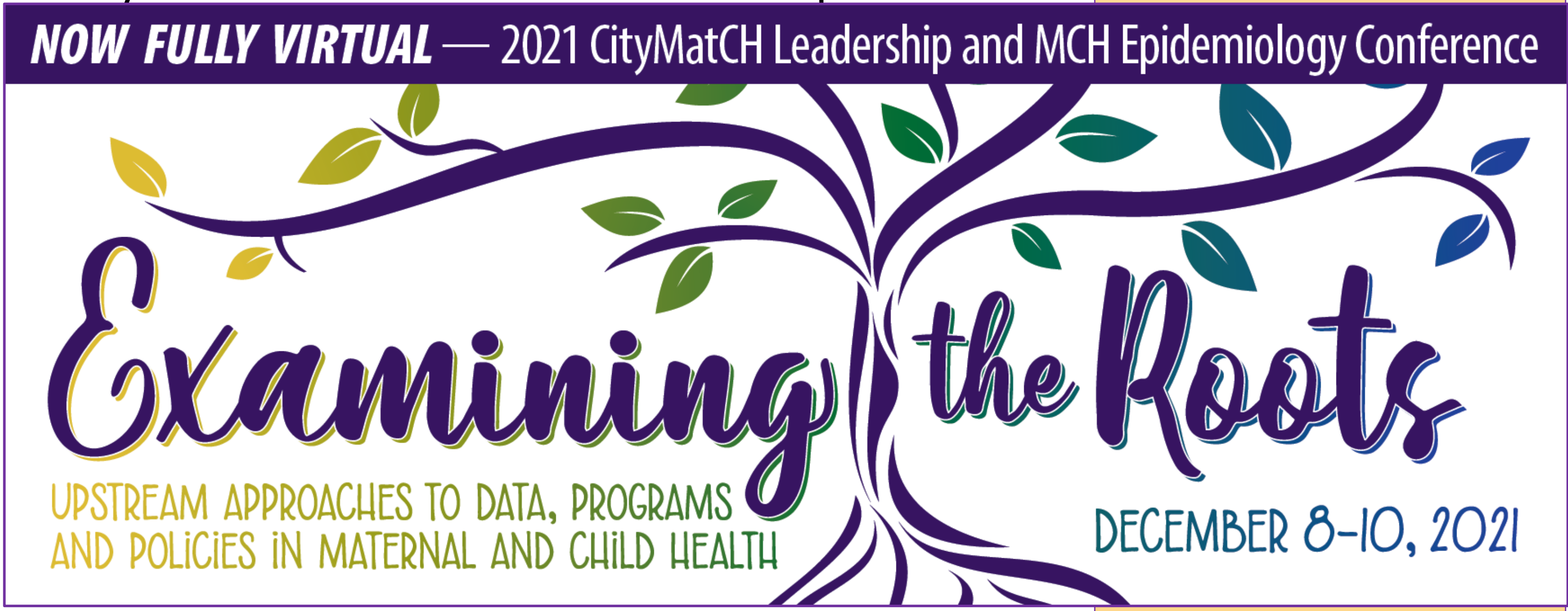
CityMatCH Conference Compendium



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ORAL ABSTRACTS

2021 CityMatCH MCH & Epidemiology Conference

CITYMATCH
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5-Year Trends in U.S. Children’s Health and Well-Being, 2016-2020

Submission Type: Oral Abstracts

Track: Child/Adolescent Health

Author(s): Lydie Lebrun-Harris PhD, MPH

Background: The National Survey of Children’s Health (NSCH) has collected data annually since 2016, and the anticipated release of 2020 NSCH data offers an opportunity to examine 5-year trends in children’s health and well-being, including an exploration of potential impacts of the COVID-19 pandemic on U.S. children.

Study Questions: 1) What are the trends over the past 5 years (2016-2020) across various health-related measures? 2) Were there any significant changes between 2019 and 2020, which might be attributed to the COVID-19 pandemic? 3) How did disparities in health measures between subpopulations change over the past 5 years?

Methods: We used NSCH data to estimate annual prevalence rates and test for statistically significant changes over time within three domains of interest: children's health conditions and special health care needs, children's health care access/utilization, and family well-being and stressors. Trend models were adjusted for child age, sex, race/ethnicity, and household income. Absolute and relative differences were calculated to determine the magnitude of changes over time, both overall and among specific populations of interest (by racial/ethnic group, income, and urban/rural location).

Results: Between 2016 and 2019 (pre-pandemic), there were significant increases in several child health conditions: anxiety problems (7.1% to 9.0%, 27% increase; $p<0.001$), depression (3.1% to 3.9%, 24% increase; $p=0.001$), chronic pain (6.5% to 7.8%, 20% increase; $p<0.001$), digestion problems (7.7% to 9.0%, 16% increase; $p=0.002$). In addition, there was a 9% decrease in the proportion of children who were publicly insured ($p=0.003$), and a 5% decrease in children having adequate and continuous insurance coverage ($p<0.001$). There was a 24% increase in the proportion of infants and toddlers receiving a developmental screening ($p=0.001$). There were significant increases in children living with someone with mental illness (12% increase; $p=0.018$) and children experiencing racial/ethnic discrimination (26% increase; $p=0.006$), and a decrease in parents/caregivers coping “very well” with the demands of raising children (67.2% to 62.2%, 7.5% decrease; $p<0.001$). Additional results will be available after the 2020 data are released (October 2021). These new data will shed further light on the trends in children's health and well-being during the COVID-19 pandemic, and describe changes in

disparities between subpopulations of interest.

Conclusions: Based on the measures examined, there are several areas of concern. In the last 5 years, there have been significant increases in the prevalence of U.S. children's mental health conditions and functional difficulties. In addition, an increased proportion of children are living with someone with mental illness and exposed to racial/ethnic discrimination, and parents/caregivers are reporting greater difficulty coping. The proportion of children with adequate health insurance coverage to meet their needs has decreased. Other areas of child health and health care access/utilization have remained stagnant. One bright note is the increased proportion of young children receiving developmental screenings, although the rate in 2019 was only 38% indicating plenty of room for additional improvement.

Public Health Implications: Additional efforts are needed to improve children's health status (particularly mental and functional health), shore up adequate health insurance coverage and access to critical health services, and support parents and families experiencing challenging circumstances.

Additional Authors: Reem Ghandour DrPH, MPA **Non-Presenting Author:** Michael Kogan PhD **Non-Presenting Author:** Michael Warren MD, MPH, FAAP

A Comparison of SIDS/SUID Behavioral Risk Among Users of a Responsive Bassinet

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Harvey Karp MD

Background: Each year, approximately 3,500 infants die of Sudden Infant Death Syndrome (SIDS) or Sudden Unexpected Infant Death (SUID). SIDS/SUID deaths usually occur in the infant's sleep area, with about 40% of the deaths attributed to SIDS, another 40% to unknown causes, and about 20% due to accidental suffocation and strangulation in bed. Studies have identified three primary risk factors associated with SIDS/SUID deaths: prone sleep positioning, sharing a sleep surface with a parent or caregiver, and the presence of soft bedding. The American Academy of Pediatrics recommends the promotion of safe sleep environments to reduce the risk of SIDS/SUID. However, since 2000 there has been no significant reduction in annual SIDS/SUID incidence in the U.S., suggesting that greater intervention is needed beyond educational campaigns. Additionally, systematic review has found that even when parents are aware of the risk of bedsharing, many choose to co-sleep with their infant to improve sleep, comforting, and bonding.

Study Questions: Does the use of a responsive bassinet improve adherence to the AAP's recommended safe sleep practices?

Methods: This study evaluates sleep practices among surveyed users of a responsive baby bassinet (SNOO) which uses motion, white noise, and swaddling to calm infants and improve the quality and duration of sleep from birth through six months of age. SNOO has a swaddling apparatus that secures the baby on its back and prevents rolling to an unsafe, non-supine position. SNOO users were surveyed to determine their infant's sleeping practices as they relate to risk factors for SIDS/SUID and compared to a national 2009-2015 sample from the CDC's Pregnancy Risk Assessment Monitoring System (PRAMS). From October 12 to October 15, 2020, an email marketing list of 35,789 SNOO users were invited to participate in an online survey composed of questions from the Phase 7 Core and Standard PRAMS Questionnaires on three SIDS/SUID risk behavior domains: infant sleeping position, bed sharing, and use of soft objects or bedding in the infant sleep area. A total of 1,509 individuals responded to the survey. The sample was filtered to exclude non-U.S. residents, those whose infants were not yet born or greater than 6 months of age, and those who reported using SNOO for <50% of night sleep, yielding a sample of 896 eligible participants.

Results: Surveyed SNOO users were found to be significantly less likely to engage in SIDS/SUIDS risk behaviors across the below three domains when compared to 2009-2015 PRAMS respondents. - Non-supine sleep - Any bedsharing - Any soft bedding

Conclusions: Results indicate that SNOO users are significantly less likely to engage in risky sleep behaviors. Given these findings, future studies should explore the relative efficacy of safe sleep education compared to interventions that target improved infant and caregiver sleep.

Public Health Implications: Although the “Safe to Sleep” campaign was widely disseminated, infant caregivers continue to engage in unsafe sleeping practices. New tools may help promote adherence to safe sleep practices by avoiding non-supine positioning, bedsharing, and the use of soft bedding.

Additional Authors:

A Platform to Share MCH Policy Successes: AMCHP's Evidence-Informed Policy Initiative

Submission Type: Oral Abstracts

Track: Policy Work/Systems

Author(s): Laura Powis MPH

Issue: Public health policy is a key shaper of the wellbeing of women, children, families, and communities. The HRSA MCHB recognizes policy as a core leadership competency, emphasizing the importance of MCH leaders understanding policy development and implementation and possessing policy skills. AMCHP has found through its member surveys that many professionals both want and lack the skills to develop, evaluate, and translate policy into organizational plans, structures, and programs. There is also limited opportunities and avenues for information sharing among MCH professionals about how they engage in various levels of the policy process. Learning from other MCH professionals who have successfully developed, implemented, and evaluated both Big and little p policies is key to supporting MCH professionals to develop policy skills.

Setting: To meet this need, AMCHP developed the Evidence-Informed Policy Track of the MCH Innovations Database where MCH professionals can share their work to be featured as model examples of evidence-informed policy. The Policy Track features agency, local, and state level MCH policy efforts from across the country, and the intended audience is MCH professionals and advocates.

Project: Through its online repository of MCH policies, AMCHP shares practice-based evidence and helps states, jurisdictions, and communities identify potential policy solutions to MCH issues in their area. The Policy Track identifies model examples of MCH policies that can serve as blueprints for policymakers, MCH professionals, and advocates to inform future policy work to benefit MCH populations. AMCHP stresses that evidence-informed policy should be equitable, relevant, unbiased, and should lead to improved MCH outcomes, while being informed by the best available evidence. The Policy Track considers MCH policies for three policy designations: evidence-informed policy development, policy implementation, and policy evaluation. Policies considered for this track include both "Big P" (e.g., public or governmental policies) and "little p" policies (e.g., private or non-governmental policies). Policies are reviewed along four dimensions – Evidence, Equity, Relevance, and Impact.

Accomplishment/Result: This session will highlight results of the Policy Track's fall submission cycle. Themes including types of policies submitted, commonalities, and areas for growth in the MCH policy field will be presented, as well as in-depth overviews of three accepted policies.

Barriers: Barriers to MCH staff being fully engaged in the policy process include staff not seeing themselves as having a role in influencing policy and the lack of opportunities to share the little p policies that influence MCH outcomes locally. This project aims to address these challenges by highlighting the myriad of ways MCH professionals can and do influence policy in their roles and by creating a hub for MCH professionals to learn from their peers.

Lesson Learned: This session will share lessons learned including feedback from Title V professionals who submitted to the database, implications for public health such as the importance of policy work to improving MCH population outcomes, and how the CDC Policy Framework and the Racial Equity Impact Assessment guided the Policy Track's develop.

Information for Replication: The Policy Track was designed to support policy replication. Each accepted submission highlights implementation considerations for MCH professionals to review when replicating policy efforts.

Additional Authors: Jessica Cohen MSW **Presenting Author:** Jessica Simon

Addressing Racial/Ethnic Inequities in Maternal Health: Challenges and Opportunities for Community Organizations Providing Social Support in Greater Boston

Submission Type: Oral Abstracts

Track: Racism, Equity, Social Justice

Author(s): Rose Molina MD, MPH

Issue: Gaps in social support during pregnancy and the first year postpartum contribute to inequities in Maternal Health, particularly for Black and indigenous people. In Greater Boston, many community-based organizations (CBOs) provide critical social support services, yet our research shows that service delivery is fragmented; structural and interpersonal racism in Greater Boston and within CBOs limit access for birthing people of color.

Setting: To learn more about fragmentation of services, we assessed CBOs that serve clients during pregnancy and the first year postpartum. Our setting included cities and towns in the Boston metro and the city's majority Black and Latina neighborhoods, given the regional scope of Maternal Health programs in this diverse, high-density metro served by several major hospital systems and a rich nonprofit ecosystem. Our research was funded by The Boston Foundation, a regional grantmaker.

Project: In Spring 2020 we administered an online survey (n=17) about organizational characteristics, social support services and client barriers to accessing social support. We held semi-structured interviews (n=14) with a subset of respondents to explore gaps as well as the role of structural racism as a barrier to social support. In Fall 2020, we leveraged Ariadne Labs' methods for health system innovation in organizing three human-centered design workshops with members of 15 CBOs. Our research elicited three primary challenges to the provision of social support to birthing people of color, and our design workshops focused on a solution prototype to address these challenges.

Accomplishment/Result: We identified common gaps in social support services, including housing, childcare, and support groups for those experiencing pregnancy-related loss. The three top challenges in connecting clients to services were (1) structural and interpersonal racism in Greater Boston, (2) structural and interpersonal racism within CBOs, and (3) lack of coordination of CBO services. Workshop participants prioritized the following factors to improve CBO coordination within a regional and organizational context of enduring structural and interpersonal racism: strengthening existing programs, co-locating multiple solutions, sharing data of client social support needs, and identifying the locus of decision-making about client screening and referrals. Our solution uses a Collective Impact model with an explicit racial equity lens and digital platform to address these priorities.

Barriers: We launched our data collection in the first COVID-19 pandemic surge, which depressed CBO recruitment. Thus, our sample may not be representative of the CBO ecosystem in Greater Boston. We supplemented this recruitment by extending invitations to our design workshops to CBOs who did not participate in our survey or interviews.

Lesson Learned: While many CBOs work at the intersection of Maternal Health and racial equity, gaps in social support persist, disproportionately impacting communities of color. There is an untapped opportunity to bring CBOs together; design thinking is a successful process that creates a convening space for prioritizing human factors and co-producing solutions. We propose a Collective Impact model with an explicit equity lens, which will be critical in bringing people together in a way that builds trust and improves coordination of social support through the prototyped digital platform in Greater Boston.

Information for Replication:

Additional Authors: Rose Molina MD, MPH
Presenting Author: Amanda DiMeo MSc **Non-Presenting Author:** Leigh Graham PhD, MBA **Non-Presenting Author:** Grace Galvin MPH **Non-Presenting Author:** Neel Shah MD, MPP **Non-Presenting Author:** Ana Langer MD **Non-Presenting Author:**

Addressing the Needs of MCH Populations During the COVID-19 pandemic: HRSA Maternal and Child Health Bureau's Response

Submission Type: Oral Abstracts

Track: Policy Work/Systems

Author(s): Ashley Wilkes MA

Issue: The COVID-19 pandemic has significantly impacted maternal and child health (MCH) populations in the United States. Pregnant women with COVID-19 have a higher risk of severe outcomes compared with non-pregnant women. While most children with COVID-19 have mild symptoms or no symptoms at all, some become severely ill and cases of multisystem inflammatory syndrome associated with COVID-19 have been reported. COVID-19 has also impacted health care delivery, with telehealth becoming a primary form of prenatal and well-child care, and notable decreases occurring in prenatal visits, well-child visits, and childhood immunization rates nationwide. In response, the Maternal and Child Health Bureau (MCHB) developed strategies and is implementing them to monitor and address these needs.

Setting: In partnership with states and communities, MCHB supports health care and public health services for an estimated 60 million people nationwide in 59 states, jurisdictions, and territories. MCHB's ongoing strategies support MCH populations impacted by COVID-19 across the nation.

Project: MCHB's strategies for addressing the COVID-related needs of MCH populations cover three key areas, including data collection and coordination; communication and partnerships; and program development and adaptations. These strategies enable MCHB to monitor, assess, and respond to ongoing and emerging needs during the COVID-19 pandemic. Bureau-wide systems and structures for gathering and synthesizing internal and external data supported situational awareness and streamlined coordination of response activities. Stakeholders shared key information and joined federal partners in communicating about critical COVID-19 issues. MCHB provided programmatic flexibility, allowed program adaptations, and supported new programs to address emerging needs and to ensure access to health care and services.

Accomplishment/Result: : MCHB's strategy led to new Bureau-wide systems and structures, including an Incident Command System to coordinate information, resources, decisions and actions across the Bureau and a Situational Awareness Hub to collect and facilitate analysis of information. These efforts streamlined the Bureau's COVID-19 response and will be important tools for monitoring and responding to future emerging issues. MCHB is also enhancing data collection efforts and supporting regular communication with grantees and stakeholders to better understand MCH impacts and grantee adaptations in order to address population needs. MCHB authored joint communications with federal partners to promote access to health care and services during the COVID-19 pandemic. Newly funded MCHB programs and flexibilities in grant requirements have supported families' access to care. These include $15 million in awards to increase telehealth access, build telehealth infrastructure, and train providers in telehealth service delivery and a $1 million competition to improve declining childhood immunization rates and well-child visits.

Barriers: The lack of real-time data on population and grantee impacts impeded timely and targeted decision-making. Also, given COVID-19's broad impact, MCHB staff and grantee capacity to adapt was limited. MCHB addressed these limitations by centralizing coordination of information, resources, decisions, and actions.

Lesson Learned: Central coordination of emergency response activities, decision-making, and Bureau operations are critical to supporting MCH populations. We expect communication and partnership to be ongoing strategies for addressing emerging needs. Further assessment of data collection efforts will guide future efforts.

Information for Replication:

Additional Authors: Ashley Wilkes MA
Presenting Author: Catherine Vladutiu PhD, MPH **Non-Presenting Author:** Clara Busse MPH **Non-Presenting Author:** Michelle Tissue MPH **Non-Presenting Author:** Michael Warren MD, MPH

American Indian and Alaska Native Women Face Rising Risk of Violence During COVID-19

Submission Type: Oral Abstracts

Track: Trauma, violence, injury

Author(s): Chiao-Wen Lan PhD, MPH

Background: Violence against American Indian and Alaska Native (AI/AN) women continues to be a significant public health concern, with a legacy tied to historical trauma. The gendered effects of the COVID-19 pandemic began to be revealed as reports started to show an alarming trend of increasing violence against AI/AN women. However, there is paucity of data measuring the impact of COVID-19 on the prevalence and reporting of violence against AI/AN women.

Study Questions: We sought to examine the impacts of COVID-19 pandemic on sexual violence against American Indians and Alaska Native women in Washington.

Methods: We utilized data from Washington's syndromic surveillance system. Patients who had an emergency department (ED) visit were included. Chief complaint and discharge diagnosis (CC and DD) codes were used to identify sexual violence related ED visits following CDC definitions. Monthly data from January 2020 to March 2021 (COVID-19 period) were compared to that of 2019 (pre-COVID-19 period).

Results: During the first year of COVID-19 pandemic, the number of sexual violence ED visits among AI/AN women aged 18 – 44 in Washington went up by 3.4% in 2020 from 2019. Further, in the following year of the COVID-19 pandemic, the results show that the number of sexual violence ED visits among AI/AN women of reproductive-age got higher – between January and March 2021, the visits increased by 7.1% from the same months in 2019. AI/AN women aged 18 to 44 were 1.4 times more likely to have a sexual violence related ED visits than White women in the same age group. While the number of sexual violence ED visits among AI/AN women went up during the COVID-19 pandemic, it decreased 11% for White women in the same age group.

Conclusions: The findings highlight an increased in violence against AI/AN women ages 18 to 44, a shadow pandemic growing amidst the COVID-19 crisis.

Public Health Implications: There is a marked inequity in the impact of COVID-19 on AI/AN communities and the gendered impacts of COVID-19 cannot be ignored. There is a strong need to take active measures towards addressing violence against AI/AN women in COVID-19 response and recovery effort. The shifts in social and economics may disproportionately impact access to support services and resources for women facing violence. The differential needs of women of reproductive-age in long term recovery efforts need to be considered, especially women and families impacted by sexual violence.

Additional Authors: Chiao-Wen Lan
Presenting Author: Sujata Joshi MSPH **Non-Presenting Author:** Danica Brown MSW, CACIII, PhD

Applying Kitagawa Decomposition to Explain Differences in C-Section Rates Between Black and White Birthing Persons: Implementing the Robson Classification System

Submission Type: Oral Abstracts

Track: Data Innovation

Author(s): Trang Pham MD, MS

Background: The U.S. C-section rate is over 30%, well above the recommended population rate of 10-15%, and rates are consistently higher for non-Hispanic Black (Black) compared to non-Hispanic White (White) birthing persons. The high rate is attributed, in part, to medically unnecessary C-sections among low-risk persons. The Robson Ten Group Classification System (TGCS) provides a method of risk stratification useful for comparing C-section rates across groups with different risk profiles. It has been underutilized in the U.S., where HP 2030 calls for monitoring C-section rates among "low-risk" deliveries, defined as singleton, term, and vertex.

Study Questions: Which of the 10 Robson Groups (RG) contribute most to the excess C-section rate among Black (compared to White) birthing persons in the U.S.?

Methods: Live births to U.S. residents (2019 Natality Data) were classified into 10 mutually exclusive RGs based on: parity, gestational age, onset of labor, fetal presentation and plurality. RGs 1-4b include deliveries designated as low-risk by HP 2030, further divided into iparous or multiparous with spontaneous labor, labor induction or pre-labor C-section. RG 5 includes multiparas with prior C-section(s) and RGs 6-9 are at high risk for medical intervention (e.g., breech, multiples). RG 10 includes preterm deliveries. Crude C-section rate differences (RD) and 95% confidence intervals (CI) between Blacks and Whites were calculated. Kitagawa decomposition was applied to estimate the percent of the excess Black C-section rate attributable to differences in the distribution of births across RGs versus the RG-specific C-section rates. Limitation: Unadjusted decomposition estimates do not account for residual confounding within heterogeneous RGs.

Results: The 2019 U.S. C-section rates for Black and White birthing persons were 35.9% and 30.7%, respectively (RD=5.2 percentage points, 95%CI: 5.1-5.4). Once stratified by RG, C-section rates were higher for Blacks than Whites in all but the two RGs for breech pregnancies. The decomposition analysis revealed that RG 10 (preterm) accounts for 40% of the excess C-section rate among Blacks, while RG 5 (prior C-section) accounts for 32%. Thirty-six percent of the excess rate is attributable to RGs 1 to 4b (low-risk), driven mostly by higher percentages of Blacks than Whites in the pre-labor C-section RGs and higher C-section rates for Blacks compared to Whites in the induction RGs.

Conclusions: The large contribution of preterm delivery to the excess C-section rate among Blacks is unsurprising, given the well-documented racial disparity in preterm birth. Blacks were also over-represented in the prior C-section RG. Most notably, over one-third of excess C-sections among Blacks occurred in low-risk RGs, suggesting an opportunity for disparity reduction. Integrating the Robson TGCS and Kitagawa technique is an innovative approach for identifying potential determinants of C-section rate disparities.

Public Health Implications: As part of larger discussions about inequities in Maternal Morbidity and Mortality, multiple strategies to address low-risk C-section rates are being considered, including the increased use of midwives, alternative birthing locations including Birth Centers, and doula support across the entire perinatal period. Reducing unnecessary C-sections may play a significant role in postpartum health, an area of focus since the majority of pregnancy-related deaths occur in the postpartum period.

Additional Authors: Trang Pham MD, MS
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Arizona Community Health Worker Home Visiting Program sees Improvement in Birth Outcomes and Prenatal Care Utilization Among Participants

Submission Type: Oral Abstracts

Track: Home Visiting

Author(s): Kelly McCue MPH

Background: Social and structural determinants affect maternal and child health (MCH) outcomes for minoritized women in the US. Community health worker (CHW) interventions are culturally congruent and cost-effective strategies for improving MCH equity. The Arizona Health Start Program is one of few US Home Visiting programs in which CHWs are the primary interventionist, serving demographically and geographically diverse women and children.

Study Questions: Will women enrolled in Arizona's Health Start Program, a maternal and child health Home Visiting intervention, have improved birth outcomes and increased prenatal care utilization compared to their matched counterparts, during 2006 to 2016?

Methods: We retrospectively analyzed administrative and birth certificate data from 2006–2016. We use propensity score-matching to estimate the average treatment-on-the-treated (ATT) effect of Health Start on birthweight outcomes, preterm births, and prenatal care utilization for enrollees (n=7,200). Subgroup ATTs were estimated separately.

Results: Participation in Health Start is associated with statistically-significantly better birthweight and prenatal care utilization rates, with larger program effects among subgroups (p-values <0.05). Compared to nonparticipants, teens had lower rates of preterm birth (30%) and higher rates of adequate prenatal care (11%); women residing in rural Arizona-Mexico border counties had higher rates of adequate prenatal care (6.40%); American Indian women had lower rates of low birthweight (38%) and higher rates of any prenatal care (1.65%); and Latina women had lower rates of very low (36%) and extremely low (62%) birthweight. The decrease in extremely low birthweight (~16 cases) translates to an estimated cost savings of $3.2 million.

Conclusions: Women who participated in Health Start during 2006 to 2016 had improved perinatal outcomes (birthweight, preterm birth, and prenatal care), particularly among ethno-racially and demographically diverse mothers, compared to their matched counterparts.

Public Health Implications: A CHW-led perinatal Home Visiting intervention can improve MCH outcomes among diverse participants, reduce healthcare costs associated with adverse birth outcomes, and impact life course health for women and children at increased risk for MCH inequity.

Additional Authors: Kelly McCue MPH

Assessing Health Equity, Diversity, and Inclusion: Multiagency Collaborations to Improve Child Safety, Health, and Wellbeing

Submission Type: Oral Abstracts

Track: Racism, Equity, Social Justice

Author(s): Abby Collier

Issue: Partnerships are a cornerstone of public health, but these vital multiagency collaborations may present additional challenges for efforts to address inequities. This is because while partners often share goals of increasing safety and improving health, they may not have a shared understanding of the inequities that drive poor health outcomes. Additionally, partner agencies in a collaboration may not all have the robust internal commitment to diversity, equity, and inclusion (DEI) that is foundational to the external work of advancing health equity or their approaches may not align. Despite the broad scope of tools designed to evaluate assess DEI practice within agencies, there is a significant gap in tools designed for multiagency collaborations.

Setting: A fetal, infant, or child death is a sentinel event that reflects the overall health and safety of a community. Child Death Review (CDR) and Fetal and Infant Mortality Review (FIMR) seek to understand systems gaps contributing to individual deaths through a comprehensive multidisciplinary review, the findings of which are used to catalyze further multiagency collaborations around prevention.

Project: A new tool for assessing DEI practice in child health and safety focused multiagency partnerships was developed through multiagency collaboration. The tool provides leaders with concrete questions to apply a health equity lens to assess and deepen DEI practice using the social-ecological model. Armed with a greater understanding of partner definitions and practices the partners can identify action steps to increase an aligned approach to DEI in their unique coalition and committee efforts, a first step in ultimately working toward health equity in their communities.

Accomplishment/Result: The tool for assessing DEI practice in multiagency partnerships encourages partners to ask questions around DEI at the systems level to illustrate gaps or needs for improvement in service delivery systems and social service programs. This tool was piloted in more than five communities through their child death review teams (CDR), fetal and infant mortality review (FIMR) teams, Safe Kids coalitions, and Child Safety Learning Collaboratives. In this session, lessons learned from the pilot will be shared, as well as teaching materials for implementing the tool within other partnerships and collaborative efforts.

Barriers: In order for multiagency DEI work to succeed, individual team members and agencies must first assesses, and address implicit bias, and DEI as individuals and agencies. Additionally, multiagency collaborations must incorporate the breath of experiences and knowledge about DEI from individual partners and the communities they are working to impact.

Lesson Learned: Multiagency collaborations, such as fatality review teams, Safe Kids Coalitions, or Child Safety Learning Collaboratives, rely on partnership and collaboration to achieve their goals. In order to identify and impact system-level change, these collaborations must challenge program members to uncover implicit bias, and work toward improving DEI in their communities.

Information for Replication:

Additional Authors: Krista Rowe
Presenting Author: Morag Mackay
Presenting Author: Bina Ali

Assessing Severe Maternal Morbidity Risk Factors Among American Indian and Alaska Native Mothers in the Pacific Northwest

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Natalie Roese MPH, CPH

Background: American Indian and Alaska Native (AI/AN) mothers face disparities in social determinants and individual health that increase the risk of pregnancy complications. Rates of severe maternal morbidity (SMM) among indigenous mothers are estimated to be twice that of the rate of non-Hispanic White (NHW) mothers.

Study Questions: This study uses hospital discharge data from Oregon and Washington during 2012-2016 to assess the association between county-level, individual and pregnancy risk factors and SMM among AI/AN mothers.

Methods: Oregon Hospital Discharge and Washington Comprehensive Hospital Abstract Reporting System data were corrected for AI/AN race misclassification and combined to encompass births in Oregon and Washington between 2012-2016. Outcome variables were defined using ICD-9 and ICD-10 coding schemes. These datasets were cross-referenced with 2015 County Health Rankings to identify county-level social and environmental characteristics. Delivery hospitalizations were identified using procedure and diagnosis codes. SMM was determined by the presence of 21 delivery morbidity events. A logistic regression was used to assess the relationship between county-level, individual and pregnancy risk factors on SMM among AI/AN mothers.

Results: 359,488 delivery hospitalizations were identified, 1,545 of which were excluded for missing maternal county of residence (AI/AN=54). This resulted in a sample size of 325,581 records with 4,052 SMM events. 12,535 delivery hospitalizations were to AI/AN mothers, 236 resulting in SMM. AI/AN mothers were more likely to live in mostly or completely rural counties with uninsured rates >=20%, and median household income below the regional lower quartile (<$42K). AI/AN mothers were more likely to be teen mothers, have pre-existing or gestational diabetes, or experience obesity at the $p<0.05$ significance level. During pregnancy, AI/AN mothers were more likely to be under supervision for insufficient prenatal care (PNC), experience gestational hypertension and pre-eclampsia and have

Medicaid as the primary payer at the $p<0.05$ significance level. AI/AN mothers faced higher rates of SMM than NHW mothers (1.91% v. 1.20%, $p<0.0001$). Results from the logistic regression (n=12,353) found that AI/AN mothers residing in rural counties (AOR: 1.56, 95% CI: 1.08-2.27) and counties with high uninsured rates (AOR: 1.56, 95% CI: 1.08-2.24) experienced higher rates of SMM. AI/AN mothers with underlying hypertension (AOR = 2.14, 95% CI: 1.14-4.03), pre-eclampsia (AOR: 3.41, 95% CI: 2.29-5.08) and those who received insufficient PNC (AOR: 1.54, 95% CI: 1.01-2.36) had an increased risk of SMM. Age <20 years, obesity, pre-existing or gestational diabetes, gestational hypertension, and county median income were not associated with SMM among AI/AN mothers.

Conclusions: AI/AN mothers face higher county-level, individual and pregnancy risk factors than NHW mothers and subsequently face a 1.6 times higher rate of SMM. County-level disparities were substantial predictors of SMM among AI/AN mothers, in addition to hypertension, pre-eclampsia and insufficient PNC.

Public Health Implications: These findings demonstrate the need for targeted support in pregnancy to AI/AN mothers who face a higher burden of risk factors that increase the risk of SMM. Efforts to reduce SMM among AI/AN mothers should focus on reducing barriers to PNC in rural counties and among women with hypertension.

Additional Authors: Natalie Roese MPH
Presenting Author: Sujata Joshi MS **Non-Presenting Author:** Chiao-Wen Lan MPH, PhD **Non-Presenting Author:** Karuna Tirumala MPH **Non-Presenting Author:**

Azhe’é Bidziil (Strong Fathers): Advancing Family Wellness Through Engaging Native Fathers in rural Tribal Communities

Submission Type: Oral Abstracts

Track: Fatherhood/Men’s Involvement

Author(s): Jennifer Richards PhD, MPH

Issue: Fathers are often less recruited and less engaged in family-based interventions, which are often tailored for female caregivers. Native American fathers, in particular, are scarcely represented in family-based interventions. Further, very few evidence-based interventions target rural-based Native fathers and many omit the traditions and cultural strengths of Native communities.

Setting: Rural, Southwest tribal communities. Intended audience: tribal health programs, fatherhood programs, MCH programs aiming to engage fathers.

Project: The Azhe’é Bidziil (Strong Fathers) study, developed in response to community feedback, aims to address this gap in tribal, community-based interventions. The Azhe’é Bidziil curricula is rooted in two evidence-based curricula from our 30-year tribal-academic partnership, Respecting the Circle of Life (teen pregnancy prevention) and Arrowhead Business Group (economic empowerment). Together with our cross-site tribal working group, the Azhe’é Bidziil program was adapted for implementation with fathers (and father figures) in two rural Native communities. The 12-session weekly program promotes positive father-child interaction, fathers’ capacity for social and economic stability, and healthy relationships between Native fathers, their children, spouses, and other family members. The program is currently being delivered by Coaches (local paraprofessionals) in a group-based, peer learning format. This workshop will describe the processes that informed curriculum development, adaptation, and program implementation.

Accomplishment/Result: The curriculum and implementation evaluation tools will also be discussed, as well as lessons learned from the first year of implementation.

Barriers: Curriculum development and implementation were affected by the COVID-19 pandemic. The Navajo Nation was tremendously affected by the COVID-19 pandemic and this impacted program launch and implementation activities. Implementation shifted to socially distanced, outdoor-based learning, as well as a virtual hybrid option.

Lesson Learned: The program is currently launching in May 2021. We aim to present lessons learned from our first year of implementation at the CityMatCH conference.

Information for Replication:

Additional Authors: Jennifer Richards PhD, MPH **Non-Presenting Author:** LeDaniel Gishie
Presenting Author: Tiffani Begay

Birth Equity Community Council (BECC): Integrating Qualitative and Quantitative Data to Leverage Resources & Achieve Collaborative Impact

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Amber Konieczka

Issue: Ramsey County faces disparities among U.S-born and foreign-born Black mothers, in the areas of low birth weight, prematurity and infant mortality. The Birth Equity Community Council (BECC) reviewed the Periodic Periods of Risk (PPOR) data to examine Ramsey County's birth inequities. The data suggested that between 2010-2013, the low birthweight rate for U.S.-born Black women was 13.8%- over two times higher than the White rate of 6.0%. The rate for foreign-born Black women was 6.6%. We observed a similar pattern with prematurity and infant mortality. The data between 2010-2013 showed that the prematurity rate for American Indian women in Ramsey County was 12.6%. Statewide the infant mortality rate for non-Hispanic American Indians was 2.6 times higher than for non-Hispanic Whites.

Setting: The geographic location included Ramsey and Hennepin Counties. The interest population was Black women born in the U.S, Black women born in foreign countries and American Indian women. The reference group in the analysis included White, non-Hispanic women who live in Ramsey and Hennepin Counties. The excess mortality, or opportunity gap numbers and rates were estimated by comparing the reference and study groups.

Project: BECC provided backbone structure, facilitation and shared leadership with partners. BECC worked alongside community members to integrate the quantitative data (PPOR) with the qualitative data (community dialogues). BECC developed a logic model that included themes that the community identified as areas of interest. Our logic models and action goals are helping to leverage resources to achieve birth racial equity at individual, community and system levels.

Accomplishment/Result: Trained 10 Doula dads in 2019, utilizing the JJ way® COPE curriculum. By Jan. 2020, 30% of the Doulas reported 100% increased knowledge of safe sleep & training used with 13 total families, pro bono. In 2020, created Infant Safe Sleep PSA video featuring BECC members promoting the ABC's of safe sleep. PSA shared on social media across community ambassador networks. Implemented PAT –Parents as Teachers ® Evidence Based Home Visiting Program, as community desired more whole family support. Collaborated with partners to install Perinatal Safe Spots, implicit bias & navigating systems trainings promoting racial and health equity. Engaged in policy efforts around Doula reimbursement.

Barriers: As a government entity, we have work to do in building trusted relationships with communities. We've hosted meetings in spaces with a reputation of supporting fathers and hired a male health educator; COVID-19 transitioned meetings to virtual and decreased engagement efforts; We were unable to include the American Indian population due to data privacy standards, and numbers needed to utilize the PPOR formula; Changes in partnership engagement overtime, moved department toward reimbursement for partner commitments, including community chair and healer facilitation; Evening meetings, child respite activities, meals, transportation, and shared leadership from those with lived experience breaks barriers.

Lesson Learned: Our abstract highlights equity by lifting up community members voices that are silenced from systematic racism. We host meetings in community spaces, are intentional about shared leadership, and integrate both local data and community stories into our community engaged action plan.

Information for Replication:

Additional Authors: Tamiko Ralston BSN, MA
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Presenting Author: Amy Lytton RN, MS
Presenting Author: Cinthia Fondrk PHN, MSN
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Birthing During COVID-19 Toolkit: An Emergency Response to Pregnancy and Postpartum

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Fabiola Tarazona Tubens

Issue: The COVID-19 impact has been disproportionate in Louisiana, where 70% of the deaths have been among the Black and Brown populations who make up only about 32% of the state's population. According to the Louisiana Maternal Mortality Review Board 2020 Report, Black women are five times more likely to die from pregnancy-related causes than White women. COVID-19's impact has further exacerbated this striking disparity highlighting the critical need to address inequitable access to basic services, such as quality health care. Rapid targeted mechanisms are needed to reduce the negative impact on health outcomes for Black and Brown birthing individuals by increasing access to essential resources, increasing knowledge and self-efficacy of the birthing population, and de-escalating stress and anxiety during the COVID-19 pandemic.

Setting: This project is based in New Orleans, Lousiana, and served pregnant and postpartum women.

Project: To target the most pressing needs of the New Orleans Black and Brown birthing population, in partnership with key community-based organizations (CBOs), we developed and disseminated a Birthing During COVID-19 Toolkit. This toolkit allowed for streamlining of existing CBOs services and resources. The toolkit was also used by social media influencers to engage the public on topics related to pregnancy and postpartum during the pandemic.

Accomplishment/Result: A community advisory board comprised of members who serve Black and Brown birthing persons in medical and social service capacities was created to ensure the needs of our priority population were centered. We were able to disseminate our toolkit to community health centers, hospitals, and social service organizations throughout New Orleans. In addition, we established a partnership with Birthmark Doulas Collective to support the second cohort of their Perinatal Community Health Worker (PCHW) program. Trained PCHW's provided doula support and linkage to care for birthing individuals.

Barriers: Fostering collaboration during the pandemic was difficult initially as many individuals/organizations needed to readjust their priorities.

Lesson Learned: The current Maternal Health infrastructure has proven to be inequitable and unjust for black and brown birthing individuals. Note that during times of crisis, resources and support are typically allocated towards more privileged groups and women of color almost always fare worse. When creating health interventions, it is important to recognize the needs and barriers of vulnerable populations and make sure they are specifically addressed. We know that health goes beyond the physical and to ensure that we are able to serve the needs of underserved populations, it is critical that we develop centralized workflow systems to be more collaborative. We were able to demonstrate a collaborative community-based approach by increasing knowledge, self-efficacy and improving overall risk assessment and management among community-based organizations serving Black and Brown birthing people in New Orleans. While we sought to understand the needs of our priority population by working with organizations who directly serve these individuals, we would have liked to have had the capacity to bring pregnant/postpartum persons on board to provide direct feedback on our resources.

Information for Replication: Sprinting to the Front Lines is a rapid funding mechanism for Tulane students to respond to the COVID-19 outbreak. The team was awarded $25,000 to allocate funding towards the planning, development, and dissemination of the toolkit.

Additional Authors: Kiara Cruz MPH
Presenting Author: Jesenia Angeles MPH
Presenting Author: Tonye Fohsta-Lynch MPH
Presenting Author: Fabiola Tarazona-Tubens **Non-Presenting Author:** Anwei Gwan

Birthing in a Pandemic: The Impact of COVID-19 on Pregnancy and Postpartum Experiences

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Adelaide Appiah MPH

Issue: Pregnancies and deliveries during COVID-19 have been characterized by reduced support during labor and delivery, increased anxiety around birthing, and changes in prenatal and postpartum appointments due to efforts to increase physical distancing in offices. To better understand the experience of pregnant and birthing people during the COVID-19 pandemic, The National Association of City and County Health Officials (NACCHO), in partnership with the What to Expect Project and through funding from CDC's Division of Reproductive Health, developed a needs assessment for What to Expect consumers. The assessment collected information on how COVID-19 has impacted reproductive decision-making, mental health during pregnancy, and pregnancy and birth-related health-seeking behavior. Certain COVID-19 protocols, such as virtual prenatal and postpartum appointments are suggested to become fabric in medical care. As we shift to this new wave of care, it is important to understand how this impacts pregnant and postpartum individuals. Data from this need's assessment will inform the creation of tools and resources to meet the needs of this population.

Setting: The needs assessment was administered through a brief (6-minute) questionnaire using the Qualtrics platform. The assessment was conducted from 3/24/21-4/7/21 and garnered a total of 3,378 respondents. Data was collected via links on WhatToExpect.com channels such as the mobile app feed and online community. The targeted audience for this assessment included U.S. residents between 18 and 45 years old; currently pregnant people, and people with at least one infant < 12 months old.

Project: The assessment covered a range of topics that pregnant and postpartum people experienced during the pandemic including pregnancy intention, change in medical appointments, mental health status, and changes in programming, resources, and medical services. An analysis is currently underway to interpret the data.

Accomplishment/Result: Preliminary data analysis revealed that younger parents (18 – 25) were less likely to change their pregnancy plans because of COVID-19 and more likely to become pregnant unexpectedly. We also found that those who reported high distress were more likely to have an unexpected pregnancy or to have delayed pregnancy than those with lower measures of distress. The final analysis will reveal the experiences of the COVID-19 pandemic on health care received during pregnancy and postpartum for varying demographic groups.

Barriers: A major limitation to the project is that the survey utilizes the sample of consumers from the What to Expect project and not the general public. Thus, the data received is reflective of their consumers. we ensured that the survey was sent to every What to Expect consumer to increase diversity in responses and needs.

Lesson Learned: Given that pregnant and postpartum people experienced many different challenges during the pandemic, we received numerous variations of responses to our qualitative questions. Thus, it is difficult to group these responses and to share a cohesive message on the general challenge. We appreciate the diversity of responses received but the capacity to address them all through resource allocation is unavailable. On our next survey, we intend to write more quantitative questions in an effort to better serve respondent needs.

Information for Replication:

Additional Authors: Adelaide Appiah MPH

Breastfeeding Trends Among Native American Women in New Mexico (2000-2015)

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Eirian Coronado MA

Background: Published breastfeeding trends and patterns among U.S. indigenous populations are limited. In New Mexico, rising breastfeeding initiation and duration rates are promising, and collaborations to support Native American breastfeeding people in their breastfeeding success are flourishing. Policy and program developments have contributed to the improvements in breastfeeding initiation and duration.

Study Questions: Which policy and programmatic efforts have impacted the rising breastfeeding rates in New Mexico among Native American women? How can we explain improving breastfeeding patterns across time?

Methods: We analyzed NM Pregnancy Risk Assessment Monitoring System data from 2000-2015 and examined contextual community and program-based policy changes to understand positive breastfeeding trends among Native American women giving live birth in New Mexico. We calculated percent changes in breastfeeding initiation and duration within an environmental and ecologic framework between two time periods: 2000-2003 (n=677) and 2012-2015 (n=738). We described changes in maternal characteristics in PRAMS for the two time periods. We also described changes in pumping and breastfeeding workplace policies, growing Baby-Friendly Hospital efforts, and WIC nutrition and peer counseling developments over time. We analyzed percent changes in initiation, duration at four weeks and ten weeks, postpartum. We modeled multivariable regression to isolate effects predictive of breastfeeding initiation and duration (at four weeks and ten weeks), 2012-2015.

Results: From 2000-2003 to 2012-2015, breastfeeding initiation rose from 82.0% to 90.3% among NM Native American women. There was a relative increase of 14.5% in duration to 4 weeks, peaking at 76.7% (95% CI, 73.2-80.1) in 2012-2015, and duration to at least 10 weeks increased from 51.4% to 56.6% in 2012-2015, a relative increase of 10.1%. Multivariable regression models performed for the 2012-2015 period indicated that prenatal WIC participation was predictive of sustained breastfeeding at ten weeks postpartum (1.47, 95% CI 1.02-2.11), after adjustment for maternal characteristics. Young maternal age <24 years was predictive of initiation (2.68, 95% CI 1.29-5.57) but not duration. We were not able to account for differences in Baby-Friendly and other birth populations in our analysis because hospital variables were restricted in our dataset.

Conclusions: Program and policy changes in New Mexico and in Native American communities have contributed to increasing breastfeeding and duration rates. WIC participation has an independent positive association with breastfeeding initiation and with duration at ten weeks.

Public Health Implications: WIC breastfeeding programming has been tailored to different tribal populations in New Mexico, and peer counseling support, Baby-Friendly hospital efforts across Indian Health Services and other healthcare entities appear to have impacted the positive trends for Native American women.

Additional Authors: Indu Ahluwalia PhD, MPH **Non-Presenting Author:** Del Yazzie MPH

Bridging Departments Across Local Health Departments to Address Future Health Threats to the MCH Community

Submission Type: Oral Abstracts

Track: Other

Author(s): Hitomi Abe MPH

Issue: Local health departments (LHDs) play critical roles in responding to public health threats across the country; in addition to forming the backbone of the COVID-19 response, they have also responded to Zika, influenza outbreaks, and more routine threats such as hepatitis and congenital syphilis. Despite the number of public health threats that impact pregnant people and infants, there are rarely efforts to increase collaboration among maternal and child health (MCH), preparedness, and infectious disease/epidemiology departments within LHDs. The COVID-19 pandemic has exposed the lack of dedicated resources for prioritizing MCH populations in preparedness activities and responses.

Setting: The National Association of City and County Health Officials (NACCHO), through funding from CDC's National Center on Birth Defects and Developmental Disabilities and the Division of Reproductive Health, has been working to increase the capacity of LHDs to address public health threats that impact pregnant people and infants collaboratively. The intended audience for this presentation includes LHDs interested in looking to collaborate within their organization to mitigate future public health threats.

Project: NACCHO has been learning from and funding LHDs to dismantle silos that inhibit them from improving internal efforts to address public health threats, such as training MCH staff to participate in preparedness responses or improving shelter intake forms to identify pregnant and postpartum people. This oral presentation will highlight outcomes and lessons learned from collaborative efforts at the local level to address the impact of infectious diseases, specifically COVID-19, on MCH populations.

Accomplishment/Result: The session will feature Kathleen Sanchez, Director of Research and Evaluation at Los Angeles County Public Health Department, and her role in changing the infrastructure of her LHD's emergency preparedness and response processes to enhance MCH populations' needs during public health emergencies. She will share how she built a model to bring together MCH, preparedness, and infectious disease staff. NACCHO also hopes to invite another LHD to participate, but the response has made confirmation of participation difficult.

Barriers: From her experiences so far, LHD staff Kathleen learned the importance of moving beyond relationship-based pathways as staff roles may change over time and is an unsustainable approach. Changing the infrastructure of LHDs' emergency preparedness processes will help ensure that these collaborations are continuous and that staff across departments are working together to enhance MCH populations' needs during public health emergencies. Infrastructure changes could include building a preparedness team with designated staff from various departments that meet regularly to review and revise emergency plans.

Lesson Learned: The overwhelming burden presented by the need to address the COVID-19 pandemic has limited LHDs' ability to collaborate, plan, and prepare for other current and future public health threats. The COVID crisis has exposed the lack of dedicated resources to MCH populations during emergency crises and made it evident that MCH populations should be included as a priority item in any and every emergency preparedness plan. Our initiative demonstrates the importance of working together to combat complex public health emergencies and how this internal relationship-building can serve as a guide for other jurisdictions to optimize collaboration within their health departments during major outbreaks, emerging threats, and disasters that affect public health.

Information for Replication:

Additional Authors: Adelaide Appiah MPH
Presenting Author: Hitomi Abe MPH
Presenting Author: Samantha Ritter MPH

Centering Equity in the Development and Implementation of the Maternal Health and Learning Center (MLHIC)

Submission Type: Oral Abstracts

Track: Racism, Equity, Social Justice

Author(s): Deitre Epps

Issue: The United States (US) is the only high-income country with an increasing maternal mortality rate.^ There are stark racial, ethnic, and geographic disparities in adverse Maternal Health outcomes in the US. African American, American Indian and Alaskan Native women experience a three to four-fold higher and two-fold higher risk of dying from pregnancy-related complications than White women, respectively.* Recognition of this problem led to recent HRSA** funding of the Maternal Health Learning and Innovation Center (MHLIC) whose purpose is to support HRSA awardees and key stakeholders in their efforts to reduce and prevent maternal mortality and severe maternal morbidity (SMM) and associated inequities. MHLIC is currently implementing a multifactorial 5-year initiative to advance federal and state-level efforts to eliminate preventable maternal deaths and reduce SMM. References: ^Collaborators GBDMM. Global, regional, and national levels of maternal mortality, 1990-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet.2016;388(10053):1775-1812. *Petersen EE, Davis NL, Goodman D, et al. Vital Signs: Pregnancy-Related Deaths, United States, 2011-2015, and Strategies for Prevention, 13 States, 2013 2017.MMWRMorbMortalWklyRep.2019;68(18):423-429. ^^Hammer, M.R. (2011). Additional cross-cultural validity testing of the Intercultural Development Inventory. International Journal of Intercultural Relations, 35(4), 474-487. https://doi.org/10.1016/j.ijintrel.2011.02.014 **Health Resources and Services Administration.

Setting: MHLIC is a multidisciplinary team of clinical and public health professionals who provide resources, technical assistance and capacity-building assistance in Maternal Health policy, community and provider engagement, and Maternal Health innovations to awardees and stakeholders, with equity as a cornerstone.

Project: MHLIC developed and implemented a multi-pronged approach to embed anti-racist principles internal to the organization. Continuous cultural development improvement is central to our work. MHLIC implemented mechanisms to provide technical assistance and capacity building to external stakeholders with an equity lens. This multifaceted approach provides the foundation to build an equity-focused national Maternal Health resource center to address maternal mortality and morbidity and associated inequities in the US. MHLIC implemented the Intercultural Development Inventory® (IDI), a validated and reliable assessment of intercultural competence used to assess individual, group, and organizational mindset and skillset in their intercultural interactions.^^ Results of the IDI identified the intercultural development orientation of the MHLIC. MHLIC then developed an intentional intercultural development plan, both at the organizational and individual levels. The plan included internal MHLIC growth activities including racial identity caucusing, an equity workgroup, intercultural coaching and opportunities to interact with other MHLIC partners working on their intercultural development MHLIC prioritized mechanisms to develop and implement equity across all center activities, universal support for awardees through reading books and articles, a webinar series, annual learning institutes, and an online resource center, featuring trainings on equity and implicit bias.

Accomplishment/Result: Ninety-six percent of MHLIC members completed the IDI. Organizational results were shared with the larger MHLIC team, while individual results were shared only with the individual. Results were used to develop equity-centered, organizational and individual action plans. For example, racially identified caucusing (October 2020), maintaining monthly participation of about 10 people. Externally focused resources were developed and launched to support the awardees and stakeholders, such as the equity in Maternal Health webinar series that produced four webinars on issues such as cultural humility and Black Maternal Health and advancing equity in our work.

Barriers: MHLIC was just beginning to develop its infrastructure when the COVID-19 pandemic prohibited in-person opportunities, requiring MHLIC to develop and cultivate collaborative, authentic relationships virtually.

Lesson Learned: Centering equity at a national Maternal Health technical assistance center requires a multi-faceted approach to support internal staff development while also centering equity throughout technical assistance, trainings, and resources provided. Ensuring the allocation of funding is essential to ensure dedicated time is available to develop, implement and evaluate the equity and Maternal Health work.

Information for Replication:

Additional Authors: Leslie deRosset MSPH, MPH
Presenting Author: Deitre Epps MS
Presenting Author: Lydia Swartz **Non-Presenting Author:** Katherine Byrant MA, MSPH **Non-Presenting Author:** Abby C. Cannon MSW, MPH

Challenges and Opportunities in meeting Behavioral Health Needs in American Indian/Alaska Native (AI/AN) Maternal & Child Populations

Submission Type: Oral Abstracts

Track: Mental/Behavioral Health

Author(s): Katrin Patterson MPH

Issue: American Indian/Alaska Native (AI/AN) populations struggle disproportionately with mental and behavioral health issues due to historic and ongoing oppression, disenfranchisement, and lack of access to culturally appropriate care. Within AI/AN populations, women, children, and youth are most likely to not have access to the kind of care they want and need.

Setting: What are the mental health/substance use needs specific to AI/AN MCH populations according to Title V block grant applications? What, if anything, is Title V doing to partner with tribal communities? To answer these study questions, we conducted an environmental scan of the 2021 Title V block grant applications. We searched by key terms related to mental health and substance use to conduct the scan, and then narrowed down results to those specifically referring to AI/AN services and partnerships.

Project: Five states were identified through the environmental scan to partner with AI/AN communities to support MCH mental health and substance use challenges. These findings from the environmental scan of Title V block grant applications will be explored in-depth, including ways in which Title V programs are addressing AI/AN mental health and substance use, challenges identified, and opportunities for improvement. A state program will provide an example of partnering with tribal health departments on behavioral health efforts for MCH that other Title V programs can replicate. An AI/AN mental health-focused community-based partner will also provide their perspective on how to authentically partner with tribal communities and opportunities for Title V to support AI/AN MCH mental health and substance use services.

Accomplishment/Result: Title V programs would be better positioned to fulfill their missions through building and maintaining authentic partnerships with AI/AN communities, and programs such as ASTHO's and AMCHP's Promoting Innovation in Maternal & Child Health Policymaking (PRISM) Learning

Community could be leveraged to facilitate connections and disseminate resources that center AI/AN needs and narratives.

Barriers: Although we were able to analyze state Title V block grant applications, this study is limited in its understanding of AI/AN and Title V efforts at the local level. We hope this session will prompt local health departments to share their work with their peers. The limited number of states working with AI/AN communities to support MCH mental health and substance use services highlights the need for more sustainable, equitable, and meaningful state/tribal partnerships to improve AI/AN mental health and substance use disorder outcomes. There is also a need for more education around what Title V is already doing in this space so others can consider replicating their efforts, as this session will do through speakers from a state program and an AI/AN mental health community-based organization.

Lesson Learned: While both federal-level and state-level initiatives are beginning to recognize that culturally- and traditionally appropriate resources (including providers and tools) are necessary to improve mental health and substance use disorder (MH/SUD) outcomes for AI/AN populations, the need for high-level coordination and collaboration remains. State and local health partnerships with tribal health departments to address AI/AN MH/SUD needs can serve as an example and provide strategies for other states and programs to replicate.

Information for Replication: The public health implications of this study include highlighting the importance of AI/AN leadership in improving AI/AN mental health and substance use disorder outcomes. Providers, administrators, and policymakers at local, state, and national levels all benefit from learning from and listening to AI/AN communities and their histories.

Additional Authors: Sanaa Akbarali MPH **Non-Presenting Author:** Jessica Simon

Characteristics of People With and Without Laboratory-Confirmed SARS-CoV-2 Infection During Pregnancy — Massachusetts, March–December 2020

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Hanna Shephard MPH

Background: Studies demonstrate that pregnant people infected with SARS-CoV-2, the virus that causes COVID-19, are at increased risk for severe illness and death when compared to nonpregnant, infected people. However, there is limited information on how the characteristics of pregnant people with laboratory-confirmed SARS-CoV-2 infection compare to pregnant people without SARS-CoV-2 infection, which can help tailor public health messaging and interventions.

Study Questions: What are the characteristics of pregnant people with and without laboratory-confirmed SARS-CoV-2 infection during pregnancy in Massachusetts?

Methods: We linked data on women aged 11–59 years with laboratory-confirmed SARS-CoV-2 infection to provisional birth and fetal death records for completed pregnancies occurring in Massachusetts during March–December 2020. Demographic characteristics, comorbidities, and pregnancy complications were obtained from vital records, and SARS-CoV-2 infection status was obtained from infectious disease case reports. Chi-squared tests were performed to identify significant differences ($p<0.05$) in the distributions of characteristics of pregnant people by infection status overall and stratified by race/ethnicity.

Results: We identified 53,790 completed pregnancies during the study period, 1,664 with and 52,126 without a laboratory-confirmed SARS-CoV-2 infection during pregnancy. A higher proportion of infected pregnant people were Hispanic (47% vs. 20%) or non-Hispanic Black (17% vs. 10%), Spanish speaking (25% vs. 6%), born outside the United States (63% vs. 33%), less than 25 years of age (21% vs. 12%), or had less than high school education (20% vs. 7%), public insurance (62% vs. 37%) or inadequate prenatal care (51% vs. 44%). A higher proportion of infected pregnant people had pre-pregnancy diabetes (1.5% vs. 0.9%) and higher mean pre-pregnancy body mass index (BMI) (27.9 vs. 26.4 kg/m2). Within each

racial and ethnic subgroup, higher proportions of pregnant individuals with SARS-CoV-2 infection had less than a high school education. However, for age, spoken language, nativity, insurance status, prevalence of pre-pregnancy diabetes, and BMI, differences by infection status were observed for some racial and ethnic subgroups, but not all.

Conclusions: This population-based analysis of characteristics of pregnant people by SARS-CoV-2 infection status demonstrates the disproportionate impact of COVID-19 on Hispanic and non-Hispanic Black pregnant people in Massachusetts. In addition to the racial and ethnic disparities observed, this analysis highlights differences in sociodemographic factors by infection status. Characteristics of women with and without confirmed SARS-CoV-2 infection differed across racial and ethnic groups, except for lower maternal education among those infected with SARS-CoV-2, which was seen across all groups.

Public Health Implications: This study contributes to the body of literature documenting the racial and ethnic inequities that exist and persist during the COVID-19 pandemic. These findings can inform culturally competent public health messaging and outreach materials for pregnant persons that are inclusive of all education levels and translated into multiple languages, especially Spanish. Pregnant persons should be prioritized in COVID-19 prevention and mitigation efforts as existent racial and ethnic disparities for Maternal Morbidity and Mortality may be widened by the COVID-19 pandemic. Future research is needed to elucidate the structural factors leading to the observed inequities.

Additional Authors: Hanna Shephard MPH
Presenting Author: Mahsa Yazdy PhD, MPH **Non-Presenting Author:** Susan Manning MD, MPH **Non-Presenting Author:** Eirini Nestoridi MD **Non-Presenting Author:**

Chicago's Best Babies Zone Storytelling Project: A Community-Driven Approach to Equity-focused Strategic Planning

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Pamela Roesch MPH

Issue: The East Garfield Park Best Babies Zone (BBZ, Chicago) is supported by CityMatCH and four backbone institutions, including the Chicago Department of Public Health. The BBZ seeks to improve birth outcomes by disrupting the social and economic determinants of health caused and perpetuated by systemic racism. Although the BBZ is led by an Advisory Team of community residents, leaders, and organizations, the group wanted to ensure that the lived experiences and needs of families guided the initiative's strategic directions. In particular, the team wanted to hear from hard-to-reach groups that may not engage in community activities.

Setting: East Garfield Park, a Black/African American community on Chicago's West Side, has a powerful group of local leaders intent on dismantling the legacy of racist policies that systematically segregated and divested its residents, resulting in poor maternal and child health. In particular, the infant mortality rate in 2013-2017 was 13.3 deaths per 1,000 births —over double that of Chicago. About 15% of infants are born preterm and 15% are born with low birth weights. While community members bear a burden of poor health outcomes, East Garfield Park is home to several organizations that are looking upstream to address the social determinants of health.

Project: To ensure that BBZ activities address the root causes of inequity and are grounded in lived experiences, the Advisory Team used storytelling as a way to understand birth, childhood, parenthood, and family. From September 2020 through June 2021, the Advisory Team gathered stories from a cross-section of residents. The Advisory Team then used findings from a subsequent thematic analysis to develop creative community-based, multi-sector, and collaborative solutions.

Accomplishment/Result: We gathered over 15 stories from a variety of residents, including mothers, fathers, grandparents, and caretakers. After transcribing, we used inductive coding to identify recurrent themes. We broadly shared these themes in an online, public compilation that included video clips, and used themes to develop BBZ short- and long-term strategic plans. We collaborated with a local organization's recording studio to compile our final public dissemination piece.

Barriers: Originally, the storytelling project was intended to be conducted in-person; however, due to the COVID-19 pandemic, we were required to conduct activities virtually. Gathering stories requires a level of trust between the interviewer and narrator; therefore, we employed various mechanisms, including a pre-session introductory meeting and a tech check, to overcome technology barriers to trust.

Lesson Learned: We found storytelling to be an effective mechanism for strategic planning, allowing our Advisory Team to better understand the varied experiences of community members. Our work resulted in publicly-available videos that served as a source of pride for residents while familiarizing medical and social service providers with the challenges and assets within East Garfield Park. We also found that storytelling was an innovative way to introduce an initiative and gain community buy-in. Residents shared stories that not only honed in on the challenges, but elevated the assets, the cornerstones of long-term, sustainable transformation of community health.

Information for Replication:

Additional Authors: Sally Lemke **Non-Presenting Author:** Pamela Roesch MPH
Presenting Author: LaDarius Curtis **Non-Presenting Author:** Sara Moffitt **Non-Presenting Author:** Cecilia Almazan **Non-Presenting Author:** Jennifer Seo

Co-Building Data Infrastructure For Indigenous Communities: Wisconsin's Experience Expanding the PRAMS survey

Submission Type: Oral Abstracts

Track: Data Innovation

Author(s): Fiona Weeks MSPH

Issue: Vital records indicate that Indigenous families, on average, have poorer birth outcomes compared with their white peers. However, no data on perinatal experiences exist in Wisconsin that would identify reasons for these disparities.

Setting: We undertook this project in Wisconsin, home to 12 Tribes, including 11 federally recognized. Of approximately 64,000 annual births in Wisconsin, about 1,400 are to people who identify as American Indialaska Native (hereafter, "Indigenous"). Data obtained through this project will benefit Tribal and urban Indigenous communities' perinatal health program planning efforts.

Project: Our team (Wisconsin Health Department staff, researchers from University of Wisconsin-Madison, a senior epidemiologist from the Great Lakes Inter-Tribal Epidemiology Center (GLITEC) and an Indigenous evaluation expert) received funding to oversample Indigenous women for the 2020 Wisconsin Pregnancy Risk Assessment Monitoring System (PRAMS) survey. We met with Tribal Health Directors several times during project planning to assess alignment with Tribal Health priorities and receive feedback on its implementation. Directors learned about the data that would be generated and how they could access it for program planning for their communities. The Great Lake Inter-Tribal Council Board of Directors, comprised of 9 Tribal chairpersons in Wisconsin, passed a resolution supporting the project. We also individually contacted all 12 Tribal leaders offering them the opportunity to opt out on behalf of the Indigenous women living in their service areas. None opted out. In 2020, 100% of self-identified Indigenous people who gave birth in were included in the Wisconsin PRAMS sample, in addition to the normal random sample of non-Hispanic black, non-Hispanic white, and people of other races. Tribal maternal and child health program staff distributed informational materials featuring artwork by an Indigenous designer to promote survey participation.

Accomplishment/Result: The census sample of Indigenous mothers garnered a response rate of 46.2%, increasing the number of annual Indigenous respondents from about 20 to over 600. This was higher than expected, especially when many states saw response rate decreases due to the pandemic. There was great enthusiasm among Tribal leaders and clinic staff to see the data, which will be available at the end of 2021; they requested repeating the oversample in future years.

Barriers: Hypothesized barriers included lack of cultural relevance and congruence of the engagement approach. By engaging with Indigenous leaders, Tribal health staff and artists, we exceeded our projected response rate by nine percentage points (46% vs. 37%).

Lesson Learned: Approval by Tribal leadership and partnership with Tribal health clinic staff in promoting survey participation were crucial to our success. We also benefited from the expertise of an Indigenous evaluator and methodologist (Dr. Bowman) who provided recommendations on long-term Tribal engagement. We plan to continue to engage with Tribal leaders and staff on analysis, interpretation, and dissemination of the data. Generating population data relevant to Indigenous communities requires significant monetary investment, and respecting Tribal sovereignty and self-determination requires a departure from business as usual.

Information for Replication: Research funds from the Wisconsin Alumni Research Foundation covered the $140,000 cost of the oversample. We hope to secure funding to repeat the oversample every three years.

Additional Authors: Fiona Weeks MSPH, PhD Candidate
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Collaborating with Community Experts to Design Approaches for Federal EITC Uptake in North Carolina

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Alexandria Coffey MPH

Issue: North Carolina (NC) has one of the highest rates of working poverty in the nation(1). Poverty leads to poor and disparate outcomes across the life course, including infant mortality, 3rd grade reading, and chronic disease(2). NC families of color experience significant health inequities and face added barriers to financial advancement. The federal Earned Income Tax Credit (EITC) can lift families out of poverty and is recognized as a cost effective, evidence-based intervention to improve MCH outcomes in five years(3,4,5). However, more than 20% of eligible North Carolinians do not claim the EITC, losing opportunities for improved health. In partnership with leaders across multiple regions in NC, the aims of this project were to understand federal EITC uptake in NC, as well as identify data-driven, evidence-based strategies to improve uptake.

Setting: This project engaged leaders and community members from 5 rural regions in NC to understand facilitators and barriers to federal EITC uptake, and identify strategies to increase uptake. Low-income people and working families will hopefully benefit from this collaborative work.

Project: Our project's interdisciplinary team includes leaders from ncIMPACT, Rural Forward NC, Together Transforming Lives, the Jordan Institute for Families, and collaboration with NC Budget and Tax Center. The innovative structure of this project engaged a diverse group of community leaders as part of a Statewide Steering Committee and Local Research Groups. We conducted a statewide analysis to understand county-level demographic, geographic, and economic characteristics associated with EITC uptake in NC. We then conducted focus groups with 200 community leaders to inform effective, community informed, and community-driven strategies to improve EITC uptake. Using bi-directional and cross-site dialogue, community partners shaped research questions and interview guides, ground truthed data results, and recruited study participants. The Local Research Groups led sharing back findings with community groups and identifying strategies for their regions.

Accomplishment/Result: Findings identified county rurality and distance to free tax prep services (VITA), as not associated with EITC uptake. Counties with larger proportions of African American, Hispanic, and Native American individuals had higher levels of federal EITC uptake. Focus groups identified the following interventions: increasing EITC awareness among taxpayers and tax preparers, addressing language and cultural barriers, providing more detailed information about who qualifies, and recognizing the role of government trust.

Barriers: While individual-level tax return data prevented assessment of individual factors, county-level data developed a foundation for future work. The COVID-19 pandemic necessitated the use of online platforms for focus group facilitation which worked well for the research but didn't give the research team a chance to travel to each region and meet people face-to-face.

Lesson Learned: The EITC improves maternal and infant health outcomes. MCH leaders should be aware of the EITC and provide information and supports to eligible families to help them access these funds. Community voices are essential for identifying the most effective strategies to promote equitable EITC participation. Equity has been integrated into the construct of our overall project team, approach, and methods. We approached planning and conducting the research process with people whose life-world and meaningful actions were being studied.

Information for Replication: This model of conducting research can be replicated, in both urban and rural settings, on many public policy topics. References (for Issue Section) 1: Sirota, A Bottom-Up Tax Cut: A NC Earned Income Tax Credit Boosts Local Communities, Working Families 2: Pascoe, Wood, Duffee, Kuo, et al. Mediators and Adverse Effects of Child Poverty in the United States 3: Centers for Disease Control, Earned Income Tax Credits 4: Centers for Disease Control, The HI-5 Interventions 5: Centers for Disease Control Foundation, Earned Income Tax Credits (EITC): An Underused Tool to Improve Maternal and Child Health

Additional Authors: Alexandria Coffey MPH
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Presenting Author: Phillip Sheldon MPA

Collecting and Using Social Determinants of Health Information in Illinois Maternal Mortality Review

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Cara Bergo PhD, MPH

Issue: Social determinants of health (SDOH) are the social, political and economic structures that influence health and contribute to inequities. The Illinois Department of Public Health (IDPH) gathers and abstracts information on pregnancy-associated deaths for review by the multidisciplinary Maternal Mortality Review Committees (MMRCs). The MMRCs review case abstracts to identify factors contributing to each death and develop corresponding recommendations at five levels: patient/family, provider, facility, community, and systems. IDPH recognized the need for more intentional consideration of community- and systems-level contributing factors. While the Maternal Mortality Review Information Application, a CDC data system, includes a social/environmental health form, it does not address all SDOH topics of interest to Illinois, including housing instability and history of trauma (e.g., sexual abuse). To improve MMRC discussions around community- and systems-level contributing factors, the MMRCs needed supplemental SDOH information.

Setting: The activities were conducted by IDPH and Illinois' MMRCs for maternal deaths among Illinois residents.

Project: IDPH developed an SDOH-specific abstraction form to organize information on 46 indicators of maternal social experiences, such as community context, education, language, health care access, and economic stability. The form uses checkboxes, rather than text boxes, to document information and simplify analysis. Abstractors completed the form for all deaths during 2016-2017 (n=127) with information from available records, including medical records, autopsy/coroner report, police records, and newspaper articles. The value of the SDOH form was evaluated by examining changes in MMRC review decisions from 2015 cases (n=65; pre-implementation) to those for 2016-2017 cases (post-implementation). The SDOH form was also used to examine the prevalence of traumatic stress (housing instability, justice system involvement, involvement with the child welfare system, community and domestic violence, or other trauma) among pregnancy-related deaths.

Accomplishment/Result: The introduction of the SDOH form provided new information to MMRCs, allowing discussions to move beyond clinical factors. Implementation led to an increased percentage of pregnancy-related deaths with at least one community-level contributing factor (14% to 43%) or at least one systems-level contributing factor (36% to 57%). A community-level contributing factor ("community knowledge") was the 4th most common contributing factor for the 2017 deaths and was the first time a non-clinical factor was among the top 5 factors. During 2016-2017, at least one traumatic stressor was identified for 33.3% of pregnancy-related deaths, with trauma (e.g., history of abuse), child welfare involvement, and domestic violence being the most common traumatic stressors.

Barriers: SDOH information is commonly absent from frequently used data sources such as vital and medical records, underestimating these experiences. Increased access to records that contain extensive social histories, such as mental health or substance use treatment records, would be helpful for improving SDOH data collection. Key informant interviews with family members of the deceased woman could yield additional SDOH information, but Illinois has not implemented interviews in the MMRC protocol.

Lesson Learned: Illinois' SDOH form expanded MMRC conversations about non-clinical issues and was valuable for identifying contributing factors at the community- and systems-levels. The SDOH form has enhanced discussions of SDOH issues by providing information about the woman's social context.

Information for Replication: IDPH will share the SDOH form for use or adaptation by other MMRCs. Abstractors found SDOH information is best collected concurrently with other data elements because it can be found in any of the available records.

Additional Authors: Cara Bergo PhD, MPH
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Non-Presenting Author: Kenya McRae JD, PhD **Non-Presenting Author:** Sophie Shepley BA

Continuity of Care in Breastfeeding Support: A Blueprint for Communities

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Harumi Reis-Reilly MS, LDN, CNS, CHES, IBCLC

Issue: There are persistent disparities in breastfeeding duration rates by race, ethnicity, and socio-economic status. Through the Healthy People 2030 initiative, national objectives have been re-set to focus on the need to increase the proportion of infants who are breastfed at six and through 12 months. As maternal and pediatric care is often not centralized, family units receive support in a number of different settings across the first 1,000 days. There needs to be intentional coordination among the numerous lactation support providers and settings in both prenatal and postpartum periods. In addition to care coordination, CoC in breastfeeding also refers to the establishment of proactive supportive environments where families live, work, play and raise children, through implementation of organizational policies, systems and environment (PSE) solutions. Establishing chest/breastfeeding CoC in historically oppressed communities is key to improving breastfeeding duration and exclusivity rates, advancing breastfeeding equity, and improving overall community health.

Setting: With funding from the Centers for Disease Control and Prevention and in partnership with the U.S. Breastfeeding Committee, NACCHO developed the Continuity of Care (CoC) in Community Breastfeeding Support Blueprint (Blueprint) with inputs from over 100 experts in the field that aims to ensure that lactation support services are continuous, accessible, and coordinated in communities across the country.

Project: Intended for local level organizations and local health staff that interact with pregnant and postpartum families, the blueprint provides seven recommendations to establish CoC to strengthen the lactation landscape at the local level. Developed with a public health lens, these recommendations aim to increase local capacity to implement community-driven approaches to support chest/breastfeeding that are centered on the needs of disproportionately impacted populations. The Blueprint's recommendations are categorized into two themes: improvements within the community infrastructure and capacity building for the lactation workforce. Each recommendation is supported by practical strategies targeted at different stakeholders to enable the advancement of CoC in communities across the country. This session will introduce the 2021 Continuity of Care (CoC) in Community Breastfeeding Support Blueprint, provide an overview of the public health significance of chest/breastfeeding CoC, common challenges to establishing CoC, and share successful stories of CoC implementation.

Accomplishment/Result: After two years of monthly meetings to collect inputs with over 100 experts across the country, and inputs from national surveys, the common definition of Continuity of Care was developed as Continuity of care in lactation support is achieved by consistent, collaborative, and seamless delivery of high-quality services for families from the prenatal period until no longer breastfeeding. Continuity of care results in transitions of care that are coordinated and fully supportive of families throughout their breastfeeding journey.   In addition, seven recommendations were developed: COMMUNITY INFRASTRUCTURE RECOMMENDATIONS: 1. Integrate breastfeeding promotion, protection, and support goals into existing community health improvement strategies and as a component of health promotion programs. 2. Create environments that proactively promote, protect, and support chest/breastfeeding throughout the community, in spaces where families live, work, play, worship, shop, travel, receive services, and raise children. 3. Implement a care coordination system across the prenatal through weaning stages, including the development of referral systems, follow-up accountability, and hand-off protocols during transitions of lactation care from one provider/setting to another. 4. Develop a shared community breastfeeding database system to track infant feeding consistently for community health collective impact efforts. LACTATION WORKFORCE RECOMMENDATIONS: 5. Increase community capacity to provide consistent, tailored, evidence-based lactation education and support by regularly training all individuals who provide services to the family unit. 6. Provide family-centered lactation care that is responsive to the intersectionality of families' multiple identities, their social determinants of health, and other factors impacting their infant feeding journey.   7. Assume a community champion role, beyond the provision of direct services, by identifying and engaging key stakeholders to identify and help remove structural barriers to chest/breastfeeding within systems, organizations, and the community.

Barriers: Though we recognize the critical impact of federal and state influences to community support, the Blueprint focuses on actions that can be taken at the local level to catalyze change. Therefore, this blueprint does not address state and federal issues that impacts chest/breastfeeding continuity of care.

Lesson Learned: While many communities with lower rates of breastfeeding often lack consistent community support from providers and institutions, Black, Indigenous, and People of Color (BIPOC) families often face additional challenges related to navigating systems of oppression at interpersonal and institutional levels. Establishing chest/breastfeeding CoC in historically oppressed communities is key to improving breastfeeding duration and exclusivity rates, advancing breastfeeding equity, and improving overall community health.   The blueprint recommendations and strategies were developed centering the needs of historically oppressed communities. The families in these communities are disproportionally affected by structural barriers to chest/breastfeeding, such as limited availability of skilled support, and more likely to be exposed to community environments not supportive of chest/breastfeeding. These are the same communities that may benefit greater from the human milk feeding positive outcomes, such as reduced rates of childhood and chronic diseases. The blueprint strategies aims to tackle gaps in CoC by addressing community barriers to chest/breastfeeding, such as create equitable paths to career advancement opportunities, especially for BIPOC Lactation support providers (LSP) to better serve BIPOC families and diversify the lactation workforce, integrate universal screening for social determinants of health that may impact infant feeding practices to identify families at-risk for suboptimal breastfeeding into routine prenatal and postpartum appointments and collaborate with community partners to address these factors through referrals to appropriate services, and a call for the lactation workforce to recognize own implicit biases to avoid prejudice and stereotyping. These are general recommendations that will need to be tailored to community's unique needs.

Information for Replication:

Additional Authors: Nikia Sankofa MPH, MPA
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COVID-19 Virtual Doula Program- Healthy Start, Inc. Pittsburgh

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Demia Horsley MPH

Issue: At the onset of the COVID-19 pandemic birthing facilities limited support people who could attend births and prenatal with pregnant people. We saw the widespread reaction to these precautions and their classification as human rights violations. No one should have a birth alone or under-supported.

Setting: In Allegheny County, Pittsburgh, PA we too were navigating this unexpected result of the pandemic. Healthy Start and local MCH partners began meeting to strategize about meeting the needs of our expectant families. We had the foresight to know that Black women and birthing people, who already experience disproportionately poor birth outcomes and treatment, would also be disproportionately impacted by these restrictions, and moved forward with intent to center black families.

Project: Some hospitals were allowing one support person forcing families to choose between their partners, who they wanted to be present at the birth but didn't always feel could adequately support them, and their doulas or other support whom they felt had a better understanding of how to care for them during labor. We began hearing that women were so afraid to birth in the hospitals, that they would rather birth at home with little to no education or preparation. We realized the opportunity to stand in the gaps and developed the Virtual Doula Program (VDP). The VDP provided/provides birth support utilizing virtual technology. We loan iPads to expectant families so that they could connect with their doulas during labor and birth. Doulas also provide perinatal education and support visits.

Accomplishment/Result: To date, we've received over 100 referrals and supported over 50 births. We're in the beginning of our formal evaluation however surveys from participants overwhelmingly indicate that doula support positively influenced participant's satisfaction with their birthing experience. We also developed strategic partnerships that have aided in sustainability of the initiative. Partners include the local hospital-based doula program to increase capacity to serve expectant families and a local MCO to reimburse for services provided to their members. Most notably, we have worked to drive forward policy efforts around doula support. Including meeting with leadership from one of the local hospital systems that, months into the pandemic, had yet to allow doula support, to encourage allowance of in-person doula support. Currently, we take part in a statewide initiative working towards reimbursement for doulas.

Barriers: Some of the most notable challenges experienced were technology issues. Some families did not know how to use the technology, others forgot the technology at home and during one period we experienced an influx of births and had issues coordinating the iPads. We were able to secure more iPads, provide tip sheets regarding use of devices and doulas encouraged participants put the iPad in their birthing bag so that it is hospital ready.

Lesson Learned: The doula program emphasizes the value of doula support even when provided virtually. This also highlights innovative approaches to deliver care effectively. As we enter year 2 of the program, we want to ramp up our data collection and evaluation efforts to have a more complete view of our successes.

Information for Replication:

Additional Authors:

Creation of a Race and Ethnicity Dashboard: Addressing Disparities within Obstetric and Neonatal Inpatient Care

Submission Type: Oral Abstracts

Track: Data Innovation

Author(s): Elizabeth Rochin PhD, RN, NE-BC

Background: Racial, ethnic, and socioeconomic disparities continue to generate widespread concern, particularly among Maternal Morbidity and Mortality researchers. Maternal outcome disparities, particularly that of maternal mortality, warrant immediate attention and focus for assuring a standardized care approach, rigorous quality assessment and rapid cycle improvement. The variation in obstetrical outcomes across hospitals, varied longitudinal performance on perinatal indicators and the persistent racial and ethnic disparities in perinatal and neonatal outcomes require innovative strategies that tackle these challenges together. There are currently few resources that exist within obstetric/neonatal inpatient settings that focus on outcome metrics and racial/ethnic disparities.

Study Questions: 1) What racial and ethnic disparities currently exist within a national sample of obstetric and neonatal inpatient discharges? 2) To what extent are current systems in place for obstetric and neonatal inpatient teams to measure outcome disparities?

Methods: In January 2020, NPIC established a Disparities Advisory Committee from volunteer member hospitals to begin the work of identifying opportunities for the creation of a dashboard that could report on key outcome metrics through the lens of race and ethnicity. This multidisciplinary Committee was selected to have broad representation of race, ethnicity, sociodemographic and geographic organizational diversity.). Within this framework, NPIC uses administrative data and supplemental data files that include patient demographics. Data are validated by hospitals prior to being compiled into the PCDB, which consists of both maternal and neonatal hospital discharges, the latter occurring from birth to 28 days after birth. NPIC case mix calculations include unadjusted and adjusted length of stay and charge data. Case mix adjusting is a method for removing the impact of variations in case mix across hospitals and comparing average lengths of stay and average charges. NPIC uses APR-DRGs to group cases and case mix adjust utilization data. Reviewing this information before and after COVID will be critical in measuring outcome disparities within and beyond the pandemic.

Results: The inaugural NPIC Race and Ethnicity Dashboard revealed similar findings to those in the literature, including disparities related to demographics and clinical outcomes, such as overall cesarean section rate, severe maternal mortality (hemorrhage) and special care discharges. In addition, exploration of “other” and “unknown” within race and ethnicity reporting will require a consistent and sustained approach to support hospitals in improving the accuracy of race and ethnicity reporting. There were numerous instances where race and ethnicity were listed as "other" or "unknown."

Conclusions: Utilization of this dashboard in practice includes tracking improvements in outcome equity; measuring improvements in diversity, equity, and inclusion initiatives; addressing accuracy of race and ethnicity reporting by reductions in “other” and “unknown” responses to admission interviews; utilization by healthcare leadership and patients/families to address outcomes; and development of obstetric and neonatal-specific metrics related to outcome disparity.

Public Health Implications: This research and subsequent implementation for equity and outcome analysis could provide a foundation for more robust understanding of bias and workforce design and integration. Respectful maternity care is an essential component of obstetric services. Highlighting equity (or inequity) of outcomes related to severe Maternal Morbidity and Mortality must become a routine care process.

Additional Authors: Elizabeth Rochin PhD, RN, NE-BC

Detecting Home Visiting Program Impacts on Maternal and Child Health Using Linked Administrative Data

Submission Type: Oral Abstracts

Track: Home Visiting

Author(s): Rebecca Fauth PhD, MS

Background: Evaluating the impacts of Home Visiting provides information on its utility promoting maternal and child health and development and can support program sustainability. Evidence of Home Visiting impacts on health and developmental outcomes is equivocal. Massachusetts employs multiple Home Visiting models including Early Intervention Parenting Partnerships (EIPP) and Welcome Family. EIPP provides home visits delivered by a multidisciplinary team to expectant parents and families with infants who experience behavioral health challenges or other stressors. Welcome Family is a universal short-term nurse Home Visiting program for families with newborns. Both programs provide health assessments and screenings and service referrals to families who may experience barriers to service connections. We assessed impacts of the Home Visiting programs on emergency department (ED) and Early Intervention (EI) utilization.

Study Questions: Are EIPP and Welcome Family participants: (a) less likely to use the ED; or (b) more likely to be referred to and receive EI than similar families not enrolled in these programs?

Methods: We conducted a quasi-experimental impact study using linked secondary data sources. Home Visiting program data for participants enrolled during 2013-2017 and birth certificates were used to generate program and comparison groups. ED records and EI data for referrals and service receipt up to 3 years postpartum were used to assess study outcomes. Program and comparison groups were created using coarsened exact matching. Participants matched on selected covariates were grouped into strata; weights were created to balance program and comparison groups on demographics, community of residence, and Maternal Health characteristics related to program eligibility. Lack of data on mothers' psychosocial characteristics (e.g., depression) is a limitation. Program effects were assessed by fitting weighted regression models, by year, to estimate odds ratios (aOR) adjusted for child sex, maternal age at birth, program catchment area, insurance type, race/ethnicity, parity, and preterm birth.

Results: Findings revealed increased odds of ED usage among EIPP children under 1 year (aOR=1.30) and mothers during the first (aOR=1.28) and second (aOR=1.31) years postpartum relative to the comparison group; ED usage did not vary by Welcome Family participation, on average. Home Visiting participants were more likely to be referred to EI by age 1 (aOR=7.11 EIPP; aOR=1.35 Welcome Family) and receive EI by age 3 (aOR=1.67 EIPP; aOR=1.36 Welcome Family).

Conclusions: Home Visiting appears effective in connecting families to EI, particularly for EIPP families. Increased ED usage was observed among EIPP participants. Analysis of claims data could elucidate whether this is evidence of greater healthcare use.

Public Health Implications: Findings provide evidence of the role of Home Visiting in connecting families to EI services. Linkage and analysis of claims data on postpartum and well-child care could provide understanding of the effectiveness of Home Visiting in facilitating access to recommended care and provide context for interpreting increased ED usage. Investigating linkages to self-reported data sources, such as the Pregnancy Risk Assessment Monitoring System, could enable measurement of psychosocial characteristics to improve matching precision. Home Visiting programs can leverage findings to pursue fiscal sustainability and maximize resources to reach more families.

Additional Authors: Chie Kotake PhD **Non-Presenting Author:** Susan Manning MD, MPH **Non-Presenting Author:** Beth Buxton LCSW **Non-Presenting Author:** Jessica Goldberg PhD **Non-Presenting Author:** Christine Silva MPH **Non-Presenting Author:** Katie Stetler MPH **Non-Presenting Author:**

Developing a Statewide Equity Dashboard to Drive Quality Improvement in Substance Addiction Treatment during Pregnancy

Submission Type: Oral Abstracts

Track: Substance Use/Smoking/Vaping

Author(s): Hafsatou Diop MD, MPH

Background: Medication-assisted treatment (MAT) for opioid use disorder (OUD) remains underutilized among racial and ethnic minorities, including pregnant people, because of structural racism. Inequities in maternal treatment and outcomes require increased efforts to achieve equitable care. Since 2017, the Perinatal-Neonatal Quality Improvement Network (PNQIN) of Massachusetts has led a statewide effort to improve outcomes for opioid-exposed newborns and their families and developed a database of key metrics. The database was used to examine key outcomes by race/ethnicity over time, first focusing on MAT at delivery.

Study Questions: What is the prevalence of MAT use at delivery over time and are there any differences in OUD treatment by race/ethnicity?

Methods: We analyzed mother-newborn dyads in the PNQIN database from January 2017 to October 2020 from 25 hospitals. MAT was defined as prescribed methadone, buprenorphine, or naltrexone at time of delivery. We calculated the prevalence of MAT in two-year intervals (2017/2018, 2018/2019, 2019/2020) and examined trends, prevalence ratios (PRs), and prevalence differences (PDs) with 95% confidence intervals (CI) for MAT by race/ethnicity using White non-Hispanic (WNH) as the reference.

Results: Twenty-five Massachusetts hospitals contributed data on 2,901 dyads, of which 87.1% were WNH, 3.8% were Black non-Hispanic (BNH), and 9.2% were Hispanic. Using two-year averages, the prevalence of MAT ranged from 63%-67% [95% CI (50%, 78%)] among BNH and 64%-68% [95% CI (56%, 76%)] among Hispanics compared to 82-84% [95% CI (80%, 86%)] among WNH. PRs were similar for BNH and Hispanic relative to WNH, ranging from 0.75 to 0.8 with 95% CI from 0.62 to 0.96. PDs were similar for BNH and Hispanic relative to WNH, ranging from 0.16 to 0.19 with 95% CI from 0.04 to 0.33. PRs and PDs remained similar over time.

Conclusions: Despite ongoing improvement efforts, significant racial/ethnic inequities in MAT persisted during our study period. Equity dashboards can be effective tools for state perinatal quality collaboratives.

Public Health Implications: As OUD continues to increase, future research should focus on understanding treatment experiences of BNH and Hispanic and the role of the healthcare system in getting pregnant people into treatment. Focus groups of BNH and Hispanic pregnant people with lived experience can help shed the light on barriers as well as facilitators of OUD treatment.

Additional Authors: Hafsatou Diop MD, MPH
Presenting Author: Sarah L Stone PhD, MPH **Non-Presenting Author:** Samantha E Parker PhD, MSPH **Non-Presenting Author:** Rachel Applewhite MPH **Non-Presenting Author:** Allison Doyle MSW **Non-Presenting Author:** Munish Gupta MD, MMSc

Development of Wisconsin Statewide Network for Children's Physical Activity and Healthy Eating

Submission Type: Oral Abstracts

Track: Nutrition/Physical Activity

Author(s): Stephanie West PhD

Issue: The 2020 Title V needs assessment identified promotion of optimal nutrition and physical activity as a priority for children in Wisconsin. This priority emerged from analysis that included in-person interviews, statewide and national surveys. The National Performance Measure (NPM) of 60 minutes of physical activity a day for children 6-11 years old was selected to be a focus for Wisconsin's Title V program.

Setting: This program area is new to Wisconsin. Without previous Title V programming at the state level, it is important that efforts are centered on health equity and local needs and priorities from the beginning. It was quickly identified that multiple, smaller efforts were occurring around the state, but lacked coordination of resources to maximize the equitable distribution of programs.

Project: To support the efforts of these programs, additional funding and technical assistance from the Association of State Public Health Nutritionists (ASPHN) was acquired with the goal to enhance infrastructure within Title V to infuse nutrition programming. Wisconsin's Title V program maintains nutrition connections through a longstanding breastfeeding program and strong collaboration with other areas in public health, such as Chronic Disease, Physical Activity, and Nutrition. To best align these efforts, Title V coordinated with the statewide agency 'healthTIDE' that includes representation from a large network of agencies (including state and local government, universities, and local organizations) involved with physical activity and nutrition work for children across the state.

Accomplishment/Result: This partnership has directly connected Title V with more than 60 organizations that work closely with Wisconsin children. These organizations helped disseminate an online survey, gathering responses from over 300 partners working with children in Wisconsin on physical activity or healthy eating. The survey included baseline measures to follow over the development of this program.. This survey also identified over 100 partners across the state that are interested in developing a committee to bring community voice directly into future programming.

Additionally, Title V partnered with a university that is able to fund community conversations focused on the current needs and barriers in Wisconsin communities for physical activity and healthy eating. These conversations will be facilitated by leaders and trusted members of communities affected by systemic racism, and will pay facilitators and participants for their time and energy, which will be critical to informing strategies to dismantle institutionalized racism and white supremacy.

Barriers: The COVID-19 pandemic brings unique challenges to connecting with new partners. However, due to this virtual workspace, Title V is better positioned to connect with a wider range of partners in more rural areas across the state.

Lesson Learned: Building a statewide program is no easy task, but through braiding funding, connecting with key partner organizations, overcoming virtual hurdles, and listening to what others are currently doing, Wisconsin is on the way to building a sustainable, equity-focused, statewide network.

Information for Replication:

Additional Authors: Molly Holdorf RN, BSN, CLC
Presenting Author: Stephanie West PhD Presenting Author

Differences in Low Birthweight and Preterm Birth Outcomes among US-Born Latina, Foreign-Born Latina, and Non-Latina White Women in New Mexico

Submission Type: Oral Abstracts

Track: Perinatal outcomes

Author(s): Eirian Coronado MA

Background: A large body of literature suggests that despite economic disadvantage and vulnerability, foreign-born women of color giving birth in the United States experience more favorable birth outcomes, including low birthweight and preterm birth, relative to US-born women of color and white US-born women. Some studies examining a 'Latina Paradox' have found that after adjustment for demographics, economic or behavioral risks and poverty, the ‘paradox’ is not sustained. We examined this paradox for the New Mexico birth population among US-born and Foreign-Born Latina women compared to non-Latina white women.

Study Questions: Is foreign-born nativity associated with a lower prevalence of preterm delivery or low birthweight? Do foreign-born Latinas experience more favorable birth outcomes compared to non-Hispanic white or U.S.-born Latinas in New Mexico?

Methods: We used 2009-2017 birth certificate and survey data from the New Mexico Pregnancy Risk Assessment Monitoring System (PRAMS) to analyze the odds of low birthweight- LBW (<2500 grams) and preterm birth PTB- (<37 weeks gestation via obstetric estimate) among women with singleton births among three populations: non-Latina White (n=3708), US-born Latina (n=4409), and Foreign-born Latina women (n=1423). We used SAS version 9.4 with survey procedures to conduct weighted bivariate analysis, chi-square tests and multivariate logistic regression. We selected covariates with statistically significant associations for each outcome variable or where we observed significant differing distributions among the three populations.

Results: Compared to non-Latina White women, US-Born Latinas did not have a significantly higher odds of having either a singleton low birthweight or preterm birth. However, Foreign-Born women (predominantly originating in Mexico) were significantly less likely to deliver a LBW or PTB infant after adjustment for poverty level, education, age, and marital status in the first model (aOR for LBW: .50, 95% CI .34-.72; aOR for PTB: .57 95% CI .40-.82) The effect of Foreign-Born Latina nativity and ethnicity persisted in the subsequent models with additional adjustment for medical and behavioral risks (hypertension, obesity, smoking, and experiencing physical abuse) and final adjustment for access to healthcare and services (adequate prenatal care, WIC nutrition services, Home Visiting and insurance coverage) with some attenuation (aOR for LBW: .56, 95% CI .35-.89; aOR for PTB: .59, 95% CI .38-.93).

Conclusions: Our findings support the paradox of a lower probability of adverse infant birth indicators among women who experience more social and economic disadvantage compared to other populations. Our results do not provide explanatory interpretations, and we were not able to measure indicators of social support or acculturation which may provide more insight and policy implications for these results. Additionally, maternal hypertension, intimate partner violence and low Body Mass Index remained predictive of the outcome variables, indicating that chronic Maternal Health conditions may adversely impact NM women and infants, irrespective of the effect of ethnicity and nativity.

Public Health Implications: These findings highlight the need for preventing and addressing chronic disease and social risk factors across all maternal subpopulations in New Mexico.

Additional Authors: Lisa Cacari Stone PhD, MPH **Non-Presenting Author:** Alexis Handal PhD, MPH **Non-Presenting Author:** Luis Magallanes-Duarte MPH

Non-Presenting Author:

Do Sticky Messages Really Stick? 2 year Follow-up Reproductive Literacy Training for Foster Care Group Home Staffs

Submission Type: Oral Abstracts

Track: Reproductive Health/Family Planning

Author(s): Kathryn Luchok M.A., PhD

Issue: Girls in foster care are 2.5 times more likely to get pregnant than other girls. Nearly half of girls in foster care have been pregnant by age 19. This high-risk population already is at a deficit due to the lack of medically accurate sex education in schools in South Carolina. Group home staff have the potential to assist teens in addressing reproductive health needs such as accessing contraception, yet many feel unprepared to do so.

Setting: Midland of South Carolina Foster Care Group Homes. Benefit staff of group homes and teens in foster care group homes.

Project: Test an innovative sex education program's short-and-long term effects on staff ability to address reproductive health needs of teens under their care. Linda Robinson, APRN-BC, developed the approach we took in this project. It used the interactive triad of sticky messages, normalization and connection. Sticky messages use humor, everyday language, simple analogies, and concrete metaphors to make complicated reproductive facts easily understood. Brain research indicates that surprising information accesses areas of the brain that govern retention (Foster & Kean, 2019). Core messages "stick" and are retained because they are tied to familiar concepts individuals already know. Normalization shifts the focus away from shame, taboos, and fear-based messages that have had little success in reducing HIV transmission, sexually transmitted infections (STIs), unintended pregnancies, and misuse or non-use of contraception. Connection is promoted by replacing preachy "you" messages with empowering "we" messages that transcend race, class, gender, ethnicity and religion. "We" messages normalize and promote positive energy by allowing people to feel seen, heard, and valued without judgment - the essence of connection. The program used Sticky Messages that were simple, unexpected, concrete, credible, emotional stories (SUCCESs). Methods: 60 group home staff across 5 sites attended a workshop using sticky messages for explaining reproductive health. Pre-post tests; narrative data were obtained through open-ended questions. Follow-up semi-structured interviews with a subset of workshop participants 2 years post.

Accomplishment/Result: Results: 87.9% reported more comfort talking with teens about reproductive health; 91.4% felt better prepared to be an advocate for helping teens access contraceptives; 84.5% knew where to refer teens for contraceptives vs 71.7% pretest. Narrative themes--workshops were more realistic, more effective than traditional sex-ed, and made it easier to talk to teens. Follow-up interviews revealed staff recalled details of the sticky messages, had continued feelings of confidence in promoting reproductive health literacy among teens in their care, reported improved interactions with teens under their care, and that teens had more confidence in choosing contraception. Some of the quotes from these interviews included: "Many of our frontline staff come from backgrounds that are pretty conservative, religiously and family upbringing and that kind of thing and so it helped them a whole lot in being able to discuss without condemning." "I can remember her little basket for the uterus and I can remember the little red streamer like to show them how their lining shed-ed each month." [The program was presented] "in ways to engage the audience's attention and it wasn't dry and scientific kind of stuff. It was humor and illustrations and all those kinds of things and again props that engage the audience." "I think that the reason that they actually got information from it was because it was so real . They're so used to people coming around and kind of fronting with them. Being you know straight by the book and then she started you know using the real words, using terms that was you know in their level they act all and wake up and start listening. I do think that you know the program was really catered to them and I think that they learned a lot. Not just foster care kids but just kids in general. I mean it is a shock factor for adults, because you're saying stuff that we normally don't say because we always want to be by the book but I think it's the shock factor that makes you listen so I do, I did enjoy it and I actually did come away with a lot of information for it and even having the ability to talk to the kids on their level." [After the workshop with teens, the staff reported:] "it made the kids feel like queens because when you say your body is a temple, you are that queen and the day after she left, we made crowns and we just walked around with crowns on our heads representing her that following day because it was so much knowledge that she had given me and my staff along with the kids."

Barriers: COVID hit during the time of the follow-up, so the interviews needed to switch from in-person to telephone. And it made it harder to contact participants; it took considerable perseverance by former student Sarah Christenbury to do schedule these interviews. There was no funding for follow-up; Sarah did the work for her senior honors thesis. Additional funding would allow us to do a more extensive robust evaluation with a quasi-experimental design. We were unable to get access to teens for direct follow-up with them.

Lesson Learned: Finding ways to help staff more effectively advocate for the reproductive health needs of teens can assist teens in making sound decisions about sexual activity and lead to reductions in unintentional pregnancies. The innovative methods can be added to reproductive literacy and sex education classes, which would have implications for public health by increasing effectiveness of such programs. This program, but addressing needs of teens in foster care and helping group home staff better address those needs, certainly has implications for equity. These teens do not have intact families to guide them through path to adulthood. Many teens in foster care are non-white and many are on the LGBTQ+ spectrum--this inclusive program speaks to them.

Information for Replication: The original project budget was $25,000 for one year. This was supplemented by the PI and Trainer taking minimal salary for their work and students volunteering time in order to get programming and research experience. The Palmetto Association for Children and Families helped us publicize the program to the Group Homes. The Department of Anthropology at UofSC (the PI's home department) provided office space and copier access to the project. The SC Department of Social Services allowed access to the Group Homes and is interested in incorporating our methods into the independent living curriculum for teens in the foster care system.

Additional Authors: Kathryn Luchok M.A., PhD
Presenting Author: Sarah Christenbury B.A. **Non-Presenting Author:** Linda Robinson RN, MSN **Non-Presenting Author:** Xumei Fan EdD

Engaging a Lived Experience Advisory Group in Program Evaluation

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Deitre Epps Master of Science in Human Administration

Issue: The COVID-19 pandemic exacerbated social risk factors and left marginalized populations at greater risk of experiencing poor Maternal Health outcomes. The Maternal Telehealth Access Project (MTAP) provided resources to expand telehealth services to maternal populations, and this expansion required that the telehealth services be informed by and responsive to the lived experience of people giving birth, people who are pregnant or postpartum, and the people supporting them, such as loved ones and doulas.

Setting: MTAP was a national project and Lived Experience Advisory Group (LEAG) members were primarily recruited from MTAP priority populations. All LEAG activities were held on Zoom for the 12-month project period.

Project: MTAP aimed to increase access to perinatal services and supports via telehealth during COVID-19. MTAP received funding for one year by the Health Resources and Services Administration through the CARES Act. MTAP focused on serving women at greatest risk of maternal mortality and morbidity, including women of color and women who live in rural and frontier communities. The lead evaluator, RACE for Equity, developed an equitable, results-based evaluation approach incorporating the Results Based Accountability framework and principles of Culturally Responsive Evaluation to understand how well MTAP funding met the needs of intended communities. A critical part of the approach included engaging community members in the LEAG. The LEAG provided recommendations and key information to the evaluation team to ensure quality, useful and credible evaluation findings. All LEAG meetings were organized around the MTAP monthly summary reports, which provided opportunities to review updates on MTAP activities.

Accomplishment/Result: The evaluation team successfully recruited 13 LEAG members nominated by MTAP collaborative partners connected to communities impacted by poor Maternal Health outcomes. LEAG members were engaged in the monthly meetings. Nine LEAG members attended all or only missed one meeting. LEAG members asked insightful questions, provided important feedback to the evaluation team, and discussed their experiences and challenges giving birth in hospitals during COVID-19.

Barriers: The rapid turnaround of the project limited time to establish a mechanism for integrating LEAG feedback into ongoing program implementation and planning outside of the evaluation team. Time constraints also limited the opportunity to engage LEAG members in co-leading LEAG meetings, and co-construction of the evaluation instruments which would have contributed to realizing the full potential of the LEAG and their range of expertise.

Lesson Learned: Including the LEAG in the MTAP evaluation demonstrated the importance and feasibility of building an evaluation team that has a meaningful connection to the lived experience of the stakeholder community. With more time, an equitable, culturally responsive approach would deepen trust-building, community engagement, and shared decision-making in the process.

Information for Replication: The success of the LEAG is attributed to the engagement of several MTAP collaborative partners and the dedicated funds to support the planning, process, resources, time and LEAG member compensation. LEAG members received $40 an hour for their participation. The LEAG planning team met more than 30 times and held ~10 meetings with LEAG members (orientation, LEAG sessions, and sub-committee meetings). The costs included funding for LEAG planning resources and access to virtual technology.

Additional Authors: Deitre Epps Master of Science in Human Service Administration
Presenting Author: Rakiah Anderson Master of Public Health **Non-Presenting Author:** Averjill Rookwood B.S. Health Service Administration, Full Spectrum Doula **Non-Presenting Author:** Alexandria Redmond M.S. Industrial/Organizational; B.S. Psychology, Culture Concentration **Non-Presenting Author:** Christine Tucker PhD, Maternal and Child Health and Minor in Epidemiology; MPH, Department of Maternal and Child Health **Non-Presenting Author:** Dorothy Cilenti DrPH, Health Policy and Management; MSW, MPH, Maternal and Child Health **Non-Presenting Author:** Eboni Williams, Birth Matters , Maya Jackson, Mobilizing African American Mothers through Empowerment

Engaging Childcares to Impact Infant Mortality

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Whitley Wynns

Issue: Indiana's SUIDs rates increased in 2019. Many infants are enrolled in childcare where state law requires safe sleep defined by either AAP or state recommendations. There is an 18 times greater risk of Sudden Infant Death Syndrome (SIDS) when infants, who are accustomed to being placed to sleep supine are placed to sleep in a prone position. Although childcares are required to follow safe sleep guidelines, little is known about how these babies sleep at home.

Setting: We partnered with child cares located in zip codes with the highest infant mortality rates in Marion County, Indiana. Our target population within the child care setting where families/guardians of infants under age 1.

Project: Pediatricians and hospitals have been leading partners in prevention and Intervention efforts to improve safe sleep practices among families. Another emerging partner is child care. Child care programs, who are licensed to care for children under 1 year of age, are state regulated to practice safe sleep, making them an ideal community partner in the fight against unsafe sleep behaviors and practices with families in the home setting. For the most part, families see child care providers on an everyday basis. It is through these frequent and on-going interactions that child care providers have built trusted relationships with families. Families look to child care providers to be a source of knowledge for early childhood development. A convenience sample of parents of infants attending childcare in zip codes with high rates of infant mortality completed a self-administered, anonymous survey. Measures of knowledge and behaviors were adapted from Cribs For Kidsâ Safe Sleep Ambassador questionnaire and the Assessment of Safe Sleep: Validation of the Parent Newborn Sleep Safety Survey. Records with missing data, infants not yet born, and infants older than 12 months were excluded.

Accomplishment/Result: 108 surveys collected from 17 participating childcares. 65% of respondents reported knowing baby should be alone; 67% of respondents reported placing baby alone. 64% of respondents reported knowing they should place baby to sleep on back; 69% of respondents reported placing baby to sleep on back. 70% of respondents reported placing baby to sleep in a crib; only 63% of respondents reported placing baby in crib. White respondents reported practicing safe sleep behaviors at a higher percentage than Black, Latinx or American Indialaskan Native respondents. To increase the knowledge and behaviors of families who have an infant in child care, we have partnered with SPARK Indiana Content Specialists. These Content Specialists create and provide all trainings and major resources to child care programs in Indiana. Currently, they have developed a safe sleep workgroup, which we participate in, to support the development of content for child care staff to facilitate safe sleep conversations with families.

Barriers: Engaging child cares to survey families during COVID-19 pandemic was a challenge. Many child cares closed their doors due to little to no enrollment since most families were confined to their homes. With that being said, finding child cares who were open and were serving infants was another challenge because families were keeping their infants at home. We were able to overcome these barriers by focusing on partnering with bigger child care facilities that remained open to care for the infants of "essential workers."

Lesson Learned: Child cares provide an equitable environment for children of all ages to thrive. As community partners, staff can mirror safe sleep practices and provide materials to all families with a need to reduce SUIDS rates.

Information for Replication: We have replicated this project in Allen County, Indiana with a budget of $150,000 annually (for 2 years) to cover resources to give to child cares to improve their safe sleep environments and share information and materials with families to improve safe sleep environments in the home. The funding for Allen County was secured through private funders and Riley Children's Foundation. The funding for Marion County was from Kohl's Cares Hospital Partnership Grants. This grant opportunity for hospital partnerships is no longer an available funding source. We have found that community-based foundations tend to have money and are looking for initiatives to support similar to this effort. We partnered with state and city-level child care professionals providing business support and coaching to child cares and community health workers that have Home Visiting programs (e.g. Nurse Family Partnerships), county level health departments, and local hospitals.

Additional Authors: Marlee Case
Presenting Author: Jennifer Tully **Non-Presenting Author:** Nancy Swigonski MD, MPH, MBA **Non-Presenting Author:** Katie Lynch **Non-Presenting Author:** Kara Casavan

Engaging Community Voices to Improve Maternal Mortality Prevention Recommendations

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Kate Gillespie DNP, RN

Issue: The Wisconsin Maternal Mortality Review (MMR) Team was established in 1997 by the Wisconsin Department of Health Services (DHS) and the Wisconsin chapter of the American College of Obstetrics and Gynecology. The Wisconsin Maternal Mortality Review Team identifies and reviews pregnancy-associated deaths, identifies problems contributing to these deaths, and recommends interventions that aim to prevent these deaths. The mission is to increase awareness of the issues surrounding pregnancy-associated and related deaths and to promote change among individuals, communities, and health care systems in order to reduce the number of deaths. The team identifies recommendations addressing individual, family, provider, facility, community, or system issues that contribute to each death. Translating the recommendations to actions is largely outside of the scope of the MMR team. In 2020, the University of Wisconsin-Madison Prevention Research Center (UWPRC) received funding from the DHS to conduct a qualitative analysis of the review findings that included input from community partners on the validity and feasibility of the recommendations to address maternal deaths. The UWPRC is a newly funded prevention research center with the goal of improving the health of low-income women, infants, and families by conducting health promotion and disease prevention research focused on maternal, infant, and child health. The overarching goal for this project is to translate MMR team findings to usable recommendations and to develop a dissemination plan.

Setting: State of Wisconsin

Project: For this project, we synthesized the review data for 11 cases that were deaths resulting from a substance use overdose. The data were shared with community partners that are affiliated with the UWPRC. The community partners were asked: 1) if the recommendations were feasible as written 2) if the recommendations were assigned to the right levels, and 3) to suggest who should be responsible for implementing the recommendations and when. The data were categorized and grouped into themes using the Social-Ecological Model. The UWPRC used the findings to design a maternal mortality prevention framework for action in collaboration with the community partners and a cohort of MMR team members. This process will be used as a template for future dissemination of MMR findings and to improve the quality of review recommendations.

Accomplishment/Result: The participants identified the following additional themes: 1) Trust-recommendations need to include building trust between pregnant people and providers, 2) Place-location for services in non-traditional settings should be considered, 3) Universal Systems-centralized intake can remove the burden on health providers to know what is available in the community, and 4) Dyadic Care-recommendations should strive to keep moms and babies together.

Barriers: The community partners were not connected to the MMR and required some contextualization of the structure and process.

Lesson Learned: Maternal mortality surveillance in Wisconsin is not well understood. Engaging community partners in forming recommendations can provide a template to guide the MMR team in a quality improvement exercise to better structure meaningful prevention recommendations.

Information for Replication: This project was a partnership between the Wisconsin Department of Health Services and the University of Wisconsin-Madison Prevention Research Center (UWPRC). The UWPRC Community Advisory Board participants included the following organizations: RISE, Southwest Community Action Programs, Centro Hispano, African American Breastfeeding Network, The Wisconsin Maternal and Child Health Program, The Lifecourse Initiative for Healthy Families, and The Child Abuse and Neglect Prevention Board.

Additional Authors: Kate Gillespie DNP
Presenting Author: Hannah Gjertson MSc
Presenting Author: Ellie Knoll BS (2020), MPH Candidate **Presenting Author:**

Equality Indicators Meets Women's Health: Analysis and Causes of Disparities in Oklahoma Women's Health Indicators Framed by Healthy Start Philosophy

Submission Type: Oral Abstracts

Track: Women's Health

Author(s): Melanie Poulter MA, Cultural Geography

Background: Our work addresses and measures racial disparities in a selection of Women's Health indicators related to the perinatal period among Oklahoma women. We often see disparities described in terms of comparisons of rates, but our study takes it a step further by transforming the disparity into an equality score.

Study Questions: What are the levels of racial disparity in each of a set of indicators directly and indirectly related to Women's Health in Oklahoma, and as a whole? What are the individual and systemic risk factors and root causes contributing to these disparities?

Methods: Our research involves the application of the Equality Indicators methodology, developed by City University of New York (CUNY), Institute for State and Local Governance, to a set of Women's Health indicators based on secondary data to measure and score racial disparity. The Equality Indicators methodology involves comparison of rates for diverse population groups, and application of an equality scoring system developed by CUNY. We use a range of data sources including birth and death data from the Oklahoma State Department of Health, data on adverse childhood experiences, mental health, and medical providers from the Behavioral Risk Factor Surveillance System, demographic and socioeconomic data from American Community Survey, arrest rates from Oklahoma State Bureau of Investigation, and findings from 2020 report of the Oklahoma Maternal Mortality Review Committee. Our study is limited by inconsistencies found across racial/ethnic definitions for different data sources, and by lack of data for certain races. For instance, Hispanic is sometimes counted as a race and sometimes as an ethnicity. Smaller size populations such as Asian and Pacific Islander in Oklahoma can mean no available data for some measures.

Results: Through our analysis we find that women of color in Oklahoma have substantially poorer opportunities and outcomes across a range of health metrics. We find that White women are most frequently in the position of the "most advantaged" population group in terms of having the best opportunities or outcomes, and that African American women are most frequently in the position of the "most disadvantaged" population group.

Conclusions: Overall our analysis of disparities generates a score of 44.2 out of 100, representing considerable disparities in Women’s Health opportunities and outcomes in Oklahoma. We identify numerous risk factors and root causes contributing to these disparities. We find that many of these risk factors and root causes are addressed through Healthy Start best practices and values.

Public Health Implications: The results of our study could be used to guide policy development in the area of Women’s Health care to reduce or eliminate conditions that are leading to adverse opportunities and outcomes for particular groups of women. It would also be beneficial in development of both provider and consumer education as it would help identify areas in which barriers exist. This study could be replicated for any state or set of disaggregated data. Our research focuses on racial equality in perinatal health, which provides a piece of the puzzle toward understanding what is needed to reach equitable distribution of resources and services.

Additional Authors: Corrina Jackson MS, Management

Estimating the Sensitivity of a Pilot Neonatal Abstinence Syndrome Surveillance System in Massachusetts Using Capture-Recapture Methodology

Submission Type: Oral Abstracts

Track: Perinatal outcomes

Author(s): Hanna Shephard MPH

Background: The Massachusetts (MA) Center for Birth Defects Research and Prevention began piloting neonatal abstinence syndrome (NAS) surveillance in 2020 through incorporation into the Birth Defects Monitoring Program (BDMP), an active, population-based surveillance system. The primary aims of NAS surveillance are to provide timely and accurate individual-level NAS data to monitor trends in Massachusetts and inform programs serving families of infants with NAS. As part of a comprehensive evaluation of the system, we estimated the sensitivity of the pilot NAS surveillance in BDMP.

Study Questions: What proportion of infants born in MA with NAS are detected by the BDMP NAS surveillance system?

Methods: We obtained data on infants ascertained by the pilot surveillance based on NAS International Classification of Diseases, 10th revision, Clinical Modification (ICD-10-CM) codes and data on infants identified on birth certificates as having NAS during April 1–September 30, 2020. We estimated the true number of infants with NAS in MA using Lincoln-Peterson capture-recapture methodology. Finally, we measured the sensitivity of the system by calculating the proportion of infants with NAS in MA detected by BDMP NAS surveillance.

Results: We identified 456 infants reported to BDMP with NAS ICD-10-CM codes and 181 infants with NAS marked on their birth certificates during the study period; 159 infants were in both systems, and 22 infants identified by birth certificates were not ascertained by BDMP surveillance. Using the Lincoln Peterson estimator method where 456*181/159 equals the estimated true number of cases in the population, the estimated true number of infants with NAS in MA was 519 (15.2 per 1,000 live births). Using this population estimate and the number of infants with NAS detected in the BDMP system, sensitivity of the BDMP NAS surveillance was calculated as 88%.

Conclusions: The estimated true prevalence of infants with NAS in MA using capture-recapture (15.2 infants per 1,000 live births) is consistent with estimates from other NAS data sources for MA and over double the 2017 national estimate of 7.3 infants per 1,000 live births, highlighting the importance of timely and accurate surveillance data to monitor trends and inform programs. A high proportion (88%) of infants born in MA with NAS were detected by the BDMP NAS surveillance system. However, the identification of 22 infants with NAS on the birth certificate that were not ascertained by BDMP suggests that including birth certificates as an ascertainment source would improve the sensitivity of the BDMP NAS surveillance system.

Public Health Implications: Evaluating a surveillance system during implementation allows for real-time modifications to improve the performance of the system. For example, after identifying infants with NAS on the birth certificate that were not reported to BDMP, we added birth certificates as a new surveillance ascertainment source. Continued efforts to improve consistent and accurate NAS case ascertainment are important to provide more comprehensive information to drive public health efforts to support families of infants with NAS.

Additional Authors: Hanna Shephard MPH
Presenting Author: Mahsa Yazdy PhD, MPH **Non-Presenting Author:** Susan Manning MD, MPH **Non-Presenting Author:** Eirini Nestoridi MD

Evaluation of a Virtual Statewide Birth Data Quality Training Program Used as a Quality Improvement Tool

Submission Type: Oral Abstracts

Track: Other

Author(s): Chinyere Reid MBBS, MPH, CPH

Issue: Legal, demographic, medical and health information collected on birth certificates are used for administrative, statistical, research, and planning purposes regarding maternal and infant health. However, birth certificate information that is incorrectly or incompletely reported can limit its usefulness. Likewise, poor birth certificate data quality at the hospital level, limits its usefulness for maternal and infant quality improvement (QI) initiatives. An initial plan to provide one-day regional in-person QI training was transformed into a virtual success.

Setting: Birth certificate data quality trainings were offered as virtual workshops to Birth Registration Specialists and their supervisors free-of-cost, with the aim of providing enhanced training on key birth certificate items to improve the reporting accuracy.

Project: The Florida Perinatal Quality Collaborative (FPQC) in partnership with the Bureau of Vital Statistics, Florida Department of Health provided two-day virtual training workshops to over 50 delivery hospitals in Florida. Day-1 of the training workshop covered the importance of birth certificate accuracy, the importance to local Healthy Start Coalitions, common errors and frequently asked questions on completing the birth certificate. Definitions and reporting accuracy of key birth certificate items were covered as on-line take-home assignments including videos and quizzes with successful completers having the opportunity to win prizes. Day-2's workshop focused on reviewing key birth certificate variables, an interactive session of clinical scenarios on accurately completing birth certificate items, and a demonstration and discussion on conducting a hospital internal audit process. All attendees received an evaluation to complete at the end of the workshops, and responses were entered into Qualtrics to generate descriptive reports. Of importance, participating hospitals followed up with three birth certificate self-audits (10 random certificates) every two months to monitor improvements.

Accomplishment/Result: Most participants (41%) best described their current hospital position as Birth Registrars. More than 80% of respondents wanted their hospital to participate in the periodic birth certificate audits that were offered. The majority of respondents strongly agreed that the workshop was well organized (97%), information/skills presented were relevant and useful (97%), workshop learning objectives were met (93%), the workshop was a worthwhile training experience overall (97%), and they would recommend this workshop to other colleagues (97%). The importance of accurately reporting birth certificate information, provision of information and clarification to questions on birth certificate completion, interactions/discussions, and clinical scenarios were expressed as the most liked aspects of the online training workshop. Hospitals that conducted internal audits made an overall improvement on their reporting accuracy of 23 key birth certificate items from baseline to their final audit. Participant recommendations included extending the Q&A session and time allotted for homework completion.

Barriers: Due to the COVID-19 pandemic, the initial training plans were converted from a one-day in-person regional workshop to a two-day virtual workshop open to all Florida delivery hospitals.

Lesson Learned: Overall, the training was well received by participants, revealed that content presented addressed recognized knowledge gaps for birth registrars and their supervisors in accurately completing the birth certificate and could be offered to all hospitals. Additionally, reporting improved.

Information for Replication:

Additional Authors: Chinyere Reid MBBS, MPH, CPH
Presenting Author: William Sappenfield MD, MPH, CPH

Evidence-Based Interventions for Black Women of Average Reproductive Age to Improve Birth Outcomes and Whole Health

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Sarah Griffiths BA

Issue: Amongst Black women, poor birth outcomes persist even when Black women have a pregnancy at an optimal age, have high income or are well educated; moreover, Black babies are two times more likely than white babies to die before their first birthday. While efforts are being made to improve birth outcomes, intervention focus has primarily been concerned with the pregnancy period as opposed to whole health during preconception and interconception. The goal of the Perinatal Equity Initiative (PEI) is to improve birth outcomes and reduce mortality for Black women and their infants. This PEI named Women of Wellness (WoW) provides education, maternal navigation, motivation, and support for Black women of childbearing age in Santa Clara County to achieve optimal health and wellness.

Setting: WoW caters to Black women of average reproductive age (18 - 40) in Santa Clara County, California; this county is home to San Jose which is "the capital of Silicon Valley."

Project: WoW has 3 program components for the 3 areas of health, that combat the problem of poor health outcomes for women of reproductive age: physical, nutritional, and mental health and wellness. Michael Lu et. al validates the importance of interventions that "...goes beyond prenatal care...from preconception to interconception and across the life course." 6-Week Wellness Challenge: encourages physical activity through virtual workouts (live and recorded) led by a certified fitness coach. Participants receive a weekly newsletter for the duration of the 6 weeks with information on nutrition and overall health and wellness. Cook & Chat: a nutrition workshop that includes an interactive nutrition activity led by a registered dietician with an educational discussion and a cooking demonstration. Wellness Wednesday: a safe space for participants to discuss and destigmatize mental health and identify their mental health needs with a licensed marriage and family therapist. Program impact and efficacy is measured through active participants and survey responses (logic model)

Accomplishment/Result: Data extracted from participant surveys will be available by July 2021. WoW has approx. 17 participants actively engaging in our content. Anecdotally, our services are appreciated and provide a safe space for women to learn and seek advice from other Black women and licensed professionals.

Barriers: Our participants are full time moms and/or have busy work schedules. We accommodate them through shorter meeting times, specific meeting days and choosing early evening meeting times. Moreover, getting the word out to our community has been challenging due to COVID. Inreaching within Roots' network, presenting via Zoom at various organizations' meetings, and utilizing our professional networks is our current solution.

Lesson Learned: Providing access to spaces for Black women to begin/resume their personal wellness journey has been successful, anecdotally. However, many of our participants, as a result of socioeconomic status, have little leisure time to regularly engage in WoW's activities as they assume many household and workplace responsibilities. This should not be mistaken for a lack of interest/need. Public health efforts, when working with marginalized communities, need to be willing to make accommodations that best fit the population that is being served.

Information for Replication:

Additional Authors: Sarah Griffiths Bachelor of Arts in Biology & Society
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Examining the Association between Industry and Occupation of Pregnant Persons and SARS-CoV-2 Infection During Pregnancy — Massachusetts, March–December 2020

Submission Type: Oral Abstracts

Track: Other

Author(s): Susan Manning MD, MPH

Background: Previous studies have shown that pregnant people are at increased risk of severe illness from COVID-19 compared to nonpregnant people. Conditions in places where pregnant people live and work can affect their risk of SARS-CoV-2 infection. It is well established that people working in certain occupations and industries with close proximity to other workers, the general public, or infected patients have increased exposure to SARS-CoV-2. However, little is known about the association between industry and occupation (I&O) and risk of SARS-CoV-2 infection among pregnant people.

Study Questions: Are maternal I&O associated with SARS-CoV-2 infection during pregnancy?

Methods: We linked surveillance data on laboratory-confirmed SARS-CoV-2 infections during March–December 2020 among women of reproductive age to provisional birth and fetal death records to identify completed deliveries in Massachusetts with infection during pregnancy. Maternal I&O were derived from text fields labeled ‘usual occupation/job within the past year’ and ‘in what industry’ on birth/fetal death records. We used CDC’s NIOSH Industry and Occupation Computerized Coding System to translate I&O text to standardized I&O codes. We used Chi-square tests to identify significant differences ($p<0.05$) in distributions of I&O and other sociodemographic characteristics of pregnant people by infection status. We conducted multiple logistic regression to examine the independent effect of maternal I&O on SARS-CoV-2 infection during pregnancy when controlling for race/ethnicity, age, education, insurance, language, and nativity.

Results: Among 53,803 completed pregnancies, 17,388 were excluded because they were not working or had missing or insufficient I&O data. Among 36,415 people in our analytic sample, 795 (2.2%) had laboratory-confirmed SARS-CoV-2 infection during pregnancy. The distributions of occupation (p<0.001) and industry (p<0.001) differed significantly between people with and without SARS-CoV-2 infection during pregnancy (among 23 occupation and 21 industry sectors assessed). In adjusted analyses, occupations with higher odds of SARS-CoV-2 infection during pregnancy included 'healthcare practitioners and technical occupations' (aOR=2.78, 96% CI=2.02–3.83), 'healthcare support occupations' (aOR=2.43, 95% CI=1.76–3.35), and 'community and social service occupations' (aOR=1.68, 95% CI=1.03–2.74). Working in the 'healthcare and social assistance industry' was associated with increased odds of infection during pregnancy (aOR=1.92, 95% CI=1.29–2.86) and working in the 'professional, scientific and technical services industry' was associated with decreased odds of infection (aOR=0.55, 95% CI=0.31–0.98).

Conclusions: We found that pregnant people working in healthcare and social service, which are key essential workforce industries, had increased risk of SARS-CoV-2 infection during pregnancy. Pregnant workers in professional, scientific and technical service industries, where workers might have more opportunity to work from home, had lower risk of infection. A limitation of our analysis is a lack of information on ability to work from home.

Public Health Implications: This study highlights the importance of collecting data on employment and other social determinants of health when exploring risk factors for SARS-CoV-2 infection during pregnancy. Better understanding of occupations and industries in which pregnant workers are disproportionately impacted by COVID-19 can inform targeted risk reduction strategies, including sick leave policies, allocation of recommended personal protective equipment, and vaccination.

Additional Authors: Hanna Shephard MPH **Non-Presenting Author:** Angela Laramie MPH **Non-Presenting Author:** Martha Morris PhD **Non-Presenting Author:** Eirini Nestoridi MD **Non-Presenting Author:** Kasey Riordan BA **Non-Presenting Author:** Kathryn Pollack-Hinds BA **Non-Presenting Author:** Syed Husain BA **Non-Presenting Author:** Mahsa Yazdy PhD

Experiences of Massachusetts Parents During the COVID-19 Pandemic

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Justine Egan MPH

Background: The COVID-19 pandemic has affected families and individuals through loss of income, social isolation and loss of support systems, difficulty accessing basic needs, and the ongoing potential for exposure to COVID-19. Prior to the COVID-19 pandemic, many parents faced challenges such as balancing caregiving and paid work, accessing affordable and quality childcare, and paying for expenses such as housing and food. Parents of color, LGBTQ+ parents, and parents of children and youth with special healthcare needs (CYSHCN) experience some of these challenges more acutely due to racism and structural inequities. We hypothesized that the pandemic affected parents in different ways than non-parents and exacerbated existing inequities among parents.

Study Questions: We examined the effects of the pandemic on parents in relation to accessing basic needs and mental health, with a focus on identifying inequities. Our primary study questions were: 1) Did parents experience differences in job loss, accessing basic needs such as food and housing, and mental health compared to non-parents? 2) What has been the effect of the pandemic on subpopulations of parents experiencing inequities?

Methods: The Massachusetts COVID-19 Community Impact Survey (CCIS), an online survey that captured residents' experiences during the COVID-19 pandemic, was administered between September-November 2020. We examined poor mental health in the past month, worrying about expenses such as housing and food, concerns about accessing childcare, and delaying healthcare using weighted frequencies. Comparisons of parents with non-parents and comparisons between subpopulations of parents were conducted using chi-squared tests of independence.

Results: A total of 19,233 out of 33,800 respondents aged ≥25 years reported being a parent. Overall, parents were 35% more likely to report worrying about any expenses, 35% more likely to lose their jobs or reduce hours/take leave, and 50% more likely to worry about housing compared to non-parents ($p<.0001$). Nearly 1 in 5 parents reported being worried about accessing childcare. Parents of color and parents of CYSHCN were more likely to report being worried about basic needs. Parents who were worried about expenses and childcare were significantly more likely to report more poor mental health.

LGBTQ+ parents were more likely to report poor mental health compared to heterosexual parents (66% vs 33%, p<.0001) and parents of CYSHCN were more likely to report poor mental health compared to other parents (48% vs 30%, p<.0001).

Conclusions: These data confirm that parents have been impacted by COVID-19 more significantly than non-parents and that the pandemic may have exacerbated existing inequities. Parental stressors such as paying for housing or food were connected to poorer mental health among parents.

Public Health Implications: Findings suggest that programs or policies that increase access to food, income, housing, and childcare would help families meet basic needs and have the potential to improve parental mental health. Parents of color, LGBTQ+ parents, and parents of CYSHCN may require targeted supports. Additional research should focus on the impact of programs supporting basic needs on the mental health of parents and the association of these programs with child health and development and the potential for disrupting cycles of poverty.

Additional Authors: Justine Egan MPH
Presenting Author: Elizabeth Beatriz PhD **Non-Presenting Author:** Allison Guarino MPH **Non-Presenting Author:** Beatriz Vautin MPH **Non-Presenting Author:** Elaine Gabovitch MPA **Non-Presenting Author:** Lauren Cardoso MSc **Non-Presenting Author:** W.W. Sanouri Ursprung PhD

Factors Related to Delays in Obtaining Contraception Among Women in New York State During the COVID-19 pandemic: The CAP Study

Submission Type: Oral Abstracts

Track: Reproductive Health/Family Planning

Author(s): Meredith Manze MPH, PhD

Background: New York State (NYS) was the initial epicenter of the COVID-19 pandemic, causing disruptions to health care delivery. We investigated if/how the pandemic affected women's ability to obtain contraception and thus maintain control over their reproductive lives.

Study Questions: What socio-demographic, health, financial, and social support factors are associated with delays to contraception due to COVID among women in New York State, compared to those with no delays? What are the most prevalent types of methods delayed and what was the reported availability of virtual contraceptive appointments among those who experienced delays due to COVID?

Methods: We conducted a cross-sectional, web-based survey of female/transgender male respondents ('women') aged 18-44 living in NYS who were not pregnant and were seeking contraception (N=953). We conducted bivariate analyses examining how socio-demographic factors, indicators of social support and financial stability, and health/mental health were associated with delays to contraception. Variables significant in bivariate analysis (at $p<0.05$) were included in a regression for modeling delays to contraception due to COVID (versus no delays). Among those who reported delays due to COVID (n=317), we examined virtual contraceptive visit availability and type of contraceptive method delayed.

Results: Women were more likely to report delays to contraception due to COVID if they missed a rent/mortgage payment during the pandemic (adjusted odds ratio (aOR): 2.23; 95% Confidence Interval (CI): 1.55, 3.22), participated in a supplemental government program prior to the pandemic (aOR: 1.88; 95% CI: 1.36, 2.60), and themselves/household member had COVID-19 (aOR: 1.48; 95% CI: 1.04, 2.12). Those who identified as Latina (aOR: 0.62; 95% CI: 0.41, 0.93) or lived upstate in a rural area (aOR: 0.48; 95% CI: 0.31, 0.74) or upstate in an urban area (aOR: 0.61; 95% CI: 0.40, 0.95) were less likely to report such delays. Of those who reported contraceptive delays due to COVID, 63% reported that virtual contraceptive visits were available, 28% unavailable, and 9% not sure. The most frequently reported methods delayed by respondents were new prescriptions (pill/patch/ring; 42%), followed by prescription refills (28%). Of those who reported delays to a new prescription or refills, 32% in each group reported either no virtual appointment availability or were unsure if this was offered.

Conclusions: Many women experienced delays to contraception due to the pandemic and over a third reported that their providers did not offer virtual appointments for contraception or were unsure.

Public Health Implications: There are potential missed opportunities to offer more virtual contraceptive appointments, better promote their availability to patients, and address refills/new prescriptions in those visits. Extension of financial safety-net supports such as the COVID rent relief program could affect New Yorkers' ability to afford contraception and maintain control over their reproductive lives during the pandemic.

Additional Authors: Meredith Manze MPH, PhD
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Finding Food, Deep Breathing, and Social Reconnections: A Response to Improve Community Well-Being During the Pandemic

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Blair Davis MSW, LMSW

Issue: In the wake of the COVID-19 pandemic, many families reported experiencing social isolation, increased stress and distress, as well as grief, and loss. These issues are ones that are already prevalent in the neighborhood of Upton/Druid Heights, due to poverty and community violence. Many grieve lost loved ones, jobs, and a sense of normalcy, and have added new life stressors as a result of COVID-19, causing strain on the wellbeing and safety of families.

Setting: Upton/Druid Heights and Mondawmin neighborhoods in Baltimore City. Participants are families at various stages during pregnancy and postpartum and are predominantly African-American.

Project: B'more for Healthy Babies Upton/Druid Heights (BHB U/DH), a community-based program, was created to help decrease infant mortality rates and increase positive pregnancy/birth outcomes.. Families were surveyed to assess their evolving needs during the COVID-19 pandemic. The mental health and wellbeing challenges brought on or exacerbated by the pandemic were frequently mentioned. In response, we shifted programming to include more wellness content. Together Time, a mindfulness and wellness series, was created,. Additionally, This One Is For Me (TOIFM), a bi-weekly mental health check-in for BHB U/DH participants, staff, partners, and community members, was also developed. The Freedom Foods program was created to combat the end of the month food shortages families were facing by providing hot meals and reading materials and socioemotional learning kits.

Accomplishment/Result: The Freedom Foods program has hosted over 20 food deliveries including more than 2,000 meals. At these deliveries, we have also distributed more than 1,555 culturally and age-appropriate books, literacy and numeracy tools, and socioemotional learning kits. BHB U/DH hosted 8 sessions of the Together Time Series, 3 as a summer series, and 6 as a fall/winter set. In the summer series, 17 people attended at least one session, and 5 people attended 75% of the sessions. For the fall/winter series, 9 people attended more than half of the sessions. 8 participants returned from the summer series, and attended sessions in the Fall/Winter.

Barriers: BHB UD/H overcame challenges around procuring funding for ongoing Freedom Food deliveries. By utilizing grant funding and applying for small grants, we have been able to manage ongoing services. The virtual programming was also challenged by competing interests, families have been balancing multiple service providers, fluctuations in school and center-based care for children, and trying to meet daily needs. Many also experienced “Zoom fatigue” or burnout from constant video chats and virtual meetings.

Lesson Learned: The pandemic and the call to “socially distance” exacerbated issues of social isolation, stress and distress, and grief and loss. These areas all have longstanding roots in the community, due to issues of poverty, food apartheid, and community violence, among an interconnected web of structural factors. A large-scale stressor like COVID intensifies these pre-existing issues, disproportionately impacting the wellbeing of historically disinvested communities like U/DH and Mondawmin. Most, if not all, of the programming that was created and expanded will have a place in BHB’s regularly operating programming beyond COVID.

Information for Replication:

Additional Authors: Blair Davis MSW, LMSW
Presenting Author: Stacey Stephens MSW, LCSW-C
Presenting Author: Angelise Shelby MSW, LMSW **Non-Presenting Author:** Wendy Lane MD,

Free Pregnancy Tests in Non-traditional Settings: A Strategy to Improve Early Prenatal Care Access

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Jill Guinan

Issue: Early, consistent, high-quality prenatal care is important for maternal and infant health outcomes. Those who do not initiate prenatal care in the first trimester may face prematurity, low birth weight, or complications from unmonitored Maternal Health conditions. Confirmation of pregnancy through a home pregnancy test kit is key to accessing prenatal care quickly. However, many people lack access to pregnancy test kits due to cost, transportation, fear, or other barriers.

Setting: The project is taking place in Franklin County Ohio, with a focus on 13 priority zip codes that have high infant mortality rates and other health and social risk factors.

Project: : In partnership with the Ohio State University, CelebrateOne is launching the “In the Know” program to distribute free pregnancy test kits in different settings. The pregnancy test kits will be distributed by CelebrateOne’s certified community health workers (CHWs) and community partners, including childcare centers, early intervention programs, and community centers. CHWs will assist those who test positive in scheduling and attending the first prenatal appointment and address any other client needs. Over the course of three years, CelebrateOne will track the number of people who make and attend a prenatal appointment after receiving a positive test result. A full logic model is available.

Accomplishment/Result: CelebrateOne launched In the Know program in April 2021. Throughout the year, we are tracking how many people receive tests, how many people with positive tests were connected to prenatal care and attended their first appointment, and how many of those people were in the first trimester when they started prenatal care. Demographic data including age, race, and ethnicity, will help demonstrate who in the community is utilizing this program the most frequently, and identify populations who are under-served by this program. CelebrateOne aims to understand if the availability of free pregnancy tests combined with access to ongoing CHW support affects the rate of people accessing prenatal care in the first trimester.

Barriers: This project was intended to begin in 2020, but we faced significant delays due to COVID-19 restrictions.

Lesson Learned: CelebrateOne aims to demonstrate that having easy access to pregnancy tests leads to higher rates of first trimester prenatal care enrollment. Non-Hispanic Black women are less likely to begin prenatal care in the first trimester than non-Hispanic White women, and many receive inadequate or poor quality prenatal care. CHWs are crucial in guiding vulnerable populations in accessing quality health care. By ensuring there are numerous ways to access free pregnancy testing with the support of a CHW, non-Hispanic Black women will be better connected to high quality prenatal care in the first trimester. The use of CHWs to assist with finding and accessing prenatal care will aid in reducing barriers that prevent women from obtaining early prenatal care, and then the CHW will continue to work with the client throughout pregnancy and beyond to identify any other barriers to care.

Information for Replication: We are documenting each step of project implementation. Upon conclusion of our annual review, we will package the program so that it is replicable in other communities.

Additional Authors:

Impact of COVID-19 on Northern New Jersey Pregnancy Outcomes

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Mackenzie Carey MPH

Background: The novel Coronavirus (COVID-19) pandemic uprooted life in early March 2020. In New Jersey, a prominent hotspot at the beginning of the pandemic, hospitals were overwhelmed with COVID-19 patients. Many hospitals were on divert, and visitation policies were curtailed. Medical professionals urged hospital visits only for serious emergencies. Given the general fear of an unknown future at the start of the pandemic, we were interested in how COVID-19 would impact births in Northern NJ.

Study Questions: We analyzed changes in the frequency of out-of-hospital deliveries. We also reviewed maternal and infant length of stay and frequency of prenatal care visits. In addition, given early questions about the safety of breastfeeding, we examined breastfeeding rates. Finally, given that interstate travel was discouraged, we reviewed changes in the number of out-of-state mothers delivering in New Jersey hospitals.

Methods: A retrospective study was conducted with birth records data from NJ's Vital Information Platform, using Tableau to determine if the incidence of variables of interest, including facility type, length of stay, maternal residence, breastfeeding, number of prenatal visits, gestational age, delivery method, and labor augmentation, changed from 2019-2020. Our dataset included all live births occurring between 1/1/19-12/31/20 in the counties of Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren for which birth certificates were created. Fetal demises were excluded. One limitation of this study is misclassification bias due to data entry errors.

Results: The key finding was a decrease in maternal and infant length of stay. For both mothers delivering by c-section and vaginally, length of stay dropped by almost 1.5 days and 1 day, respectively, starting in Q2 2020. The length of stay is currently on an upward trajectory but remains below pre-pandemic levels. The number of prenatal visits decreased starting in Q2 of 2020. This number has recovered to near pre-pandemic levels. No other changes were observed. The limitations of our study are we cannot generalize our data to any other population, and we cannot control for data entry errors.

Conclusions: We found that during the height of the COVID-19 pandemic in Northern NJ, the average maternal and infant length of stay dropped by over 1 day when compared to the same quarter during 2019. Other variables of interest did not see substantial changes in the incidence before and after the start of the pandemic.

Public Health Implications: This study can be used for provider education. The implications of reduced length of stay may include limited opportunities for maternal education during the hospital stay, and a greater need for postpartum education in the outpatient setting. In addition, given that most severe maternal morbidity occurs during the delivery visit, a reduced length of stay could shift some of those events to outpatient settings with unknown, but concerning possible impacts.

Additional Authors: Mackenzie Carey MPH
Presenting Author: Carolyn DeBoer MS

Impact of COVID-19 Restrictions on Individuals with Genetic Intellectual and Developmental Disabilities: The CARING Through COVID Survey

Submission Type: Oral Abstracts

Track: Children/Youth with Special Health Care Needs

Author(s): Carly Hyde B.S.

Background: COVID-19 restrictions have greatly impacted individuals with genetic conditions associated with intellectual and developmental disabilities (genetic IDDs), who often receive continuous medical and therapeutic support. To our knowledge, the CARING through COVID survey is the largest international survey of caregivers of individuals with genetic IDDs (Jeste et al. 2020).

Study Questions: This survey was created to understand access to therapeutic and medical services for individuals with genetic IDD, mood and behavior changes, and caregivers' experiences parenting during the pandemic.

Methods: The online survey was distributed at two cross-sectional timepoints in April 2020 (n=823) and again in February 2021 (n=113). Participation criteria included having a child with a (1) genetic diagnosis and (2) neurodevelopmental or neurological diagnosis (developmental delay, intellectual disability, autism spectrum disorder, or epilepsy). 46 states in the US and 39 countries around the world were represented.

Results: In April 2020, 75% of individuals lost access to at least one therapeutic service and 30% lost access to all services. 11% continued to receive some in-person services and 56% received at least one service remotely. Most respondents found these online services helpful, with only 8% rating "not at helpful." 49% received remote care from a medical provider. 80% of caregivers reported worsening of their child's mood or behavior, including sleep disruption, anxiety, or mood dysregulation. However, some parents reported improvements, including better communication or reduced problem behaviors. In 2021, fewer individuals lost access to services (46%) and more received some in-person services (47%). 94% received remote care from a physician. More parents reported some improvement to their child's mood or behavior (36%), including reduced restricted and repetitive behaviors. At both timepoints, the majority of parents endorsed a negative experience for themselves, such as anxiety, frustration, or fear, though most also reported a positive experience such as increased closeness with their family. A third took a full or partial leave from work to care for their child at home. Negative changes for both children and caregivers were associated with discontinued therapeutic services, inability to access medical providers, and low parent ratings of remote service helpfulness ($p<.0001$, adj. r^2 = .392 using multivariate regression).

Conclusions: The data highlight the fact that COVID-19 restrictions disrupted access to medical and therapeutic services and created behavioral and psychological challenges for children with genetic IDD and their parents.

Public Health Implications: The consequences of these experiences will persist as we transition out of COVID restrictions and may require careful observation and sensitivity. Further, remote therapeutic and medical services were helpful for caregivers during the pandemic. These remote services may help to address disparities in access to high-quality care for underserved families, particularly adults with intellectual or developmental disabilities, individuals who are geographically isolated or medically complex, or caregivers who are constrained by time, employment, or financial resources. For these families, high-quality remote options should remain available, and we should continue to evaluate the experiences of families to ensure that we appropriately leverage and modify certain aspects of tele-health and tele-education moving forward.

Improving the Timeliness, Accessibility, and Granularity of an Automated Hospital Perinatal Quality Indicators Dashboard in Florida

Submission Type: Oral Abstracts

Track: Data Innovation

Author(s): ESTEFANIA RUBIO MD, MPH

Issue: The Florida Perinatal Quality Collaborative (FPQC) created the Perinatal Quality Indicator (PQI) initiative to support quality monitoring and improvement of key perinatal health care indicators in birthing hospitals across the state. PQI generates hospital reports using existing birth certificate, hospital discharge and linked data files. In spring of 2020, FPQC conducted a survey to assess participating hospital needs regarding PQI. Hospitals reported their desire to improve granularity by examining their indicators stratified by various patients and hospital characteristics. Hospitals also desired more frequent updates to improve responsiveness to emerging issues, requesting reports quarterly instead of semi-annually. As these requests increased without additional resources, the burden of generating reports led to the FPQC's exploration of more efficient and effective alternatives to create and disseminate hospital data reports.

Setting: PQI is offered to all FL birthing hospitals at no charge to the hospitals. 54 of 110 Florida birthing hospitals currently participate in the PQI initiative and recruitment is ongoing. Hospitals are required to train, improve data quality, and complete brief surveys.

Project: In response to the need to expand and automate PQI with support from the Florida Department of Health, FPQC transferred PQI to a data visualization platform (Power BI), which allows hospitals to interact with their data online in a secure fashion. It provides a quicker production of reports, automates processes to minimize potential errors while "interacting" with data, improves data visualization of indicators and facilitates the development and dissemination of new reports and reporting options. The FPQC Data Advisory Committee, composed of representatives from participating hospitals and state partnering organizations, meets to advise and guide FPQC's work to develop the new web-based reporting system for PQI. Key hospital liaisons and the advisory group were consulted throughout the development stage to ensure usability prior to escalation of efforts.

Accomplishment/Result: Hospitals can access their PQI report online through a password-protected account. Built-in features allow users the capability to examine a QI indicator dashboard and hospital maternity profiles. Granularity has improved with drilldown tools to stratify indicators by key characteristics (e.g., race-ethnicity, payer source, age, primary language). Hospitals can use these features to identify where equity gaps exist in clinical outcomes and to develop more specific QI strategies. Various relative ranking tools exist to compare a given hospital to its peers. Synchronous and asynchronous training tools are being developed for hospitals and will soon be shared with hospital liaisons and the advisory group to solicit feedback and recommendations. In response to identified data quality issues, a data quality dashboard will be added during the next stage of development as well as a dedicated equity dashboard which aims to highlight gaps in health care within and between hospitals.

Barriers: Premium capacity of Power Bi is required which carries an important cost. Obtaining proper permission to share administrative data online and implementing security features to ensure data protection is a must.

Lesson Learned: Training hospitals in the proper use of the report and in integrating an equity lens into existing dashboards is required to successfully implement report usage and actionable insight.

Information for Replication:

Additional Authors: Estefania Rubio MD, MPH
Presenting Author: William Sappenfield MD, MPH **Non-Presenting Author:** Jason Salemi PHD, MPH
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Increased Access to Treatment of Prenatal and Postpartum Opioid Use Disorder in Wisconsin, 2012-2020

Submission Type: Oral Abstracts

Track: Substance Use/Smoking/Vaping

Author(s): Olivia Johnson BS

Background: Prenatal opioid use disorder (OUD) is on the rise in the United States. Medication-assisted treatment (MAT) with methadone or buprenorphine is the standard of care for pregnant and postpartum persons. However, a number of studies suggest many do not receive this care, and the landscape of access to prenatal and postpartum MAT remains unclear.

Study Questions: How has the availability of OUD treatment for pregnant and postpartum persons changed during a period of time of expanded access to MAT in Wisconsin generally, especially in rural areas?

Methods: We used data from the National Survey of Substance Abuse Treatment Services and National Directory of Drug and Alcohol Abuse Treatment Facilities to identify substance use treatment facilities, including buprenorphine-waivered providers and methadone treatment centers, for 2012-2020. Rural counties were defined as micropolitan or non-core based on the 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties. The locations of facilities offering substance use treatment specifically tailored to pregnant and postpartum persons, with or without MAT, were mapped to county using identifying key codes and addresses from the National Directory. We used the Annual Wisconsin Birth and Infant Mortality Report from the Wisconsin Department of Health Services to describe births by county and estimate the fraction of births occurring in counties without a treatment facility.

Results: There was a steady increase in the number and proportion of facilities offering any treatment specifically tailored to pregnant persons in Wisconsin, increasing from 16 (6% of all facilities) in 2012 to 45 (16% of all facilities) in 2020. Of these, only a fraction offered MAT, increasing from 5 (1.9% of all treatment facilities) in 2012 to 21 (7.6% of all treatment facilities) in 2020. As of 2020, 22 of 72 counties (30%) had at least one treatment facility offering services to pregnant people, of which 9 counties were considered rural (NCHS micropolitan or non-core). This represents improvement from 2012, when only

11 of 72 counties (15%) offered treatment for this demographic, none of which were rural. In 2020, 37 rural counties (51%) remained without a treatment facility for prenatal OUD. For the most recent available year (2017), 33% of Wisconsin births were to residents of counties lacking treatment specifically tailored to pregnant and postpartum persons.

Conclusions: Treatment availability for prenatal OUD expanded during the study period, although many Wisconsin counties remain without access to MAT for pregnant persons, including a majority of rural counties. A large proportion of births occurred in counties identified as lacking treatment for pregnant and postpartum persons.

Public Health Implications: Treatment access for prenatal OUD has expanded in Wisconsin in recent years, yet gaps remain in the availability of MAT during pregnancy, particularly in rural areas. This has implications for access to treatment for rural residents with prenatal OUD, as longer driving times may make treatment unfeasible. Geographic inequities represent only one aspect of access to OUD treatment; the multitude of maternal and community-level factors which implicate availability of treatment for pregnant persons also deserve further attention and study.

Additional Authors: Olivia Johnson
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Infant and Young Child Feeding and Post-Hurricane Laura Response: Implications for Improving Breastfeeding in Louisiana

Submission Type: Oral Abstracts

Track: Other

Author(s): Malaika Ludman MPH, CLC

Issue: According to international literature on infant and young child feeding in emergencies (IYCFE), human milk is the safest feeding option for infants in emergencies. Alternatively, not breastfeeding makes infants more vulnerable. Safe formula feeding requires a steady supply of formula, clean water, and supplies to clean feeding equipment - resources which are not guaranteed in an emergency. In August 2020, Hurricane Laura caused extensive damage to infrastructure in Southwest Louisiana, creating unsafe conditions for infant feeding and aggravating existing health inequities. This natural disaster also occurred during the COVID-19 pandemic, further compounding the risk of disease spread. The New Orleans Breastfeeding Center (NOBC), a program of Birthmark Doula Collective, mounted its first local IYCFE response. Our Infant Ready project promotes breastfeeding as the safest feeding option in emergencies through training, educational materials, and distribution of emergency infant feeding kits. The experiences and observations of lactation professionals providing support show that city and state entities were not adequately prepared to respond to the infant feeding needs of evacuee families. Further, we noted very low rates of breastfeeding among the evacuee population, which drove us to readapt our response.

Setting: Activities took place in New Orleans and benefited pregnant and parenting families with children under 2 years evacuating to state-run shelters.

Project: NOBC launched an emergency parent-infant hotline; conducted feeding assessments of pregnant and parenting families with children under 2 years, and distributed emergency feeding kits and donations to evacuee families. When our feeding assessments revealed very low rates of breastfeeding, we had to pivot our response. With emergency funding, we created an innovative feeding kit to support formula feeding families in times of disaster.

Accomplishment/Result: NOBC supported 60 callers with questions on infant feeding, where to get essential baby supplies, and where to receive mental health or medical counseling. At the city-managed

Evacuee Resource Center we distributed baby items and menstrual products to 212 families; conducted 70 feeding assessments; and distributed 65 emergency infant feeding kits or safer formula feeding kits. NOBC was the only entity assessing feeding histories and infant preterm status or illness.

Barriers: We observed no system in place to quantify resources for pregnant and parenting families with children 0-2 years, no initial assessment of infant feeding type at shelter sites to provide appropriate support, and no designated agency to manage formula distribution in the early days of the response. To address this we documented gaps, adapted and implemented a rapid assessment tool, and provided feedback to emergency response planners.

Lesson Learned: With these lessons, we aim to fill a gap in the IYCFE literature. Birthmark/NOBC is partnering with Xavier University to conduct community based participatory research to explore IYCFE in a low breastfeeding population and in a context where IYCFE preparedness is low. We will conduct interviews with the evacuee families we supported. This experience and subsequent research has the potential to guide officials in developing a robust IYCFE response. Given the increasing frequency and intensity of natural disasters, we believe our project can have important lessons on IYCFE for communities beyond Louisiana.

Information for Replication:

Additional Authors: Malaika Ludman MPH, CLC
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Innovations in Maternal Health: Bold New State Strategies to Address the National Crisis

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Amy Mullenix MSPH, MSW

Issue: The United States is the only nation with an advanced economy in which the maternal mortality rate in increasing. Over the past few decades, the rate of pregnancy-related deaths in the United States has more than doubled. While maternal mortality is considered a rare but sentinel event on the Maternal Health continuum, severe maternal morbidity is nearly 100 times more common. Strong investments to achieve equity in Maternal Health outcomes have produced an abundance of interventions across the country over the past ten years, many of which are shifting to incorporate bold and innovative strategies.

Setting: An emerging model is the Maternal Health Innovations (MHI) program, funded by the federal Maternal and Child Health Bureau (MCHB). In late 2019, MHI programs were launched in nine states for a five-year intensive cycle to meet the challenges of maternal mortality and morbidity head on. Additionally, MCHB also funded the Maternal Health Learning and Innovation Center (MHLIC) to serve as the premier resource center for Maternal Health resources in the country.

Project: Each of the nine MHI sites includes initiatives to improve clinical preparedness and quality of care, strengthen state-level capacity to eliminate disparities, and engage community-based organizations, local health departments and outpatient service providers. The specific interventions look different in each location, and are based on a strategic plan that aligns all Maternal Health initiatives in the state. During this joint session, 2-3 states from the MHI program will share their progress and lessons learned. The MHLIC will open with an overview of state Maternal Health innovation efforts, then state leaders will share their learning from the first year of their MHI projects in the following areas: 1) Establish a state-focused Maternal Health Task Force to create and implement a strategic plan that incorporates activities outlined in the state's most recent State Title V Needs Assessment, 2) Improve the collection, analysis, and application of state-level data on maternal mortality and morbidity, and 3) Promote and execute innovation in Maternal Health service delivery, such as improving access to maternal care services, identifying and addressing workforce needs, and/or supporting postpartum and inter-conception care services.

Accomplishment/Result: Many states have used the MHI opportunity to braid several Maternal Health efforts together, including existing state perinatal health plans and other efforts such as AIM, ERASE MM, and LOCATe initiatives.

Barriers: Many states experienced delays in launching their work during the COVID-19 pandemic.

Lesson Learned: After the initial start-up phase, all MHI states have been able to effectively manage the impacts of COVID-19 on their work, while moving toward implementation of state-level innovations in partnership with local public health and hospital-system level initiatives. Examples of innovations include: 1) Implementing maternal levels of care using CDC LOCATe, 2) Expanding postpartum Home Visiting programs to connect with women earlier than traditional 4-6 weeks postpartum check-up, 3) Building on existing telehealth services to support Maternal Health interventions, and 4) Collaborating with Perinatal Quality Collaboratives to deliver implicit bias trainings for health care providers.

Information for Replication:

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JustBirth Space: Bridging Birth Justice and Innovation to Provide Community-Based, Virtual Perinatal Support in New York City and New Jersey

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Yuki Davis MPH

Issue: The need for comprehensive and person-centered perinatal support has become even more critical during COVID-19, as pregnant and parenting people face heightened isolation and anxiety, especially in New York City, the epicenter of COVID-19 transmission in 2020. The gaps in access and racial disparities that existed before the pandemic have widened and will remain moving forward. During this moment of crisis, there is an opportunity to improve how the maternity care system supports the needs of childbearing families and their care providers through a birth justice framework.

Setting: JustBirth Space is a virtual perinatal support space that offers free, compassionate, and responsive support for pregnant and parenting individuals in New York City and northern New Jersey.

Project: JustBirth Space engages a team of community-based doulas, childbirth educators, and lactation consultants to provide text-based support, one-on-one phone or video sessions, and virtual support groups and classes. This partnership is grounded in mutual trust and shared decision-making between Ancient Song Doula Services, Village Birth International, Jacaranda Health, and Every Mother Counts. Based on the expertise of community-based doula programs and grounded in anti-racist models of care, JustBirth Space puts the principles of birth justice into practice by humanizing virtual care in order to address the systems and structures that lead to racial disparities in Maternal Health outcomes. The design and implementation of JustBirth Space exemplifies how programs can create adaptive community-driven solutions through technological platforms in order to address urgent needs brought up by the COVID-19 pandemic, but that have existed in our maternity care system for far too long.

Accomplishment/Result: Since September 2020, JustBirth Space has been providing emotional, informational, and systems navigation support. The program’s framework is driven by trust- and relationship-building, which is reflected in user engagement. Initial qualitative data indicates that interactions are driven by trust and connection, demonstrated by more vulnerable questions in text conversations, in-depth emotional support, and intimate, virtual community-building. By the time of the conference, we will be able to present conclusive qualitative and quantitative results that represent the reach and impact of the platform through analysis of surveys and conversation data.

Barriers: The greatest obstacle that the project has encountered is increasing utilization of the support platform. While engagement is steadily increasing, there is even more opportunity to reach more pregnant and parenting people who most greatly need JustBirth Space's resources. To expand utilization, the project team has developed short-term and long-term strategies for outreach, including referral partnerships with health systems and community-based organizations, targeted media outreach, and developing our social media presence.

Lesson Learned: By fostering systemic change towards birth equity through individual and community support, JustBirth Space works to exemplify birth justice as a replicable framework for perinatal support centered in community-based care models. The project demonstrates how programs can create adaptive community-driven solutions to address deepened needs through innovation and equitable partnership. JustBirth Space exemplifies how programs can create adaptive community-driven solutions to address the heightened needs associated with the COVID-19 pandemic but reflect the longstanding inequities in our maternity care delivery system.

Information for Replication:

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Making Computers Talk With Each Other: Building an Interoperable State Home Visiting Data Collection System

Submission Type: Oral Abstracts

Track: Home Visiting

Author(s): Virginia Zawistowski MPH

Issue: Home Visiting programs are often required to use different data systems for reporting to funders, Home Visiting model developers, and for their own case management. Multiple data systems usually mean redundant data entry work, creating a greater administrative burden for Home Visiting program staff. Additionally, state Home Visiting program administrators frequently need to compile data from different systems to meet state and federal requirements, such as MIECHV performance measure reporting. The lack of a shared data standard for Home Visiting makes it challenging to combine data sets because data is not collected and formatted in a consistent manner. To address these issues, the Minnesota Department of Health (MDH) Family Home Visiting Section built a data system that is interoperable with electronic health record (EHR) and case management systems used by local Home Visiting programs.

Setting: The Information for Home Visiting Evaluation (IHVE) system is used by MDH Home Visiting grantees across Minnesota.

Project: IHVE is designed to embed Home Visiting data collection within EHR and case management systems used by local Home Visiting agencies. Once entered, data is submitted by local systems to the MDH IHVE database through a secure application programming interface (API). The submission process is automated and occurs in near real-time. The API validates each submission, ensuring data quality before loading into the IHVE database. MDH contracted with EHR vendors to create IHVE-compatible data collection forms with participation from local public health (LPH) Home Visiting program staff. Data elements (such as demographic variables) that already existed in the EHRs were re-used for IHVE, avoiding the need to enter data more than once.

Accomplishment/Result: IHVE has resulted in a significant reduction in data entry burden for LPH agencies because reporting to MDH on Home Visiting is now integrated with charting. IHVE has also improved MDH's ability to report on Home Visiting activities, because consistent data is collected across

Home Visiting grantees. MDH is currently working with vendors to embed IHVE-compatible forms and API capabilities into data systems used by non-profit Home Visiting programs, extending the benefit of this design to additional Home Visiting grantees. MDH has also funded projects to create interoperability between EHRs and Home Visiting model developer systems to further reduce the data entry burden to local Home Visiting programs.

Barriers: It was challenging to build IHVE while also maintaining our existing data systems. We experienced some slippage in the project schedule because of the time needed to execute IT contracts, and we underestimated the effort needed to migrate our existing data to the new database. One vendor also needed schedule adjustments to allow LPH staff a greater opportunity to participate in the testing process.

Lesson Learned: Major IT projects such as IHVE require a large investment of time and funding, and coordination of many partners. This investment has been worthwhile, because it has made data entry more efficient for local Home Visiting programs, and data analysis more efficient for MDH staff. Frequent communication through multiple channels was essential. It was important to meet with local Home Visiting staff early in the project to prepare them for the transition to IHVE and gather their input.

Information for Replication:

Men’s Preconception Health and Socioeconomic Determinants: What are we Missing?

Submission Type: Oral Abstracts

Track: Fatherhood/Men’s Involvement

Author(s): Adaobi Anakwe

Background: Optimizing men’s health prior to conception is becoming a public health priority. Men’s health and health behaviors do not occur in a vacuum. Research has acknowledged the role of socioeconomic determinants in creating and shaping health trajectories across the life course. Although studies suggest that men with higher educational attainments are more likely to modify health behaviors prior to a pregnancy with their partner (i.e., preconceptionally), it remains unclear a) what distinct preconception health categories exist among U.S. men and b) how men’s socioeconomic statuses influence these preconception health categories.

Study Questions: Among U.S. men, does socioeconomic status (income stability, poverty level and educational status) predict men’s preconception health latent class membership?

Methods: Pooled data from the 2011-2019 male file of the National Survey of Family Growth was analyzed (n= 10,223). Latent class analysis was used to identify distinct classes of men’s preconception health. Eight manifest variables (number of sexual partners, sexual risk taking, condom use, general health status, alcohol use, drug use, sexually transmitted disease status and body mass index) where used to fit latent class models. A classify-analyze approach was subsequently used to create a preconception health phenotype (PhP) outcome variable. Three measures of men’s socioeconomic status (income stability, poverty level and educational status) were used as exposure variables to predict class membership. Survey weighted multinomial regression models were fitted to examine the association between the exposure and the outcome.

Results: Three unique PhPs were identified (lowest risk, substance users (SU) and sexual risk takers (SRT)) from the LCA model. Men in the SU group (22.9%) were characterized by high-risk alcohol use and drug use while SRT (8.1%) were characterized by multiple sexual partners. Across all PhPs, most men had stable employment, more than a high school degree and lived above poverty. Living below 100% poverty was associated with reduced odds for belonging in the SRT or SU categories (aOR: 0.64, 95%CI

0.49, 0.85; aOR: 0.73, 95% CI: 0.60, 0.89 respectively) while employment instability was associated with reduced odds for belonging in the SRT category (aOR: 0.73, 95% CI: 0.59, 0.90) but increased odds for belonging in the SU category (aOR: 1.23: 95% CI: 1.04, 1.45). Having a high school degree or higher was associated with increased odds for belonging in the SRT and SU categories.

Conclusions: Higher educational attainment is thought to protect against risk behaviors while poverty is thought to increase risk taking behaviors. Findings from this study challenge these perspectives. For U.S. men (20 to 44 years), higher educational attainment may not be protective of preconception health nor poverty increase the likelihood for poor preconception health. These disparate findings raise important questions for how preconception health interventions should be created, tailored and/or retooled.

Public Health Implications: Studies that examine the sociocultural and political contexts underpinning the relationship between social class, masculinity, and men's preconception health are needed to provide nuanced insights on factors that shape these outcomes and how they should be addressed.

Additional Authors: Adaobi Anakwe
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Mitigating the Harmful Effects of Climate Change for Better Birth and Maternal Health Outcomes among Black Birthing Individuals

Submission Type: Oral Abstracts

Track: Environment; Place and Health

Author(s): Tracey Estriplet MPH

Issue: Programs like the Title V MCH Block Grant and community-led initiatives to combat the effects of climate change are essential; however, they take a siloed approach to addressing Black Maternal Health. New efforts by government and global organizations acknowledge the impact of the climate crisis on public health, but minimize sexual and reproductive health and rights (including labor rights) of pregnant people, who are often much sidelined.

Setting: The United States is in the midst of a Maternal Health crisis and has the worst Maternal Health of any high-income nation, despite unparalleled healthcare spending. This crisis is fueled by the maternal mortality of Black women who remain two to four times more likely to die of pregnancy-related causes than white women.

Project: Protecting Black pregnant and birthing people from the catastrophes of climate change must include: 1) Safeguarding against heat exposure for birthing people, at home and work; 2) Investing millions in NIH and CMS-funded research on impacts of environmental exposures and climate change on birth outcomes within communities of color: 3) Requiring all government-sponsored climate change research proposals include investments in citizen science and community-centered partnerships: 4) Requiring FEMA to create targeted strategies for pregnant and postpartum families within emergency preparedness and weather-related disaster plans.

Accomplishment/Result: Investing in the collaboration of reproductive justice and climate change organizations can lead to an effective community-centered approach to combat the specific harms of climate change to Black pregnant and birthing people.

Barriers: While climate change impacts all populations, communities, and women of color are disproportionately exposed to environmental harms due to structural racism and gender oppression. Social and structural determinants of health, including residence in inner cities with higher exposure to air pollutants, long-term high levels of stress, racism, and sexism are known to contribute to adverse obstetrical outcomes for Black women. As climate change worsens, air pollutants, water pollutants, and temperatures will continue to rise, exacerbating the cycle of harm to Black birthing people. One study of preterm birth and exposure to heat found Black and Asian mothers had larger impacts from heat exposure than white mothers. Another study found that white or college-educated mothers faced fewer impacts than others, most likely due to their high socioeconomic status and ability to obtain air-conditioning. In the United States, Black and Native Americans have less air conditioning coverage, spend a greater proportion of their income on it when they do and are more likely to live in poor quality housing than white people. These barriers have not been overcome.

Lesson Learned: The United States cannot reduce adverse Maternal Health outcomes unless there is a sustained effort to strengthen public health systems and climate change policies. While more conversations take place around climate change and how it connects with both reproductive and birth justice, we must ensure the conversations and actionable steps center those most often exposed to environmental harms and neglected by climate research, emergency preparedness, and advocacy--Black women and birthing people.

Information for Replication:

Additional Authors: Kelly Davis MPA

Modernizing the State Surveillance System Landscape: Lessons Learned from the Health eMoms Data Collection Program

Submission Type: Oral Abstracts

Track: Data Innovation

Author(s): Rebecca Rees MS

Issue: Traditional maternal and child health state surveillance systems are limited in their ability to rapidly respond to emerging issues. Their strict methodology offers the benefit of having nationally comparable estimates but restricts the flexibility of these systems to adapt and respond in emergencies or to state-specific concerns.

Setting: In 2018, the Colorado Department of Public Health and Environment created Health eMoms, a homegrown state surveillance system that collects novel, longitudinal data on the perinatal and early childhood periods. Health eMoms draws a monthly simple random sample of 200 birthing people from recent live birth certificates and invites them by mail to join the online survey platform around 3-4 months postpartum. Health eMoms was designed to incorporate modern modes of electronic data collection and to flexibly respond to the needs of postpartum people, public health programs, and current events in Colorado.

Project: Since its inception in 2018, Health eMoms has not been evaluated based on a subset of key Centers for Disease Control and Prevention (CDC) metrics of success for public health surveillance systems. The aim of this work is to evaluate the flexibility, acceptability and representativeness of Health eMoms and provide recommendations for the improvement and sustainability of the system.

Accomplishment/Result: As an online, homegrown state data collection system, Health eMoms has the flexibility to quickly adapt and respond to evolving postpartum needs in Colorado. Rapid, small-scale survey revisions can be made in real time to imminent issues. The Pregnancy Risk Assessment Monitoring System (PRAMS) COVID-19 supplement was added to Survey 1 as soon as it was made available, months earlier than when it was funded to be added to PRAMS. Health eMoms also deployed a unique COVID-19 survey to all enrolled participants that captured additional data on the pandemic's impact that could not be obtained using existing surveillance systems. These evolutions were possible due to the flexible nature of the system. Health eMoms has consistently enrolled 44-47% of invited participants from 2018-2020, exceeding its proposed enrollment targets each year. Of those who enroll, 79-81% continue on to complete the remaining five surveys, demonstrating a high level of acceptability among participants. Health eMoms struggles to represent the experiences of black postpartum people in Colorado due to the small proportion of live births in Colorado to black individuals (~6%) and lower response rates in this population due to many historical and social factors. Although this is a problem that many surveillance systems face, Health eMoms recognizes this a significant limitation in its representativeness.

Barriers: There are no comparable data systems that could serve as a baseline for these evaluation metrics. These metrics will be used as benchmarks to identify future opportunities for system improvements.

Lesson Learned: Modern modes of data collection are both flexible in operation and acceptable to survey participants. States should prioritize equitable representation of the target population and funding should be integrated into grants or proposals to ensure that the data collected is not perpetuating unjust systems. Health eMoms is a potential model for states that are looking to create a flexible, state-specific data collection system that addresses many of the limitations that are inherent to established state surveillance systems.

Information for Replication:

Additional Authors: Sarah Blackwell MPH

Multisectoral Factors Associated with Global National Trends in Neonatal Mortality Rates: A Call for Targeted Public Health Intervention

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Riana Riffle MD

Background: The United Nations' 2030 Sustainable Development Goals target an end to preventable newborn deaths and a reduction in neonatal mortality rate (< 28 d, NMR) to 12/1,000 live births for all countries. Understanding concurrent trends in country-level, multisectoral factors associated with NMR trends may illuminate opportunities for intervention strategies.

Study Questions: To explore country-specific trends in NMR from 1990-2019 and identify those countries which contribute to the largest percentage of neonatal deaths in order to focus efforts on reducing NMRs in those specific countries.

Methods: We created a comprehensive global database of NMR and associated variables that were selected based on literature review and categorized into Population Health, Health Systems, Maternal, Neonatal, and Social factors from 1990 to 2019. Data were compiled from publicly available sources including UNICEF, World Bank, WHO, and OECD. Data were collected and analyzed for 195 countries. NMR trends were analyzed from 1990 to 2019 with more targeted analysis of trends in the last 2 decades from 2000 to 2019.

Results: In terms of total deaths, 20 countries contributed 75% of the total 2.5 million neonatal deaths. All of these 20 countries showed decreases in NMR since 1990. However, only China and Egypt accomplished the UN goal of reducing NMR to 12/1,000 live births. We compared variables associated with NMR in our 20 target countries to the remaining countries. Significant differences were noted between the means for the target countries compared to the means for the remaining countries for most variables including disparities in other health outcomes, gender equality, resource availability, and share of population in urban areas.

Conclusions: Since 20 countries contribute 75% of the neonatal deaths worldwide, we propose that targeting these 20 countries would have the greatest impact on global neonatal deaths. Future research will focus on identification of country specific barriers and evaluating the countries with greatest NMR improvements to propose effective focused strategies for reducing NMRs in high burden countries.

Public Health Implications: This study has potential uses for public health policy because it has identified countries that would benefit the most from targeted public health intervention in order to make the greatest impact in reducing neonatal mortality. It also provides the foundation for future research into analyzing variables contributing to neonatal mortality so that they can be addressed specifically. This abstract highlights inequity within countries (income inequality, gender parity, etc.) and between countries (median income, life expectancy, etc.) which profoundly impact neonatal mortality.

Additional Authors: Riana Riffle MD
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Nashville Strong Babies Transforms Affordable Housing Practice: Leveraging MCH Data, Program and Policy

Submission Type: Oral Abstracts

Track: Home Visiting

Author(s): D'Yuanna Allen-Robb MPH

Issue: Approximately 25% of infant deaths in Nashville, TN are classified as sleep-related deaths (Data sources: Child Fatality Review, FIMR). These sleep-related infant deaths are often associated with housing overcrowding and lack of affordable, safe, stable housing as an underlying social determinant driving the most preventable infant deaths in Nashville.

Setting: The policy changes occur in an urban metropolitan city. The intended audience is any local health department MCH professional linking social determinant issues to local policy changes.

Project: In April 2019, the Metro Public Health Department of Nashville and Davidson County (Maternal Child and Adolescent Health Division) was awarded the Health Resources and Services Administration (HRSA) healthy start grant award to implement the Nashville Strong Babies model. Nashville Strong Babies (NSB) is the comprehensive care management and systems change model initiated as a result of participation in the CityMatCH Equity in Birth Outcomes Institute (2016 – 2019). MCH leadership and Epidemiologists influenced the rewrite of the Metro Government Request for Proposal process for use of the Barnes Funds - publicly available funds for the purpose of building new affordable housing units or the renovation of existing units for affordable housing purposes – to prioritize the availability of new family housing units (larger than 1 bedroom) for enrolled NSB families. The session highlights a hallmark of CityMatCH's training and technical assistance to our membership, leveraging to the Data Use Triangle (Data, Program and Policy) to affect local systems change. The session also outlines the convergence of the compelling and creative use of Maternal Child Health Data (presented by MCH Epidemiologists), the application of practice-based evidence programs (presented by MCH Program leadership) to leverage relationships with policy makers (presented by Metropolitan Nashville Mayor's Office leadership) to initiate and sustain policies to influence the social determinants of health. Finally, the session highlights the results of Nashville's policy initiative to transform affordable housing funding structures (Barnes Fund) to boldly move affordable housing equity forward in the landscape of persistent urban redevelopment and subsequent displacement of vulnerable MCH populations. This session's importance aligns with the conference theme and reinforces the impact of strategic thinking to achieve equitable policies.

Accomplishment/Result: The 2019 Barnes Fund Request for Proposals process was rewritten in October 2019 to prioritize funds for housing builders who will use Barnes funds to build single family homes specifically for federal healthy start families in Nashville. Ultimately funds were awarded to a local builder, Be A Helping Hand, in December 2019 and new homes are currently under construction (COVID delayed construction in 2020).

Barriers: The primary barrier included construction delays due to COVID, however, the builder joined the local healthy start Community Action Team to keep the team abreast of construction developments.

Lesson Learned: Using the CityMatCH Data Use Triangle approach remains an effective tool to leverage data, program and local policy.

Information for Replication: Replication considerations include: a). Using MCH Epidemiologists to abstract data for related social determinant associations; b). Leverage policy maker presence on perinatal health advisory boards (Ex. FIMR, healthy start, MIECHV programs, etc.); c). Building relationships with housing providers who have the capacity to build affordable housing for home-visiting clients.

Nurse Home Visiting Augmented with Relationship Education to Prevent Intimate Partner Violence Among U.S.-Born and Foreign-Born Latinx Mothers in Oregon

Submission Type: Oral Abstracts

Track: Home Visiting

Author(s): Qing Li MD, DrPH

Background: Perinatal intimate partner violence (IPV) is a common but unresolved barrier to achieving preventive effects of early Home Visiting. Two randomized controlled trials (RCTs) of the Nurse Family Partnership (NFP) program augmented with IPV components did not achieve a reduction in IPV or improvement in maternal quality of life. One reason may be that women do not often disclose IPV experience and care providers face challenges, especially among minority women. Latinx mothers are particularly vulnerable due to reproductive coercion and machismo. Furthermore, immigrant Latinx face barriers (e.g., fear of deportation).

Study Questions: We examined whether the effectiveness of the NFP program augmented with IPV prevention varied across U.S.-born and foreign-born Latinx mothers.

Methods: We re-analyzed data from an RCT of the NFP program in Multnomah County, Oregon, 2005 to 2011, when 238 first-time, low-income pregnant mothers were randomized into either standard or augmented programs. Trained nurses provided structured verbal screening of IPV and the adapted Within My Reach Curriculum. Those who reported IPV received the referral. Among the 119 Latinx mothers at baseline, 33 were U.S.-born and 86 were foreign-born. The absence of any type of violence in the past 12 months assessed in the Revised Conflict Tactics Scale across 3 time points indicated a violence free status. The sum of any type of physical and sexual victimization and/or perpetration was coded as an ordinal outcome from 0 (none) to 4 (types). The proportional odds model of generalized estimating equations was performed, adjusting for the intervention status, age at baseline, and low education for age.

Results: Foreign-born Latinx mothers were more likely to report lower education for age and low family yearly income (<$21,000), but more likely to be employed, older at age, and older sexual debut, report being married or engaged, and IPV free or less types of IPV ($p<0.05$). The visit-intervention interaction and the intervention-nativity interaction were dropped from the model due to non-significance. In the final model, the intervention program was associated with less IPV types 2 years later [Adjusted Odds Ratio (AOR): 0.57, 95% Confidence Interval: 0.34 to 0.97, $p=0.038$]; and AOR of foreign-born status was 0.29 (0.13 to 0.66, $p=0.003$) at baseline, attenuated to 0.43 (0.17, 1.08, $p=0.07$) at one-year follow-up, and was 0.76 and not significant at two-year follow-up (0.34, 1.70, $p=0.50$). One-year increase in age at the baseline was marginally associated with less IPV types (AOR: 0.95, 95% CI: 0.90 to 1.01, $p=0.09$).

Conclusions: Preliminary findings show that this augmented NFP program prevented IPV among Latinx mothers, especial older ones. The advantage of foreign-born Latinx mothers on less IPV types at baseline attenuated one-year follow-up of the augmented program and became insignificant two-year follow-up.

Public Health Implications: Potential reasons included the reporting bias, and the augmented program did not address specific needs to prevent IPV among foreign-born Latinx mothers. Culturally tailored curricula can better detect and prevent IPV and optimize the resources for health equity. Evidence re-analyzed from this RCT can inform the design of cultural-tailored Home Visiting programs to prevent IPV among Latinx families.

Parental Emotional Support Trajectories and the Risk of Overweight or Obesity in Adolescence

Submission Type: Oral Abstracts

Track: Child/Adolescent Health

Author(s): Maya Tabet PhD, MS

Background: A growing body of evidence links the home environment to the development of obesity in youth. However, few studies investigated the role of emotional support from parents in early life and none examined developmental trajectories of parental emotional support in relation to overweight or obesity.

Study Questions: This study aimed to identify developmental trajectories of parental emotional support in early life (0-15 years) and examine associations between such trajectories and overweight or obesity in adolescence (15-19 years).

Methods: The study sample consisted of 6,348 children born to women in the National Longitudinal Survey of Youth (NLSY79), a nationally representative sample of men and women who were 14-21 years of age on December 31, 1978. Emotional support from parents at 0-15 years was assessed using the Home Observation Measurement of the Environment-Short Form (HOME-SF) and overweight or obesity at 15-19 years was defined using the International Obesity Task Force (IOTF) body mass index (BMI) cut-offs. A 3-step approach was used for data analysis, as follows: 1)-developmental trajectories were identified using Latent Class Growth Analysis (LCGA); 2)-trajectory group membership was assigned to each observation based on predicted posterior probabilities of belonging to each group; and 3)-Poisson regression for survey data was used to examine the associations between emotional support trajectories at 0-15 years and overweight or obesity at 15-19 years. Regression analyses were stratified by gender, given the significant interaction between gender and parental emotional support.

Results: We identified 4 trajectories of parental emotional support: 1)-high emotional support in infancy that remains high over time (“high-high”, used as reference in subsequent analyses); 2)-low emotional support in infancy that remains low over time (“low-low”); 3)-high emotional support in infancy that decreases over time (“high-low”); 4)-low emotional support in infancy that increases over time (“low-high”). In multivariable regression analysis, the risk of overweight or obesity at 15-19 years was increased by 74% (RR: 1.74, 95% CI: 1.31-2.32) among females in the “low-low” group and 39% (RR: 1.39, 95% CI: 1.04-1.87) among females in the “low-high” group. No significant associations were found among females in the “high-low” group or among males in any group.

Conclusions: Females who receive low parental emotional support in infancy and childhood are at increased risk of overweight or obesity in adolescence, and the risk remains increased even if emotional support improves over time.

Public Health Implications: Given the long-term repercussions of low parental emotional support, overweight/obesity prevention efforts may benefit from exploring parental education programs.

Additional Authors: Maya Tabet PhD, MS
Presenting Author: Pamela Xaverius PhD, MBA

Peer Learning in Practice: Cross-State Collaboration through a Community of Practice

Submission Type: Oral Abstracts

Track: Data Innovation

Author(s): Abby Cannon MPH, MSW

Issue: Growing recognition of the Maternal Health crisis in America has led to increased funding and focus on improving related outcomes and decreasing disparities; however, a lack of coordination can lead to duplication and delays in identifying and implementing promising innovative practices. The mission of the Maternal Health Learning and Innovation Center (MHLIC) is to foster collaboration and learning among diverse stakeholders to accelerate evidence-informed interventions advancing equitable Maternal Health outcomes. MHLIC is contracted to provide support to various Health Resources and Services Administration (HRSA) funded programs aimed at improving Maternal Health.

Setting: MHLIC supports 12 HRSA-funded collaborating partners, including nine state recipients of the State Maternal Health Innovation (MHI) program, with information and capacity-building resources. A baseline survey of these organizations indicated a desire for peer learning and collaboration, including aligning evaluation measures and sharing innovations.

Project: In this session, we highlight the development and implementation of our State MHI Measurement Community of Practice (CoP) – a group of people with shared interest who deepen their knowledge or expertise through ongoing interaction . Our CoP, comprised of Maternal Health data and evaluation professionals (e.g. MCH epidemiologists), is an example of how this continuous learning approach could be replicated at a state level with local partners. This fluid and participant-driven process included a survey about member interests and solicited volunteers to present an innovation from their state. Participants requested ongoing sessions to discuss measures for common innovations, evaluation challenges, and innovative practices in data use. Several of our CoP topics focused on equity (e.g. challenges around evaluating implicit bias trainings), while other topics integrate equity throughout (e.g. importance of disaggregated data in analysis and presentation).

Accomplishment/Result: We have hosted five CoP meetings with rich discussion, high participation, and varied speakers. The ongoing high attendance from states is crucial as it illustrates commitment and engagement of members, drives discussion and generates demand for the CoP. An anonymous Qualtrics survey was sent to CoP participants after the first year of implementation. Evidence illustrates utility of discussion, increased collaboration because of the CoP (e.g. requests to connect state teams to each other for continued discussion following meetings), collaboration on conference abstracts and rapid dissemination of updated measurement guidance.

Barriers: The CoP began during the COVID-19 pandemic, requiring a balance of remote relationship building while leaving time for content and discussion. Another challenge was the diversity of state innovations, which required time to understand each project before discussing evaluation methods that could be adapted and applied elsewhere.

Lesson Learned: A CoP is an efficient and effective way to build community, share ideas, obtain feedback, and make connections between projects and positions that would not normally interact. This participant-driven approach allows for responsivity to member needs, developing shared measures across projects, and new ideas of how to evaluate innovations that can be replicated at a local, state or national level. Commitment from participants is critical and buy-in from our funder has been helpful, as it provides an access point for members to ask questions and for our funder to hear teams' successes and challenges.

Information for Replication: Our results indicate a CoP is a cost-effective way of creating collaboration and learning among distant yet related Maternal Health data and evaluation professionals that could be replicated at a local, state or national level. The main cost of implementation is dedicated time of an individual to coordinate meetings and speakers, as well as manage the virtual hosting platform. Commitment from participants is critical and buy-in from our funder has also been helpful, as it provides an access point for members to ask questions and for our funder to see/hear the successes and challenges teams are facing.

Additional Authors: Abby Cannon MPH, MSW
Presenting Author: Theresa Chapple-McGruder PhD, MPH **Non-Presenting Author:** Abigail Holicky MPH
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Perinatal Medicaid Enrollment in Wisconsin, 2007-2016

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Marina Jenkins BA

Background: Federal Medicaid policy requires pregnancy-related eligibility continue through 60 days postpartum, although there is growing federal and state policy interest in expanding postpartum coverage through 12 months postpartum. Because pregnancy-eligibility income thresholds are more generous than parental-eligibility thresholds, many mothers lose coverage after childbirth, which may affect continuity and quality of postpartum care. This study describes perinatal Medicaid enrollment in Wisconsin and identifies mothers most affected by coverage loss during the first postpartum year.

Study Questions: How many mothers experience loss of Medicaid in the postpartum period? If Wisconsin were to extend Medicaid coverage for pregnancy through one year postpartum, who would benefit?

Methods: We used 2007-2016 Wisconsin birth records linked to Medicaid enrollment files to determine mother's coverage by calendar month up to 12 months prior to conception and 12 months following a covered delivery. No preconception coverage was a dichotomous variable defined as no enrollment in the 12 months prior to conception. Postpartum Medicaid coverage was categorized into 3 groups: 1) mothers with continuous coverage allowing for 1-2 months administrative missingness, 2) mothers who were unenrolled for 3+ months but regained Medicaid coverage, and 3) mothers who unenrolled and did not regain coverage by 12 months postpartum. Covariates included race/ethnicity, parity, age, and marital status at the time of live birth. Analysis included descriptive statistics, hazard ratios adjusted for all co-variates, and chi-square tests and was performed in SAS v9.4. The primary outcome for the hazard analysis was time in months to postpartum Medicaid unenrollment.

Results: Of 252,725 Medicaid-covered births in the sample, 56.2% of mothers were white non-Hispanic (NH), 34.8% primiparous, average age 25.7 (SD=5.5), and 67.0% unmarried. Overall, 36.0% (n=90,876) had no preconception coverage; 86.8% (n=219,349) were continuously enrolled postpartum, 3.6% (n=9,069) unenrolled postpartum and regained coverage, and 9.6% (n=24,307) unenrolled and did not regain coverage. Among those who did not regain coverage, 15.9% (n=3,853) unenrolled immediately after delivery, 8.9% (n=2,161) by 3 months, 17.2% (n=4,169) between 3-6 months and 58.1% (n=14,124)

between 6-12 months. Among those who became unenrolled postpartum (n=33,376), 56.3% (n=18,772) had no preconception coverage. Race, lower parity, younger age, and being married were associated with Medicaid unenrollment. Asian/Pacific Islander mothers were more likely to unenroll postpartum than other groups, while Black (NH) mothers were less likely (p<.001). Mothers with <3 prior live births, those <19 years of age, and married mothers were more likely to unenroll postpartum (p<.001).

Conclusions: While many mothers with a Medicaid-covered birth were not enrolled prior to pregnancy, most were continuously enrolled in Medicaid during the first postpartum year. Those not continuously postpartum enrolled may or may not have gained private insurance.

Public Health Implications: President Biden, in his American Rescue Plan, has proposed trying to improve maternal and infant health and reduce racial disparities by offering states the option to extent pregnancy-related eligibility to 12 months post-partum. Our study describes the possible population in Wisconsin that such an expansion could directly support. In Wisconsin, preconception Medicaid enrollment appears to be a larger concern than postpartum coverage and may also be a predictor of postpartum enrollment.

Additional Authors: Marina Jenkins BA
Presenting Author: Hsiang-Hui Daphne Kuo PhD **Non-Presenting Author:** Christine Durrance PhD **Non-Presenting Author:** Deborah Ehrenthal MD, MPH

Perinatal Periods of Risk (PPOR) to Analyze Fetal and Infant Mortality in Louisiana

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Jia Benno MPH

Background: In 2019, the infant mortality rate in Louisiana was the 4th highest in the United States. Phase 1 and Phase 2 Perinatal Periods of Risk (PPOR) can illuminate populations with the most excess death, why the excess death is occurring, and where to focus targeted intervention strategies.

Study Questions: Where is the highest excess mortality in Louisiana? Are there statewide differences in excess mortality or regional differences? What factors contributed to the excess mortality in specific regions?

Methods: Period linked birth and infant death certificates along with fetal death certificates for Louisiana residents from 2016-2018 were used to analyze fetal and infant mortality rates. Analyses were limited to fetuses and infants with gestational age > 24 weeks and birth weight > 500 grams. The PPOR approach was used to identify excess mortality statewide and within the public health regions of the state. Deaths were classified into four perinatal periods of risk based on birth weight (<1500 vs. 1500+ grams) and age at death (fetal death, 0-27 days, or 28-364 days). The Maternal Health/Prematurity (MH/P) period includes fetal and infant deaths < 1500 grams at any age. The Maternal Care (MC) period includes fetal deaths 1500+ grams. The Neonatal Care (NC) period includes infant deaths 1500+ grams who died before 28 days of life. The Infant Health (IH) period includes infant deaths 1500+ grams who died at 28-365 days old. Excess mortality was calculated based on mothers with the best outcomes in Louisiana, white mothers > 20 years old and 13+ years of education. Phase 2 PPOR analyses were conducted in the regions with the highest excess mortality in each period.

Results: Statewide analyses indicated little excess mortality. However, regional analyses showed higher excess mortality in some areas. South central Louisiana had the highest excess mortality in the MH/P and MC periods due to a high number of fetal deaths. Fetal deaths in the MH/P period occurred among young black mothers with private insurance. Fetal deaths in the MC period did not have differences across race or maternal age groups but were higher among private insurance. Northeast Louisiana had the highest excess mortality in the NC period. Only 50% of babies weighing 1500-1999 grams were born at a level 3 NICU hospitals, compared to about 90% in other regions. Northwest Louisiana had the highest excess mortality in the IH period due to deaths from sudden unexpected infant deaths and other injuries. Most deaths were black infants, in urban areas, and to mothers with Medicaid.

Conclusions: While excess mortality across Louisiana as a whole was not terribly high, there was high excess mortality across the various periods when assessed by geographic region. Each region has unique contributing factors affecting infant and Maternal Health, and regional approaches are needed to decrease infant mortality.

Public Health Implications: Louisiana will need targeted, regionally-tailored interventions to address fetal and infant mortality. Culturally-competent safe sleep education in urban areas in Northwest Louisiana or expanding Level 3 NICUs in Northeast Louisiana could be potential solutions.

Additional Authors: Jia Benno MPH

Philly Families CAN: Launching a Centralized Intake System for Connecting Families to Home Visiting Services During COVID-19

Submission Type: Oral Abstracts

Track: Home Visiting

Author(s): Julia Reeves

Issue: Maternal and infant Home Visiting improves birth outcomes, Maternal Health, child school-readiness, and supports parent-child bonding. In Philadelphia, there are 14 maternal-infant Home Visiting (HV) models from 9 organizations. Each HV program has unique eligibility requirements and areas of focus making it challenging for families and referring providers to identify the best-fit programs. A 2015 Philadelphia needs assessment found that many eligible families were not accessing HV services and that some programs were operating at capacity with waitlists while others were under-enrolled.

Setting: This program is made to support families who are pregnant and/or have children 0-3 in Philadelphia.

Project: The Healthy Start Community Action Network (CAN) addressed these gaps in resource connection by creating a centralized intake system, “Philly Families CAN” (PF-CAN), for Philadelphia’s HV services. PF-CAN is a website and phone number where Philadelphia families that are pregnant or have a child 0-3 can access voluntary maternal and child HV programs. Through a phone conversation, a coordinator helps families learn about HV, identifies which voluntary programs they are eligible for, and helps makes the referral to any selected best-fit programs. PF-CAN is guided by the input of pregnant and parenting local families, home visitors from each of the programs, and a Steering Committee of HV leaders.

Accomplishment/Result: PF-CAN has increased access and matched families to HV that optimally support families’ goals and interests. The PF-CAN 4-month pilot was launched in October 2020, with referring providers from 2 health systems. As of April 30, 2021, 260 families were referred to PF-CAN. Approximately 55% (142/260) were referred from PF-CAN to a HV program and 66.9.% (95/142) were enrolled. Of families who were referred to HV programs through PF-CAN, 29.4% were aged 20-24, 53.9% were pregnant, 67.1% identified as Non-Hispanic, and 65.7% identified as Black or African American. 15 respondents completed a telephonic satisfaction survey in the first month of the pilot and gave PF-CAN 4.8/5 stars. 93% said they would tell others about this service. 86.5% said they felt listened to and were connected to the services they need.

Barriers: PF-CAN was initially set to launch May 14th, 2020, but was postponed due to COVID. After consulting the community group, the Committee unanimously decided to proceed with launching the CI to help increase families’ awareness, access, and referrals to these virtual-support services.

Lesson Learned: Through close collaboration of HV program leaders and continued guidance of local families, PF-CAN demonstrated that it is possible to overcome obstacles such as a pandemic and social distancing to provide direct, personalized support to families at a critical time when they might be experiencing social isolation.

Information for Replication: Key partners who collaborated with the Philadelphia Department of Public Health on the program: Carson Valley Children's Aid, Children's Hospital of Philadelphia Early Head Start, Early Intervention, ELECT - School District of Philadelphia, Health Federation Early Head Start, Healthy Start Community Action Network - Community Group, Maternity Care Coalition, Nurse Family Partnership, Mabel Morris, ParentChild+, People's Emergency Center, Strategy Arts, and William Penn Foundation

Additional Authors: Julia Reeves
Presenting Author: My-Phuong Huynh MPH **Non-Presenting Author:** Cynthia Estremera Gauthier **Non-Presenting Author:** Stacey Kallem MD, MSHP

Postpartum Contraception, Timing of Utilization, and Short Interval Pregnancies among Women Enrolled in South Carolina Medicaid

Submission Type: Oral Abstracts

Track: Reproductive Health/Family Planning

Author(s): Wondi Manalew Ph.D.

Background: Over one-third of pregnancies in the United States have short inter-pregnancy intervals (IPIs); periods ≤ 18 months between childbirth and subsequent pregnancy. Short IPIs are associated with preterm birth and adverse neonatal outcomes. Women with low income have increased risk of short IPIs, attributed primarily to insufficient access to effective contraception. Medicaid is an important source of contraception access for women with low income. However, postpartum contraception utilization and IPIs among Medicaid beneficiaries is understudied.

Study Questions: What factors are associated with postpartum contraception utilization among South Carolina Medicaid (SCM) beneficiaries? How do rates of short IPI differ between beneficiaries using long-acting reversible contraceptives (LARC) or short-acting hormonal contraceptives (SAC) relative to those with no evidence of prescription contraception use (NPCU)?

Methods: A retrospective cohort was constructed of women aged 15-45 who were eligible for SCM from 2012-2018. Women who had 4 years of continuous eligibility, with at least one birth during that period were retained. Primary outcomes were postpartum contraception use and IPI. Contraceptive use up to 6 months postpartum was evaluated and timing of use was categorized as immediate postpartum (IPP)—same month as delivery, early postpartum (EPP)—1-2 months after delivery, and delayed postpartum (DPP)—3-6 months after delivery. Contraception was categorized as LARC (intrauterine devises and implants), SAC (injection, pills, patch,and rings), and NPCU. Women with no evidence of contraceptive use within 6 months postpartum were categorized as NPCU. Logistic regression was used to investigate associations between beneficiary characteristics (age, race/ethnicity, evidence of prenatal care visits), postpartum contraceptive use, and short IPI.

Results: The cohort included 6,485 women. Overall, 47.1% of were white, with the majority (57.7%)

aged 15-19 years old. Contraception was used by 29.6%, with LARC use (16.3%) slightly more common than SAC (13.2%) in the 6-month postpartum period, with the remaining 70.4% having NPCU. IPP LARC was initiated by 21.8%, with Black and Hispanic women using IPP LARC nearly twice the rate of White women (4.7 & 4.3% vs 2.4%, respectively). Rates of IPP SAC were lower than IPP LARC for black and Hispanic women (1.3 & 2.3, respectively), but similar for white women (2.2%). Women with prenatal visits were more likely to initiate IPP LARC than those without prenatal visits (aOR=5.16, CI 2.65-10.03). Use of LARC or SAC within 6 months postpartum significantly reduced likelihoods of short IPI. For each postpartum period, LARC users had lower adjusted odds ratios of short IPI than SAC users: IPP [0.17 (0.11-0.27) vs 0.26 (0.15-0.46)], EPP [0.12 (0.08-0.17) vs 0.45 (0.34-0.59)], DPP [0.15 (0.09-0.24) vs 0.35 (0.27-0.46)]. Women aged 15-19 were significantly more likely than other age groups to have short IPIs (aOR: 1.65, 1.42-1.92), and Hispanic women were less likely than white women to experience short IPI (aOR: 0.58, 0.41-0.81), while there was no significant difference between white and black women.

Conclusions: Less than one-third of Medicaid beneficiaries used prescription contraception within 6 months postpartum. Both LARC and SAC help to achieve medically optimal birth spacing when initiated within this period, though LARC methods are associated with lower likelihoods of short IPI than SAC.

Public Health Implications: Increased access to all methods coupled with contraceptive counseling could increase timely utilization of contraception and reduce short IPIs.

Additional Authors: Wondi Manalew Ph.D.
Presenting Author: Nathan Hale Ph.D. **Non-Presenting Author:** Edward Leinaar MPH **Non-Presenting Author:** Michael Smith DrPH, MSPH **Non-Presenting Author:** Amal Khoury Ph.D

Postpartum Prescription Pain Reliever Use, Results of a Utah Department of Health Study

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Nicole Stone MPH

Background: On average in Utah, 323 people die each year from a prescription drug overdose. From 2017 to 2018, there was an observed increase in the number of opioid-related deaths in Utah. The number of opioid overdose deaths excluding heroin increased by 1.8%. Women are commonly exposed to opioids after birth, especially after a cesarean delivery. Studies have repeatedly reported on the association between initial opioid exposure and the risk of chronic opioid use and overdose deaths. Little is known about the firsthand experiences of women using prescription pain relievers postpartum.

Study Questions: What are the maternal characteristics of Utah women who misuse postpartum prescription pain relievers? What past life experiences are associated with misuse of prescription pain relievers postpartum? How do Utah women obtain opioids without a prescription?

Methods: Through the Pregnancy Risk Assessment Monitoring System (PRAMS), the Utah Department of Health conducted a survey of women nine months postpartum to assess maternal behaviors and experiences related to use of prescription pain relievers and other opioids. The sample was obtained from women who responded to the PRAMS survey and consented to be re-contacted for participation in an additional survey. The survey was conducted by telephone and consisted of 54 questions. Data were weighted to represent the 2019 birth population. Descriptive analysis was conducted using SAS survey procedures for complex survey data. The demographic variables used for analysis were from birth certificate records obtained through Utah Vital Records and Statistics. Limitations include self-reported data and the sample consisting of women more likely to respond to surveys, so possibly not being representative of the general maternal population.

Results: 535 PRAMS respondents were re-contacted and 318 participated in the OCBS (59.3% response rate) 26% of women reported taking prescription pain relievers after delivery Rates of postpartum prescription pain reliever use was highest among women with repeat c-section deliveries, however, 20.2% reported receiving prescriptions for pain relievers after routine vaginal deliveries. 10% of women reported using prescription pain relievers for reasons not related to pain and 8% reported obtaining their pain relievers from friends and family without a valid prescription or using pain relievers from an old prescription not prescribed for pain associated with birth.

Conclusions: Although there are some women who need an opioid after a difficult vaginal delivery, many obstetric caregivers believe prescription narcotics are not appropriate for vaginal deliveries and there is a possible need for closer scrutiny of the approximate 20% of women with vaginal deliveries who use prescription pain relievers postpartum. Careful pain management plans should take into consideration the potential for misuse of prescription opioids as demonstrated by the findings of misuse in this study.

Public Health Implications: The call-back survey was designed to collect data that could be used to understand community needs, policy gaps, and to identify best practices to reduce maternal opioid misuse and overdose deaths. The data collected through this surveillance highlights equity as it includes responses to questions about how women felt they were treated in the hospital based on their race, religion, culture, size, and substance use status.

Predictors of Flourishing in Relation to Adverse Childhood Experiences and Resilience Using the National Survey of Children's Health

Submission Type: Oral Abstracts

Track: Child/Adolescent Health

Author(s): Sharonda Lovett MPH, CPH, CHES

Background: Adverse childhood experiences (ACEs) are traumatic events that are associated with poor health outcomes. These events include economic hardship, child abuse or neglect, parental incarceration, witnessing violence or household dysfunction, and racial/ethnic mistreatment, among others. Currently, there is limited research investigating the impact of ACEs on a child's ability to flourish using recent nationally representative data.

Study Questions: The objective of this study was to examine the association between (1) exposure to ACEs and flourishing and (2) resilience and flourishing, among children aged 6-17 years in a nationally representative sample.

Methods: A cross-sectional study was conducted using the 2016-2017 National Survey of Children's Health from a sample of 48,050 children. The dependent variable, flourishing, measured whether a child showed interest and curiosity in learning new things; stayed calm and in control when faced with a challenge; and worked to finish tasks they start. The independent variables included exposure to ACEs, age of the child, sex of the child, race/ethnicity of the child, family structure, federal poverty level, status of special health care needs, and resilience. Resilience was operationalized into four types: family resilience, adult mentorship, after school activities, and community service. Multinomial logistic regression models were conducted using SAS version 9.4.

Results: Most children definitely flourished (40.7%), did not experience ACEs (49.7%), and experienced multiple types of resilience. Children with four or more ACEs had lower odds of somewhat flourishing (adjusted odds ratio, AOR = 0.652, 95% CI = 0.522, 0.814) and definitely flourishing (AOR = 0.302, 95% CI = 0.233, 0.392) compared to children with no ACEs. Children who experienced four types of resilience had higher odds of somewhat flourishing (AOR = 7.004, 95% CI = 2.156, 22.752) and definitely flourishing

(AOR = 11.497, 95% CI = 4.545, 29.081) compared to children with no resilience. Among the four resilience types, family resilience was the strongest predictor of definitely flourishing (AOR = 4.065, 95% CI= 3.129, 5.280). Increased odds of somewhat flourishing and definitely flourishing were also identified with participation in after school activities, community service, and presence of an adult mentor.

Conclusions: Findings demonstrate that children with a greater number of ACEs have decreased odds of flourishing, whereas children with a higher number of resilience types have increased odds of flourishing.

Public Health Implications: Children with ACEs that lack sources of resilience may have less support to "bounce back" when faced with challenging events. Children with resilience (or positive experiences) may receive the support needed to try need new things and finish tasks. Children with resilience may also be exposed to additional resources and opportunities to solve personal or interpersonal problems, which fosters their development. This study indicates that building resilience is a critical element for the promotion of positive well-being among youth.

Additional Authors: Brett Reid MPH **Non-Presenting Author:** Russell Kirby PhD, MS **Non-Presenting Author:** Abraham Salinas-Miranda MD, PhD

Pregnancy Experiences Among Women in NYS During the Coronavirus Pandemic Compared to Pregnant Women One Year Prior: The CAP Study

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Diana Romero PhD, MA

Background: In early 2020, New York State (NYS) was the epicenter of the COVID-19 pandemic. We were interested in examining pregnancy-related experiences pre/post pandemic and by racial/ethnic background.

Study Questions: Did pregnant women's prenatal, childbirth and postpartum experiences during the pandemic compared with those pregnant one year prior? Did these experiences differ by women's racial/ethnic identity?

Methods: We administered a web-based, cross-sectional survey to 1,525 women, 18-45 years, proportionate to geographic and sociodemographic distribution in NYS. Respondents were screened based on giving birth over one year prior (5/2018-4/2019), being currently/recently pregnant (3/7/20 and after), or were considering a pregnancy in 2020. We collected data on sociodemographics, healthcare-related behaviors and attitudes, mental health, social support, pregnancy-related concerns, physical health/wellbeing, resources and social program participation, and the impact of the pandemic. We conducted bivariate analyses on a range of factors related to the pregnancy and childbirth experiences (e.g., accessing prenatal care, postpartum care, well-baby visits, contraception) by (a) whether it was before or during the pandemic, and by (b) racial/ethnic group, as well as multivariate analysis of predictors of delayed prenatal care. ANOVA was carried out with an index constructed from a 9-item question regarding negative COVID-related events (e.g., infection, hospitalization, loss of employment/income, death of household member) affecting respondents and/or their household members comparing means by racial/ethnic group.

Results: Compared to women pregnant prior to the pandemic, women who were pregnant at the beginning of/during the pandemic were more likely to: have delayed obtaining prenatal care (75% [66%

due to COVID] vs. 11%), have their first prenatal care visit in the second trimester (14% vs. 8%), have delayed obtaining postpartum care (74% [56% due to COVID] vs. 8%), and have a postpartum appointment cancelled and online, well-baby appointment cancelled and online, and/or baby's immunization appointment cancelled. Controlling for select sociodemographic and health-related factors, the odds of delaying prenatal care was 19 times greater among people who were pregnant during COVID (OR = 18.92, 95% CI = [11.010, 32.502], $p < 0.05$). Subgroup (n=917) examination of these experiences by White, Black, and Hispanic race/ethnicity revealed significant differences with regard to delays obtaining: prenatal care due to COVID (White [W]: 36%; Black [B]: 45%; Hispanic [H]: 53%), postpartum care (W: 28%; B: 24%; H: 36%), contraception (W: 36%; B: 23%; H: 30%). ANOVA revealed significant racial/ethnic differences in negative COVID-related experiences with a mean of 3.1 (out of 9) for both Black and Hispanic respondents compared with a mean of 2.6 among White respondents.

Conclusions: The pandemic had a significant and detrimental impact on utilization of pregnancy- and newborn-related services in NYS, compared to women who were pregnant one year prior. Moreover, significant racial/ethnic differences in accessing maternal and reproductive health services were also documented, as well as a significantly greater impact of the pandemic on Black and Hispanic respondents including non-health areas (e.g., loss of job, income, insurance, child care.

Public Health Implications: These findings should focus attention on improving pregnancy-related health services, with an emphasis on racial/ethnic minorities, to mitigate delays associated with future public health crises.

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Prenatal Telemedicine During COVID-19: Patterns of Use and Barriers to Access

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Alexandra Morgan

Background: With the beginning of the COVID-19 pandemic many health systems rapidly transitioned to a telehealth model for prenatal care to protect pregnant patients and the healthcare workforce. Emerging research demonstrates comparable maternal and perinatal outcomes for the use of telehealth for a portion of prenatal care, and benefits for people living a distance from their maternity care providers. However, little is known about the barriers and challenges with regards to accessing telehealth for prenatal care.

Study Questions: 1. What is the experience of rural pregnant people who participated in a prenatal telehealth visit during the first six months of the COVID-19 pandemic? 2. What barriers exist to accessing telehealth among pregnant people in northern New England?

Methods: We conducted a post-visit electronic survey of pregnant people who successfully participated in a telehealth visit with an obstetric provider at a rural academic medical center in Northern New England.

Results: Responses were obtained from 164 pregnant people (18% response rate). Forty percent of respondents had participated in audio-only telehealth, and 60% in a video telehealth visit. The visit was easy or somewhat easy for 79% of respondents. The most common barrier to accessing telemedicine was poor internet or phone connectivity (39%), followed by childcare responsibilities (35%), lack of equipment (11%) and lack of privacy (11%). Participants also engaged in additional remote prenatal care including communication with the obstetrics team through a secure health messaging portal (21.1%), phone calls with registered nurses (7.6%), and home health monitoring including weight measurements (76.3%) and blood pressure measurements (30.5%). Over 77% would recommend telehealth to a friend.

Conclusions: In this survey of rural pregnant people who successfully participated in a prenatal telehealth visit during the first six months of the COVID-19 pandemic, respondents had an overall positive experience, but also, identified significant barriers to participation in telehealth, including problems with connectivity, access to digital technology, privacy, and competing family responsibilities.

Efforts to promote telehealth in prenatal care must include focused work to make it universally accessible to avoid widening already profound socioeconomic disparities. Equity in telehealth must be addressed at the policy, practice, and individual patient levels.

Public Health Implications: This study has important implications for public-health and policy measures necessary to ensure equitable access to telehealth. While most participants reported that the telehealth system was easy to navigate, there were significant barriers to access. Poor internet connectivity and lack of necessary equipment, disproportionately impact rural and low-income pregnant people and could potentially widen existing disparities in maternity care. Ensuring equitable access to telemedicine will require a public-health focused coordinated approach at multiple system levels, ranging from policy changes to operations at the community and clinical services levels.

Additional Authors: Daisy Goodman DNP, MPH, CNM **Non-Presenting Author:** Allie Morgan
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Quality Improvement to Address Racial Disparities and Reduce Severe Maternal Morbidity among Women with Hemorrhage or Hypertensive Disorders of Pregnancy

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Lyn Kieltyka PhD, MPH

Background: The Louisiana Perinatal Quality Collaborative launched its Reducing Maternal Morbidity Initiative (RMMI) in August 2018 as a quality improvement collaborative of 41 birthing hospitals using improvement science to implement structures and processes in the hospital setting. Although RMMI began in August 2018, many hospitals began their improvement work in 2016. Severe Maternal Morbidity (SMM) includes unexpected outcomes of labor and delivery that result in significant short- and long-term consequences to a woman's health. The Centers for Disease Control and Prevention defines SMM excluding transfusion as any one or more of 20 complications identified through International Classification of Diseases, 10th revision codes (e.g., Disseminated Intravascular Coagulation and Eclampsia). RMMI goals were to achieve a 20% reduction in SMM excluding transfusion among birthing women with a diagnosis of hemorrhage (SMM-HEM) or hypertensive disorders of pregnancy (SMM-HTN) by May 2020 and to reduce racial disparities in both outcomes.

Study Questions: From 2016-2020, what changes were observed in SMM-HEM, SMM-HTN, and racial disparities in SMM-HEM and SMM-HTN?

Methods: Louisiana hospital inpatient discharge data for RMMI participating hospitals were used to identify SMM; outcome measure baseline was set as Quarter 1 of 2016 (1Q2016), and endpoint was set at Quarter 2, 2020 (2Q2020) to be consistent with the RMMI end date of May 2020. Quarterly rates (per 10,000 delivery hospitalizations) of SMM-HEM and SMM-HTN, both overall and race-stratified (non-Hispanic White (White) and non-Hispanic Black (Black)), were calculated in SAS EG 7.1. Percent change and Joinpoint regression was used to assess change over time.

Results: Rates of SMM-HEM decreased from 1037.3 per 10,000 delivery hospitalizations in 1Q2016 to 676.1 in 2Q2020, a 35% decrease. Joinpoint results indicated a significant quarterly decrease of 2.1% ($p<0.03$). Race-specific SMM-HEM Joinpoint results indicated a non-statistically significant decrease for White, but a significant decrease for Black women in one of the three Joinpoint segments identified (4Q2017-2Q2020, 5.8% quarterly decrease, $p < 0.03$). The Black:White disparity ratio decreased from 2.1 to 1.3 in SMM-HEM. Rates of SMM-HTN decreased from 823.2 per 10,000 delivery hospitalizations in 1Q2016 to 727.6 in 2Q2020, a 12% decrease. Joinpoint results indicated non-statistically significant decreases in both overall and race-specific models. The 2Q2020 disparity ratio was 1.1.

Conclusions: From 1Q2016 through 2Q2020, decreases in SMM-HEM exceeded the RMMI 20% reduction goal but SMM-HTN did not. Structured quality improvement initiatives such as RMMI have been shown to be a potentially effective strategy to reduce disparities by ensuring that all women receive the same quality care every time, as was the case for RMMI among SMM-HEM.

Public Health Implications: Reduction of SMM is critical to improving short- and long-term unexpected complications of delivery. It is equally important to include equity in the work towards achieving improved outcomes, as quality cannot be achieved without equity. Although more work remains to be done, the RMMI structure was successful in achieving some of its goals by reducing SMM-HEM and addressing racial disparities and may provide a model for consideration in other states.

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Racism and its Associations With Stressful Life Events and Postpartum Depressive Symptoms Among Women who Gave Birth in Massachusetts

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Xiaoli Chen MD, PhD, MPH

Background: Despite evidence documenting the health impacts of racism, limited studies have quantitatively examined the effect of racism on stressful life events (SLEs) and postpartum depressive symptoms (PDS). Fewer studies have examined whether the associations of racism experienced by women vary by race/ethnicity, nativity, and disability status. As stress and PDS have both been shown to have negative consequences for women and their infants, addressing contributors of stress and PDS is critical to improving Women's Health and well-being before, during, and after pregnancy.

Study Questions: 1) Are women who have experienced racism during the twelve months before delivery more likely to have experienced SLEs twelve months before delivery and PDS? 2) Do these associations differ by race/ethnicity, nativity, and disability status?

Methods: This cross-sectional study included 2009–2019 data from the Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS). All but White non-Hispanic (WNH) women were oversampled to allow for adequate representation of racial/ethnic minority groups. We examined the prevalence of racism, PDS, and SLEs including financial, emotional, partner-related, and traumatic stressors. Multivariable logistic regression models were used to calculate adjusted risk ratios (aRR) and 95% confidence intervals (CI), controlling for maternal socio-demographic characteristics and health conditions. Stratified analyses were conducted by race/ethnicity, nativity, and disability status. All analyses were performed using SAS version 9.4 and SUDAAN 11.0 to account for the PRAMS complex survey design and weighting. The data were based on self-reported questionnaires and maybe subject to recall bias.

Results: Our final study sample included 11,413 women who gave birth in Massachusetts during 2009–2019. Of these, a total of 1,210 women (6.2%) reported experiencing racism. The prevalence of racism increased significantly from 4.4% in 2009 to 7.5% in 2019. The prevalence of racism was 2.1%, 19.5%, 11.5%, 13.0%, and 11.1% among WNH, Black non-Hispanic (BNH), Hispanic, Asian non-Hispanic (ANH), and other racial/ethnic women, respectively. Compared to women who did not experience racism, women who experienced racism were more likely to report ≥ 1 stressor (aRR=1.17, 95% CI=1.12-1.23), emotional stressors (aRR=1.23, 95% CI=1.10-1.38), partner-related stressors (aRR=1.56, 95% CI=1.39-1.76), financial stressors (aRR=1.24, 95% CI=1.16-1.34), traumatic stressors (aRR=1.63, 95% CI=1.35-1.96), and PDS (aRR=1.24, 95% CI=1.02-1.51). Statistically significant associations of experienced racism existed across racial/ethnic groups with ≥ 1 stressor (aRR=1.23, 95% CI=1.07-1.42 for WNHs; aRR=1.11, 95% CI=1.04-1.19 for BNHs; aRR=1.17, 95% CI=1.09-1.25 for Hispanics; and aRR=1.13, 95% CI=1.03-1.24 for ANHs) and partner-related stressors (aRR=1.83, 95% CI=1.27-2.62 for WNHs; aRR=1.27, 95% CI=1.11-1.46 for BNHs; aRR=1.48, 95% CI=1.25-1.74 for Hispanics; and aRR=1.67, 95% CI=1.31-2.14 for ANHs). The associations of experienced racism with SLEs remained significant across nativity and disability status.

Conclusions: Racism experienced by women before delivery increased over time. Women who experienced racism were more likely to report also having SLEs and PDS. Statistically significant associations between racism and SLEs existed across racial/ethnic groups, nativity, and disability status.

Public Health Implications: Racism is a public health crisis oppressing women of color affecting both physical and mental health. Understanding the associations of racism with perinatal stressors and PDS using large population-based surveillance data can inform service provision and improve Women's Health outcomes.

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Remote Learning: Innovating Sex Ed in the Time of COVID for NYC Teens

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Vanessa Nigg Bachelors in Health Sciences

Issue: Although the infant mortality rate (IMR) in New York City has continued to drop, disparities driven by historic and continued disinvestment and structural racism persist between select groups. One of the efforts put forth to address these disparities is New York City Teens Connection (NYCTC), a federally grant-funded program of the NYC Department of Health and Mental Hygiene working in collaboration with citywide partners in a comprehensive effort to improve adolescent sexual and reproductive health (ASRH), particularly for those most marginalized. NYCTC promotes a lower unintended teen pregnancy rate and corresponding IMR by helping youth learn about ASRH and access the resources needed to make healthy decisions; the program trains teachers to implement an evidence-based ASRH curriculum and links youth to teen-friendly clinics. Through their efforts, prior to the pandemic, NYCTC reached over 15,000 youth annually.

Setting: New York City

Project: To ensure sex education mandates were met with partnering schools, NYCTC adapted previously provided resources to suit commonly used web-based platforms and provided just-in-time trainings to teachers on how to use these platforms, alleviating the constraints COVID-19 created for teachers. NYCTC also developed online versions of its data collection tools, which allowed the program to continue to track key performance measures and identify additional resources needed. With the access to health services, changes were made to the linkage model. Pre-COVID-19, students were afforded an opportunity to visit the clinic and meet the staff. They were introduced to the services provided at the teen-friendly clinic and gained an understanding of the enrollment process. During the pandemic, priorities shifted for the clinics. Consequently, NYCTC developed a remote version of the clinic tour presentation and scheduled health educators to present when time permitted. The presentation contained the same elements covered during the in-person presentation, including a condom demonstration. NYCTC also reached out to NYC clinics to identify ASRH services provided during the pandemic and shared the resulting provider directory with the implementing partners.

Accomplishment/Result: Between the resources provided to the teachers, the adaptations to the clinic tour presentation and the provider directory, NYCTC was able to reach over 10,000 youth during the pandemic and conduct over 200 clinic tours, whereby maintaining access to comprehensive sex education and health services for NYCTC youth.

Barriers: COVID-19 changed how students learned and received clinical services. School-based partners closed, and community clinics shifted their focus from offering comprehensive services to youth to responding to COVID-19. Given the existing inequities in ASRH, ensuring access to comprehensive sex education and health services for all youth was particularly salient. The pandemic left the program questioning how they would continue to offer technical support to their partners and get much-needed resources to NYC youth.

Lesson Learned: Amplifying and responding to the sexual health education needs of teens can lead to innovative solutions to address disparities in unintended teen pregnancies and infant mortality rates. With the adaptations made, the barriers established by the COVID-19 pandemic were lifted and sexual health education was made more supportive for teens in a variety of educational environments.

Information for Replication:

Additional Authors: Dionne Smith

Reproductive Healthcare Access and Utilization Around the Time of Pregnancy Among Women With and Without Disability

Submission Type: Oral Abstracts

Track: Reproductive Health/Family Planning

Author(s): Katherine Kortsmit PhD, MPH

Background: Although women with disability can achieve healthy pregnancies, they might encounter barriers to accessing reproductive healthcare. However, little is known about behaviors and experiences of women with disability around the time of pregnancy.

Study Questions: What is the prevalence of self-reported healthcare visits and provider discussion or provision of services of select reproductive-health-related topics, before, during, and after pregnancy, among women with and without disability?

Methods: We analyzed 2019 data from the Pregnancy Risk Assessment Monitoring System (PRAMS) for 20 sites that included the Washington Group Short Set of Questions on Disability (WG-Short Set). PRAMS, a population-based, site-specific surveillance system, collects self-reported data on behaviors and experiences before, during, and after pregnancy. Women with a recent live birth are sampled 2–6 months postpartum to participate. We calculated the weighted percentages of self-reported healthcare visits before, during and after pregnancy and the content of those visits related to discussions of reproductive-health topics or service provision: before pregnancy (desire to have children, contraception, sexually transmitted infections [STIs]; improving health for pregnancy); during pregnancy (contraception plans); and after pregnancy (birth spacing, contraception, provision of contraception, insertion of long acting reversible contraception). Chi-squared tests ($p<0.05$) were used to determine differences by disability status. Disability was defined as having ‘a lot of difficulty’ or ‘cannot do at all’ on any of the WG-Short Set questions which address six functional domains (seeing, hearing, walking/climbing stairs, communicating, remembering/concentrating, self-care).

Results: Overall, 6.4% of women with a recent live birth reported having any disability. During the 12 months before pregnancy, a similar proportion of women with (66.7%) and without disability (69.7%)

reported attending any healthcare visit. However, among women attending a visit before pregnancy, fewer women with disability attended a regular checkup with an obstetrician/gynecologist (53.6% versus 63.3%). During any healthcare visit before pregnancy, fewer women with disability than without reported discussions about their desire to have children (39.2% versus 47.0%) or how to improve their health before pregnancy (25.0% versus 32.2%). However, more women with disability than without reported their provider talked with them about using contraception (52.6% versus 44.1%) or about STIs (37.1% versus 26.7%). Smaller percentages of women with disability than without reported any prenatal care visit (97.0% versus 99.3%), first trimester prenatal care initiation (80.5% versus 89.0%), or attending a postpartum visit 4–6 weeks after delivery (80.3% versus 91.7%). The prevalence of reproductive health content discussion or provision of services during prenatal and postpartum visits was generally similar between women with and without disability, although fewer women with disability reported discussions about contraception during postpartum visits (86.0% versus 89.7%).

Conclusions: Among women with a recent live birth, women with and without disability reported similar prevalence of attending any healthcare visit before pregnancy. However, content of these visits varied by disability status. Fewer women with disability attended prenatal or postpartum healthcare visits.

Public Health Implications: Attendance at healthcare visits around the time of pregnancy and reproductive-health content of these visits varies by disability status. Strategies to improve equitable access and utilization of reproductive healthcare for women with disability may be needed.

Additional Authors: Katherine Kortsmit
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Risk Factors for Suicide Attempt Among Illinois High School Students with Suicidal Ideation and Behaviors, 2017-2019

Submission Type: Oral Abstracts

Track: Child/Adolescent Health

Author(s): Bria Oden MPH

Background: Suicide is the third leading cause of death among Illinois adolescents ages 10-19. Preventing suicide and improving adolescent mental health are priorities of the Illinois maternal and child health program. Suicide attempt is the strongest risk factor associated with suicide death. Understanding the risk factors associated with adolescent suicide attempt provides an opportunity for targeted prevention efforts.

Study Questions: Among Illinois high school students with suicidal ideation and behaviors, what risk factors are significantly associated with suicide attempt?

Methods: This study used Illinois Youth Risk Behavior Survey data from 2017-2019. We included high school students with suicidal ideation and behaviors (n=1,918), defined as reporting any of the following in the last 12 months: considering suicide, making suicide plans, attempting suicide, and/or having injuries requiring medical attention due to suicide attempt(s). The study outcome was student report of any suicide attempt, defined as attempting suicide or having injuries requiring medical attention due to a suicide attempt in the last 12 months. Nineteen potential risk factors were grouped into four categories for a stepwise model-building process: violence victimization, substance use, physical activity, and weight status. Using logistic regression models, among those with suicidal ideation and behaviors, we estimated the crude association between each risk factor and suicide attempt; risk factors with significant beta coefficients were included in one of four category-specific multivariable models that also controlled for demographics (race/ethnicity, sex, sexual orientation). Each significant risk factor from the four category-specific models was included in a final model that controlled for demographics. Adjusted odds ratios (aOR) and 95% confidence intervals were calculated for each risk factor. For any risk factors significant in the final model, we used chi-square to test their association with demographic groups. Data were analyzed using SAS 9.4 survey procedures and significance was set at $p<0.05$.

Results: Among Illinois high school students with suicidal ideation and behaviors during 2017-2019, 35.8% [32.1-39.6] had a suicide attempt. In the final model, Two of the seventeen risk factors were significantly associated with suicide attempt: any sexual violence (aOR=2.2 [1.6-3.1]) and prescription pain medication misuse (aOR=2.4 [1.7-3.5]). After mutual adjustment for demographics and the three significant risk factors, no demographic characteristics were significantly associated with suicide attempt. Among students with suicidal ideation and behaviors, sexual violence significantly varied by sex (p=0.0001) and sexual orientation (p<0.0001). Prescription pain medication misuse significantly varied by sexual orientation (p=0.001).

Conclusions: Among Illinois high school students with suicidal ideation and behaviors, sexual violence and prescription pain medication misuse were independently associated with increased odds of attempting suicide. The proportion of students experiencing these risk factors significantly varied by sex and/or sexual orientation.

Public Health Implications: Suicide prevention programs in Illinois can consider the intersectional identity of students and screen for health-risk behaviors that may co-occur with suicide attempt. There is opportunity to integrate suicide prevention efforts with initiatives that address student sexual violence and/or prescription pain misuse.

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Safer Childbirth Cities: Philadelphia- Building Bridges to Birth Justice

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Simone Snead MPH, CLC

Issue: Philadelphia has been a leader in addressing maternal mortality by creating the nation's first non-state-based Maternal Mortality Review Committee (MMRC) in 2010. The MMRC gathers multidisciplinary stakeholders to better understand the causes of maternal mortality and to provide recommendations for policy and programmatic change. In the past, the Philadelphia MMRC relied on individual stakeholders to implement recommendations that came from the review process. This methodology meant that stakeholders were not able to fully scale up interventions and it decreased the likelihood of a population level change. It also created silos which led to duplication of services. Recognizing that maternal mortality is a complex problem that spans many sectors, it is essential create a streamlined approach to implementing systems level changes and policies.

Setting: All activities have taken place in the City of Philadelphia.

Project: The Philadelphia Department of Public Health formed an action team, the OVA (Organizing Voices for Action) to ensure that recommendations from the MMRC move forward in a systematic and streamlined manner. The OVA is comprised of a multidisciplinary group of stakeholders including women with lived experience, governmental agencies, health care system professionals, insurance providers, maternal support organizations, policy advocates, and social determinants of health professionals. These sectors were chosen by identifying high priority populations from the surveillance process and conducting stakeholder interviews. Also vital to the OVA success was to be strategic about the individual representing each sector. Individuals were invited who had the agency to implement change within their organization and authorize collaboration with other groups. Embedded in the OVA implementation strategy is to ensure that community members are involved from the very beginning when convening the action team and that scaled up programs and future action-team chosen projects are based on data from the MMRC process.

Accomplishment/Result: The OVA has accomplished the following: (1) partnered the regional health information exchange organization, all Philadelphia Managed Care Organizations, and all Philadelphia health care systems to implementation of an electronic health information exchange to facilitate referrals for health care and social services and improve care coordination; (2) In part through advocacy efforts from members of the OVA, Pennsylvania has committed to submit a State Plan Amendment to extend Medicaid to a year postpartum; (3) funding secured to create and disseminate an educational series for early warning signs of severe maternal morbidity; (4) completed city wide implementation a text based blood pressure monitoring system in the postpartum period; (5) conducted implicit bias training at all delivery hospitals in Philadelphia. In the last MMRC report, there were 33 specific recommendations. The OVA has already begun implementation or accomplished 11 or 33% of these recommendations.

Barriers: COVID-19 has prevented in-person networking and relationship building.

Lesson Learned: (1) incorporating community voice is essential to informing program implementation; (2) embedding an equity plan governance has ensured ongoing and new initiatives remain equity focused and periodic equity check-ins allow accountability to the process.

Information for Replication: Funding source: Merck for Mothers Safer Childbirth Cities

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Scalable Approaches for Authentically and Effectively Convening Community Stakeholders to Inform Maternal and Child Health Programs in Chicago

Submission Type: Oral Abstracts

Track: Community Collaboration

Author(s): Cindy San Miguel MPH

Issue: The patchwork system of health and social services in most urban areas is insufficient to address MCH inequities. When implementing systems change, community-grounded responses are key to meaningful and lasting improvement. Few evidence-based interventions offer lessons learned around how community stakeholders can be authentically and effectively engaged.

Setting: Within Chicago, Black and Latinx families face a disproportionate and unjust burden of maternal morbidity and death. In addition, predominantly Black and Latinx neighborhoods on the city's Southwest and West Sides have been historically disinvested, leading to worse socioeconomic conditions that exacerbate poor MCH outcomes. Due to this, the Chicago Department of Public Health (CDPH) identified Family Connects, a community-informed universal postpartum Home Visiting program, as a critical equity approach. Sinai Urban Health Institute (SUHI), the community-based research arm of a local safety net hospital system, and Sinai Community Institute (SCI), the hospital system's social services arm, have engaged community members in their work to document and respond to health inequities since 2000.

Project: Family Connects Chicago (FCC) entails a one-time home nurse visit to any resident who gives birth, referring families to needed social service and health resources. While FCC will be offered universally, Chicago's 77 neighborhoods have unique populations and social service infrastructures. To ensure that citywide implementation is responsive to distinct neighborhood needs, community-centered organizations are convening community alignment boards (CABs). The Sinai team leveraged its learnings in community-engaged best practices to co-lead the CABs for two FCC regions.

Accomplishment/Result: To authentically and effectively engage community members, leaders, and organizations from across diverse regions, SUHI and its partners leveraged community-based practices to refine its approach over time. Activities included: conducting a stakeholder analysis to select and convene key partners; creating diverse opportunities to provide input; and using quality improvement techniques to identify and respond to engagement opportunities. To date, the two CABs encompass 44 members, including residents and community organizations from sectors such as housing, childcare, Home Visiting, and managed care organizations. Using our evidence-informed approach, the CABs have provided feedback to ensure FCC addresses the unique needs of West and Southwest Side neighborhoods.

Barriers: The COVID-19 pandemic posed challenges to working with community stakeholders in a virtual environment. In response, additional support was given for virtual meetings, including the provision of technology and software platform trainings. In order to increase engagement, CAB leaders have taken additional trainings on hosting virtual meetings. Despite the necessary pivots, buy-in from CAB members has been generally high. We also found some benefits in terms of increased participation and flexibility with the removal of travel time.

Lesson Learned: Authentic community engagement is critical for improving implementation, particularly in communities where there is distrust of health and social services. Initial feedback from CAB members suggests that stakeholders want to see increased collaboration among social service providers and a unified, coordinated MCH strategy. Further, our quality improvement approaches have revealed the best-received activities and approaches for maintaining engagement over time.

Information for Replication: This effort has been a collaboration between CDPH and a number of hyper-local organizations, including Sinai Urban Health Institute, Sinai Community Institute, and West Side United. While CDPH has provided oversight and coordination of the project, these local organizations were invited to leverage their partnerships and experience with community stakeholders to conduct the community alignment. This has been a key component of that has led to successful collaboration.

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Scoping Out a COP: Community building through capacity assessment of the Safer Childbirth Cities

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Giannina Ong MA

Issue: The Safer Childbirth Cities initiative (SCC) was launched in 2018 by Merck for Mothers to support community-based organizations. Implementing evidence-based interventions and innovative approaches to foster local solutions that help cities become safer and more equitable places to give birth. The Association of Maternal and Child Health Programs (AMCHP), in collaboration with the National Healthy Start Association, was brought on as a collaborator of this initiative to foster and host a Community of Practice (COP) among the city grantees.

Setting: In 2019, ten cities were funded: Atlanta, GA, Baltimore, MD, Camden, NJ, Chicago, IL, Columbus, OH, Jackson, MS, Newark, NJ, New Orleans, LA, Philadelphia, PA, and Pittsburgh, PA. These cities were evaluated in March-May 2020.

Project: A COP is a learning collaborative where participants share a common problem or passion. When well-facilitated and participant-driven, COPs are effective spaces for problem-solving, sharing and seeking experience, adapting existing assets, identifying synergies, testing ideas, and innovating new strategies. Because the grantees are located across the nation, AMCHP supports the grantees by structuring and building social capital through assessment and capacity-building activities. The goal was to identify the individual and collective strengths and needs of the grantees to define the scope of the COP. A two-step process was used, inclusive of a survey and a semi-structured in-depth one-on-one interview with each grantee. The survey measured capacity in Vision, Leadership, Communication and Relationship Building, Decision Making, Dissemination, and Inclusivity. The interview guide was developed to produce repertoire between the AMCHP team and the grantee, and primarily asked grantees to provide context on their city's program. Completed surveys and interviews were analyzed for major themes and opportunities for collaboration and growth.

Accomplishment/Result: Findings revealed grantees ranged in expertise in addressing the structural and institutional causes of poor maternal outcomes. Potential synergies between programs identified include nurturing community-based doula programs as well as quality improvement work around maternal morbidities. Racial equity was identified as a capacity to measure and evaluate. Most grantees would reiterate the Black maternal mortality rate when describing their city's problem contributing to a deficit-lens framework and only one grantee explicitly stated that their interest was in trauma-informed care.

Barriers: We realized that certain grantees lacked capacity positioning themselves in relation to the work, but this was not a result of the interview's planned questions. For example, one interviewee could not describe to a colleague why their program catered to Black women, rather than "all women." Going forward, the project team will adjust the assessment to specifically ask about health equity perspectives, descriptions of racism, and the grantee's methods of engaging mothers and their community as well as sharing back data.

Lesson Learned: The resulting Community of Practice informed by the capacity assessment will work to include difficult conversations about positionality, racism, and policy change where grantees learn and collaborate with one another. We hope that with these added insights the Community of Practice will allow the SCCI affect long-lasting and sustainable systems change.

Information for Replication:

Additional Authors: Giannina Ong MA
Presenting Author: Kristina Wint MPH
Presenting Author: Shaquelle Ballou MS
Presenting Author: Andria Cornell MPH

Severe Maternal Morbidity through the ICD Transition: Analysis of HCUP National and State Inpatient Databases, 2014-2017

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Ashley Hirai PhD

Background: U.S. rates of severe maternal morbidity (SMM) involving unexpected major complications during delivery hospitalizations have been rising over the past two decades with significant health and economic consequences. Surveillance using hospital discharge records has been complicated by the International Classification of Disease (ICD) Clinical Modification (CM) coding transition from the 9th to 10th revision in October 2015.

Study Questions: 1) What is the surveillance impact of the ICD transition on SMM rates overall and by state? 2) What are the latest national and state SMM estimates?

Methods: SMM was defined by the Centers for Disease Control and Prevention algorithms, with and without blood transfusions. SMM rates per 10,000 delivery hospitalizations were analyzed using the 2014-2017 Healthcare Cost and Utilization Project National Inpatient Sample and State Inpatient Databases, which include the universe of all-payer hospital discharge records from community, non-rehabilitation hospitals in 47 States and the District of Columbia. The ICD transition impact was evaluated by comparing the change in rates across ICD transition (2015Q1-Q3 to 2016) to the year prior to transition (2014 to 2015Q1-Q3) while 2017 data provided the latest available estimates (will be updated with 2018 data and employ segmented regression models).

Results: Nationally, SMM rates with blood transfusion decreased by 9% through the ICD transition (177.2 per 10,000 in 2015Q1-Q3 to 160.6 per 10,000 in 2016), significantly different from the 0% change in the year prior to transition (177.6 per 10,000 in 2014); p=0.01. Although 18 states experienced a significant decrease through the ICD transition, the remainder were not affected. Overall SMM rates without blood transfusion decreased by 4% through the ICD transition (72.9 per 10,000 in 2015Q1-Q3 to 69.8 per 10,000 in 2016), not significantly different from the 1% increase in the year prior to transition (72.4 per 10,000 in 2014); p=0.23. However, 9 states experienced significant decreases, largely attributable to a decrease in cases identified by hemorrhage complications. In 2017, national SMM rates with and without blood transfusion were 166.3 and 68.7 per 10,000, respectively; neither changed significantly from 2016. SMM rates varied considerably across states, ranging from 74.1 (UT) to 251.1 (RI) per 10,000 with blood transfusion and 38.3 (MT) to 105.0 (AK) per 10,000 without blood transfusion. Excluding blood transfusion, hemorrhage accounted for the largest share of complications nationally (44%) and across states (range: 34% in DC – 70% in ND).

Conclusions: National surveillance of SMM rates with blood transfusion appear to be affected by the ICD transition, showing a significant decrease not observed in the year prior. However, not all states experienced significant disruption. Conversely, national SMM rates without blood transfusion did not appear to be significantly affected by the ICD transition but some states experienced significant decreases.

Public Health Implications: Given significant reductions, national SMM rates with blood transfusions cannot be compared between ICD-9-CM and ICD-10-CM. Substantial state variability in the impact of the ICD transition suggests differences in coding practices that may also contribute to cross-sectional state-level SMM differences. Efforts are needed to improve coding guidance and standardization and understand state-level SMM variation.

Additional Authors: Ashley Hirai PhD
Presenting Author: Pamela Owens PhD **Non-Presenting Author:** Lawrence Reid PhD **Non-Presenting Author:** Catherine Vladutiu PhD **Non-Presenting Author:** Elliott Main MD

State Innovations to Advance Breastfeeding Equity Through Transformational Change

Submission Type: Oral Abstracts

Track: Policy Work/Systems

Author(s): Deborah Backman MPH

Issue: Despite American Academy of Pediatrics recommendations to exclusively breastfed infants for the first six months and continue for one year, most infants do not exclusively breastfeed or continue breastfeeding. Furthermore, Black and Hispanic/Latinx infants are less likely to exclusively breastfeed for six months compared to White infants. Infants in rural areas are also less likely to ever breastfeed compared to infants in urban areas. Systemic breastfeeding barriers disproportionately impact Black, Hispanic/Latinx, and rural women, including inadequate hospital/community support and lack of workplace lactation accommodations. The Association of State and Territorial Health Officials (ASTHO) Innovations program provided funding for state efforts to improve breastfeeding support for under-resourced populations in birthing facilities, workplaces, and communities.

Setting: Nine states participated in ASTHO's Innovations grant program, including Alaska, Arkansas, Colorado, Illinois, Missouri, Ohio, Pennsylvania, Utah, and Washington. Each state implemented strategies to reduce breastfeeding barriers for Black, Hispanic/Latinx, and/or other under-resourced populations.

Project: In 2018, ASTHO launched a Breastfeeding Learning Community (BLC) comprised of 16 state teams and supported by the Centers for Disease Control and Prevention (CDC). In January 2020, ASTHO awarded grants and provided technical assistance to nine BLC states to support transformative strategies for advancing breastfeeding equity. State strategies included improving culturally competent breastfeeding support, improving breastfeeding policies in healthcare and childcare facilities, and strengthening workplace lactation accommodations. Research indicates that these strategies have been effective in increasing breastfeeding rates. State teams incorporated innovative approaches by enabling community-based organizations (CBOs) to receive grant funds directly, lead activities, and engage community members in addressing breastfeeding barriers and implementing solutions. ASTHO evaluated the program through a survey of state teams and used regular reporting to measure progress and challenges.

Accomplishment/Result: Program results included increased trust between state health agencies and communities, new partnerships, and more equitable systems. Key grantee accomplishments included increasing the number of lactation support providers representing under-resourced populations and providing trainings on breastfeeding practices and racial equity for childcare and healthcare facilities. Finally, grantees held summits on breastfeeding inequities, developed policy recommendations for birthing facilities, and created racially/ethnically diverse breastfeeding equity workgroups.

Barriers: Grantees encountered various barriers related to COVID-19. The pandemic required worksites, healthcare facilities, and childcare centers to prioritize resources and attention for COVID-19 response, leaving less time and attention for breastfeeding. All grantees had to postpone in-person training and research. Another common challenge included mistrust of state health agencies among Black communities due to perceived historical mistreatment. All teams adapted projects to meet COVID-19 constraints through technology, and/or financial adjustments. Some state agencies addressed mistrust in Black communities by enabling Black-led CBOs to receive Innovations grant funding and lead projects.

Lesson Learned: The Breastfeeding Innovations program yielded several lessons learned for both ASTHO and participating states. State teams emphasized that significant engagement with under-resourced communities was crucial for success. Partnerships were sustainable when built on mutual respect and equality. Finally, state teams aligned Innovation activities with other grant-funded initiatives to maximize impact on breastfeeding equity.

Information for Replication:

Summary of Neonatal and Maternal Transport and Reimbursement Policies in 50 States, 2019

Submission Type: Oral Abstracts

Track: Policy Work/Systems

Author(s): Carla DeSisto PhD, MPH

Background: In an ideal perinatal system, high-risk maternity patients are transferred during the antenatal period so they can deliver at a facility with the equipment and staff available to provide the most appropriate care based on risk. State-level policies that support appropriate transport of mothers and neonates are an important part of regionalized perinatal care, as transport increases access to services for all families who need it and is vital for the promotion of mothers giving birth to high-risk neonates in the appropriate facilities. State-level transport policies supporting such transfers are reflected in the selection of National Performance Measure 3: Risk-Appropriate Perinatal Care as part of the programmatic focus for the Title V Maternal and Child Health Services Block Grant. This measure allows states to report the percentage of very low birth weight infants born in a hospital with a Level III+ Neonatal Intensive Care Unit. A 2014 review of maternal and neonatal transport policies revealed that 34 states had a policy for neonatal transport, 30 states had a policy for maternal transport, 30 states had a reimbursement policy for neonatal transport, and 10 states had a reimbursement policy for maternal transport.

Study Questions: What proportion of states had neonatal and maternal transport policies in 2019?

Methods: A standardized, systematic review of web-based, publicly available information on neonatal and maternal transport policies was conducted for each state in 2019. Available policies, rules, codes, licensure regulations, planning documents, state agency program descriptions, and statewide non-governmental perinatal health entity publications were identified for data extraction. Identified documents were reviewed to assess if each state had policies for neonatal transport, maternal transport, back-transport, and inter-hospital transport; reimbursement policies for neonatal transport, maternal transport, and back-transport; and a Medicaid transport reimbursement policy. Data were summarized using descriptive statistics.

Results: In 2019, 42 states (84%) had a neonatal transport policy. Of these, 37 (88%) had a maternal transport policy, 23 (55%) had a policy to back-transport convalescing infants to resident communities, and 39 (93%) had a policy for inter-hospital transport allowing women and infants to be transferred between hospital systems. Further, 31 states (62%) had a reimbursement policy for neonatal transport. Of these, 11 (35%) had a reimbursement policy for maternal transport, 6 (19%) had a reimbursement policy for back-transport, and 30 (97%) included a reimbursement policy specific to Medicaid.

Conclusions: Most states had neonatal transport and reimbursement policies in place. However, among states with a neonatal reimbursement policy, only one-third included maternal transport reimbursement and one in five reimbursed for back-transport of convalescing infants to a facility in the family's home community. The majority of states with reimbursement policies for neonatal transport had policies specific to Medicaid.

Public Health Implications: Continued progress in developing and refining neonatal and maternal transport policies, including reimbursement policies, by states may support the improvement of perinatal outcomes, especially among high-risk maternity patients. Such policies address health equity by ensuring recommended care to all mothers and their neonates.

Additional Authors: Carla DeSisto PhD, MPH
Presenting Author: Ekwutosi Okoroh MD **Non-Presenting Author:** Charlan Kroelinger PhD

The Association Between Obstetric Comorbidities and Severe Maternal Morbidity Among Illinois Deliveries

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Madison Levecke MPH(c)

Background: Severe maternal morbidity (SMM) surveillance is critical to assess Maternal Health in Illinois. Preexisting comorbidities strongly affect the risk of SMM however use of comorbidities to predict SMM has not been examined in detail. State-level analysis of factors that increase risk of SMM, including comorbidities, can help improve understanding of SMM and the disparities that exist among SMM.

Study Questions: To assess the association between obstetric comorbidities and SMM in Illinois.

Methods: This cross-sectional study utilized 2016-2018 hospital discharge data obtained from the Illinois Department of Public Health. International Classification of Diseases, Version 10 (ICD-10) diagnosis and procedure codes identified obstetric comorbidities and cases of non-transfusion SMM. OCI is a tool containing 24 obstetric comorbidities that have an assigned sub-score, of which are summed to give each delivery hospitalization record a total OCI score. Chi Square tests were used to assess the distribution of comorbidities and SMM. Multivariable logistic regression was used to assess the association between OCI scores and SMM. Effect modification was assessed by race.

Results: 416,179 delivery records for Illinois residents were examined. The overall rate of SMM during 2016-2018 was 77 per 10,000 deliveries. Women with at least one comorbidity had 7 times greater odds of experiencing SMM compared to women with no comorbidities (aOR=6.8, 95%CI=6.0-7.7). As OCI score increased, the rate of SMM increased from 17 up to 4,004 per 10,000 deliveries. Similarly, as OCI score increased the odds of SMM drastically increased, from women with OCI scores 1-10 having twice the odds of SMM compared to those with scores of 0, to those with scores 60+ having 371 times greater odds of SMM (aOR=1.9, 95%CI=1.6-2.1; aOR=370.7, 95%CI=312.2-440.1). Stratification by race/ethnicity showed significant disparities for Black compared to white women. For those with an OCI score of 0, the SMM rate was twice that among Black versus white (29 v. 15 per 10,000 deliveries) and stayed consistently higher as OCI score increased.

Conclusions: This study found that as number of comorbidities and subsequent OCI scores increased, SMM rates increased substantially. The association between OCI scores and SMM was statistically significant for all score intervals after adjustment for covariates. Administrative data is primarily used for billing, not research, and is less comprehensive than complete medical records. However, OCI is a nuanced method for studying SMM more extensively.

Public Health Implications: This study is an example for other state health departments on how to use administrative data to surveille SMM. OCI is a useful tool for providers to identify patients' risk for complications since the included comorbidities are likely diagnosed prior to delivery. These findings support early and adequate prenatal care to identify those who may benefit from heightened medical surveillance, support for diagnosis or management of comorbidities, and referral to risk-appropriate care.

Additional Authors: Rebecca Campbell PhD **Non-Presenting Author:** Cara Bergo MPH, PhD

The Association of Maternity Leave Length and Breastfeeding Duration in Massachusetts: PRAMS, 2016–2019

Submission Type: Oral Abstracts

Track: Other

Author(s): Emily Lu MPH

Background: Although more mothers are breastfeeding, research suggests that few breastfeed for as long as they intend to, and few meet the World Health Organization's recommendations for breastfeeding at least six months. Many factors including paid maternity leave influence breastfeeding duration. Beginning in January 2021, under the Massachusetts Paid Family and Medical Leave (PFML) Act, new mothers are eligible to take up to 26 weeks of paid leave for bonding, medical, and family reasons. Analysis of historical maternity leave data and breastfeeding duration will allow evaluation of this state policy to assess whether PFML is equitably promoted and utilized by race/ethnicity and its impact on breastfeeding duration.

Study Questions: Is length of maternity leave associated with breastfeeding ≥ 10 weeks and are there differences by race/ethnicity?

Methods: We analyzed 2016–2019 data from the Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) to examine maternal characteristics, maternity leave length (≤ 6 weeks, 7-12 weeks, 13-18 weeks, and ≥ 19 weeks), leave types (paid, unpaid, and both paid and unpaid), and breastfeeding ≥ 10 weeks utilizing weighted prevalence estimates and chi-square statistics. Bivariate analyses and multivariable logistic regression modeled the associations between maternity leave length and breastfeeding ≥ 10 weeks while controlling for potential confounders, and adjusted prevalence ratios (aPR) and 95% confidence intervals (CI) were reported. Survey data may be subject to recall bias.

Results: During 2016–2019, 75.2% of Massachusetts mothers reported breastfeeding ≥ 10 weeks. Prevalence of breastfeeding ≥ 10 weeks varied by race/ethnicity: 76.7%, 73.7%, 61.9%, 83.5%, and 82.6% among mothers of White non-Hispanic, Black non-Hispanic, Hispanic, Asian non-Hispanic, and Other non-Hispanic race/ethnicity, respectively. Overall, 8.9% of mothers took ≤ 6 weeks of leave, 44.9% of mothers took 7-12 weeks, 36.1% of mothers took 13-18 weeks, and 10.1% of mothers took ≥ 19 weeks. The prevalence of breastfeeding ≥ 10 weeks was highest among those who took ≥ 19 weeks of leave (82.4%), followed by 13-18 weeks (77.7%), 7-12 weeks (73.3%), and ≤ 6 weeks (66.9%). Factors associated with breastfeeding ≥ 10 weeks include taking ≥ 19 weeks of maternity leave, college education, Other non-Hispanic race/ethnicity, living above 100% federal poverty level, foreign born, and being married. Multivariate analysis showed that mothers who took ≥ 19 weeks of leave (aPR =1.11, 95%CI: 1.02-1.20) were more likely to breastfeed ≥ 10 weeks than those who took 7-12 weeks of leave regardless of maternity leave types.

Conclusions: Maternity leave ≥ 19 weeks was positively associated with higher prevalence of breastfeeding ≥ 10 weeks.

Public Health Implications: PRAMS data provide previously unavailable information on maternity leave for Massachusetts. Longer length of maternity leave may better support mothers in reaching their breastfeeding goals. Since the awareness and the uptake of Massachusetts-sponsored PFML may differ by socio-economic factors, it will be crucial to evaluate the impact of the PFML Act by race/ethnicity to understand and address potential inequities, and to assess the health effects of PFML on mothers and their newborns.

Additional Authors: Emily Lu MPH
Presenting Author: Xiaoli Chen MD, PhD, MPH **Non-Presenting Author:** Sarah L. Stone PhD, MPH **Non-Presenting Author:** Hafsatou Diop MD, MPH

The Beautiful Struggle: Reengaging Systems to Meet the Needs of Expectant and Parenting Teens in Baltimore City

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Angelise Shelby MSW, LMSW

Issue: The U.S. disparity in teen birth rates between Black and White teens decreased by 75% and between Latina and White teens decreased by 47% since 2009. Despite these successes, Baltimore City's teen birth rate (32.6 births per 1,000 females aged 15–19) is more than double Maryland's 15.9 teen birth rate and represents 20% of all Maryland teen births. The stigma of teen pregnancy can be a barrier to success for young families. The negative effects of early childbearing may have adverse effects on the health, education, and employment opportunities for young families.

Setting: Perinatal group sessions targeted at youth ages 12-25 took place in various community and school settings in West Baltimore and participants were predominately African American.

Project: B'more for Healthy Babies Upton/Druid Heights (BHB U/DH), a community-based program, was created to help decrease infant mortality rates and increase positive pregnancy/birth outcomes in the city. Perinatal group sessions (Baby Basics Mom's Club) are a key component of BHB U/DH. In addition to group sessions in the community, BHB U/DH and Baltimore City Public Schools administrators adapted sessions to fit into the school day and the specific needs of this population. Youth were given satisfaction or knowledge-based surveys. Small focus groups were also held to assess whether programs were meeting participants' needs. Expanding upon the traditional Mom's Club group dynamic, additional group sessions were added to the curriculum to support their parenting and vocational success. Sessions included continuing education, reproductive health, parental rights, mental health, self-advocacy, power, finances, job readiness, and leadership. In addition, youth benefited from case management to support their family in navigating healthcare, school, and government programs.

Accomplishment/Result: BHB U/DH identified 152 expectant/parenting youth. Seventy-eight were served in a school or community setting where they participated in perinatal support groups. Five participated in the paid BHB peer leader program gaining skills in time management, public speaking, and leadership skills. Fifteen graduated from high school. Three pursued higher education. Of the 38 births, none were premature and only one was born at a low birth weight. BHB U/DH expanded community connections beyond our core neighborhood schools, serving four additional high schools and Baltimore City Community College.

Barriers: BHB U/DH staff overcame school administration changes and youth and caregiver engagement issues when implementing this programming. After launching programming, staff worked with pregnant and parenting youth to overcome barriers that would prevent them from being successful such as re-engagement in school, childcare issues, hostile living arrangements, youth homelessness, and mental health issues. Staff maintained a consistent presence and often functioned as a liaison between pregnant and parenting youths' caregivers and the school system.

Lesson Learned: Much of the pregnant and parenting youth in Baltimore have limited resources and/or knowledge to support themselves and sustain themselves through this transition to adulthood. This population has a different set of needs than those of their peers and even those parenting at a mature age. Case management and access to parenting and self-sufficiency programming may help reduce the barriers and inequalities these teens and young adults face.

Information for Replication:

Additional Authors: Giselle Joseph CLC
Presenting Author: Stacey Stephens MSW, LCSW-C **Non-Presenting Author:** Bronwyn Mayden MSW

The Economic and Mental Health Impacts of the COVID-19 Pandemic on Families: Results from the Health eMoms COVID-19 Survey

Submission Type: Oral Abstracts

Track: Collateral Damage of COVID

Author(s): Rebecca Rees

Background: The COVID-19 pandemic has severely compromised economic security for many families in Colorado. In April 2020, the Colorado unemployment rate peaked at 12.1%-- a steep rise from the pre-pandemic rate of 2.8%. Current unemployment is still two times higher than in the months prior to the pandemic. Women have borne the brunt of this loss of employment due to being overrepresented in the most-impacted industries and over-relied upon to care for children or other family members. These economic impacts and their indirect effects may carry an additional psychological toll during an already trying time. We used the Health eMoms COVID-19 Survey to assess both economic and psychological impacts of the COVID-19 pandemic in families with young children.

Study Questions: How has the COVID-19 pandemic impacted families with young children economically? Are these economic impacts associated with increased anxiety in the birthing parent?

Methods: The COVID-19 Survey was distributed by email and text message between January 20 and February 3, 2021 to all participants enrolled in Health eMoms. Health eMoms is an online, longitudinal maternal and child health data collection system that invites 200 birthing people each month to join an online survey platform. Participants complete up to 6 online surveys on their experiences over the first three years postpartum. The COVID-19 survey was an additional cross-sectional survey developed to capture the unique impacts of the pandemic on families. Out of 2,887 eligible participants, 1,844 (65%) birthing parents completed the survey. Responses were weighted on demographic factors to represent all birthing parents of children ages 0-3 born and currently living in Colorado. Birthing parent anxiety was measured using the Generalized Anxiety Disorder-2 screener. Associations between this measure and economic hardships were assessed using Pearson Chi-Square tests and an α of 0.05.

Results: Approximately 1 in 4 parents (23.7%, CI:21.6-25.9%) had a GAD-2 score indicative of possible generalized anxiety at the time of survey. The majority of participants (75.5%, CI:73.3-77.7%) reported that someone in the household experienced a change to employment since March 1, 2020; 16.1% (CI:14.3-18.0%) reported that someone in the household was laid off or furloughed and 10.1% (CI:8.6-11.7%) reported that someone in the household quit their job to take care of dependents. Greater generalized anxiety was significantly associated with being laid off or furloughed (p<0.0001) and quitting a job to take care of dependents (p=0.0052). Additional economic hardships and their relationship to anxiety will be detailed in the presentation.

Conclusions: Those experiencing employment change and economic hardships as a result of the COVID-19 pandemic are more likely to be experiencing generalized anxiety than those who have remained more economically stable.

Public Health Implications: Mental health services are an essential component of emergency response. We must remove barriers to accessing these services so that systems are resilient and navigable for those with pre-existing mental health conditions and those with new mental health needs due to the crisis or its effects.

Additional Authors: Rebecca Rees MS **Non-Presenting Author:** Sarah Blackwell

The Illinois Maternal Health Strategic Plan: Leveraging Partnership to Advance Policy

Submission Type: Oral Abstracts

Track: Maternal Health

Author(s): Abigail Holicky MPH

Issue: Illinois is one of nine states awarded the HRSA State Maternal Health Innovation grant, a five-year federal initiative to address the stark inequities in Maternal Health outcomes nationally. As part of this effort, the Innovations to ImPROve Maternal OuTcomEs in Illinois (I PROMOTE-IL) project established the Illinois Maternal Health Task Force (Task Force) in March 2020. The Task Force is a volunteer body of stakeholders assembled to advise the creation of the Illinois Maternal Health Strategic Plan (Strategic Plan) and aid in its implementation.

Setting: The Strategic Plan is a state-level initiative, which builds on multiple efforts in the state to improve maternal and child health (MCH) outcomes. The plan is intended to guide, support and/or strengthen the efforts of all MCH stakeholders by providing feasible strategies and action steps.

Project: The Task Force, under the direction of I PROMOTE-IL, implemented distinct steps in the creation of the Strategic Plan. First, the vision, mission and values to guide the process were developed. Second, data and recommendations from Illinois' Maternal Mortality Review Committees were reviewed and action steps or policy changes were suggested to implement the recommendations. Third, feedback on various components (e.g. acceptability) was compiled and analyzed to create five strategic priority areas: Care Coordination & Case Management; Public Education and Community Empowerment/Engagement; Equal Access to High Quality Care; Root/Structural Causes of Health Equity; and, Maternal Health Data for Action. Fourth, working committees were established, one for each priority area, to identify strategies and action steps to be implemented over the next four years. Fifth, the Strategic Plan was drafted with an emphasis on alignment with other efforts. Finally, the Strategic Plan was implemented through the work of the committees as well as through the leveraging the work of multiple partners.

Accomplishment/Result: The Task Force developed a comprehensive Maternal Health Strategic Plan for Illinois. The Strategic Plan has significant buy-in from stakeholders and key elements are currently being addressed through state legislative and administrative actions. The vast majority (89%) of Task Force members strongly agreed/ agreed that the Strategic Plan aligns with the priorities of their organization.

Barriers: Challenges include ensuring adequate representation from across a large state. I PROMOTE-IL staff have identified the need for more local-level and non-Chicago representation on the Task Force and have continued to solicit invitations to fill this gap. Another challenge is ensuring that the Strategic Plan continues to align with the other statewide efforts focused on maternal and infant health.

Lesson Learned: The Task Force identified values of equity, collaboration, quality, science/evidence, and community empowerment, which was valuable in guiding the strategic planning process. Partners with expertise and experience are encouraged to take the lead on various strategies, which has engendered buy-in and investment. Likewise, maintaining flexibility is critical; focusing on issues where momentum is greatest allows the Task Force to respond to changing needs and emerging issues. Finally, Illinois has multiple statewide plans and initiatives which address maternal and related issues. Aligning the Strategic Plan with these other agendas prevents duplication, unifies the vision, and synergizes the impact of all efforts.

Information for Replication: In Illinois, the impetus for creating the Strategic Plan was receipt of federal funding, which provided infrastructure for several staff positions. It is estimated that it took at least 250 staff hours to plan, organize and draft the first version of the IL Maternal Health Strategic Plan. This does not include the efforts of the 60+ Task Force members. Having knowledgeable and well-connected paid staff is essential to developing and moving the Strategic Plan agenda forward. Alignment with Title V and other key initiatives is essential to ensure that competition between multiple plans is kept to a minimum and all partners support each other’s efforts.

Additional Authors: Abigail Holicky MPH
Presenting Author: Caitlin Garland MPH **Non-Presenting Author:** Elizabeth Glassgow PhD **Non-Presenting Author:** Ashley Horne MSPH **Non-Presenting Author:** Shirley Scott DNP, RN-BC, C-EFM, CLS, APN **Non-Presenting Author:** Kenya McRae JD, MPH, PhD **Non-Presenting Author:** Cindy Mitchell RN, BSN, MSHL **Non-Presenting Author:** Stacie Geller PhD **Non-Presenting Author**: Rachel Caskey MD, MAPP **Non-Presenting Author:** Arden Handler DrPH

The Potential Economic Benefits of Reducing The Traditional 14 Prenatal Visits To 10 Or 8 for Women at Low Risks

Submission Type: Oral Abstracts

Track: Policy Work/Systems

Author(s): Ilhom Akobirshoev PhD, MA, MSW

Background: Compelling evidence suggests that fewer prenatal visits (PNV) for low-risk women are medically acceptable and may be more cost-effective. In late 1989, the US Department of Health and Human Services Expert Panel on Prenatal Care endorsed a reduced number of prenatal visits for low-risk women. The reduced schedule of PNV, compared with traditional models, for low-risk, parous women was also supported by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (ACOG). However, US prenatal care practices still a "one-size-fits-all" approach by requiring the standard 13 to 15 PNV visits.

Study Questions: What is the economic effect on healthcare expenditures of reducing traditional PNV from 14 to 10 or 8 for women with low risks?

Methods: We conducted a cost-benefit analysis of reducing the traditional 14 PNV to 10 or 8 for women at low risk. The healthcare costs of traditional 14 PNV, including the direct costs and the indirect costs, were estimated from a societal perspective based on the 2017 National Vital Statistics data of 3.86 million deliveries. In the second step, the net savings due to the reduction of the traditional PNV from 14 to 10 or 8 for women with low risks were calculated. We used multiple data sets to derive the study input data including $275 as the average direct costs per PNV which include physician fees and tests; $103 as the average indirect costs per PNV in terms of pregnant women's time and transportation costs; and 48% (out of 3.86 million deliveries) as the average prevalence of low-risk pregnancies.

Results: The estimated total cost attributable to PNV in the United States in 2017 was $20.4 billion, including the total direct healthcare cost of $14.9 billion and the total indirect cost of $5.5 billion. From a societal perspective reducing the traditional 14 PNV to 10 or 8 for women at low risk would generate a net cost savings of approximately $2.8 billion or $4.2 billion, respectively. The net healthcare expenditures savings were $724 for every pregnant woman if the traditional 14 PNV were reduced to 10 PNV and $1,087 if reduced to 8 PNV.

Conclusions: Reducing the traditional 14 PNV to 10 or 8 for women at low risk is cost-effective.

Public Health Implications: These findings can be used to inform administrators and policy decision-makers to promote sustainable adoption and implementation of reduced PNV visit models for women at low risk as a significant cost savings strategy to reduce U.S. health care costs both by public and private payers.

Additional Authors: Ilhom Akobirshoev PhD, MA, MSW
Presenting Author: Monika Mitra PhD

The Risk of Child Mortality Among Women With and Without Disabilities in South Africa

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Ilhom Akobirshoev PhD, MA, MSW

Background: While the number of women with disabilities is growing in resource-constrained countries, little research has examined the association between maternal disability and child mortality. This study examines the association between maternal disability and child mortality in South Africa.

Study Questions: Is disability among women in South Africa associated with child mortality, including neonatal mortality, infant mortality, and under-five mortality?

Methods: We analyzed data for women age 15–49 years from South Africa, using the nationally representative 2016 South Africa Demographic and Health Survey (SADHS). We estimated unadjusted and adjusted risk ratios of child mortality indicators by maternal disability using modified Poisson regressions.

Results: Children born to mothers with disabilities compared to their peers born to non–disabled mothers were at a higher risk for neonatal mortality (RR=1.74, 95% CI: 1.25 - 2.42, $p<0.001$), infant mortality (RR=1.80, 95% CI: 1.24 - 2.59, $p<0.001$), and under-five mortality (RR=2.29, 95% CI: 1.42 - 3.69, $p<0.001$). These differences persisted and remained robust even after adjusting for maternal age, maternal education, marital status, sex of the live-born child, household wealth index, residence, and region (RR=1.56, 95% CI: 1.12 - 2.17, $p<0.001$ for neonatal mortality; RR=1.65, 95% CI: 1.14 - 2.39, $p<0.001$ for infant mortality; RR=2.31, 95% CI: 1.43 - 3.72, $p<0.001$ for under-five mortality).

Conclusions: Our results show higher child mortality rates among mothers with disabilities and lack of equal access to adequate maternal child health services may be an important factor.

Public Health Implications: These findings emphasize that it is critical for policymakers, donor agencies, and non–governmental organizations to consider disability-inclusive maternal and child health services in developing policy and practice in the context of reducing child mortality under the Sustainable

Development Goals (SDGs) in the Global South

Additional Authors: Monika Mitra **Non-Presenting Author:** Nora Groce

Transitioning to a Virtual Baby Café© Model: Lessons Learned

Submission Type: Oral Abstracts

Track: Other

Author(s): Ann Dozier RN, PhD

Issue: Providing community based lactation support in the weeks and months after birth presents an ongoing challenge for many institutions and communities. Referring new mothers to community resources is also required as part of the Baby Friendly Hospital Initiative's Step 10. Phone or group support are common approaches. An evidence-based model is the Baby Café©. Baby Cafés© are free, drop-in, informal breastfeeding support groups, offering ongoing professional lactation care and intervention, that have been implemented across the US. In 2020 providing support beyond the delivery/hospital period became all the more critical; with shorter lengths of stay there was less time for breastfeeding support before discharge and usual supports from family and friends were less accessible. Breastfeeding support groups were no exception, so a virtual Baby Café© model was implemented.

Setting: Starting in 2018 in an upstate New York community we implemented the Baby Café© model to primarily to reach postpartum breastfeeding women who have less access to resources and support.

Project: Prior to April 2020 (with NYS funding), the Baby Cafe model had been implemented at 3 different sites each offering a 1.5-2 hour session eventually provided weekly at each site (weekdays; daytimes, evening), facilitated by either a Lactation Consultant (IBCLC) or an RN Certified Lactation Counselor (with IBCLC backup) with a breastfeeding peer counselor as co-facilitator. Cafes were community-wide involving both health systems and the local health department. Implementation was coordinated across the community to offer convenient scheduling and locations accessible to our priority population. Marketing occurred predominately through Facebook and informational handouts distributed at prenatal and pediatric practices, hospitals and through a local WIC program. With the onset of the pandemic, we used Zoom to create a virtual platform for all groups, amending promotional flyers to include login information, postings on social media/websites and established a text reminder (sent shortly before each session). A 'smart phrase' was implemented in the electronic health record in both local health systems (as a quick/easy way for staff to generate information for patients). We held two special "virtual" events to stimulate interest. Brief educational presentations were included (e.g. mindfulness, nutrition).

Accomplishment/Result: Before the transition to virtual participation was inconsistent and suboptimal (average of ~2.5 weekly attendees). We transitioned within 3 weeks with minimal service disruption. The special events drew over 60 individuals. Our average weekly attendance rose to ~40-45. Repeat participation became common place (~75%). “Having the support encouraged me that I could do it and pushed me to continue.” We achieved improved access for women who would otherwise be unable to attend in-person sessions due to Covid-19, transportation issues, inclement weather or no childcare.

Barriers: Challenges encountered: unable to weigh infant or easily visualize latch; comfort with technology and video/Zoom fatigue (for both moderators and participants) and required Baby Café© data collection challenges.

Lesson Learned: Contrary to our skepticism the virtual platform proved to be more successful than in-person, likely due to reduced barriers to participation. While participants are looking forward to in-person sessions, given our success, maintaining at least one virtual option is planned.

Information for Replication:

Additional Authors: Ann Dozier RN, PhD
Presenting Author: Holly Widanka MS, CLC **Non-Presenting Author:** Amy Saglibene-Parmelee RN, BSN, IBCLC, RLC **Non-Presenting Author:** Rosemary Bonaccorso DTR,CDN,IBCLC

Translating PR-PRAMS Safe Sleep Data into Strategies to Decrease Infant Mortality in PR

Submission Type: Oral Abstracts

Track: Infant Mortality

Author(s): Wanda I. Hernández MPH

Background: The American Academy of Pediatrics recommends placing infants to sleep in a safe environment that includes a back-sleep position on a separate firm sleep surface and without soft objects and loose bedding to decrease sleep-related Sudden Unexpected Infant Deaths (SUIDs) rates. In Puerto Rico (PR) SUIDs rates, including sudden infant death syndrome (SIDS), undetermined causes, and accidental suffocation and strangulation in bed, increased from 49.2/100,000 live births (LB) in 2017 to 102.9/100,000 LB in 2019. In 2017, PR showed the lowest baby back-sleep position practice (38.1%) compared to other PRAMS participating states with an overall average of 79.5%.

Study Questions: What are the safe sleep practices in PR? What strategies are needed to address safe sleep practices in PR?

Methods: Safe sleep practices (back-sleep position, separate approved sleep surface, and no soft objects or loose bedding) were analyzed using PR-PRAMS data (2017-2019). Data was stratified by the socio demographic, behavioral, and health care characteristics of participants. The providers' advice on safe sleep was also considered in the analysis.

Results: Less than half of the mothers reported usually placing their infants to sleep on a separate firm sleep surface (46.4%), followed by placing their infants on their back (42.2%). Fewer reported avoiding soft objects and loose bedding (27.8%). On the other hand, only 4.5% of the mothers place their infants to sleep in a safe environment. A safe sleep environment increases with mother's age (1.6% for ≤19 years; 4.3% for 20 to 34 years; 8.0% for ≥35 years). It is also higher among mothers who are non-WIC beneficiaries (8.5% vs. 3.7%), married (7.0% vs. 3.3%), with private health insurance (6.1% vs. 3.7%), currently breastfeeding (5.4% vs. 3.3%), with a high school diploma (5.5% vs. 2.7%), and those that took the infant for the preventive visit (4.5% vs. 0.6%). Receiving provider's advice was only associated with increased back-sleep position (49.1%, p-value<0.0001).

Conclusions: The data indicates that mothers may have little or no knowledge about infant safe sleep practices to prevent SUIDs. Therefore, infant safe sleep is an issue that must be addressed urgently in PR.

Public Health Implications: Informed by the PR-PRAMS data, the PR Maternal, Child and Adolescent Health Program (PRMCAHP) developed a strategic plan targeted at both health professionals and families to address infant safe sleep. The PRMCAHP joined efforts with a network of partners to promote infant safe sleep among health professionals including hospital staff. Raising awareness of the risks involved in common sleep practices that are considered non-safe among families is critical to assure infants sleep in a safe environment. Therefore, infant safe sleep has been integrated into the prenatal and parenting courses, multimedia campaign, and the PRMCAHP Home Visiting Program. Since PR is a jurisdiction prone to natural disasters that result in the displacement of families with infants to shelters and relatives' homes, education and support on safe sleep practices in these environments is an integral part of the strategic plan. An indicator was created to measure the impact of these strategies in PR.

Additional Authors: Wanda I. Hernández Master's Degree in Public Health
Presenting Author: Marianne Cruz Master's Degree in Epidemiology
Presenting Author: Aurea Rodriguez Master's Degree in Biostatistics **Non-Presenting Author:** Norma Boujouen Doctorate's Degree in Cultural Anthropology

Trends in Postpartum Contraceptive Use – 20 US States and Jurisdictions: The Pregnancy Risk Assessment Monitoring System, 2015-2018

Submission Type: Oral Abstracts

Track: Women's Health

Author(s): Katharine Bruce MPH

Background: In the last decade, state and national programs and policies have aimed to increase access to postpartum contraception. Despite these efforts, research on recent nationwide trends in postpartum contraceptive use is limited.

Study Questions: Did postpartum use of contraceptive methods change from 2015 to 2018? Were there differences in method use and trends by insurance status or geographic setting (rural vs. urban)?

Methods: Using Pregnancy Risk Assessment Monitoring System data from 20 jurisdictions, we analyzed trends in postpartum contraceptive method use from 2015 to 2018 overall and within subgroups using weighted logistic regression. Using 2018 data and multivariable weighted logistic regression, we assessed variation in method use by insurance type and geographic setting.

Results: From 2015 to 2018, overall, there were increases in long-acting reversible contraception (LARC) use ($p=0.04$) and in use of no method ($p<0.01$) and a decrease in short-acting reversible contraception (SARC) use ($p<0.01$). LARC use increased among those with private insurance ($p=0.01$) and in urban settings ($p=0.01$) but not in other subgroups. In 2018, those with no insurance had lower odds of using LARC ($p=0.01$), SARC (<0.01) and permanent methods ($p=0.03$) than those with private insurance. There were no significant differences in use of those methods between private and public insurance. Those in rural settings had greater odds of using all method categories ($p<0.02$) than those in urban settings.

Conclusions: We found significant changes in contraceptive method use patterns from 2015 to 2018. Those with private insurance were more likely to use effective contraception than those without insurance, and those in rural settings were more likely to use all methods than those in urban settings.

Public Health Implications: Public health institutions can implement strategies to remove barriers to access and increase availability of methods with high upfront costs, such as permanent contraception and LARC, which may address differences in utilization across insurance statuses and geographic settings. State-level policies that adequately reimburse for the insertion procedures and device costs associated with immediate postpartum LARC and provide guidance for facilities and providers on reimbursement may address implementation challenges and improve access, including among people without insurance. Initiatives that support provider training on method insertion, method removal, and patient-centered counseling on a full range of methods may also improve access. Finally, additional research is warranted to determine whether the effectiveness of existing policies and programs varies between urban and rural settings, or whether these variations may be attributable to other factors.

Additional Authors: Katharine Bruce MPH
Presenting Author: Andrei Stefanescu PhD **Non-Presenting Author:** Lisa Romero DrPH, MPH **Non-Presenting Author:** Ekwutosi Okoroh MD **Non-Presenting Author:** Shanna Cox MSPH **Non-Presenting Author:** Lyn Kieltyka PhD, MPH **Non-Presenting Author:** Charlan Kroelinger PhD **Non-Presenting Author:**

Uncovering Racism and Discrimination in Maternal Mortality Case Abstraction

Submission Type: Oral Abstracts

Track: Racism, Equity, Social Justice

Author(s): Lisa Z. Klein DNP, MSN, BSN

Issue: Maternal mortality continues to disproportionately affect non-white women. In Maternal Mortality Review (MMR), the process can be less controversial and less confrontational when committees focus on the clinical issues and social determinants alone. However, looking at a more holistic picture of the patient's experience means sometimes diving deeper into the cases to ask if discrimination or racism contributed to a woman's death. The Delaware MMR recently added the discussion of such issues to its purview. This presentation/poster will provide instances of clinical situations and medical records notes suggesting discrimination or racism in maternal mortality cases. It will show examples of ways to document the concern in the clinical case summary and how to structure the case summary to facilitate committee deliberation and minimize discrimination and racism in the review process.

Setting: The reviews took place as part of the Delaware Maternal Mortality Review process, and residents of the state experiencing a pregnancy-associated death are the population who can benefit from this work.

Project: Delaware is a recipient of a CDC grant to support our MMR committee. Participants in this program utilize a designated repository, the Maternal Mortality Review Information Application (MMRIA), for clinical and social information. MMRIA includes a Committee Decision Form (CDF) to summarize the findings around a maternal death. In 2020 the CDF was revised to include discrimination and racism as factors contributing to the death. The MMR abstractor reviews the available clinical and social information on pregnancy-associated deaths. The abstractor must maintain objectivity in the review while recognizing terminology that is consistent with discrimination or racism. While racism is addressed as structural or interpersonal and specifically addresses issues related to race, discrimination appears as biases, prejudices, and stereotyping in clinical care, communication, or shared decision making. It may or may not be due to race but could also be associated with age, weight, financial class, sexual orientation, or personal health beliefs. This poster will show examples of ways to document the concern in the clinical case summary.

Accomplishment/Result: Since the initiation of changes to the Committee Decision Form to include discrimination as a contributor to a death, and since educating the MMR Committee members to use an equity lens in the review of maternal mortality cases, four of 13 cases reviewed have identified discriminations and/or racisms as a possible factor in the death.

Barriers: Using the words structural and individual racism and discrimination - By MMR Committee leadership modeling the practice of using these words, we are promoting the concept that it is OK to say that these may have had an influence on a maternal death. Recognition of personal triggers - Identifying clinical situations and medical records notes may trigger difficult emotions for members of the committee. We have provided training opportunities for members to learn their triggers and ways to address them.

Lesson Learned: Suggesting discrimination or racism as factors in maternal mortality cases creates challenges requiring MMR Committee members to reconsider their practices and beliefs. It takes them out of their comfort zone, but it is a road we need to follow to make meaningful change and hold ourselves accountable. The next challenge will be taking action to reduce the impact of racism and discrimination as factors in maternal mortality.

Information for Replication: Leadership and members of the Delaware MMR Committee collaborated to open their minds and hearts to consider the influence of discrimination and racism on maternal mortality. Training for the team on identifying their own beliefs and concerns was basic to creating dialogue to include this factor.

Additional Authors: Lisa Klein DNP, MSN, BSN
Presenting Author: Anne Pedrick MS
Presenting Author: Meena Ramakrishnan MD, MPH

Understanding Disasters: The Unique Role of Fatality Review Teams

Submission Type: Oral Abstracts

Track: Environment; Place and Health

Author(s): Abby Collier MS

Issue: A wide range of incidents, both natural and human-made, can result in mass fatalities. These disasters include pandemic infections such as COVID-19, hurricanes, tornadoes, wildfires, floods or mass shooting events. Before the COVID-19 pandemic, approximately 2,000 individuals died each year from these disasters. Disaster-related deaths may have a direct link to the disaster, for example: a death due to COVID-19, a drowning death resulting from a flood, or a gunshot wound from a mass shooting. However, another component of reviewing disaster-related deaths is capturing those deaths indirectly related to the disaster for example, a teenager who dies by suicide during the COVID-19 crisis as a result of social isolation, sepsis due to lack of resources for personal care, or an infant who dies in an unsafe sleep environment while in a crisis shelter. Fatality review teams play a critical role in understanding how systems prepare, respond, and prevent disaster-related systems-gaps.

Setting: A fetal, infant, or child death is a sentinel event that reflects the overall health and safety of a community. Child Death Review (CDR) and Fetal and Infant Mortality Review (FIMR) seek to understand systems gaps contributing to individual deaths. CDR accomplishes this through a comprehensive, multidisciplinary review of child deaths. Findings are used to catalyze prevention work. FIMR teams are comprised of multi-disciplinary groups of professionals who review de-identified cases of infant and fetal death. Fatality review teams engage a broad group of community collaborators to do prevention work.Louisiana, a state that experienced a high number of natural disasters in 2020, including five direct hits from Gulf hurricanes and the COVID-19 pandemic, uses fatality review to understand disasters.

Project: In collaboration with a variety of local, state, and national organizations, guidance for fatality review teams has been created on how to improve understanding of disasters. This is particularly relevant to the COVID-19 pandemic.

Accomplishment/Result: Since Hurricane Katrina, the state has developed and evolved Emergency Operations protocols to ensure the continuity of essential state functions. While COVID-19 presented new challenges, these were compounded by multiple severe storms. Part of the function of the state Child Death Review is to monitor emerging trends in child mortality and identify injury prevention opportunities through state and local systems. While still too early to comment on data trends, the state has seen in child mortality directly and indirectly due to COVID-19 and hurricanes, the mortality surveillance team responded to these disasters through existing formal and informal networks. Through Regional Maternal and Child Health (MCH) Coordinators located throughout the state, the Mortality Surveillance Team can support, address emerging needs, and provide access to resources. In conjunction with local Community Advisory and Action Team (CAAT) members and their respective agencies, MCH Coordinators have been able to collaborate in: connecting families in need to Pack 'N Plays while displaced to promote Safe Sleep; connecting families to appropriately installed car seats to promote child passenger safety; and communicating with local shelters and hospitals to identify any MCH related needs for families affected by COVID-19 and disaster displacement.

Barriers: During the time of a disaster, agencies are often operating under emergency procedures. These procedures can have lasting impacts on the community as well as agencies. Additionally, during times of disaster resources may be limited. Lastly, due to competing needs during a disaster, ensuring the health and safety of communities and families is even more challenging.

Lesson Learned: Fatality review processes are positioned in states and jurisdictions to provide timely, relevant, and informative data on how systems prepare, respond and prevent disasters. This timely access to data provides rich context that can be used at the local, state, and national levels. Additionally, CDR teams can help identify the root causes for behaviors that increase risk, as well as catalysts for behaviors that decrease risk.

Information for Replication:

Additional Authors: Rosario Trichilo-Lucas MPH

Understanding the Maternal and Child Health Epidemiology Workforce: Results from the 2021 Epidemiology Capacity Assessment

Submission Type: Oral Abstracts

Track: Leadership/Workforce Development

Author(s): Sarah Auer MPH, CHES

Background: In 2021, the Council of State and Territorial Epidemiologists (CSTE) conducted its seventh Epidemiology Capacity Assessment (ECA) since 2001. The ECA enumerates the applied epidemiology workforce and explores funding sources, training needs, assets for recruiting and retaining epidemiologists and departments' capacity to conduct three of the Essential Public Health Services (EPHS).

Study Questions: The 2021 ECA was designed to enumerate and describe the applied epidemiology workforce, describe the training needs of the applied epidemiology workforce, describe the funding supporting the applied epidemiology workforce, describe the level of epidemiology capacity in state health departments and assess the impact of the COVID-19 pandemic on epidemiological capacity and staffing.

Methods: The 2021 ECA was developed in Qualtrics online software and piloted in three states before distribution to remaining states, DC and 8 US territories in January 2021. Data were analyzed in Excel 2008 and SAS 9.4 statistical software.

Results: Among the 50 states and DC, the total number of epidemiologists in state health departments has increased 23% since 2017, from 3,370 to 4,135 epidemiologists. The number of maternal and child health epidemiologists has decreased 9% since 2017, from 321 to 292 epidemiologists. The number of lead epidemiologists in this program area has decreased similarly since 2017. In 2021, the 292 maternal and child health epidemiologists represent 7% of the applied epidemiology workforce. The majority of maternal and child health epidemiologists are funded from federal sources, with only 14% funded by states. Participating states and DC noted the need for an additional 135 epidemiologists in maternal and child health to reach ideal capacity, with only 68% of the need currently met. At least 69% (n = 35) of states and DC reported substantial to full capacity in maternal and child health to provide three of the Essential Public Health Services.

Conclusions: While the applied epidemiology workforce continues to grow, the number of maternal and child health epidemiologists has decreased since 2017. Despite the decrease, maternal and child health remains one of the top program areas reporting substantial to full capacity in the Essential Public Health Services. However, there remain gaps in the number of epidemiologists needed in this program area to attain ideal capacity and a heavy reliance on federal funding for personnel.

Public Health Implications: The 2021 ECA data are critical for enumerating maternal and child health epidemiologists and understanding the needs of the workforce. In many jurisdictions, maternal and child health epidemiologists had been identified as not critical for emergency response. However, the ECA data illustrate that many maternal and child health epidemiologists were reallocated to support the COVID-19 response and serve an integral role to plan for and engage with mothers and children during a response. Maternal and child health epidemiologists should be included in emergency preparedness planning and trained adequately to provide support during response activities.

Additional Authors: Jessica Arrazola DrPH, MPH, MCHES **Non-Presenting Author:** Amanda Masters MPH **Non-Presenting Author:** Matthew Masiello

Understanding Unintended Pregnancy Among Women in North Dakota

Submission Type: Oral Abstracts

Track: Lifecourse perspective

Author(s): Ramona Danielson PhD, MS

Background: Women with an unintended pregnancy may not have prioritized healthy behaviors before conception and may not get adequate prenatal care, which can mean that health risks for mother and infant go undetected. The Pregnancy Risk Assessment Monitoring System (PRAMS) explores experiences before, during, and after pregnancy among women who had a live birth. ND chose to include the optional set of 10 questions capturing adverse childhood experiences (ACE) for data analyses.

Study Questions: What factors are associated with unintended pregnancy among ND women who had a live birth?

Methods: The 2017 and 2018 Pregnancy Risk Assessment Monitoring System (PRAMS) data were combined to create a larger dataset for more robust analyses. While PRAMS is typically a sample of birth records, ND Department of Health partnered with each of the five federally recognized tribes located at least partially within the state to create a sufficiently large sample for analysis of this subpopulation. Surveys were sent to all women identifying as American Indian (AI) on the infant's birth certificate, and to a sample of other women (1 in 6). Characteristics that may be associated with pregnancy intendedness were analyzed for significant differences: age; race; ACE score; depression status; and substance use during pregnancy. Unintended pregnancy included respondents who only wanted to be pregnant later, did not want to be pregnant then or at any time in the future, or weren't sure what they wanted. Limitations include potential response bias regarding which mothers completed the PRAMS survey, as well as potential underreporting of risk factors like substance use during pregnancy.

Results: 43% of pregnancies that resulted in a live birth to a ND woman in 2017 and 2018 were unintended. Unintended pregnancy rates were significantly higher among women under 20 (81% of births); who used substances during pregnancy (56%); who had depression before, during, and/or at time of survey (54%); who had an ACE score of 4+ (50%); and women who were American Indian (AI; 63%). Among all women who had a healthcare visit in the year before getting pregnant (67% of respondents), 40% had been asked by their provider about their desire to have children; among women whose pregnancy was unintended, 26% had been asked. A smaller proportion of women with an unintended pregnancy got prenatal care as early as they wanted (82%) compared to women with an intended pregnancy (93%).

Conclusions: There are several factors that are associated with higher rates of unintended pregnancy among ND women who had a live birth in 2017 and 2018, including maternal age (<20 years), race (American Indian), and ACE score (4+). Women who had depression before, during, and/or at time of survey had higher rates of unintended pregnancy, as did women who used substances during pregnancy.

Public Health Implications: Healthcare visits provide one opportunity for discussion about the desire for children and ways to prevent pregnancy, but are missed among many women experiencing the highest rates of unintended pregnancy.

Additional Authors: Ramona Danielson PhD, MS
Presenting Author: Grace Njau MS

Update: Characteristics of Women of Reproductive Age with Symptomatic Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, 2020

Submission Type: Oral Abstracts

Track: Immunization/Infectious disease

Author(s): Penelope Strid MPH

Background: In 2020, more than 3,800,000 cases of laboratory-confirmed COVID-19 were reported to the Centers for Disease Control and Prevention (CDC) among women of reproductive age (WRA), 15 to 44 years. Prior reports found that pregnant women, compared with nonpregnant women, are at increased risk for severe illness from SARS-CoV-2 infection, the virus that causes COVID-19. We describe an updated analysis of previously published reports on all cases of laboratory confirmed COVID-19 among symptomatic pregnant WRA in the United States in 2020.

Study Questions: We aimed to describe characteristics associated with severe COVID-19 illness as described by intensive care unit (ICU) admission, receipt of invasive ventilation, receipt of extracorporeal membrane oxygenation (ECMO), and death among symptomatic WRA, by pregnancy status, in 2020.

Methods: Data from CDC's COVID-19 case surveillance system was used for this analysis. Pregnancy status (Yes, No) was based on the case report form and records linked from the Surveillance for Emerging Threats to Mothers and Babies Network. Among all cases reported to CDC from January 1 through December 31, 2020, we restricted analyses to symptomatic WRA since screening practices among pregnant women may disproportionately capture asymptomatic cases. Symptomatic status was defined using the symptom status variable or specific symptoms reported on the case report form. We used Poisson regression to obtain overall and stratified risk ratios for the outcomes of interest. Models were adjusted for age, race and ethnicity, and presence of three underlying conditions (i.e., diabetes, cardiovascular disease, and chronic lung disease) most associated with severe illness. SAS was used to

conduct all analyses. This activity was reviewed by CDC and was conducted consistent with applicable federal law and CDC policy.

Results: Among symptomatic women, 50% had pregnancy status reported. In 2020, 50,168 pregnant women had symptomatic COVID-19. Additionally, 7 per 1,000 cases (n=346) were admitted to the ICU and 1 per 1,000 cases died (n=58). The risk of ICU admission (aRR 2.9, 95% CI: 2.6-3.3), invasive ventilation (aRR 2.7, 95% CI: 2.1-3.6), ECMO (aRR 1.9, 95% CI: 1.1-3.2), and death (aRR 1.8, 95% CI: 1.3-2.4) were significantly greater among symptomatic pregnant women with COVID-19, compared to symptomatic nonpregnant women after adjusting for age, race and ethnicity, and presence of underlying conditions.

Conclusions: Compared with symptomatic nonpregnant women, the risk of ICU admission, mechanical ventilation, ECMO, and death is increased among symptomatic pregnant women when adjusting for age, race and ethnicity, and presence of underlying conditions. This report summarizes all cases of laboratory confirmed COVID-19 among symptomatic pregnant women aged 15 to 44 years in the United States in 2020. Due to a surge of cases at the end of 2020, the sample size has doubled; however, the increased risk for symptomatic pregnant women compared to symptomatic nonpregnant women remained similar for ICU admission and death.

Public Health Implications: These study findings support the conclusions that symptomatic pregnant people are at increased risk of severe COVID-19 compared to symptomatic nonpregnant people. Greater awareness of the risk posed by SARS-CoV-2 infection on pregnant people can inform clinical guidance, risk communication, and resource allocation.

Additional Authors: Penelope Strid MPH
Presenting Author: Van Tong MPH **Non-Presenting Author:** Suzanne Gilboa MHS, PhD **Non-Presenting Author:** Romeo Galang MD, MPH **Non-Presenting Author:** Sascha Ellington PhD, MSPH

Using Population-Based Data to Develop Adolescent Health County Rankings in Illinois

Submission Type: Oral Abstracts

Track: Child/Adolescent Health

Author(s): Lauren Draftz MPH

Issue: Adolescents develop health behaviors that establish patterns in adulthood and affect overall life course trajectories. Most public health datasets are only available at the state-level and it can be difficult for local health departments to obtain data for needs assessments. This project was implemented in response to the need for local adolescent health data to inform program development.

Setting: This project was conducted by the Illinois Department of Public Health (IDPH), Office of Women's Health and Family Services to help local health departments, health systems, and other organizations assess and respond to the needs of adolescents within their jurisdictions.

Project: A literature review was conducted to identify topics and outcomes for comprehensively describing adolescent health. Based on data sources available publicly or internally accessible to the state health department, specific measures were identified and prioritized by IDPH staff members. These measures came from eight population-based sources: American Community Survey, Robert Wood Johnson County Health Rankings, National Survey of Children's Health (NSCH), State Board of Education Report Card, birth certificates, death certificates, sexually transmitted infection surveillance data, and hospital discharge emergency department data. Data years varied for each measure, ranging from 2009-2019, depending on the measure's stability at the county-level and most recent data availability. Measures from the NSCH were not directly available at the county-level and were calculated using synthetic estimates. For each measure, a z-score was calculated based on the county mean. Z-scores were summed across measures to produce an overall adolescent health score and rank counties into quintiles. Measures were classified into one of two categories (social determinants of health [SDOH] or adolescent health status); z-score sums and corresponding quintiles were then calculated for each category. Chi-square tests were used to examine the distribution of quintiles by county urban-rural classification, population size for 10-19 year olds, and region of the state.

Accomplishment/Result: Twenty-four total measures were selected for inclusion in the final county health rankings (12 SDOH measures and 12 health status measures). The distribution of the overall adolescent health county quintiles and the two category quintiles did not significantly vary ($p>0.05$) by urban-rural classification, adolescent population size, or region. Nearly half (n=47/102; 46.1%) of Illinois counties ranked in the same quintile for both the SDOH and health status categories. A report of county rankings and maps was posted on the IDPH website and shared with local jurisdictions through IDPH adolescent health programs.

Barriers: Rare health outcomes (e.g., homicides) had low case counts in most Illinois counties, necessitating combination of many years of data. Measures based on survey data have inherent uncertainty due to sampling, but this was not accounted for in the z-scores for measures.

Lesson Learned: Compiling adolescent health measures into a standardized score can enable comparisons between peer counties and the rest of the state. Because all data sources were either publicly available or accessible by state health department staff, this method of summarizing adolescent health at a county-level can be adapted by other state health departments and offers a blueprint for providing a localized snapshot of adolescent health.

Information for Replication: • Illinois Title V maternal and child health program hosted a graduate student intern from DePaul University for 9 months to support the completion of this project. • There was no budget associated with this project, though Title V epidemiology staff time was needed to oversee the work of the intern and finalize the publication of the state report. • The adolescent health rankings utilized publicly available data sources in combination with sources internal to IDPH. o Publicly available data sources included the American Community Survey, the Robert Wood Johnson County Health Rankings, the National Survey of Children’s Health, and the Illinois State Board of Education Report Card o Data sources internal to IDPH included Illinois vital records (death and birth certificates), STI surveillance data, and Illinois hospital discharge outpatient data. • Specific information on the 24 selected measures will be provided during the presentation

Additional Authors: Lauren Draftz MPH
Presenting Author: Amanda C. Bennett PhD, MPH

Validity of Pregnancy-Related Death Classification by the CDC Pregnancy Mortality Surveillance System Compared With the Louisiana Maternal Mortality Review Committee

Submission Type: Oral Abstracts

Track: Maternal Morbidity and Mortality

Author(s): Lyn Kieltyka PhD, MPH

Background: The Centers for Disease Control and Prevention's (CDC) Pregnancy Mortality Surveillance System (PMSS) requests jurisdictions voluntarily send death records of women who died during or within one year of pregnancy, linked live birth or fetal death records if applicable, and any additional data when available. CDC-PMSS medical epidemiologists review available information to classify deaths as pregnancy-related, pregnancy-associated but not related, or false cases. Results are used to report a national pregnancy-related mortality ratio (PRMR). Louisiana's Maternal Mortality Review Committee (LA-MMRC) classification of Louisiana pregnancy-related deaths is considered the gold standard due to enhanced access to detailed medical and autopsy records. Classification of Louisiana's pregnancy-related deaths by LA-MMRC and CDC-PMSS has not been compared.

Study Questions: What is the PRMR calculated by CDC-PMSS for Louisiana deaths [CDC-PMSS (LA)] versus LA-MMRC? What is the sensitivity, specificity, and positive predictive value (PPV) for pregnancy-related deaths by CDC-PMSS (LA)?

Methods: Louisiana's Vital Records office sent CDC-PMSS the requested death records and applicable linked birth or fetal death records. LA-MMRC also used the pregnancy checkbox and linkages of all death records, irrespective of cause, with live birth and fetal death records to identify cases. All LA-MMRC cases were cross referenced with medical records to confirm pregnancy. Each system identified all 2017 Louisiana pregnancy-related deaths that occurred during or within one year of the end of pregnancy and independently reviewed and classified deaths as pregnancy-related (death from any cause related to or aggravated by the pregnancy), pregnancy-associated but not related (deaths from any cause not directly related to or aggravated by pregnancy), or false case (no evidence of pregnancy within the year prior to death). Each system's data was used to calculate a Louisiana PRMR, defined as the number of pregnancy-related deaths per 100,000 live births. CDC-PMSS (LA) and LA-MMRC deaths classified by both systems were used to calculate the sensitivity, specificity, and PPV of CDC-PMSS (LA).

Results: Both systems classified 15 deaths as pregnancy-related (13 were identically classified in both systems), resulting in each system reporting a PRMR of 24.6 per 100,000 births. CDC-PMSS reviewed 61 Louisiana pregnancy-related deaths. LA-MMRC noted 30 additional pregnancy-associated deaths for a total of 91 to review. None of the additional 30 deaths were classified as pregnancy-related by LA-MMRC; these records were excluded from the validity analysis because CDC-PMSS did not review them. One false case was also excluded from validity analyses. Of the 60 remaining records, sensitivity was 86.7%, specificity was 95.6%, and PPV was 86.7% for pregnancy-related classification by CDC-PMSS (LA).

Conclusions: LA-MMRC and CDC-PMSS (LA) resulted in identical PRMR; CDC-PMSS (LA) also noted good sensitivity and specificity despite limited access to records for review.

Public Health Implications: As maternal mortality continues to be a priority nationally and in Louisiana, reliance on accurate counts and rates is essential to effective monitoring. This comparison supports confidence in CDC-PMSS classifications of Louisiana's pregnancy-related mortality.

Additional Authors: Lyn Kieltyka PhD, MPH
Presenting Author: Joan Borstell **Non-Presenting Author:** Devin George MPPA **Non-Presenting Author:** Jemimah Mickel **Non-Presenting Author:** David Goodman PhD

Variation in Prescription Opioid Use Across 34 U.S. Jurisdictions Among Recently Pregnant Women

Submission Type: Oral Abstracts

Track: Substance Use/Smoking/Vaping

Author(s): Beatriz Salvesen MPH

Background: The use of prescription opioids may be recommended during pregnancy for the management of pain; however, use during pregnancy could lead to adverse maternal and infant outcomes.

Study Questions: Among women with a recent live birth, does the prevalence of prescription opioid pain reliever (prescription opioid) use, misuse, and desire to cut down vary by jurisdiction?

Methods: CDC analyzed data from 37,749 respondents across 34 jurisdictions in the United States that implemented the Pregnancy Risk Assessment Monitoring System (PRAMS) opioid supplement questionnaire in 2019. Data were used to assess the self-reported prevalence of prescription opioid use during pregnancy by jurisdiction. Weighted prevalence estimates with 95% confidence intervals were calculated.

Results: Among respondents, the prevalence of prescription opioid use during pregnancy was 6.1% (95% Confidence Interval [CI]: 5.7-6.5), and ranged from 2.6% (95% CI: 1.0-4.1) in the District in Columbia (DC) to 9.3% (95% CI: 7.4-11.2) in Oregon. Across all jurisdictions, a median of 82% (Interquartile range [IQR]: 79-89) of respondents who reported using prescription opioids indicated they obtained them from a healthcare provider, ranging from 70% (95% CI: 51-90) in New York to 97% (95% CI: 94-99) in New Hampshire. The prevalence of using prescription opioids for pain-related reasons also varied by jurisdiction with a median prevalence of 70% (IQR: 63-77), ranging from 42% (95% CI: 20-64) in Iowa to 90% (95% CI:80-99) in Louisiana. The median prevalence of misuse (i.e., used for non-pain related reasons or obtained from a non-healthcare related source) was 36% (IQR: 32-44), ranging from 17% (95% CI: 4-30) in Louisiana to 65% (95% CI: 44-95) in Iowa. Among women reporting use of prescription opioids during pregnancy across all jurisdictions, a median of 24% (IQR: 21-30) indicated that they wanted or needed to cut down or stop using them; jurisdiction-specific estimates ranged from 6% (95% CI: 2-11) in Iowa to 55% (95% CI: 33-76) in Kentucky.

Conclusions: Fewer than 1 in 10 women reported prescription opioid pain reliever use during pregnancy. Significant variation occurred across the 34 jurisdictions in the proportion of women who reported obtaining prescription opioids from a health care provider, misuse of prescription opioids and reporting want or need for cutting down or stopping use.

Public Health Implications: Population-based assessment (or surveillance) of prescription opioid prevalence during pregnancy can inform and guide jurisdictions on emerging risks to maternal and infant health outcomes. Opportunities exist to inform and guide the improvement of healthcare provider counseling and ensure adequate screening for potential misuse during pregnancy.

Additional Authors: Denise D'Angelo MPH **Non-Presenting Author:** Jean Ko PhD **Non-Presenting Author:** Brian Morrow PhD **Non-Presenting Author:** Shanna Cox **Non-Presenting Author:** Suzanne Folger **Non-Presenting Author:** Leslie Harrison MPH **Non-Presenting Author:** Lee Warner PhD **Non-Presenting Author:** Wanda Barfield MD

Gestational Diabetes Mediates the Effects Between Maternal Pre-Pregnancy Body Mass Index and Large for Gestational Age Singleton Term Births

Submission Type: Oral Abstracts

Track: Perinatal outcomes

Author(s): Anthony Kondracki

Background: Maternal pre-pregnancy body mass index (BMI) is strongly associated with infant birthweight and the risk differs in pregnancies complicated by gestational diabetes mellitus (GDM). Study Questions 1)How are the effects of pre-pregnancy body mass index (BMI) on large for gestational age (LGA)(>97th percentile) singleton births at term (37-41 completed weeks gestation) mediated through gestational diabetes (GDM)?

Methods: 1)Data from the 2018 U.S. National Vital Statistics Natality File restricted to singleton term births(N= 3,229,783) were used in this study. In counterfactual models for causal inference, weestimated the total effect (TE), the natural direct effect (NDE), and the natural indirect effect(NIE) for the association of maternal pre-pregnancy BMI status with LGA births at early, full, and late term mediated through GDM using log-binomial regression, adjusted for race/ethnicity, age, education, parity, and infant sex. Proportion mediated was calculated on the risk difference scale and potential unmeasured confounders were assessed based on the E-value.

Results: 1) Overall, 6.4% of women had GDM and there were 3.6% LGA singleton term births. The highest prevalence of GDM was among pre-gestational overweight and obesity that also had the highest rates of LGA births at term. The NDE estimates for LGA term birth categories were higher than the NIE estimates across overweight and obese BMI status. The proportion mediated was higher for LGA early term births (up to 16.4%) and declined for LGA births at full and late term. A limitation was that self-reports in the dataset may lead to potential measurement error and bias. Findings from this study need to be considered under the conditions for valid causal inference including consistency, exchangeability, and positivity assumptions. Given some common causes of the mediator-outcome relationship were not adjusted for in mediation models, the assumption of no unmeasured confounding may have been violated.

Conclusions: 1) Results from our study are important because the prevalence of maternal obesity and GDM are increasing and LGA births are becoming more common.

Public Health Implications: 1) Although the proportion mediated was relatively small, term births consist the largest cohort of infants and health risks arising from GDM and pre-pregnancy overweight/obesity can be significant to both the mother and her offspring.

POSTERS

Justice for All? An In-Depth Look at Sexual Assault Kit Testing in the Carolinas

Submission Type: Posters

Track: Policy Work/Systems

Author(s): Kathryn Luchok M.A., PhD

Issue: Within the last few decades, technological advancements and an improved understanding of biological materials have led to an increase in evidence that can be submitted for forensic testing in criminal justice investigations. In a sexual assault investigation, a sexual assault kit (SAK) is often collected and contains the evidence found on the victim's or suspect's person. While the true total is unknown, it is estimated that several hundred thousand untested SAKs remain in the custody of law enforcement and forensic crime laboratories across the United States. Whether these SAKs were neglected due to law enforcement bias, the prioritization of other types of evidence, or the limited testing capacity of crime laboratories, each kit represents a victim of sexual assault who potentially underwent the invasive collection process for nothing. Testing SAKs can not only provide investigative leads in individual cases but can also identify serial rapists by connecting multiple crimes together. Although the federal government has established minimal guidelines for SAK testing, it is largely up to state and local jurisdictions to implement protocol regarding testing newly collected and backlogged SAKs. This policy study examined the state of the SAK backlogs in North and South Carolina.

Setting: North and South Carolina. Intended audiences: Law enforcement, crime labs, prosecutors, victims of sexual assault.

Project: This was a policy review rather than an intervention project. In order to address the backlog in these states, reform efforts must be highly specific to the local and state jurisdictions.. The Carolinas are largely rural, and much of the scholarly literature focused on the efforts made in major U.S. cities (i.e., Detroit and Los Angeles). To study this problem in the Carolinas, I used the End the Backlog website, articles from local news sits as well as bill summaries and other government publications. In 2017, the United States Department of Justice's National Institute of Justice (U.S. DOJ NIJ) formed an elite research team and amalgamated results from reform efforts in jurisdictions around the country and published a detailed report including guides for forming a multidisciplinary team, performing an SAK audit, testing backlogged inventory, and survivor notification entitled National Best Practices for Sexual

Assault Kits: A Multidisciplinary Approach. The document was my guiding source for the life of a sexual assault kit and the United States SAK backlog sections because the suggestions are meant to be applicable nationwide with minimal alterations. The End the Backlog website provides a "backlog snapshot" for each state that clearly states the approximate number of untested kits and indicates what criteria has been met in achieving comprehensive SAK reform; however, information for each state is limited to what has been made public by the individual crime labs and law enforcement agencies in that state. As a result, many of the figures presented are gross underestimates, because many agencies either do not know or do not report accurate kit totals (End the Backlog, n.d.-d). To date, End the Backlog has helped American jurisdictions inventory over 225,000 untested SAKs; however, it is estimated that there are still several hundred thousand more that have yet to be counted throughout the country (Joyful Heart Foundation, n.d.). For my analysis of the Carolinas, I compared the states' legislature and procedures as of May 2020, to End the Backlog's outline of comprehensive statewide reform as listed in the legislative handbook Comprehensive Rape Kit Reform: A Legislative Handbook (2019) and illustrated in Appendix A. The initiative's criteria are as follows: 1. Completion of a Statewide Annual Inventory 2. Mandating Testing for All Backlogged Kits 3. Mandating Testing for All Incoming Kits 4. Implementation of a Statewide Tracking System 5. Granting Survivors the Right to be Informed 6. Appropriate State Funding for Reform

Accomplishment/Result: North Carolina is well on its way to instating comprehensive SAK reform—having almost completed a statewide inventory, implemented a tracking system, mandated SAK testing, and efficiently allocated funding. South Carolina is only a few steps behind having recently passed a bill requiring a statewide audit and tracking system.

Barriers: The original plan was to interview crime lab personnel in both states but with the onset of COVID, interviewing was curtailed. Instead, reviews of existing documents were used to assess the backlog status.

Lesson Learned: Recommendations for addressing state backlogs include forming a multidisciplinary team: testing all backlogged kits, creating protocol for testing new kits, and instituting a statewide tracking system. If the original planned interviews had been done, more insight into local barriers and potential solutions would have been useful in crafting policy recommendations.

Information for Replication:

Additional Authors: Jessalyn King B.A. **Non-Presenting Author:** Kathryn Luchok MA. PhD

“I’ll See You Next Year”: Nativity, Perceived Racial Discrimination and Preterm Birth Among Black Mothers In NYC

Submission Type: Posters

Track: Racism, Equity, Social Justice

Author(s): Yanica Faustin PhD, MPH

Background: The persistent disparities in preterm birth have still not been fully explained. Potential risk factors worth further attention include exposure to racial stress. Gaining knowledge on the experiences of U.S. -born, Caribbean-born and African-born Black mothers can inform practice and intervention aimed at reducing and eventually eliminating health disparities in maternal and infant health within the Black population. Studying immigrants can also shed light on racial health disparities in the U.S. more broadly. The lack of research on the health of the foreign-born is often due to sample size issues and potentially the invisible nature of the Black immigrant.

Study Questions: This study asked the following questions: 1) What is the association between nativity and preterm birth for African-born, Caribbean-born and U.S.-born Black mothers; 2) Are there differences in the descriptions of instances of racial discrimination within the Black population?

Methods: This concurrent triangulation mixed-methods design employed birth records (n=167,558), which were analyzed using logistic regression to examine variation in preterm delivery, and semi-structured interviews (n=21), which were recorded, transcribed and analyzed using the principles of the sort and sift, think and shift method. The quantitative and qualitative results were then integrated with one another, further validating the findings found by each strand, and provided a more nuanced understating of preterm birth disparities within the Black population.

Results: Results indicate that U.S.-born Black women had the highest crude and adjusted odds of preterm delivery, relative to foreign-born. U.S.-born women and Caribbean-born women were more closely related to one another in their PTB prevalence and odds as well as their narratives on discrimination. Key themes include: 1) Immediate Recognition: "How dare you? and who do you think you are"; 2) Post-experiential processing: “Oh, this is discrimination”; 3) Disregarding Disrespect: “It never bothered me, because I didn’t own it”; and 4) Pregnancy-Related Discrimination: “I’ll see you next year”. These findings support the importance of examining the variation in maternal and infant health disparities within the Black population and the role of the U.S. racial context.

Conclusions: The trend in PTB odds among the three groups was consistent with the patterns observed in their narratives on discrimination. U.S.-born women and Caribbean-born women were more closely related to one another in their PTB prevalence and odds as well as in their narratives on discrimination. The different ways in which these populations perceive and interpret discriminatory experiences may shape the potential pre-conception and prenatal stress that U.S.-born, African-born, and Caribbean-born Black women might embody over the life course.

Public Health Implications: It is imperative to continue to research these adverse birth outcome disparities within the Black population in order to improve the health of all Black mothers and infants regardless of nativity. This study can be used to inform 1) policies aimed at mitigating the adverse effects, for all Black women, of being exposed to the U.S. racial context; 2) research focused on health inequities, racism and nativity within the Black population; and 3) practices that involve moving away from treating the Black population as monolithic, which obscures variation in birth outcomes.

Additional Authors: Nyla Rivers **Non-Presenting Author:** Jon Hussey PhD **Non-Presenting Author:** Yanica Faustin PhD, MPH
Presenting Author: Kristin Black PhD, MPH

Analyzing Group Prenatal Care in the Time of COVID-19

Submission Type: Posters

Track: Perinatal outcomes

Author(s): Jeffrey Goodman MSPA

Background: CenteringPregnancy, an evidence-based curriculum-based program, has been serving Hispanic and Haitian women in a group setting in Palm Beach County (PBC) since 2007. The low birthweight and preterm percentages for participating women have consistently been better than the overall county percentages. For the last 3 years, the average low birthweight and preterm percentages for program participants were half that of the county as a whole. CenteringPregnancy empowers patients, strengthens patient-provider relationships, and builds communities. The main components of this program involve social interaction and medical assessment within the group space and education with a Maternity Care Provider. So the question arose: Would the program achieve the same success in a virtual environment due to COVID-19? Using a mixed-methods methodology, the analysis focused on the birth outcomes of pregnant women who attended CenteringPregnancy at health centers before COVID-19, and those who participated virtually, during COVID-19. Staff and clients also were surveyed to understand challenges, and benefits, of delivering the program virtually.

Study Questions: Can the CenteringPregnancy program achieve the same positive outcomes virtually that it did in person?

Methods: The research design analyzed two client groups: Pregnant women who attended the program in person from January 2019 through February 2020, before the pandemic; and pregnant women who attended the program virtually and delivered after March 1, 2020, during the pandemic. Chi-square analysis was used to determine if the difference in birth outcomes between the two groups of clients was statistically significant. Odds ratios were generated to determine the effect of attending the program before or after COVID-19 began. CenteringPregnancy staff and clients were surveyed to get their insight in to why there might be differences in the birth outcomes based on how the women attended the program.

Results: Women who attended all sessions virtually were over three times more likely to deliver a low birthweight baby than women who attended in health centers (OR=3.1), and almost 2.5 times as likely to experience a preterm birth (OR=2.4). This difference was statistically significant. Staff and clients commented that after COVID-19, there was limited social interaction between group members, inconsistent medical care, and the inclusion of medically high-risk clients, which contributed to the differences in birth outcomes.

Conclusions: The CenteringPregnancy program is much more effective when delivered in person, than virtually. The program follows a specifically designed curriculum that depends on social interaction between group members, teaching mothers self-care activities, and having a provider perform medical check-up as part of the group session. This either did not occur or was inconsistent when delivered virtually. Without these components, the program does not achieve the same outcomes as it did pre-COVID-19.

Public Health Implications: Results show that while some health-related programs may find success in a virtual setting after the pandemic, CenteringPregnancy – which relies on active group interaction and hands-on medical care – is more effective in a face-to-face environment. This analysis will lead the program to explore the effectiveness of tiered options for program service delivery.

Additional Authors: Jeffrey Goodman MSPA
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Are Decreases in Adolescent Birth Rates in Appalachian Sub-Regions of the United States Consistent With National Declines?

Submission Type: Posters

Track: Child/Adolescent Health

Author(s): Kathleen Tatro MPH

Background: Adolescent births remain an important public health issue in the United States (U.S.). Adolescent births are associated with poor educational, economic, and health-related outcomes. Adolescent birth rates (ABR) have significantly decreased in the U.S. across all demographic groups, largely driven by delayed sexual initiation and increased contraceptive utilization. However, disparities continue to persist. While previous research has explored state-level variations in ABR, few studies have examined variations among the culturally unique U.S. sub-regions, such as Appalachia.

Study Questions: Are there differences in the rates at which adolescent births have declined among counties in the Appalachia sub-regions relative to non-Appalachian counties?

Methods: We conducted a retrospective longitudinal study between 2012-2018 on county-level vital records data. County-level birth rates were derived from restricted-use natality files obtained from the National Center for Health Statistics (NCHS) linked with the American Community Survey (ACS) 5-year population estimates from the Census Bureau. We examined longitudinal differences and the trajectory of change in ABR among the Appalachian sub-regions relative to national averages. Our study employed Generalized Estimating Equations (GEE) to identify the difference in ABR over time while adjusting for socio-economic vulnerability relative to no vulnerability, lack of health care access relative to substantial health care access, total population, race/ethnicity, non-English speaking residents, and access to health insurance for adolescent and adult females. A limitation of this study is that the potential causes of differences in ABR, such as national health care policies and state-level expansion of Medicaid, were not explored.

Results: There were statistically significant absolute differences in the predicted mean ABR between 2012-2018 across all the Appalachian sub-regions and the non-Appalachian region. Notably, Central Appalachia had the highest ABR in 2012, thus giving room for larger decline. A larger absolute difference in the predicted mean of ABR between 2012-2018 was observed for the Central Appalachia (16.8 births per 1,000 females aged 15-19 years), followed by Southern Appalachia (13.0 births per 1,000 females aged 15-19 years). Both North Central (12.1 births per 1,000 females aged 15-19 years) and South Central (11.9 births per 1,000 females aged 15-19 years) had a slightly higher absolute difference in ABR compared to the observed difference in the non-Appalachian region (11.0 births per 1,000 females aged 15-19 years). During the study period, the Northern Appalachian region had the lowest absolute difference in ABR (8.2 births per 1,000 females aged 15-19 years).

Conclusions: Our study shows that the public health impact on ABR within the Appalachian region is better observed at the sub-regional level rather than as a whole region relative to the rest of the U.S.

Public Health Implications: We identified that rates of adolescent births have decreased across the United States from 2012 to 2018. Further, there is significant variation in the rates of decline in the sub-regions of Appalachian relative to what was observed outside of Appalachia. While adolescent birth rates remain higher in certain sub-regions, such as Central Appalachia, the gap has decreased substantially. This suggests that public health efforts and interventions should focus on each Appalachian sub-region independently.

Additional Authors: Nathan Hale PhD, MPH **Non-Presenting Author:** Sylvester Orimaye PhD, MPH **Non-Presenting Author:** Kate Beatty PhD, MPH **Non-Presenting Author:** Michael Meit MPH **Non-Presenting Author:** Michael Smith DrPH, MSPH **Non-Presenting Author:** Amal Khoury PhD, MPH **Non-Presenting Author:** Kathleen Tatro MPH

Assessing Changes in Postpartum Type 2 Diabetes Screening Rates Following a Paradigm Shift in Postpartum Care

Submission Type: Posters

Track: Chronic disease

Author(s): Brittany Ajoku BA

Background: African American women with gestational diabetes are 2 times more likely to develop type 2 diabetes (T2D) following a pregnancy than Non-Hispanic White women with gestational diabetes. This can impact future reproductive health, especially when undiagnosed, since entering a pregnancy with uncontrolled T2D is strongly linked with complications that contribute to maternal mortality and morbidity. Though postpartum women with a history of gestational diabetes are recommended to be screened for T2D within the first 12 weeks after delivery, screening rates in the US vary greatly between 30-70%. This represents a significant, and changeable gap in postpartum care. In February 2018, the American College of Obstetricians and Gynecologists (ACOG) recommended a paradigm shift away from a single 6 week visit, toward an ongoing model of postpartum care to improve T2D screening.

Study Questions: In this study, screening rates for T2D are examined among postpartum women with a history of gestational diabetes in the Baylor Scott & White (BSW) Health System to assess changes following the ACOG recommendation, by race/ethnicity, age, and insurance status.

Methods: A retrospective chart review was utilized to identify BSW patients that delivered infants between 2017-2019, had a history of gestational diabetes, and were 18 years or older. Descriptive analysis was used to report the prevalence of screening overall and by subgroups. Bivariate analysis using X2 tests were also used to compare screening by time, and possible associations with race/ethnicity, age, and insurance status.

Results: 1117 patients (mean age 30.8 yrs.; 45.3% non-Hispanic White, 34.7% Hispanic White, 12.5% African American) were included in the study, with over half utilizing private insurance. The screening rate for women before ACOG's recommendation was 26.7%, while 27.2% were screened afterwards. Subgroup analysis by race/ethnicity, age, and insurance status revealed no statistically significant differences in screening rates before and after the ACOG recommendation. However, there were positive upward trends for several groups including African American women (27.1% to 34.8%), women with private insurance (28.9% to 34.7%), and age 40 and older (22.6% to 44.8%).

Conclusions: These findings suggest that an overwhelming majority of women in BSW are not being screened for T2D in the postpartum period, even after ACOG's recommended shift in postpartum care.

Public Health Implications: Screening serves as a powerful tool for secondary prevention therefore, it is imperative to strive to increase screening rates to prevent T2D and increase opportunities for early treatment. The findings of this study can be used by BSW to help inform expansion of existing screening efforts to reach high risk groups in the clinical setting. Additionally, findings can be used to tailor existing education programs, messages, and resources for postpartum women served by BSW.

Additional Authors: Brittany Ajoku BA
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Association of Doula Support and Patient Experiences With Hospital Staff During Birth in a Sample of California Women

Submission Type: Posters

Track: Maternal Health

Author(s): Erin Hubbard MPH

Background: Several studies suggest doulas improve birth outcomes, including lower rates of preterm birth, low birthweight, and non-indicated cesarean delivery. Few studies have investigated whether doula support can improve patient experiences with hospital staff, which is an important aspect of quality maternal care.

Study Questions: Our research questions assessed the relationship between doula support and patient experiences with hospital staff in two ways. First, we assessed the relationship between doula support and patient experiences of unfair treatment, verbal/physical abuse, and perceived support by delivery staff. Second, we assessed the relationship between patient experiences of unfair treatment, verbal/physical abuse, and perceived support from delivery staff and expressed openness to doula support in a future birth.

Methods: This study uses data from the Listening to Mothers in California Survey, a state-wide survey assessing maternal experiences and perspectives among mothers who gave birth in a California hospital in 2016. Our analytical sample included 1,345 English-speaking participants. We used a multivariate logistic regression to test for 1) associations between doula support and experiences of unfair treatment, abuse, and support from hospital/delivery staff, and 2) for associations between these patient experiences and expressed openness to future doula support during birth. Covariates included maternal characteristics and views on the need for medical intervention during birth.

Results: Among participants 2.6% had doula support during birth only, 6.6% had doula support during birth and pregnancy/postpartum, 6.3% experienced unfair treatment, 11.5% experienced physical or verbal abuse, 5.7% reported no support from delivery staff, and 58.1% expressed openness to future doula support. Doula support was not significantly associated with experiences of unfair treatment, abuse, or delivery staff support. Those who experienced unfair treatment were more likely to express openness to future doula support during birth (aOR = 1.83, 95% CI [1.03, 3.24]), and those who reported feeling supported by delivery staff were less likely to express openness to future doula support (aOR = 0.40 95% CI [0.18, 0.90]). Limitations included a relatively small sample size of participants who reported doula support, limited information about types of doula support such as racially or culturally-concordant care, and generalizability limited to hospital births and those who primarily speak English at home in California.

Conclusions: No significant relationships were found between doula support and patient experiences with hospital staff. However, patient experiences with hospital staff during birth were associated with openness to future doula support.

Public Health Implications: This study adds to the limited quantitative literature on doula support and patient experiences with hospital staff during birth. The results should be used to advocate for increased access to doula support for pregnant people, especially for people of color who more often experience poor birth outcomes and mistreatment. Future research should further explore interactions between doulas and hospital staff, and how these relationships affect quality of maternal care.

Additional Authors: Erin Hubbard MPH
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Associations Between Intimate Partner Violence and Pregnancy Wantedness Among Reproductive-Aged Women in Guatemala

Submission Type: Posters

Track: Reproductive Health/Family Planning

Author(s): Sharonda Lovett MPH, CPH, CHES

Background: Wantedness of pregnancy is often assessed by asking women to categorize their pregnancy as unwanted, wanted, or mistimed. There is evidence that intimate partner violence (IPV) plays a role in unwanted pregnancies. Few studies have explored wanted pregnancies. These issues have not been investigated in Guatemala using nationally representative data.

Study Questions: To examine the association between IPV and unwanted pregnancy as well as wanted pregnancy among Guatemalan women of reproductive age (15-49 years).

Methods: A cross-sectional study was conducted using a sample of married or cohabitating women from the 2014-2015 Guatemala Standard Demographic Health Survey. Women were excluded if they were never in a union or formerly married (i.e., widowed, divorced, separated). Women were also excluded if they had been sterilized, or their partner had been sterilized prior to the last two years. The final study population included 4,783 women of reproductive age that provided responses to the measures of interest. Pregnancy wantedness was operationalized as two separate outcomes: unwanted and wanted pregnancy. Women who met the inclusion criteria were asked if their current or last pregnancy (within the past 12 months) was unwanted or wanted (then or later). The predictor variables were different types of IPV (i.e., emotional violence, physical violence, sexual violence, any violence). Other multi-level risk factors included age, ethnicity, education, religion, residence type, wealth index, and number of living children. Binary logistic regression analyses were conducted for each outcome separately in SAS version 9.4.

Results: Among the study women, 3% reported an unwanted pregnancy and 26% reported a wanted pregnancy. These women also reported experiencing emotional violence (14%), physical violence (8%), sexual violence (2%), and any violence (16%). Women who experienced any violence had only a slightly

higher odds of unwanted pregnancy compared to women who did not experience violence (aOR = 1.12, 95% CI = 0.65, 1.92). Among the IPV types, women who experienced sexual violence had the highest odds of unwanted pregnancy although not statistically significant (aOR = 1.85, 95% CI = 0.75, 4.60). Women who experienced any violence did have lower odds of wanted pregnancy compared to women who did not experience violence (aOR = 0.79, 95% CI = 0.63, 1.00). Physical violence and wanted pregnancy was specifically identified among the IPV types (aOR = 0.69, 95% CI = 0.50, 0.97).

Conclusions: Reduced odds of wanted pregnancy was found among women who experienced any violence. Regarding the IPV types, the associations varied. Only the association between physical violence and wanted pregnancy was statistically significant.

Public Health Implications: This study examined whether IPV is associated with pregnancy wantedness using separate, but somewhat related outcomes. This study also examines male to female perpetration of gender-based violence, which may relate to whether or not a woman gets pregnant. Findings emphasize the need for integrating violence prevention and family planning programs to attain sustainable development goals related to gender equity in Guatemala.

Additional Authors: William Sappenfield MD, MPH, CPH **Non-Presenting Author:** Abraham Salinas-Miranda MD, PhD **Non-Presenting Author:** Nicholas Thomas PhD, MPH

Associations Between Lifetime Exposure to Racial/Ethnic Discrimination and Health Conditions among Black/African American Children

Submission Type: Posters

Track: Racism, Equity, Social Justice

Author(s): Lydie Lebrun-Harris PhD, MPH

Background: Discrimination based on race or ethnicity has been linked to poor health outcomes among U.S. adults, particularly those who are Black or African American. Relatively less is known about the health effects of racial/ethnic discrimination among Black/African American children.

Study Questions: What is the prevalence of parent-reported lifetime exposure to racial discrimination among Black/African American children in the U.S.? Is there an association between experiencing racial discrimination and presence of various mental/emotional, developmental, physical, and functional health conditions?

Methods: Parent/caregiver-reported data from the National Survey of Children's Health were pooled across 4 years (2016-2019). Analyses were limited to children ages 3-17 years whose reported race was Black or African American (henceforth referred to as "Black"). Health-related outcomes included specific mental/emotional or developmental conditions; chronic physical conditions; functional difficulties; special health care needs; and activity limitations. Bivariate analyses examined the prevalence of individual health outcomes by whether or not Black children had experienced racial/ethnic discrimination during their lifetime, as assessed by parent/caregiver reports of their child ever being treated or judged unfairly because of their race or ethnic group. Logistic regression models, adjusted for child age, sex, and any health care visits in the past year, were used to calculate prevalence ratios representing the increased risk of poor health outcomes among Black children associated with lifetime exposure to racial discrimination relative to no exposure to discrimination.

Results: Twelve percent (12%) of Black children ages 3-17 were reported by their parents/caregivers to have experienced racial/ethnic discrimination during their lifetime. After adjustment, discrimination was significantly associated with several health conditions among Black children, including anxiety, depression, behavioral/conduct problems, allergies, severe/frequent headaches, oral health problems, chronic physical pain, stomach/intestinal problems, special health care needs, and activity limitations.

Conclusions: Lifetime exposure to racial discrimination is significantly associated with several mental/emotional, physical, and functional health conditions among Black children.

Public Health Implications: Future research could explore if efforts to reduce racial discrimination against Black children, and to also mitigate the effects of discrimination, may contribute to reductions in health conditions among this population. Further research could also examine how childhood experiences of racial discrimination contribute to long-term morbidity and mortality into adulthood.

Additional Authors: Reem Ghandour DrPH, MPA **Non-Presenting Author:** L. Abigail Duchatelier-Jeudy PhD, MPH

Breaking Down Health Barriers by Expanding Doula Coverage under TRICARE

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Claire Lorenzetti

Issue: The pregnancy-related mortality ratio (PRMR) in the United States has more than doubled between 1987 and 2016 (about 60 percent of those deaths are preventable), making the United States the only high-income nation whose PRMR has increased over the last several decades. As non-medical professionals, doulas are trained to provide continuous non-clinical emotional, physical, and informational support during pregnancy, birth, and postpartum. Research suggests that doula care can improve maternal and infant health outcomes by reducing maternal stress, reducing maternity care costs, and improving communication between pregnant women and their health care providers. Military moms may especially benefit from doula care as they are at increased risk for stress and isolation during their pregnancies. Our initiative provided support to pass the TRICARE Coverage for Doula Support Act under the National Defense Authorization Act (NDAA) for Fiscal Year 2021. This bill would offer doula care reimbursement for military moms through TRICARE.

Setting: Due to COVID-19, engagement with congressional offices occurred via Zoom and other virtual platforms. The passing of this bill would directly impact any individuals under TRICARE, including active-duty members, retired members, members of the Guard/Reserves, family members and some veteran populations.

Project: The What to Expect Project (WTEP) supported this bill by engaging community members to vocalize support of the bill to their legislators through grassroots efforts via social media engagement, collecting testimonies from military moms, and providing research materials on the impacts of doula care to legislative representatives and sponsors of the bill. To evaluate the policy outcomes, the NDAA bill requires the Secretary of Defense to collect data on how many members of the Armed Forces or military spouses gave birth while their spouse or birthing partner was absent and on the number of births at each military medical treatment facility and under TRICARE. This information will allow government agencies to track impact, cost, quality of care, and trends in childbirth across the services to ensure necessary resources are available for military families to address Maternal Health disparities.

Accomplishment/Result: The legislation passed on January 1, 2021, and includes a five-year pilot program to cover the services of doula support for female troops and military family members during childbirth. The passing of this legislation and the COVID-19 pandemic specifically, significantly increased the WTEP's engagement with legislators for advocacy and support for Maternal Health policies. Future efforts now include supporting a bill to provide doula care reimbursement through Medicaid.

Barriers: While the former Presidential administration originally vetoed the bill, the House and Senate passed the legislation by such wide margins, that the chambers had the votes to override the rejection and enact the bill.

Lesson Learned: Receiving bipartisan support in both chambers is critical for successful legislation. WTEP engaged all congressional members that supported previous relevant bills (i.e., using general military support to support doula care under TRICARE).

Information for Replication:

Additional Authors: Claire Lorenzetti Bachelor's in Sociology, University of Maryland

Bringing Municipal Funding for Abortion & Comprehensive Reproductive Health Care to Kalamazoo County, MI: New Model, Innovative Partnerships

Submission Type: Posters

Track: LGBTQ+ Health; Gender and Sexual Orientation

Author(s): Kelsey Woida

Issue: This initiative was intended to address access issues identified by the YWCA Kalamazoo in a survey they conducted of their community, which found that Kalamazooans' most significant barrier to accessing reproductive health care and gender affirming care was cost. This is compounded by the fact that insurance in Michigan, including Medicaid, does not cover abortion care or doula care.

Setting: Kalamazoo County, MI

Project: - Conducted a survey and open houses with community to hear about their needs for accessing comprehensive reproductive health care and gender affirming care - Evaluated potential solutions to cost barriers (the top barrier named) and determined that funding to community based organizations that provide those services is most impactful - Developed a plan to create a comprehensive RH Fund at the YWCA Kalamazoo - Won funding from private foundations to support some of the cost of the funds - Developed and implemented an advocacy strategy to win financial support from Kalamazoo County - Launched the country's first comprehensive RH Fund, with private and public support, to increase access to abortion care, doula care, gender-affirming care, and PeP

Accomplishment/Result: The fund is in its first year; the creation of the fund and investment from community is our first success. We will be evaluating throughout the years to come.

Barriers: - Challenge creating the fund: this requires intense logistics, working with multiple organizations and entities in the community (Planned Parenthood, Rootead, a local health care system, and a local pharmacy). This was addressed with facilitated conversations, MOUs, and an ongoing learning process to improve and refine payment that centers the patient experience - Funding for abortion care is preempted by state law, so county funding could only cover practical support for abortion care. Ultimately, the county decided against any of the funding going towards support for abortion access. This was a loss but the campaign plans to continue to advocate for unrestricted funding (within state law) - Ensuring community is aware of the program: The YWCA has deep reach in the community but is working to reach people who do not already receive services from the Y, and who might need this support. This is done in partnership with the community organizations.

Lesson Learned: Local funding can and should be used to invest in innovative programs that address community needs, especially financial barriers. When state and private programs, like insurance coverage, fall short, localities invested in public health can identify trusted community partners to develop innovative, person-centered programming that is bold and cares for the whole person. This fund is focused on Black, Indigenous, and people of color in Kalamazoo, those who are trans and gender nonconforming, and those who are low-income – individuals whose identities include all these intersections are at the center of the fund. This is about achieving equity in health care for those with the most limited means, led by people of color and LGBTQ people in Kalamazoo.

Information for Replication: All* Above All National Institute for Reproductive Health Costs: Staff time at YWCA Kalamazoo, $20,000 in funding for one year of advocacy

Additional Authors: Winnie Ye
Presenting Author: Demetrias Wolverton MSA
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Cannabis Use Among Pregnant Women and the Impact of the COVID-19 Pandemic

Submission Type: Posters

Track: Substance Use/Smoking/Vaping

Author(s): Scylla Blervacq B.S. Health Science

Background: Together with legalization and easier access, recent increase in maternal cannabis use have raised questions for the health and safety of women and children. Since the start of the COVID-19 pandemic, social isolation has been found to be damaging to mental and physical health. Currently or previously pregnant women who self-medicate to regulate their mental and emotional health may be experiencing heightened anxiety or depression impacted by COVID-19.

Study Questions: What are the attitudes, beliefs and behaviors of currently and previously pregnant women using cannabis? How has the COVID-19 pandemic affected their use?

Methods: This study utilized data from an ongoing online survey of cannabis users during pregnancy. Participants were recruited via social media using targeted hashtags (e.g. #cannamom) and online pregnancy and breastfeeding community forums for cannabis users. All participants consented and indicated being currently or previously pregnant.

Results: We collected data from 164 respondents (mean age 29.6 years, 64.6% non-Hispanic white, 15.2% Hispanic/Latino, 5.5% non-Hispanic Black and 11% Mixed). Half had a household income of >$49,000 and 85.3% of women had completed high school. 34.8% of the women were currently pregnant, and 65.2% were previously pregnant. Of the currently pregnant, 98.2% used cannabis before pregnancy and 94.7% continued to use cannabis while pregnant. Whereas 86.9% of previously pregnant women used cannabis during their pregnancy/ies. The frequency of cannabis use decreased over the course of the pregnancy. Although only 27.1% have a recommendation/medical card from a health professional, 82.2% reported using cannabis for medical reasons; 66.5% for anxiety, 54.3% for depression, 35.4% for migraines or headaches, 36% for nausea. When asked about cannabis use during pregnancy specifically, 75% reported using for nausea, 67.1% for stress or anxiety, 52.4% for vomiting, 47.6% for pain, and 29.9% for fun or to relax. The dominant cannabinoids reported were 59.2% THC and 30.9% CBD and THC ratio while less than 2% said CBD or CBN dominant and 8.6% were unsure. A third of women changed the way they used cannabis since the start of the pandemic; 34.2% increased frequency and 30.7% increased dosage. 73.3% of participants isolated themselves and 68.3% felt more worried about their pregnancy because of the COVID-19 pandemic. Analysis of the qualitative data supported our findings that the pandemic increased feelings of isolation and anxiety/depression as well as financial burden.

Conclusions: Our findings underscore the importance of assessing the frequency and reasons for cannabis use during pregnancy and how heightened anxiety, depression and feelings of isolation due to the COVID-19 pandemic have affected this use.

Public Health Implications: Future scientific data and research on the health outcomes of cannabis use during pregnancy should utilize a patient-centered approach with an understanding of the behaviors, attitudes and beliefs of pregnant women using cannabis.

Additional Authors: Scylla Blervacq
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Capturing Multi-Race and Multi-Ethnic Populations for Public Health Planning

Submission Type: Posters

Track: Data Innovation

Author(s): Fiona Weeks MSPH, PhD Student

Background: How health departments collect and report racial/ethnic data impacts many dimensions of racial equity work, including informing funding and policy decisions, identifying geographic areas of need, and guiding public reporting and program planning. While efforts have been made for state data systems to collect racial/ethnic data that is more inclusive of multiracial identities, many, including Wisconsin's birth data, still report mutually exclusive single-race categories. This mismatch between data collection and reporting affects state and local public health planning, including whether counties are able to access data on the diversity of their populations through publicly available published data.

Study Questions: How does using more inclusive definitions of Black and Indigenous maternal race impact birth counts in these populations and geographic distributions of these births?

Methods: Using 2017-2019 Wisconsin birth certificate data, we compared birth counts using the current maternal racial/ethnic, mutually exclusive reporting categories to more inclusive racial definitions (Black or Indigenous race of mother regardless of ethnicity or other race reported) to examine the impact of racial/ethnic reporting categorization on birth counts. We then examined the impact of the more inclusive racial definitions on the births by county, using a threshold of 1% composition of births to the population of interest.

Results: Overall, there was a 91% increase in the number of births to Indigenous people and 16% increase in births to Black individuals using the more inclusive racial definition (i.e., Indigenous and Black birthing persons regardless of ethnicity or other race, respectively). Using the current mutually exclusive criteria, out of Wisconsin's 72 counties, 23 counties had >=1% of births to Indigenous persons (single race, non-Hispanic) and 27 counties had >=1% of births to Black persons (single race, non-Hispanic); however, with the more inclusive racial definitions, 44 counties had >=1% of their births to Indigenous people (regardless of ethnicity or other race) and 51 counties had >=1% of their births to Black people (regardless of ethnicity or other race). Among the counties with increases in births to Black and Indigenous women with the more inclusive racial definitions, county-level increases in births to Indigenous and Black persons ranged from 0.1% to 10% and 0.1% to 4%, respectively. Notably, the birth certificate multi-select race data collection does not capture what mothers might choose as their primary identity or as the community they feel is most relevant to their health needs or outcomes. Future studies are needed to better understand identity and multi-select race categories.

Conclusions: We found that almost a third more of Wisconsin counties had a substantial proportion of their births (>=1%) to Indigenous people and to Black people using more inclusive definitions of maternal race.

Public Health Implications: State health departments have a responsibility to consider how racial/ethnic data are reported; local public health planning is often based on what data is publicly available and many maternal and child health programs use measures of diversity to target program funding. Therefore, not capturing births to Indigenous and Black people in Wisconsin may affect program planning, funding allocation, and resources to meet the social and cultural needs of these populations.

Additional Authors: Fiona Weeks MSPH, PhD Student
Presenting Author: Emily Lynch MPH

Challenges and Changes in the Implementation of Family Connects Chicago Home Visits due to COVID-19

Submission Type: Posters

Track: Home Visiting

Author(s): Lisa Sophia Haen MPH

Issue: Given the persistent racial and ethnic disparities in maternal and infant outcomes in the City of Chicago, strategies for improving the perinatal support system are critical. While an array of perinatal support services are available, access to services varies across neighborhoods and services have historically focused on ‘at-risk’ families, leaving some families unsupported and others receiving duplicative or mismatched services.

Setting: To address this need, in early 2020, the Chicago Department of Public Health (CDPH) initiated a pilot of the Family Connects (FC) program at 4 hospitals. The FC model includes universal hospital-based recruitment and a postpartum home visit by a nurse that includes physical health assessments of mother and infant, systematic assessments of family risks and needs, education, and referrals to services based on family needs and preferences. Due to COVID-19, the Family Connects Chicago (FCC) pilot implementation required adaptations to safely serve Chicago families virtually.

Project: A formative evaluation of the FCC pilot will inform the city-wide expansion of FCC. To date, evaluation includes 16 key informant interviews with nurse home visitors (NHV) and administrators at the 2 FCC “lead agencies” (CDPH, which employs NHV who support birthing families at 3 hospitals, and a large hospital that employs NHVs to serve its own birthing population). Analysis is being conducted in Dedoose software using a deductive coding approach.

Accomplishment/Result: All in person home visits were stopped in March 2020 due to COVID-19. Hospital-based NHVs continued serving families by quickly shifting to “supportive calls” using phone/telehealth platforms; however, CDPH NHVs were reassigned to COVID-19 response efforts, gradually resuming supportive calls over several months. Participants noted that the COVID adaptations were: (1) important, as families were hesitant to seek recommended healthcare; (2) acceptable, as some families were not comfortable having a visitor in their homes in the postpartum period; and (3) instructive about new modalities of care, as telehealth options would not have become available to

NHVs without the pandemic. Participants perceived telehealth as a positive option to continue post-COVID.

Barriers: Participants described multiple challenges to implementing FCC during COVID-19, with respect to: (1) family recruitment, as NHVs were not allowed in hospitals and had to rely on postpartum hospital nurses to market FCC; (2) home visits, as NHVs were unable to conduct physical assessments for mother and infant, limiting their ability to identify health issues, and faced challenges in building rapport with families via telehealth; and (3) referrals, as family needs were perceived to be exacerbated during the pandemic and access to and availability of services to address these needs was also perceived to be negatively affected.

Lesson Learned: Implementing FCC during the pandemic required lead agencies to adapt program activities to continue serving Chicago families. Telehealth allowed NHVs to continue providing support. Due to lessons learned through the pandemic, providing NHV via telehealth may be particularly beneficial to ensure those with the greatest needs are reached. Although the scope of virtual home visits is limited, virtual visits provide the opportunity for increased accessibility and reach during the pandemic and post-COVID.

Information for Replication:

Additional Authors: Lisa Sophia Haen MPH
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When More is Not Better: Changes in Household Challenges Between Pre-Birth and Childhood and Subsequent Child Welfare Contact

Submission Type: Posters

Track: Child/Adolescent Health

Author(s): Robyn Husa PhD

Background: Household dysfunctions, such as experiencing homelessness and limited monetary resources, can overburden parents, making it difficult for them to provide the best care and support for their children. A higher number of household dysfunctions present during the 12 months before or during pregnancy is strongly predictive of the accumulation of adverse childhood experiences (ACEs) for the child. However, it is unknown whether changes in the number of household dysfunction components from the pre-birth to early childhood periods affect child maltreatment, an important component of the ACE score.

Study Questions: To examine the transition effect in number of pre-birth and early childhood household dysfunction components on the risk of a child maltreatment reports by age 3 years in an Alaskan statewide representative birth cohort.

Methods: Data from the Alaska 2009-2011 Pregnancy Risk Assessment Monitoring System (PRAMS) were linked with data from its 3-year follow-up survey (CUBS) and multiple administrative data sources, including the Alaskan Office of Children's Services (OCS). A total sample of 1,699 respondents (representing 32,837 births) were used in the analyses. We identified two unique pre-birth risk groups in PRAMS respondents through latent class analyses: low risk (pre-birth household dysfunction components <=1) and high risk (pre-birth household dysfunction components >=2). We then modeled respondents' changes in risk group between pre-birth identification and post-birth using a latent transition analysis to examine whether transitioning to a different risk group over time was predictive of child maltreatment reports to the state child welfare agency. Respondents' race, education, and urban or rural status were entered as covariates in the latent transition model.

Results: Overall, roughly 11% of respondents transitioned to a different risk class over time (18% of low-

risk respondents transitioned to high risk; 9% of high-risk respondents transitioned to low risk). Transitioning from a high-risk status during the pre-birth period to a low-risk status during the early childhood period was predictive of a significant decrease in risk for OCS contact. For low-risk respondents, transitioning to the high-risk status during the early childhood period (when the child was 3 years old) predicted a significant increase in the risk for OCS contact compared to those who did not experience a change in household dysfunction components.

Conclusions: Changes in household dysfunctions during the pre-birth and early childhood periods are strongly predictive of change in risk for child maltreatment reports. These results have implications for Alaskan public health prevention efforts.

Public Health Implications: Targeting household dysfunctions prenatally and during the first 3 years of the child's life could limit or decrease the risk of negative outcomes for the children. It is important to provide supports (e.g., mental health care and financial resources) to mothers in high-risk households to help prevent risk of child maltreatment and promote healthy growing environments for children. In addition, we must ensure mothers living in low-risk households during the pre-birth period are aware of available resources so that they can easily access supports if challenges do arise during their child's early childhood years.

Additional Authors: Robyn Husa PhD
Presenting Author: John Prindle PhD **Non-Presenting Author:** Jared Parrish PhD

Characteristics Associated with Non-Participation in Prenatal Risk Screening in Florida in 2018-2019

Submission Type: Posters

Track: Other

Author(s): Vera Beloshitzkaya PhD

Background: The Florida Department of Health (Department) universal prenatal screening, a Florida Statute requirement, helps to identify pregnant women at risk for adverse birth outcomes. To achieve the Department's standard of universal screening and decrease the modifiable risks of adverse birth outcomes, it is important to explore the characteristics of women who decline to participate in this screening process.

Study Questions: 1. What maternal characteristics are associated with a decline to participate in the Department's prenatal risk screening? 2. What maternal characteristics are associated with a decline to release information after a positive screening score?

Methods: Florida administrative data of linked prenatal screens and birth certificates for 2018-2019 was used to conduct this exploratory analysis. The dataset was restricted to women who had received prenatal care (N=112,604). Adjusted Risk ratios (ARR) and 95% confidence intervals (CI) were computed using multivariate regression with robust standard errors. Models were adjusted for maternal race/ethnicity, maternal age, maternal education, birthplace, BMI, mother's pre-pregnancy smoking status, previous pregnancy outcome, type of insurance, marital status, and whether pregnancy was from a fertility treatment. All analyses were performed in Stata 15.

Results: In 2018-2019, 8.4% of women chose not to participate in the screening process and 6.2% of women with a positive screen declined to provide a consent for an information release. After adjustment, maternal characteristics statistically significantly associated with a decline to participate in the prenatal screening process include 35 years of age or older (ARR=58.0, 95% CI: 53.0, 63.0), Hispanic ethnicity (ARR=1.1; 95% CI: 1.0, 1.1), 12 years or less of education (ARR=1.3; 95% CI: 1.2, 1.3), and being born in the United States (ARR: 2.0; 95% CI: 1.9, 2.1). After adjustment, statistically significant maternal characteristics associated with a non-consent to an information release after a positive screen include a graduate or professional degree (ARR=2.3; 95% CI: 1.5, 3.3) and being born in the United States

(ARR=1.5; 95% CI: 1.3, 1.7).

Conclusions: Some of the findings are comparable with the findings from studies of non-participation in other prenatal screens and survey participation. At the same time, maternal age older than 35, professional or graduate degree, and being U.S.-born challenge the findings in prior studies on prenatal screening participation and require further examination of potential confounding factors and reasons behind the choices women make.

Public Health Implications: This study helps us to better understand what the characteristics of women who opt out of prenatal risk screening are to redesign consent forms and marketing tools to reach these women in a more efficient way in order to increase their participation in prenatal risk screening.

Childbirth During a Pandemic: Covid-19 and Delivery Location

Submission Type: Posters

Track: Collateral Damage of COVID

Author(s): Christina Brigance MPH

Background: Ninety-eight percent of births in the United States occur in hospitals despite other options being available. Early in the COVID-19 pandemic, March of Dimes partnered with Ovia Health, a women's and family health company, to capture experiences in the U.S. relating to prenatal, delivery and postpartum care. During the pandemic, childbirth protocol changed and women shifted priorities on delivery based on both enforced restrictions and personal choice.

Study Questions: The aim of this research is to evaluate who made changes to delivery plans during the COVID-19 pandemic.

Methods: Women were invited to participate in a 16- to 51-item survey, regarding their experience with prenatal and postpartum care during the pandemic. Emails were sent on a weekly basis beginning April 18, 2020. Data presented include responses submitted through August 6, 2020. Descriptive statistics were summarized and differences in delivery plans were compared statistically using Chi Square tests. Multivariate logistic regression models were utilized to assess the association of demographic characteristics and the likelihood of changing delivery plans. Analyses were conducted using SAS statistical software (SAS 9.3; SAS Institute, Inc., Cary NC) and the study was granted exemption from Advarra, an independent IRB.

Results: A total of 16,972 women responded to the survey. After the exclusion of 2,648 women who did not report their delivery plans, a sample of 14,324 women were represented in this analysis. In this sample, 95% of women surveyed planned to give birth in a hospital. Overall, 3% of women changed their delivery plan after the onset of COVID-19. Approximately 1% of women initially planned for a home birth, which increased to 2.5%. Plans for a birth center delivery increased from 3.9% to 4.4% and plans for hospital birth decreased from 95% to 93%. High-risk women were 5 times more likely to have changed their plan to a hospital compared to women who were not high-risk (OR = 5.19, 95% CI: 1.55-13.76). Women in their 3rd trimester were less likely to change to a birth center (OR = 0.40, 95% CI: 0.20-0.83) but 2 times more likely to change to a home birth (OR = 2.08, 95% CI: 1.04 -4.14) compared to those in their 1st trimester. Those with a high school diploma or less were less likely to change their plan to a birth center (OR = 0.37, 95% CI: 0.14-0.98) compared to those with a graduate degree. Data for race/ethnicity were not statistically significant.

Conclusions: This research shows us that during the COVID-19 pandemic, some women considered changing birthing location with a shift away from hospitals. Knowing who and why women will consider changes to birth plans can help guide clinical practice to best serve the woman and her individual needs. Continuing research is needed with more diverse populations.

Public Health Implications: Gaining insight into planned birthing locations compared to where patients actually deliver during a pandemic can help with future planning for resources and patient education about birth settings. Understanding barriers to community birthing options is helpful to make sure pregnant women have access to all birth settings that are appropriate for them.

Additional Authors: Christina Brigance MPH
Presenting Author: Chasmine Flax MPH
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Communication Among Expectant Parents and Use of Zika Prevention Methods During Pregnancy: Findings from the PRAMS-ZPER Partner Survey, Puerto Rico

Submission Type: Posters

Track: Maternal Health

Author(s): Beatriz Salvesen von Essen MPH

Background: Zika virus (Zika) infection during pregnancy has been causally linked to certain birth defects, such as microcephaly, and is both vector-borne and sexually transmitted. During the 2016-2017 Zika outbreak in the Americas, over 36,000 cases were reported in Puerto Rico. Pregnant women and their sex partners who live in or have traveled to an area with risk of Zika should use condoms during sex or abstain from sex for the duration of their pregnancy.

Study Questions: What is the prevalence of communication about topics to prevent Zika transmission among expectant parents? What is the relationship between communication among expectant parents on using condoms during pregnancy and reported condom use?

Methods: We analyzed data from the Pregnancy Risk Assessment Monitoring System-Zika Postpartum Emergency Response Study Partner Survey, a hospital-based postpartum survey of 1,179 fathers of live-born infants or male partners of women with a recent live birth in 32 participating hospitals from November to December 2017 in Puerto Rico. The prevalence of men reporting talking with the infant's mother during pregnancy regarding prevention of Zika was examined across sociodemographic groups. Multivariable logistic regression was used to examine factors associated with condom use during pregnancy.

Results: Most men (80.7%) reported talking with the infant's mother about preventing Zika during pregnancy. Discussions were more frequent about topics related to prevention of vector-borne transmission (protecting home from mosquitoes (97.4%) and using mosquito repellent (96.8%)) than sexual transmission (abstaining from sex (56.9%) and using condoms (72.6%)). Most men (91.9%) reported having sex with the infant's mother during pregnancy; of these, 25.4% reported consistent condom use and 49.3% reported any condom use. Men who discussed condom use with the infant's mother were significantly more likely to report any (68.3% vs 15.8%, adjusted odds ratio aOR: 12.1 [7.2-16.4]) and consistent (34.9% vs 6.2%, aOR: 8.2 [4.5-14.9]) condom use during pregnancy compared with men who did not discuss condom use with their partners.

Conclusions: While the prevalence of men communicating with the infant's mother about Zika preventive measures during pregnancy was high, prevention of sexual transmission was less commonly discussed than prevention of vector-borne transmission. Our analysis revealed there was a strong positive association between discussion of condom use during pregnancy to prevent Zika infection and reported condom use during pregnancy.

Public Health Implications: Public health messaging aimed at increasing communication among expectant parents about risk of sexually transmitted infections during pregnancy might help increase condom use during pregnancy in the context of conditions that may pose a risk of adverse effects to the infant.

Additional Authors: Emma Tucker
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COVID-19 Symptom Surveillance and Symptom Clustering in Youth and Young Adults in Maine, 2020-2021

Submission Type: Posters

Track: Collateral Damage of COVID

Author(s): Andrea Lenartz MPH

Background: More than 1 in 6 COVID-19 cases in Maine have been diagnosed in youth aged 18 and under. Clinicians serving youth across the state expressed interest in understanding the impact of COVID-19 on youth. In addition to monitoring prevalence and demographic characteristics of youth COVID-19 cases, it is also vital to surveil symptoms to identify how the virus manifests in these populations. Furthermore, it is currently unknown which combinations of symptoms youth in the state commonly present with. Symptom clusters can be useful for practitioners to better diagnose and predict symptomatology.

Study Questions: What are the most common symptoms and symptom clusters clinicians can expect to see in youth and young adults with COVID-19 in Maine?

Methods: Using COVID-19 data collected by case investigators and documented in Maine's NEDSS Base System (NBS), we created data visualizations in Tableau to analyze and display probable and confirmed COVID-19 symptom information in cases aged 18 and under using the following age groups: 0-4, 5-9, 10-14, 15-18. Cases reported to NBS between March 1, 2020 and April 30, 2021 were included in the analyses, although the visualizations will be used for continued surveillance. Exploratory factor analysis was completed in SAS to form symptom clusters for youth.

Results: The most common symptoms in youth aged 18 and younger were runny nose (38%), fatigue (27%), and headache (27%). 21% were asymptomatic. In comparing the youth age groups, the percentage of asymptomatic cases was lowest at 14% of 15-18-year-olds and highest at 26% and 28% of 0-4- and 5-9-year-olds, respectively. The most common symptoms in 0–4-year-olds were runny nose (37%), cough (26%), and feeling feverish (22%). In 5–9-year-olds, 32% had a runny nose, 20% felt fatigued, and 20% had a headache. The most common symptoms in 10–14-year-olds were runny nose (39%), headache (33%), and fatigue (29%), similarly to 15–18-year-olds with runny nose (42%), headache (36%), and fatigue (31%). Symptom cluster results will be presented when factor analysis is finalized.

Results are limited by the accuracy and completeness of self-reported symptom data collected during case investigations.

Conclusions: Data visualizations from these analyses have been reviewed by leadership at the state level. The dashboard will be used for continued surveillance of COVID-19 in youth. Symptom clusters will allow pediatric providers to forecast presenting signs of COVID-19. Further research should be done to identify symptom clusters and other predictors (such as BMI, socioeconomic status, and emerging COVID-19 variants) of high-risk youth COVID-19 cases and those who will experience severe COVID-19 illness, become hospitalized, or require respiratory support.

Public Health Implications: Youth symptom data and continued research on symptom clusters will allow for clinicians to better understand how COVID-19 manifests in this population.

Additional Authors: Andrea Lenartz MPH
Presenting Author: Erika Lichter ScD

COVID-19 Vaccine Attitudes and Intentions Among Pregnant & Postpartum Women in the U.S.

Submission Type: Posters

Track: Maternal Health

Author(s): Tishra Beeson DrPH, MPH

Background: Vaccination during pregnancy protects mothers and infants from serious disease through maternal antibodies. Maternal vaccination is especially critical during a global pandemic like COVID-19, especially as COVID-19 disease yields disproportionate risks and outcomes among pregnant individuals. Despite the emerging data on safety and efficacy of COVID-19 vaccines, evidence on maternal attitudes and intentions to receive COVID-19 vaccines during pregnancy or the postpartum stage is not well-established.

Study Questions: This study investigates the vaccine attitudes and intentions of pregnant women and women who recently gave birth during the COVID-19 pandemic and identifies certain subgroups of women who may be more or less likely to report positive COVID-19 vaccine intentions.

Methods: This study recruited a convenience sample of pregnant women between December 2020 - April 2021 to participate in a series of online surveys on pregnancy, childbirth, and postpartum experiences during the COVID-19 pandemic. Respondents were asked to complete a prenatal survey during their pregnancy, with a follow-up survey 4-8 weeks after their reported due date. Data was collected on respondent demographics, care utilization, vaccine attitudes, intentions, and breastfeeding/lactation status. Descriptive frequencies as well as bivariate analyses using unpaired t-tests and chi-square tests of proportions were utilized to identify any group differences. Logistic regression modeling was used to detect relationships between independent variables and respondents' positive intention to receive a COVID-19 vaccine.

Results: A total of 449 respondents had complete data for this study (n=277 prenatal, and n=172 postpartum). Among pregnant women, 54.5% reported that they would "definitely" get a COVID-19 vaccine while another 6.9% would "probably" get it. This rate increased slightly among postpartum women with 62.2% "definitely" likely to get vaccinated and 10.5% who would "probably" get vaccinated against COVID-19. No differences in vaccine intentions were observed by race, ethnicity, relationship status, or household size. However, among postpartum women, intentions to receive a COVID-19 vaccine was positively associated with age, (p-value=0.0004), household income (p-value=0.003) and educational attainment (p-value<0.001). Prior receipt of an influenza vaccine was correlated with positive intentions toward receiving a COVID-19 vaccine for both pregnant (OR=1.87, p-value=0.036) and postpartum respondents (OR=7.87 p-value<0.001). Pregnant participants were nearly nine times more likely to report positive vaccine intentions if their provider had expressly recommended COVID-19 vaccination (OR=8.98, p-value<0.001). Additional data on vaccine attitudes surrounding safety, efficacy, and harm perceptions will also be presented.

Conclusions: This study highlights emerging data and highlights key elements that may be helpful in helping pregnant individuals and those who have recently given birth navigate important decisions about COVID-19 vaccination. The findings also reveal opportunities where vaccine perceptions may be modified through education, counseling, and support, most notably through direct recommendations from trusted health care providers.

Public Health Implications: This study builds a foundation toward better understanding vaccine attitudes and intentions during a major global pandemic, especially among a sample of pregnant and postpartum individuals who face disproportionate risk of COVID-19 outcomes and rapidly changing information about vaccination. These results will help providers, policymakers, and practitioners assess the needs of this population for better support mechanisms to engage informed, empowered decision-making in the context of COVID-19 vaccination.

Additional Authors: Tishra Beeson DrPH, MPH
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Does Medical Home Reduce the Economic Burden of Informal Care Coordination for Children With and Without Special Health Care Needs

Submission Type: Posters

Track: Medical Home

Author(s): Ilhom Akobirshoev PhD, MA, MSW

Background: Care coordination within a Medical Home can improve health outcomes and reduce the total cost of informal care coordination for children with and without special health care needs. We aimed to determine the economic cost of informal care coordination for children with and without special health care needs and to identify to what extent having a Medical Home reduces this burden.

Study Questions: What is the burden of informal care coordination for children with and without special health care needs? To what extent having a Medical Home reduces the burden of informal care coordination for children with and without special health care needs?

Methods: We analyzed combined 2016-2018 NSCH data. We measured the economic cost of informal care coordination for children with and without special health care needs by multiplying the average caregiver's time spent on care coordination by the median hourly wage for all occupations in 2018 ($18.58). We used risk ratios (RR) for the association between Medical Home and time spent on care coordination to estimate the reduction in informal care coordination cost for children with and without special health care needs. The analytical sample included 101,155 U.S. children age 0-17, including 79,090 non-CSHCN and 23,065 CSHCN. When weighted they represented 59,624,948 non-CSHCN and 13,777,672 CSHCN in 2018.

Results: The total economic cost of informal care coordination for all children in the U.S. in 2018 was $12.12 billion. Families raising CSHCN accounted for 76% or $9.27 billion of this burden. We estimate that if all CSHCN had a Medical Home, the total cost of informal care coordination would be reduced by almost 50%, generating a net-cost savings of approximately $5.79 billion.

Conclusions: Families of CSHCN carried a disproportionately high burden or $9 billion out of the $12 billion or 76% of the total economic burden. Providing access to a Medical Home significantly reduces these costs.

Public Health Implications: Policy and decision-makers can use these findings and promote the adoption and implementation of Medical Home standards.

Additional Authors: Don Shepard PhD **Non-Presenting Author:** Anne Valentine **Non-Presenting Author:** Monika Mitra PhD

Doula Perspectives on Maternal Health Futures

Submission Type: Posters

Track: Maternal Health

Author(s): Nika Darvish

Issue: Doulas are trained professionals who provide educational, physical, and spiritual support before, during, and after childbirth. Doula-assisted mothers are four times less likely to have a low birth weight baby and among Medicaid beneficiaries, 41% less likely to have a Caesarean section. Doulas can also support pregnant people of color who experience the impacts of racism by providing individually tailored, culturally appropriate care. Postpartum doulas are a key strategy to keep Black, Indigenous, and other women of color connected with primary and speciality care. This project explores potential innovations that may improve the future reach and impact of doulas, including emerging technologies.

Setting: The project takes place at UC Berkeley's Wallace Center for Maternal, Child, and Adolescent Health. It engages doulas from across the United States, including community doulas, which provide services at low or now cost to underserved communities and are often members of the communities they serve. At least 50% of the participating doulas provide services to communities of color.

Project: Semi-structured, one-on-one interviews have begun exploring doulas' experiences working with expectant mothers, specific services, training, emerging technologies, and the future of doula care. A subset of doulas will be invited to participate in virtual workshops to imagine alternative futures for doula care and childbirth in the year 2030 using techniques and approaches from the fields of futures thinking and human-centered design. The study duration is April - December 2021. The audiences for this work are: doulas and those supporting innovation in Maternal Health, at program and policy levels. A secondary audience is practitioners and researchers who may wish to use these futures tools in their own work.

Accomplishment/Result: To date, 35 doulas from 26 states and Washington, DC have committed to participate in formal interviews, and seven interviews have been conducted with doulas residing in California, Alabama, Washington, Ohio, and Mississippi. Several preliminary themes and innovation concepts have already emerged. Doulas continue to face backlash from medical teams while supporting their clients during labor. Doulas primarily communicate with one another through Facebook community groups and also use Facebook to find clients. An apprenticeship model that pairs new doulas with more experienced doulas to observe their first several births may make doula training more robust and instill a chain of learning. The majority of doulas agree that if all women were provided doula care, Maternal Health outcomes would improve.

Barriers: Community doula recruitment has been our biggest challenge. We have leveraged social media platforms, notably Facebook Groups, and email to reach community doulas. Recognizing that we still may have limitations in who we are able to reach, we followed up by phone to specific doula groups.

Lesson Learned: Unlike those in clinical roles, doulas engage in a pregnant person's journey holistically, providing them with a unique and valuable perspective for future innovation. There is a need to further elevate the voices of doulas to support equity in leadership and outcomes. To provide doulas with a meaningful decision making role in this work, we are compensating two doulas to be a part of an advisory committee.

Information for Replication:

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Presenting Author: Jaspal Sandhu PhD, SM **Non-Presenting Author:** Anu Manchikanti Gomez PhD, MSc
Non-Presenting Author: Cassondra Marshall DrPH, MPH **Non-Presenting Author:** Marissa McKool MPH

Effectiveness of Postpartum Contraceptive Choice Among Women at Risk for Unintended Pregnancy, Ohio, 2019

Submission Type: Posters

Track: Reproductive Health/Family Planning

Author(s): Samantha Batdorf MPH

Background: Family planning is one of the great public health achievements of the 20th century and 99% of sexually active women report using contraception at some point in her life. Still, according to the 2019 Ohio Pregnancy Assessment Survey (OPAS), 43% of pregnancies were not intended. The postpartum period is an opportunity for women to consider or reconsider their contraceptive choice. Understanding current patterns of postpartum contraceptive use across populations may help public health and medical practitioners target family planning resources and education appropriately.

Study Questions: Among Ohio women who recently gave birth and are at risk for unintended pregnancy, did women choose highly effective contraceptive methods? Does this vary by race, postpartum insurance, and/or maternal education level?

Methods: Using data from the 2019 OPAS, we examined the prevalence of highly effective contraceptive method versus low effectiveness or no contraceptive method use among women at risk for unintended pregnancy. Women were considered to be at risk of unintended pregnancy if she was not currently pregnant, did not want to become pregnant, and was sexually active. If a respondent selected multiple contraceptive methods, she was assigned to the most effective method indicated. We then examined whether effectiveness of contraceptive method varied by race/ethnicity, postpartum insurance, and maternal education level using chi-square tests of association.

Results: Among Ohio women with a recent live birth at risk for unintended pregnancy, 61% used a highly effective contraceptive method in the postpartum period, which includes permanent contraception, long-acting reversible contraceptives, injectables, the oral contraceptive pill, and the patch or ring. Thirty-nine percent used a low effectiveness method or no contraception (23% low effectiveness, 16% none). The choice of highly effective postpartum contraception differed by demographic characteristics. Specifically, Non-Hispanic Black women (65%) and Hispanic women (66%) were most likely to use highly effective postpartum contraception, compared to non-Hispanic white women (60%) (chi-squared

p=0.052). Sixty-nine percent of women with public insurance used a highly effective contraceptive method in the postpartum period; this was higher than the percent of women with private insurance (57%) and women without insurance (44%) who chose a highly effective method (p<0.0001). Women with a bachelor's degree were less likely than women with a high school degree or women with some college to use a highly effective contraceptive in the postpartum period (56% vs. 65% and 65%, respectively, p<0.01).

Conclusions: Nearly 40% of women at risk of unintended pregnancy either did not use a contraceptive method or used a contraceptive method with low effectiveness in the postpartum period. While effectiveness of postpartum contraceptive varied by race/ethnicity, postpartum insurance, and maternal education, high proportions of women in each population remain at risk for unintended pregnancy.

Public Health Implications: The prenatal and postpartum periods present an opportunity to provide education about contraceptive options to women at risk of unintended pregnancy. Understanding variation in postpartum contraceptive choice can help inform strategies to provide equitable education and access to effective contraceptive methods among women who do not currently want to become pregnant.

Additional Authors: Samantha Batdorf MPH
Presenting Author: Alicia Rooney MPH, MSW **Non-Presenting Author:** Andrea Arendt BSN, MPH

Efficacy of School-Based Interventions in Preventing Teen Dating Violence: A Literature Review

Submission Type: Posters

Track: Child/Adolescent Health

Author(s): Judy Tang B.S., MSN Student

Background: Adolescents in unhealthy and violent romantic relationships are at risk for poor physical and mental health outcomes, often mediated by maladaptive coping strategies following traumatic experiences. School-based interventions to prevent teen dating violence (TDV) hold promise for reducing these negative outcomes by educating adolescents on healthy relationship behavior, conflict resolution, and safe sex.

Study Questions: The purpose of this literature review was to synthesize research on the efficacy of school-based TDV prevention programs.

Methods: This literature search was conducted using two databases: Google Scholar and PubMed. The search terms used were teen dating violence, school-based, adolescent, health outcomes, and synonyms for primary prevention intervention. Eligible articles were those that were published in English after 2005, measured TDV perpetration and victimization as outcomes, and were primary research articles. Qualitative studies, observational studies, and systematic reviews were excluded.

Results: A total of 11 articles met criteria for inclusion in the review. The interventions studied varied in design, with some that incorporated support groups, technology, or self-defense into their curricula to educate adolescent youth about the dangers of TDV. There were mixed effects of implementing school-based TDV prevention education interventions with adolescent populations. While some studies reported that participants experienced increased knowledge of healthy romantic relationship behavior and conflict resolution skills, programs have produced an inconclusive reduction in physical, sexual, or psychological dating violence perpetration and victimization. Those that included self-defense and structural changes to school (e.g., increased security), in addition to education, were most effective.

Conclusions: This review found limited evidence for the efficacy of school-based prevention education interventions in reducing actual incidence of TDV, and as such, there is a need to consider adapting intervention models to incorporate elements of interventions that have yielded success, such as self-defense or security presence. Though these programs have encouraged teens to learn positive relationship skills and increase their knowledge, it may be beneficial to empower them with skills that apply outside the classroom setting to decrease rates of TDV and improve adolescent population health.

Public Health Implications: Implementing structural changes to reduce violence and promote safety (e.g., school-based self-defense training program, increased security in schools) has the potential to improve population health by decreasing the rates of TDV victimization or perpetration. A reduction in violent experiences and trauma symptoms may improve adolescent mental and physical health outcomes. Because adolescents have limited experiences of intimate relationships, a TDV prevention program may encourage teens to learn how to utilize positive relationship skills to resolve conflicts. Since nurses focus on health promotion and primary prevention efforts, they may be instrumental in executing programs in the school setting, to educate adolescents about healthy and respectful romantic relationships and encourage greater awareness of TDV to break the cycle of violence and poor health outcomes.

Additional Authors: Judy Tang B.S.
Presenting Author: Kristen Choi PhD

Elevating the Voices of Men and their Health in the Context of Maternal and Child Healthcare: A Focus Group Study

Submission Type: Posters

Track: Fatherhood/Men's Involvement

Author(s): Brenikki Floyd

Background: Research supports that father/male partner involvement in the perinatal period can improve maternal, child, and family health outcomes. However, men are often left out, or not specifically included in, healthcare and social services settings focused on women and children. Additionally, few studies have engaged men directly about their participation in the healthcare of their female partners and children. Within the context of a community-based infant mortality program, this study aimed to elicit facilitators and barriers for men in accessing their own healthcare and to identify ways men feel they can support women and children in obtaining healthcare.

Study Questions: How do men's experiences in accessing healthcare differ from women in the same community? What are the ways men feel they can support women and children in obtaining healthcare?

Methods: We conducted six sex-stratified focus groups using a structured interview guide. In addition to asking questions similar to those asked of the women, men were asked about the use of healthcare by their partners and children. All participants (n=38) lived in three under-resourced communities in Chicago. Across all three communities, over 90% of residents identify as Black and the median household income ranges from $21,275 to $34,661. We coded transcripts of the recorded sessions using Microsoft Excel; themes were generated using a combination of inductive and deductive methods.

Results: Five shared themes related to healthcare utilization emerged for both men and women: fear of obtaining healthcare; mistrust of the medical system; affordability of healthcare and confusion about eligibility for benefits; seeking healthcare outside of their community; and, the influence of positive relationships on willingness to access healthcare. In addition to these shared themes, most male participants shared that mothers are the default decision-makers in their child(ren)'s healthcare; they noted that the lack of job flexibility and provider stigma affected their ability to be involved. Men expressed varying ability to support their partners in seeking healthcare and described an overall lack of healthcare services available for themselves. Lastly, men shared that their perceptions of manliness

affects their willingness to seek healthcare.

Conclusions: Results reveal structural barriers that prevent men and women from accessing healthcare for themselves and in particular highlight perceived barriers in men's ability to be involved in their child(ren)'s care. These data support efforts to address systems level barriers and implement changes such as strengthening patient-provider interactions and providing paid sick leave to encourage the use of health care. This information can also inform strategies to increase male involvement in Maternal and Child Health (MCH) programs that focus on women's and children's health in order to increase use of the healthcare delivery system by the entire family.

Public Health Implications: Father/male partner involvement in MCH programs present an opportunity to engage men about their own healthcare needs as well as the healthcare needs of their female partners and children. To facilitate this, MCH programs can provide specific programming focused on increasing father/male partner involvement and addressing the multiple personal and systems-level barriers men experience in healthcare settings.

Additional Authors: Abigail Holicky MPH
Presenting Author: Brenikki Floyd PhD, MPH **Non-Presenting Author:** Kate Yep MPH(c), BS **Non-Presenting Author:** Virginia Reising DNP, RN, PHNA-BC **Non-Presenting Author:** Arden Handler DrPH

Emergency Preparedness Among Women of Reproductive Age: Behavioral Risk Factor Surveillance System, Reproductive Health Call-back Survey, 2018

Submission Type: Posters

Track: Other

Author(s): Ashley Smoots MPH

Background: Women and children face unique challenges during and after disasters.

Study Questions: Assess the prevalence of emergency preparedness factors among women of reproductive age (18-49 years) and assess whether having children in the household was associated with preparedness.

Methods: Using self-reported data from the Behavioral Risk Factor Surveillance 2018 Reproductive Health Call-Back Survey, we assessed emergency preparedness among women of reproductive age (WRA) in 7 states and the District of Colombia. Preparedness behaviors were a household preparedness index (index) (having: a 3-day supply of water, 3-day supply of food, a battery-operated radio, a backup cell phone battery, and safe document storage), having an emergency evacuation plan, and having a 3-day supply of medication. We calculated weighted prevalence estimates and adjusted PRs (aPR) with 95% Confidence Intervals (CI) using SUDAAN software to account for the complex sampling design. For each preparedness behavior, we used a marginal predictions approach to multivariable logistic regression to estimate associations between the presence of children in the household and emergency preparedness. Models were adjusted for demographic characteristics.

Results: Overall, 1203 out of 3892 (27.3%, 95% CI: 23.7, 31.1 (weighted)) eligible women participated. Most respondents were 36-49 years old (51.6%, 95% CI: 43.9, 59.2%), non-Hispanic White (60.8%, 95% CI: 52.9, 68.2), and lived in a household with children (71.1%, 95% CI: 64.6, 76.8). Most women reported feeling “well prepared” (24.5%, 95% CI: 18.4, 31.9) or “somewhat prepared” (52.0%, 95% CI: 44.2, 59.6) for emergencies. A quarter of respondents reported having all items in the index (25.8%, 95% CI: 19.6, 33.2). Reporting all index items differed by age (p=0.01); 35.8% (95% CI: 26.1, 46.8) of women 36-49 years old compared to 16.1% (95% CI: 7.2, 32.2) of women 18-24 years old. Most women had an emergency evacuation plan (57.3%, 95% CI: 49.4, 64.9) and 3-day supply of medication (89.5%, 95% CI: 81.6, 94.3). After adjusting for sociodemographic characteristics, having children in the household was associated with an increase in having an evacuation plan (aPR= 1.32, 95% CI: 1.04, 1.66), but a decrease in having a 3-day supply of medication (aPR= 0.91, 95% CI: 0.85, 0.98). Reporting all index items did not differ by presence of children in the household.

Conclusions: Some preparedness behaviors among WRA may differ by whether children live in the household.

Public Health Implications: Three out of four WRA reported feeling somewhat or well prepared for emergencies, however only one in four reported having all household preparedness index items. Public health and emergency planning messages may encourage women of WRA to plan for disasters by having emergency preparedness items, having an emergency plan, and adequate supplies of medication. Household plans can be shared with all household members, including children. When creating tools to aid in helping families create disaster plans, it is important for state and local health departments to consider the needs of and how to best reach younger women and families with children.

Additional Authors: Ashley Smoots MPH
Presenting Author: Aspen Riser MPH
Presenting Author: Regina Simeone MPH **Non-Presenting Author:** Sascha Ellington MSPH, PhD

Evaluation of a Quality Improvement Initiative to Reduce Unnecessary Cesareans in Florida Hospitals

Submission Type: Posters

Track: Maternal Health

Author(s): Erica LeCounte MPH

Background: Florida Perinatal Quality Collaborative's (FPQC) Promoting Primary Vaginal Deliveries (PROVIDE) Initiative assisted 44 hospitals with implementing quality improvement (QI) strategies that reduce unnecessary iparous Term Singleton Vertex (NTSV) cesarean births. After the initiative's first 18 months, January 2018 to June 2019, some hospitals' NTSV rates significantly decreased, while others' significantly increased or remained the same. This evaluation's purpose was to assess reasons why some hospitals reduced their rates and others not.

Study Questions: This evaluation examines PROVIDE implementation differences to better understand resulting NTSV rates.

Methods: A retrospective evaluation was conducted using in-depth interviews with hospital staff members to understand contextual factors influencing implementation of PROVIDE across hospitals. Purposive sampling was used to select a diverse group of hospitals for recruitment. Only hospitals whose rates had significant sustained decreases (n=13) or sustained increases (n=7) were recruited. Hospitals also had to be enrolled in the second phase of PROVIDE to participate. The Consolidated Framework for Implementation Research (CFIR) was used as a guide for interview questions. The interview guide was developed using 12 CFIR constructs across four domains: intervention characteristics (adaptability, evidence strength and quality), process (champions, engaging, opinion leaders, planning), inner setting (culture, goals and feedback, implementation climate, leadership engagement, tension for change), and outer setting (external policy and incentives). Constructs were preselected by the PROVIDE evaluation team based on their perception of which CFIR constructs would have the greatest influence on physicians' cesarean delivery practices. Interviews were conducted between August and December 2020 using Microsoft Teams. Recordings were professionally transcribed. Transcripts were thematically coded (deductively and inductively) and analyzed using Atlas.ti.

Results: Interviews were conducted with 21 participants across 13 hospitals. Participants represented 8 hospitals whose NTSV rates significantly decreased and 5 hospitals that significantly increased. Contextual factors influencing PROVIDE implementation were similar between all hospitals. These factors were present across all CFIR domains and constructs studied. All participants reported a great need for change in hospital practices to improve outcomes for moms and babies. They described the strength of the scientific evidence supporting PROVIDE and external guidelines and performance measures from organizations like The Joint Commission, as key implementation factors. Hospital culture was praised as being very committed to quality improvement and change. However, most hospitals experienced difficulties getting physician engagement. This made the implementation climate challenging. Communication of hospital goals and cesarean rates were used to help physicians become more receptive to implementation. Participants praised strong leadership engagement and champions for supporting PROVIDE and making implementation a priority.

Conclusions: At the high level of the interviews, PROVIDE implementation differences did not appear to have contributed to changes in hospital NTSV rates. Contextual factors influencing implementation were similarly reported between hospitals and appear to have operated across all CFIR domains and constructs studied. Further analyses continue to better understand hospital differences.

Public Health Implications: This evaluation will help improve understanding of why NTSV rates decreased in some hospitals and help the FPQC and other quality initiative's better assist participating hospitals in reducing rates.

Additional Authors: Erica LeCounte MPH
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Evaluation of Changes in Maternal and Congenital Syphilis in Florida from 2013-2014 to 2018-2019

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): James Matthias MPH

Background: Syphilis rates in women are increasing in Florida leading to an increase in congenital syphilis (CS). During 2013–2014, an increase in maternal and CS was observed and evaluated by the Florida Department of Health. Over 20% of syphilis cases among pregnant women resulted in CS cases. Both maternal and congenital syphilis cases were most commonly seen among Black non-Hispanic persons and found to be of mothers with early syphilis or high-titer late or unknown duration syphilis. Since 2014, however, maternal, and congenital cases have increased 2-and 3-fold respectively in Florida despite prevention efforts.

Study Questions: We assessed maternal and congenital syphilis cases in Florida to look for clues to help explain these increases.

Methods: Reported maternal syphilis cases and their linked CS cases from 2013–2014 and 2018–2019 were extracted from the Florida sexually transmitted diseases database. The two time periods were compared using χ2 tests for association for CS, age groups, race/ethnicity, drug use (crack/cocaine, heroin, methamphetamine, or intravenous drug use), titer, and syphilis stage at diagnosis. We also compared the fraction of pregnant women with syphilis that were adequately treated in time to prevent CS during both time periods.

Results: Comparing 2013-2014 with 2018-2019, pregnant women with syphilis increased from 404 to 809 and CS cases increased from 83 to 258. At the same time, the likelihood that a pregnant woman with syphilis had a baby with CS increased from 83/404 (79%) to 258/859 (68). If CS cases in 2018–2019 were prevented at the same rate as 2013–2014 only 167 CS cases would have been expected meaning an excess 93 cases were due to a reduction in CS prevention efficiency. Adjusting for prevention rates of maternal stage and titer at diagnosis, the 2018–2019 maternal syphilis cohort would have an estimated 183 CS cases (77 case excess from reduced efficiency). Black non-Hispanic women were disproportionately at both time points, but there were no changes over time by race/ethnicity or age.

Reported drug use increased from 6 to 10% among all mothers (p=0.03) and 12 to 19% of those whose baby had CS. The proportion of early syphilis or high-titer late or unknown duration syphilis also increased from 50% to 62% (p=0.01) of all mothers and 71% to 76% of those resulting in CS.

Conclusions: The increases in early syphilis and high-titer late or unknown duration syphilis among pregnant women suggest more recent and growing syphilis transmission among heterosexuals in Florida. The slight increase in reported drug use has been seen in other jurisdictions.

Public Health Implications: This evaluation suggests that systems/programs are struggling with CS prevention in two ways 1) more women are getting syphilis and 2) a higher percentage of them are not treated in time to prevent CS.

Additional Authors: James Matthias MPH
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Expecting Parent Packet: Employee Support at the Flip of a Page

Submission Type: Posters

Track: Policy Work/Systems

Author(s): Chemyeeka Tumblin MSPH, MMFT

Issue: The Expecting Parent Packet was an identified need by employers after they had went on Maternity Leave following the birth of their children. Employees noted that there were resources such as information around local lactation support and physical, as well as, digital support for mental and behavioral health issues needed in postpartum. Metro Nashville Government approved Family Leave for both moms and dads to have leave after the birth of a child and/ or adoption. While family leave was a huge win, it came with the understanding parents need resources while on leave for their new family.

Setting: The Expected Parent Packet was created within the Nashville Metro Public Health Department for it's employees. The impact of the Packet is that it would improve the Postpartum and new family experience for both the employees and their families, as well as, provide customers for local businesses. The Packet would also increase employee knowledge of benefits, as well as, increase moral through reinforcing means of support.

Project: The Expected Parent Packet was created with all parents in mind. The Packet uses gender affirming language with compassion and understanding that parenting does not look the same for all, just as there are many ways to become a family. The Packet was created to increase knowledge around common issues faced during the transition period of expanding a family, as well as, resources to address common problems and for policies related to returning to work. The final product of the Expected Parent Packet was divided into sections that highlight areas within Postpartum, the Fourth Trimester and the New Parent Transition. The Packet brings attention to Mental Health in the New Parent transition by providing resources on Perinatal Mood Disorders and understanding the differences between Baby Blues and Postpartum Depression, as well as, highlighting the importance of follow up appointments with doctors for parents. There is also information on the importance of caring for self, as well as, children and being a supportive partner or caregiver. The Packet also addresses work place policies around leave, as well as, planning for returning to work while nursing by listing the locations of worksite lactation rooms. The Packet focuses on Infant Vitality through providing education on Safe Sleep practices, need and use of car seats, as well as, nutrition with language around chest feeding and milk banks.

Accomplishment/Result: The Expectant Parent Packet has been adopted as a Policy Change with the local Health Department and offered to employees at the time they begin the preparation period to take Family Leave. The Nashville Metropolitan Government is adapting the Expectant Parent Packet as a resource that can be used by all Metro employees. There are now two versions of the Expectant Parent Packet. One is print so that employees may pick it up from HR directly and the other is digital and can be found on the Metro Website for employees with accessible links and QR codes.

Barriers: A barrier faced in the Expectant Parent Packet being adopted as a policy was internal data to support needed change due to low survey participation among employees. Data was used from other places of employment around employee moral and missed work days post expansion of families in relation to resources needed to assist with their transitions.

Lesson Learned: Resources such as the Expectant Parent Packet provide employees with education on how to navigate new stages of life, while also aiding employers in retention through employees understanding how the environment they are returning to supports them in their transitions. The Packet also provided a conversation piece for employees to speak with HR around uncertainties of Leave, as well as, their needs in returning to the work place. The Packet was equitable in that it did not focus on a specific parent but all parents or caregivers. It promotes Birth Equity and Infant Vitality through increased awareness and knowledge of many issues that are factors in infant death and decreased quality of mental health in parenting.

Information for Replication: The project was completed as a collaboration between the Preventative Health and Wellness Coordinator, Preconception Health Strategist and other Metro Nashville Partners.

Additional Authors: Heather Snell MSPH

Explanatory Mixed Method Analysis of Social Determinants of Maternal and Child Health in Arizona Using Joint Displays.

Submission Type: Posters

Track: Data Innovation

Author(s): Martin Celaya MPH

Background: While maternal and child health indicators in Arizona appear better than national averages; this is not true across sub-populations in Arizona. Communities of color, in particular indigenous and black communities, are disproportionately affected by numerous morbidities and causes of mortality. Large sparsely populated areas; the existence of 587 federally designated Health Professional Shortage Areas; and striking geographical features with an international border pose unique geographical, cultural, and political challenges to health. These ultimately create barriers that directly affect health-seeking behaviors and health outcomes. The assessment team used an innovative concurrent mixed-methods approach to describe residents' perceptions on specific social determinants of Maternal Health in Arizona.

Study Questions: To describe perceived social-level factors that impinge on Maternal Health outcomes in Arizona using a concurrent mixed methods analysis with joint display methodology.

Methods: A statewide needs assessment was conducted in Arizona from 2018-2020 that used 8 distinct methodologies including qualitative focus group discussions, vital record analysis, and survey methodologies to collect information regarding social-level barriers to maternal and child health. The quantitative survey scored 20 social determinants using Likert scales by respondents, whereas the qualitative research provided insights into social-level barriers to maternal, child, and adolescent health. Vital records data provided population health outcomes that grounded both survey and focus groups themes. Data from all methods were analyzed using a joint display methodology to provide inferential insights into social determinants of maternal and child health.

Results: Transportation, housing conditions, social and emotional support raked highest as the strongest perceived determinants of maternal and child health. The ranking for the determinants did vary by participants' racial and ethnic identities, highlighting the different needs of ethnic groups in Arizona.

Conclusions: The result from this mixed analysis was beneficial; it improved our understanding of perceived social determinants of health and how they affect maternal and child health. Overall, poverty, lack of social support, and inadequate housing conditions were the strongest determinants. This research contributes to an emerging literature on the impact of social determinants on maternal and child health; it highlights essential but often neglected determinants of health.

Public Health Implications: This research contributes to an emerging literature on the impact of social determinants on Maternal Morbidity and Mortality. It provides an overview of determinants on which state programs may focus to improve Maternal Health and outcomes and provides specific recommendations by racial groups and type of county residence.

Additional Authors: Abidemi Okechukwu MBBS, MPH
Presenting Author: Aline Indatwa MPH, PhD

Exploring the Impact of a Positive COVID-19 Test During Pregnancy on ND Infant Birth Outcomes

Submission Type: Posters

Track: Perinatal Outcomes

Author(s): Ramona Danielson

Background: Based on emerging research, pregnancy appears to be associated with greater maternal and infant risk from COVID-19. In Nov. and Dec. 2020, North Dakota experienced some of the highest per capita COVID-19 positivity rates in the world. The present study examined birth outcomes (low-birth weight, pre-term birth, NICU stay, infant ventilation, poor APGAR score, delivery by C-section) for infants born from Apr. to Dec. 2020 to ND women with a positive COVID-19 test during pregnancy.

Study Questions: Do infants born to women with a positive COVID-19 test during pregnancy have worse birth outcomes than infants born to a woman without a record of a positive COVID-19 test during pregnancy?

Methods: Women with a positive COVID-19 test while pregnant (N=311) were identified by merging birth records from Apr.-Dec. 2020 (N=2796) with COVID-19 testing data. To isolate the effects of a positive COVID-19 test on birth outcomes, we created two control groups. For our first control, we used birth records from Jan.-Mar. 2020. To account for differences based on time of year of birth, we examined quarterly birth record data from 2015-2019 and found no patterns in birth outcomes. For our second control, we identified women without a positive COVID-19 test while pregnant from Apr.-Dec. 2020. We used propensity score matching to ensure covariate balance using a variety of demographic and health-related characteristics that could potentially influence the likelihood of exposure to COVID-19 or that could impact birth outcomes. A limitation is that women that did not have a record of a positive COVID-19 test in ND may have tested positive in another state or had COVID-19 but were never tested. Another limitation is that due to a small incidence of infant mortality annually in ND, we are not able to draw conclusions about this outcome.

Results: No significant differences were detected in birth outcomes between women who tested positive for COVID-19 and women who gave birth in the three months prior to the presence of COVID-19 in ND or among women who gave birth during the same 9-month period but who did not have a positive test.

Conclusions: Infants born to a ND woman with a positive COVID-19 test were not at an increased risk of poor birth outcomes compared to women without a positive COVID-19 test.

Public Health Implications: Other research shows that the risk of poor birth outcomes increases for pregnant women who are hospitalized due to COVID-19. The contribution of our study is that among all women who tested positive for COVID-19 during pregnancy in ND, having COVID-19 during pregnancy was not associated with poorer birth outcomes. This study is an important use of linking data files to learn about the impact of COVID-19 on newborns in ND overall, and to learn if it had a disparate impact on birth outcomes for specific populations.

Additional Authors: Grace Njau MS
Presenting Author: Ramona Danielson PhD, MS **Non-Presenting Author:** Brenda Vincent MS **Non-Presenting Author:** Tracy Miller PhD, MPH

Factors Associated With Giving Birth at Advanced Maternal Age in the United States

Submission Type: Posters

Track: Maternal Health

Author(s): Shannon Maloney PhD

Background: In 2018, 17 percent of all births in the United States occurred to women of advanced maternal age (AMA.) While the outcomes of AMA pregnancies have been examined extensively, the drivers behind increasing rates of AMA pregnancies in the United States are less understood. Some scholars have asserted that women are increasingly delaying their first birth in favor of educational and career aspirations. Yet birth trends in the United States do not support this as the primary explanatory factor of AMA births. Other factors may also contribute to high rates of AMA in the United States. This study sought to identify main predictors of AMA birth using a cross-sectional retrospective sample.

Study Questions: What are the individual level factors associated with AMA pregnancy in the United States? Does pregnancy intendedness and pregnancy history independently predict giving birth at advanced maternal age? Which factors [income, education, race, pregnancy intendedness, pregnancy history, health insurance] remain independent risk factors in a multivariate regression model that includes all factors?

Methods: We employed a multivariate logistic regression analysis on a cross-sectional retrospective sample to identify significant independent predictors of giving birth at advance maternal age (AMA) in the United States. Data was obtained from the Unites States Pregnancy Risk Assessment Monitoring System (PRAMS) Phase 7 Core Questionnaire and linked birth certificates. The PRAMS dataset comprises self-reported data and linked birth certificate data from women who recently gave birth. The study population represents mothers from 34 states that met the CDC's 55% response rate threshold and Puerto Rico. A total of 38,549 mothers are included in the Phase 7 dataset. State sample sizes ranged from 503 mothers in Wyoming to 1,897 mothers in Michigan. All mothers gave birth in the year 2017. The outcome of interest was AMA birth, defined as conceiving and subsequently giving birth to a baby at age 35 or older. Predictors for AMA birth were selected a priori and included: pregnancy intention, history of previous live birth, insurance status, income, education, race/ethnicity, marital status, and urban location.

Results: Previous live birth to at least one child was a significant independent predictor for AMA birth. Mothers with high parity, defined as 6 or more previous live births, were 17 times more likely to give birth at advanced maternal age. Mothers with an unwanted pregnancy were 1.9 times more likely to have an AMA birth. College attainment, high income, marital status, urbanicity, and race/ethnicity were also independent predictors of AMA birth. Health insurance was not a significant predictor of AMA birth after accounting for other factors.

Conclusions: Delayed and late childbirth may not be intentional for a significant group of older mothers. Converse to popular assumptions that women delay childbearing in favor of career aspirations, the majority of AMA mothers have previous children. Half of AMA mothers have two or more previous children. The findings in this paper suggests that multiple factors predict AMA births. There may be several subtypes of women who enter pregnancy at advanced maternal age.

Public Health Implications: As women weigh personal desire to bear children against competing social expectations, they may find themselves navigating their own unique path shaped in part by the region in which they live. Better characterization of the circumstances that lead to advanced maternal age in the United States, including exploration of unintended and unwanted AMA pregnancy, is necessary to develop policies and interventions that meet women's needs. This work should utilize a reproductive justice framework to ensure that women's preferences, particularly women of color, are upheld while promoting health and wellbeing for women.

Additional Authors: Chad Abresch PhD **Non-Presenting Author:** Melissa Tibbits PhD **Non-Presenting Author:** Brandon Grimm PhD **Non-Presenting Author:** Kiara Lyons MPH

Feasibility of an IVRS Intervention to Promote Smoking Cessation for Pregnant and Postpartum Women Served by Louisiana WIC Clinics

Submission Type: Posters

Track: Substance Use/Smoking/Vaping

Author(s): Ty-Runet Bryant

Background: Smoking during pregnancy causes deleterious health effects for mothers and babies. Quitting smoking before, during, or after pregnancy reduces health risks, but few pregnant women utilize cessation interventions, and many who quit during pregnancy relapse postpartum. Interactive voice response system (IVRS) technology automates communication and data collection with people through computer-operated phone systems. This pilot study tested the feasibility and the effectiveness of an intervention using IVRS technology to promote quitting among current and former smoking pregnant and postpartum women.

Study Questions: Will pregnant and postpartum smokers served by WIC clinics participate in a tailored 6-months, 6-call IVRS intervention to increase smoking cessation?

Methods: We recruited 42 patients seen in Louisiana Women, Infants, and Children (WIC) clinics between September 2019 to March 2020 into a 6-month IVRS intervention study. Participants received IVRS calls 3, 14, 30, 90, 120, 180 days after enrollment. The IVRS calls obtained current smoking status and readiness to quit, offered referral to cessation services, and provided motivational messaging and mindfulness exercises. Before and after the intervention, we recorded patient socio-demographic characteristics and examined participants' smoking status, quit attempts, knowledge, and beliefs about the effects of smoking and quitting on pregnancy. We also measured the feasibility of recruiting participants by enrollment and attrition rates and assessed participants' experience and satisfaction. We used descriptive statistics to report demographic characteristics and used McNemar tests and paired t-tests to analyze pre-post changes in the above measurements.

Results: We enrolled 28 (72%) patients, and of these, 15 (54%) participants completed the intervention. The majority of the participants reported as 25-34 years of age (66.7%), black (73.3%), having a high

school diploma or above (80.0%), making an income less than $20,000 (80.0%), insured by Medicaid (100%), never married (80.0%), pregnant (66.7%) at the beginning of the intervention. Tests showed that compared with pre-intervention, more participants reported receiving health information about quitting smoking in their community post-intervention (p=0.01). All participants said they were satisfied with the number of calls (100%), the time of day they received calls (100%), the sound of the system voice (100%), and the majority were satisfied with the IVRS calls (93.3%), and the quit smoking services offered by the IVRS system (92.9%).

Conclusions: This study provided a successful proof-of-concept for employing an IVRS intervention supporting WIC clinics' ability to screen, treat, and manage tobacco use for women during pregnancy. Future research will scale up and further validate the effectiveness of the IVRS intervention.

Public Health Implications: This study supports using a novel automated behavioral health intervention to supplement WIC clinic screening and treatment of tobacco use. Successful application of this IVRS intervention may improve the health outcomes of mother and baby, specifically those from socioeconomically disadvantaged populations, and decrease smoking-related health disparities.

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Florida Healthy Babies

Submission Type: Posters

Track: Infant Mortality

Author(s): Ellis Perez MPH

Background: Florida Healthy Babies is a collaborative statewide initiative to positively influence social determinants and reduce racial disparity in infant mortality. This project engages the department's 67 local health offices and numerous partner interventions, within each county to address disparities in evidence-based interventions. Even though we have the lowest infant mortality in our history, Florida has racial and ethnic disparities which we are continuously working to eliminate. In 2016, there were 16,649 births to Orange County mothers. Of these births, 537 infants died within their first 365 days of life. This is equivalent to a death rate of 7.1 deaths per 1,000 births. This rate is higher than the state rate of 6.1 deaths per 1,000 live births. There are also significant disparities in infant mortality rates between races. In 2016, black infants were two and a half more likely to die before their first birthday, compared to white babies. The graph below displays infant mortality rates per 1,000 births in Orange County and statewide for the past five years. The goal is to close the racial gap and decrease infant mortality in the county. We have identified communities within Orange County that have the highest prevalence of poor birth outcomes, with black moms and babies. Core factors that have contributed to Orange County infant mortality and inequities include prematurity, low birthweight, advanced maternal age, and obesity. Therefore, our goal is to reduce preventable infant mortality in Orange County.

Study Questions: What are the racial gap between black and white babies in Orange County Florida?

Methods: Focusing on the most recent 3-year rate, we looked further into the data sources to gather more information on black infants who have died between 2014 to 2016: Fish Bone Analysis: Detailed discussion on the possible causes and effect that may contribute to the death of the infant .Zip Code level Analysis: Identified all Zip Codes in the county (73) to further select the Zip Codes with the highest infant death counts. Causes of Death: We looked at the top causes of infant death within the identified Zip Codes. Maternal Factors: Maternal factors that contribute towards the overall health of the prenatal development. Community Assets: Visual map of identified community assets available in and around the highest death count Zip Codes.

Results: A Fishbone Analysis was conducted to brainstorm and categorize the potential causes and effects to identify root causes of infant deaths among black babies. There are approximately 73 different Zip Codes in Orange County, of which 25 had at least one infant death. From the 25 identified Zip Codes, we focused on 7 that had the highest death counts (32703, 32805, 32808, 32811, 32818, 32835 and

32839). Based on the 7 selected zip codes, a total of 99 deaths were determined between the time period (2014-2016). These Zip Codes have previously been known to be prevalent in many other health outcomes (i.e. low income, high chronic disease rates, low poverty, etc..). Death counts have continuously increased throughout the 3 years within the 32808 zip code; therefore, resulting in the highest number of infant deaths. The top 6 causes of infant deaths were identified: Preterm/Low birth weight, maternal complications of pregnancy, congenital malformations, bacterial sepsis, necrotizing enterocolitis of newborn, and SIDS. Preterm/low birth weight is the number one cause of death (33.3%), with the highest count found in the 32839 zip code. Mothers age, education and BMI levels were selected as maternal factors. Mothers age ranged from 17 to 43 years old, with the majority of mothers being in their late twenties to mid thirties. The majority of mothers only have a high school diploma (39.4%), and 21.2% have associates degree or higher. Mother's Body Mass Index (BMI) shows 50.5% of mothers being overweight or obese. A total of 195 different organization/programs have been identified in the 7 zip codes as well as all surrounding zip codes. These programs/organizations can aid with preventative efforts to reduce infant mortality.

Conclusions: Based on the results, we want to address infant mortality issues by targeting the 7 identified highly prevalent zip codes. We plan to partner with local maternal child health agencies by increasing the utilization of current social media to increase the awareness of ways to reduce infant mortality risk factors by engaging organizations/community members to incorporate the #floridahealthybabiesorange hashtag and or messages to increase the awareness through social media platforms (i.e. Facebook, Twitter, Instagram). Increase local retailer's, who supply infant items, with awareness and knowledge on what a safe sleep environment looks like and encourage their crib displays to represent a safe sleep environment. We're going to implement the Moms2B curriculum that provides 6 weeks of education and support sessions to promote healthy lifestyle choices and link Moms with support services. The educational topics focus on breastfeeding, child development, family planning, goal setting, labor and delivery, maternal-infant health, positive parenting, reproductive health, safe sleep. Lastly, we're going to develop a Fetal and Infant Mortality Reviews (FIMR) process to improve systems of care for women and infants, to reduce deaths

Public Health Implications: This study aids in increasing partnership, resources, and awareness to the public in the targets communizes which will increase health equity. The Moms2B and the FIMR initiative that will result from the results of the data will be able to impact vulnerable mothers by bringing information they need such as: breastfeeding, child development, family planning, goal setting, labor and delivery, maternal-infant health, positive parenting, reproductive health, safe sleep. Education will be provided in a language that they know with educators who represent their ethnic background to increase acceptable and engagement.

Additional Authors: Ellis Perez MPH

Food Insufficiency and Early Childhood Flourishing in a Nationally Representative Sample of Young Children in the U.S.

Submission Type: Posters

Track: Child/Adolescent Health

Author(s): Clara Busse MPH

Background: Food insufficiency, or inadequacy in the amount or quality of food intake, in early childhood is associated with poor health across the life course. However, little is known about its impact on flourishing, an indicator of wellbeing, or mitigating behavioral factors.

Study Questions: Is there an association between food insufficiency and flourishing among young children in the U.S.? Does developmentally adequate sleep modify this association?

Methods: We analyzed data from a nationally representative sample of U.S. children, ages 6 months-5 years, from the 2018-2019 National Surveys of Children's Health (n=15,844). Food insufficiency in the last 12 months was reported by caregivers and categorized as sufficient, sufficient with limited food choices ("limited choices"), and often or sometimes insufficient ("insufficient"). Caregivers who reported that their children were always or usually curious, resilient, attached, and contented in the last month were determined to be flourishing. Survey-weighted prevalence differences (PD) and 95% confidence intervals (CI) for the association between food insufficiency and flourishing (yes/no) were modeled using generalized linear regression. Models were adjusted for caregiver education, multiply imputed poverty level, child sleep adequacy, and child age. Sleep adequacy was defined dichotomously as meeting or not meeting the age-specific guidelines from the American Academy of Sleep Medicine for recommended sleep duration. It was assessed as an effect-measure modifier on the additive scale using a likelihood ratio test (LRT) with an alpha level of 0.05.

Results: Overall, 3.4% of children (n=526) had insufficient food and 21.6% had limited choices (n=3,355). Among those with insufficient food, 28.3% percent of children were not flourishing (n=149), while 17.0% of children with limited choices were not flourishing (n=570). Eleven percent of children who had sufficient food were not flourishing (n=1325). Sleep adequacy modified the association between food insufficiency and flourishing on the additive scale (LRT=11,885.2, degrees of freedom=2, $p<0.05$). Among children with adequate sleep, the adjusted prevalence of flourishing was 4.3 percentage points less for

those with limited choices (95% CI=-0.087, 0.001), and 4.2 percentage points less for those with insufficient food (95% CI= -0.151, 0.067), as compared to children with sufficient food. Among children with inadequate sleep, the adjusted prevalence of flourishing was 2.3 percentage points less for those with limited choices (95% CI=-0.066, 0.019), and 11.7 percentage points less for those with insufficient food (95% CI=-0.224, -0.009), as compared to children with sufficient food.

Conclusions: Our results suggest that food insufficiency is associated with a lower prevalence of flourishing in early childhood, and adequate sleep attenuates this association.

Public Health Implications: Food insufficiency and sleep adequacy are both modifiable factors that should be targeted in public health interventions to facilitate flourishing among young children. As food insufficiency becomes more prevalent in the wake of the COVID-19 pandemic, such interventions are critically important.

Additional Authors: Clara Busse MPH
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Harnessing Hope: Partnering Data and Community Voices in Initiative to Address Birth Inequities

Submission Type: Posters

Track: Community Collaboration

Author(s): Cinthia Fondrk MN

Background: Ramsey County data shows continuing disparities in birth outcomes among U.S. born and foreign-born Black infants and mothers. Despite initiatives implemented at the healthcare systems level, little has changed. In response to birth inequities experienced by the Black community and echoed in county data, Ramsey County, created the Birth Equity Community Council (BECC). BECC is committed to a collaborative process, engaging individual, community, and system level initiatives, aimed at reducing birth disparities.

Study Questions: How do we partner data with community voices in creating initiatives to reduce infant mortality inequities, and improve infant and maternal birth outcomes in the U.S. born and foreign-born Black populations?

Methods: Perinatal Periods of Risk (PPOR) was used for the analysis. The study utilized birth, linked birth-death, and fetal death records from Ramsey and Hennepin Counties for 2011-2014 and 2014-2018 which were obtained from the Minnesota Department of Health. The study populations were U.S. born and foreign-born Black women. Phase 2 of Infant Health was done with the U.S. born study group in 2011-2015 and Phase 2 of Maternal Health / Prematurity was done with both study groups in 2014-2018. BECC facilitated community gatherings around Envisioning Victories, harnessing community voices and experiences to drive initiatives.

Results: PPOR Phase 1 showed inequities in all 4 periods of risk. Infant Health caused by sleep related causes had the largest inequity in 2011-2014 for U.S. born Black women. Maternal Health / Prematurity was the largest area for both study groups in 2014-2018. Kitagawa analysis showed that large numbers of preterm births was the main pathway for U.S. born women. For foreign-born Black women the pathways were split between large numbers of premature births and poor survival of premature babies. For U.S. born women population attributable risk identified toxicology testing and hypertension as significant factors. Through the Envisioning Victories gathering, community focused on empowerment of parents, leading to the adoption of PAT program, empowerment of Dads, leading to Club Dad and Doula4Dads, parent education around Safe Sleep, and most recently focusing on trainings, celebrations, and policy.

Conclusions: Through conversations, community members echoed concerns around safe sleep, maternal access to care, and trust in care providers. BECC was able to partner data and community voices in the implementation of initiatives including the Doula4Dads program, the adoption of the Parents as Teachers Home Visiting program, the creation of Club Mom and Club Dad, and the creation of a Safe Sleep PSA involving community members. These initiatives partner data and community voices to address Maternal Health and prematurity disparities, by creating direct and indirect pathways to empowerment of community to mitigate lack of access and increase advocacy within healthcare systems for families.

Public Health Implications: By partnering data and community voices in our initiatives, BECC has learned and proposes that programs seeking initiative implementation around birth equity must: address the intersectionality of the social/cultural/ historical determinants of health embodied in populations and experienced in communities. Also, initiatives must tap into the community's ability to move towards empowerment and self-determination through collaborative equitable agency.

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Hepatitis C Virus History among Pregnancy-Associated Deaths in Tennessee, 2017–2019

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Elizabeth Harvey PhD, MPH

Background: Tennessee Department of Health (TDH) established its Maternal Mortality Review (MMR) Program in 2017 to review pregnancy-associated deaths, defined as any death occurring during pregnancy or within one year of the end of pregnancy, and report recommendations to prevent these deaths. In 2019, TDH received Centers for Disease Control and Prevention (CDC) Foundation funding to comprehensively review all pregnancy-associated overdose deaths. A history of hepatitis C virus (HCV) infection, particularly among young persons, can be an indicator of drug use behavior. From 2014–2018, chronic HCV infections increased 193% in Tennessee, and women <45 years comprised nearly 50% of infections.

Study Questions: Our study objective was to understand the burden of HCV among pregnancy-associated deaths in Tennessee.

Methods: MMR data consist of the Tennessee MMR Committee's consensus determinations for each death, including pregnancy-relatedness, causes of death and contributing factors, preventability, and recommendations for prevention efforts. Each pregnancy-associated death during 2017–2019 was linked with the National Electronic Disease Surveillance System [NEDSS] Base System (NBS) for HCV history and most recent infection status. HCV infection status was based on the most recent HCV laboratory result as follows: positive HCV RNA (viremic), standalone positive HCV antibody (possibly infected), and negative HCV RNA with a prior positive HCV RNA or antibody (cured/cleared). Descriptive statistics summarized the frequency of HCV among all pregnancy-associated deaths and MMR Committee determinations.

Results: Of 222 pregnancy-associated deaths, 27 (12%) had a history of HCV; of these, 18/27 (67%) were viremic, 4/27 (15%) were possibly infected, and 5/27 (19%) were cured/cleared at the time of death. The MMR Committee determined 23/27 (85%) pregnancy-associated deaths with HCV history were not related to pregnancy. Among pregnancy-associated deaths with a history of HCV, the most common immediate causes of death were acute overdose (13/27; 48%) and septic shock due to endocarditis (9/27; 33%). Among the 75 (34%) pregnancy-associated deaths where substance use disorder (SUD) was determined a contributing factor, 22 (29%) had known history of HCV. Among women with HCV history, 21/27 (78%) died 43-365 days postpartum and 20/27 (74%) deaths were determined preventable.

Conclusions: SUD is a substantial contributing factor in Tennessee pregnancy-associated deaths; one-third of pregnancy-associated deaths with SUD had a history of HCV. Deaths among women with HCV were largely preventable, and were driven by acute overdose, with most occurring 43-365 days postpartum.

Public Health Implications: Understanding the burden of HCV among persons with substance use disorder can further inform and educate healthcare providers on the importance of current HCV screening recommendations for all pregnant women. Universal screening for HCV in pregnancy may identify women for postpartum HCV treatment and referrals to harm reduction services, particularly for co-occurring SUD, which may, in turn, prevent death.

Additional Authors: Heather Wingate **Non-Presenting Author:** Erin Hodson **Non-Presenting Author:** Ibitola Asaolu **Non-Presenting Author:** Bethany Scalise **Non-Presenting Author:** Rachel Heitmann **Non-Presenting Author:** Pamela Talley **Non-Presenting Author:** Morgan McDonald **Non-Presenting Author:** Lindsey Sizemore

Hope is More than a Feeling: Incorporating Brain Science into Fatality Review

Submission Type: Posters

Track: Mental/Behavioral Health

Author(s): Abby Collier MS

Issue: The death of a child is a sentinel event that shakes a community to its core. Children are not supposed to die, and these preventable events impacts communities' health, safety, and resilience. Research indicates childhood is both the time of promise and risk. Positive experiences help set the foundation for a healthy life. However, a child's exposure to negative, risky, or harmful experiences can have lifelong consequences impacting the child's health, safety, and ability to thrive. Understanding the ways children interact with their environments build resilience, and experience adversity and the impact these experiences provide fatality review teams important insights that guide prevention.

Setting: A fetal, infant, or child death is a sentinel event that reflects the overall health and safety of a community. Child Death Review (CDR) and Fetal and Infant Mortality Review (FIMR) seek to understand systems gaps contributing to individual deaths. CDR accomplishes this through a comprehensive, multidisciplinary review of child deaths. Findings are used to catalyze prevention work. FIMR teams are comprised of multi-disciplinary groups of professionals who review de-identified cases of infant and fetal death. Fatality review teams engage a broad group of community collaborators to do prevention work.

Project: In collaboration with Child Safety Forward, a Department of Justice (DOJ) a national initiative to reduce child abuse and neglect fatalities and injuries through a collaborative, community-based approach, tools for implementing lessons from brain science were developed. These tools, including webinars, written guidance, and worksheets, are used to help communities understand the context in which families live.

Accomplishment/Result: Through the creation of these tools, fatality review teams are better positioned to discuss topics that help identify elements of brain science.

Barriers: Much of the information needed to conduct fatality review team meetings is collected by agencies focused on identifying the cause and manner of death, which can narrow the information collected. As a result, indicators of overall health, including key concepts of brain science, are challenging for fatality review teams. Additionally, it can be challenging for fatality review teams to have discussions about these key concepts.

Lesson Learned: Fatality review teams are well positioned to understand how the parts of a community system work together. In order to do this fully, a complete picture of the child's life, environment, and death must be understood. The concepts of brain science provide fatality review teams with the framework, vocabulary, and resources necessary to write prevention findings and recommendations that impact the entire community.

Information for Replication:

Additional Authors: Jennifer Jones MSW
Presenting Author: Stacy Phillips

Hospital Surveillance of Cesareans among Low-Risk Births: Developing Three Comparative Indicators in Florida

Submission Type: Posters

Track: Maternal Health

Author(s): Renice Obure MPH

Background: Florida Perinatal Quality Collaborative (FPQC) uses the iparous, Term, Singleton, Vertex (NTSV) measure to report low-risk primary cesarean rates for participating hospitals. This measure is estimated using birth certificates (BC) because of timely availability (within 30 days), which is important for hospital quality improvement. NTSV cesarean measures developed by the Joint Commission (JC) and the Society for Maternal-Fetal Medicine (SMFM) are considered more accurate because they exclude additional high-risk conditions requiring cesarean. However, the JC/SMFM measures require BCs to be merged with hospital discharge data that contain ICD codes used to identify the high-risk conditions, a linkage process that takes an additional 12-18 months.

Study Questions: FPQC is developing comparative indicators using the three measures to answer two questions. What is the quality of BC and hospital discharge data by hospital? What are differences in rates of the current measure (BC) compared to the JC and SMFM measures? We hypothesized that NTSV cesarean rates would decrease when using JC/SMFM measures, especially in high-risk perinatal centers.

Methods: Florida's BC and linked data from 2016-2019 were used for 110 delivery hospitals with complete data. NTSV cesareans were identified in three ways: 1) BC data (NTSV-BC), 2) linked data using JC exclusions (NTSV-JC), and 3) linked data with MFM exclusions (NTSV-MFM). For all three measures, we 1) compared 2019 NTSV cesarean rates and the percentage change in rates, 2) assessed the temporal trend in rates, and 3) calculated the relative hospital rank. In addition, we estimated measure differences by hospital level of neonatal care, and assessed the impact of defining cesarean deliveries using BC only versus linked data.

Results: 2019 NTSV cesarean rates ranged from 10.4%-56.4% (NTSV-BC), 11.5%- 56.8% (NTSV-JC) and 11.7%-56.9% (NTSV-MFM). Most hospitals recorded a 0%-10% rate decrease (n=66) comparing NTSV-BC to NTSV-JC and 0%-3% decrease (n=62) comparing NTSV-BC to NTSV-MFM. NTSV cesarean rates did not decrease for most hospitals as we hypothesized. 34 and 29 hospitals recorded an increased rate when comparing NTSV-BC to NTSV-JC and NTSV-BC to NTSV-MFM, respectively. In addition, some low-risk perinatal hospitals had larger decreases in rates than others. For most hospitals, NTSV cesarean rate trends were similar for all measures. Relative ranking changed for hospitals based on the measure used, but without a clear pattern.

Conclusions: Use of national measures did not result in a large or systematic change. ICD-10 exclusions generally lowered rates. However, by adding linked data, more cesareans were identified in some hospitals, thereby increasing rates. Generally, the accuracy of NTSV-BC is comparable to national measures. While national measures are theoretically more accurate, the additional hospital data is not only less timely, but also subject to coding errors and data quality issues.

Public Health Implications: The three NTSV measures produce fairly comparable rates. The use and needs, as well as timeliness and accuracy tradeoffs, should be considered before selecting a measure. Hospitals need to invest in quality data collection to produce data needed for quality improvement.

Additional Authors: Chinyere Reid MBBS, MPH **Non-Presenting Author:** Estefania Rubio MD, MPH
Non-Presenting Author: Jason Salemi MPH, PhD **Non-Presenting Author:** William Sappenfield MD, MPH

Impact of the ACA's Contraceptive Coverage Mandate on the Use of Contraception Among Privately Insured Women: A Systematic Review

Submission Type: Posters

Track: Policy Work/Systems

Author(s): Melissa Eggen MPH

Issue: Inconsistent, incorrect or non-use of contraception are primary causes of unintended pregnancy. The Patient Protection and Affordable Care Act of 2010 (ACA) sought to increase access to prescription contraception through a universal coverage requirement by mandating that all new private health insurance plans cover the full range of FDA approved contraceptive methods, beginning with plans that started on or after August 2012. There is a growing body of literature examining the impact of the ACA's contraceptive mandate on the use of prescription contraception. Understanding the impact of the mandate on women's use of contraception is critical to guiding evidence-based public policy decisions. The purpose of this systematic literature review is to summarize the current body of research, highlight key findings and discuss policy implications.

Setting: The intended audiences for this systematic review are policy and decision-makers who are interested in Women's Health and/or policy related to contraceptive use. This systematic review describes findings of contraceptive use among privately insured women in the United States.

Project: A literature search was conducted using PubMed and Embase for the period between 2010 and 2020. Keyword search terms were "Affordable Care Act", "contraception" and "contraceptives." For the purposes of this review, only articles that were peer-reviewed, written in English, involved human subjects, focused on female contraception and were published between 2010 and 2020 were included. Studies were not limited to a specific design or sample size. Studies that did not assess utilization of contraception both before and after passage of the ACA as a primary outcome were excluded. The initial keyword search returned 197 articles. After using filters to narrow articles to those that met the inclusion criteria, 113 articles remained. Abstracts and titles of the 113 articles were reviewed by one reviewer to determine which met the inclusion and exclusion criteria. Abstracts that did not identify pre- and post-ACA contraception use as a primary outcome were eliminated. This step eliminated 88 articles.

The full-text of the remaining 25 articles was then assessed for inclusion in the final review. This resulted in the exclusion of 13 articles. These articles were excluded because they focused only on the impact of Medicaid expansion on contraception use and/or assessed the impact of out-of-pocket costs post-ACA mandate but not contraception use. One article was excluded because it focused only on contraception use among women undergoing a first trimester abortion. Three articles were added after reviewing citations of the remaining articles and using the "similar articles" feature in PubMed. The final review included 15 studies.

Accomplishment/Result: This systematic review provides an overview of current knowledge on the impact of the ACA's contraceptive mandate on prescription contraception use among women of reproductive age in the United States. This review found mixed evidence to support a significant increase in prescription contraception use with the exception of LARC, which has increased slightly since the requirement went into effect. The ACA's contraceptive mandate required that all new private health insurance plans, including those sold on the Health Insurance Marketplace, cover prescription contraception without co-pays or co-insurance, even when the deductible has not been met. Eight of the fifteen studies in this review examined the impact of out-of-pocket costs on contraception use and found a positive association with LARC use.

Barriers: This systematic literature review had several limitations. First, not all studies in this review analyzed data from nationally representative data sets. This could have reduced the external validity of some study findings if the study sample was not representative of the broader population of women of reproductive age. Second, the studies examined different time periods pre- and post-ACA and this could have contributed to the lack of generalizability of the results. Many of the studies included in the review studied time periods that occurred not long after the ACA contraceptive mandate went into effect, which could have underestimated the impact of the mandate on contraceptive use. Some studies limited their analysis to a one-year time period or shorter and may not have only been able to observe short-term impacts of the ACA mandate. Future research should examine longer periods of time to study trends in contraceptive use following the ACA mandate. Third, some studies did not consider pre-ACA out-of-pocket costs for contraception for privately insured women in their analysis. This omission might have underestimated the impact of the ACA mandate on contraception use, particularly among women with zero or low out-of-pocket costs prior to the mandate.

Lesson Learned: Studies included in this review highlighted the importance of the mandate's no-cost policy as a driver for increased contraception use, particularly LARC. However, many privately insured women had low or zero out-of-pocket costs for contraception prior to the ACA's mandate. This finding suggests the possibility that some studies may have underestimated the impact of the ACA's contraceptive mandate if baseline costs were not considered. Future research studies should include baseline out-of-pocket costs for contraception in order to determine a more accurate interpretation of the impact of the ACA's mandate on contraception use and choice. Finally, there is a gap in the literature examining the impact of the ACA's contraceptive mandate on unintended pregnancy rates. A PubMed search found only one article published on this topic. This study found a decrease in unintended pregnancy rates post-ACA but further research is needed to confirm this finding. Nationally representative data sets, such as the National Survey of Family Growth, offer an opportunity to do analyses that could have significant policy and practice implications. Research regarding factors that contribute to changes in unintended pregnancy rates will also be important for public policy and practice decisions.

Information for Replication:

Impacts of the COVID-19 Pandemic on Food Insecurity Among Children in Massachusetts

Submission Type: Posters

Track: Other

Author(s): Eva Nelson

Background: One in 10 children in Massachusetts was food insecure in 2018, but that rate has increased to 1 in 5 children during the COVID-19 pandemic. Prevalence of food insecurity is highest among households with children; currently, approximately 13% of people and 18% of children in the U.S. are food insecure. Food insecurity in non-pandemic times can cause adverse outcomes, particularly for children, such as challenges with academic performance, behavioral issues, and higher expenditure on healthcare. The impact of COVID-19 on food insecurity is being explored.

Study Questions: This study examined sociodemographic determinants of food insecurity, measured through food insufficiency, that may have been exacerbated by COVID-19 in Massachusetts.

Methods: We analyzed publicly available data from the Census Household Pulse Survey, administered from April 2020 through present, which focuses on COVID-19 impacts on U.S. households . We examined exposures related to food insufficiency categorized according to U.S. Department of Agriculture's definitions (food sufficiency, marginal food sufficiency, low food sufficiency, and very low food sufficiency) and defined by survey respondents describing sufficiency of food in the past 7 days. Data analysis reflects data collected through February 2021 and restricted to Massachusetts residents. Determinants were assessed for independent associations with food insufficiency and logistic regression controlled for known and suspected covariates.

Results: Approximately 75% of respondents were food insufficient. About half had a 2-3 person household (54.53%), with 66.33% reporting no children, and 28.46% reporting 1-2 children. Food insufficiency was highest among households with 5 or more people and lowest in households with no children. Food insufficiency increased as household size and number of children increased. Young people ages 18-29 were more food insufficient than older people (OR=1.88, 95% CI=1.73, 2.04). People who had less than a high school education were more food insufficient, compared to people who had a graduate degree (OR=7.05, 95% CI=5.44, 9.12). Males were less food insufficient than females (OR=0.81, 95% CI=0.78, 0.84). Non-Hispanic people were less food insufficient compared to Hispanic people (OR=0.41, 95% CI=0.39, 0.45), while Black people were most food insufficient. Independent associations remained, even when controlling for other determinants. A limitation of this study includes defining food insufficiency with one question, though other studies use similar definitions. Other sociodemographic variables were not measured by the survey, including specific geographic location, but may be important.

Conclusions: This study demonstrates that sociodemographic determinants experienced during COVID-19 are associated with food insufficiency in Massachusetts. Specifically, this study found that living in a larger household, having more children, being between 18 and 29 years old, having lower educational attainment, being female, and being Hispanic or black impact food insufficiency during COVID-19.

Public Health Implications: Examining large scale data during a pandemic can inform next steps for public health, including resource distribution, funding allocation, intervention planning, and decision making. Areas for intervention during and in the aftermath of COVID-19 should address the burden of food insecurity, especially in households with children, given the range of determinants and adverse health outcomes.

Additional Authors: Eva Nelson
Presenting Author: Shagun Modi **Non-Presenting Author:** Candice Bangham MPH **Non-Presenting Author:** Rachel M. Zack ScD, ScM **Non-Presenting Author:** Jacey Greece DSc, MPH

Improving Birth Outcomes through an Academic-Community Partnership in Baltimore City

Submission Type: Posters

Track: Infant Mortality

Author(s): Wendy Lane MD, MPH

Background: The Upton/Druid Heights neighborhood of Baltimore has significant racial and geographic disparities. Birth outcomes have been persistently poor with an average infant mortality rate of 15 per 1000 live births from 2005-2009, and 18.2% preterm births.

Study Questions: Can a supplemental place-based initiative improve birth outcomes to a greater extent than the larger city-wide initiative?

Methods: B'more for Healthy Babies Upton/Druid Heights (BHB U/DH) is part of a city-wide initiative to improve birth outcomes. In addition to city-wide messaging, Home Visiting referral, and fatality review, BHB-U/DH services include intensive community outreach, identification, assessment, and service linkage for pregnant women, postpartum support, breastfeeding, and fatherhood resources. We compared 5-year rolling infant mortality rates for U/DH to Baltimore City and rates of sleep-related deaths pre and post-intervention. We examined adjusted and unadjusted rates for preterm birth, low birthweight, and breastfeeding, comparing changes in rates pre and post intervention in U/DH to those for Baltimore City. A general linear regression model was fitted and adjusted by the corresponding covariates for each outcome to get the least square means and 95% confidence intervals corresponding to each outcome.

Results: Infant Mortality rates have decreased from 14.1/1000 births (2007-2011) to 3.8 (2014-2018). Unsafe sleep deaths decreased from 4.0/1000 births to 1.7. Unadjusted preterm birth rates decreased from 15.2% in 2008-11 to 14.8% in 2012-2018 (ARR=0.37%; RRR=2.44%) in U/DH and 12.9% to 12.7% (ARR=0.12%; RRR=0.93%) in Baltimore City for the same time periods. Unadjusted low birthweight births decreased from 14.3% in 2008-11 to 14.2% in 2012-18 (ARR=0.1%; RRR=0.63%) in U/DH, and from 12.2% to 11.9% (ARR=0.34%; RRR=2.79%) in Baltimore City for the same time periods. Breastfeeding increased from 44.2% in 2008-11to 55.3% in 2012-18 (ARI=11.1%; RRI=25%) in U/DH and from 64.3% to 71.9% (ARI=7.5%; RRI=11.7%) in Baltimore City for the same time periods. Adjusted preterm birth rates decreased from 15.3% (95% CI 0.12, 0.18) to 12.2% (95% CI 0.10, 0.14) for U/DH and from 13.3% (95% CI (0.13, 0.14) to 12.5% (95% CI 0.12, 0.13) for Baltimore (p=0.22). Adjusted low birthweight births decreased from 34.5% (95% CI 0.24, 0.45) to 31.8% (95% CI 0.22, 0.42) for U/DH and from 33.0% (95% CI 0.23, 0.43) to 32.8% (95% CI 0.23, 0.43) for Baltimore (p=0.17). Adjusted breastfeeding rates increased from 58.7% (95% CI 0.53, 0.65) to 72.4% (95% CI 0.67, 0.75) for U/DH and from 67.9% (95% CI 0.67, 0.69) to 77.4% (95% CI 0.77, 0.78) for Baltimore (p=0.21).

Conclusions: Reductions in infant mortality and unsafe sleep, and improvements in other birth outcomes, including low birthweight and preterm births and breastfeeding, are achievable through place-based interventions. On adjusted analyses, reductions in low birthweight and preterm birth and increases in breastfeeding were larger in U/DH than in Baltimore City, but differences were not statistically significant, in part because of city-wide improvements.

Public Health Implications: Community health interventions are an important part of improving birth outcomes in high-risk communities. Additional ecologic studies should be undertaken to assess the effectiveness of the citywide model and determine if replication in other communities is indicated.

Additional Authors: Wendy Lane MD, MPH
Presenting Author: Stacey Stephens MSW **Non-Presenting Author:** Bronwyn Mayden MSW

Infant Risk Screen Refusals: Trend, Maternal Characteristics and Postneonatal Deaths Florida 2010–2019

Submission Type: Posters

Track: Newborn Screening

Author(s): Angel Watson MPH, RHIA

Background: Florida Statute 383.14 requires the Infant Risk Screening be offered to parents or guardians of all infants born in Florida before leaving the delivery facility. The infant screen helps to identify infants at increased risk of postneonatal death (after 28 to 364 days of life). An infant with risk score of 4 or more is determined to be at-risk. The intent is to identify infants in need of additional health care services after they leave the hospital. Despite this benefit, some families refuse the screen. In Florida from 2010–2019, 152,306 (7%) parents or guardians refused the infant screen.

Study Questions: What is the trend of infant screen refusal? What maternal characteristics are associated with a refused screen? What is the prevalence of postneonatal deaths for infants at risk with a screen refusal?

Methods: We used 2010–2019 Florida linked birth and infant death data to answer the study questions. We measured the trend of refusing the screen using join-point regression, calculated the risk score for each infant with a refused screen using birth certificate data and the prevalence of postneonatal death for at-risk infants. We used multivariable regression models in STATA (v.15.1) to estimate adjusted risk ratios (ARR) and 95% confidence limits (CL) of mothers with a refused screen in relation to maternal characteristics. Risk ratios were adjusted by mother's age, education, race/ethnicity, body mass index, foreign born and delivery paid by Medicaid.

Results: For the period 2010–2019, 2,166,938 records were included, of which 4,302 were postneonatal deaths. There was a statistically significant decreasing trend in the percent of parents or guardians who refused the screen with annual percent change of -10.6. Maternal characteristics significantly associated with a refused screen were ages 20-34 (ARR=1.2 [95%CL:1.1-1.2]) and 35+ years (ARR=1.2 [95%CL:1.1-1.2]) compared with less than 20 years, having a high school degree or less (ARR=1.1 [95%CL:1.1-1.1]) compared with having more than a high school degree and U.S. born (ARR=1.4 [95%CL:1.4-1.4]) compared with foreign born. Characteristics protective of a refused screen were being Hispanic

(ARR=0.5 [95%CL:0.5-0.5]) compared with being non-Hispanic White and delivery paid was by Medicaid (ARR=0.7 [95%CL:0.7-0.8]) compared with non-Medicaid. Among infants with refused screen at risk, almost 50% had a postneonatal death during 2010–2019.

Conclusions: In 2010-2019, the percentage of parents or guardians who refused the screen decreased significantly. Maternal characteristics associated with a refused screen were maternal ages ≥20 years, high school education or less, and U.S. born. Mothers who were Hispanic and whose delivery was paid by Medicaid were less likely to be associated with a refused infant screen. Some postneonatal deaths may have been avoided if the infants were screened and referred to services.

Public Health Implications: Providers should educate all pregnant women on the importance of having their infants screened before leaving the delivery hospital. Receiving the appropriate referrals to services and care coordination could potentially prevent an infant death.

Additional Authors: Angel Watson MPH, RHIA
Presenting Author: Leticia Hernandez PhD, MS

Institutional Racism and Preterm Birth: The Collateral Effects of Black-White Parole Inequity

Submission Type: Posters

Track: Data Innovation

Author(s): Lauren Ramsey MPH

Background: It is well known that Black women have higher rates of preterm birth (PTB) compared to women in other racial groups. Risk factors for PTB include inadequate prenatal care, obesity, smoking, increased maternal age and stress. Black women have identified discrimination and racism as a root cause of chronic stress. Racial inequities in the criminal justice system have been previously investigated as an indicator of institutional racism. These differences may negatively impact Black Women's Health. On average, Black women can expect that at least two family members will experience incarceration. Black women are more likely than Black men, White women, and White men to have a social network saturated with persons with criminal justice history. As primary caregivers in their families and communities, Black women may be burdened by duties associated with caring for a person with incarceration history and may experience chronic stress as a result. There are 4.5 million people under community supervision (probation and parole), in addition to 2.3 million people incarcerated in the U.S. Research on reentry following incarceration has documented the stress that parole imposes on Black communities, families, and women. This stressful life event should be considered when exploring factors that contribute to racial/ethnic health disparities in birth outcomes.

Study Questions: Is there a relationship between PTB and institutional racism measured by state level B/W differences in parole among non-Hispanic Black women?

Methods: This analysis used Pregnancy Risk Assessment Monitoring System (PRAMS) data from 30 states among Black women who delivered an infant during 2014-2015 (n=10,720). PRAMS was linked with state-level CC measures (i.e., incarceration, probation, and parole) from the Bureau of Justice Statistics and population characteristics from American Community Survey. We categorized states into tertiles of high, moderate, and low ratios of Black/White inequity for each measure. PTB was measured using the clinical estimate for gestational age. Babies born <37 weeks were classified as preterm. Adjusted odds ratios (aOR) and 95% confidence intervals (CI) for associations between state-level Black/White parole inequities and PTB were estimated using race-stratified multi-level-models in

SAS using $p<0.05$ for significance. Models were adjusted for state- level measures (poverty; racial composition; incarceration, probation and parole rates) and demographics (age; education; insurance; and prenatal care adequacy).

Results: Compared to women living in states with lower levels of B/W parole inequity, Black women in states with moderate and high B/W inequity in parole had increased odds of PTB (aORmod; 4.29, CI: 1.53,12.01; aORhigh: 6.29, CI: 2.25,17.61) after controlling for individual characteristics, and state-level factors, such as poverty, overall incarceration, probation, and parole rates; and additional correctional control indicators.

Conclusions: Black women had increased odds of PTB in states with high Black/White parole inequity. Examining Black/White inequity in parole as a proxy for institutional racism can enable better understanding of the negative effects of racism on the health of Black women and babies.

Public Health Implications: Focusing solely on incarceration as an indicator of institutional racism ignores other aspects of the carceral system that may impact disparities in PTB and other health outcomes. This examination of Black/White inequity in parole as a proxy for Institutional racism highlights the nuanced ways in which racism in the criminal justice system affects Black population health; and benefits efforts to eradicate inequities in poor birth outcomes.

Additional Authors: Marian Moser Jones PhD MPH **Non-Presenting Author:** Lauren Ramsey PhD(c), MPH
Presenting Author: Marie Thoma PhD **Non-Presenting Author:** Caryn Bell PhD **Non-Presenting Author:**

Launching a Mobile Wellness Unit in Response to Community Need

Submission Type: Posters

Track: Medical Home

Author(s): Jenny Sharrick MPH

Issue: FAMILY, Inc. launched a Mobile Wellness Unit in response to service gaps and increased barriers for children and families in accessing preventative care in the midst of the COVID-19 pandemic.

Setting: This unit was designed to increase access to comprehensive preventative services including oral health, hearing, vision, lead, developmental and social emotional screenings for children and pregnant women in Southwest Iowa.

Project: In addition, the unit mitigates access barriers for clients, particularly in rural communities, such as transportation, long wait lists, complex administrative processes, and encourages vulnerable populations to receive necessary health services.

Accomplishment/Result: The unit was developed in response to COVID need, but has almost limitless possibilities based on ongoing community feedback regarding need into the future.

Barriers: The primary barrier for the launch of the program was the drastic community need paired with the national shortage of recreational vehicles due to the pandemic, thus slowing down the launch of the program for a few months.

Lesson Learned: This presentation will review steps to assess community need (which ultimately resulted in FAMILY's unit), processes for launching a mobile screening program, and next steps for FAMILY's unit, which serves the Early Childhood Family Support, Title V Public Health, and Early Childhood Literacy programs.

Information for Replication:

Additional Authors: Kimberly Kolakowski MS
Presenting Author: Cristen White MA
Presenting Author: Samantha Emerine BS

Life Course Effects of the WWII Lanham Preschools on Education, Labor, and Senior Health Outcomes

Submission Type: Posters

Track: Lifecourse perspective

Author(s): Taletha Derrington PhD

Background: Momentum is growing for public investment in universal preschool programs for children. The case for positive outcomes rests on research that is largely based on studies of needs tested programs for disadvantaged children that were privately funded with small to medium-sized samples of children (e.g., ≤ 200) and/or limited longitudinal follow-up. This study identifies areas that received WWII National Defense Housing Act of 1940 (Lanham Act) funding for Lanham preschools (LNS) and links that information to high school participants in the landmark nationally representative 1960 Project Talent (PT) study that collected outcomes data in high school and five- and eleven-years post-high school. Chronic senior health conditions were examined through linkages to Medicare claims data.

Study Questions: 1) Is access to LNS preschools predictive of high school and young adult educational and labor outcomes and senior chronic health conditions? 2) Are any effects of LNS access heterogeneous across participant sex and age?

Methods: Census data on LNS and non-LNS place characteristics were linked through geo-coding to PT data, which was then linked to Medicare claims data. There were 98,547 participants who met study criteria (LNS: 29,427, treatment; non-LNS: 69,210 in non-Lanham places, control). Of those, 31,348 had linked Medicare records. We used an intent to treat approach and conducted a progression of increasingly specified multivariable regression models to examine the predictive power of a dichotomous LNS/non-LNS indicator and the number of months of potential exposure defined by age eligibility (2-6 years) during window of LNS operation (6/1/1943-3/1/1946). High school outcomes included academic (e.g., IQ and verbal) and social emotional (e.g., sociability, social sensitivity) measures. Year 5 outcomes were attendance of and graduation from college, and year 11 outcomes added income and other labor measures. Senior chronic conditions were Alzheimer's and related disorders, heart disease, diabetes mellitus, and lung cancer. We used entropy balancing to statistically equate participants in Lanham and non-Lanham areas. All models were stratified by sex and grade in high school (9th, 10th, 11th and 12th; 9th graders would have been too young to participate in LNS and allowed for estimation of effects attributable to Lanham area but not preschool).

Results: For men, we observed an added benefit of LNS for high school academic measures but no added benefit for social emotional measures, and some negative effects of being in Lanham areas. For women, there was an added LNS benefit for math, and similar social emotional results to men. Men's income was the only year 5 or 11 outcome with an added LNS benefit. Medicare analysis are currently underway, and results will be available for the presentation.

Conclusions: This is the first study of this kind. Limitations include lack of data on actual attendance and LNS quality and unreliable race/ethnicity data. Strengths include large sample, long follow-up, and statistical rigor. Given the contemporary focus on preschool quality and early social emotional development, these findings provide a lower bound positive case for universal preschool programming.

Public Health Implications: Additional longitudinal research including data on quality is needed to identify lifecourse dynamic complementarities linking universal preschool to later well-being.

Additional Authors: Joseph Ferrie PhD **Non-Presenting Author:** Alison Huang MPH

Like Mother, Like Baby: Will Under-Immunized Mothers Raise Under-Immunized Infants? Findings from the Michigan Pregnancy Risk Assessment Monitoring System (MI-PRAMS)

Submission Type: Posters

Track: Immunization/Infectious disease

Author(s): Peterson Haak MS (June 2021)

Background: Immunizations are among the most effective tools available for protecting population health. Two populations of special concern are pregnant women and young children. Because of the risks inadequate immunization pose to both groups, we examine the relationship between maternal immunizations around pregnancy and future plans for infant immunizations.

Study Questions: 1. How many mothers report that they received either of two immunizations recommended for all pregnancies - Tdap (Tetanus, Diphtheria, Pertussis) and seasonal influenza? 2. How many mothers plan for their infants to receive all immunizations recommended by their doctor? 3. Is there a relationship between maternal immunizations around pregnancy and future plans for infant immunization?

Methods: We analyzed population-representative data from MI-PRAMS for birth years 2016-2019. We calculated population-level frequencies and 95% confidence intervals (95% CI) using the SAS-callable SUDAAN CROSSTAB procedure and examined the relationship between maternal pregnancy immunizations and plans for infant immunization using SAS PROC GENMOD binomial logistic regression to control for confounders.

Results: 1. Just over half of Michigan mothers received a seasonal influenza shot around pregnancy (53.9%; 95% CI: 52.4%-55.4%), and almost three quarters (72.2%; 95% CI: 70.8%-73.6%) received a Tdap shot. In combination, roughly half of women were protected with both immunizations (47.9%; 95% CI: 46.3%-49.5%), 30.6% had just one shot (95% CI: 29.1%-32.1%), and 21.6% had neither (95% CI: 20.3%-

22.9%). 2. Most mothers (90.8%; 95% CI: 89.9%-91.6%) said their babies would receive all immunizations recommended by their doctor. One in eleven mothers (9.2%; 95% CI: 8.4%-10.1%) reported that their infant will miss either some or all recommended immunizations. 3. Relatively few mothers (2.1%; 95% CI: 1.6%-2.8%) who received both shots for themselves said their infants would miss any recommended immunizations. Plans for infants to miss some or all recommended immunizations were higher among mothers with just one shot (9.1%; 95% CI: 7.6%-10.7%), and most prevalent among women who reported neither Tdap nor flu shots during pregnancy (27.7%; 95% CI: 24.7%-30.9%). Compared to the baseline risk among fully immunized mothers, the relative risks (RR) that infants will be under-immunized are higher for partially (RR = 4.3, 95% CI: 4.1-4.5) and non-immunized (RR = 13.2; 95% CI: 12.7-13.6) mothers. Multivariate adjustment for competing factors (education, race/ethnicity, insurance, parity, smoking, and federal services eligibility) had little effect on the increased risk for either comparison (partially immunized: adjusted RR (aRR) = 3.5; 95% CI: 3.3-3.6 and non-immunized: aRR = 12.4; 95% CI: 12.0-12.9).

Conclusions: One in five women received neither the Tdap nor influenza vaccine during pregnancy. Compared to fully immunized mothers, those who missed their own recommended immunizations were more likely to plan on raising infants who would miss some or all recommended immunizations.

Public Health Implications: Pregnancy is a time when people are motivated to make changes to benefit their own health and that of their future baby. The immunization practices of women around the time of pregnancy could be a strong predictor for future plans for infant immunizations. Prenatal care providers who recognize an under-immunized patient during pregnancy could intervene, to the benefit of mothers today and infants tomorrow.

Additional Authors: Peterson Haak MS
Presenting Author: Mackenzie Mentel MPH **Non-Presenting Author:** Hannah Sauter MPH **Non-Presenting Author:** Jill Hardy MA **Non-Presenting Author:** Susanna Joy MA **Non-Presenting Author:** Chris Fussman MS

Mapping Concentrated Disadvantage in Virginia Localities

Submission Type: Posters

Track: Environment; Place and Health

Author(s): Meagan Robinson DrPH, MPH

Background: A number of factors are identified as contributing to adverse health outcomes. Studies have shown that lower neighborhood socioeconomic status is associated with increased risk of adverse health and birth outcomes. Concentrated Disadvantage (CD) is a standardized measure of socioeconomic well-being in a community, which can be more indicative of overall disadvantage than single measures of poverty, especially in relation to health outcomes.

Study Questions: The purpose of this study is to assess changes in economic disadvantage in a VA locality using a standardized measure of socioeconomic well-being in a community.

Methods: For this study, an indicator of economic disadvantage was calculated for two five-year time periods to compare changes in economic hardship in Richmond City, VA, the state's capital. Using data from the 2009-2013 and 2014-2018 American Community Survey (ACS), CD was calculated at the Richmond City census tract level using measures of poverty, public assistance use, unemployment, female-headed households, and density of children. These indicators were then Z-score transformed, averaged, and divided into quartiles to determine category of disadvantage. Areas of Highest CD (Quartile 4) were defined by those that fell within the 75th percentile of values. Tableau 2019.4 was used for this study.

Results: The results were categorized by quartiles and mapped for each time period. There were 66 census tracts in Richmond City. During the 2009-2013 period, 62.1% (n=41) of census tracts were in the highest quartile of CD (most disadvantaged) and 13.6% (n=9) in the lowest quartile (most prosperous). When looking at the 2014-2018 index, 42.4% (n=28) of Richmond City census tracts were High CD and 31.8% (n=21) were Low CD.

Conclusions: Between the study years, High CD was most evident across 2009-2013, but decreased by nearly a third in 2014-2018. Richmond City saw nearly a 134% increase in census tracts that fell in the most prosperous CD level (Low CD). These findings show evidence of an economic and social shift in the city. These findings will lead to additional analysis incorporating health outcomes.

Public Health Implications: Concentrated Disadvantage can capture compounded disadvantages that expose residents to reduced access to health care, social services, resources, skills, work, education, technology, nutrition and safety. Studies have shown that economic disadvantage is associated with health outcomes across the life course. Because of this, utilizing economic disadvantage can show useful for identifying target communities for population-focused interventions.

Additional Authors: Robert Rotzin MPH

Maternal Malnutrition and Weight Gain During Pregnancy Among Women With a History of Weight Loss Surgery

Submission Type: Posters

Track: Perinatal outcomes

Author(s): Kara Christopher MS, MPH, PhD

Background: In 2019, 29% of women of reproductive age were obese (BMI≥30.0 kg/m2) prior to pregnancy. While weight loss surgery (WLS) is effective in reducing weight, there are concerns about patients' nutritional status post-WLS. This study sought to determine if differences exist in maternal malnutrition and weight gain during pregnancy in women who had WLS compared to those who did not.

Study Questions: What are the odds of malnutrition and excess weight gain during pregnancy in women who had WLS compared to those who did not have WLS?

Methods: We used the National Inpatient Sample, a publicly available dataset from the Healthcare Cost and Utilization Project that samples 20% of hospital discharges. The study population includes women between the ages of 20-44, who had a maternal admission code (n=23,268,671). Data were analyzed using weighted logistic regression. Adjustment of odds was done using the following covariates: age, primary payer, physical health comorbidities, mental health diagnosis, and obesity. The models were stratified by race.

Results: Women with a history of WLS had 6.48 (95% CI 5.70-7.36) times higher odds of having malnutrition during pregnancy, with Latinas who had WLS having 7.83 (95%CI 6.02-10.17) times higher odds, white women having 6.44 (95% CI 5.48-7.57) times higher odds, and Black women having 5.30 (95% CI 4.15-6.76) times higher odds of malnutrition during pregnancy, compared to women who did not have WLS. Additionally, women who were obese had nearly 2 times (aOR 1.92, 95% CI 1.80-2.06) higher odds of malnutrition during pregnancy compared to non-obese women; this relationship held across all racial groups (aORwhite 1.91, 95% CI 1.74-2.10; aORBlack 1.62, 95% CI 1.45-1.82; aORLatina 2.13, 95% CI 1.85-2.45). There was not a significant difference between women who had WLS and those who did not regarding excess weight gain during pregnancy. However, obese women had nearly 6 times (aOR 5.84, 95% CI 5.32-6.41) higher odds of having excess weight gain during pregnancy compared to non-obese women. The odds differed between racial groups, but all were significantly higher for obese women in each group (aORwhite 6.16, 95% CI 5.56-6.82; aORBlack 3.59, 95% CI 3.19-4.05; aORLatina 7.27, 95% CI 6.13-8.61).

Conclusions: WLS is associated with increased odds of malnutrition during pregnancy, while obesity is associated with increased odds of excess weight gain during pregnancy. Further research is needed to understand how these pathways may differentially impact birth outcomes.

Public Health Implications: Nutrition during pregnancy plays an important role in the health of both mother and child. Nutritional recommendations during pregnancy may vary based upon obesity status during pregnancy and a history of WLS. It is important to consider tailoring nutrition recommendations to address the different nutritional needs of pregnant women who had WLS and may be at risk for malnutrition.

Additional Authors: Kara Christopher
Presenting Author: Colleen Madden RDN **Non-Presenting Author:** Megan Ferber PhD **Non-Presenting Author:** Ahmed Abdelsalam MD **Non-Presenting Author:** Pam Xaverius PhD

Maternal Vaccine Hesitancy in the United States, and Association With Influenza and Tdap Vaccination Uptake, 2019–20 and 2020–2021 Influenza Seasons

Submission Type: Posters

Track: Immunization/Infectious disease

Author(s): Katherine Kahn MPH

Background: This is the first study on prevalence of vaccine hesitancy among pregnant women in the United States using a survey module developed by CDC and examining the association with maternal influenza and Tdap vaccination coverage.

Study Questions: What percentage of women indicated being hesitant about vaccines recommended during pregnancy, what factors are associated with vaccine hesitancy among pregnant women, and what is the association between vaccine hesitancy and influenza and Tdap vaccination status?

Methods: An Internet panel survey of pregnant and recently pregnant women 18–49 years in the United States was conducted in April 2020 and April 2021, and included questions on hesitancy about vaccines recommended during pregnancy. Women were recruited from a national, opt-in, general population Internet panel. Respondents pregnant since August 1st in the year prior to survey completion were included in the analysis. The proportion of respondents who indicated they were not at all confident that vaccines recommended during pregnancy are necessary, safe, or beneficial, and who were somewhat/very hesitant about flu or Tdap vaccinations during pregnancy were assessed. Bivariate analyses with Wald chi squared statistics and pairwise comparison t-tests were performed. Statistical measures were calculated with an assumption of random sampling and should be interpreted only as guides to assessing the associations from this non-probability sample.

Results: The proportion of April 2020 survey respondents (n=2,264) who reported not being at all confident that all vaccinations recommended during pregnancy are necessary, safe, or that benefits outweigh risks was 9.9%, 12.8%, and 12.2%, respectively. In addition, 48.5% and 47.6% of women reported being somewhat/very hesitant about flu and Tdap vaccinations during their pregnancy, respectively. Respondents more likely to report vaccine hesitancy included non-Hispanic Black, less educated, unmarried, unemployed, living below poverty, and those who had no insurance or public insurance. Women who did not have a provider visit since July 1st the previous year and those who reported not receiving a provider recommendation for both flu and Tdap vaccinations were more likely to report vaccine hesitancy. Vaccination coverage was significantly lower among vaccine hesitant women. Influenza vaccination coverage among respondents who expressed hesitancy about influenza vaccines was 42.1% compared with 79.2% among those who were not hesitant. Tdap coverage was 30.6% among women hesitant about Tdap vaccines compared with 68.3% among women who did not report hesitancy. Analyses will be updated when April 2021 survey data arrive in June 2021.

Conclusions: Nearly half of pregnant women in the United States are hesitant to receive either influenza or Tdap vaccines during their pregnancy, and vaccine hesitancy is negatively associated with vaccination coverage. Monitoring vaccine hesitancy among pregnant women could help immunization programs develop and target methods to try to increase vaccine confidence in this population, particularly among those groups identified as being more likely to be hesitant, such as Black women.

Public Health Implications: Providers should continue to recommend influenza and Tdap vaccinations to all pregnant women and address any patient concerns. Education about influenza and Tdap vaccines along with provider recommendations for vaccination could help ensure women understand the importance of getting these vaccinations as recommended.

Additional Authors: Hilda Razzaghi PhD **Non-Presenting Author:** Kimberly Nguyen DrPh

Method of Delivery and Labor Interventions Among Latinx Birthing People in Massachusetts 2011-2015: Country of Origin Matters

Submission Type: Posters

Track: Perinatal outcomes

Author(s): Candice Belanoff ScD, MPH

Background: Latinx populations are often described as having better than expected health outcomes in spite of various sources of social marginalization, sometimes referred to as "The Latino Paradox." However, the group of people who identify as Latinx, (or Hispanic or Latino/Latina) is not a monolith. In Massachusetts, Latinx birthing people hail from countries all over the world, bringing with them a variety of experiences, exposures and histories. It is critical to parse this diverse group by country of origin in order to better understand the etiology of maternal and infant health outcomes. Of particular interest are delivery interventions and methods, which are the products of a complex interplay of clinical practice, provider perceptions, and Maternal Health, access and agency.

Study Questions: Do specific methods of delivery– specifically spontaneous vaginal, instrumental vaginal, primary and repeat cesarean and vaginal birth after cesarean (VBAC) – vary among Latinx birthing parents by maternal country of origin?   Do labor interventions including induction of labor and epidural anesthesia (each associated with method of delivery) also vary among Latinx birthing parents by country of origin?

Methods: We used the Massachusetts birth certificate file for the years 2011 – 2015, restricted to births occurring to residents in the three major metropolitan areas of Massachusetts, where the vast majority of Latinx residents live. We included births among people who were identified as "Hispanic" on the birth certificate, and were from a country represented by at least 100 births during the study timeframe. We also grouped births into four regions, which included South and Central America, the Caribbean and the United States. Bivariate associations were performed, and multivariable analyses adjusted for characteristics including age, education, marital status and insurer. Maternal Health characteristics and pre-pregnancy BMI were also examined. We lacked data on time since, or circumstances around immigration to the United States.

Results: A total of 51,425 births representing 14 maternal countries of origin were included in our analyses. Method of delivery varied significantly by country of origin, with both primary and repeat cesarean delivery having about 10-percentage point ranges. Epidurals were the most variable intervention, with prevalences ranging from 34.5% (El Salvadorian parents) to 74.6% (Brazilian parents). Induction of labor varied less so, but still ranged from 13.5% (Venezuelan parents) to 20.3% (parents form Dominican Republic). Regional analyses suggest a cesarean delivery prevalence that was lower among Central American, and higher among Caribbean parents compared to US-born parents. Adjusted analyses did not explain most variation.

Conclusions: Delivery methods and interventions vary substantially by country of origin among Latinx people giving birth in Massachusetts.

Public Health Implications: With growing calls to reduce unnecessary interventions during delivery, public health professionals should examine sources of their variation by nationality, and disaggregate highly diverse racial and ethnic groupings wherever possible. Special attention should be paid to potential sources of inequity, including maternal agency, intersections with social class, language and immigrant status, provider bias, and anti-Latinx racism and xenophobia, any of which may present barriers to optimal care.

Additional Authors: Joanna Almeida ScD, MSW, MPH **Non-Presenting Author:** Adriana Black MPH, MAT
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Microlearning for MCH: Equitable Approach to Supporting MCH Professionals and Students in Development and Learning

Submission Type: Posters

Track: Leadership/Workforce Development

Author(s): Jennifer Tyson MPH

Issue: This initiative intends to utilize an effective well developed microlearning curriculum through the MCH Navigator and adapt it to local rural Appalachian context and be made available to practitioners and students who are interested in exploring the content in an easy, accessible, and equitable manner. We hope to achieve this through a short 10 week microlearning opportunity where we pose one question per week for the practitioners and students to reflect on, ponder, and then answer. In addition, we plan to provide additional resources for the participants to dive deeper on their own time. The delivery of this content will be available in multiple innovative platforms for ease of access and to accommodate different learning styles. This microlearning program is a direct result of student and practitioner requests for more local access to professional development related to Maternal, Child, and Family Health.

Setting: This activity takes place at Appalachian State University and in Watauga County, NC. The intended audiences are students and practitioners who are interested in exploring and expanding their MCFH careers.

Project: We ask a series of 10 questions to jump-start learning and sharpening of skills. Over the course of 10 weeks, professionals in the field and students share their learning goal, areas where they need to grow, and learning aspirations with us. We assemble resources around each of the 10 questions and their responses, addressing the expressed needs for professional development in MCFH. These answers and resources will be available digitally in one place. Participants will be able to read more about each question, reply back with their own answer (optional), learn a little about how the question relates to the MCH Leadership Competencies, access some additional learning, and see what the field is saying (and what they're learning right along with the participant!). This project was adapted from the MCH Navigator MCH 20|20 project.

Accomplishment/Result: Results will include participant answers to the questions and their feedback on the effectiveness of the microlearning opportunity.

Barriers: Barriers include lack of funding and investment in MCFH initiatives, as well as equitable access to the microlearning opportunity. We plan to overcome this by collaborating with convergent faculty with diverse backgrounds, students, and the local health department to secure funding. We also plan to engage in various platforms of learning delivery so access is easy, equitable, and tailored to the user. This includes digital communications, podcasting, email, slack, and more.

Lesson Learned: This project will be executed starting in August 2021 and we will have lessons learned available during this abstract presentation.

Information for Replication: This program is very easy to replicate. In fact, it is actually a replication of the MCH Navigator platform MCH 20|20. They gave full permission for us to use and adapt it to our local context.

Additional Authors: Abby Cope

Mixed-methods Analysis of Pregnancy-Associate Drug Overdose Deaths Reviewed 2018-2020 in Massachusetts, North Carolina, Ohio, Tennessee, Utah, and Wisconsin

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Christine Cooper MPH

Background: Maternal Mortality Review Committees (MMRC) are multidisciplinary groups composed of clinical and non-clinical experts that convene at a state or other jurisdiction level to review pregnancy-associated deaths (deaths of persons during or within a year of pregnancy). The prevalence of opioid use disorder (OUD) among delivery hospitalizations increased by 333% between 1999 and 2014. From 2007-2016, pregnancy-associated deaths involving opioids more than doubled in rate and percentage of all pregnancy-associated deaths. In response to this trend, 6 MMRCs completed comprehensive reviews of pregnancy-associated overdose deaths that occurred in their state.

Study Questions: What are contributing factors and recommendations for preventing pregnancy overdose deaths that states identified in 2018-2020 reviews?

Methods: We analyzed 104 overdose deaths, reviewed beginning in September 2018 for Massachusetts, North Carolina, Tennessee, Utah, and Wisconsin, and reviewed beginning in August 2019 for Ohio. Review ended in March 2020 for all 6 states. A mixed methods approach was completed by analyzing the data used for review captured in the Maternal Mortality Review Information Application quantitively using SAS and qualitatively by a team at Emory University using a team-based, structural content analysis approach.

Results: Most (75%) pregnancy-associated drug overdose deaths occurred 43 to 365 days after the pregnancy outcome. The majority (65%) of deaths were among individuals insured by Medicaid either during prenatal care or at delivery. There were 327 contributing factors and 330 recommendations developed by MMRCs from review of these 104 deaths. Committees determined substance use disorder (SUD) contributed to death in 94% of the deaths. Mental health conditions other than SUD contributed to 72% of pregnancy-associated overdose deaths reviewed. Contributing factors and recommendations were organized by committees at levels of patient/family, provider, system, community, and facility and then classes. The most frequent level assigned to a contributing factor and/or recommendation was patient/family (n=165, 40%), provider (n=82, 20%), and system (n=75, 18%). At the patient/family level, the top factor classes were SUD (21%), mental health conditions (15%), and childhood abuse/trauma (10%), accounting for 45% of the classes. At the provider level, the top factors were clinical skill/quality of care (28%), continuity of care (23%), referral (12%), and knowledge (10%), which accounted for 74% of the classes. At the facility level, the largest class was continuity of care, encompassing 50% of contributing factors or recommendations.

Conclusions: SUD and other mental health conditions were major contributors to pregnancy-associated overdose deaths. There is need to remove barriers to treatment for individuals who are pregnant through the late postpartum period. At the provider level, areas of improvement are needed around clinical skill/quality of care, continuity of care, and referrals. Overall, continuity of care, referrals, and access to mental health and substance use care are needed to help prevent pregnancy-associated overdose deaths.

Public Health Implications: MMRC recommendations provide opportunities for data to action at the local and state level. This analysis highlights the quality of data MMRCs can produce to prevent pregnancy-associated overdose deaths and areas initiatives can focus to prevent such deaths.

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Obstetric Provider Awareness and Interpretation of the "20-Week Abortion Ban" in Georgia

Submission Type: Posters

Track: Reproductive Health/Family Planning

Author(s): Sophie Hartwig MPH

Background: In 2015, Georgia implemented a gestational age limit, House Bill 954 (HB954), on abortion at "20 weeks post-fertilization" (equivalent of 22 weeks from last menstrual period). Restrictive abortion laws such as this have the potential to adversely affect maternal mortality and morbidity in the state.

Study Questions: We sought to examine obstetric providers' awareness and interpretation of HB954, and assess how HB954 influenced their clinical decisions and desire to practice obstetrics in Georgia.

Methods: We conducted a cross-sectional survey of providers practicing obstetrics in Georgia. We administered surveys electronically both at in-person conferences and via email. One limitation of this study results from our approach to recruitment; given our goal of distributing to as many obstetric providers in Georgia, we used diverse methods of contacting eligible providers (e.g., through institutional listservs and direct emails, via key stakeholders, at provider meetings), which prevented an accurate count of total providers contacted. The survey assessed: provider demographics, awareness and interpretation of HB954, changes in protocols and clinical decisions following implementation of HB954, and perceived effects of HB954 on patient health and provider practice patterns. We performed descriptive and bivariate analyses to examine how responses differed by awareness and understanding of HB954.

Results: The majority of the analytic sample (n=163) identified as female and practiced obstetrics and gynecology in an urban setting. One-fifth (21%) was unaware of HB954 prior to the survey. When asked to identify its current status, only a third (31%) correctly identified the law as fully in effect. Three-quarters (76%) correctly interpreted HB954's gestational age dating criteria as 22 weeks from last menstrual period. Less than half (48%) reported that their practice had discussed the implications of HB954 for patient care. Eighty percent perceived HB954 as negatively affecting patients with fetal or maternal conditions, and 45% reported that HB954 decreased their desire to practice obstetrics in Georgia.

Conclusions: Provider awareness of HB954 among obstetric providers is neither universal nor consistent. Additionally, providers believe HB954 negatively influences patient health, as well as their own desire to practice in Georgia.

Public Health Implications: These findings illustrate the potentially detrimental effect of restrictive abortion policies on provider practices, especially with respect to provider desire to continue practicing obstetrics in Georgia, which hold important implications for patient care and health outcomes.

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Pap Smear Screening and Disability Among Women in the United States: Results from the National Survey of Family Growth, 2017-2019

Submission Type: Posters

Track: Women's Health

Author(s): Sharonda Lovett MPH, CPH, CHES

Background: Women with disabilities are less likely to receive preventive cancer screening compared to women without disabilities. Women with disabilities may experience provider bias, accessibility issues (e.g., insurance, cost) and structural barriers (e.g., medical equipment), among other reasons. Few studies using nationally representative data have investigated the relationship between disability and pap smear screening among women in the United States.

Study Questions: To examine the association between disability status and receipt of a pap smear among age-eligible women.

Methods: Cross-sectional data from the 2017-2019 National Survey of Family Growth (n=6141) were analyzed. Women who reported being unsure of receiving a pap smear within the past 12 months were removed and all cases with missing information on the predictor variables were excluded listwise (n=58). The final study population included 5,009 women aged 21-49 years. Disability status was self-reported and defined as sensory disabilities (difficulty hearing or seeing), cognitive disabilities (difficulty concentrating, remembering, or decision-making), mobility disabilities (difficulty walking, climbing, dressing, bathing, or completing errands alone), or any disability. Sociodemographic variables assessed as covariates included age, race/ethnicity, marital status, federal poverty level, health insurance, parity, lifetime male sexual partners, and receipt of a sexually transmitted disease (STD) test within the past 12 months. Multivariable regression analyses were conducted in SAS 9.4.

Results: Overall, 57% of women participated in pap smear screening and 21% of women reported any disability. Regarding disability types, 8% had sensory disabilities, 14% had cognitive disabilities, and 8% had mobility disabilities. Women with disabilities had lower odds of pap smear receipt compared to women without disabilities (AOR = 0.79, 95% CI = 0.65-0.96). Women more likely to receive a pap smear identified as non-Hispanic Black (AOR = 1.58, 95% CI = 1.19-2.11), had health insurance (AOR = 2.36, 95% CI = 1.75-3.19), and received an STD test (AOR = 8.65, 95% CI = 6.79-11.03). Women less likely to receive a pap smear were aged 21-29 years (AOR = 0.61, 95% CI = 0.44-0.84) and had three or more children (AOR = 0.68, 95% CI = 0.47-0.98). Further analyses by disability type indicated women with sensory disabilities had the lowest odds of pap smear screening (AOR = 0.62, 95% CI = 0.44-0.88). Reduced odds to receive a pap smear were also found among women with cognitive disabilities (AOR = 0.82, 95% CI = 0.64-1.05) and women with mobility disabilities (AOR = 0.84, 95% CI = 0.61-1.16), although these associations were not statistically significant.

Conclusions: Women with disabilities are less likely to receive a pap smear compared to women without disabilities. Moreover, women with sensory disabilities are least likely to participate in pap smear screening.

Public Health Implications: This study emphasizes the need to reduce disparities in pap smear screening among women with sensory, cognitive, or mobility disabilities. It also underscores the importance of learning more about the reproductive health needs of women with disabilities and variations by disability type. Future research should explore the extent to which these disparities are impacted by structural barriers and clinical factors.

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Perceived Harm of Prescription Opioid Use During Pregnancy Among Women With a Recent Live Birth In 34 U.S. Jurisdictions

Submission Type: Posters

Track: Maternal Health

Author(s): Beatriz Salvesen von Essen MPH

Background: Approximately 7% of women use prescription opioid pain relievers (prescription opioids) during pregnancy. Using prescription opioids during pregnancy could lead to adverse maternal and infant outcomes. Despite the potential risks, their use may be recommended during pregnancy to manage pain. Healthcare providers prescribing prescription opioids during pregnancy should discuss the benefits and potential risks associated with their use for both the mother and the infant.

Study Questions: Among women with a recent live birth, does perceived harm to an infant's health associated with prescription opioid use during pregnancy differ by maternal and infant characteristics, prenatal prescription opioid use, and receipt of healthcare provider counseling?

Methods: We analyzed 5 months of data from the Pregnancy Risk Assessment Monitoring System's opioid supplement questionnaire collected in 34 U.S. jurisdictions in 2019. Data from 20,248 respondents with a recent live birth were analyzed to assess perceived harm to the infant associated with prescription opioid use by maternal characteristics, select infant outcomes, prenatal prescription opioid use, and healthcare provider counseling. Weighted prevalence estimates, 95% confidence intervals (CI) and Chi-squared tests were calculated.

Results: Overall, most women (62.8%) perceived the use of prescription opioids during pregnancy as harmful to the infant even when taken as prescribed, 34.2% perceived it as not harmful if used as prescribed, and 3.0% perceived it as not harmful at all. A higher proportion of women using prescription opioids during pregnancy reported perceiving their use as not harmful (if taken as prescribed (56.2%) or at all (7.5%)) when compared to women without use (32.5% and 2.5%, respectively). Among women using prescription opioids, no differences in perceived harm were observed by counseling status. Among women without use, a higher proportion of counseled women perceived their use as not harmful if taken as prescribed (35.3%, 95%CI:33.5-37.1) compared to their non-counseled counterparts (30.4%, 95%CI:28.9-32.0).

Conclusions: Women using prescription opioids during pregnancy compared to those without use, and those without use that received prenatal counseling compared with those not counseled, were more likely to perceive prescription opioid use during pregnancy as not harmful to the infant if taken as prescribed. Women using prescription opioids during pregnancy were more likely to perceive its use as not harmful at all to the infant when compared with their non-user counterparts. It is important to ensure that healthcare providers prescribing opioids to women during pregnancy offer comprehensive information to help women make informed decisions about medication use.

Public Health Implications: Health care provider assessment of women's current use or misuse of prescription opioids during pregnancy, and open discussions about the benefits and possible risks to a woman's own health and the health of the infant are important to ensure the best possible pregnancy outcomes, even when prescription opioid use is recommended.

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Perinatal Periods of Risk: Using Data and Community Voice to Address Infant Mortality

Submission Type: Posters

Track: Infant Mortality

Author(s): Samantha Shuster MSW

Background: Philadelphia has a higher infant mortality rates than the national and state averages. There are profound racial disparities in infant mortality in Philadelphia with Black infants (11.7 per 1,000) experiencing worse outcomes than White infants (4.0 per 1,000). To address this racial disparity in infant mortality, the Philadelphia Department of Public Health and the citywide stakeholder group, the Maternal and Infant Community Action Network (CAN), are using the Perinatal Periods of Risk (PPOR) framework to analyze infant mortality data and develop new initiatives.

Study Questions: The aims of the initiative are to utilize the PPOR framework to develop new infant mortality prevention initiatives for Philadelphia and to incorporate community voice and feedback of community members and community-based organizations into the PPOR data analysis process.

Methods: Following the PPOR framework, Philadelphia used a mixed methods approach to understand the rates of infant mortality and the risk factors associated with infant mortality. Community engagement was integrated into all step of the PPOR analysis. Analysis for the PPOR framework was broken into two phases. In Phase 1, fetal and infant deaths were mapped into four periods of risk. The target population chosen was Black, non-Hispanic feto-infant deaths. To quantify the number and rate of preventable deaths, the CAN community group and the CAN steering chose the reference group of White, non-Hispanic feto-infant deaths to compare with the target population. The results of the Phase 1 analyses were presented to the CAN Community Group and Steering committee who selected the Maternal Health/Prematurity period of risk as the focus area. In Phase 2, a mixed-methods approach was utilized to understand the risk factors for Maternal Health/Prematurity. A list of risk factors was shared with the CAN Community Group to expand and prioritize. A logistic regression of the factors from the final list was then performed to determine which factors were associated with very low birthweight in Philadelphia. For the qualitative analysis, semi-structured interviews were conducted to understand the experiences of Philadelphia residents from the target population. Participants were recruited through snowball sampling and social media posts. Interviews were transcribed and thematic analysis was used to identify significant experiences in the pre-pregnancy and pregnancy periods.

Results: The feto-infant mortality rate for Philadelphia was 8.16 per 1,000 births (2013-2017). The rate for the target population was 10.61 per 1,000 births and reference population was 4.72 per 1,000 births. The rate of preventable feto-infant deaths was 5.89 per 1,000 births with the Maternal Health/Prematurity period making up the largest proportion of preventable deaths (54.3%). Associated risk factors were maternal age <20, identifying as Black, Non-Hispanic or Hispanic/Latinx, having hypertension before or during pregnancy, and having depression during pregnancy. A total of 36 interviews were conducted and analysis is in process. Preliminary themes include = supporting mental health, strengthening social support systems, and improving access to quality prenatal care. Phase 2 analyses will be presented at a stakeholder meeting where prioritization for areas for action will occur.

Conclusions: Engaging the community at different stages of analysis helped to determine an appropriate reference group, prioritize a period of risk, and expand the list of risk factors to review. A mixed method approach is necessary to inform action and center community priorities.

Public Health Implications: The PPOR provides an easy-to-understand framework that can be used to amplify community voice in data analysis and the development of new infant mortality public health initiatives

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Pregnancy-Related Deaths Due to Hemorrhage in Ohio, 2008-2016

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Sarah Kriebel MLIS

Background: Nationally, postpartum hemorrhage (PPH) complicates approximately 4% of vaginal deliveries and 6–7% of cesarean deliveries. Data from nine state maternal mortality review committees, including Ohio, found that hemorrhage was a leading cause of pregnancy-related deaths. Ohio sought an in-depth understanding of pregnancy-related deaths, due to hemorrhage, in order to plan prevention activities.

Study Questions: What are the characteristics of women with pregnancy-related deaths due to hemorrhage in Ohio and what are the contributing factors?

Methods: The Ohio Pregnancy-Associated Mortality Review (PAMR) identified and abstracted vital records between 2008–2016 for all presumed pregnancy-related deaths. Additional abstracted information came from available medical, social, and transport records. PAMR's multidisciplinary committee then reviewed cases and documented determinations of key findings in the Maternal Mortality Review Information Application (MMRIA) Committee Decisions Form, including pregnancy-relatedness, Pregnancy Mortality Surveillance System (PMSS) classification scheme for underlying cause of death, preventability, critical factors that contributed to the death, and recommendations that address contributing factors. SAS 9.3 was used to analyze descriptive statistics and assess contributing factors at the facility, patient/family, provider, and system levels.

Results: There were 186 pregnancy-related deaths in Ohio during 2008–2016. Hemorrhage was the third leading cause of pregnancy-related deaths (n=22; 1.7 deaths per 100,000 live births). As collected on the MMRIA Committee Decisions Form, the following hemorrhage types were found: hemorrhage-uterine atony/PPH (n=7), ruptured ectopic pregnancy (n=4), hemorrhage-rupture/laceration/intra-abdominal bleeding (n=3), placental abruption (n=2), hemorrhage due to primary disseminated intravascular coagulation (n=2), placenta previa (n=1), placenta accrete/increta/percreta (n=1), and other hemorrhage (n=2). PAMR determined that 64% of pregnancy-related deaths due to hemorrhage were preventable. Among women who died due to hemorrhage, 59% were non-Hispanic white and 36% were non-Hispanic Black, 68% were aged 30-44, and 55% lived in a metropolitan county. Most deaths (77%) occurred within

24 hours of delivery. The death occurred in the hospital for 86% of deaths. The committee identified 118 unique contributing factors among pregnancy-related hemorrhage deaths, on average, five for each death. Contributing factors, at the system level (n=45), included inadequate training, lack of case coordination, and lack of policies/procedures. At the provider level (n=41), use of ineffective treatment, misdiagnosis, delay in treatment, and failure to seek consultation were frequently cited. At the patient/family level (n=28), lack of knowledge/patient education regarding the importance of the event, and chronic disease (e.g. obesity) were most common. Facility level factors (n=4) included failure to screen and inadequate treatment. No community level contributing factors were cited.

Conclusions: Most hemorrhage deaths were deemed preventable by the review committee. Leading contributing factors for hemorrhage deaths included inadequate provider training, lack of policies and procedures, ineffective treatment, and lack of patient knowledge/education.

Public Health Implications: Ohio PAMR used data generated from committee review to inform data to action activities. Ohio PAMR is implementing interventions including supporting hospital implementation of best practices recommended by the Alliance for Innovation on Maternal Health, raising awareness of Urgent Maternal Warning Signs through public health providers, expanding simulation training for preparation for obstetric emergencies to emergency medicine providers, and telehealth delivery training for Women’s Health providers.

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Prenatal Education, Socioeconomic Status, and the Disparities that Separate them among Tennessee Women in 2016-2019

Submission Type: Posters

Track: Maternal Health

Author(s): Lauren Kuzma MPH

Background: Tennessee has higher rates of adverse birth outcomes, which have been associated with low socioeconomic status (SES), than the US. Prenatal care (PNC) and counseling have been linked to improved birth outcomes. Studies have shown low SES women may receive more comprehensive prenatal counseling (CPC) compared to those of higher SES. This analysis explored the association between SES and CPC or receipt of counseling on HIV testing (C-HIV) among those with a recent live birth in Tennessee.

Study Questions: What is the association between SES and receipt of CPC or C-HIV among those with a recent live birth in Tennessee?

Methods: Complex survey procedures in SAS 9.4 (Cary, NC) were used to analyze data from the 2016-2019 Tennessee Pregnancy Risk Assessment Monitoring System (PRAMS). Analysis included only those 18 years or older, who received PNC, and had responded to at least one part of the 10-item counseling question. CPC was defined as a "yes" response to receiving counseling on all 10 topics (substance use, breastfeeding, seat belt use, medications, signs of preterm labor, depression, and intimate partner violence). C-HIV was assessed separately from CPC. Chi-square tests were used to find associations ($p<0.05$) between counseling outcomes and race/ethnicity, maternal education, receipt of WIC during pregnancy, and insurance coverage. Logistic regression models were adjusted for age, marital status, parity, tobacco and alcohol use, pre-existing conditions, and timing of PNC entry.

Results: Analysis included 2,855 respondents representing 72,143 individuals with a recent live birth. 34.4% received CPC. Race/ethnicity, education, WIC receipt and insurance coverage were all associated with CPC ($p<.001$). The final model showed Non-Hispanic (NH) Black women were more likely to receive CPC than NH White women (OR=1.59; 95%CI:1.13, 2.23). Those with some college (OR=1.89; 95%CI:1.33, 2.7), GED/high school diploma (OR=2.4; 95%CI:1.61, 3.57) or less (OR=3.35; 95% CI:1.96,5.74) were more likely to receive CPC compared to college graduates. WIC recipients were more likely to receive CPC than non-WIC recipients (OR=1.67; 95%CI:1.21, 2.31). After adjustment, insurance was not associated with CPC. 63.9% received C-HIV. NH Black respondents were more likely to receive C-HIV than NH White respondents (OR=2.25.; 95%CI:1.55, 3.27). Medicaid enrollees were 33% less likely to receive C-HIV compared to those privately insured (OR=0.67; 95% CI:0.47, 0.95).

Conclusions: Similar to other studies, receipt of CPC and C-HIV was found to be associated with race/ethnicity and SES, suggesting that providers may tailor prenatal counseling for those at greater risk for adverse pregnancy outcomes, but overlook the opportunity for those of higher SES. This analysis was unable to account for full obstetric history, number of visits, quality of the patient-provider relationship, or other factors that could impact the topics discussed.

Public Health Implications: Providers may be overlooking the opportunity to provide CPC to higher SES patients. While counseling topics should be tailored to individuals, it is important to acknowledge that risks for adverse outcomes are not confined to those of low SES, and targeting of counseling by SES may allow those of higher SES with risk factors to miss needed education.

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Pre-pregnancy Diabetes, Pre-pregnancy Hypertension and Prenatal Care Timing among Women in the United States, 2018

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Shanika Jerger Butts MBA, MPH (candidate)

Background: Introduction: In 2019, nearly 5% of women of reproductive age in the United States were diabetic. Women who become pregnant with these pre-existing conditions have an increased risk of complications that can be detrimental to the health of mother and baby. Women who obtain prenatal care in the first trimester receive necessary routine testing and disease management tools to control pre-pregnancy conditions such as hypertension and diabetes. Underrepresented in current research, this study aims to investigate the association between pre-pregnancy hypertension and pre-pregnancy diabetes and the timing of prenatal care among women of the United States.

Study Questions: Is there an association between pre-pregnancy diabetes and pre-pregnancy hypertension and early prenatal care visits among women in the United States?

Methods: Live birth data from the 2018 National Vital Statistic System (n = 3,519,330) was used to conduct this national cross-sectional study. Information on prenatal care timing, maternal conditions, and demographic information was collected for each live birth that occurred during 2018 by trained personnel. Multivariate logistic regression models were created to evaluate the association between pre-pregnancy hypertension, pre-pregnancy diabetes and prenatal care timing. In addition, a stratified analysis was conducted to determine if race/ethnicity modified the associations between the two pre-pregnancy conditions and prenatal care timing.

Results: Nearly 80% of women received prenatal care in their first trimester. After adjustment for race/ethnicity, age, marital status, education, insurance status, WIC coverage and attendant at birth, women with pre-pregnancy hypertension had 24% increased odds (OR 1.24, 95% CI 1.21-1.26) of receiving early prenatal care compared to women without pre-pregnancy hypertension, and this finding was statistically significant. Also, women with pre-pregnancy diabetes had statistically significantly increased odds (OR 1.29, 95% CI 1.26-1.33) of receiving early prenatal care compared to women without pre-pregnancy diabetes after adjustment for confounders. Additionally, race/ethnicity was identified as an effect modifier of the associations. For example, among non-Hispanic black women, those with pre-pregnancy diabetes had 36% increased odds (OR 1.36, 95% CI 1.29-1.45) of receiving early prenatal care compared to women without diabetes prior to pregnancy. However, among non-Hispanic women of other races, those with pre-pregnancy diabetes had only 11% increased odds (OR 1.11, 95% CI 0.99-1.25) of receiving early prenatal care compared to women without pre-pregnancy diabetes. With respect to the pre-pregnancy hypertension exposure, among non-Hispanic women of other races, those with pre-pregnancy hypertension had 37% increased odds (OR 1.37 95% CI 1.24-1.50) of receiving early prenatal care compared to women without pre-existing hypertension. In comparison, among Asian women, there was no statistically significant association between pre-existing hypertension and receipt of early prenatal care (OR 1.12, 95% CI 0.99-1.26).

Conclusions: In this large study, both pre-pregnancy diabetes and pre-pregnancy hypertension were associated with statistically significant increased odds of receipt of early prenatal care. In addition, race/ethnicity modified these associations. Further research is needed on the transition from preconception care to obstetrical care for women with pre-existing diabetes and hypertension.

Public Health Implications: However, these findings suggest that women who have conditions that could cause pregnancy complications are pursuing early prenatal care services to mitigate the development of adverse maternal and infant health conditions.

Additional Authors: Shanika Jerger Butts MBA, MPH (candidate)

Preterm Births and Maternity Care Deserts in the U.S.

Submission Type: Posters

Track: Perinatal outcomes

Author(s): Chasmine Flax MPH

Background: In 2019, the preterm birth rate in the U.S. rose for the fifth year (10.2%). In 2020, March of Dimes released an updated version of the Nowhere to Go: Maternity Care Deserts across the U.S. report to highlight counties across the country where access to maternity care services is limited or absent. Access to quality maternal care services is critical component in the reduction of poor birth outcomes.

Study Questions: The aim of this study is to explore whether residing in a maternity care desert was associated with preterm birth among women who had a singleton birth during 2017-2019.

Methods: Data from the 2020 Nowhere to Go report was used to categorize counties by level of access to maternity care. Using singleton birth data from the National Center for Health Statistics natality data (2017-2019), multiple logistic regressions were fit to identify associations between preterm birth and county of residence. Maternal age, race/ethnicity, education, payment method, adequacy of prenatal care, and rural/urban designation were controlled for. Stratified analysis of preterm birth by race/ethnicity were conducted to further understand the association between preterm birth and county of residence. Analysis was conducted using SAS statistical software 9.3.

Results: Almost half (45%, n = 1,434) of all counties in the U.S. have either no or limited access to maternity care. The average preterm birth rate among singleton babies in counties with either no or limited access to maternity care services significantly differed from counties with full access to maternity care services ($p < 0.0001$). Among singleton births in these counties, 9.0% were born preterm. In counties with full access to maternity care, 8.4% of singleton babies were born preterm. Women residing in counties with full access to maternity care were less likely to have a preterm birth (OR = 0.94, 95% CI: 0.92-0.95) compared to those women residing in counties with no or limited access to maternity care. Across all non-Hispanic races, women residing in counties with full access to maternity care were less likely to have a preterm birth when compared to women of the same race group residing in a county with no or limited access to maternity care. Among Hispanic ethnicity, there was no significant difference found in the likelihood of preterm birth based on level access to maternity care in county of residence.

Conclusions: Ensuring assess to maternity care services may be an important step towards improving preterm birth rates. Further research to understand social and economic factors that intertwine to affect preterm birth could help public health programming and resources to reduce the preterm birth rate in the U.S.

Public Health Implications: Geographic barriers to access to care is an issue across the U.S., and increased access to maternity care both before and during pregnancy is important for the prevention of preterm birth. Improving access to care in maternity care deserts alone is not enough to improve preterm birth rates, however it is one important piece of the solution towards preventing preterm birth in the U.S.

Additional Authors: Christina Brigance MPH
Presenting Author: Ann Davis PhD **Non-Presenting Author:** Roland Estrella MS, MBA **Non-Presenting Author:** Zsakeba Henderson MD

Promoting Breastfeeding among Black Women in Nashville through Educational Video Series Featuring Community-Member Lived Experience Voice and Lactation Experts

Submission Type: Posters

Track: Community Collaboration

Author(s): Heather Snell MSPH

Issue: In 2017, the breastfeeding initiation rate for Davidson County was 92%, with 95% White and 86% Black families. The 2011 Surgeon General's Call to Action to Support Breastfeeding recommends increasing access to resources, education and strengthening community support to increase breastfeeding. Lack of breastfeeding knowledge and community support are frequently cited as barriers to breastfeeding and Black families are disproportionately impacted. There is a lack of accessible evidence-based breastfeeding education and an under-representation of the Black community among lactation materials and professionals. The Nashville Breastfeeding Education Series aims to promote health equity by improving breastfeeding support for Black families in Davidson County through diverse and accessible breastfeeding education and resources.

Setting: Black families considering or currently breastfeeding in Nashville, TN (Davidson Co.)

Project: The Metro Public Health Department (MPHD) and the Nashville Breastfeeding Coalition (NBC) collaborated to create an online breastfeeding class that was diverse and inclusive of community voice. The team convened to establish our goal, priority populations and details pertaining to the class. The education series was broken into short topic segments to maintain viewers' attention and to allow parents to access information pertinent to where they are in their breastfeeding journey. Each segment consists of a lactation professional followed by a local breastfeeding family sharing their experience and ending with resources for more information. The MPHD Prevention and Wellness, WIC, and Preconception Health divisions partnered to assist with segment content and to deliver the presentations. NBC recruited Black breastfeeding families through social media and through partner recommendations. The team partnered with Metro Nashville Network to record, edit, and post the video series on the Metro Network YouTube channel. The series will be promoted at the TN Breastfeeding Symposium in June 2021 by both MPHD staff and one of the local families featured in the video series. A QR code was embedded in each segment, which links to a survey for process evaluation.

Accomplishment/Result: The breastfeeding video series is in the final editing process and projected to be completed by May 2021.

Barriers: The COVID-19 pandemic caused us to be delayed and to record videos remotely with our Metro Network partners.

Lesson Learned: Marketing through Black social media groups allowed us to better reach our intended audience. Working in partnership with the Black community is necessary to create culturally competent materials and ensure their voices are heard and amplified.

Information for Replication: The Metro Nashville Network provided in-kind support to create the video series and YouTube links. NBC members co-lead this project and assisted with the planning, recruiting, and provided the incentive for the project. The Metro Public Health Department’s WIC and Preconception Health staff participated in the planning, provided their expertise for the videos, and promoted the series. Homeland Heart Birth and Wellness Collective provided their expertise in lactation and assisted with the promotion of the video series. The community volunteered their time to share their experience and advice for other breastfeeding families in Davidson County.

Additional Authors: Heather Snell MSPH

Rates of Sudden Unexpected Infant Death (SUID) in Infants of U.S.-Born and Foreign-Born Women

Submission Type: Posters

Track: Refugee/Immigrant Populations Health

Author(s): Tonia Branche MD, MPH

Background: It has been previously demonstrated that there is a maternal nativity (country of birth) disparity in adverse birth outcome in the United States. Additionally, the widespread racial disparity in U.S. infant mortality rates is well known. However, the extent to which rates of SUID (including its' subcategories) differ between births to US-born foreign-born women is incompletely understood.

Study Questions: We aim to define the difference in SUID rates, including accidental suffocation and strangulation in bed (ASSB), sudden infant death syndrome (SIDS), and other ill-defined and unspecified causes of mortality between infants with U.S.-born and foreign-born mothers. We also aim to identify the disparity in SUID rates between non-Latinx Black, non-Latinx White and Mexican-American women.

Methods: Stratified and multivariable binominal regression analyses were performed on the National Center for Health Statistics linked 2016-2017 live birth-infant death database. Inclusion criteria included infants born to non-Latinx White, non-Latinx Black, and Mexican American women. Individual level characteristics examined included maternal nativity, age, education, insurance status, marital status, parity, prenatal care usage, alcohol usage, cigarette smoking, and infant gestational age.

Results: Infants with US-born mothers (N=5,266,192) had SUID rate of 110.6/100,000 compared to only 32.0/100,000 for infants of with foreign-born mothers (N=939,870); RR= 3.7 (3.2, 4.1). The distribution of maternal demographic, medical, and behavioral characteristics differed by maternal nativity. US-born (compared to foreign-born) women were more likely to be non-Latinx White, college-educated, and receive early prenatal care. Notwithstanding, the maternal nativity disparity persisted across each measured risk factor. Infants with US-born college educated mothers (N=3,407,226) had a SUID rate of 62.6/100,000 compared to 25.9/100,000 for their counterparts with foreign-born mothers (N=424,821); RR= 2.4 (2.0, 2.9). Most striking, the nativity disparity existed among births to non-Latinx White (N=4,043,739), non-Latinx Black (N=1,115,001), and Mexican-American (N=1,047,322) women: RR = 4.0 (3.1, 5,2), 5.3 (4.2, 6.6), and 2.4 (2.0, 2.9), respectively. The overall adjusted (controlling for maternal race/ethnicity, age, education, insurance status, marital status, parity, prenatal care usage, alcohol usage, cigarette smoking, and infant gestational age) RR of SUID for all infants with US-born (compared to foreign-born) mothers equaled 2.6 (2.3, 3.0). The adjusted RR of SUID for infants with US-born (compared to foreign-born) non-Latinx White, non-Latinx Black, and Mexican American women were 2.7 (2.1, 3.6), 3.8 (2.9, 4.9), and 2.3 (1.8, 2.8) respectively. Similar trends occurred with respect to the SUID subcategories of SIDS, ASSB, and unknown causes.

Conclusions: We conclude that births to US-born (compared foreign-born) women have higher rates of SUID and its subcategories independent of traditional demographic, medical, and behavioral risk factors. This intriguing phenomenon appears largest among non-Latinx Black (compared to non-Latinx White and Mexican-American) women. These findings warrant greater investigational and public health attention.

Public Health Implications: Identifying the highest risk groups allows for more focused investigational efforts into the causality of the disparity of higher SUID rates among births to US-born and non-Latinx Black women. With more in-depth exploration, policies and programs can be developed and specifically tailored to reduce SUID in the most at-risk communities.

Additional Authors: Janice Shapiro MD **Non-Presenting Author:** James Collins MD, MPH **Non-Presenting Author:** Tonia Branche MD, MPH

Risk for Adverse Health and Health Care Among U.S. Children: Disparities at the Intersection of Disability and Race or Ethnicity

Submission Type: Posters

Track: Racism, Equity, Social Justice

Author(s): Ilhom Akobirshoev PhD, MA, MSW

Background: Prior research has found that adverse health and health care risks are more prevalent among children from minoritized racial/ethnic groups and among children with disabilities. This study aimed to assess adverse health and health care risks at the intersection of disability and race/ethnicity.

Study Questions: Are Black and Hispanic children and children with special health care needs (CSHCN) each at greater risk for adverse health and health care outcomes, and if so, are the full effects of being Black or Hispanic CSHCN compounded?

Methods: We analyzed data from the 2016-2019 National Survey of Children's Health (NSCH) data to estimate the prevalence of preventive care receipt, ED visits, unmet needs, and health status indicators among children 0-17. We used modified Poisson regression to compare non-Hispanic White children with disabilities and children with and without disabilities in three other race/ethnicity groups (non-Hispanic Black, Hispanic, Other Race) to a reference group of non-Hispanic White children without disabilities.

Results: In every racial and ethnic group, children with disabilities had a significantly higher prevalence of adverse health and health care risks than their counterparts without disabilities. The disparities in ED visits, unmet medical needs, unmet dental care needs, poor health status, and poor oral health status indicators for Black and Hispanic children with disabilities were super additive, with the adjusted risk ratio more than the sum of the risk ratios for disability alone (and Black race and Hispanic ethnicity alone.

Conclusions: Children at the intersection of disability and minoritized racial/ethnic groups may be at especially high risk of adverse health and healthcare outcomes.

Public Health Implications: Targeted efforts are needed to improve the health of children in these doubly marginalized populations.

Additional Authors: Ilhom Akobirshoev PhD, MA, MSW
Presenting Author: Monika Mitra PhD

Safeguarding Health and Education Services to Children/Youth with Special Health Care Needs during Public Health Emergencies: A Statement of Principles

Submission Type: Posters

Track: Children/Youth with Special Health Care Needs

Author(s): Paige Bussanich MS

Issue: The COVID-19 pandemic has far-reaching implications on the health of children & youth with special health care needs (CYSHCN). Families of CYSHCN made clear that the pandemic disrupted support and services in schools, creating significant challenges to health, well-being and development. Public health and education programs must partner to improve outcomes and promote stronger, more equitable systems. By not addressing the gaps in policy that can drive critical public health and education practices, these systems increase the likelihood of racism and ableism impacting decision-making and implementation during emergencies.

Setting: This project sought to bring together a diverse group of stakeholders and to lift up leaders of/within from communities directly impacted by racism, ableism, COVID-19, and/or educational social injustices. The intended audience includes all stakeholders interested in strengthening partnerships across the public health and education sectors to improve the health and well-being of all children.

Project: AMCHP & Child Trends gathered a group of 14 family, self, and community leaders/advocates from 13 states and U.S. territories who identified as being personally impacted by growing system inequities. This convening explored challenges and sources of support to accessing health services during COVID-19 and discussing which supports are needed to support positive learning outcomes and quality of life. We used those proceedings to intentionally ground lived experience as we collected information from public health and education stakeholders in an iterative fashion to help us determine the scope and shape the content of this resource, which sets standard expectations for state-level coordination and system resilience that persevere through both this crisis and those that follow.

Accomplishment/Result: Through our research, it has become apparent that health and education must leverage collaborative efforts to improve access to services by identifying and committing to a series of measures and outcomes to monitor and track over time that centers the needs of all students, families, and professionals. This resource provides a set of implementation examples that aim to improve the health and well-being of those experiencing poor outcomes due to structural racism and systemic inequities, through fostering partnership between state/territorial and local public health and education programs.

Barriers: The frequently changing policies for schooling in the face of the COVID-19 pandemic contributed to an ever-changing context surrounding the resource. Also, the differences in language used by public health vs. state special education programs was overcome by focusing on the need to develop a common language to support better coordination and data sharing.

Lesson Learned: This resource features a series of guiding principles around systems-level capacity building; education and health coordination; placement and services; and educational staff support. Although there is no one-size-fits-all model, these guiding principles provide a starting point for state/local-level coordination between public health and education. In developing these principles, we placed the voices of families at the center of our work and are grateful for their willingness to share their experiences and ideas. We also relied on the good work that has been done in the field already and the perspectives of public health and education professionals, and national organizations that support them.

Information for Replication:

Additional Authors: Paige Bussanich MS

Severe Maternal Morbidities (SMM) in the time of COVID-19: An Analysis of Arizona Inpatient Delivery Hospitalizations from 2019 To 2020

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Kate Lewandowski MPH

Background: The effect of COVID-19 on pregnant and postpartum women has become central to the conversation of Maternal Health during the recent pandemic. However, reports are varied on the severity of COVID-19 in the perinatal period and even less is known about its contribution to other adverse Maternal Health outcomes, such as the rate and specific indicators of Severe Maternal Morbidities (SMM).

Study Questions: Did the SMM rate increase among inpatient hospital deliveries in Arizona during the COVID-19 pandemic? Did the COVID-19 pandemic affect the leading indicators of SMM among inpatient hospital deliveries in Arizona?

Methods: Inpatient delivery hospitalizations were analyzed using Arizona hospital discharge data from 2019 to 2020. Twenty-one diagnosis and procedure indicators were used to identify cases of SMM. Following CDC guidance on coding maternal COVID-19 infections, maternal viral infections were identified using ICD-10 code O98.5, "Other viral diseases complicating pregnancy, childbirth and the puerperium." Descriptive statistics for these outcomes were assessed prior to and during the COVID-19 pandemic in Arizona.

Results: April 1, 2020 was used to differentiate deliveries before and during the COVID-19 pandemic based on increases in the O98.5 code. From January 2019 and March 2020 1.0% of deliveries had the O98.5 code, which increased to 2.5% of deliveries between April and December 2020. From 2019-2020 in Arizona, there were 2177 SMM cases among 149880 deliveries. There was no change in the SMM rate during the COVID-19 pandemic; the SMM rate before was 145.0 cases of SMM per 10,000 delivery hospitalizations compared to an SMM rate of 145.7 during COVID-19. However, the types of SMM indicators shifted. There was a 33% increase in respiratory-related indicators, driven by a 51% increase

in adult respiratory distress syndrome and a 42% increase in ventilation, despite a 15% decrease in pulmonary edema. Conversion of cardiac rhythm increased 48%, cerebrovascular accidents increased 43%, eclampsia increased 40%, and sepsis increased 26%. Conversely, thrombotic embolism decreased 51% and hysterectomy decreased 22%. The SMM rate for deliveries with a O98.5 code prior to COVID-19 was 203.9 cases per 10,000 delivery hospitalizations compared to an SMM rate of 144.4 among non-O98.5 deliveries during this time. The SMM rate was even greater among deliveries with a O98.5 code during the pandemic at 515.1 cases per 10,000 deliveries compared to 136.3 among non-O98.5 deliveries.

Conclusions: The proportion of deliveries in Arizona with a code for maternal viral infection (O98.5) increased during the COVID-19 pandemic. While the overall rate of SMM did not change during this time, deliveries with the O98.5 code experienced a higher rate of SMM than non-O98.5 deliveries, and were higher during the pandemic than previously. The indicators of SMM among deliveries also changed during this time, likely driven by the types of morbidities experienced by deliveries with a viral infection, such as those involving the respiratory, immune, and cardiovascular systems.

Public Health Implications: Understanding recent changes in Maternal Health outcomes is necessary for the development of policy and programmatic efforts to address Maternal Health in the midst of and after this pandemic.

Additional Authors: Martín Celaya MPH **Non-Presenting Author:** Kate Lewandowski MPH

Stroke Risk Factors during Pregnancy in Women who had Weight Loss Surgery

Submission Type: Posters

Track: Perinatal Outcomes

Author(s): Kara Christopher MS, MPH, PhD

Background: While stroke during pregnancy is rare, there are risk factors that can increase the risk of stroke during pregnancy and delivery. Hypertensive conditions associated with pregnancy, such as pregnancy-induced hypertension, preeclampsia, and chronic hypertension, are leading causes of stroke and maternal morbidity. Women who have pre-conception weight loss surgery have been shown in some research to have a substantial reduction in these disorders.

Study Questions: Is there a relationship between weight loss surgery (WLS) and stroke or stroke risk factors (gestational hypertension, preeclampsia, and embolism or thrombosis)?

Methods: We used the National Inpatient Sample, a publicly available dataset from the Healthcare Cost and Utilization Project that samples 20% of hospital discharges. The study population includes women between the ages of 20-44, who had a ICD-(9/10) code associated with pregnancy (n=23,268,671). Data were analyzed using weighted logistic regression. Adjustment of odds was done using the following covariates: age, primary payer, physical health comorbidities, depression, and obesity. The models were stratified by race.

Results: There were not significant differences in the odds of stroke in women who had WLS compared to women who did not, however incidence of stroke in this sample was small (0.01% of the total sample). Women with a history of WLS had 15% lower odds of having preeclampsia than those who did not have WLS (aOR=0.85, 95% CI 0.80-0.91), this relationship was similar for white women and Latinas, but there was not a significant difference for Black women (aORwhite 0.85, 95% CI 0.78-0.94; aORBlack 0.93, 95% CI 0.81-1.06; aORLatina 0.71, 95% CI 0.60-0.85). Those with WLS also had decreased odds of gestational hypertension. However, when stratified by race, this difference was only significant for white women (OR=0.87, 95% CI 0.81-0.94), (aORwhite 0.89, 95% CI 0.80-0.97; aORBlack 0.84, 95% CI 0.70-1.00; aORLatina 0.86, 95% CI 0.70-1.06). WLS was not associated with the odds of embolism or thrombosis, but women with a BMI of <=30.0kg/m2 (obese classification) had 1.79 times higher odds of having an embolism or thrombosis during pregnancy than normal weight women, the odds were similar when stratified by race (aORall=1.79, 95%CI 1.68-1.90; aORwhite 1.68, 95% CI 1.54-1.85; aORBlack 1.74,

95% CI 1.57-1.92; aORLatina 1.65, 95% CI 1.41-1.92).

Conclusions: Women with a history of WLS have decreased odds of some risk factors that could lead to a stroke during pregnancy. However, this relationship is primarily only significant for white women. Black women in particular show no difference in risk of these outcomes whether they have had WLS or not.

Public Health Implications: WLS helps women lose weight and decrease the incidence of some pregnancy complications, though there is a notable health disparity among Black women, who do not benefit from the lower odds of these pregnancy complications even if they've had WLS with successful weight loss.

Additional Authors: Kara Christopher MS, MPH, PhD
Presenting Author: Ahmed Abdelsalam MD **Non-Presenting Author:** Chike Ilorah MD **Non-Presenting Author:** Pamela Xaverius PhD

Tarrant County Birth Equity Collaborative: Engaging Community to Reduce Racial Inequities in Maternal and Infant Health

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Kyrah Brown Ph.D

Issue: The Tarrant County Birth Equity Collaborative (supported by the CityMatch BEST Cities initiative) was formed to reduce racial inequities in maternal and infant health by identifying, planning, and implementing upstream and downstream strategies. The need for the Collaborative' s work is demonstrated by local data. In Tarrant County, the 2016 overall infant mortality rate was 6.21 deaths per 1,000 live births. Persistent racial/ethnic inequity is characterized by the Black infant mortality rate (9.33) being substantially higher than their white counterparts (5.39). Also, among the 11 Texas public health regions, Tarrant County belongs to the region that has the 3rd highest maternal mortality rate (25.4 deaths per 100,000 live births) and the 2nd highest maternal mortality rate among Black women (48.3 deaths per 100,000 live births).

Setting: The Collaborative's work is based in Tarrant County, Texas. Tarrant County consists of 2.1 million residents with the largest cities being Fort Worth and Arlington.

Project: The Tarrant County Birth Equity Collaborative is a diverse group of community members/parents, organizations, academic institutions, and health partners. As a part of the CityMatch BEST Cities initiative, this collaborative was formally established in June 2019 and fully functioning in June 2020. Using the Forming, Storming, Norming and Performing (FSNP) framework, we will describe the Collaborative's early work in forming the coalition and engaging community members, its strategies for establishing norms and values to build community, and its collaborative action planning processes to guide its work.

Accomplishment/Result: Our presentation will describe several measurable accomplishments including the execution of key planning and community engagement activities to recruit Collaborative members, the use of collaborative brainstorming and decision-making processes to build sense of ownership and buy-in, the attainment of project outcomes (e.g., launch of COVID-19 stories project, establishing social media presence, creation of logo), the ability to adapt engagement approaches during the COVID-19 pandemic, and the use of innovative approaches to engage Collaborative members in action planning (and logic model development) processes to identify upstream and downstream strategies to address racial inequities in maternal and infant health.

Barriers: Our presentation will discuss key barriers to the work including challenges related to forming a new, unfunded, community-driven collaborative; engaging community members during the COVID-19 pandemic; building organizational infrastructure; and clarifying member role expectations

Lesson Learned: While undertaking this work, the Collaborative had to establish shared values and principles to guide the work, balance member capacity building and resisting the urge to 'jumping into action' too soon, ensuring that the strategic action planning process was truly collaborative and community friendly; and be intentional about creating synergy through partnerships with other coalitions, organizations and groups in the community.

Information for Replication:

Additional Authors: Keithara Baker **Non-Presenting Author:** Barbara Dunlap MA, BS
Presenting Author: Erika Thompson PhD, MPH
Presenting Author: J'Vonnah Maryman PhD, MPH
Presenting Author: Marie Stark MSN, RNC-OB
Presenting Author: Misty Wilder MSW
Presenting Author: Maia Dean BSPH
Presenting Author: Kyrah Brown Phd

The Association between Perceived Racial Discrimination and Healthcare Utilization among Mothers in Virginia

Submission Type: Posters

Track: Racism, Equity, Social Justice

Author(s): Kenesha Smith Barber MSPH, PhD

Background: In the United States, Black mothers are three to four times more likely to die from pregnancy related causes than White women, and infants born to Black mothers die at twice the rate as infants born to White mothers. This trend holds true across education levels and socioeconomic status. Research has suggested that stress from dealing with racism may influence health disparities seen between Non-Hispanic White and Black mothers; however, research on how racism affects minority mothers' use of health care systems is sparse. Thus, it may be valuable to examine the relationship between perceived racial discrimination and healthcare utilization.

Study Questions: Are minority women who have experienced discrimination less likely to seek prenatal care and other forms of health care prior to pregnancy?

Methods: Virginia Pregnancy Risk Assessment Monitoring System (PRAMS) data (2016-2019) were used for this secondary data analysis. Demographic, lifestyle, and reproductive data were obtained from surveys and birth certificates. Data on the exposure, perceived discrimination, was assessed from the VA PRAMS survey question "During the 12 months before your new baby was born, did you experience discrimination, harassment, or were you made to feel inferior because of your race, ethnicity, or culture?" The outcomes, having a healthcare visit and receipt of prenatal care, were also assessed via survey questions. Logistic regression was used to calculate unadjusted and adjusted odds ratios (ORs) and 95% confidence interval (CIs).

Results: A total of 3,835 mothers participated in VA PRAMS in 2016-2019. Non-minority mothers (i.e. non-Hispanic White) were excluded and 1,695 mothers were left for analyses. Approximately 8% of mothers reported that they felt discriminated against 12 months prior to their infant's birth, 51% did not attend a healthcare visit 12 months prior to delivery, 1.5% did not receive prenatal care and 5% received prenatal care after their first trimester. After controlling for confounders, minority mothers who experienced discrimination were found to be less likely to receive prenatal care (OR=0.12; 95% CI: 0.01-

1.45); however these findings were not statistically significant. In addition, after controlling for confounders, minority mothers who experienced discrimination were found to be significantly less likely to attend a healthcare visit prior to delivery (OR=0.21 95% CI: 0.05-0.88) and to attend prenatal care prior to the end of their first trimester of pregnancy (OR=0.17; 95% CI: 0.04-0.79).

Conclusions: Results of this study suggest that Virginia minority mothers who experience racial discrimination are less likely to seek prenatal care and other forms of health care prior to pregnancy. Future research should seek to examine this relationship among a larger population to potentially increase statistical significance. Future outreach efforts should seek to target minority mothers, ensuring that they are not discriminated against within the healthcare system to potentially decrease the risk of them omitting health care.

Public Health Implications: Understanding how perceived racism affects minority women's use of the health care system can assist public health professionals in reducing and eliminating maternal and infant racial disparities.

Additional Authors: Kenesha Smith Barber MSPH, PhD
Presenting Author: Meagan Robinson MPH, DrPH

The Impact of Interpregnancy Intervals on Neonatal Health: A Secondary Data Analysis of US Birth Certificates

Submission Type: Posters

Track: Perinatal Outcomes

Author(s): Kandice Lacci MPH

Background: Interpregnancy intervals (IPIs), defined as the time between a livebirth and the start of a subsequent pregnancy that results in a live birth, have been a growing focus in perinatal health research. Both short and long intervals are associated with adverse maternal and infant health outcomes. The present study aims to examine the relationship between IPI and select under-studied neonatal health outcomes in the US, including immediate assisted ventilation (AV), persistent AV (>6 hours), and admission to the neonatal intensive care unit (NICU). The outcomes were selected because of their acute and long-term implications on infant health.

Study Questions: How does interpregnancy interval impact neonatal need for medical intervention upon birth, including immediate and persistent assisted ventilation and admission to the neonatal intensive care unit?

Methods: 2018 birth certificates from women aged 18 to 45 were used. Women who had complete information on the exposure and outcomes and who had a previous live birth were included in the study (N=2,114,493). IPI was calculated using estimated gestation. The exposure was defined as short (≤18 months), intermediate (19-35 months), and long (≥36 months) intervals. The outcomes included immediate AV, persistent AV, and NICU admission. Multivariate logistic regression was used to estimate odds ratios (ORs) and 95% Confidence Intervals (CIs).

Results: After adjusting for confounders, there were no strong associations between short IPIs and the selected outcomes. Women with long IPIs, however, had statistically significant increased odds for all infant outcomes compared to women with intermediate IPIs (immediate AV: OR=1.18, 95% CI= 1.16-1.20; AV > 6hrs: OR=1.21, 95% CI= 1.17-1.25; NICU admission: OR=1.21, 95% CI= 1.19-1.23).

Conclusions: Women with IPIs greater than 36 months had greater odds of birthing infants who needed medical attention, including immediate and persistent AV and NICU admission. Further studies are needed to confirm these associations.

Public Health Implications: Spacing births optimally may have beneficial health implications for infants, such as requiring fewer medical interventions at birth. Infants that do not require medical interventions at birth have better immediate and long-term health compared to infants that receive medical interventions. This study may be used to inform future research around IPIs, which could influence clinical recommendations regarding optimal birth spacing.

Additional Authors: Kandice Lacci MPH

The Relation of Neighborhood Racial, Ethnic, and Economic Polarity to Preterm Birth Rates in Chicago: A Population-Based Exploratory Study

Submission Type: Posters

Track: Perinatal Outcomes

Author(s): Ivana Brajkovic MD

Background: Over the last several decades, American neighborhoods have undergone a phenomenon known as spatial social polarization. Neighborhoods of both extreme wealth and extreme poverty have grown exponentially. This change has not been distributed evenly by race/ethnicity; neighborhoods experiencing the most increases in per capita income have a higher percentage of non-Latinx white residents. The relationship between spatial social polarization and birth outcome as stratified by race/ethnicity is incompletely understood.

Study Questions: To determine the extent to which the extremes of spatial social polarization defined by race/ethnicity and income is associated with preterm (< 37 weeks, PTB) rates among non-Latinx Black, Latinx, and non-Latinx white women.

Methods: Stratified and multi-level multivariable logistic regression analyses were performed on a linked dataset of 2013-2017 Chicago vital records of singleton infants. The Index of Concentrations at the Extremes (ICE) was used to assess neighborhood polarity defined by race (non-Latinx Black vs non-Latinx white), ethnicity (Latinx vs non-Latinx white), Latinx nativity (US-born vs foreign-born), and household income.

Results: PTB rates varied by ICE quintiles defined by race and household income. Women (n=4,134) who resided in the lowest quintile ICE neighborhoods had a PTB rate of 11.5% compared to 7.3% for those (n=8,048) who resided in the highest quintile ICE neighborhoods, RR= 1.6 (1.4, 1.8). Women in who lived in the lowest (compared to the highest) ICE quintile geographic areas were more likely to be Black, teens, unmarried, have < 12 years of education, and have inadequate prenatal care usage. The adjusted OR (after controlling for maternal age, education, marital status, cigarette smoking, insurance status, and hypertension) of PTB for women who resided in the ICE neighborhood quintiles 1, 2, 3, or 4 (compared to quintile 5) equaled 1.7 (1.4, 2.1), 1.7 (1.4, 2.1), 1.4 (1.1, 1.6), and 1.1 (1.0, 1.3), respectively. Moreover, these associations persisted among those who received adequate prenatal care. The ICE analyses based on ethnicity, Latinx nativity and household income are pending.

Conclusions: Urban women who reside in neighborhoods of concentrated non-Latinx Black (compared to non-Latinx white) populations and low (compared to high) economic privilege have a greater risk of PTB independent of the traditional individual-level characteristics including the adequacy of prenatal care utilization. We speculate that a similar phenomenon exists among US-born, but not foreign-born, Latinx women.

Public Health Implications: These findings highlight the benefit of using ICE to contextualize the impact of urban neighborhood-level characteristics on PTB rates.

Additional Authors: Aaron Weiss MD **Non-Presenting Author:** James Collins MD, MPH **Non-Presenting Author:** Nana Matoba MD, MPH **Non-Presenting Author:** Margarita Reina MPH **Non-Presenting Author:** Nik Prachand MPH **Non-Presenting Author:** Ivana Brajkovic MD

The School Readiness of U.S. Preschool-Aged Children Raised by Grandparent or Multigenerational Caregivers Compared to Parents

Submission Type: Posters

Track: Mental/Behavioral Health

Author(s): Sarah Keim PhD, MA, MS

Background: The early life family environment is important to child health and preparedness for school. Greater numbers of grandparents are now in roles supporting school readiness because parental substance abuse and incarceration, child abuse and neglect, domestic violence are common experiences, particularly for children of color.

Study Questions: Identify whether children ages 3-5 raised by grandparents are healthy and ready to learn compared to children raised by parents and explore how poverty, adverse childhood experiences (ACEs), and race may be effect modifiers.

Methods: Using National Survey of Children's Health data (2016-19), we compared grandparent-headed and multi-generational to parent-headed households in terms of school readiness (On Track with early learning skills, physical health and motor development, social-emotional development, self-regulation, healthy and ready to learn composite) of the children in their care. Survey weighted logistic regression models were built, and effect modification was evaluated. Models were adjusted for year and covariates found not to be effect modifiers.

Results: Among 18647 households, 517 (4.1%) were grandparent-headed, 904 (6.0%) were multi-generational, 17226 (89.9%) were parent-headed. In unadjusted models, children in multigenerational homes had ~30-45% reduced odds of being On Track in all school readiness domains except social-emotional, and children in grandparent-headed homes had ~40% reduced odds of being On Track in social-emotional only, versus children in parent-headed homes. Upon adjustment, all effect estimates were attenuated and confidence intervals included the except for physical health and motor development where ACEs and race were effect modifiers and for self-regulation where poverty was an effect modifier. Children in grandparent-headed households with no reported ACEs had a much reduced odds of being On Track (adj OR=0.39, 95% CI: 0.17, 0.89) compared to children in parent-headed households with no ACEs. White children in multigenerational households had a reduced odds of being On Track (adj OR=0.53, CI: 0.29, 0.98) and white children in grandparent-headed households had twice as the odds of being On Track in physical health and motor development than white children in parent-led households (adj OR=2.04, CI: 1.10, 3.78). Children living in multigenerational households who received SNAP had a reduced odds of being On Track in self-regulation compared to children receiving SNAP in parent-headed households (adj OR=0.48; CI: 0.28, 0.82). No other sub-groups showed clear differences in the odds of being On Track as compared to children in parent-headed households, although effect estimates for minority children in grandparent households suggested physical and motor development delays but were imprecise.

Conclusions: For most indicators, children raised in a grandparent-headed or multigenerational household were similarly On Track as compared to children in parent-headed households, once ACEs, poverty, and race were accounted for. However, sub-groups of children defined by ACEs, poverty or race continued to show poor school readiness in certain domains.

Public Health Implications: Understanding school readiness challenges for grandparent-headed households will improve awareness of this growing type of family and enable the MCH community to more effectively support children who are not on track for a variety of reasons.

Additional Authors: Rachel Mason MPH **Non-Presenting Author:** Andria Parrott PhD

The Status of Sexual Health in Louisiana: A Field Report

Submission Type: Posters

Track: Other

Author(s): Melissa Evans PhD, MsPH

Issue: Louisiana has some of the poorest sexual health outcomes in the US, such as rates of sexually transmitted infections (STIs) and teen pregnancy. Furthermore, recent policies restricting sexual and reproductive health freedoms and limiting access to quality sexual and reproductive health services contribute to racial and gender disparities in sexual health. This field report provides current information on indicators for sexual health in Louisiana, including racial and gender disparities, with a special focus on STIs, and describes multiple socioecological contexts that may drive poor sexual health outcomes.

Setting: This report utilizes statewide data to describe the current status of sexual health indicators in Louisiana. The intended audience includes those charged with improving the lives of women, children, and families, including policy makers, researchers, healthcare providers, and other social service providers.

Project: The current report was developed by the Mary Amelia Center for Women's Health Equity Research (MAC) and Newcomb Institute (NI) at Tulane University, in partnership with the Louisiana Department of Health, the Institute for Women & Ethnic Studies, and others. The interdisciplinary report, building on our previous reports (2013, 2017), frames socioecologic factors contributing to inequities in sexual health outcomes and provides a platform for addressing these inequities. Activities following the summer 2021 release of this report are designed to increase sexual heath knowledge, mobilize advocacy efforts, and create equitable policies. We will organize a social media blitz with our community partners to widely disseminate information to our intended audience. Through existing relationships with the Governor's Women's Commission, we will educate policy makers through presentations, identify legislative champions, and together craft sexual health improvement bill(s) to file in January 2022. Our activities will be evaluated by the number of likes and shares on social media and the number of bills in the 2022 legislative session influenced by our report. A similar outreach and dissemination plan followed the release of our previous report on birth outcomes and led to city policy and statewide advocacy, all through a MCH coalition built upon that work.

Accomplishment/Result: Results are currently being finalized. Given MAC and NI's continued collaboration and track record of successful advocacy endeavors to improve MCH outcomes in Louisiana, we hope to demonstrate a positive impact on sexual health in Louisiana through education, advocacy and policy change.

Barriers: Creating an interdisciplinary field report requires significant collaboration and coordination of efforts, and alignment of priorities and goals, which can be challenging. To ensure each organization's priorities are met, the recommendations section of the report attempts to strike a balance between providing tangible and specific recommendations for each topic while not being overly prescriptive or exhaustive.

Lesson Learned: In the U.S., and particularly in Louisiana, there is an urgent need to ensure equitable, accessible, non-discriminatory sexual and reproductive health, rights, and justice for all communities. It is our hope that providing this evidence will support the passage of policies and development of programs that identify sexual and reproductive health as a fundamental human right. The collaborative effort required to create this report was strengthened by grounding the report in health equity, a value shared by all community partners.

Information for Replication:

Additional Authors: Melissa Evans PhD, MsPH
Presenting Author: Julia Fleckman PhD, MPH **Non-Presenting Author:** Lauren Dyer MPH **Non-Presenting Author:** Dovile Vilda PhD, MsC **Non-Presenting Author:** Maeve Wallace PhD, MPH **Non-Presenting Author:** Clare Daniel PhD **Non-Presenting Author:** Katherine Theall PhD, MPH

Towards a Patient-Centered Framework of Preconception Counseling for Patients with Diabetes

Submission Type: Posters

Track: Preconception health

Author(s): Cassondra Marshall DrPH, MPH

Background: Diabetes is one of the most common preexisting medical conditions affecting pregnancy. 1 to 2 out of every 100 pregnant women have preexisting diabetes in the United States, which elevates their risk of pregnancy-related complications, including preeclampsia, congenital defects, preterm birth, and stillbirth. Preconception counseling and care can improve glycemic control prior to and early in pregnancy and, as a result, reduce the risk of adverse outcomes. Clinical guidelines recommend that preconception counseling be incorporated into routine diabetes care for nonpregnant women of reproductive age with diabetes, but little research has explored patient experiences of counseling and education.

Study Questions: Our aim was to characterize and contextualize patient experiences of diabetes-related preconception counseling and education.

Methods: We conducted an exploratory, qualitative study among pregnant women with diagnosed preexisting diabetes. Participants were recruited from a specialty diabetes and pregnancy clinic in the Maternal and Fetal Medicine Department of a large, academic medical center in Northern California. Between October 2020-February 2021, we conducted in-depth, semi-structured interviews, which covered participants' experience of becoming pregnant, their perception of how diabetes affects pregnancy, and their health care experiences prior to becoming pregnant. Interviews were audio-recorded, transcribed verbatim, and analyzed using an inductive and deductive content analysis approach.

Results: Twenty-two (n=11 Type 1, n= 10 Type 2, n=1 other preexisting diabetes) participants were interviewed, ranging in age from 21 to 40 (mean: 33.7). They ranged from 8 to 32 weeks pregnant at the time of interview. 32% self-identified as white, 27% identified as bi or multiracial; the majority reported private or employer-based insurance. Approximately 27% of participants reported not having any discussions about pregnancy before they became pregnant. Interviews revealed vast differences in women's experiences with preconception planning, education, and diabetes management. At one end of the knowledge spectrum, some felt very knowledgeable about the impact of diabetes on pregnancy. Several specifically sought out this information from their health care providers before attempting pregnancy. Some reported being counseled by providers to wait to conceive due to elevated blood sugar or other health concerns, and some participants felt blocked from receiving assistance with achieving pregnancy (e.g., fertility treatments) unless their health status improved. At the other end of the knowledge spectrum, some participants entered pregnancy with limited information about the impact of diabetes on pregnancy, including complications, optimal blood sugar levels, and risks to maternal and fetal health; these participants reported little or no discussions about pregnancy with their health care providers before they became pregnant. For several participants, this lack of information led to shame, anger, and/or increased stress. Limitations include that the results of this exploratory, qualitative work cannot be generalized.

Conclusions: The varied experiences of preconception counseling indicate gaps in standard education for reproductive-aged women with diabetes about pregnancy and diabetes management. These gaps in care may compound the existing maternal and fetal health complications that women with diabetes experience.

Public Health Implications: Findings suggest a need for a patient-centered framework for education and counseling about pregnancy and diabetes that respects individuals' choices, allows for optimization of health, and honors reproductive autonomy.

Additional Authors: Lindsay Parham PhD, JD **Non-Presenting Author:** Roxanna Irani MD, PhD **Non-Presenting Author:** Cassondra Marshall DrPH, MPH

Transgender Discrimination, Gender Affirmation, and Suicidal Ideation Among US Nonbinary/Gender Non-Conforming Adults

Submission Type: Posters

Track: LGBTQ+ Health; Gender and Sexual Orientation

Author(s): Sarah Johnson MA, MPH candidate

Background: Transgender individuals constitute a highly vulnerable population globally, experiencing a disproportionately high burden of adverse health and disease outcomes including mental illness such as depression and suicidality. In addition, transgender individuals face exceedingly high rates of violence and victimization, while simultaneously experiencing significant barriers in accessing healthcare as well as health-supporting resources such as employment and housing. Yet despite this vast array of health needs, these populations are still woefully understudied. Furthermore, that research which does exist often treats the highly heterogeneous populations of transgender people as a monolith, or simply focuses on binary transgender individuals. Health research is particularly sparse as regards those individuals outside the gender binary, such as nonbinary or gender non-conforming individuals. Where available, existing research has found mixed results when examining the health of nonbinary individuals as compared to binary transgender individuals, though has more consistently found that nonbinary individuals have worse health outcomes than their cisgender counterparts. This research is regularly hampered by small sample sizes. Notably, current studies on nonbinary populations are largely focused on youth rather than adults. Despite the many obstacles faced by both binary and nonbinary transgender individuals, evidence shows that resilience and positive coping skills can lead to improved health. Recent research has found gender affirmation to be associated with lower odds of suicidal ideation and psychological distress among binary transgender individuals, and a very small study among genderqueer individuals found significant interaction between social support and coping factors when predicting anxiety.

Study Questions: This study sought to characterize the relationship between transgender-based discrimination and suicidal ideation, as well as possible moderation of this relationship by gender affirmation, among nonbinary adults in the United States.

Methods: Analysis was performed using secondary data from the 2015 US Transgender Study. Survey-weighted logistic regression was run on data from 9758 nonbinary individuals with continuous exposure of past year trans-based discrimination and outcome of past 12 months suicidal ideation. Estimates were adjusted for non-trans-based discrimination, age, race, education, poverty, sex assigned at birth, and perception by others as cisgender. Interaction by continuous gender affirmation was assessed.

Results: Adjusted odds ratio of 1.72 (95% CI [1.34, 2.21], $p < 0.001$) was found for one-unit increase of past year trans-based discrimination on past 12 months suicidal ideation. Interaction term (OR 0.94, 95% CI [0.89, 0.98], $p < 0.05$) indicated decreased relationship between trans-based discrimination and suicidal ideation for each increased unit of gender affirmation.

Conclusions: Despite the overwhelming challenges faced by nonbinary individuals nationally, these results suggest that increased affirmation may help buffer against the effects of trans-based discrimination on suicidal ideation.

Public Health Implications: These results imply that even when faced with widespread discrimination, the overwhelmingly inequitable burden of suicidal ideation among nonbinary individuals may be tempered by an increase in gender affirmation and support from a variety of venues, from family support, to legal identification changes, to better-informed healthcare providers. This provides evidence that policy, healthcare, and other structural or institutional changes aimed at better affirming nonbinary and gender non-conforming individuals may in fact be seen as key health interventions to save lives.

Additional Authors: Julianna Deardorff PhD **Non-Presenting Author:** Kim Harley PhD

Uphill Both Ways: State and Territorial Trends in Maternal and Family Behavioral Health Policies and Programs

Submission Type: Posters

Track: Policy Work/Systems

Author(s): Katrin Patterson MPH

Issue: PRISM is a five-year project co-organized by the Association of State & Territorial Health Officials (ASTHO) and the Association of Maternal & Child Health Programs (AMCHP) that convenes cohorts of states/territories to address substance use and mental health needs in maternal and child populations through innovative and sustainable policy solutions. The program is structured as a cohort-based learning community that includes supported action planning, policy academies, regular virtual learning sessions, presentations and support from subject matter experts, peer-to-peer learning, stakeholder engagement, and networking.

Setting: PRISM has a robust evaluation strategy that includes pre-, mid-, and post-engagement assessments and key informant interviews of participating jurisdictions. Previous evaluation results show that PRISM contributed to increased effectiveness of stakeholder and partner engagement among participating jurisdictions. (At Cohort 1's midpoint, participating jurisdictions agreed that PRISM's activities contributed to increased effectiveness of engagement.) As evaluation data continues to roll in and additional cohorts are onboarded, PRISM's potential and value as a miniature surveillance program has become more apparent. Through PRISM's extensive evaluation activities, ASTHO and AMCHP are building a picture of mental health and substance use interventions and policies for maternal and child populations across the country.

Project: Through a mixed-methods approach that includes pre-, mid-, and post-project survey assessments throughout 2020, as well as evaluation surveys for discrete activities and key informant interviews at the conclusion of the project in 2021, we assess the impact of the PRISM project on policy implementation, modification, and uptake in participating jurisdictions. Assessment measures include the perceived importance of policy topics to decision-makers, the phase of implementation of each PRISM team's action plan, and stakeholder engagement.

Accomplishment/Result: Participating state and territorial health agency teams found the PRISM learning community model to be an effective way to address substance use and Maternal Health needs. The model encouraged cross-sector teams to develop and work toward agreed-upon goals.

Barriers: Even though each team was heavily engaged in their jurisdiction's COVID-19 pandemic response, which limited their ability to realize all their goals, teams confirmed the importance of progressing their cross-sector goals and galvanizing the energy the learning community generated within their own agencies.

Lesson Learned: There is an important role for national organizations such as ASTHO and AMCHP to play in facilitating knowledge-sharing and relationship-building among states, territories, national organizations, and federal agencies. National organizations have the opportunity to play an especially important role in advocating on behalf of state and local public health for increased funding and other policy changes at the federal level.

Information for Replication: This project's findings have implications for public health policy development and implementation, as well as for how the field engages in continued education with policy- and decision-makers. As PRISM continues to grow and mature, the project will be able to begin to illuminate and answer questions around national (as well as regional) trends in MCH Mental/Behavioral Health needs and substance use.

Additional Authors: Allen Rakotoniaina MPH
Presenting Author: Emily Peterman MPH **Non-Presenting Author:** Sanaa Akbarali MPH

Using Concentrated Disadvantage to Assess MCH Outcomes in Virginia Localities

Submission Type: Posters

Track: Environment; Place and Health

Author(s): Meagan Robinson DrPH, MPH

Background: In the America's Health Rankings 2019 Health of Women and Children Report, Virginia ranked 18 out of 50; but maternal and child health (MCH) disparities are evident in the state, leading to Virginia's governor declaring statewide mobilization to eliminate maternal and infant health disparities. This is timely with the state's MCH needs assessment, where the state health agency is looking at innovative ways to assess health in communities. Studies show that community hardship is associated with increased risk of adverse health and birth outcomes. Indices, such as Concentrated Disadvantage (CD), can be used as a standardized measure of socioeconomic well-being in a community.

Study Questions: The purpose of this study is to describe the scope of economic disadvantage in a Virginia (VA) locality, Richmond City, and several birth outcomes: Infant Mortality, teen births, preterm births, low birth weight and very low birth weight.

Methods: This descriptive study used data from the 2014-2018 American Community Survey (ACS) and 2014-2018 VA Health Statistics data. CD in Richmond City was calculated using measures of poverty, public assistance use, unemployment, female-headed households, and density of children. These indicators were then Z-score transformed, averaged, and divided into quartiles to determine category of disadvantage. Areas of High CD (quartile 4) were defined by those that fell within the 75th percentile of values. Outcomes were calculated at the census tract level, then calculated by quartile of CD, then chi-square tests were conducted. SAS 9.4 and Tableau 2019.4 were for this study.

Results: The results were categorized by quartiles and mapped for Richmond City. High CD (most disadvantaged) existed in 42.4% of census tracts compared to 31.8% in Low CD (most prosperous). High CD census tracts had a higher percent of preterm births than Low CD (12.6% vs 7.7%). The percent of low weight births increased with increasing quartile of CD (High CD 12.5% vs Low CD 6.3%). This was also seen in teen births (High CD 182.7 vs Low CD 19.5 births per 1,000 females aged 15 to 19 years). A significant difference in distribution was seen for all indicators across CD level ($p<.0001$). The infant mortality rate among High CD was 11.6/1000 live births, among Medium-High CD was 13.6, and in Low CD was 4.2, also showing a significant difference ($p= 0.0051$). The infant mortality rate in VA was

5.6/1000 live births in 2018.

Conclusions: Preterm births, low weight births, and teen birth rates increased with increasing levels of CD. Infant mortality was highest in Medium-High CD (quartile 3) followed by High CD. There were significantly higher rates of adverse outcomes in the most disadvantage tier when compared to the most prosperous tier. These findings will lead to additional analysis incorporating more demographic information, including race/ethnicity.

Public Health Implications: CD can be more indicative of overall disadvantage than single measures of poverty, capturing compounded disadvantages that expose residents to reduced access to health care, social services, resources, skills, work, education, technology, nutrition and safety. Utilizing economic disadvantage indices can show useful for identifying targeted communities for population health interventions across the Commonwealth.

Additional Authors: Kenesha Barber PhD, MPH **Non-Presenting Author:** Robert Rotzin MPH

Using the Health Opportunity Index to Understand Black-White Pregnancy-Associated Mortality in Virginia

Submission Type: Posters

Track: Maternal Morbidity and Mortality

Author(s): Melanie Rouse PhD

Background: It is known that there are racial and ethnic disparities in maternal mortality, with black women being 3-4 times more likely to die compared with white women. Much of the research on maternal mortality has focused on medical reasons related to pregnancy; however, pregnancy-associated mortality, which include deaths due to any reason, such as homicides or accidental overdoses, are also important causes that warrant public health attention. In order to reduce black-white disparities in maternal mortality, the interplay of social determinants of health indicators such as access to care, and place and neighborhood need continued focus.

Study Questions: As several Healthy people 2030 objectives include reducing maternal mortality as well as fatal injury and unintentional injury deaths, we used the Virginia Health Opportunity Index (HOI), a composite measure of several social determinants of health indicators, to determine whether this measure and select individual components are associated with black-white disparities of pregnancy-associated maternal mortality in Virginia from 2005-2015.

Methods: We used data from the Pregnancy-Associated Mortality Surveillance System (PAMSS) from 2005-2015. Data from 2014 were excluded due to quality concerns. The Virginia Health Opportunity Index (HOI), which includes the Wellness Disparity profile that measures access to health services and community segregation, was linked to PAMSS by county. Data were restricted to pregnancy-associated deaths among black and white Virginian women. Chi-square and independent samples t-test were used to determine whether the composite HOI quintiles and its Wellness Disparity profile differed by race.

Results: From 2005-2015, there were 411 pregnancy-associated deaths in the sample, with 239 (58.2%) among white women and 172 (41.8%) among black women. Nearly half were between ages 20-29, and the majority of women had livebirths and died of natural causes. When comparing county HOI quintiles, fewer pregnancy-associated deaths occurred in counties with higher HOI index among white women, while pregnancy-associated deaths occurred even in counties with the highest quintiles among black women ($p<0.05$). This finding was also evident with a statistically higher mean among black women compared with white women. The Wellness Disparity profile was higher among black women compared with white women, with deaths occurring among black women in counties where there was more access to health services and slightly less segregation compared with white women.

Conclusions: Our findings show that pregnancy-associated deaths occurred among black women regardless of the health opportunity and access to care of the county compared with white women. Although black women lived in counties with greater access to care, individual experiences may vary and does not measure the quality of services received.

Public Health Implications: Despite a higher health opportunity and access to care, black women are still at a disadvantage compared with white women. Findings suggest the need to explore the quality of services received among black mothers, which may help reduce disparities in pregnancy-associated mortality.

Additional Authors: Melanie Rouse PhD
Presenting Author: Dane De Silva PhD, MPH **Non-Presenting Author:** Ryan Diduk-Smith PhD

Vaping and Dual-Use of Substances Around the Time of Pregnancy

Submission Type: Posters

Track: Maternal Health

Author(s): Paulette Valliere

Background: This study addresses the use of e-cigarettes (‘vaping”) among women before and during pregnancy, and co-occurring use of other substances. While it is commonly accepted that the use of any substances during pregnancy could be harmful to mother and fetus, the extent of co-use has not been widely studied. This analysis provides state-specific information on women who use e-cigarettes, tobacco, and/or marijuana around the time of pregnancy.

Study Questions: What is the extent of dual-use of nicotine products (smoking and vaping) among women around the time of pregnancy? Do users of marijuana also use e-cigarettes and/or smoke cigarettes?

Methods: Data from the Pregnancy Risk Assessment Monitoring System (PRAMS) was analyzed to determine the frequency of vaping among pregnant women in 2016-2019, and the co-occurrence of use of tobacco and/or marijuana. PRAMS is a survey of women who had a live birth; a sample is drawn from the State of New Hampshire birth file; data are weighted to represent the statewide population of women who had a livebirth. Analysis was done using SAS 9.4 survey analysis procedures for complex survey design. Limitations: PRAMS data are self-reported and may be subject to social desirability bias. The use of substances, especially during pregnancy, is generally considered harmful to health, so use is likely under-reported. The survey is available only in English, so women with limited English proficiency may not participate.

Results: 7.9% of women reported vaping in the past two years: 1.2% used e-cigarettes only, and 6.7% used both cigarettes and e-cigarettes. Cigarette smoking just before pregnancy was reported by 20.9% of women, with 14.2% smoking cigarettes only, and 6.7% reporting both smoking and vaping. Vaping was less frequent at 7.9%, with 1.2% reporting that they used only e-cigarettes, and 6.7% reporting use of both. Taken together, 22.2% of women reported the use or either product. During pregnancy 8.4% of women smoked cigarettes only, 0.8% vaped only, and 1.1% used both, for a combined 10.3% of women using nicotine products. Limitations: During pregnancy the use of all three substances was reported less frequently than in other time periods; these small numbers must be interpreted with caution.

Conclusions: Substance use often includes dual-use of nicotine or other products. In all time periods studied, women who smoked cigarettes vaped more frequently than those who did not smoke; likewise those who vaped also smoked cigarettes more frequently that those who did not vape. Similar results were found for vaping and marijuana. E-cigarettes have increased the number of women who are exposed to nicotine: (1) before pregnancy, from 14.2% who smoked cigarettes only, to 22.2% who used either or both, cigarettes and e-cigarettes; and (2) during pregnancy, from 8.4% who smoked cigarettes only, to 10.3% used either or both.

Public Health Implications: Public health messaging that targets pregnant women to quit smoking should concurrently include messages to quit vaping, given the prevalence of dual-use. All products that contain nicotine are not safe to use during pregnancy, and are potentially harmful to a baby's developing brain and lungs.

Additional Authors: Rhonda Siegel MS

SYMPOSIA

Accelerating Upstream Together: Title V MCH Five-Year Needs Assessment Focus on Health Equity

Submission Type: Symposia

Author(s): Sarah Hueneke MPH

Symposium Objectives:1) To become informed about the shift in priorities towards upstream strategies to address health equity across all levels in the Title V Maternal and Child Health Block Grant Five-Year Needs Assessment. 2) To recognize the role of family and community members in the Title V MCH Block Grant Five-Year Needs Assessment in identifying MCH population needs and in informing MCH programming. 3) To explore opportunities to integrate a health equity lens through partnership across all levels.

Session Description: Title V of the Social Security Act requires states to conduct a comprehensive, statewide Needs Assessment every five years. This Needs Assessment provides the basis for the development and implementation of a Five-Year MCH State Action Plan. States submitted the Title V MCH Block Grant Five-Year Needs Assessment in September 2020, along with a new State Action Plan developed based on its findings. In conducting its Five-Year Needs Assessment, each state and jurisdiction examined the health status and needs of the MCH population and the capacity of the Title V program to address the identified needs through provision of gap-filling services and leveraging of existing resources and partnerships. In the 2020 Title V Five-Year Needs Assessment, the percentage of the 59 states and jurisdictions which developed priorities targeting social determinants of health (42%), health equity (46%), and mental health (81%) increased from 2015. In addition, 54 states and jurisdictions acknowledged health equity and/or social determinants of health in their Application/Annual Report as important considerations in their work to address needs of the MCH population. Urban MCH leaders and their community partners are critical in ensuring that their unique population needs, resources, health services delivery gaps and emerging public health concerns are considered as part of the State's Five-Year Title V Action Planning process, with a particular focus on engagement of those who experience disparities disproportionately. In this session, urban MCH leaders will become familiar with the findings of the 2020 Title V Needs Assessment process and explore opportunities for continued engagement as well as implementing a health equity lens across the life-course of the MCH populations in which they support.

Session Justification: Urban MCH leaders and their community partners are uniquely positioned to inform the State Title V programs around the needs of urban MCH populations, particularly those who experience disparities disproportionately. With this clear shift in upstream thinking, urban MCH leaders and community partners are critical in the development of strategies for addressing health equity and fostering collaboration to assure coordinated systems of care for the MCH population at both state and local levels.

Eliminating Disparities in Infant Mortality by 2030: Lessons Learned from the Midwest

Submission Type: Symposia

Author(s): Sarah Hueneke MPH

Symposium Objectives:1) To become informed about the negative impact of social and structural determinants of health which impact communities of color disproportionately across the Midwest, especially in infant mortality. 2) To highlight local and state perspectives, lessons learned, and successes in implementing learnings from a Federal, state, and local partnership to eliminate disparities in infant mortality by 2030. 3) To explore opportunities to apply lessons learned and coordinate unified plans to address the root causes of disparity in infant mortality.

Session Description: Communities of color experience the negative impact of social and structural determinants of health disproportionately across the Midwest, and there are persistent disparities, especially in infant mortality. In particular, Black-White inequities in infant mortality in HHS Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin) are among the worst in the nation. At the state-level, 5 of the 10 states with the highest Black IMRs are located in Region 5, and 4 of the 5 states across the US with the highest absolute Black-White IMR gap are in Region 5. Infant mortality rates for the Native American community are also unacceptably high in this region. With the COVID-19 pandemic exacerbating health inequities, addressing racial disparities in infant mortality remains a critical issue. An initiative to eliminate disparities in infant mortality in Region V was launched in 2021 through a Federal, state, and local partnership, bringing together nearly 500 traditional and non-traditional stakeholders from across the Region to examine key drivers and root causes of disparities in these states. Early findings and lessons learned that can contribute to achieving equity in infant mortality by 2030 will be shared.

Session Justification: Despite years of hard work at the federal, state, and local levels, disparities in infant mortality have persisted, and in some areas, worsened. Urban MCH leaders and their community partners, working together with state and Federal partners, are uniquely positioned to address health disparities in their communities. By aligning efforts, they have the power to impact the systems and policies which have contributed to perpetuating racism and maintaining persistent health inequities amongst different racial and ethnic groups.

Extending Postpartum Medicaid Coverage: Why It Matters & How Stakeholders Are Pursuing this Foundational Policy Approach

Submission Type: Symposia

Author(s): Angela Snyder PhD, MPH

Learning Objectives: 1) To understand why extending postpartum Medicaid coverage beyond the current federal cut-off of 60 days postpartum is an important and foundational policy to pursue to reduce maternal mortality and severe maternal morbidity and particularly to eliminate racial and ethnic disparities in Maternal Health outcomes in the United States; 2) To learn from the experiences of stakeholders in two states with approved Section 1115 waivers to extend postpartum Medicaid coverage regarding the waiver process and the status of implementation; 3) To understand the state of play for policy change at the federal level, including the newly enacted Medicaid State Plan Amendment, and opportunities for maternal and child health stakeholders at the local, state, and national levels to build on this legislative achievement and accelerate policy adoption and implementation

Session Description: Presenters will give a lay of the land for one of the most active policy issues aimed at reducing maternal mortality and severe maternal morbidity and eliminating racial/ethnic disparities in Maternal Health outcomes in the U.S: extending postpartum Medicaid coverage beyond the cut-off of 60 days postpartum. To set the stage with critically important context, participants will learn from a national Maternal Health leader and researcher on why closing the Medicaid postpartum coverage gap can promote better Maternal Health outcomes and how it can help address health equity for women of color. Health policy experts from leading academic centers in Illinois and Georgia will then share insights from those states' successful efforts to secure Section 1115 Medicaid waivers to extend postpartum coverage. Illinois and Georgia's waivers are among the first waivers of this kind to be approved by the Centers for Medicare and Medicaid Services. The presenters will discuss how states are planning to document outcomes of this policy innovation, the potential barriers they may encounter, and tools and tips Illinois and Georgia have used to initiate policy action. Finally, a federal maternal and child health advocate from the Association of Maternal & Child Health Programs will share her take on how Congress recently enacted a State Plan Amendment (SPA) to give states a streamlined method to receive federal Medicaid matching funds for extending postpartum coverage to 12 months. She will share the latest updates on uptake of the new policy option, opportunities for state and local engagement to pursue the new SPA, and what more Congress can do to strengthen this policy approach.

Session Justification: Individuals with pregnancy-related Medicaid coverage typically lose their benefits

60 days after the end of pregnancy. Our nation's rate of maternal mortality is rising, and a growing body of evidence shows that many of these deaths are preventable and occur after pregnancy-related Medicaid coverage ends. Long-standing racial disparities in Maternal Health outcomes persist: non-Hispanic Black women are roughly three times as likely to die of pregnancy-related causes than white women; Indigenous women are roughly two times as likely to die of pregnancy-related causes than white women. Over 12 percent of Black new mothers experienced uninsurance in 2017, one and a half times the rate of uninsurance experienced by white new mothers. Multistakeholder engagement and advocacy at the local, state, and federal levels led to recent successes in achieving policy changes designed to close gaps in postpartum Medicaid coverage. Three states – Illinois, Georgia, and Missouri – obtained Section 1115 waivers from the Centers for Medicare and Medicaid Services (CMS) in April 2021 to extend postpartum coverage beyond 60 days postpartum. Several additional states have similar waivers pending at CMS or are in the process of drafting or submitting proposals. Congress enacted the American Rescue Plan Act in March 2021 with a provision that creates an additional and streamlined method for receiving federal matching funds to extend postpartum Medicaid that takes effect in April 2022. Maternal and child health stakeholders at the local, state, and national levels have several opportunities in the coming year to accelerate policy adoption and implementation.

Presenters: Angela Snyder PhD, MPH

Moderator: Alyson Northrup MS

Co-Presenter: Jamila Taylor PhD, MPA,

Co-Presenter: Arden Handler DrPH, MPH

Co-Presenter: Sashoy Patterson MPH

Field-Based COVID-19 Case Investigation Services To Reduce Barriers & Ensure Access To High Quality Services For All

Submission Type: Symposia

Track: Immunization/Infectious disease

Author(s): Theodore Marak

Issue: In October Rhode Island experienced a massive surge in the COVID-19 pandemic resulting in dramatic reductions in cases being attempted and reached for interview. There were concerns about service delivery equity issues, with high density communities, communities of color, and individuals who did not speak English as their primary language being reached less often than others. In December 2020 RIDOH implemented a Field-Based Case Investigation Program to improve the speed and capture rate of COVID-19 contact tracing activities, with a focus on high density communities.

Setting: Field-based case investigation provided on-site support for anyone who tests positive for COVID-19, effectively meeting people where they were at. Field-based CI operated at 10 fixed locations and multiple pop-up locations like community events and holiday events.

Project: At field-based case investigation sites, people who test positive via rapid test were able to speak to a Case Investigator face-to-face, build rapport, and a foundation of trust when discussing personal information. Case Investigators conducted in-person interviews of COVID-19 cases of all ages, provided isolation guidance, educated about safety precautions, and informed cases and their families about available resources they could benefit from receiving. Field-based case investigation was implemented at drive-up and walk-up sites. Families were able to access services and multiple members of a household could be tested at once.

Accomplishment/Result: Field-based CI led to cases providing more complete information. The Program offered more tailored and comprehensive referrals to support services such as MABS, behavioral health, and assistance with food and housing. Cases were reached more quickly and with a higher rate of success than the state average. Through field-based case investigations, resources and services were made available to everyone regardless of barriers with language, transportation, or child-care and all of our communities are being served equitably so that access to support for COVID-19 was not limited due to circumstance, or geographic location.

Barriers: Field-based case investigation required additional logistic, technological, and staffing resources and required coordination with additional teams. The Team had to ensure proper PPE was available, access to internet for data entry was maintained, and the physical space and coordination with other staff on site was ensured. This coordination was difficult. However, good communication between host sites, the Testing Team, and the Case Investigation Team led to success with implementing field-based case investigation across the state.

Lesson Learned: Field-based CI for COVID-19 is possible and can lead to faster and more complete interviews and better linkage to support services. Field-based CI has become a pillar of RIDOH's case investigation and contact tracing strategy, reaching cases who may not otherwise be reached, and delivery services more quickly and comprehensively than phone-based CI/CT methods. Field-based case investigation succeeded in engaging individuals in high density communities hardest hit. Field-based CI furthered RIDOH's Three Leading Health Priorities: Addressing socioeconomic and environmental determinants of health; Eliminating health disparities and promoting health equity, and Ensuring access to quality health services, including the state's vulnerable populations.

Information for Replication:

Additional Authors: Jordyn Learman MPH CPH **Non-Presenting Author:** Jaime Comella MPH **Non-Presenting Author:** Theodore Marak MPH

Innovations in Federal Surveys to Assess the Impacts of the COVID-19 Pandemic on Children and Families

Submission Type: Symposia

Author(s): Michael Kogan PhD

Symposium Objectives:1) To describe new and revised data sources and their utility in determining the impact of the COVID-19 pandemic on children and families 2) To overview new content included within the 2021 NSCH that will provide state-level data on the impacts of the COVID-19 pandemic on children and families 3) To describe the results of MCHB-Sponsored items included within the Census Bureau's weekly Household Pulse Survey since March 2021 4) To introduce planning for a longitudinal cohort study that will provide national and state-level data on past participants of the NSCH, and to describe how this data will support assessments of the impact of the COVID-19 pandemic

Session Description: This workshop will serve as the first public presentation of multiple innovations in surveys supported by the federal Maternal and Child Health Bureau used to conduct public health surveillance during and after the COVID-19 pandemic. Topics covered will include: 1) content changes within the 2021 National Survey of Children's Health (NSCH) to support state-level, COVID-19 related analyses, 2) the results of MCHB-endorsed content fielded within the U.S. Census Bureau's weekly Household PULSE Survey, and 3) plans for a longitudinal cohort study to assess the long-term health and developmental impacts of the COVID-19 pandemic on children and their families. Participants will receive guidance on the key strengths and limitations of these complementary survey efforts with regards to interpreting national and state-level estimates.

Session Justification: Emerging research has illustrated that the COVID-19 pandemic has caused significant disruptions in the lives of U.S. children and their families, including their health, health care access, receipt of intervention and other services, education, childcare arrangements, food security, and family functioning. Notably, research from previous pandemics and disasters suggests that children will experience greater impacts on mental and behavioral health including higher rates of anxiety, depression, and post-traumatic stress disorder; will struggle to achieve expected developmental and educational milestones; and will have less confidence in their future. Accordingly, MCHB is committed to ensuring public health programs are prepared to meet these challenges, and that researchers have access to relevant data. This symposium will provide participants with an overview of resources for both immediate and long-term analytic needs.

Integrating Fetal and Infant Mortality Review (FIMR) and Perinatal Periods of Risk (PPOR) for Better Maternal Child Health Outcomes

Submission Type: Symposia

Author(s): Rosemary Fournier RN, BSN

Learning Objectives: 1. Review the framework, processes, and rationale for the PPOR and FIMR methodologies, and understand their commonalities and complementary strengths. 2. Explore how using findings from both FIMR and PPOR has guided community decision making, and how their complementary strengths can improve recommendations for change. 3. Consider ways that the FIMR and PPOR processes can be better integrated so that each process can benefit in real time from information that the other source provides.

Session Description: The first 25 minutes will be hosted by Carol and Rosemary and will include a review of the two methodologies, and a discussion of commonalities, strengths and limitations of each approach. FIMR, with it's in depth case review and inclusion of maternal interviews, brings both qualitative and quantitative information to groups, with emphasis on community level details and the big picture. The personal narratives bereaved parents share provide uniquely insightful information about their experiences before, during, and after the death of their babies. The PPOR approach brings the perspective of the whole population of women and infants, the population at risk for infant or fetal death, which the FIMR case review sample of deaths does not provide. PPOR estimates preventability and narrows the community's focus to areas where the most prevention is possible. Both processes involve community collaborators from multiple sectors, and consider systems changes rather than specific individual behaviors or medical decisions. The second part of the workshop will focus on the two community presenters who will share stories of how FIMR and PPOR methodologies informed their way of decision making, processes, and outcomes. Audience stories will also be highlighted at this time. In the last section, Rosemary and Carol will focus on effective structures and processes, and best practices for integrating them. Poll Everywhere and small group breakouts will be used to engage participants to answer these questions: At what point in the process do FIMR CAT teams learn about PPOR and other population-based data? When and how do PPOR Investor Groups learn about FIMR findings and case studies? How does integrating this information at different points affect investigations and decision-making?

Session Justification: The death of a child is a sentinel event that serves as a measure of a com¬munity's general health and its social and economic well-being. While infant mortality in the United States has improved in the past few years, disparities persist between whites and persons of color, especially African Americans. Latinos and Native Americans also bear a disproportionate share of poor maternal and child outcomes. What often underlies these disparities is racism and inequity. MCH programs can use PPOR to integrate health assessments, initiate planning, identify significant gaps, target more in-depth inquiry, and suggest clear interventions for lowering feto-infant mortality. PPOR enables greater cooperation in improving MCH through more effective data use, strengthened data capacity, and greater shared understanding of complex infant mortality issues. FIMR is core public health surveillance that exemplifies the three functions of essential public health services: Assessment, Policy Development, and Assurance. Fatality review efforts provide unique insights into marginalized populations and risk factors for morbidity and mortality that can drive community-level recommendations for increased safety and wellbeing, guide intervention and prevention planning, and support positive trends across the Title V National Performance Measures (NPMs). Multiple and integrated strategies are needed more than every today to move the needle on infant mortality.

Presenter: Rosemary Fournier RN, BSN **Moderator**: Carol Gilbert MS, ABD **Co-Presenter**: Kelli McNeal BS, **Co-Presenter**: Katherine Larsen BA

Opportunities, Challenges, and Applications of Using Community-Level and Social Data to Improve Understanding and Prevention of Maternal Mortality

Submission Type: Symposia

Author(s): Jennifer Beauregard PhD, MPH

Symposium Objectives: Participants will be able to: 1) Describe opportunities for and goals of enriching individual-level maternal mortality data with area-level community and social information (e.g., availability of and access to health providers, area-level socioeconomic indicators, transportation environment) to improve understanding of the broader context of women's lives and inform prevention efforts focused on reducing racial and geographic disparities; 2) Summarize current efforts to incorporate community and social data into CDC's Pregnancy Mortality Surveillance System (PMSS) and build capacity for considering community and social data among state maternal mortality review committees (MMRCs); 3) Explain features of the Community Vital Signs Dashboard and describe potential applications by MMRCs, both in reviews of individual deaths and for reporting of aggregate data; 4) Summarize results concerning the contribution of community health services and socioeconomic measures to pregnancy-related mortality; 5) Give examples from two state MMRCs of incorporating community and social data into their maternal mortality reviews, and identify successes, barriers, and lessons learned from those experiences.

Session Description: In the United States, about 700 women die each year as a result of pregnancy-related complications. Racial and geographic inequities persist, with higher pregnancy-related mortality ratios among non-Hispanic Black and American Indian/Alaska Native women compared with non-Hispanic White women and Hispanic women, and 3-fold differences in pregnancy-related mortality ratios between states with the highest and lowest burden. It is increasingly clear that addressing disparities between these groups requires looking beyond individual-level risk factors to understand the contributions of broader contextual, social, and community factors that further characterize women's lived experiences. This symposium will provide an in-depth overview of current progress incorporating information on the area-level community and social contexts of women's lives into maternal mortality data at both the national and state levels. The symposium will first provide an overview of the motivation for and goals of incorporating community and social information (e.g., availability of and access to healthcare providers, area-level socioeconomic indicators, transportation environment) into maternal mortality data to address group-level racial and geographic disparities in maternal mortality.

The overview will include background information on current efforts to link area-level community and social data from sources such as the American Community Survey and Robert Wood Johnson County Health Rankings with CDC's Pregnancy Mortality Surveillance System (PMSS) data. It will also discuss current national- and jurisdiction-level efforts to build capacity for integrating community and social data into maternal mortality reviews among state and local MMRCs. Building on this overview, four shorter talks will focus on specific examples and/or applications of using community and social information to better understand maternal mortality data. The session will conclude with an open question and answer session with all presenters.

Session Justification: This symposium directly aligns with the conference theme of "Examining the Roots: Upstream Approaches to Data, Programs, and Policies in Maternal and Child Health". In this symposium, we will introduce and demonstrate through national- and state-based examples the importance of incorporating community and social information about the broader contexts of women's lives to better understand maternal mortality in the United States and inform prevention efforts focused on reducing racial and geographic disparities. The symposium should be timely and of particular interest to conference attendees given national interest in preventing maternal mortality as well as CDC's current support of 25 states through the Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) Program. The target audience is state and local maternal and child health leaders, particularly those involved in state and local MMRCs. Through the ERASE MM program, states have the opportunity to use this funding to enhance their current processes by incorporating social determinants of health in their maternal mortality reviews. Attendees will be able to share the findings described in this symposium in their states and jurisdictions. Current activities in Illinois and Louisiana will inform work in other states and jurisdictions to incorporate social and community measures into their MMRC reviews

Refresh PPOR: A New National Analysis with Updated Reference Groups and a Critical Assessment of Data Quality

Submission Type: Symposia

Author(s): Carol Gilbert

Symposium Objectives: The Perinatal Periods of Risk approach (PPOR) is used widely by local health departments and their community partners to investigate locally important underlying reasons for high infant mortality rates. Objectives: (1) Summarize vital records data quality problems and the extent to which they bias PPOR analyses and other comparisons. Discuss the need for PPOR exclusion criteria to reduce bias. Are the original PPOR "cutoffs" justified even though they leave out many cases of death in each community? (2) Explain how missing maternal information biases PPOR reference group rates because cases are excluded from the reference group whether or not they would have qualified. Does this mean reference group rates are always underestimates? How can PPOR analyses and other comparisons overcome this issue? (3) Describe six Phase 1 & 2 county-level PPOR excess mortality outcomes, and their distribution across US counties. What are common patterns and how do we know when our community is an outlier? Can unusual findings highlight particularly helpful or harmful health environments? (4) Analyze how county-level PPOR outcomes vary by county-level characteristics such as poverty, income inequality, and racial segregation. Which factors predict which components of excess mortality? What we can learn from outlier communities?

Session Description: This session presents results from a recent national PPOR analysis, inviting frank discussions of methodological choices, and the strengths and limitations of vital records data and the PPOR approach as a local tool for addressing high infant mortality rates. We present new White and Black national reference groups, and assessments of the quality of data needed for Phase 1 and the initial steps of Phase 2 analysis, and to create reference groups. We define six PPOR excess mortality components, beginning with the four periods of risk, then dividing the MHP period using Kitagawa decomposition, and the IH period by cause of death. These components are reported for 100 US Counties with at least 25,000 PPOR valid births and fetal deaths in a three-year period. We describe common patterns, and consider what we can learn from communities with both extremely high and extremely low values of any of the six components of excess mortality rates. We present data on the relationship between each outcome and county-level socioeconomic factors.

Session Justification: The Perinatal Periods of Risk approach (PPOR) is widely used, and has potential to be used in even more communities. Approximately 300 US counties have enough deaths in five years to do a full PPOR analysis. The approach is particularly suited for communities that want to address equity in birth outcomes, and in many communities PPOR findings highlight socioeconomic factors associated with preventable mortality. Fundamentally PPOR involves comparing a priority population (a county or subpopulation) to a "best case" reference population, a real population defined by maternal demographic characteristics. This comparison allows communities to estimate their preventable mortality and, more importantly, points them in specific directions for prevention activity. A national reference group has not been published since soon after PPOR was developed, largely due to data quality problems, yet many communities do not have enough deaths or adequate data quality to create their own internal reference groups. This is the first national analysis that includes initial Phase 2 PPOR findings (Kitagawa and SUID). Adoption of revised electronic vital records forms, improved survival of very low birth weight infants, and the possibility of improved data quality motivated this updated and expanded nationwide analysis.

Moderator and Co-presenters: Carol Gilbert, Pamela Xaverius

Respectful Maternity Care Conceptual Framework and Its Application in Healthcare and Research Settings

Submission Type: Symposia

Author(s): Susan Perez PhD

Symposium Objectives: The National Birth Equity Collaborative (NBEC) creates solutions to optimize Black maternal and infant health through training, research, policy advocacy and community-centered collaboration by putting Black birthing people and patients at the center of decision-making and research. We use the term “birthing people” to be intentional of the inclusion of queer and transgender individuals who are also routinely excluded from research design, participation in research, and discussions about improving equity in reproductive health care. NBEC’s niche is educating health care institutions and the community about the structural and social dynamics that prevent optimal births for every birthing person, specifically birthing people of color. The overall learning objectives for attendees of this symposia are to: 1) Apply the Cycle to Respectful Care Framework in health systems; 2) Synthesize a birth equity patient-centered research infrastructure as one opportunity to dismantle systemic racism; and 3) Evaluate the Cycle to Respectful Maternity Care Framework as a guide to shift culture towards trans-inclusive respectful care with an emphasis on Black birthing people.

Session Description: There are limited resources to guide clinical practice and clinician behavior to dismantle biased practices and beliefs, and the policies and practices that perpetuate structural and institutional racism. Using an iterative process, we developed the Cycle to Respectful Care Framework as a foundation for anti-racist maternity care education for healthcare providers and clinicians. The Cycle to Respectful Care acknowledges the development and perpetuation of biased healthcare delivery. This framework is a resource and actionable solution for dismantling healthcare provider behaviors that result in biased and discriminatory care. In addition to providing tools and training to center the needs of patients in their reproductive care, NBEC is centering Black birthing people as leaders and partners in research despite often being included solely as subjects. The absence of Black birthing people in key roles in the research and design phases is a missed opportunity for this group to develop research topics, facilitate research methods, or implement protocols that directly impact their lives. In response to this exclusion, NBEC has intentionally established the Respectful Maternity Care Collaborative (RMCC). The purpose of the RMCC is for Black birthing people to initiate, design, and lead research initiatives. With support from the Patient-Centered Outcomes Research Institute (PCORI), the RMCC puts birthing people and communities at the helm of guiding the iterative systems and applications of respectful care. RMCC is part of the development of new epistemologies of knowing and more effective research methodologies for working within the community.

Session Justification: Importance: From the perspective of professional responsibility and racial equity, healthcare providers have an obligation to prioritize frameworks created for, by, and with Black birthing people. The Respectful Maternity Care Framework provides the foundation for provider education tools, community awareness messaging, and a patient reported experience measure. The framework is expected to have applications in healthcare quality improvement initiatives for remedying the experiences and outcomes for birthing people. The framework will be applied in various settings beyond healthcare, including research initiatives that shift power to Black women-led, community-based organizations, and transforming the public discourse about perinatal health inequities. Timeliness: The COVID-19 pandemic has powerfully illustrated the racial divide in the health of this country. In real time, we are bearing witness to how different political, social, and economic factors work together to construct racist structural inequities. Now more than ever, frameworks such as the Cycle to Respectful Care are needed to inform the development of equitable, sustainable, long-term policy solutions for the Black Maternal Health crisis we have been facing for centuries.

Target Audience: The target audience for this session are birth workers/paraprofessionals/community health workers, healthcare and service providers/clinicians, health educators, students, parents/ guardians/ mamas, researchers, policy makers, and general audience.

Rhode Island Initiatives Support Safe Operations of Child Care Programs and Provide Equitable Resources to Families During the COVID-19 Pandemic

Submission Type: Symposia

Track: Collateral Damage of COVID

Author(s): Amanda DellaGrotta MPH

Issue: Barriers to accessing child care, including those caused by the coronavirus disease 2019 (COVID-19) pandemic, threatens children's health and development. Families rely on child care to participate in the workforce and help children develop social, emotional, and cognitive skills critical for success in school and life. Thus, child care supports equitable outcomes for children. However, in March 2020, Rhode Island (RI) child cares were mandated to close in response to increasing COVID-19 cases in the state.

Setting: When child care programs were approved to reopen in June 2020, an infrastructure was needed to ensure that these programs remained open and that families had access to care. The RI Department of Health (RIDOH) mobilized a team of epidemiologists, case investigators, nurses, and medical directors to create a specialized COVID-19 response program for RI child care programs.

Project: This RIDOH Child Care team performs a number of activities to support child cares and families, including case investigation, contact tracing, and COVID-19 education. The team maintains a handbook with detailed COVID-19 guidance to help child care providers navigate various COVID-19 scenarios. The team also responds to outbreaks and provides informed public health guidance through coordinated efforts of the epidemiologists, nurses, and medical directors. In outbreak scenarios, the team deployed mobile COVID-19 testing to impacted programs for children and staff to receive free and convenient tests to detect additional infection and mitigate transmission. The RIDOH Child Care team has since collaborated with other state efforts to create testing sites across the state for staff and students, which has not only expanded testing access to this population, but also facilitated prompt detection and isolation of COVID-19 cases to prevent child care outbreaks and mitigate program impacts. To address socioeconomic disparities that are exacerbated by quarantine and isolation instructions, the RIDOH Child Care team refers children and their families to RIDOH case managers and social workers, who address needs related to housing, behavioral health, finances, and essential items like food and diapers through direct provision of resources or by linking families to community-based or state-run services.

Accomplishment/Result: A key success of the RIDOH Child Care team is the intra-agency collaboration with the RI Department of Human Services (RIDHS) Office of Child Care. Both agencies meet daily to review data including trends in child care cases, outbreaks, testing, and program impact indicators such as COVID-19 related classroom closures; this data will be shared during the presentation. Review of the data has facilitated policy and program decisions at the state level that balance the health and safety of children and staff while maintaining child care operations. Through these initiatives, RI has minimized the impact of the COVID-19 pandemic on child cares and ensured that children have access to this critical service.

Barriers: Barriers early in the state's COVID child care response included limited testing opportunities for child care staff and students, which delayed symptomatic individuals' return to care or detection of COVID-19 infection to initiate prompt contact tracing and mitigate transmission. As a result, the state expanded testing capacity and resources to create testing sites across RI specifically for staff and students. Another barrier has included socioeconomic disparities that make quarantine and isolation instructions challenging for vulnerable children and families. These challenges are addressed by referring individual to the RIDOH Quarantine and Isolation Support team, which provides individuals direct resources for needs related to housing, behavioral health, finances, and essential items like food and diapers and links them linking to community-based or state-run services for long-term support.

Lesson Learned: State agency collaboration, coordination of community-based and state support services, focus on health equity, and use of data to inform ongoing policy decisions has supported a safe reopening of child cares during the COVID-19 pandemic and ensured that children and families have access to this critical service.

Information for Replication:

Additional Authors: Tara Cooper MPH
Presenting Author: Amanda DellaGrotta MPH
Presenting Author: Kristine Campagna MED **Non-Presenting Author:** Jaime Comella MPH

WORKSHOPS

Addressing Root Causes through Fatality Review

Submission Type: Workshops

Author(s): Catherine Kothari

Symposium Objectives: At the conclusion of this activity, participants will be able to… 1. Describe core components of Fetal-Infant and Child Death Reviews 2. Identify common equity problems that arise in Reviews and potential solutions to them 3. Practice applying one or more equity solutions in an actual review team meeting

Session Description: At its core, fatality reviews are community-based policy making. This workshop will cover the fundamental components of fatality reviews, demonstrate common equity problems encountered, apply potential solutions and end with a strengths-based review innovation. The workshop team combines fatality review expertise that encompasses multiple aspects of fetal-infant and child death reviews, from team recruitment to translating recommendations into action at local, state and national levels. The team currently works together producing NCFRP's Fatality Review Health Equity Learning Collaborative, which practices applying equity principles in various fatality review situations. The session will include descriptive presentations, fatality case scenarios, team review simulations, and a moderated debrief and collective sharing of best practices among participants. Participants will receive the following materials for use during the session and to take home: -Case and Review team scenarios -List of fatality review questions to drill down to root causes -Summary of common equity problems and solutions (from 2020 LC) -Health Equity Toolkit -Best practice summary of data collection and review processes for integrating equity (Kelly Bower) -SMARTIE goals worksheet

Session Justification: Child death, specifically infant death, is used across the globe as a marker of the functionality of social and health systems and, ultimately, population well-being. While such systems are subject to broader national policies, local community policies, institutions, and social norms contribute significantly to the environment within which individuals live and die. Multi-sector fatality reviews have been widely adopted as practical and feasible approaches to identifying local gaps in economic opportunity and in systems of care. More recently, the potential for such reviews to highlight systemic inequities has been recognized, leading to multiple efforts for developing best practices. With 162 Fetal Infant Mortality Review teams and over 1350 Child Death Review teams across the nation, fatality reviews are common. They are often legislatively mandated, and supported through public health dollars. The challenges typically lie in the mechanics of implementation. This is particularly true when it comes to implementation with an equity lens at every stage of the review process: Convening teams, accessing records, conducting review meetings, making findings, writing recommendations and moving recommendations into action.

Moderators and Co-Presenters: Karen Schrock, Susanna Joy, Sasha Mintz

Strategic Storytelling for Greater Health and Equity

Submission Type: Workshops

Author(s): Magda Peck ScD

Symposium Objectives: Specifically, we aim to (1) describe and discuss the purpose and power, risks and opportunities of merging data and strategic storytelling to enhance MCH data use; (2) describe and discuss how strategic storytelling can strengthen MCH practices and influence decision makers to improve community health and promote greater health equity; and (3) model and engage session participants in basic storytelling practice and parameters to solidify learning and build shared capacity.

Session Description: Stories are a common component of public health activities and meetings, used to illustrate in first-person voice real challenges faced. How can we integrate storytelling into MCH practice with intention and integrity, engagement and evidence, to yield greater impact? This symposium will bring together colleagues and efforts across organizations, who are working to advance the inclusion of stories and storytelling in their data to action initiatives. The National Center for Fatality Review and Prevention, in collaboration with MP3 Health (Dr. Magda Peck), is incorporating storytelling into the fetal and infant mortality review (FIMR) process, launching a Storytelling Learning Collaborative across five sites in 2020 and is expanding with Phase 2 into 2021. Augmenting local storytelling capacity and strategic use of stories may help FIMR teams shift conversations about recommended solutions from personal responsibility and individual behaviors toward upstream services and systems improvements. CDC launched the Hear Her Campaign, elevating stories to influence decision-makers. Working with Maternal Mortality Review Information Application (MMRIA) sites, AMCHP introduced strategic storytelling into its MMRIA Users Meeting (MUM) opportunities to strengthen the power of data to prevent maternal mortality. The new Detroit-based Merck4Moms project aims to lift up women's stories of vitality. Others in the field are inviting and rendering stories that lift up lived experience and wisdom to inform and shape solutions. To augment our influence and impact on maternal and child health and equity, we want to help establish a shared knowledge base among MCH practitioners, researchers, and partners about the art, science, and practice of storytelling, and align effective storytelling practices in the field.

Session Justification: While robust science and data are necessary for the public's health, they are insufficient to make institutional, structural or systems change happen. For most audiences, data do not speak for themselves. Without knowing and telling their underlying stories, metrics of risks and outcomes can remain static, even in numbing, pandemic proportions. Stories can become additional power tools for humanizing data, changing stuck narratives, and influencing decision makers and public opinion. The addition of strategic storytelling into our approaches can augment understanding of complex MCH challenges and lift up the silenced or unheard voices of people most impacted. When MCH practitioners, policymakers and partners develop shared appreciation, appetite, and aptitude for storytelling, together we can become more effective in changing hearts and minds and translating our data into action for greater health and equity.

Using System Dynamics to Map and Model the Impacts of COVID on MCH Outcomes and Document Innovations

Submission Type: Workshops

Author(s): Isabella Guynn

Learning Objectives: 1) Develop a common understanding of "system" and "systems thinking" using System Dynamics (SD) to understand dynamic and complex maternal and child health challenges; 2) Experience a structured SD approach to systems thinking, and discuss how you could implement such a session "back home" using guides we provide; 3) Document and discuss impacts of COVID on diverse maternal and child health outcomes, noting innovations observed by participants; and, 4) Learn about the breadth of SD applications to maternal and child health that you could draw on to inform your own work to understand and plan action to improve family health.

Session Description: In this session, we will motivate and introduce the System Dynamics (SD) approach to systems thinking, which can be used to illuminate complex family health outcomes as a critical foundation for planning more effective action. SD methods are designed to help diverse stakeholders develop rich, mechanistic hypotheses about the complex system structure producing observed trends that stakeholders would like to change, which can be subjected to testing, quantification, and decision support modeling. We will engage participants in a structured qualitative systems thinking session to document and discuss key impacts of COVID on maternal and child health outcomes, noting innovations in response. This session will be "scripted" and facilitation guides made available so participants can practice systems thinking back home. Presenters have recently completed a systematic review of the applications of SD to maternal and child health, and use these methods in their own research, practice, and workforce development. Review results will be shared to illustrate the breadth of extant work participants could build off of -- further propelling their own ability to infuse systems thinking in their communities. We believe this session provides an introduction and hands-on training in a valuable skill for developing a shared (e.g., cross-stakeholder) understanding of complex challenges, but will also produce rich insights about the diverse impacts of COVID on maternal and child health outcomes, noting innovations triggered to improve outcomes. Collectively, the facilitation team has more than 25 years experience using SD to improve public health.

Session Justification: Many maternal and child health outcomes are complex, and require methods that can accommodate this complexity. System Dynamics (SD) is one such method, which couples best practices for diverse stakeholder engagement with powerful diagrammatic conventions for describing how systems behave over time. This notation allows stakeholders to critique, correct, and use models of how systems behave to inspire better intervention actions, and to test these actions against others' understanding of what will/will not work and through computer simulation (once models are quantified). Learning how to develop and communicate models of system structure and behavior allows researchers and practitioners to present ideas, get feedback, and better anticipate how stakeholders will respond to changes -- and which will have desired impacts. It is far better to invest in planning in the face of complexity up front, than to learn after the fact that interventions would not work as intended. This approach to systems thinking grew out of engineering, and is growing traction in public health. Though its learning curve can be steep, we believe an experiential introduction, such as offered in this workshop, can help participants appreciate the approach and its potential. We will also present results of a recently completed review of SD applications to maternal and child health, which we believe will help participants readily find examples of extant work to inspire their own applications.

Moderators and Co-presenters: Isabella Guynn, Kristen Hassmiller Lich, Amy Mullenix, Dorothy Cilenti, Jessica Simon