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CityMatCH Conference Compendium



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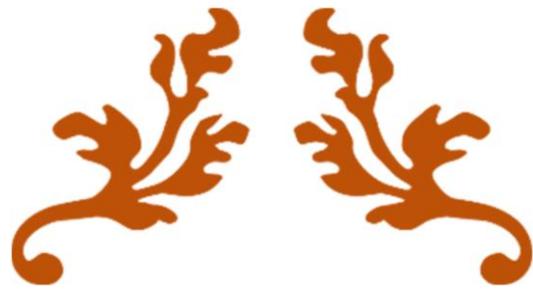
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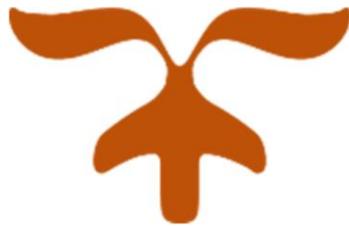
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Symposia



The Making of the Film Toxic: A Black Woman's Story

Symposia

Authors: Megan Walsh, BA, MSSA

Frances Mills, BA, MDIV

Objective(s): 1) Attendees will learn about community partnership and the process of using committee work to achieve collective impact. 2) Attendees will learn about the impact of racism on birth outcomes through viewing the film, Toxic: A Black Woman's Story. 3) Attendees will brainstorm ways they can use the film, or engage in a similar process, to create systemic change in their communities.

Narrative: The proposed session begins with a description the work that culminated in the creation of the short film Toxic: A Black Woman's Story. The primary purpose of the film and the accompanying discussion guide is to provide training for various audiences (healthcare setting, law and policy makers, etc.) on the impact of toxic stress associated with racism on birth outcomes. Attendees will learn how the Healthy Neighborhoods Committee of the Healthy Cleveland Initiative engaged in upstream work to move the needle on infant mortality. Various lessons learned will be explored, including the importance of including the voices of loss and the importance of working with Black filmmakers. Then, the film will be shown (running time, approximately 25 minutes). Following the film, attendees will gather in small groups for discussion and to brainstorm how their communities could utilize the film and/or use the lessons learned to inform their own upstream efforts.

Justification: Collective impact is a goal that can be difficult to conceptualize and act on. Additionally, work on committees can often feel unproductive. The purpose of this session is to demonstrate how upstream change can be made. Through this session, the process of partnering with other agencies and developing a teaching tool to be used in a variety of ways (raising awareness, providing cultural competence training, etc.) will be explored. The film itself will help attendees better understand the topic of racial disparities in birth outcomes and provide an avenue to have difficult conversations about racism, particularly within systems that are predominantly white. The session will provide attendees with action items regarding how to use the film in their own communities to create collective impact. Attendees will learn how to leverage partnerships and committee work to move the needle on infant mortality. Work in the MCH field is lacking without the discussion of the impact of racism on women and families. This session will help with normalizing that conversation and bringing it to the mainstream. Showing the film itself is approximately 25 minutes; therefore, a 90 minute session is needed in order to meet the session objectives.

References: (1)Alhusen JL, Bower K, Epstein E, Sharps P. Racial discrimination and adverse birth outcomes: an integrative review. J Midwifery Womens Health. 2016;61(6):707-720. doi: 10.1111/jmwh.12490

Elevating Women's Voices through the Illinois Maternal Health Digital Storytelling Project

Symposia

Authors: Abigail Holicky, MPH

April J Bell, PhD, MPH

Objective(s): This session will describe the Illinois Maternal Health Digital Storytelling Project, which elevates the voices of those who have been affected by severe maternal morbidity and other pregnancy complications. Key information covered in the session will include an overview of digital storytelling use in the field of public health, project goals, and logistics. Next, there will be a screening of the four digital stories included in the project. The session will conclude with a facilitated discussion with the storytellers about their experience creating the digital stories and what they hope people will learn, feel or do after viewing their digital stories. There will be time for questions and comments from the attendees as well as interactive activities throughout which attendees can participate in using their smart phones. By the end of the session, attendees will be able to describe digital storytelling and understand why the Illinois Maternal Health Digital Storytelling Project was implemented. Attendees will be exposed to digital stories about maternal health and interact with colleagues to further conversation on how digital stories can be used in public health prevention.

Narrative: Research on maternal mortality, severe maternal morbidity (SMM), and other pregnancy outcomes at the state and national level is ongoing and frequent. However, there is a need for projects which center women's voices and perspectives of SMM and other pregnancy complications. The Illinois Maternal Health Digital Storytelling Project was a one-time digital storytelling workshop conducted virtually in August 2021 to collect stories from Illinois women about challenges experienced during pregnancy or postpartum. The goals of the project were to elevate voices to complement other sources of data and provide a personal element to inform ongoing prevention and support work. During the workshop, participants created their own digital story, a 2–3-minute video incorporating images, video, sound, and text. Four storytellers provided consent for their stories to be shared publicly and are published online. The stories have also been presented with practitioners to raise awareness and encourage use in teaching environments.

Justification: Nationally, pregnant and postpartum people, especially people of color, are experiencing adverse outcomes related to pregnancy at alarming rates. The U.S. has maternal mortality rates that are 3-4 times higher than other high-income nations. While tragic, maternal mortality is rare and many more pregnancies are complicated with severe maternal morbidities (SMM), chronic diseases, mental health conditions and substance use disorders. Systematic prevention research, including through maternal mortality review committees, is underway to examine these outcomes. However, these efforts are usually void of patient voice warranting the need for projects which center women's perspectives of SMM and other pregnancy complications(1). Hearing directly from pregnant/postpartum women can highlight critical issues in general women's health and healthcare and provide contextual insight to inform ongoing prevention efforts. The Illinois Maternal Health Digital Storytelling Project is funded by the Health Resources and Services Administration (HRSA)'s Maternal Health Innovation Program,

awarded to the University of Illinois at Chicago in 2019. This grant aims to improve maternal health and reduce maternal mortality and SMM through innovations in partnership, data, and care delivery. This innovative approach elevates postpartum women's voices on a state-level stage by using the digital storytelling workshop pioneered by StoryCenter, a participatory approach, rooted in authenticity in which storytellers self-identify, craft their own narrative, and own their digital stories(2). The stories are rich, yet short, making them feasible for wide consumption. To our knowledge, this is one of the first times that this method of digital storytelling has been used in the U.S. to describe experiences of pregnancy and postpartum medical complications. A full 90-minute session will allow for adequate time to explain the digital storytelling methodology and facilitate discussion among presenters and attendees. A longer session would also allow the screening of all four stories, which will take approximately 20 minutes.

References: 1. Building U.S. Capacity to Review and Prevent Maternal Deaths. Report from nine maternal mortality review committees. (2018). Retrieved from http://reviewtoaction.org/Report_from_Nine_MMRCs 2. Gubrium A. Digital storytelling: an emergent method for health promotion research and practice. *Health Promot Pract.* 2009;10(2):186-191.

Strengthening the Community-based Doula Workforce

Symposia

Authors: Tennille Collins, MPH

Stephanie Spencer, BSN, RN, LCCE, CLC

Marna Armstead

Deundra Hundon, Doula

Jessica M. Roach, MPH

Dorian L Wingard, MPA

Objective(s): Doula care lowers the need for medical interventions during childbirth and cesarean rates; increases women's (and their partners) positive perceptions of their births; increases breastfeeding success; and lowers rates of depression and anxiety postpartum. The American College of Obstetrics and Gynecology (ACOG) listed doula support as a top ten recommendation in their 2018 and 2019 Policy Statements regarding high-quality maternity care (1). In this symposium, a collective of Safer Childbirth Cities grantees from Columbus, Ohio, Jackson, MS, San Francisco, CA, and Norfolk, VA will share how they are strengthening the community-based doula workforce in their respective cities through innovative approaches to recruitment, retention, training, hiring and connecting to expecting families for service provision. Attendees will learn how to identify doula care provision gaps in their city and design sustainably funded solutions that increase access to this lifesaving resource.

Narrative: The lack of birth workers, perinatal support and comprehensive birth education geared toward Black women, other women of color and low-income women furthers the disparities in birth outcomes experienced in many states. As a response, several Safer Childbirth Cities grantees are addressing the lack of perinatal birth worker support across the country by focusing on strengthening the doula workforce in their communities. Expanding perinatal support services by training culturally concordant doulas, increasing access to doula training, and hiring to not only strengthen the maternal workforce but also creating employment opportunities for Black women and other women of color. Additionally, grantees will share their methods for delivering anti-racism training to deconstruct structural determinants of health that negatively impact maternal health outcomes and educating care providers on best practices for working with doulas as part of a full spectrum team to strengthen care systems and improve everyone's experience around labor and delivery.

Justification: Sharing the successes and lessons learned from leading doula service programs is paramount to supporting systems of care that create optimal birthing environments for Black families and families of color. Strengthening the doula workforce and training culturally concordant doulas as approaches to reinforcing efforts to improve maternal health outcomes in cities across the U.S. is the focus of this symposium. The discussions that will come out of this session will be rich and filled with different perspectives and methods from community-based leaders across the country. The full 90 minute session will give speakers and the audience space to share insights from work to date, unearth new ideas and potentially organize next steps to take the learnings into the field.

References: Centers for Disease Control and Prevention. Severe Maternal Morbidity in the United States. Retrieved on June 4, 2018 from <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html> ACOG Committee Opinion No. 766 Summary: Approaches to Limit Intervention During Labor and Birth, Obstetrics & Gynecology: February 2019 - Volume 133 - Issue 2 - p 406-408. doi: 10.1097/AOG.0000000000003081

Navigating New Horizons: Updates from the Pregnancy Risk Assessment Monitoring System (PRAMS)

Symposia

Authors: Brenda Bauman, MSPH

Letitia Williams, MPH

Holly Shulman, MS

Ada Dieke, DrPH, MPH

Moderator(s): Cynthia Cassell, PhD

Objective(s): 1. Discuss the addition of web data collection mode to ongoing mail and phone modes, its anticipated effects on survey participation rates overall and among hard-to-reach populations, and its effects on data collection burden. 2. Highlight recent data modernization efforts and collaborations with NAPHSIS to increase data processing and facilitate more rapid and less burdensome access to PRAMS data with an automated research file. 3. Explain findings from non-response bias analyses and how these findings are being used to guide PRAMS release of sites' data and to inform an updated data release policy for future birth cohorts. 4. Provide an overview of the PRAMS questionnaire revision process and how partner input helped to shape the revision framework and the new survey and highlight new indicators that will be available from the forthcoming Phase 9 questionnaire.

Narrative: For more than 30 years, the Pregnancy Risk Assessment Monitoring System (PRAMS) has been a flagship maternal and child health surveillance system of CDC's Division of Reproductive Health conducted in partnership with state, local, and territorial health departments. With current participation from 50 sites, PRAMS data represent 81% of U.S. live births and serve among the nation's best sources for information on maternal experiences and behaviors before, during, and shortly after pregnancy. In the past two years, PRAMS has developed several enhancements to better address evolving needs of grantees and the public health community. These enhancements primarily aim to increase data accessibility, flexibility, reach, speed, and efficiency. The goal of this symposium is to describe changes that will improve timeliness of data release, accessibility to PRAMS data, and the launch of a new phase of the questionnaire, including key new maternal and child health indicators.

Justification: PRAMS is a population- and jurisdiction-based surveillance system that has been collecting data on experiences and behaviors among mothers before, during, and shortly after pregnancy that are not available elsewhere. PRAMS data are used by our partners at the jurisdiction level to inform programs and policies and to track performance measures, and by researchers to better understand relationships between maternal health experiences and behaviors and maternal and infant health outcomes. In this symposium, presenters will describe enhancements to PRAMS to improve data availability, accessibility, flexibility, and efficiency. We will highlight system improvements, such as introduction of a web-based data collection option to help reduce data collection burden by sites and increase survey participation. The web survey module will be an additional mode for data collection; respondents will still be able to access the continuing modes of mail or phone. We will showcase recent collaborations with the National Association for Public Health Statistics and Information System

(NAPHSIS) and PRAMS grantees to facilitate more rapid and less burdensome access to PRAMS data through an automated research file. Attendees will learn how PRAMS is using findings from non-response bias analyses to guide release of PRAMS data and to inform the PRAMS data release and availability policy. Lastly, presenters will provide an overview of the PRAMS Phase 9 questionnaire revision framework, enhancements to incorporate contextual data on social determinants of health, racism, discrimination, and quality of care to better understand inequities in maternal health behaviors, experiences, and outcomes. The 90-minute symposium format is needed to provide attendees with all relevant updates from PRAMS in one session and allow ample time for each area to be discussed.

Scaling-up Public Health Surveillance for Fathers: Lessons Learned from the PRAMS for Dads Experience

Symposia

Authors: Lee Warner, PhD

Michael Bryan, PhD, MPH

Craig Garfield, MD, MaPP

Hafsatou Diop, MD, MPH

Michele Menegay, PhD, MPH

Moderator(s): Lee Warner, PhD

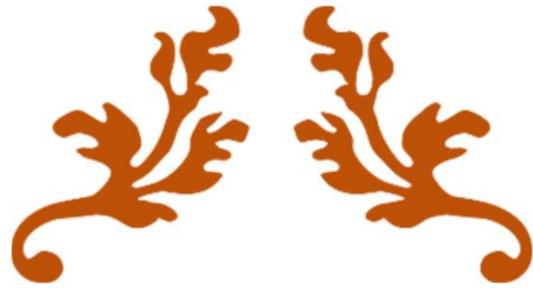
Objective(s): 1. Describe the current state and need for population-based surveillance of fathers around the time of their child's birth. 2. Demonstrate the feasibility of conducting surveillance of fathers of recently born infants to address public health data gaps relevant to pregnant women, children, and families. 3. Summarize findings from the PRAMS for Dads pilot study, a population-based study of recent fathers conducted in Georgia. 4. Describe efforts to scale-up similar surveillance efforts inclusive of recent fathers into population-based surveillance systems across additional states.

Narrative: Fathers can play a key role in the health and development of their children as well as supporting birthing parents. For more than 30 years, the Pregnancy Risk Assessment Monitoring System (PRAMS) has been a flagship surveillance project of CDC and jurisdictions that provides population-based data on maternal perinatal health and well-being and currently represents 80% of US births. However, to date, PRAMS has collected only minimal data on fathers, and data that are collected are from maternal self-report. We will begin with a description of the feasibility, acceptability, and content of implementing a parallel system designed for fathers of recently born infants and then discuss results from a pilot study conducted in Georgia during 2018-2019. Following these presentations, representatives from state health departments in Massachusetts and Ohio will discuss the challenges and opportunities for implementing such a surveillance system in their state.

Justification: What is new/innovative to the field of MCH about this project? The need for population-based surveillance of fathers of live-born infants is increasingly being recognized, as research demonstrates that men can have an impact on the short- and long-term health of their families. Currently, no large-scale, population-based system in the United States is aimed at understanding the health behaviors of men shortly before and after the birth of their infant. With this session, we describe the need for such surveillance systems and describe past and ongoing efforts to incorporate father-based surveillance into PRAMS. Why is it important to MCH? As a long-recognized priority of maternal and child health (MCH) and topic of interest for this year's CityMatCH conference, fathers represent a critical population for inclusion in CityMatCH. Further, the PRAMS for Dads project featured in this symposium is a first-of-its kind, population-based surveillance project using PRAMS methodology to obtain self-reported data from fathers of recent live-born infants. Specific reasons why this session is suitable for a full 90-minute session as opposed to a shorter abstract presentation (~20 minutes): The symposium format with a full 90-minute timeframe is needed to best describe this work and allow

for discussion. Studies of this new public health surveillance system for fathers have been completed in one state (Georgia) and are in the field in two additional states (Massachusetts and Ohio). Having representatives from each of those three states, as well as the CDC and the academic partner (Northwestern University), will lend this symposium to an engaging dialogue around the different experiences, priorities, funding mechanisms, challenges, and opportunities that would not be feasible in a 20-minute abstract presentation. Further, we envision attendees who may be considering similar activities in their jurisdictions will benefit from this symposium format and larger discussion.

References: Garfield C. Pregnancy Risk Assessment Monitoring System for Dads: A piloted randomized trial of public health surveillance of recent fathers' behaviors before and after infant birth. *PLoS One*. 2022;17(1): e0262366. Kortsmit K. Paternal involvement and maternal perinatal behaviors: Pregnancy Risk Assessment Monitoring System, 2012-2015. *Public Health Reports* 2020;135:253-61. Garfield C. Pregnancy Risk Assessment Monitoring System for Dads: Public health surveillance of new fathers in the perinatal period. *Am J Public Health* 2018;108:1314-1315



Workshops



Building Community Resilience through Maternal Child Health and Emergency Preparedness Collaboration

Workshops

Authors: Tucker O'Donnell, MPH

Sarah Matthews, MPH

Meghan Burian, MPH

Moderator(s): Emily Boyle, MS

Objective(s): Through our workshop, we hope participants will be able to 1) describe the importance of inter-professional collaboration between public health, healthcare, and emergency management in all phases of the disaster life cycle, 2) identify at least 2 areas in which to improve collaboration between Maternal Child Health (MCH) and Emergency Preparedness and Response (EPR) departments within your organization, and 3) identify at least 2 opportunities to engage MCH staff in emergency planning within your organization.

Narrative: The workshop will share highlights and best practices for LHDs to collaborate across partners to support MCH needs in emergencies. We will guide participants through HHS' MCH Emergency Planning Toolkit to learn ways to address the MCH population during public health emergencies, followed by an interactive tabletop exercise for participants to develop or improve relationships among MCH and EPR staff, identify shared goals, and include priorities and considerations for MCH populations in EPR plans. Local health departments (LHDs) and community-based organizations are ideal audiences for this presentation.

Justification: LHDs play a critical role 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 other infectious disease outbreaks and natural disasters. Despite the number of public health threats that impact pregnant people and infants, there are rarely efforts to increase collaboration among MCH and EPR departments within LHDs. The COVID-19 pandemic has exposed the lack of dedicated resources for prioritizing MCH populations in preparedness activities and responses. Local health departments (LHDs) and community-based organizations are ideal audiences for this presentation, specifically those working in EPR and MCH departments.

References: Health and Human Services, Maternal Child Health Emergency Planning Toolkit

Sustainability: Beginning with the End in Mind

Workshops

Authors: Leslie deRosset, MSPH, MPH

Tanisa Adimu, MPH, BA

Amy Mullenix, MSPH, MSW

Moderator(s): Dorothy Cilenti, DrPh

Objective(s): Participants will participate in an interactive peer-to-peer learning session to build their skills and knowledge of sustainability and sustainability tools. Participants will get hands-on experience practicing one of the tools shared. Participants will be asked to reflect on how the evidence-based tools advance or impede equity. The opportunity to engage and reflect with other MCH experts will be a unique opportunity for the participants. 1. Understand the importance of sustainability and sustainable impact; 2. Describe how sustainability planning tools can be utilized with maternal and child health program innovations and practices; 3. Practice using one of the sustainability planning tools; and 4.

Participate in peer-to-peer learning and reflection with other MCH experts to share best practices, obstacles, opportunities, and brainstorm next steps.

Narrative: To improve the health and equity outcomes of individuals and communities over time, we must find ways to sustain successful practices, programs and policies. “Beginning with the end in mind” helps us consider sustainability from the early planning stages, into implementation and throughout the life of an initiative. This session will equip participants to proactively plan for the future by incorporating hallmarks of sustainable programs into their work. Facilitators will focus on the principles of sustainability, describe various tools that can help in the planning process, and provide interactive activities to practice a sustainability tool during the session. Participants will also discuss the intersection of equity and sustainability. This session is ideal for all types of public health practitioners who design, lead or implement programs at any level, and will offer opportunities to engage in peer-to-peer reflection.

Justification: As a result of inequitable maternal health, COVID-19 and other outcomes, new funds have recently been flowing to local communities to support families and communities, either in the form of additional funds for current programs or new funds for new programs. Ensuring programs that work become sustainable over time is a critical role for MCH practitioners. Research from Georgia Health Policy Center and other organizations indicate that there are distinct and replicable characteristics of programs that become sustainable over time, including shared vision, use of data, and dynamic leadership. These and other characteristics can be used to proactively position programs to become sustainable. Sustainability of particular programs may either advance or impede equity, depending on the type of individuals and communities that have benefitted from the programs in the past. If the traditional “evidence base” is solely used to determine which programs should be sustained, public health practitioners may inadvertently contribute to continuing inequities. This challenge will be explored during the session in the context of sustainability planning. As a leader in engagement,

innovation, and policy, the Maternal Health Learning & Innovation Center is well suited to facilitate an interactive session on sustainability for MCH experts from around the country.

References: 1. Center for Public Health Systems Science: Sustainability Tools 2. Community Toolbox: Sustaining the Work or Initiative 3. Community Health Systems Development/GHPC

StoryCamp: Strengthening MCH Data-to-Action Through Strategic Storytelling Workshops

Authors: Magda Peck, ScD, ScM

Janelle Palacios, PhD, CNM

Moderator(s): Kenn Harris, BS

Calvin Williams, BS, CLC

Objective(s): 1. Define the concept of 'Strategic Storytelling,' in the context of maternal and child health practice; 2. Describe at least 3 ways storytelling can be a powerful tool for catalyzing systems change; 3. Define the concept of 'dominant narratives' in public health, and describe how prevailing narratives can limit and /or promote the translation of research and data into effective programs and policies; 4. Identify at least 3 storytelling strategies communities can use to incorporate lived experience expressed as stories, as qualitative 'data' for shaping MCH solutions; 5. Define the concept of an 'Anchor Story' in the context of MCH practice; and 6. Identify at least 3 essential elements for developing a personal 'Anchor Story' to fuel and sustain leadership for health and equity, for women, children and families.

Narrative: This interactive capacity-building workshop is for MCH practitioners, MCH Epi/data specialists, and community partners, to incorporate strategic storytelling into public health practice, to strengthen effective data use and better engage policymakers. Participants will gain hands-on knowledge and practice to: 1) define strategic storytelling and describe key 'powers of stories' for catalyzing systems change; (2) understand how 'dominant narratives' both hinder and help translation of research and data into effective programs and policies; (3) describe storytelling strategies for lifting up lived experience as essential 'data' for shaping MCH solutions; and (4) recognize how personal stories can anchor and fuel leadership for health and equity. A case-studies approach and structured exercises will be used to illustrate how strategic, skilled storytelling can refresh and augment data use approaches to established MCH issues, including infant mortality. After the workshop, additional materials, resources and videos will be made available to further storytelling in MCH practice.

Justification: In June 2021, HHS Secretary's Advisory Committee on Maternal and Infant Mortality recommendations called for an expansion of "traditional concepts and definitions of 'evidence,' with the valued inclusion of community voices and lived experience, especially of individuals from Black, Indigenous, and People of Color communities," and for building "capacity for the inclusion of qualitative data, lived experience, and family perspectives in sentinel event review approaches." In concert with these recommendations, this workshop aims to build capacity for putting them into practice. As clinicians, practitioners, community leaders and applied scientists, especially in the recent era of pandemic, we recognize that robust population health data and surveillance are absolutely necessary, but often insufficient, to make the convincing case for science-based solutions. Storytelling can heighten and humanize public health data, augment community engagement, and expand the reservoir of 'evidence.' Our session introduces practical, hands-on tools aimed at practitioners for building local storytelling capacity and strategies. It builds upon a December 2021 CityMatCH/MCH Epi Conference

Symposium on storytelling for social change, which offered diverse MCH leaders' perspectives and highlighted core principles. It also adapts tools and methods developed for the National FIMR Storytelling Learning Collaborative for wider use in MCH leadership and practice.

References: These are sample references and resources: 1. Rieger, K.L., West, C.H., Kenny, A. et al. Digital storytelling as a method in health research: a systematic review protocol. *Syst Rev* 7, 41 (2018). <https://doi.org/10.1186/s13643-018-0704-y>
<https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-018-0704-y> 2. Gubrium AC, Krause EL, Jernigan K. Strategic Authenticity and Voice: New Ways of Seeing and Being Seen as Young Mothers through Digital Storytelling. *Sex Res Social Policy*. 2014 Dec 1;11(4):337-347. doi: 10.1007/s13178-014-0161-x. PMID: 25506294; PMCID: PMC4261042. <https://pubmed.ncbi.nlm.nih.gov/25506294/> 3. Park E, Forhan M, Jones CA. The use of digital storytelling of patients' stories as an approach to translating knowledge: a scoping review. *Res Involv Engagem*. 2021 Aug 28;7(1):58. doi: 10.1186/s40900-021-00305-x. PMID: 34454604; PMCID: PMC8403386. <https://pubmed.ncbi.nlm.nih.gov/34454604/> 4. Palacios JF, Salem B, Hodge FS, Albarrán CR, Anaebere A, Hayes-Bautista TM. Storytelling: A Qualitative Tool to Promote Health Among Vulnerable Populations. *J Transcult Nurs*. 2015 Sep;26(4):346-53. doi: 10.1177/1043659614524253. Epub 2014 May 14. PMID: 24829264. <https://pubmed.ncbi.nlm.nih.gov/24829264/> 5. VanDeCarr P. Storytelling and Social Change. <https://narrativearts.org/wp-content/uploads/2016/02/story-guide-second-edition.pdf>

State Oversampling in the National Survey of Children's Health: From Design to Results

Workshops

Authors: Scott Albrecht, PhD

Ashley Hirai, PhD

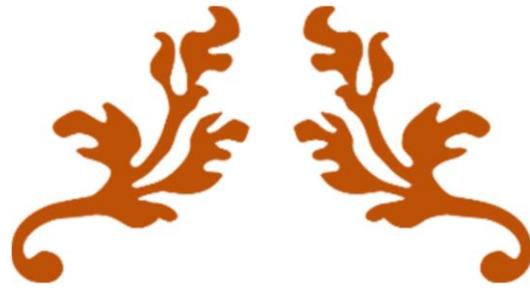
Moderator(s): Ashley Hirai, PhD

Objective(s): By the end of the session, participants will be able to: 1) Understand the purpose, types, and process of designing oversamples 2) Identify the results and benefits of oversampling 3) Design an oversampling plan and calculate costs

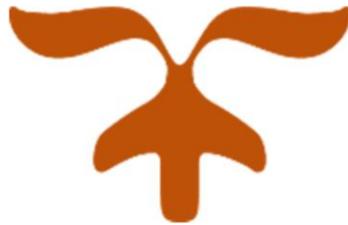
Narrative: State oversampling within the redesigned National Survey of Children's Health (NSCH) began as an option in 2020 to enhance or enable reporting for smaller population groups, conditions, or localities. This workshop will provide an overview of the purpose and types of oversampling (i.e., general and sub-state) and the nuts and bolts of designing an oversampling plan, including objective formation, determining a target sample size, and cost estimation. Examples will be featured drawing from current state oversampling plans with a discussion of actual 2020 results and benefits. The workshop is intended for state/local MCH epidemiologists interested in planning and designing an oversample.

Justification: State oversampling can support more targeted assessment, program planning, and evaluation. To date, 12 oversampling plans have been executed with objectives that include improved overall sample size for CSHCN-specific measures or certain racial/ethnic groups as well as regional and metro-level estimates. Costs have ranged from \$20k to \$500k depending on the size and type of oversample. This topic is timely as states increasingly work to measure and address racial/ethnic and geographic inequities in MCH. State/local MCH epidemiologists will be the target audience who will be helping to design oversamples and analyze results. However, MCH directors may also be interested in learning more about the process. The presenters plan to offer individual follow-up consultations at the conference for those interested.

References: <https://mchb.hrsa.gov/data-research/national-survey-childrens-health/oversampling>
https://www.census.gov/content/dam/Census/programs-surveys/nsch/NSCH_State_Oversample_Summary_Document.pdf



Program/Policy



NC Maternal Health Innovation (MHI) Program: An Upstream Approach to Diversifying the Maternal Health Workforce

Program/Policy Abstracts

Authors:

Presenting Author - Lily Stevens, MPH

Presenting Author - Ushma Mehta, PhD, MPH

Presenting Author - Rebecca Severin, MPH

Category/Categories: Maternal health, Leadership/workforce development,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Issue: This initiative was created to address the lack of diversity in the health care workforce. The lack of diversity in the health care workforce is directly correlated with negative health outcomes for patients and especially for patients of color. In the case of maternal health, this has contributed to racial disparities in pregnancy-related causes of death. This disparity in maternal health outcomes has persisted for decades just as has the lack of work force diversity.

Setting: This activity was an online event for junior and senior college students across the entire state of North Carolina (NC). Students in attendance were participants in the NC Area Health Education Center's (NCAHEC) Scholars Program, a program that recruits, trains, and supports underrepresented minority junior and senior college students who are pursuing careers in health and allied health professions.

Project: This activity brought together a new partnership between the NC Division of Public Health-Women, Infant and Community Wellness Section Health Maternal Health Innovation Program (MHI) and NC AHEC Scholars Program. This activity brought new information to allied health students to broaden their perspectives on maternal health and introduce them to a new field of health professions which may diversify the maternal health workforce in the years to come.

Accomplishments: This activity was hugely successful with over 120 students in attendance and lively discussion in which participants shared personal stories and asked thoughtful questions. After the event, our partners at NC AHEC expressed that they found the event to be such a success that they would like to continue our partnership and offer this module again in the next programmatic year.

Barriers: The largest barriers that our activity faced were that online events can lack engagement, participants, and overall lack attendance. This barrier was overcome by the recruitment efforts of the NC AHEC staff and the genuine interest in the topic on behalf of the students.

Lessons Learned: This activity was a cost-effective, collaborative approach of engaging existing work to benefit the future of maternal health in NC and is an example of a strategy to advance addressing equity in maternal health and opportunity to diversify the workforce in the future. This activity should be tailored to the population of participants in attendance and relies on committed partners. Those interested in replication should ensure that the time of the event is conducive to high attendance and that interactivity is guaranteed. This module would not have been nearly as successful if participants could not engage with the speakers.

Information for Replication: Key partners for this project included the NC AHEC Program and MHI Program staff, Dr. Nakeitra L. Burse, MHI contractors, and community partners. Due to the buy-in from our partners at NC AHEC, there was no cost incurred by the Women, Infant and Community Wellness Section. NC AHEC was able to cover Dr. Burse's fee for the screening of her documentary and presentation. The time commitments from our planning team, and other presenters were in-kind donations.

Beyond State Lines: A Partnership to Prevent Maternal Mortality

Program/Policy Abstracts

Authors: Presenting Author - Ashley Busacker, PhD

Presenting Author - Amy Solesman, MPH

Category/Categories: Maternal morbidity and mortality, Community collaboration,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Issue: Typically, maternal mortality review committees (MMRC) review deaths and focus prevention activities within their state jurisdictions. However, maternal health care is not bound by state borders, especially in rural/frontier settings. Some women may choose to seek care out of state and others must due to availability, emergencies or needed access a higher level of care. State-level ability to implement and sustain an MMRC may be limited by state resources and the annual number of deaths. Despite having fewer deaths, small states face challenges related to staff capacity, multi-disciplinary committee membership, and infrastructure in implementing mortality reviews. Utah and Wyoming Departments of Health are partnering across state lines to build capacity to review and prevent maternal mortality in the mountain west.

Setting: The partnership is occurring in two neighboring western states, Utah and Wyoming, and benefits residents of both states.

Project: Utah and Wyoming first successfully collaborated in 2017 to implement the Alliance for Innovation on Maternal Health's Hypertension in Pregnancy safety bundle. In 2019, Utah and Wyoming expanded the partnership to broaden the existing MMRC in Utah and begin MMRC in Wyoming. Utah was awarded funding from CDC's Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) program and partnered with Wyoming in their award. Utah's MMRC was expanded to review Wyoming cases and include Wyoming representation. Reviews and bi-monthly team meetings occur virtually.

Accomplishments: The two states successfully negotiated a contract for fiscal resource sharing. They have developed standard MMRC operating procedures, maternal death case finding protocols, and analysis and dissemination plans. The plans are similar but can account for the unique details in each state. The expanded MMRC reviews deaths quarterly, with the first Wyoming cases reviewed in summer of 2020. The partnership capitalizes on the experiences of the long-standing Utah MMRC. Benefits for both states include cross-state peer-to-peer learning opportunities. Benefits to Wyoming include access to specialty providers not available in-state, and efficiency, since Wyoming typically sees fewer than five maternal deaths annually. For Utah, the additional cases did not significantly increase the time from identification to review for Utah cases; committee members welcomed additional cases and learned from the new perspectives offered by the Wyoming members during review and recommendation discussions. The state teams plan to complete a two-state analysis of data and publish a joint report in the coming year. The Utah Wyoming Maternal Health Summit is scheduled for summer of 2022.

Barriers: The partnership has encountered some barriers, including negotiating a cross-state contract between two state legal departments, and ongoing challenges of staff turnover, different organizational

structures, access to data systems, and capacity challenges brought on by the pandemic. Frequent open communication and flexibility have been keys to addressing the barriers.

Lessons Learned: By sharing resources, materials, and expertise, this two-state collaboration is leveraging resources to improve maternal health and prevent morbidity and mortality for women in both states.

Linking the Pregnancy Risk Assessment Monitoring System (PRAMS) and Clinical Outcomes Data: Lessons Learned from a Multi-Jurisdiction Learning Community

Program/Policy Abstracts

Authors: Lauren Kipling, PhD, MPH

Non-Presenting Author - Shannon Vance, MPH

Non-Presenting Author - Britta Cedergren, MPH, MPA

Non-Presenting Author - Ellen Pliska, MHS

Non-Presenting Author - Lisa Romero, DrPH, MPH

Non-Presenting Author - Lijing Ouyang, PhD

Non-Presenting Author - Heather Tevendale, PhD

Non-Presenting Author - Shanna Cox, MSPH

Category/Categories: Data: innovation, quality improvement, communication, Maternal health,

Method of Presentation: Poster Presentation

Data Methods: Using new data linkages

Issue: A variety of research questions related to maternal and child health can best be answered through the linkage of data from multiple sources. Data linkage promotes the identification of information to account for the social context and social determinants that influence maternal and child health outcomes. The Pregnancy Risk Assessment Monitoring System (PRAMS) is a state-specific, population-based survey of women with a recent live birth. PRAMS collects data on maternal attitudes and experiences before, during and after pregnancy. Linking PRAMS with clinical or social services data can provide fuller context to understand interrelated factors and inform health programs and policy to improve maternal and child health outcomes. However, many states have limited capacity to support data linkage methods with PRAMS and clinical or social services data.

Setting: In 2021, the Centers for Disease Control and Prevention (CDC), in partnership with the Association of State and Territorial Health Officials (ASTHO), launched a multijurisdictional PRAMS Data Linkage learning community to build capacity among participating states to link PRAMS to clinical or social services data to better understand patient centered outcomes in maternal and child health. Alaska, New Mexico, Texas, and Washington are currently participating with plans to add additional states in 2022.

Project: ASTHO provides technical support and capacity building expertise to participating states to link PRAMS data to their chosen, preexisting set of clinical or social services data. A standardized methodology for creating linked data sets is being documented for sustainability and future replication. Priority analyses using the linked data sets will be conducted to support patient-centered outcomes research and quality improvement initiatives in maternal and child health.

Accomplishments: ASTHO has facilitated state action planning to assist state teams in developing comprehensive guides for their data linkages. Alaska is linking PRAMS to state Medicaid and vital records to understand factors that influence injury related healthcare visits during a baby's first two years of life. New Mexico is enhancing linkages between PRAMS, a PRAMS follow-up survey, and home visiting data. Texas is conducting a linkage of PRAMS to birth certificate data and the Texas Health Care Information Collection to inform initiatives to reduce severe maternal morbidity and life-threatening pregnancy complications. Washington is linking PRAMS data with the Washington Comprehensive Hospital Abstract Reporting System to increase understanding of maternal morbidity, adverse outcomes of opioid use during pregnancy and birth, and clinical outcomes for mothers and infants. A data linkage toolkit with recommendations on data access, data linkage, data sharing, and data hosting and sustainability will be developed and disseminated.

Barriers: States in the learning community reported multiple priorities and limited resources, especially during the COVID-19 pandemic, as barriers to data linkage. Barriers due to staff turnover, legal issues, the execution of data sharing agreements, and focusing linkage and analysis plans were also reported.

Lessons Learned: Technical assistance, virtual webinar/learning sessions, and state action planning meetings were effective means of support and information sharing to address barriers. Peer-to-peer communication among state participants also promoted learning and collaboration within the learning community.

The Impact of Virtual Delivery of Home Visitation Program During the Pandemic

Program/Policy Abstracts

Authors: Shunaiber Tauhid, Bachelor of Medicine and Bachelor of Surgery (MBBS), Master of Public Health (MPH), Master Certified Tobacco Treatment Specialist (CTTS-M), Certified Domestic Violence Specialist (CDVS-II)

Non-Presenting Author - Melissa Baker, MA

Category/Categories: Home visiting, Maternal health

Method of Presentation: Poster Presentation

Data Methods: Policy assessments or evaluations, Program evaluation or surveillance evaluation, Using existing data sources in innovative ways,

Issue: Right From the Start (RFTS) is West Virginia's Medicaid eligible home visitation (HV) program, providing comprehensive care to low-income maternal and infant clients. RFTS encourages healthy living to families using the research-based curriculum, Partners for Healthy Baby (PHB). Some of the topics covered in PHB are improved prenatal health, enhanced child development, economic self-sufficiency, family stability, and healthy lifestyles. Home-visitors are licensed registered nurses or licensed social workers who provide support, education, screenings and facilitate access to other service providers. The ability to provide meaningful service was challenged during the pandemic. As the world grappled with the effect the pandemic was causing and the Stay-at-Home order being mandated, RFTS quickly moved its service to being virtual. This change in the delivery method allowed for the continuity of service.

Setting: RFTS program is divided into 8 regions serving all 55 counties of West Virginia. The services are provided to prenatal, postpartum, and infant clients.

Project: The Bureau for Medical Services (Medicaid) and West Virginia's Office of Maternal, Child and Family Health (OMCFH), jointly worked to provide support services to women and infants to reduce adverse health outcomes. RFTS is an in-person HV model, and the organization implemented policies to allow virtual services to be provided to clients. It was a challenge particularly in a rural setting as resources are limited; encouragingly, the transition was relatively smooth. Using online tools home-visitors screened and provided education to clients. The program was evaluated periodically by measuring and trending the enrollment and retention rates of clients, and the success of virtual service was evident by the retention rate.

Accomplishments: In analyzing the pre-pandemic months of April and May of 2019, a total of 132 prenatal clients enrolled in the program and 96 stayed in the program until delivery. During the same two months in 2020, at the start of the pandemic, a total of 105 prenatal clients enrolled in the program and 76 stayed until delivery. The retention rate was 72.7% and 72.4%, respectively. The decrease in the enrolment rate is attributed to the early stages of the pandemic and the initial lockdowns.

Barriers: Barriers include screening for sensitive topics such as Domestic Violence (DV) and using the Carbon Monoxide (CO) monitor, which is used to measure smoking cessation. Both services were stopped during the initial phase of the pandemic. However, as the pandemic evolved and vaccines

became widely available, RFTS adapted a hybrid approach. Hence, the DV screening and the quit smoking progress was to be documented during in-person visits.

Lessons Learned: By its nature, the virtual delivery of the home visitation program is contradictory to the fundamental element of the in-person home visits, however, clients' preference of virtual, in person or hybrid does not change their retention into the program. RFTS encourages health equity and by adding the method of virtual delivery, RFTS opens the door to expand services to a wider clientele across the region and potentially pair them with HVs that are of similar background to provide better services.

Information for Replication:

Listening to the Voices of Lived Experience

Program/Policy Abstracts

Authors: Presenting Author - Lisa Crane, MSN, RN

Presenting Author - Patty Pigman, MSW, LCSW

Category/Categories: Maternal health, Maternal Substance Use Disorder, Mental/behavioral health,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Other, Appreciative Inquiry

Issue: Substance use among pregnant women is a major contributor to both infant and maternal mortality. In 2020, our hospital cared for 99 families with substance exposed infants, representing nearly 8% of total births. Of these, 17% were identified as illicit drug use. Using human-centered design to identify solutions, we received valuable input from community organizations and healthcare providers, but we were missing feedback from women with lived experience

Setting: We conducted our listening sessions in Columbus, Indiana, a small city of 50,500 which is the county seat in Bartholomew County. Columbus is the largest town in this rural county. Columbus Regional Hospital serves a 10 county area, with the majority of births from people living in Bartholomew, Jennings and Jackson Counties. These counties are rural with 50% of births funded by Medicaid.

Project: “Nothing about us without us” is a mantra our team uses to guide our work. We are fortunate in our county to have a system of care for individuals struggling with SUD that includes a recovery resource center, corrections system support, treatment center and transitional recovery housing. In collaboration with these partners, we used empathic interviews and focus groups to gather information from women with lived experience with SUD. In total, we spoke with 24 women, asking open-ended questions about experiences during pregnancy, birth and postpartum. We asked clarifying questions about experiences seeking and receiving prenatal care, and birth experiences in the hospital. We followed up with questions about recommendations the mothers had for those providing care to individuals with substance use.

Accomplishments: We identified common themes and recommendations from our listening sessions, and used these recommendations in our proposal for a funding opportunity. We were awarded funding to address systems changes over the next 2 years. As we implement the planned interventions, we continue to be informed by the powerful stories the mothers shared with us. These interventions include universal urine drug screen on prenatal intake, peer recovery coach available to immediately meet mothers in need of recovery services at OB offices, nurse navigation and mothers in recovery support group. We will evaluate results through our grant reporting: numbers of mothers in need of services identified, and those referred to Peer Recovery Coach and treatment, in addition to those engaged in recovery support group.

Barriers: There is significant stigma attached to substance use, and much more so for pregnant people with SUD. This makes scheduling interviews and focus groups especially challenging. Those who serve these women are rightfully protective of them. Longstanding relationships with gatekeepers in the

community helped us overcome this. Even so, it took a number of months to schedule the groups we felt we needed to get a full picture of the journeys to recovery.

Lessons Learned: We learned that to gather honest information from a vulnerable population, we needed to have trusting relationships with the community. We learned to enter discussions with humility, and to leave our assumptions at the door. We learned to stress from the very beginning that this was a “no judgment zone”. We learned that having their stories heard and acknowledged by caring professionals was welcomed by almost all the participants. Most of all we learned that we came away with our stereotypes blown up, and with awe and respect for the strength of these women and their deep love for their child(ren).

Information for Replication: Budget for this work included the staff time for preparation and in the group. We typically had at least 3 people present at each group, and sometimes 4. We provided \$25 gift cards to all those who participated to thank them for their time. Key partners were our local mother-baby recovery house recovery support hub, community corrections and Nurse-Family Partnership.

Non-Stigmatizing Public Health Communications to Address Perinatal Cannabis Use

Program/Policy Abstracts

Authors: Amani Echols, MPH

Category/Categories: Mental/behavioral health, Tobacco, smoking, vaping,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Other, Social media analytics

Issue: Most people in the U.S. now live in a jurisdiction where cannabis is legal for medical or nonmedical use. As cannabis legalization accelerates, state health departments are increasingly concerned about the use of cannabis during the perinatal period and its potential harms to maternal, fetal, and newborn health. Approximately one in 20 people report using cannabis while pregnant, making it the most used federally illicit substance by pregnant people in the U.S. In response, public health departments have utilized different forms of public health communication (e.g., social media campaigns, warning labels) to educate pregnant and lactating people on the potential harms of cannabis use. However, developing effective public health messaging that does not contribute to the stigmatization of pregnant and postpartum people who use cannabis can be challenging. This session will focus on different communication modalities public health departments utilize to address perinatal cannabis use and highlight messaging approaches that do not contribute to stigma. State examples will be incorporated to demonstrate effective public health campaigns and outline the considerations for developing the campaigns.

Setting: The content presented will benefit state and local health departments. The session will explore avenues for delivering accurate cannabis use health information without stigmatizing pregnant and postpartum people. Then, in consultation with the states and subject matter experts, state examples of comprehensive communication campaigns and strategies for perinatal cannabis use will be presented.

Project: Through its PRISM project (Promoting Innovation in State MCH Policymaking), AMCHP is engaged in research and education on the role of Title V in addressing mental health and substance use during the perinatal period. In this workshop, AMCHP will provide background on cannabis use in the perinatal period. The session will present an overview of current public health communication approaches state health departments are employing to address perinatal cannabis use. Additionally, in consultation with states, key communication considerations and techniques to reduce stigmatization of pregnant and postpartum people who use will be shared.

Accomplishments: AMCHP will disseminate findings on effective state public health communication strategies and policy approaches for cannabis that do not contribute to stigma.

Barriers: Ineffective public health messaging on cannabis use can result in distrust in healthcare systems, stigmatization, and uphold narratives that contribute to the criminalization of pregnant and postpartum people. Counter messaging from the cannabis industry is also a barrier to effective, medically accurate information. In consultation with states, AMCHP will share how states have addressed these barriers in their public health communications.

Lessons Learned: This session will provide an overview of current public health communication approaches for perinatal cannabis use and provide examples of state public health campaigns. Participants will be encouraged to consider proactive ways to promote effective, non-stigmatizing public health campaigns for perinatal cannabis use.

Information for Replication: AMCHP Issue Brief titled Perinatal Cannabis Use in the Era of Increasing Legalization: Considerations for State MCH Programs: <https://amchp.org/resources/perinatal-cannabis-use-in-the-era-of-increasing-legalization-considerations-for-state-mch-programs/>

Progress not perfection, lessons learned and meaningful actions from Arizona's Perinatal Periods of Risk Approach

Program/Policy Abstracts

Authors: Presenting Author - Laura Bellucci, MBA

Presenting Author - Martin Celaya, MPH

Category/Categories: Infant mortality; pregnancy outcomes, Data: innovation, quality improvement, communication, data to action

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Implementation science, Program evaluation or surveillance evaluation, Using existing data sources in innovative ways.

Issue: The Arizona infant mortality rate (IMR) has remained the same as in 2007, around 6.3 per 1,000 live births. Infant mortality risk varies by race/ethnicity, with Black and American Indian (AI) infants having the worst survival chances among racial/ethnic groups every year. In 2018 the IMR for Black and AI infants was 9.2 and 9.3 per 1,000 live births despite these two groups each comprising only 6% of all live births. Stakeholders from Communities of Color reached out to the Arizona Department of Health Services (ADHS) in 2018 to identify the best approach to address the increasing rate of infant deaths in their communities. It was decided by agency leadership and community partners that the Perinatal Periods of Risk Approach (PPOR) would be employed.

Setting: This project took place statewide across Arizona. The intended audience for the project activities included: medical and non-medical service providers, state agencies, legislators, and networks of family representatives.

Project: ADHS was the analytical and programmatic lead of the project and utilized the PPOR methodology developed by CityMatCH in conjunction with the Centers for Disease Control and Prevention and the March of Dimes. Stages 1-2 included fetal-infant mortality data of resident mothers and infants from 2014 to 2018. Stage 3 resulted in two annual Maternal and Infant Mortality Summits that engaged stakeholders and communities on the findings. Stages 4-6 are continually in progress but have resulted in developing a statewide Fetal-Infant Mortality Action Plan (FIMAP) based on the PPOR and Arizona's Child Fatality Review. The FIMAP utilizes a Policy, Systems, and Environmental Change approach to reach populations and uncover strategies for sustained favorable impact in communities of color. The project's inputs, process, and outputs diagram (IPO) visually describe how PPOR, CFR, and other statewide plans and initiatives were leveraged to produce a comprehensive and thorough action plan for Arizona.

Accomplishments: Since completing this project, ADHS established an internal workgroup to plan and execute a statewide action plan to combat fetal infant mortality. ADHS engaged stakeholders and communities at two annual Arizona Maternal and Infant Mortality Summits statewide. The summit objectives were to present the prevalent and associated risk factors leading to maternal and infant mortality (PPOR findings); identify opportunities to reduce preventable maternal and infant mortality;

discuss how Arizona can achieve health equity for populations experiencing disparities, and discuss cross-sector strategies to support Arizona families during and after COVID-19.

Barriers: Identifying interventions to be community-specific for Black and AI families within Arizona was a significant barrier but had an immense potential to reduce the number of fetal-infant deaths. The project engaged community liaisons and representatives in summit planning meetings on the stated barrier and built communal trust and community support.

Lessons Learned: PPOR develops stronger collaborations with communities in improving maternal and child health outcomes through effective data use, strengthened data capacity, greater shared understanding of infant mortality issues, placed accountability, and developed mutual trust. Active community engagement is pivotal to the success of PPOR and its subsequent initiatives.

Ohio Equity Institute - Using Program Data for Quality Improvement and Action

Program/Policy Abstracts

Authors: Presenting Author - Emily Burns, MPH

Presenting Author - Kristin Snyder, MPH

Category/Categories: Data: innovation, quality improvement, communication, Infant mortality; pregnancy outcomes

Method of Presentation: Poster Presentation

Data Methods: Program evaluation or surveillance evaluation, Using existing data sources in innovative ways.

Issue: The Ohio Equity Institute (OEI) program was established in 2012 to address inequities in birth outcomes. In 2018, the Neighborhood Navigation (NN) strategy was added to establish local capacity to connect Black pregnant people to clinical and social services. Neighborhood Navigators primary outreach strategies were expected to authentically fill a gap, by reaching women in non-traditional settings where established systems and programs do not currently exist. Through data monitoring and evaluation, the OEI state team found 30% of clients were identified in traditional settings, which was not aligned with the intention of the program.

Setting: Nine of the urban counties in Ohio with the greatest racial disparities in birth outcomes. Black pregnant people are the priority population for NN services.

Project: Over four years, multiple activities were conducted to address the identified issue. In year one, Ohio Department of Health (ODH) reinforced the true intent of OEI, and the misalignment seen in the intent versus the actual outreach local teams were conducting. Year two consisted of sending communications outlining the NN expectation of conducting outreach in non-traditional spaces. ODH defined traditional vs. non-traditional avenues of outreach and included concrete examples with each definition. ODH also intentionally created individual and group technical assistance opportunities and connected teams who were struggling with this expectation to colleagues who were successful at non-traditional outreach. As a data monitoring mechanism, an outreach question was added to the screening tool responsible for collecting client interactions in year three. Finally, ODH added an official grant deliverable, tied to funding, holding subrecipients accountable to the expectation that OEI team members would conduct non-traditional avenues of outreach. All activities were executed through a developmental evaluation approach.

Accomplishments: Through our stepwise approach, ODH has seen evidence of a shift from traditional to non-traditional forms of outreach. After building a question into the client screening tool, we saw a 9% increase in 15 months from the baseline data collection.

Barriers: One barrier ODH encountered was determining the appropriate approach to measuring and quantifying the non-traditional outreach requirement. Addressing the issue also created culture shifts within some of the OEI teams, creating some reluctance. These barriers were overcome through slowly

making changes and increasing accountability, communicating thoroughly, and listening to subrecipients.

Lessons Learned: Goals and objectives should be measurable and threaded throughout all aspects of the public health program. Without the proper monitoring and evaluation mechanisms in place, the emerging issue could not have been identified or resolved within OEI. Our successful approach included small investments over time, which helped local OEI teams produce sustainable changes in outreach and the program overall to better achieve intent and goals. Creating these changes was a collaborative effort between ODH and subrecipients. Collective input from subrecipients, including the Neighborhood Navigators, was invaluable to the success of ODH's process. It's important to keep the project's long-term goals and objectives in mind when making all programmatic decisions. For OEI, this means ensuring all decisions are led by Black families and communities, with the intent of reducing racial inequities in birth outcomes.

Building the MCH Workforce: the Role of MCH Academe

Program/Policy Abstracts

Authors: Presenting Author - Arden Handler, MPH, DrPH

Non-Presenting Author - Gabriela Masini, MSW

Non-Presenting Author - Alisa Velonis, PhD

Non-Presenting Author - Julie Maslowsky, PhD

Category/Categories: Leadership/workforce development, Racism, equity, social justice,

Method of Presentation: Poster Presentation

Issue: To address the multiple needs of the MCH population, Title V agencies and their partners require adaptive leaders with command of an array of tools to ensure that all women, children, and families have access to both high quality health care and multi-sector strategies that meet their needs across the life course. To ensure the availability of these skilled individuals for the MCH workforce, academic MCH programs must prepare future MCH leaders who are steeped in social justice, systems thinking, and a life course approach to effectively address the structural and social determinants of health and reduce health inequities.

Setting: The University of Illinois School of Public Health Center of Excellence in MCH (UIC-SPH CoE-MCH) in Chicago, IL, with support from the Maternal and Child Health Bureau (MCHB), has responded to this need by providing health equity-focused leadership education, training, and programming to a diverse body of students and members of the current MCH workforce.

Project: The UIC-SPH CoE-MCH offers comprehensive graduate education at the MPH, doctoral, and post-doctoral levels in order to develop the next generation of diverse broad-thinking, flexible, and highly proficient MCH professionals. This leadership education provides students with direct exposure to the MCH community and continues support after graduation with numerous opportunities for interaction with MCH academe. The success of this multi-faceted effort is documented through surveys of graduating students and alumni, and in-depth interviews with UIC-SPH CoE-MCH alumni in leadership positions who reflect on their MCH leadership trajectory in relationship to their experience with the CoE-MCH.

Accomplishments: One hundred percent of 2020 (n=13) and 2021 (n=12) graduating MPH students completed initial and final leadership competency assessments. Comparison analyses show positive growth across all competencies with particular strength in MCH leadership competencies. Surveys conducted in 2020 and 2021 of 2, 5 and 10 year graduates show that over 70% of respondents reported holding MCH leadership positions at the time of the survey. Recent graduates were less likely to be in leadership positions compared to graduates 5 and 10 years out. The detailed analysis of interviews with at least 10 diverse CoE-MCH graduates in leadership positions highlights the key factors affecting graduates' development as MCH leaders and their needs and concerns as they navigate their leadership roles.

Barriers: Students come to their MCH graduate training with diverse lived experiences that sometimes require attention beyond the traditional educational process. Supporting these needs allows a more diverse pool of students to emerge as MCH leaders.

Lessons Learned: Becoming an MCH leader begins with leadership and mentoring opportunities while a student in an MCH graduate program that is further supported by ongoing interactions with MCH academe after graduation. Our data suggest that although initially MCH alumni are not necessarily in leadership positions, this changes over time.

Information for Replication: The development of MCH leaders requires engaging students in the MCH community as part of their graduate training, and responding to their diverse needs before and after graduation. The process of providing intensive and engaged leadership training is clearly facilitated by financial support from an external entity such as MCHB.

Leveraging Technology to Connect Pregnant Women to Prenatal Services in Baltimore, MD: ePRA Project

Program/Policy Abstracts

Authors: Presenting Author - Amy Secrist

Category/Categories: Health insurance or safety net care, Data: innovation, quality improvement, communication,

Method of Presentation: Poster Presentation

Issue: The Maryland Prenatal Risk Assessment (PRA) identifies pregnant women with health and social concerns that may place maternal and infant health at risk. The PRA is required for all Medicaid-eligible pregnant women (approximately 58% of Baltimore City, MD births). In Baltimore City, submission triggers a series of triaging events within the B'more for Healthy Babies (BHB) centralized intake system connecting pregnant women to community-based resources. PRA completion rates in Baltimore City hovered at 65%. Clinic staff reported that the PRA process is cumbersome, duplicative, and outside of their workflow. When the PRA is submitted, often critical information is missing, resulting in missed opportunities for patients.

Setting: The Baltimore City Fetal-Infant Mortality Review found that eligible pregnant women did not receive a PRA in 55% of fetal-infant deaths reviewed. Baltimore's infant mortality rate has decreased by 35% with a 53% decrease in the Black-white racial disparity since the launch of BHB (2009-2019). However, the Black infant mortality rate remains 2.5 times higher than the white rate, with Black pregnant women being disproportionately supported by Medicaid.

Project: The goals of the electronic PRA (ePRA) pilot project were to create efficiency, improve linkage to care, and provide more complete data to all partners involved in connection to care. The pilot brought together stakeholders to make the PRA user-friendly for providers embedded in the clinical workflow for the first prenatal care visit at two clinical sites. Working with physician champions and health system IT staff, the PRA was recreated within the clinics' electronic medical record (EMR), drawing necessary data from relevant parts of the patient's record. Providers then began to complete and transmit the PRA electronically from within their EMRs.

Accomplishments: Each pilot site successfully built the ePRA directly into its EMR, ensuring easy adoption by providers, improving utilization and data quality, and decreasing time between the first prenatal care visit and referrals. Through a survey, all providers reported ease of use, compatibility with clinical workflow, decreased delays, improved accuracy and patient care. Providers saw an increased PRA completion rate of 83% using the ePRA, even during a period of staff turnover, which is higher than the city average of 65%. BHB is now scaling the ePRA across Baltimore City. To date, six other health systems are in various stages of integrating the ePRA into their EMRs and clinical workflows. This expansion will make the ePRA available at approximately 70% of Baltimore City obstetrics clinics. The ePRA now has the full support of state partners and is expanding across the state, piloting at five sites in neighboring counties, developing a technical assistance toolkit, and providing recommendations for statewide implementation.

Barriers: Lack of support from partners was initially a barrier, but was overcome after successful demonstration through the pilot.

Lessons Learned: The ePRA pilot improved efficiency for all partners. Through collaborative data integration, cumbersome processes like the PRA can be made more effective for providers, demonstrating how improving workflow and leveraging existing technology, we can improve linkage to care, which can lead to improved outcomes for high-risk pregnant patients and babies.

Addressing Disparities in Maternal and Child Health in Connecticut Using Community-Based Partnerships and Collaborations

Program/Policy Abstracts

Authors: Presenting Author - Katharyn Baca, PhD, MPH

Presenting Author - Alison Tyliszczak, MSW

Non-Presenting Author - Jennifer Morin, MPH

Non-Presenting Author - Marijane Carey, MSW, MPH

Non-Presenting Author - Sang Hee Won, MPH

Non-Presenting Author - Marc Camardo, MPH

Category/Categories: Community collaboration, Maternal health,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Issue: People of color (POC), specifically Non-Hispanic Black (NHB) and American Indian Alaska Native, are more likely to suffer from severe maternal morbidity or die due to pregnancy-related reasons. Causes of such disparities include the racism and discrimination that POC experience while accessing maternal health (MH) services. Using 2020 Connecticut Pregnancy Risk Assessment Monitoring Survey, 9.2% of Connecticut mothers reported being treated unfairly in getting health-related services because of different maternal characteristics during pregnancy, and NHB and Hispanic mothers were disproportionately affected (16.5% and 13.3%, respectively). Meaningful engagement and collaboration with people with lived experiences of discrimination or mistrust during pregnancy, childbirth, and the postpartum period may inform efforts to improve quality of care and ultimately reduce disparities in MH.

Setting: Connecticut.

Project: Connecticut Department of Public Health (DPH) and Connecticut March of Dimes (MOD) created Connecticut's Reproductive Justice Alliance (Alliance) in Spring 2021 to address inequities in maternal and reproductive health and justice in Connecticut through multidisciplinary partnerships. The Alliance consists of 30 individuals who represent those with lived experiences, doulas, and community-based organizations (CBOs) and Connecticut State agencies. Key objectives of the Alliance include improving access to respectful, quality maternity care; respectful interactions between patients, providers and staff; health care systems, resources, and policies related to MH; and accountability of health care systems by centering patients' voices. The Alliance has prioritized the following three key areas: planning and conducting qualitative research, including focus group discussions (FGDs) with NHB and Hispanic birthing persons to help identify interventions or activities; increasing community engagement and creation of new partnerships within communities; and improving transparency on data around the inequities in MH.

Accomplishments: The Alliance has been successful in collaborating with new members who inform the Alliance on maternity care access and health care system issues and resources from their respective

communities. The Alliance co-created tools, recruitment strategies, and methodologies for qualitative research, which strengthens community engagement. The voices of community members are included to align activities with the needs of communities, like learning which FGD themes should be included and prioritized from NHB and Hispanic birthing persons. A factsheet on inequities in MH was created to be shared with communities and partners. Lastly, there has been statewide recognition of the Alliance's dedication to reproductive justice in Connecticut, including recognition from community organizations, Connecticut State agencies, and statewide workgroups.

Barriers: Project activities are funded through various sources, including federal and community dollars, with various start and end dates, which can cause delays.

Lessons Learned: Ongoing input and participation from NHB and Hispanic birthing persons has strengthened the ability of the Alliance to be responsive to community needs. We learned that a collective approach, including NHB and Hispanic birthing persons, CBOs and state-level partners, allows for conversations with various perspectives and approaches which is important in addressing adverse MH outcomes through the lens of respectful care.

Information for Replication: The collective approach is useful when addressing respectful care which requires time and financial investments. However, it is an approach that is respectful of community voices which is important for sustainability and acceptability.

Advocating for Equitable Care Through a Home Visiting Program

Program/Policy Abstracts

Authors: Sarah Harness, MPH

Presenting Author - Lynn Herr, RN, BSN, CPN

Presenting Author - Sophie French, RN, BSN

Category/Categories: Infant mortality; pregnancy outcomes, Home visiting,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation

Issue: The infant mortality rate in the United States in 2019 was 5.6 deaths/1,000 live births. During the same year in Indiana, the infant mortality rate was 6.5 deaths/1,000 live births and in Southwestern Indiana it was 6.4 deaths/1,000 live births. In 2018, in the United States, the leading causes of infant deaths were birth defects, preterm birth and low birth weight, injuries including suffocation, sudden infant death syndrome, and pregnancy complications. Regardless of race, ethnicity, gender or socioeconomic status, everyone deserves the right to be treated equally and receive quality care.

Setting: The Pre to 3 Program, home visiting program for pregnant women and women with children (birth to 3 years) in Southwestern Indiana, advocates for equitable care for clients. Anyone, regardless of income level, can enroll in the program, the majority of clients are the most vulnerable with 74.6% on Medicaid, 76% unmarried, 64.6% household income less than \$15,000, 24.8% no high school diploma, 14.2% Hispanic, and 25.8% black.

Project: Through screenings, the program assesses client needs and ensures they are receiving adequate care. One of the assessments, which began in April 2019, asks prenatal clients a series of questions to determine if they have a high, moderate, or low risk for developing preeclampsia, a contributing factor to infant and maternal mortality. American College of Obstetricians and Gynecologists recommends, individuals with high or moderate risk for developing preeclampsia to be prescribed low-dose aspirin to reduce risk of preeclampsia. From April 2019 to December 2021, the program assessed 422 clients. Of those clients, 14.2% were high risk, 63.5% moderate risk, and 22.3% low risk. The program developed a letter, with feedback from providers, to provide to client and physician bringing awareness of high or moderate risk for preeclampsia. The letter highlights client's risk factors with recommendations for aspirin therapy to reduce preeclampsia risk. Physician amenability to prescribe low-dose aspirin is followed by the client's home visitor.

Accomplishments: Of the identified clients with high risk who received the letter, 13 of 23 discussed their risk with their physician. Of those who discussed risk, 84.6% began low-dose aspirin. Of the identified clients with moderate risk who received the letter, 31 of 105 discussed their risk with their physician. Of those who discussed their risk, 67.7% began taking low-dose aspirin. When a client and physician are able to discuss the risk factors there is higher initiation of aspirin therapy, therefore an opportunity for improved maternal and infant outcomes.

Barriers: Identified barriers included an inability to share information with a provider due to a missing authorization to release information form. Relying on client lead conversations with providers were not always productive. Not all providers prescribed aspirin to identified at-risk clients. Transportation and finances are barriers for our clients in regards to prescriptions.

Lessons Learned: When we advocate for equitable care for our clients and provide more social support to our families through weekly home visits, we can help decrease the maternal and infant mortality rate in Southwestern Indiana.

Information for Replication:

Improving Black Maternal Health Outcomes and Combatting Systemic Racism through Melanated Group Midwifery Care

Program/Policy Abstracts

Authors: Presenting Author - Karie Stewart, PhD(c), MPH, MSN, APRN

Non-Presenting Author - Katlyn Dillane, MPH (c), BS

Non-Presenting Author - Katherine Craemer, MPH

Non-Presenting Author - Pamela Pearson, DNP, CNM, RN

Non-Presenting Author - Saria Lofton, PhD, RN

Non-Presenting Author - Crystal Patil, PhD

Non-Presenting Author - Kylea Liese, PhD, CNM

Non-Presenting Author - Stacie Geller, PhD, MPA

Category/Categories: Maternal health, Racism, equity, social justice

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Implementation science, Other, New clinical model

Issue: In Illinois, maternal mortality rates are 3-4 times higher for Black pregnant persons compared to their White counterparts. Black mothers experience disrespectful and discriminatory healthcare, have alarmingly low rates of adequate perinatal care, and insufficient coordination of specialty care as well as wrap-around services, especially in the postpartum period. These systemic failings engender distrust and reveal the societal drivers of maternal morbidity and mortality disparities.

Setting: This study takes place at a prenatal clinic at a large urban hospital in Chicago that predominantly serves Black pregnant people who are medically underserved.

Project: Melanated Group Midwifery Care (MGMC) is an innovative model of maternity care that incorporates four evidence-based strategies to improve maternal health care experiences for Black mothers: 1) Racial concordance matching Black midwives and Black patients to increase trust and patient satisfaction 2) Group prenatal care to improve social support, self-efficacy, and health literacy 3) Nurse navigation support during pregnancy and one year postpartum to connect patients to specialty care and wrap-around services and 4) community-based postpartum doula support to address postpartum depression and increase linkages to healthcare for 12 months following birth. We will enroll 432 Black pregnant persons in a randomized control trial comparing MGMC to standard of care related to trust and engagement with the health care system. We also evaluate implementation barriers, facilitators, and solutions to integrating MGMC into clinical care. Finally, we will track and describe the care pathways of patients in both MGMC and usual care who experience severe pregnancy-related complications. We expect MGMC participants will have greater trust and engagement in the health care system than participants receiving usual care.

Accomplishments: We developed culturally relevant protocols and training materials for racially concordant group prenatal care, nurse navigation and postpartum doula support. We established a stakeholder advisory board comprised of community leaders, legislators, insurers, and Black maternal health advocates to support MGMC's scalability and sustainability. We also established a community based advisory board of Black mothers in Chicago to ensure that the MGMC model is culturally concordant and meeting the needs of the community.

Barriers: Implementation barriers include billing complexities (care coordination and doula services) and challenges to the healthcare status quo via hiring, retaining and integrating Black midwives and community doulas. To address these barriers, we identified strategies to improve equity within maternal health research and policy: 1) Structures must be developed for successful interdisciplinary communication and mentorship; 2) Communication and respect must be mutual within the healthcare system; and 3) Researchers must center the expertise and voices of community based Black birthing people affected by disparities in maternal health.

Lessons Learned: Given that no single intervention has substantially reduced maternal disparities, MGMC is a promising prenatal and postnatal model of care that can improve trust and patient engagement in the health care system and decrease experiences of racism. This study will provide evidence of the effectiveness and implementation of a multilevel intervention across the pregnancy and postpartum continuum.

Stability, Security and Mobility: Financial Well-being as a Strategy to Address Health Equity

Program/Policy Abstracts

Authors: Presenting Author - Jessie Reeder

Presenting Author - Michele Ebendick, MA

Category/Categories: Community collaboration, Leadership/workforce development

Method of Presentation: No Preference

Issue: Working with families and community partners, we see how poverty compounds negative health outcomes, specifically child development and maternal mental health. When we effectively disrupt the cycle of poverty through initiatives such as increased access to the Child Tax Credit, we can reduce poverty among families, support their social-emotional well-being and foster opportunities for positive attachment, thus improving multi-generational health outcomes. The Maternal and Child Health (MCH) team is implementing financial well-being as a strategy to increase families' protective factors in addressing upstream root causes of health inequities.

Setting: Adams, Arapahoe and Douglas counties in Colorado

Project: Recognizing this continuum of economic stability, security and mobility, the following projects were implemented to support families: Piloted a tax credit navigation project at a community resource hub. This allowed for economic stability to be a priority by providing connections to concrete supports like food boxes and child care assistance program navigation. Cross collaboration with direct services to capture stories of successful integration of financial and social emotional well-being. Participation in our agency's Total Worker Health initiative to emphasize the importance of financial well-being as a social determinant of health. Care coordination for children and youth with special healthcare needs, embedded in the MCH program, promotes a clear understanding of what this means for families and allows program staff to identify population and system opportunities to support families across the life course.

Accomplishments: As the backbone agency for financial and social emotional well-being, we provide a vision for our partners and community. A holistic approach through financial well-being and the connection to protective factors allowed for community buy-in and successful implementation of pilot projects. Not only did we change the way we view economic mobility, but we also shifted how we provide services to our community through our tax navigation pilot.

Barriers: The initial work quickly showed that economic mobility was a limited perspective of where families are. Economic mobility comes after a family has acquired financial stability and built financial security. Continued challenges include articulating public health's role in financial work and supporting a holistic multi generation approach to reducing inequities.

Lessons Learned: While promoting increased access to tax credits for families, the MCH team learned that promoting tax credits without addressing immediate needs was inauthentic and unjust to families. This prompted a shift in the strategy to recognizing where families are in the continuum of economic stability, security and mobility by reinforcing the importance of families' immediate needs being met.

Financial Well-Being allowed us to look at the inequities that exist among multiple systems as families try to access services and navigate their own well beings.

Information for Replication: Conducting an environmental scan of partners is a helpful first step to understanding financial well-being and the role of public health. This includes finding out who in the community is a Volunteer Income Tax Assistance (VITA) site, which partners are incorporating protective factors into their programs and what workforce development is occurring within your own agency. It was helpful to look within our MCH program and determine where the financial well-being thread could be woven in to elevate the need for financial stability as a priority when supporting the community, particularly our CYSHCN.

Rhode Island Doula Workforce Development

Program/Policy Abstracts

Authors: Presenting Author - Deborah Garneau, MA

Presenting Author - Aidea Downie, MA

Category/Categories: Maternal morbidity and mortality, Women's health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation

Issue: RI had a non-diverse doula workforce without access to state certification pathways or insurance coverage. This financially inaccessible perinatal workforce potentially could address the below perinatal disparities. In 2019, 8% of RI Womxn of Color (WOC) responded always experiencing racism in the healthcare setting and 49% WOC experienced racism sometimes. In 2020, Non-Hispanic Black Women were less likely to receive prenatal care in their first trimester (73%) than Non-Hispanic White women (87%). Non-Hispanic Black women were almost twice as likely to experience severe maternal morbidity (SMM) (152 SMM per 10,000 delivery hospitalizations) than Non-Hispanic White women (82 SMM per 10,000 delivery hospitalizations).

Setting: Activities happened in RI and spanned across a multiplicity of state and local agencies, including RI Department of Health (RIDOH), Executive Office of Health and Human Services (EOHHS), One Neighborhood Builders Health Equity Zone (ONEIB HEZ), RI Medicaid, RI Certification Board (RICB), and statewide doula collectives.

Project: Studies have shown doulas reduce pregnancy complications, prematurity and illness of newborns, unnecessary cesareans, and increase breastfeeding rates, and overall satisfaction of childbirth care. 1 RIDOH's MCH program assisted in passing the Doula Reimbursement Act (DRA) and creating doula certification standards and insurance reimbursement pathways. Local stakeholders (KIDS COUNT, RI Birth Workers Collective, SISTAFire, community doulas) created the Right from the Start campaign that championed a package of legislation and budget priorities to advance state policies (including DRA) for babies, young children, and families. After the passage of DRA, RIDOH and EOHHS supported the mobilization of Medicaid processes through the State Plan Amendment (SPA). Title V facilitated doula workforce and RIBC collaboration that yielded certification standards. Ultimately, local stakeholders, ONIB HEZ, and Preschool Development and Title V Grants developed, funded, and implemented a Doula Workforce Development Initiative that offered doula training and mentorship opportunities to racially/ethnically marginalized communities. Analyzing this expanding workforce is ongoing through the Early Childhood Comprehensive Systems grant implementing a doula workforce gap and asset analysis. We will continue addressing workforce gaps and collaborating statewide with communities, advocates, and insurances. 1.ADVANCING BIRTH JUSTICE:Community-Based Doula Models as a Standard of Care for Ending Racial Disparities. <https://blackmamasmatter.org/wp-content/uploads/2019/03/Advancing-Birth-Justice-CBD-Models-as-Std-of-Care-3-25-19.pdf>

Accomplishments: Accomplishments include the passage of DRA, the creation of the SPA, the completion of RIBC Doula Certification Standards and Doula Asset and Gap Analysis report, and the expansion and diversification of the doula workforce.

Barriers: Barriers included navigating complex administrative systems and facilitating collaborations between community stakeholders and government agencies. Both issues were tackled through Title V staff outreaching to state agencies and community stakeholders and engaging in conversations that aligned our goals and mapped a way forward towards the proliferation of them.

Lessons Learned: Patience and listening are required when forging a collaborative partnership between community stakeholders and government entities. Title V staff acted as an intermediary to bridge the gap in understanding between both parties and unite both under a common goal.

Information for Replication: We recommend involvement of all core state health agencies (Title V/RIDOH, EOHHS, Medicaid) when supporting doula workforce reimbursement, certification, and development. It is important to form a collaborative relationship with the doula workforce and associated advocates as a state implements all activities above.

Measuring Substance Use in Pregnancy Using Two Statewide Datasets in Connecticut

Program/Policy Abstracts

Authors: Presenting Author - Lisa Budris, MS, MPH

Presenting Author - Jennifer Morin, MPH

Non-Presenting Author - Margaret Lloyd Sieger, PhD

Category/Categories: Maternal health, Healthcare quality improvement

Method of Presentation: Poster Presentation

Data Methods: Using existing data sources in innovative ways

Issue: When an infant with prenatal substance exposure is born, CAPTA (Child Abuse Prevention and Treatment Act) requires birthing hospitals to notify the Connecticut Department of Children and Families through an online portal. A CAPTA notification occurs when there is evidence of a newborn with prenatal substance exposure. This notification does not contain any personally identifying information and is intended to meet federal data requirements, help the State monitor prevalence and plan for possible service needs. However, because the CAPTA portal is new, it is unknown how well the system is capturing infants with prenatal substance exposure.

Setting: Birthing Hospitals in Connecticut

Project: This project aimed to validate CAPTA data against self-report data on substance use during pregnancy collected using the Connecticut Pregnancy Risk Assessment Monitoring System (PRAMS) survey, including a 2019 supplement measuring prescription pain reliever and other substances during pregnancy. Since CAPTA notifications started March 15, 2019, the timeframe for the analysis was limited to births that occurred March 15 to December 31, 2019. A comparison of substance use was made for alcohol, marijuana, medication-assisted treatment (MAT), non-MAT opioids, and other illegal drugs, both as single and polysubstance use categories.

Accomplishments: The project was effective in comparing substance exposure using two different surveillance systems. PRAMS found higher percentages of substance users during pregnancy compared to CAPTA (18.1% vs. 6.0%, respectively). PRAMS captures any alcohol consumption (including <1 time per week) during the last trimester while CAPTA most likely captures heavy alcohol use only because most hospitals conduct perinatal toxicology at provider discretion. When the three or less drinks per week categories were excluded from PRAMS, any substance use declined from 18.1% to 10.7% of women and single-use alcohol reduced to <5 individuals, which more closely aligns with CAPTA. There is no significant difference ($p < .05$) in any substance use between race/ethnicity groups in PRAMS, and this does not change when the three or less drinks per week categories were excluded. However, they are different in CAPTA; notifications were twice as high among non-Hispanic Black than non-Hispanic White (10.4% (9.4%-11.5%) vs. 5.2% (4.9%-5.6%), respectively). PRAMS also found a higher percent of single-substance users (10.3% (7.7%-12.9%) vs. 5.1% (4.8%-5.3%)). Another accomplishment includes a newfound partnership with UConn School of Social Work and the Department of Public Health.

Barriers: The two data systems are not equivalent, with PRAMS measuring the mother's use during pregnancy and CAPTA measuring mother and/or infant toxicology. PRAMS is self-report, individuals may underreport usage, answers are subject to recall bias, and small numbers may produce unstable estimates. CAPTA relies on provider identification and there is not a standard practice that all hospitals follow, which may account for racial disparities on reporting. Varied hospital identification methods may impact how well CAPTA is capturing all infants with exposure.

Lessons Learned: Data suggests that all infants with prenatal substance exposure may not be captured in CAPTA, especially within different racial/ethnic groups. Implementing a standard of practice across all Connecticut birthing hospitals for reporting CAPTA notifications could lead to more accurate identification of substance exposed infants.

Empowerment of Community-Based Organizations to Improve Health of Women of Low Income and/or from Minority Demographics in North Dakota

Program/Policy Abstracts

Authors: Valentina Asiedu, BSc

Presenting Author - Alicia Belay, PhD, MPH

Presenting Author - Ramona A. Danielson, PhD, MS, Assistant Professor

Category/Categories: Community collaboration, Maternal health,

Method of Presentation: No Preference

Data Methods: Implementation science

Issue: The 2017-2018 North Dakota Pregnancy Risk Assessment Monitoring System (PRAMS) data, stated that 37% of women reported having a “routine” check up in the 12 months prior to becoming pregnant. The North Dakota Department of Health (NDDoH) Title V Maternal Child Health Well Woman Care Program resolved to collaborate with community partners to use media platforms for educating women on available preventative care and providers, especially for women of lower incomes and/or from a minority demographic in the communities they serve. However, the community-based organizations representing the population of focus have not typically applied for NDDoH funding.

Setting: Community partners were primarily nonprofit organizations from urban communities in North Dakota: Jamestown, Bismarck, Grand Forks, and Minot.

Project: According to the 2020 Georgetown University Maternal and Child Health Evidence Toolkit, media campaigns are most effective in improving women's health across a wide range of wellness criteria when developed and driven by community members using culturally appropriate messaging and delivered through channels used by the communities they serve. To resolve the issue of inaccessibility of grant funds by community-based organizations through traditional methods, the NDDoH piloted a participatory grantmaking approach that fosters empowerment and equity. This shared decision-making funding strategy has been implemented by funders such as John & James L. Knight Foundation and American Express/JPMorgan Chase.

Accomplishments: Eight community-based organizations from four urban communities in North Dakota submitted a short application or video proposal. Partners then met to discuss ideas, collaborate, and allocate funding to implement strategies to increase well-woman visits in their communities. The contracts implemented by NDDoH reflected more diverse organizations than previously funded. The community-based organizations implemented projects most appropriate for reaching the women they served. Activities included the development and execution of radio campaigns aimed at reaching African immigrant women; education on well-woman preventative health care targeted at underserved women who were receiving mental health services; a “train-the-trainer” approach in which 10 immigrant leaders from Hispanic and African communities were trained to educate other immigrants; and speakers and facilitated discussions with women on spirituality and the importance of women’s physical health,

traditional birthing practices, prenatal and post-partum care, parenting, and traditional concepts of “self-care”.

Barriers: Because of COVID-19 protocols that had emerged, a facilitated half-day grantmaking session was held using a virtual meeting platform instead of an in-person session. This reduced interpersonal interactions between grantees. Additionally, grantees had little experience in navigating online contract processes.

Lessons Learned: NDDoH convened grantees virtually at the end of the program year. Overall, grantees reported satisfaction with the grantmaking process and learned a great deal from other agencies. The process allowed for fostering of partnerships and collaborations that grew over the project year. Insights from process evaluation drove adjustments for a new cohort in 2022, currently in progress: increased specificity on reporting requirements for these funds, use of very specific and detailed instructions for use of state grant reporting systems, and guidance on measuring impact (e.g., number of women reached with their programmatic activities, number of women who obtained well-woman care).

The Roots of Black Family Wellness; how Roots Community Health Center centers Pregnant Black Women in the Bay Area

Program/Policy Abstracts

Authors: Nkemka Egbuho, MPH

Presenting Author - Kendra Hypolite, MSW

Presenting Author - Porchea Fort, MA

Presenting Author - Alma Burrell, MPH

Non-Presenting Author - Noha Aboelata, MD

Non-Presenting Author - Ifeoma Udoh, PhD

Category/Categories: Maternal health, Reproductive health/family planning

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Issue: The CDC states that having a healthy BMI, increasing physical activity, and a balanced diet are all steps that can positively impact health outcomes. These are protective factors that could change outcomes for pregnant Black women. This project seeks to address these disparities by allowing voluntary participation in a Food is Medicine program that provides virtual nutrition, fitness education, and resources.

Setting: The Food is Medicine (FIM) program was implemented at Roots Community Health Center's (Roots) South Bay clinic in Santa Clara, California. Data from the Santa Clara County Public Health Department shows that Black babies are two times more likely to die in their first year of life than other babies and, approximately 1 in 10 births are preterm and/or are born with low birth weight, (Santa Clara County Public Health Department, 2018).

Project: The FIM program is a pilot project designed to explore how participation in a nutritional access intervention influences the health outcomes of pregnant Black women. Specifically, to explore how providing healthy food options, combined with nutritional education, as part of standard prenatal practice in a community health clinic, can support the holistic health of pregnant Black women and their families. The program provided meal kits and nutritional support to pregnant Black women who live in Santa Clara County. As a part of the intervention, participants also received nutrition and fitness education, access to virtual group exercise classes, access to stress-reducing tools, and maternal navigation services provided by Roots staff. Roots contracted with ETR, another Black woman lead organization, to serve as evaluation partners employing a mixed-method approach- using online surveys and focus groups to explore the barriers and facilitators of the intervention and gain feedback from participants on their experiences.

Accomplishments: A total of 33 women were enrolled in the pilot. 70% of the women enrolled completed both baseline and endpoint assessments. 17 women participated in one of the three focus groups we facilitated. The initial themes highlighted how the meal kits increased families' access to

healthy foods and introduced them to fresh fruits and vegetables. Results from the FIM pilot program will be available in Summer 2022.

Barriers: Throughout the project there were ongoing delivery issues with the meal kit delivery company, Marley Spoon, these issues required Roots staff to regularly follow up with the company and participants. Some of the participants found it challenging to attend the group sessions and Roots addressed these challenges by providing newsletters that included the recorded sessions.

Lessons Learned: The project's high retention rate is due to the continuous outreach efforts of the Roots team who recognized the level of work needed to keep Black women engaged in prenatal care – building strong relationships, follow-up efforts, and a dedicated navigator whose sole responsibility was the care for these women and their families through their birthing process. From a public health standpoint, we need to continue to support mothers during pregnancy and postpartum while creating spaces that listen to their needs. That support can help reduce stress and impact birth outcomes that support healthy communities.

Telling our Story: Colorado's Innovative Data to Action Priority Packages

Program/Policy Abstracts

Authors: Presenting Author - Ashley Juhl, MSPH

Non-Presenting Author - Risa Friedman, MPH

Category/Categories: Data: innovation, quality improvement, communication, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using new data systems

Issue: Colorado maternal and child health communication materials were disjointed, redundant, and piecemeal. Not all materials were publically available nor consistent across priorities resulting in ineffective communication about successes, barriers, and impacts.

Setting: Colorado selected seven new maternal and child health priorities for 2021-2025 and developed a theory of change to show the connection between priority strategies and outcomes. Communication materials detailing the priority work, measurement, evaluation, and storytelling are intended to inform internal staff and partners at the federal, state, and local levels.

Project: To showcase the activities and accomplishments of the new priorities, Colorado created a cohesive set of resources named Data to Action Priority Packages. The main goal of the packages is to integrate program components, quantitative data, and qualitative information to tell the story of maternal and child health in Colorado. Package products include a priority overview, state snapshot, state data brief, local data table, evaluation summary, and qualitative stories. An on-line interactive framework connects all the products and facilitates access to the products for internal staff and external partners.

Accomplishments: The maternal and child health program specialist, epidemiologist, and evaluator led and supported the development of each package product. The program specialist led the creation of icons, with input from priority coordinators and the community advisory board, for each priority to enable visual identification across products. Priority coordinators provided input into the design and content of the overview, snapshot, data brief, and evaluation summary. Priority coordinators and local public health agency staff provided guidance for the local data tables and ideas for qualitative stories. Overviews and evaluation summaries were created for the three strategic anchors (racial equity, community inclusion, upstream). The strategic anchors were also highlighted throughout the snapshot, data briefs, and stories.

Barriers: The amount of time needed to request feedback, incorporate changes, and communicate back to those who provided feedback was one barrier to forward progress. The community advisory board met infrequently, so getting on the agenda took time. Priority coordinators were inundated with requests for feedback. Various methods were used to request feedback (i.e. in person meetings, emails, surveys, newsletters, and the decision-making team). Incorporating input into the package product was a high priority, so timelines were adjusted to accommodate schedules and integrate feedback. Coordination with two different graphic design teams handling multiple projects was also tricky. Color

and design palettes and photos were shared between the two teams to enhance consistency in the materials.

Lessons Learned: A project manager was integral to oversee project implementation with various contributors. Great value was found in thinking of the products as part of a larger communication package. Feedback from various users, including an antiracism expert and community members, was critical to product development. Evaluation of the packages through users will occur in future years and changes will be made to enhance usefulness.

The COVID-19 Public Health Emergency is ending: What does this mean for Medicaid Coverage for children and families?

Program/Policy Abstracts

Authors: Presenting Author - Atyya Chaudhry, MPP

Presenting Author - Stacy Collins, MSW

Category/Categories: Health insurance or safety net care, Women's health,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Policy assessments or evaluations

Issue: In March 2020, a federal Public Health Emergency (PHE) was declared by the U.S. Department of Health and Human Services (HHS) to respond to the COVID-19 pandemic. Shortly after, the Families First Coronavirus Response Act was signed into law to facilitate the nation's response to the PHE and provide relief to states as they grappled with the pandemic. One important provision in FFCRA for state Medicaid programs was a 6.2 percent increase in federal matching funds if state Medicaid programs meet specific Maintenance of Effort requirements, including continuous enrollment of Medicaid beneficiaries through the end of the PHE, now projected to be July 2022. As a result, Medicaid enrollment over the past two years has grown significantly. With the PHE forecasted to expire in 2022, nearly 80 million Medicaid enrollees will be redetermined for eligibility, potentially triggering a Medicaid coverage crisis for enrolled populations including women, children, and families. The unwinding of the PHE will place a significant burden on understaffed state Medicaid agencies to redetermine enrolled individuals. State and local MCH professionals and advocates have an important role in supporting families through this uncertain time and ensuring that MCH populations have continuity of coverage as they are redetermined.

Setting: The unwinding of the PHE will take place in all states. Specific states such as those that did not expand Medicaid and those states with hard-to-reach populations may face more significant challenges in redetermining Medicaid eligibility.

Project: National organizations such as AMCHP are monitoring this pending situation closely. AMCHP is committed to raising awareness of the issue, providing resources, and fostering dialogue among state and local entities to promote ideas and resource sharing. AMCHP is developing education and advocacy resources for state and local MCH professionals to ensure that children and families, including children with special health care needs, maintain continuous coverage and are treated equitably in the redetermination process.

Accomplishments: This presentation will highlight any available data that demonstrates the positive impact of the continuous eligibility provision for Medicaid and other Medicaid-related protections put in place during the PHE. The audience will gain a better understanding of the positive health outcomes of Medicaid coverage during the pandemic and implications for maternal and child health populations. Any early data about the redetermination process underway in states will also be highlighted.

Barriers: With the unwinding of the PHE and the process of redetermination, states will face many barriers and challenges in the process. This presentation will discuss some of the challenges such as

hard-to-reach beneficiaries, staff shortages, inadequate system capacity, limited budgets, and political pressures. The presenter will provide MCH advocates with proactive approaches for addressing barriers beforehand.

Lessons Learned: The unwinding of the PHE is one of the most significant healthcare coverage challenges in recent times. The pandemic afforded many families the opportunity to enroll and remain on Medicaid. With the unwinding, there a great deal of uncertainty with the redetermination process and different sources of coverage. The role of state and local MCH professionals is to raise awareness, connect with families, partner with other state Medicaid advocates, and monitor the redetermination process to promote continuity of coverage.

Focus on ME: A Statewide Primary Care Initiative Targeting Anxiety and Depression Management among Reproductive-Age Women amid the COVID-19 Pandemic

Program/Policy Abstracts

Authors: Presenting Author - Seuli Bose Brill, MD

Presenting Author - Allison Lorenz, MPA

Non-Presenting Author - Jaina Amin, MD

Non-Presenting Author - Sara May, MA

Non-Presenting Author - Melissa Leonard, MPA

Non-Presenting Author - Nathan Helsabeck

Non-Presenting Author - Bethany Panchal, MD

Non-Presenting Author - Lisa Christian, MD

Category/Categories: Women's health, Mental/behavioral health

Method of Presentation: No Preference

Data Methods: Other, Quality Improvement Science

Issue: High proportions of reproductive-age women experience depression and anxiety. The disproportionate impact of anxiety and depression on women compared to men has intensified during the COVID-19 pandemic, yet only half of women experiencing depression or anxiety receive care. While primary care providers have the clinical expertise necessary to improve care for these patients, many primary care clinics (PCCs) may not have the infrastructure to engage in robust quality improvement (QI) work.

Setting: Across Ohio, 23 PCCs are participating in Focus on ME: Mental Health is Essential Health (FOM) which aims to improve anxiety and depression screening, detection, and management among reproductive-aged women through a coordinated, statewide, primary care QI initiative.

Project: Focus on ME applies the Institute for Healthcare Improvement's methodology to engage primary care providers in structured QI activities to improve depression and anxiety screening, treatment, and referrals for women aged 18-44. A clinician expert panel developed an evidence-based clinical change package with workflow. Additional activities include a pre-work site survey, virtual kickoff webinar, development of electronic health record (EHR) data queries, statewide monthly webinars for peer-to-peer learning, monthly engagement with state sponsors, participation in Plan-Do-Study-Act cycles to inform change, and site-specific QI coaching. Statewide expansion will follow this pilot initiative funded by the Ohio Departments of Health and Medicaid.

Accomplishments: Focus on ME includes 23 PCCs spanning 6 health systems, 7 counties, and 5 EHR systems. Most sites are Federally Qualified Health Centers (17/23), but some are private, hospital-

owned, or academic practices. Most sites (22/23) reported using some mental health screeners, but only a minority of respondents expressed high confidence in ability to follow up with patients diagnosed with depression (8/23) and anxiety (6/23). While most respondents (20/23) believed they could influence change within their organizations, just 4/23 respondents reported high confidence in using data for practice improvement. Statewide QI initiatives, like Focus on Me, can help practices overcome gaps in QI expertise so they can more broadly apply clinical expertise in mental health care to their communities, providing much needed mental health access.

Barriers: One barrier to participation is the ongoing COVID-19 pandemic and impacts to staffing including general time constraints and staff turnover. By offering recordings of critical project webinars, clinics can review as time allows and share in onboarding new staff.

Lessons Learned: Focus on ME demonstrates feasibility of a statewide QI initiative to improve mental health care among reproductive-aged women. Participating sites have desire and clinical expertise to provide mental health care but lack expertise in QI methodology. Providing information, resources, and training within a QI project creates a robust opportunity to positively impact mental health care delivery.

Incorporating Storytelling Science and Practice into Fetal and Infant Mortality Review (FIMR): Lessons Learned

Program/Policy Abstracts

Authors: Presenting Author - Magda Peck, ScD

Presenting Author - Rosemary Fournier, RN, BSN

Presenting Author - Dominique Walker, MPH, CHES

Presenting Author - Tunishia Kuykindall, MS

Category/Categories: Infant mortality; pregnancy outcomes, , Racism, equity, social justice

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Issue: The US continues to have the highest maternal and infant mortality rates among developed countries. Black women are dying from pregnancy-related complications rates three to four times higher than for non-Hispanic white women, while death rates for Black infants are twice that of infants born to non-Hispanic white mothers.

Setting: Fetal and Infant Mortality Review (FIMR) is a community-based, data-driven, action-oriented process aimed at improving services, systems, and resources for women, infants, and families to prevent fetal and infant deaths. In practice for over 25 years, over 150 local FIMR programs operate in 27 US states and territories today. FIMR brings together multidisciplinary teams to examine fetal and infant deaths for the purpose of preventing future deaths. Unique to some FIMR sites is the inclusion of confidential, de-identified, structured 'family interviews' to bring families' voices into the FIMR process. Combined with clinical death reviews, personal narratives bereaved parents share illustrate their experiences before, during, and after the death of their babies. How can their stories be better incorporated into FIMR practices?

Project: The FIMR Storytelling Project (2019-2022) explores how strategic storytelling can refresh and strengthen current FIMR approaches to combining data and community engagement to further prevent fetal and infant deaths. The National Center for Fatality Review and Prevention (NCFRP), in collaboration with key national partners, engaged two cohorts of experienced FIMR teams in an intensive Storytelling Learning Collaborative, focusing on the science and art of storytelling, innovative methods and practice, and deep community engagement. Developing foundational storytelling capacity and promoting strategic use of FIMR stories can help teams shift prevailing local narratives from personal responsibility and individual behaviors, toward upstream services and systems improvements, and greater health equity.

Accomplishments: Participating FIMR teams gained a strong foundation in how stories can catalyze social change; developed personal 'anchor stories' to ground individual and team storytelling practices; and co-created preliminary strategies for integrating strategic storytelling into local FIMR work, for greater impact. Highlights of follow up evaluation, following CDC Frameworks and methods, will be

shared. Team participants will describe lessons learned and local strategies for strengthening the impact of their FIMR practices, through incorporated storytelling.

Barriers: During the pandemic, participating teams faced ongoing challenges: time constraints, competing priorities, reassignment of key staff to support COVID-19 activities (e.g. surveillance, contact tracing, testing, and vaccination). Planned “in-person” learning and workshops were converted to virtual platforms.

Lessons Learned: Aggregate FIMR data and technical recommendations are necessary, but insufficient, to catalyze services and systems level changes. Strategic, skilled storytelling in FIMR processes can humanize data, and help shift prevailing narratives of why babies die from personal responsibility toward upstream solutions. Greater inclusion of the voices of parents and families who have experienced infant losses, beyond current family interviews, honors their lived experiences and elevates their stories, for better solutions. And, when colleagues involved in FIMR case reviews develop skills to tell their own stories, while listening more deeply to others, they and their partners can be rekindled to champion health and equity in their communities.

Building Social Opportunity to Achieve Health Equity: The Family Partnership Pilot Program

Program/Policy Abstracts

Authors: Presenting Author - Ariel Childs, MPH, CLC

Category/Categories: Maternal health, Infant mortality; pregnancy outcomes

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation

Issue: Advancements in maternal and child health equity require innovative solutions that center the most marginalized families as drivers of their own health and wellbeing. The Family Partnership Pilot Program (FPP) was created to move beyond traditional maternal case management services, which often provide acute short-lived solutions to crises, and to support families in achieving long-term, sustainable, positive outcomes. FPP takes the novel approach of addressing perinatal health outcomes for mothers and infants, while also promoting family and community-level social opportunity through individualized coaching and targeted goal achievement. Through marrying clinical interactions with social outcomes, FPP strives to achieve intergenerational health equity across the life course.

Setting: Pregnant and parenting individuals (prenatal - two y.o) in Boston MA (Priority neighborhoods: Mattapan, Dorchester, Roxbury, Jamaica Plain and Mission Hill).

Project: The Family Partnership Program is a skills-based coaching program that partners expectant individuals with a personalized coach to support their perinatal health care needs, stabilize their family, and support their long-term goals related to economic mobility, workforce development, parenting, life skills and health. Program participants enter the program prenatally and attend monthly coaching sessions focused on incentivized goal setting until their child's second birthday. In addition to the one-on-one component of FPP, program participants are also invited to participate in a group-based community calendar of activities that promote knowledge, resources, and skills necessary for goal achievement, while also strengthening the social network of the FPP community.

Accomplishments: Throughout the two-year pilot, FPP partnered with over 200 families across six Boston-based prenatal care sites. In addition to providing an overview of FPP (including program delivery, implementation, and evaluation strategies), this presentation will explore program outcomes including low birthweight, prematurity, breastfeeding, healthcare utilization, and social impact data. Our data analysis from the first two years of programming demonstrates positive results for local, state-wide, and national MCH targets, as well as an 80% goal achievement rate for social opportunity goals (family stability, employment/education, economic mobility, parenting, life skills and health).

Barriers: The barriers we encountered include streamlining program processes and protocols across six different clinical sites, recruitment and retention of program participants, and the capacity of program staff to continue enrolling clients given the program demands. All barriers were addressed and overcome through quality improvement processes that will be discussed in the program presentation.

Lessons Learned: Historically, the field of Maternal and Child Health has lacked programming that incorporates the many dimensions of support needed to address the complexities of maternal and

infant health inequities. Programs tend to prioritize either individualized or group-based interventions, and rarely do clinical interventions include integrated social services. Thus, clients are forced to seek services and support from various (often misaligned or poorly coordinated) programs/providers, and inevitably miss opportunities for sustained long-term impact. The FPP is an example of a program that is built upon the robust MCH evidence base and decades of best practices, while piloting strategic advancements and innovations centered on the diverse and complex needs of our patient population, the multidimensional aspects of care, and the opportunity to achieve intergenerational positive outcomes.

Information for Replication: FPP for 200 families costs approximately \$20,000 per year plus staff salaries. Key partners and stakeholders include internal clinical champions who can support screening and referral pathways, as well as community organizations providing relevant social services for the client population.

Bridging Departments Across Local Health Departments to Address Future Health Threats to the Maternal and Child Health Community

Program/Policy Abstracts

Authors: Non-Presenting Author - Hitomi Abe, MPH

Presenting Author - Elana Filipos

Category/Categories: Birth defects/disability and MCH populations, Collaboration across MCH, Preparedness, and Infectious Disease, Birth defects/disability and MCH populations

Method of Presentation: Oral Presentation (appx. 20-25 mins)

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 18 LHDs to address public health threats that impact pregnant people and infants collaboratively. NACCHO has been learning from 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.

Project: This oral presentation will highlight outcomes and lessons learned from collaborative efforts at the local level to address the impact of infectious diseases on MCH populations. We will highlight efforts from one MIP member on their perinatal HCV program and their LHD's effort to partner and collaborate across partners to address perinatal HCV in the community.

Accomplishments: To date, we have successfully recruited 14 LHDs to participate in the MIP. MIP members meet bimonthly to engage in learning, peer-to-peer exchange, and resource sharing to build their LHDs' capacity to collaboratively address public health threats that impact the MCH population. MIP members have shared about the progress they have made within their LHDs around this effort, and we will highlight one LHD effort in this presentation.

Barriers: LHDs are at various stages in their efforts to consider and prioritize MCH populations in EPR planning to prepare for the next infectious disease outbreak. Although MIP members all benefited from the bimonthly meetings and training opportunities, it would be more impactful if members could have opportunities to work together as a collaborative to support one another and exchange valuable ideas and resources to move this work forward.

Lessons Learned: As we learn from the COVID-19 response in supporting the unique needs of the MCH population, providing opportunities for LHDs to engage across departments and stakeholders to

consider MCH needs during public health emergencies is critical. The MIP workgroup is an opportunity for members to engage with other MCH, ID, and EPR staff and to engage in peer-to-peer exchange.

Information for Replication: NACCHO supported LHD staff representing MCH, Preparedness and/or Infectious Disease to serve on our workgroup. NACCHO led workgroup meetings and facilitated presentations, new resources, and opportunities for members to cross-collaborate within their LHD.

The Empaths perinatal substance use pilot study: Utilization of universal screening and virtual case management in perinatal health care

Program/Policy Abstracts

Authors: Presenting Author - Stephanie Fitch, MHA, MS, BS, LAC

Presenting Author - Sarah Reese, PhD, MSSW, BSSW, LCSW

Non-Presenting Author - C. H. Tersh McCracken III, MD, FACOG

Non-Presenting Author - Joe Salyer, CBHPSS

Non-Presenting Author - Valerie Lofgren, BS, ACLC

Non-Presenting Author - Marcy Hanson, MSN, BSN, RN

Category/Categories: Maternal health, Community collaboration

Method of Presentation: No Preference

Data Methods: Implementation science, Program evaluation or surveillance evaluation

Issue: The University of Montana is conducting an analysis of pregnancy-associated deaths (N=196) in Montana occurring between 2003 and 2019 in preparation for Montana's initiation of a formal maternal mortality review process. Preliminary findings from this analysis indicate that overdose and suicide are the 3rd and 4th leading causes of death in pregnancy-associated mortality in Montana, comprising 12.2% and 11.7% of all pregnancy-associated deaths during this period. Women living in the most rural counties in Montana comprise over half of all pregnancy-associated deaths in Montana, with AI/AN women living in these very rural counties at an especially high risk.

Setting: Empaths is piloted out Billings, MT with evaluators located in Missoula, MT. Sites participating in Empaths are located in Billings, Red Lodge, Glendive, Wolf Point and Miles City, Montana. The Indian Health Service Unit in Lame Deer, MT is in the process of enrolling in the Empaths program.

Project: Empaths is a healthcare system-level treatment model in which universal screening for substance use in pregnancy is implemented in the OB/GYN and primary care settings. Patients screening positive for substance use disorder (SUD) and/or perinatal mood and anxiety disorder (PMAD) concerns are referred to a centralized care manager who conducts Screening, Brief Intervention, and Referral to Treatment (SBIRT) sessions via live and telehealth appointments. Patients get connected to appropriate behavioral health treatment services as well as peer and community support programming to promote healthy outcomes for moms and babies.

Accomplishments: In the first year of Empaths implementation, a total of 271 patients completed the 5P's1 (Prenatal Substance Abuse Screen for Drugs and Alcohol) screener at least once during their pregnancy or up to 14 weeks postpartum. Of the patients that completed the 5P's, 139 screened positively (responded 'yes' to at least one question) and received brief intervention from their obstetric provider or the Empaths care manager. Seven patients met with the Empaths care manager for further assessment and referral. In addition to the SBIRT pathway, a total of 30 patients were referred to the Empaths care manager without screening with concerns related to mental health or substance use.

These referrals occurred either before the implementation of the universal screening or through other departments within Billings Clinic. Based on assessment, patients were referred to Rimrock for Substance Use Disorder (SUD) services (n = 2), outpatient medication management (n =2), outpatient behavioral health therapy (n = 25), obstetric care (n = 1), nurse-family partnership (n = 2), child abuse and neglect prevention services (n = 1), and other services (n = 1).

Barriers: Barriers to implementation include integration of the screening tool into the electronic health record, outreach and provider engagement, lack of uniformity in screening protocols, and provider team discomfort in addressing substance use with patients.

Lessons Learned: Universal screening for substance use in the OB/GYN and primary care settings where perinatal patients receive care is an effective practice in identifying at-risk patients and connecting them to appropriate resources. A centralized care management program offered via telehealth is a feasible model in rural Montana.

Addressing NYC's Disparities in EIP Referrals by Using EMR Systems and Developing System-Wide Workflows Relying on Task-Shifting

Program/Policy Abstracts

Authors: Presenting Author - Nura Anwar, MPH

Presenting Author - Tania Corporan, MD

Non-Presenting Author - Katharine McVeigh, PhD, MPH

Non-Presenting Author - Arin Balalian, MD

Non-Presenting Author - John Lyons, BSIS

Non-Presenting Author - Samantha Bynoe, BA

Non-Presenting Author - Catherine Canary, MD, MPH

Non-Presenting Author - Mary McCord, MD, MPH

Non-Presenting Author - Lidiya Lednyak, MA, PMP

Category/Categories: Data: innovation, quality improvement, communication, Healthcare quality improvement

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using new data linkages, Using existing data sources in innovative ways, Other, innovative use of EHR technology

Issue: The New York City (NYC) Early Intervention Program (EI) assists and empowers families of children < 3 years old by providing services as soon as any developmental delay or disability is recognized. The earlier an infant or toddler is referred to EI, the greater the likelihood that a service plan designed specifically for the child and family will have a positive impact on the child's development. Structural inequities prevent many children from receiving the necessary EI services to which they are entitled. In 2019, the EI referral rate among Black children in NYC was 2.2 percentage points lower than the rate for children of other races (8.9% vs. 11.1%). While widespread decline in EI referral rates during the Covid-19 pandemic has narrowed the rate gap (8.6% vs. 10.3% in FY'21), it remains unacceptable.

Setting: In 2021, The NYC Bureau of Early Intervention (BEI) and NYC Health + Hospitals (H+H) collaborated to reduce racial inequities in EI referrals and retention at 3 H+H sites in 2021. In 2022, the initiative is being expanded to all H+H pediatric primary care sites and to sites at three additional healthcare systems.

Project: The project has 3 components: incorporation of the EI referral form into the EPIC EHR, Implementation of bi-directional data exchange between BEI and H+H, and active follow-up of children who are not progressing smoothly through the referral process.

Accomplishments: The EHR-based referral form was launched at 3 sites in March 2021 and upgraded and activated at 21 H+H sites by March 2022. Workflows for developmental screening were redesigned

to incorporate electronic referral and obtaining written consent for bi-directional information exchange between BEI and H+H. Staff was trained, and BEI developed a referral status report to guide community health worker follow-up. Demographic characteristics of the 315 children referred during 2021 affirm that the project is predominately reaching children of color and that retention rates exceed citywide averages for children of all races. More than 560 referrals were received in March 2022.

Barriers: Clinical workflows differ across clinical sites, so project workflows must be customized for each location. The largest challenge is developing workflows to obtain written consent for bi-directional data exchange from each patient. Consent is required before BEI can provide H+H with information about the status of a child's referral. The most important resource to the success of this project is the strong commitment on the part of both BEI and H+H. With this commitment, both parties have been able to reflect on their own practices and modify procedures to address challenges and ensure project success.

Lessons Learned: Systems integration approaches to reduce inequities in EI referral and retention are possible and may contribute to population-level changes in access to care.

Information for Replication: In addition to committed leadership, this work requires a moderate amount of EPIC programming support, a willingness to modify workflows, and staffing support commensurate with the number of sites, volume of referrals and planned intensity of follow-up.

Family Engagement Program/Policy Abstracts

Authors: Helena Girouard, BS

Presenting Author - Victoria Camper,

Presenting Author - Beatrice Gilbert,

Category/Categories: Community collaboration, Mental/behavioral health,

Method of Presentation: No Preference

Data Methods: Policy assessments or evaluations, Program evaluation or surveillance evaluation

Issue: The Healthy Start Coalition of Flagler & Volusia counties would like to hear from Parents that have firsthand experience with navigating the system to develop equal and mutually respectful partnerships between parents, case managers, and community partners to improve the lives of children and to transform the system. Healthy Start and the Florida Department of Health in Volusia County are committed to supporting the development of Parent Leaders. After a Call to Action by the Florida Department of Children and Families in September of 2021, Parent Leaders began a process of surveying the community to identify what is working and what is not working for families and to discover the most important community issues to work on.

Setting: Family Engagement Advisory Board is a team of 10 birth parents with lived experience in navigating the child welfare system from Volusia County that have come together to recommend and support changes that will improve life for families in the child welfare system in Volusia County. We have been supported by the Healthy Start Coalition of Flagler & Volusia Counties since January of 2014. Planning activities took place virtually with one in-person celebration. Surveys were disseminated throughout the county via paper, email, and survey monkey. Surveys were distributed by Parent Leaders to other parents in our community in hopes of learning what strengths and opportunities were identified.

Project: The Needs mentioned in the Volusia System of Care survey were all Mental Health Services at one location, a Mental Health System that is comfortable to navigate, clarification on the difference between mental health and behavioral health, and peer support. Healthy Start's role was to support Parent Leaders with things such as technology for virtual meetings, survey monkey access, paper surveys, and provide stipends.

Accomplishments: Parent Leaders came together to create a proposal for action to present in a Town Hall meeting. Parents proposed that parents and community residents choose from the following action campaign and project proposals during a town hall meeting. 1. A campaign to inform the system of what we need from a Resource Center. 2. A project to create a Web App that allows parents to navigate the system easier. 3. A campaign to inform the system of what resources are needed for exceptional needs or behavioral health. 4. Host a support group for teens. 5. A project to get an Anti-Bullying and/or Body Image PSA on social media, radio, or tv.

Barriers: There were barriers to finding times when all parents were available to meet. The staff took parent schedules into consideration and chose an evening time that worked best for most parents regardless of staff availability. Staff was encouraged to join, when possible, but the parent voice was always at the forefront. Finding funding to support the next steps activities is a potential barrier (although an opportunity as well).

Lessons Learned: Parents are the experts. When Parent Leaders are engaged and empowered by organizations, they are true changemakers. They want to be educated and they want to inform the work of public health. Transparency regarding the slow nature of change is important to share with parents.

Information for Replication: Budget: about \$15-20K of staffing support (although it might be in-kind). Significant in-kind/separately funded staffing support and Mini-grant from the Center for the Study of Social Policy \$3,000 provided one celebration dinner and a \$25 stipend for each parent that participated in each meeting (10 parents x 10 meetings x \$25 = \$2500). Key partners include Healthy Start, Department of Health, Department of Children and Families, Center for the Study of Social Policy

Title: Shaping Healthy Equitable Reproductive Outcomes (SHERO) via Technology

Program/Policy Abstracts

Authors: Presenting Author - Renaisa Anthony, MD, MPH

Non-Presenting Author - Tracey Estriplet, MPH

Category/Categories: Maternal health, Technology, Pregnancy Outcomes, Maternal morbidity and mortality, Black Maternal Mortality Crisis

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using new data systems, Other, New data collection of Black MCH outcomes

Issue: The US continues to lead industrialized nations with the highest rates of maternal & infant mortality/morbidity with persistent racial and ethnic disparities. Black women experience disproportionately high rates of deaths and severe maternal morbidity due to pregnancy and childbirth. Maternal mortality directly impacts the mother and baby but has a wider socioecological impact on the family, community, and overall society. Yet, Black women and babies die 3-5Xs more often than their white counterparts from pregnancy-related complications with Southern states leading the trend. Inequities in maternal mortality are a result of many overlapping factors, including healthcare access and quality, racial discrimination, and lack of social support within communities. SHERO "Shaping Healthy Equitable Reproductive Outcomes" is the first, patient centered, digital health, TECH solution designed by and specifically for Black women to solve the Black maternal/infant health crisis.

Setting: SHERO is a public-private partnership and is scaling cohorts across the nation. This presentation will focus on our first pilot-cohort in Mississippi in partnership with Babyscripts. As known to all MCH experts, Mississippi is one of the leading States with the highest maternal and infant mortality rates.

Project: SHERO powered by Babyscripts integrates the only four approaches shown to improve Black prenatal outcomes: group care, home visitation, racial concordance, and community health workers. We optimize technology to intentionally combat implicit bias, institutional/systemic racism and remove barriers rooted in social determinants. We emphasize health and wellbeing and are intentionally tech-based to bridge the Black/White digital divide. SHERO engages, educates, and empowers SHERO mom participants throughout pregnancy and the postpartum journey. The program staff, which include community birth workers, doulas, doctors, and public health experts, meet moms on Zoom platform technologies on a weekly, and biweekly basis, as a cohort and individually, respectively, to provide both prenatal and the social needs support and advocacy. The program utilizes the implementation of a culturally tailored model by recruiting, training, and retaining a BIPOC workforce thus, strengthening America's Black economic infrastructure and create a safe and trusted ecosystem conducive for thriving.

Accomplishments: SHERO is a multiprong, prospective, mixed-methods and quasi-experimental design that incorporates a methodology of continuous performance, process, and outcome evaluation to assess health equity, whole person health, health related social needs. Process and outcome evaluations were

implemented to inform SHERO reiterations for future cohorts and to assess the impact of SHERO on the lived-pregnancy-experience, pregnancy and birth outcomes, overall health, and well-being. Data is continuously monitored on the SHERO tech platform during pregnancy-pod-meetings and biweekly check-ins which contribute to the SHERO MCH-database to measure the following metrics: 1) pregnancy-related outcomes, 2) health equity outcomes, 3) overall whole person health outcomes, 4) health related social needs and collaborations, and 5) SHERO intervention specific outcomes. Metrics are tracked across a 40+ week pregnancy and post-partum timeline with SHERO's primary outcome indicator being 95% of SHERO-pregnancies result in a healthy mom and baby. Our journey with Black pregnant women across the US starting in the States with the highest need will provide a plethora of data that is currently missing in the MCH field and literature. We are in the midst of our cohort with promising results, and we are excited to present them in September at CityMatch in Chicago.

Barriers: Our initial barriers were optimizing a public-private partnership. As a 501c3 organization we work with profit organizations contracting with third party payers. The logistics of the partnerships was initially cumbersome. However, with trial and error have become standard practice. Furthermore, the integration of SHERO onto our partners platform and initial onboarding process is labor intensive but streamlined once launched. We leverage the Minimal Viable Product (MVP) approach discussed in "Lean Start Up" by Eric Ries to overcome these barriers with our tech partners.

Lessons Learned: Pregnancy outcome programs and data collection is time and labor intensive but worth the long-term investment. SHERO runs a minimum of 40 weeks for each pregnancy pod cohort. We are a safety net for the women most refer to as high risk, high need and high cost but we lovingly refer to as high potential.

Information for Replication: Cohort Costs = \$16,000 (40 weeks, 40 women per cohort) = \$10/woman & baby/week
Resources = 3rd party payers, public-private partnerships, grants, donations, angel investors
Key Partner = pilot SHERO program = Babyscripts

Evaluation of a Menstrual and Reproductive Health Program for Adolescent Boys and Girls

Program/Policy Abstracts

Authors: Presenting Author - Susannah Anderson, PhD, MPH

Non-Presenting Author - Audrey Anderson Duckett, MA

Category/Categories: Reproductive health/family planning, Child/adolescent health

Method of Presentation: No Preference

Data Methods: Program evaluation or surveillance evaluation

Issue: Globally, evidence indicates that inadequate menstrual management can have serious consequences for menstruating adolescents' psychosocial well-being and ability to equitably participate in society. However, the majority of existing solutions-oriented research has focused on single-sector relationships, such as the connection between the provision of menstrual products and school attendance. This study provides information about how menstruation is experienced and managed by adolescent girls, and it describes the effects of the intervention on girls' and boys' knowledge and attitudes about reproduction and menstruation as well as girls' ability to participate in daily activities during menstruation.

Setting: The menstrual health program took place in 14 schools in two provinces in Mozambique in summer 2019. Participants included male and female students ages 11-18. 849 boys and 1,242 girls participated at baseline. The intervention consisted of a one-hour menstruation workshop (girls and boys) and distribution of two pairs of menstrual underwear (girls only). The evaluation used a quasi-experimental design in which classrooms of students were assigned to workshop, workshop-plus-underwear, or comparison groups. Evaluation data were collected at baseline, immediately post-program, and two months post-program. All participants received the full program after the follow-up evaluation data were collected.

Project: In order to facilitate girls' participation in activities of daily life, such as attending school and playing sports, the program offers educational workshops and menstrual underwear to address knowledge and information needs as well as material needs for management of menstruation. Boys are included in the educational workshops in order to better disseminate accurate information and dispel myths for all participants. The intervention includes two components: an educational workshop with learning tool (girls and boys) and menstrual underwear (two pairs each, girls only). The one-hour workshop teaches the basic biology of the menstrual cycle, explains how menstruation is related to reproduction, and addresses taboos surrounding menstruation. During the workshop, participants receive a learning tool to track three phases of the menstrual cycle.

Accomplishments: The intervention had significant positive effects on girls' and boys' menstrual cycle knowledge, girls' and boys' understanding of reproduction and family planning, girls' attitudes towards family planning, girls' emotional state during menstruation (confidence and feelings of normalcy), and girls' ability to participate in certain daily activities during menstruation, as compared to those in the comparison group.

Barriers: Follow-up data were collected two months post-program with an attrition rate of 30% (1,448 students completed all evaluation measures). In addition to typical school absenteeism, study drop-out was also impacted by school year holidays and a national election, and in some schools, students were not informed by school staff that the workshops would be taking place.

Lessons Learned: Findings suggest that a one-hour menstruation education workshop can significantly improve participants' knowledge about menstruation and the fundamentals of reproductive health and family planning. Programs and interventions that seek to achieve improvements in adolescent reproductive health and overall development should consider how the ability to understand and manage menstruation affects girls' program participation and well-being outcomes.

Information for Replication:

LGBTQIA+ Inclusion in Home Visiting Programs of the Allegheny County Health Department's Office of Family and Child Health

Program/Policy Abstracts

Authors: Presenting Author - Mary Carroll, RN, BSN, LCCE, CLC, CIMI

Non-Presenting Author - Karen Faulk, SNM, PhD, RN, BSN

Category/Categories: LGBTQ+ health, gender & sexual orientation, Home visiting

Method of Presentation: Poster Presentation

Data Methods: Program evaluation or surveillance evaluation

Issue: The challenges faced by LGBTQIA+ individuals and families in interactions with the healthcare system provides support for the importance of culturally informed care, particularly in the perinatal experience. Many health professionals find themselves ill-equipped to care for patients whose gender and sexual identities are not limited by strict arbitrary binaries. Healthcare for LGBTQIA+ individuals and families during pregnancy, birth, and the postpartum period is an understudied area. No research currently documents the number of transgender men who have had a pregnancy, and the increasing diversity of categories and forms of self-identification and expression (gender-fluid, gender non-binary, etc) remain nearly invisible within the health care system. Perinatal care for birthing people represents one of the most vulnerable times for the intersection of health care and gender identity, as preconceived cultural notions of ascribed gender and gender roles are intensified during pregnancy and birth.

Setting: This program evaluation will assess the care experiences of LGBTQIA+ birthing individuals and families and make recommendations to improve the quality of home visiting services of the Allegheny County Health Department's (ACHD) Office of Family and Child Health in Allegheny County, Pennsylvania. This project is a collaboration between the University of Pittsburgh School of Nursing's Nurse Midwife Program and the Allegheny County Health Department.

Project: This project seeks the voices of families involved in services to actively shape the way that questions are asked, information is shared, and staff is trained in the future. Data will be gathered on the gender identities and familial configurations of the pregnant individuals that participate in the Office of Family and Child Health's home visiting programs. Perception of their experiences with perinatal care in relation to their perceived needs will be evaluated and differences in shared decision making, autonomy, and respect between LGBTQIA+ identifying individuals and heterosexual, cisgender individuals with consideration of racial and ethnic identity will be examined. The Mothers Autonomy in Decision Making (MADM) scale (Vedam et al., 2017a) and Mothers on Respect (MOR) index (Vedam et al., 2017b) are two tools that have been developed to measure the perspectives of birthing individuals on the care they receive during the perinatal period. These tools will be modified and used to capture the experiences of LGBTQIA+ individuals and families in accessing respectful and inclusive care. The sample will include all participants in the home visiting programs who are willing to provide the requested information. 16 nurses visit an average of 300 families per year. An estimated 40% of clients are expected to participate for a sample size of 120. Of these 12 will be recruited to participate in semi-structured interviews and/or focus groups.

Accomplishments: Data is being collected by the home visiting nurses in multiple formats from April to July 2022.

Barriers: Based on the results, recommendations for culturally sensitive consideration of the multiple gender identities and familial configurations of clients receiving care from the ACHD will be developed. These recommendations will include ideas to improve data collection in the future and identify and incorporate information on resources for families.

Lessons Learned: This project will highlight health equity in home visiting.

Information for Replication: Minimal costs covered by University of Pittsburgh and ACHD.

Black Women in Motherhood Support Group Pilot Program

Program/Policy Abstracts

Authors: Presenting Author - Cherline Arnoux, MSW (LSWA)

Presenting Author - Hannah Rackers, MPH

Presenting Author - Morgan Taylor

Non-Presenting Author - Sarah Crowne, PhD

Category/Categories: Mental/behavioral health, Racism, equity, social justice

Method of Presentation: No Preference

Issue: Black mothers are more likely to experience postpartum depression but less likely to receive treatment. Contributing factors include perceptions of mental health treatment, well-founded lack of trust in institutions, and screening tools not designed to detect symptoms in women of color.

Setting: This behavioral health initiative was conducted in the Boston metropolitan area with Boston Healthy Start Initiative (BHSI) participants weekly in a virtual setting. BHSI serves Black women who are pregnant and/or parenting.

Project: In 2021, BHSI developed a position for a behavioral health clinician to support the mental health needs of BHSI participants through direct services and support groups with the goal of increasing social support, coping skills, and self-efficacy in accessing mental health care and addressing perinatal mental health. The 8-session pilot group was co-led by BHSI's Assistant Director and behavioral health clinician. Sessions focused on topics including perinatal mental health, "Strong Black Woman" Syndrome, advocacy, and support. In order to overcome anticipated engagement barriers, facilitators conducted an introductory support group session to allow transparency and foster group dynamics. Eight women participated in the pilot with consistent attendance. Participants completed surveys pre- and post-group to assess experiences, motivation, self-efficacy in accessing mental health services, and depressive symptoms.

Accomplishments: Preliminary analysis found that participants hoped to obtain education and information about mental health services and support from other peers/mothers. Talking to and hearing from other mothers like them was the most reported helpful component. By the end of the series, all participants at least somewhat agreed that mental health services/treatment can be of benefit and that they are confident in their ability to communicate their concerns to staff, follow recommendations, and overcome any embarrassment about seeking mental health services. Some participants expressed an increased level of support within the community and willingness to receive mental health services. A majority of women reported that their family/friends were supportive of group participation and that they would recommend that group to others. Focus groups are planned for Spring 2022 to follow up on preliminary survey findings.

Barriers: Starting in October, the pilot series faced scheduling issues due to the holiday season and a surge of the pandemic; however, all topics and sessions were covered. For some sessions, not being able to join from the privacy of their own home limited participant's ability to engage fully. The participants

communicated these barriers, and co-facilitators supported participation by sharing out on behalf of participants using tools such as the chat feature. This allowed participants to join from different settings, continue with daily routines, and to care for their children.

Lessons Learned: Participants were highly engaged and reflected positively on their group experience. When participants lead certain aspect of the series, it encouraged community leadership and comfort with engagement. At the end of the series, participants wanted continued support through the group and the conclusion was abrupt. For future groups, it is recommended that participants are reminded weekly of the number of sessions remaining so that other support options can be explored if needed.

Integrating Community Members into Health Department Programming

Program/Policy Abstracts

Authors: Presenting Author - Mone't Olivis, MS

Non-Presenting Author - Sarah Sanders, MPH

Category/Categories: Community collaboration, Maternal health,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Other, Community engagement

Issue: Based on the experiences and insights of Family Health Advocates in Allegheny County, Pennsylvania, this presentation aims to describe best practices for community engagement within health department programming and planning.

Setting: The Allegheny County Health Department is designated as a CityMatCH Equity Institute site, Allegheny County is located in the southwestern region of Pennsylvania and has a population of about 1.3 million.

Project: Using the program of a partnering organization as an exemplar, the ACHD recruited parents as Family Health Advocates (FHA) to better engage and empower community voices. As defined, the FHA position involved an individual commitment of about 6-8 hours each month. These hours would include weekly check-in meetings, monthly meetings with the Alignment for Action Collaborative (AAC), monthly Technical Assistance (TA) calls, and any additional trainings related to maternal and child health.

Accomplishments: In March 2021, the ACHD sent three community members to the AAC Kickoff Training with CityMatCH, signaling the launch of the FHA program. The FHAs established multiple avenues for connecting with the community, including a Facebook group. To better understand community needs, the FHAs coordinated four Community Parent Engagement Meetings between November 2021-March 2022. Meeting topics included parenting during COVID-19, strategies for meal preparation, and self-care; some topics were specifically requested by community members. During these community meetings, the FHAs learned more about parents' concerns, which ranged from COVID-19 vaccines for children to daycare closures to overall stress reduction. They also survey community participants on their engagement, ensuring that programming and resources are relevant and accessible. Over time, the FHAs have taken on additional responsibilities, including entering data into the Community Checkbox tool, identifying community partners, and facilitating AAC meetings.

Barriers: In its inaugural year, the FHA program described here has faced some challenges. In addition to adapting to and planning around a global pandemic, making it more difficult to directly engage with communities, the FHAs have reported difficulties in defining expectations, as well as ensuring enough time to properly develop the trusting relationships needed to sustain their advocacy work.

Lessons Learned: Although the insights gleaned by the FHAs thus far have been multiple, a few lessons learned are enumerated here. First, recruiting community members as health advocates requires knowing one's community. It may be logical to start with a health department's nursing and home

visitor networks, but also important to remember that these champions for family health can be found outside of the usual circles. Second, it is important for a health department to properly budget its time, as well as its funds, to successfully implement an FHA program. Fostering new relationships and building trust takes time and effort, not only from those directly engaging with communities but also those managing advocacy programs. In this vein, a third lesson emerges: by listening to community needs and promptly responding to them, the FHA program described here has seen its efforts reciprocated with sustained engagement from the community, as well as positive reports of trust and respect from its members.

Improving Maternal Health and Racial Inequities through Adoption of Community-Based Safety Bundles

Program/Policy Abstracts

Authors: Presenting Author - Peggy Vander Meulen, MSN, RN

Non-Presenting Author - Lee Anne Roman, MSN, PhD

Non-Presenting Author - Celeste Sanchez Lloyd, MA

Non-Presenting Author - Jennifer Raffo, MA

Non-Presenting Author - Hannah Nelson, MPH

Non-Presenting Author - Cristian Meghea, PhD

Category/Categories: Healthcare quality improvement, Healthcare quality improvement

Method of Presentation: No Preference

Issue: The US maternal mortality rate has increased over a third from 2018-2020 with Black women 3.5 times more likely to die of pregnancy related complications and 2 times more likely to experience severe maternal morbidity (SMM) than White women. The Alliance for Innovation on Maternal Health—Community Care Initiative (AIM-CCI) is a federally funded partnership with the National Healthy Start Association to develop safety bundles for community settings to reduce SMM and overcome inequities.

Setting: The Strong Beginnings (SB) Healthy Start program in Grand Rapids, Michigan, one of six AIM-CCI pilot sites, is focused on Black and Hispanic perinatal individuals (65% high risk pregnancies, 36% mental health, and 30% hypertension). Community Health Workers (CHW) team with nurses and social workers in a Medicaid state-sponsored home visiting program. Multiple agencies and community collaborators comprise a Local Maternal Safety Group (LMSG).

Project: SB is implementing AIM-CCI's Postpartum Care Bundle – we will share community strategies for implementing several of the 18 bundle elements. "Assist birthing persons in completing timely referral and follow up for all identified, medical, behavioral health, reproductive health, and social determinants." Strategies: 1) Increase access to care coordination through SB and home visiting; linking prenatal care providers with home visitor agencies to improve referrals across 16 practices in an 8-county region. 2) All women receiving home visiting will receive self-monitoring blood pressure education. For those with hypertensive disorders, the intervention will include: a blood pressure machine, self-monitoring education, record-keeping, and an Action Plan for collaborative care with their medical provider. "Provide education on postpartum warning signs that is culturally responsive." Strategy: Engage a broad group of stakeholders to implement the CDC Hear Her campaign. Deliver education at multiple points of care (prenatal visits, hospital discharge, postpartum visit, home visitors). "Maintain an up-to-date inventory of community resources to assist with unmet needs." Strategy: In several sites, the well-tested High Touch/High Tech (H2T) behavioral health screening tool, completed on-line or by tablet in the waiting room, is being adapted for social needs screening. Referral resource links will be embedded in the tool for the provider and patient, with reporting mechanisms. Tablet-based screening is acceptable to patients and linked to higher disclosure rates.

Accomplishments: A process linking clinical care to evidence-based home visiting achieved a 69% referral rate (goal 50%). Approximately 65 home visitors received hypertension training with intervention delivery by 5-1-22. Twelve Hear Her trainings were completed, 30,000 copies of Hear Her materials were printed and distributed to community agencies, reaching 10,000 birthing people per year.

Barriers: The major barrier was the COVID-19 pandemic coinciding with the launch of AIM-CCI and the additional burdens on clinical providers and home visitors.

Lessons Learned: Implementation of strategies in a large health system was enhanced by senior level administrators, physician champions, operations specialist, and others. As strategies included community-wide education, having project resources available for development and training was critical. Using and adapting the CDC Hear Her campaign materials was efficient and readily accepted by community stakeholders.

Healthy Start Coalitions: 30 Years Dedicated to Healthy Mothers & Babies

Program/Policy Abstracts

Authors: Presenting Author - Gabrielle Bargerstock, MPH

Presenting Author - Anna Simmons, MSW

Presenting Author - Helena Girouard, MPH in progress

Category/Categories: Infant mortality; pregnancy outcomes, Maternal health

Method of Presentation: No Preference

Data Methods: Implementation science, Policy assessments or evaluations, Using new data systems, Using new data linkages.

Issue: Healthy Start Coalitions were created by the Florida Legislature in 1991 as part of the landmark Healthy Start initiative (s.383.2161, F.S.). The Healthy Start initiative's intent is to improve the health and well-being of Florida's pregnant women and young children. Healthy Start Coalitions seek to lower risk factors associated with preterm birth, low birth weight, infant mortality and poor developmental outcomes.

Setting: 32 locally driven coalitions led by a state association serve all counties/communities of Florida.

Project: The Florida Healthy Start Coalitions provide education, support and proven interventions to expecting and new families who are at-risk of a poor birth outcome or delay in development. The program focuses on common issues or conditions that occur during pregnancy or in infancy. Universal screening for pregnant woman and newborn infants, offered by prenatal care providers and hospitals, helps to identify families that could benefit from services.

Accomplishments: Building and maintaining broad community input and collaboration to maternal and child health planning efforts. Sustained effort to increase overall public awareness of the importance of investing in pregnant women and children. Development and implementation of short and long range plans to improve maternal and child health in communities. Florida Healthy Start Coalitions conduct planning and service delivery approaches that incorporate Florida communities as partners and participants in disparity elimination. Successful implementation of promising practices and evidence-based models to improve the health of women and babies.

Barriers: Changing priorities of state and legislative leaders require constant communication and good relationships. The complexity of Florida communities and populations present challenges to standardization, as does the maintenance of local control. Healthy Start has overcome this somewhat by standardizing components of the services offered while still allowing for local decisionmaking with respect to particular initiatives as well as service delivery planning.

Lessons Learned: Long-term, statewide investment in women and babies through a coalition model leads to coordinated effort (Healthy Start Service Delivery Plans are usually directly linked to County Health Improvement Plans and Needs Assessments), ongoing data monitoring and tracking, successful

start up and implementation of evidence-based models, and an effective mechanism for efficiently implementing new initiatives such as FIMR projects or fatherhood initiatives.

Information for Replication: Florida supports the Healthy Start system through state general revenue, Medicaid monies, as well as federally allocated DOH funds. In addition, local Healthy Start Coalitions leverage additional private philanthropic monies, corporate grants, and supplemental government funding to 'build out' their local systems. Multiple legislators, governors, State Department of Health leadership, local Department of Health leadership and numerous community partners helped establish and ensure the ongoing success of Healthy Start.

Early Childhood Literacy Program/Policy Abstracts

Authors: Helena Girouard, BS

Presenting Author - Beatrice Gilbert

Category/Categories: Racism, equity, social justice, Community collaboration,

Method of Presentation: No Preference

Issue: In alignment with the MCH Health Babies Priorities, the Florida Department of Health in Volusia County is increasing the percentage of children being read to and Healthy People 2030 Objectives are to increase the proportion of children whose parents read to them at least 4 days per week and to increase the proportion of 4th graders with reading skills at or above the proficient level.

Setting: Southside Health Zone is a DOH-Volusia site located in the heart of Daytona Beach where some of the highest risk populations reside. To promote child literacy a “lobby library” was created. Helena Girouard our Overdose Prevention Community Outreach Liaison and Maternal and Child Health Program Coordinator and Beatrice Gilbert, Government Operations Consultant keep the library stocked with children’s books and flyers on the importance of early childhood literacy. Books are free—an initiative of Florida Healthy Babies. Additionally, any organizations serving marginalized children are welcome to meet with Helena and Beatrice to receive free books and flyers to distribute at their locations.

Project: Since December 2021, over 2,000 books have been distributed via the “lobby library” and community partner lobbies. Logic models: SDOH: Statewide Performance Measure, Promote Child Literacy: The percent of parents who read to their young children age 0-5. To increase the percent of children being read to. Increase the proportion of children whose parents read to them at least 4 days per week. Increase the proportion of 4th-graders with reading skills at or above the proficient level.

Accomplishments: Since December 2021, over 2,000 books have been distributed via the “lobby library” and community partner lobbies.

Barriers: Initially there were barriers to getting children to take books. We learned that simply telling families that there were free books, they were excited to take a book and flyer.

Lessons Learned: Relationship building is key. Saying hello to families and simply showing the books makes a huge difference Having engaged staff willing to make those connections is critical. Clinic, WIC, and outreach staff all work together to spread the message of the importance of early childhood literacy.

Information for Replication: \$26,000 annual budget from MCH Healthy Babies Grant. Key partners/stakeholders who collaborated on the program / activity were Department of Health and community partner organizations (churches/childcare centers/community organizations).

Early Intervention Stakeholder Perspectives of Implementing an Electronic Option for Family-Centered and Participation-Focused Service Design

Program/Policy Abstracts

Authors: Presenting Author - Sabrin Rizk, PhD, OTR/L

Non-Presenting Author - Vera Kaelin, MScOT

Non-Presenting Author - Julia Sim

Non-Presenting Author - Natalie Murphy

Non-Presenting Author - Ashley Stoffel

Non-Presenting Author - Lesly James

Non-Presenting Author - Kris Barnekow

Non-Presenting Author - Beth McManus

Non-Presenting Author - Natalie Leland

Non-Presenting Author - Elizabeth Papautsky

Non-Presenting Author - Mary Khetani

Category/Categories: Data: innovation, quality improvement, communication, Community collaboration

Method of Presentation: Poster Presentation

Data Methods: Implementation science, Using new data systems, Using new data linkages, Using existing data sources in innovative ways

Issue: Family-centered care is integral to creating individualized family service plans tailored to their service needs. The Young Children's Participation and Environment Measure (YC-PEM) is an evidence-based and promising electronic patient-reported outcome (e-PRO) measure for developing family centered and participation-focused individualized family service plans. The purpose of this study was to examine diverse stakeholder perspectives of supports and barriers to implementing the YC-PEM e-PRO in an early intervention (EI) setting.

Setting: A mixed-methods study design was employed with families (n=6), service coordinators (n=9), and program leadership (n=7) affiliated with a single large and metropolitan EI program to represent diverse stakeholder perspectives to interpret the effects of the YC-PEM e-PRO implementation in routine EI workflow.

Project: We conducted semi-structured interviews and focus groups to share pragmatic trial results centered on trial enrollment and implementation strategies. Stakeholder perspectives were solicited to understand these results, for guiding programmatic planning for longer-term implementation of the YC-

PEM e-PRO in their routine workflow. Interview and focus group video recordings were transcribed verbatim. Deductive analyses of full transcripts for each stakeholder type were guided by the Consolidated Framework for Implementation Research (CFIR). Data were sorted and arranged into CFIR constructs and further collapsed. A national early childhood advisory group prioritized salient implementation strategies and barriers to support longer-term implementation of the YC-PEM e-PRO across multiple EI programs.

Accomplishments: Results suggest the YC-PEM e-PRO is an evidence-based option that is viable for implementation as an EI systems intervention. All three stakeholder groups identified supports and barriers related to 10 findings across four CFIR domains: 1) intervention (relative advantage, trialability and adaptability, complexity, design quality, and packaging), 2) outer setting (needs and resources, cosmopolitanism, and external policies and incentives), 3) inner setting (structural characteristics and implementation climate, culture, network, and communication), and 4) process (planning and executing, engaging, reflecting and evaluating). All stakeholders recognized the value of the YC-PEM e-PRO in building rapport and soliciting information about family priorities specific to areas of unmet participation needs. Service coordinators and program leadership broadly acknowledged the value of YC-PEM e-PRO results to mitigate EI access barriers, and to build relationships with EI enrolled families to enact tailored service plans.

Barriers: Finding an optimal timeline for implementing the YC-PEM e-PRO with the EI workflow was described as a challenge to implementation, resulting in suggestions for automating data capture and sharing processes for improved efficiency. Further optimizations to its implementation (e.g., automated data capture and sharing processes) are needed to inform scalability across multiple EI programs.

Lessons Learned: The YC-PEM e-PRO can facilitate the development of family centered and participation-focused individualized family service plans. Results signal opportunities for hybrid type-2 and 3 multi-site trials involving the YC-PEM e-PRO in EI programs with electronic data capture systems.

Description of a MultiModal Maternal Infant Perinatal Outpatient Delivery System (MOMI PODS): Providing Dyadic Care for Moms and Infants

Program/Policy Abstracts

Authors: Presenting Author - Seuli Bose Brill, MD, FAAP, FACP

Non-Presenting Author - Nikki Thomas, PhD

Non-Presenting Author - Allison Lorenz, MPA

Non-Presenting Author - Paola Flores,

Non-Presenting Author - Bethany Panchal, MD

Non-Presenting Author - Stephen Thung, MD

Non-Presenting Author - Shengyi Mao, MD

Non-Presenting Author - Amythest Gautier, MD

Non-Presenting Author - Jody Davis,

Non-Presenting Author - Naleef Fareed, PhD, MBA

Category/Categories: Healthcare quality improvement, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Implementation science, Policy assessments or evaluations, Program evaluation or surveillance evaluation, Using new data systems, Using new data linkages.

Issue: Fewer than half of women attend recommended postpartum clinical visits. Strategies to improve visit adherence, especially among individuals with chronic disease risk factors, include obstetrics to primary care handoffs and interventions making visit attendance more convenient. We propose the Multimodal Maternal Infant Perinatal Outpatient Delivery System (MOMI PODS), which is a comprehensive postpartum primary care program to increase maternal engagement in postpartum clinical care.

Setting: MOMI PODS is based at the Ohio State University Wexner Medical Center, and integrates primary care, obstetrics, maternal fetal medicine, neonatology, and community partners (like Women, Infants, and Children WIC) to deliver postpartum primary care to individuals across Central Ohio, especially those with severe maternal morbidity risk.

Project: MOMI PODS is a health system-level program based on the chronic care model, promoting prenatal and postpartum primary care engagement through evidence-based components and aligning with Ohio Department of Medicaid perinatal priorities. Partners engage patients across the pregnancy continuum to ensure seamless care transitions and care access. A nurse coordinator provides warm handoffs between obstetricians and primary care through an electronic health record referral system. Both mother and baby are offered care by the same primary care provider during one comprehensive

patient visit, overcoming time, transportation, stress, and financial barriers. Mothers are screened for depression, tobacco use, and diabetes, and receive delivery, lactation, diet, smoking, and contraception education. The program began in December 2021 with the goal of enrolling 1,260 dyads by 2024. As part of program quality improvement and evaluation, data are collected via electronic health records, vital statistics, Medicaid administrative data, and surveys. We are documenting our approach to establish a reproducible template to increase preventive postpartum care among high-risk populations.

Accomplishments: Three months into initiation, MOMI PODS has established community and university partners: Nationwide Children’s Hospital; institutional obstetrics, primary care, and neonatal intensive care; and community based WIC, patient navigation, and maternal mental health programs. Eleven primary care providers have adopted the program at four practices across two counties. We have received 28 new referrals since program initiation; weekly referrals have steadily increased since the start of the program. Program outcome data will be consolidated at the end of Year 1.

Barriers: MOMI PODS depends upon coordination of multiple partners and requires transformation of existing workflows. We have worked to overcome varied scheduling and clinical workflows across participating clinics to ensure appointment availability. Provider capacity has been impacted by COVID-19 and workforce attrition.

Lessons Learned: Early lessons from program implementation indicate the importance of early engagement with community partners and providers to quickly establish workflows for referrals and handoffs between providers, respectively. Penetration within the community ensures equitable access to our program particularly among those from vulnerable communities and those who have the most need.

Information for Replication: Critical components for replication include: a) initial funding for personnel, including significant effort from a nurse coordinator; b) transformations to clinical structures and processes supported by a multi-disciplinary team; c) provider buy-in and effort; and d) cross-specialty partnerships. Approximately 30% of initial costs for the program is estimated to be displaced by program revenue.

Innovative Program Delivery Model to Combat Maternal and Infant Mortality Inequities Amidst a Global Pandemic

Program/Policy Abstracts

Authors: Presenting Author - Angela Goode

Category/Categories: Infant mortality; pregnancy outcomes, Maternal health

Method of Presentation: No Preference

Issue: Nashville-Davidson County, Tennessee has one of the highest infant mortality rates in the state, coming in at 7.3 deaths per 1,000 live births. Black mothers are more than twice as likely to experience the death of an infant as white mothers. The Community Drive-in Baby Shower aim was to address through innovatively delivered education: the environmental and social factors such as access to health care and early intervention services, educational, employment, and economic opportunities, social support, and availability of resources to meet daily needs that influences maternal health behaviors and health status.

Setting: The Community 'Drive-In' Baby Shower event took place in the Metro-area of Nashville TN. Geographically, efforts were focused on seven identified zip codes within Metro Nashville who have the highest maternal and infant mortality rates in the county. The intended population were new and expectant mothers. The purpose of the event is to serve low-income families and provide access to valuable local resources that will help give them a stronger start to parenthood.

Project: Participants were able to interactively participate in health educational presentations via a drive-in movie style delivery method. From the safety of their vehicles, families were able to view on a movie screen, while listening to the audio on their car radio. Active participation, through the free phone app Kahoot! provided the real time learning platform. Balloons tied to vehicles identified by color: Dads in attendance, if an interpreter was needed, and requested health screenings. The role of Meharry Nashville Strong Babies Program served as the lead planning agency.

Accomplishments: Based on preliminary participants pre and post test results, it is evidence that shows an improvement in knowledge around key aspects of a healthy pregnancy and delivery. Additionally, 95% of the completed satisfaction surveys reflected either very satisfied or satisfied with the overall event.

Barriers: Approximately half in attendance were outside the target zips codes, several as far away as Kentucky were in attendance. In attempt to increase participation from our target zip codes, a balloon color was designated for those families to ensure target base programmatic resources was shared.

Lessons Learned: Participants received an array of viable information on how important it is to take care of their health, especially during pregnancy, and the health of their baby. As well as baby items. Vendors available that represented different aspects of addressing social determinants of health highlighted the community aspect of the event. Those who were reluctant to participate in an event was put at ease of being able to social distance and at the same time still be fully engaged. The Community Drive-in Baby Shower was able to provide health education in a variety of subjects, all aimed to better maternal and infant health outcomes.

Information for Replication: Approximate budget for Community Drive-in Baby Shower = \$15K
Resources used to cover the cost: Nashville Strong Babies program grant through the Metro Public Health Department. Key partners: Metro Public Health Department who provided the event space; Nashville Diaper Connection who provided each family 50 diapers for attendance and New Life Center (Fatherhood program).

New Partners in Public Health: Breaking Down Silos to Improve Economic Mobility

Program/Policy Abstracts

Authors: Presenting Author - Nathan Davis, B.A., Urban Studies

Presenting Author - Isabel Dickson, MPH

Category/Categories: Refugee/Immigrant population health, Social Determinants of Health - Economic Mobility, Infant mortality; pregnancy outcomes

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Issue: Colorado is increasingly expensive, and many Colorado families have trouble meeting critical expenses. Colorado is tied for the third-lowest Earned Income Tax Credit participation rate in the U.S. (73.3%). Many Coloradans are not aware of their eligibility for expanded tax credits because their income is too low to require filing taxes. Expanded tax credits support economic mobility and are specifically associated with reduced child and household poverty, increased food security, and fewer adverse childhood events.

Setting: Prioritizing economic mobility to improve health outcomes is part of Colorado MCH's broader move upstream to address social determinants of health. Outreach and referral to free tax filing is intended to reach Coloradans not engaged with the IRS. Non-filers tend to be disproportionately low income, non-English speaking, and rural residents.

Project: Colorado MCH's tax credit project formed new partnerships to increase outreach and referral to free tax filing. The primary statewide non-profit partner is Mile High United Way's (MHUW) Tax Help Colorado, a Volunteer Income Tax Assistance (VITA) program. MHUW has strong community networks and operates Colorado's 2-1-1 program, a vital resource for referrals to VITA sites. Colorado MCH leveraged its public health and human services networks to disseminate a comprehensive communications campaign in 11 languages to expand outreach and referral in community-based settings. The project developed a logic model and evaluation plan.

Accomplishments: A new network of partnerships was formed, supporting outreach, communication, and referral aimed at increasing tax filing statewide. Nearly all state agencies participated in a workgroup to facilitate outreach. Colorado MCH collaborated with local public health, HungerFree Colorado, WIC, the Denver Housing Authority and the Colorado Benefits Management System. New collaborations with AmeriCorps and Code For America offered Coloradans no-cost tax services. Colorado MCH implemented mini-grants to VITAs to strengthen free tax assistance, and with Tax Help CO, deployed two teams of AmeriCorps members to assist Coloradans in tax filing. Colorado MCH also launched a statewide media campaign, trained 2-1-1 operators, and contracted with community-based organizations to reach immigrant and refugee communities using trusted voices. Recently, state bill (SB22-182) was introduced to the legislature to establish Colorado MCH's Economic Mobility Program in statute and allocate pandemic recovery funds over the next 2 years to support the tax credit outreach project.

Barriers: Staff capacity and tax filing deadlines limited the number of presentations and outreach activities that could be conducted. Additional staff were hired. Language translation took longer than expected. Shipping flyers in multiple languages to community partners took significant time. Community input gathered at two engagement events was invaluable, and should be incorporated more fully in the 2023 tax season.

Lessons Learned: Public health can use its networks as well as new partners to connect MCH populations to income supports to reduce income disparities. Messaging to successfully reach non-traditional partners to speak to those partners' values is important to securing buy-in. Support from agency leadership is critical to facilitating partnerships and innovation.

Information for Replication: The program leveraged funds, and began with a 0.5 FTE for program design and partner engagement. Key partners were local public health, state agencies, and VITA sites.

Combatting Birth Disparities in South Carolina: Generating a Searchable Inventory of Maternity Support Services

Program/Policy Abstracts

Authors: Non-Presenting Author - Taylor Olson, B.S.

Presenting Author - Kathryn Luchok, MA, PhD

Category/Categories: Maternal health, Healthcare quality improvement

Method of Presentation: No Preference

Data Methods: Using existing data sources in innovative ways

Issue: Rural women face more barriers for access to healthcare compared to their urban counterparts. Rural pregnant women must overcome many barriers in order to receive adequate care and have good birth outcomes. Geographical access to maternal services has increasingly become one such barrier. Over the past several decades, the number of hospitals in rural counties has declined. With 3 out of 4 women giving birth in local hospitals, this has created an issue. Only 45% of rural counties in the United States had Obstetrics services in 2014, which is down about 10% from the previous decade, and 17 hospitals servicing rural communities closed in 2016 alone (Anderson, et al., 2019). With the closure of these hospitals, it has increased travel intrapartum care by an average of 29 miles and likely affected mostly lower income families (Anderson, et al., 2019). South Carolina has many areas of maternal services deserts, where women need to travel long distances to access care. This initiative is to create a searchable map of maternity support services across the state to pinpoint gaps and ascertain how many services serve high need locations. This map will be used to plan more inclusive services across the state.

Setting: South Carolina. This work will inform the Birth Equity Workgroup of the South Carolina Birth Outcomes Initiative. It will benefit health services planners and ultimately the pregnant people of South Carolina. Improvements in promoting birth equity will benefit the entire state.

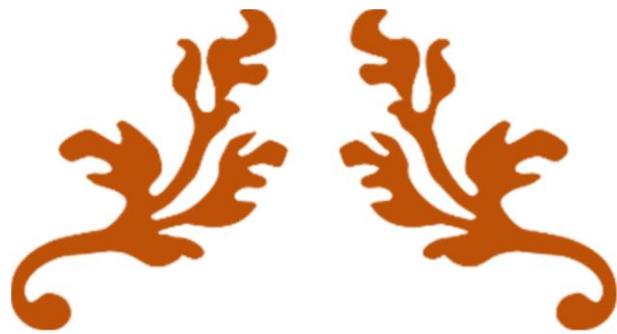
Project: Using a mixed methods approach, the research into services used a variety of existing data bases as well as queries to various organizations and agencies to determine types, scopes of services, and geographic location and reach. Lists included hospitals, clinics, birth centers, community services, doulas, and direct entry midwives. Once the broad array of services were delineated, they were mapped to show where services were clustered and where the gaps were. Then Department of Health and Environmental Control data regarding birth outcomes (by county, race, insurer, income) and match these data up with the mapped inventory. This comparison will allow for a better understanding of what parts of the state could use more services to promote better birth outcomes. This work is being done by a public health undergraduate under the direction of her Honors Thesis advisor.

Accomplishments: The map will be used for program planning and eventually may be formed into a resource guide for consumers. How the inventory is used and updated will be monitored. The inventory can be used to fill gaps in care around the state and changes in services can be tracked along with rates of birth outcomes to see if improvements in service delivery lead to better birth outcomes and more equitable birth outcomes.

Barriers: Access to easy to use data was limited for some providers and took considerable legwork to gather. Time limitations are in place for the first phase of this project, but after graduation the former student plans to continue refining the inventory.

Lessons Learned: This project was done with volunteer labor and some funding would have allowed for more time spent on the project. There were some limitations in the existing data, for example ranges given of OB providers rather than exact counts of providers per zip code. More time would also allow more checking with services to ascertain changes in their services. This project is designed to promote health equity in birth outcomes by expanding service areas and identifying a full range of supportive services.

Information for Replication: This could be replicated in any state. The inclusion of agencies that hold the data is key. Having a student or other person devoted to the project is important as there is a lot of data to collate and map. While this can be done with volunteers, it would be more timely accomplished if there was funding to support the work.



Facilitated Discussion



Maintaining Healthy Work Force during the COVID-19 Pandemic: Tips for Fatality Review Teams and other MCH professionals

Facilitated Discussion

Authors: Abby Collier, MS

Rosemary Fournier, RN, BSN

Moderator(s): Susanna Joy, MA

Objective(s): Participants will recognize ways that the pandemic has affected their physical, mental, and emotional health. Hearing from panelists with lived experiences from the field, participants will explore coping strategies to help mitigate stress associated with their work. Participants will come away with a multifaceted approach to improving the health and well-being of the fatality review and MCH workforce.

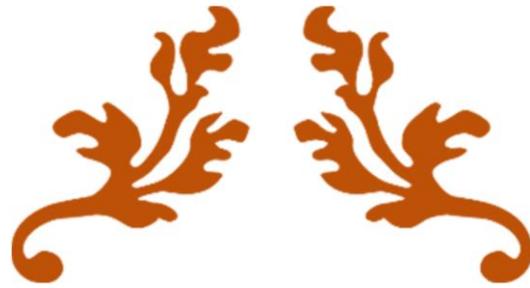
Narrative: More than 2 years after the first cases of COVID-19 were reported in the U.S., the pandemic continues to affect communities and has challenged the health care work force in many ways. Child Death Review (CDR) and Fetal and Infant Mortality Review (FIMR) teams were no different. Stay-home orders and remote work requirements, reassignment of key staff to activities such as surveillance, contact tracing, COVID testing, and recently mass vaccination effort were among the challenges identified. Even before the pandemic, partners engaged in the FIMR and CDR, either individually or on a team, were adversely affected by the repeated exposure to traumatic information, a condition referred to as “vicarious trauma”. This session will bring together panelists from FIMR and CDR, and other MCH experts, to discuss the successes and challenges they have encountered in maintaining a healthy work force during the COVID-19 pandemic. Format: World Cafe

Justification: Rapidly changing working conditions, accelerated by the pandemic, have had significant, but not yet fully known impacts on workers. Stress and burnout are the first and most obvious effects, what are yet to be fully understood are the changing technologies or remote work, and the long-term effects of worker isolation and sedentariness. During the pandemic, the overall response of health care systems has been somewhat patchwork, with some local governments, public health experts, and health care systems responding faster and more effectively than others. Organizations have differed over whether and how in-person interaction should take place, and rapidly changing regulations. This has often increased workers’ stress levels. The National Center for Fatality Review and Prevention (NCFRP) is the data and resource center providing technical assistance, resources, and support to existing and developing fatality review teams. Over the course of the pandemic, the National Center has developed a number of tools to assist teams and has conducted “listening session” via quarterly networking and community or practice meetings and opportunities with local and state fatality review leaders. Staff identified that in addition to secondary or vicarious trauma, pandemic specific stressors such as high staff turnover and staff shortages, isolation, higher workload, psychological distress, social exclusion/stigmatization, and absence of coordination and proper management of health care have had incredibly negative impacts on the health of the work force. Building on what is known, this interactive session will capitalize on the expertise of the fatality review field, sharing their successful strategies to identify and mitigate challenges they have encountered in maintaining a healthy work force during the COVID-19 pandemic. During the small groups discussions, individuals will be invited to share insights or

other results from their conversations with the rest of the large group. These results will be reflected visually graphic recording.

Agenda/Format: Facilitated World Café, 90 minutes To maximize learning, connections, and participation, the dynamic format will include: 1) Welcome and Introduction: (15 minutes) Get to know who is in the session. Introduction to the topic of Maintaining Healthy Work Force during the COVID-19 Pandemic. Explain the World Café process, setting the context and putting participants at ease. 2) Small-Group Rounds: (60 minutes) Three 20-minute rounds of conversation for small groups of five to six people per group, seated around a table. At the end of the 20-minutes, members move to a different new table. One person will serve as the “table host” for the next round, welcomes the next group and briefly fills them in on what happened in the previous round. 3) Questions: each round is prefaced with a question specially crafted for the specific context and desired purpose of the World Café. The questions will build upon each other to focus the conversation or guide its direction. 4) Harvest/Debrief: (15 minutes) After the small groups, individuals are invited to share insights or other results from their conversations with the rest of the large group. These results are reflected in written and visual recording, shared with session participants, and the conference attendees at large.

References: Wilensky GR. The COVID-19 Pandemic and the US Health Care Workforce. *JAMA Health Forum*. 2022;3(1):e220001. doi:10.1001/jamahealthforum.2022.0001 Shreffler J, Petrey J, Huecker M. The Impact of COVID-19 on Healthcare Worker Wellness: A Scoping Review. *West J Emerg Med*. 2020;21(5):1059-1066. Published 2020 Aug 17. doi:10.5811/westjem.2020.7.48684 Mehta S, Machado F, Kwizera A, Papazian L, Moss M, Azoulay E, et al. COVID-19: A Heavy Toll on Health Care Workers. *The Lancet*. 2021. Published 2/5/2021. DOI: [https://doi.org/10.1016/S2213-2600\(21\)00068-0](https://doi.org/10.1016/S2213-2600(21)00068-0)



**Scientific
Research/Data**



Emergency Department Visits among Pregnancy-Related Deaths in Illinois, 2015-2017

Scientific Research/Data Abstracts

Authors: Cara Bergo, PhD, MPH

Non-Presenting Author-Marcelo Seminara,

Category/Categories: Maternal morbidity and mortality, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Linked data file, Other

Background: In 2017, Illinois had a pregnancy-related mortality ratio of 20 deaths per 100,000 live births. The Illinois Department of Public Health gathers information on each pregnancy-associated death to be reviewed by two multidisciplinary Maternal Mortality Review Committees (MMRCs). The Illinois death abstract includes information on emergency department (ED) use during and after pregnancy. Understanding ED use and its prevalence among maternal deaths is pivotal to preventing future deaths.

Study Questions: What percent of pregnancy-related deaths had an ED visit during pregnancy or the postpartum period? What factors and recommendations to prevent future maternal deaths addressed usage of the ED?

Methods: Deaths within one year of pregnancy were reviewed by the Illinois MMRCs to determine: underlying cause of death, if the death was pregnancy-related, preventability, contributing factors involved, and recommendations that could prevent future deaths. Case information is abstracted from medical records, police records, autopsies and other records available. We examined MMRC records for pregnancy-related deaths to Illinois residents during 2015-2017 (n=86) to identify if there was an ED visit during pregnancy or postpartum. Chi square tests were used to compare percentage of ED visits by type of death (mental health conditions n=28, medical conditions n=57). Qualitative analysis was performed to review text responses regarding contributing factors and recommendations.

Results: Of Illinois' pregnancy-related deaths during 2015-2017, 70.9% (n=61) had at least one ED visit during pregnancy or up to one year postpartum and 43.0% (n=37) had two or more ED visits. Among mental health condition deaths, 85.7% (n=24) had at least one ED visit during pregnancy or up to one year postpartum versus 63.2% (n=36) of medical condition deaths (p<0.05). Specifically, mental health condition deaths were more than twice as likely to have an ED visit up to one year postpartum compared to medical condition deaths (46.4% vs. 21.1%, p<0.05). Contributing factors identified with ED use were poor quality of care and lack of care coordination. Poor quality of care was described as EDs lacking a formal curriculum on obstetric best practices for all providers. Lack of care coordination was described as not having systems in place for ensuring continuity of care for women with complex conditions. To address these factors, recommendations included developing policies to consult obstetric

care providers, ED provider education on appropriate management of postpartum complications, and linking women to appropriate care.

Conclusions: ED visits are common among pregnancy-related deaths, affecting almost 3 of 4 Illinois women who died from pregnancy-related causes. Women who died from pregnancy-related mental health conditions were more likely to have an ED visit than women who died from pregnancy-related medical conditions. ED use is linked to factors that when addressed could prevent future maternal deaths.

Public Health Implications: Recognizing that most women who experienced a pregnancy-related death visit the ED during or after pregnancy is crucial to understanding where to focus interventions and how to build effective strategies to reduce maternal mortality in Illinois. Specifically, improvements in the ED could help identify pregnant and postpartum women and better connect them to needed services to prevent future death.

Cannabis Use During Pregnancy and the Association with Neonatal Global and Subcortical Brain Morphology

Scientific Research/Data Abstracts

Authors: Presenting Author-Tessa Crume, PhD, MSPH

Non-Presenting Author - Pilyoung Kim, PhD, MA

Non-Presenting Author - Erika Iisa, MS

Non-Presenting Author - Elaine Stickrath, MD

Non-Presenting Author - Christine Conageski, MD

Non-Presenting Author - Alexander Dufford, PhD

Category/Categories: Infant mortality; pregnancy outcomes, Tobacco, smoking, vaping, substance abuse

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Other

Data Source: Other

Background: Increasing legalization of cannabis in the United States has led to higher levels of use among women of reproductive age. Unlike alcohol and tobacco use which decreased among pregnant women at the national level between 2002 and 2016, prenatal cannabis use nearly doubled. Increasing evidence suggests that in utero cannabis exposure is associated with deleterious offspring neural development and behavior related to deficiencies in attention, executive function, and inhibition control that emerge across the lifespan. Neonatal structural MRI offers a methodology to identify subclinical disruptions to brain development before the confounding effect of the postnatal environment.

Study Questions: To evaluate differences in neonatal global and subcortical brain volume of neonates in the first month of life according to in utero cannabis exposure in the prospective pre-birth cohort, the Moms Helping Moms study.

Methods: A cohort of 78 pregnant women were consented and enrolled into a pre-birth longitudinal neuroimaging study (35 women who used cannabis prenatally and 43 non-users) from two large community hospitals in Denver Colorado. Urine was collected from mothers during the 3rd trimester of pregnancy and blood and urine were collected at delivery. Cord blood and meconium was collected from neonates at birth. The presence of 12 cannabinoids and their metabolites using ultra-high performance liquid chromatography-tandem mass spectrometry (LC-MS/MS) was quantified on all samples. Structural MRI was conducted on 57 neonates within the first month of life and 45 had sufficient image quality on the T1 and weighted T2 structural images to be included in the neuroimaging analytic sample (19 cannabis exposed and 26 unexposed).

Results: Mothers of neonates with evidence of in utero cannabis exposure were less likely to be non-Hispanic white, married and breastfeed their infant and more likely to have lower total household

income, public health insurance and have a lower birthweight infant compared to mothers with no evidence of in utero cannabis exposure. Neonates exposed to cannabis in utero had significantly lower total brain volume compared to unexposed infants ($p=0.03$), independent of adjustment variables including prenatal tobacco use. Total intracranial volume, right and left hippocampal and right and left amygdala volume were not significantly different according to in utero cannabis exposure. The finding of lower total brain volume was robust to sensitivity analyses in which tobacco exposed neonates were excluded.

Conclusions: Prenatal cannabis use was associated with deleterious offspring brain structure. This study addresses a critical knowledge gap in the associations of prenatal cannabis use and the impact on offspring brain structure shortly after birth before the confounding impact of the postnatal environment.

Public Health Implications: Mounting evidence suggests that exposure to exogenous cannabinoids has a detrimental impact on the developing fetal brain. While prenatal tobacco cessation has a strong body research to support specific design of interventions with components that have been shown to be highly effective, prenatal cannabis cessation is largely non-existent. Considering that regular cannabis use is increasing among women of reproductive age, robust prenatal cannabis prevention and cessation models need to be developed.

Stability of Health Insurance Coverage before and During Pregnancy and the Association with Prenatal Care Utilization in Illinois

Scientific Research/Data Abstracts

Authors: Jelena Debelnogich, MPH

Non-Presenting Author-Amanda Bennett, PhD, MPH

Non-Presenting Author - Cara Bergo, PhD, MPH

Category/Categories: Maternal health, Health insurance or safety net care

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: PRAMS

Background: Health insurance instability can be a barrier to healthcare access during pregnancy. This study's purpose is to examine the association of insurance instability during the perinatal period and prenatal care utilization.

Study Questions: What are the patterns of health insurance coverage before and during pregnancy among Illinois birthing persons? Is insurance instability associated with utilization of prenatal care?

Methods: This study used 2016-2019 Illinois Pregnancy Risk Assessment Monitoring System (PRAMS) data for Illinois residents with a recent live birth (n=5,147). Insurance type was self-reported for the month before pregnancy and during pregnancy. These two time points were used to classify insurance as stable private, stable Medicaid, consistently uninsured, or unstable (any insurance changes before and during pregnancy). Chi-square tests assessed insurance stability patterns by race/ethnicity, age, marital status, education, parity, geography, and pre-pregnancy chronic conditions (hypertension, diabetes, or depression). The outcomes of interest were first trimester prenatal care entry and adequate or better prenatal care (Adequacy of Prenatal Care Utilization Index). Multivariable logistic regression assessed the association of insurance stability with each outcome after controlling for demographics. Consistent uninsurance was rare (n=89) and excluded from chi-square and regression analyses. SAS v.9.4 survey procedures were used to produce weighted percentages and odds ratios (OR) with 95% confidence intervals (CI).

Results: Among birthing persons in Illinois, 51.7% (CI:50.1-53.2%) had stable private insurance, 27.6% (CI:26.3-29.0%) had stable Medicaid insurance, 18.8% (CI:17.6-20.4%) had unstable insurance, and 1.9% (CI:1.4-2.3%) were consistently uninsured. Insurance stability significantly varied by all demographics examined ($p < 0.05$). Most birthing persons entered prenatal care in the first trimester (88.6%, CI:87.5-89.6%), with first trimester entry more common for those with stable private insurance (95.6%, CI:94.7-96.5%) than those with stable Medicaid (84.3%, CI:82.0-86.5%) or unstable insurance (78.3%, CI:75.2-81.4%). After adjustment for demographics, the odds of first trimester prenatal care entry were significantly higher for birthing persons with stable private insurance (OR=3.1, CI:2.1-4.5) and stable

Medicaid insurance (OR=1.8, CI:1.4-2.4) compared to persons with unstable insurance. Of birthing persons, 78.4% (CI:77.0-79.7%) had adequate or better prenatal care, which was more common for those with stable private insurance (85.3%, CI:83.8-86.9%) than those with stable Medicaid (70.9%, CI:68.0-73.8%), or unstable insurance (72.8%, CI:69.3-76.3%). After adjustment for demographics, birthing persons with stable private insurance had significantly higher odds of adequate or better prenatal care than those with unstable insurance (OR=1.5, CI:1.2-2.0), but there was no significant difference between stable Medicaid and unstable insurance (OR=1.1, CI:0.8-1.4).

Conclusions: Nearly 1 in 5 Illinois birthing persons experienced insurance instability. Compared to unstable insurance, persons with stable private insurance had higher odds of early and adequate prenatal care, and persons with stable Medicaid had higher odds of early prenatal care.

Public Health Implications: These results indicate that stable insurance, either private or Medicaid, is associated with earlier entry into prenatal care, and stable private insurance is positively associated with adequacy of prenatal care compared to unstable insurance. Policies to improve insurance stability may support early entry into and adequacy of prenatal care.

Very preterm, very low birth weight infants admitted and not admitted to the neonatal intensive care unit– United States, 2019

Scientific Research/Data Abstracts

Authors: Presenting Author-Carla DeSisto, PhD, MPH

Non-Presenting Author - Lindsay Womack, PhD

Non-Presenting Author - Ekwutosi Okoroh, MD

Non-Presenting Author - Shanna Cox, MSPH

Non-Presenting Author - Charlan Kroelinger, PhD

Non-Presenting Author - Wanda Barfield, MD

Category/Categories: Infant mortality; pregnancy outcomes, Healthcare quality improvement

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: Birth and/or death certificates

Background: Evidence has demonstrated improved neonatal and posthospital discharge survival among very preterm (VPT) and very low birth weight (VLBW) infants born in hospitals with neonatal intensive care units (NICU). A recent study analyzed trends in NICU admission rates for VLBW infants during 2008-2018 and found that NICU admission rates have increased overall and among each racial/ethnic category examined. However, little is known about characteristics of VPT, VLBW infants not admitted to the NICU.

Study Questions: What are the characteristics of VPT, VLBW infants not admitted to the NICU?

Methods: We used 2019 birth records from the National Vital Statistics System. We included infants who were both VPT (gestational age <32 weeks) and VLBW (<1500 grams). We excluded infants born at <22 weeks and those with missing information on gestational age, NICU admission, payment source, maternal race/ethnicity, delivery method, or 5-minute Apgar score. We calculated crude and adjusted prevalence ratios using log binomial models to assess the prevalence of not being admitted to the NICU by selected characteristics: sex (reference=female), maternal age (reference=30-39 years), payment source (reference=private), maternal race/ethnicity (reference=non-Hispanic White), gestational age (reference=28-31 weeks), plurality (reference=singleton), delivery method (reference=Cesarean), and 5-minute Apgar score (reference=9-10). Adjusted models included all characteristics. We examined clinical interventions (transfer, assisted ventilation, surfactant, maternal receipt of antenatal steroids) by NICU admission status and calculated chi-square tests to assess differences.

Results: Among 39,641 VPT, VLBW infants born in 2019, 11% were not admitted to the NICU. In the adjusted model, factors associated with a higher prevalence of not being admitted to the NICU included maternal age ≥ 40 years (adjusted prevalence ratio[aPR]= 1.12, 95% confidence interval [CI]: 1.01-1.25),

non-Hispanic Asian maternal race (aPR=1.24, 95% CI: 1.13-1.36), gestational age 22-24 weeks (aPR=1.48, 95% CI: 1.38-1.59), vaginal delivery (aPR=1.82, 95% CI: 1.73-1.93), and 5-minute Apgar score of 0-3 (aPR=3.40, 95% CI: 3.10-3.72). Factors associated with a lower prevalence of not being admitted to the NICU included non-Hispanic Black maternal race (aPR=0.90, 95% CI: 0.84-0.96), gestational age of 25-27 weeks (aPR=0.86, 95% CI: 0.80-0.93), multiple gestation pregnancy (aPR=0.88, 95% CI: 0.82-0.94), and 5-minute Apgar score of 7-8 (aPR=0.84, 95% CI: 0.77-0.92). Infants not admitted to the NICU were more likely to be transferred (13.9% vs. 10.5%) and less likely to receive assisted ventilation (17.6% vs. 59.6%), receive surfactant (4.0% vs. 22.6%), or have their mother receive antenatal steroids (26.9% vs. 51.4%), compared with infants admitted to the NICU ($p < 0.0001$ for all).

Conclusions: Overall, NICU admission was high among VPT, VLBW infants in 2019; however, it varied by maternal age, maternal race/ethnicity, gestational age, plurality, delivery method, and 5-minute Apgar score.

Public Health Implications: Current standards call for NICU admission for VPT, VLBW infants. Infants without NICU admission were less likely to receive treatment, including ventilation or surfactant. Ensuring that these infants receive risk-appropriate care in NICUs is critical for improving neonatal and posthospital discharge survival.

Methodology for Aligning Fetal Infant Mortality Review and Maternal Mortality Surveillance Recommendations to Improve Maternal and Infant Health Outcomes

Scientific Research/Data Abstracts

Authors: Presenting Author-Audra Brummel, MPH

Presenting Author - Melissa Limon-Flegler, BSW

Presenting Author - Heidi Neumayer, MPH

Category/Categories: Data: innovation, quality improvement, communication, Infant mortality; pregnancy outcomes,

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: Other

Background: Michigan Maternal Mortality Surveillance (MMMS) and Fetal Infant Mortality Review (FIMR) are fatality review programs following similar processes. Each program performs case abstractions, case reviews, and develops recommendations aimed at improving systems for women, infants, and families. Both also use action-oriented processes. To better elevate both program recommendations and increase impact, a methodology was developed to align recommendations between the two program areas.

Study Questions: What methodology can be implemented to identify aligned themes between MMMS and FIMR program-specific recommendations?

Methods: Recommendations developed during fiscal year 2021 quarter three were used in these analyses. MMMS and FIMR coordinators created a file containing the following variables: individual program area recommendations, themes for action, organization or person responsible for recommendation implementation, geographic level, impact level, theme, and theme focus by MMMS and FIMR coordinators. The recommendations were uploaded to a qualitative analysis software, NVivo version 12, and a unique identifier for each recommendation program area code was developed. Four different mechanisms were used to align recommendations between the two program areas with two different parent code grouping sets. The first parent code groupings were based on twelve different theme focus areas. The coordinators then assigned each recommendation to the theme focus area and the epidemiologist used manual comparison to align FIMR and MMMS recommendations within focus areas. The second parent code groupings were based on alignment categories and were developed using the NVivo autocode feature, matrix queries, text frequency queries and word count. FIMR and MMMS recommendations from the alignment categories were identified. Data visuals including comparison diagrams and word clouds were developed to include with dissemination materials.

Results: There were 55 MMMS and 37 FIMR Recommendations developed between July 2021 and August 2021. Ten duplicate MMMS recommendations were removed from the analysis. Of the remaining recommendations, 46 percent of FIMR recommendations and 40 percent of MMMS recommendations were able to be aligned between the two program areas. Areas of alignment that were identify include: pre-/inter conception care, patient/provider communication, child protective service involvement, care of incarcerated individuals, social determinants of health, substance use disorder, screening, wrap around services, accessibility and connection to services, payment for care and mental health.

Conclusions: Maternal child health professionals need locally informed data to improve systems and reduce disparities. Aligning recommendations allow an additional data source that provides context to quantitative data being disseminated. This methodology is beneficial for breaking down program silos, increasing alignment between program areas, and increasing the impact of community driven recommendations. The methodology for this project can easily be replicated in other states and/or for additional fatality review programs.

Public Health Implications: States have multiple types of fatality review programs. This methodology provides an example of how intersecting mortality review programs can highlight themes and areas of concerns to have greater impact. The application of qualitative analysis provides an innovative way to disseminate mortality review data and highlights inequities that may not be seen with the quantitative data alone. An annual report that details these aligned recommendations will be developed and disseminated to policy makers, public health professionals, practitioners, and the general public. Additional communication strategies, such as presentations and press releases, will be implemented to disseminate results as well.

Prevalence of Postpartum Substance Use and Polysubstance Use by Mental Health Conditions and Life Stressors, 7 U.S. Jurisdictions, 2019

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Andrea Stewart, PhD

Non-Presenting Author - Jean Ko, PhD

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Category/Categories: Mental/behavioral health, Violence and injury prevention

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: PRAMS

Background: Reducing substance use during pregnancy, including the misuse of licit (e.g. prescription opioids) or illicit substances is a public health priority. Postpartum substance use, polysubstance use, and their determinants are less well-characterized during the U.S. opioid crisis.

Study Questions: This study aimed to describe the prevalence of any postpartum substance use and polysubstance use, and the relationship with depressive symptoms, depression, anxiety, adverse childhood experiences (ACEs), and stressful life events (SLEs).

Methods: Pregnancy Risk Assessment Monitoring System (PRAMS) respondents in 7 states with high rates of opioid overdose (Kentucky, Louisiana, Massachusetts, Missouri, Pennsylvania, Utah, and West Virginia) were called 9-10 months after a 2019 live birth and asked about prescription opioid misuse, alcohol misuse, and any use of tobacco or illicit substances (heroin, marijuana products, cocaine, amphetamines, hallucinogens, tranquilizers, or inhalants) since their infant was born. Respondents were also asked about depressive symptoms in the past 30 days, current depression, current anxiety, and five ACEs (parental divorce, mental illness, alcoholism, drug use or incarceration). During the main PRAMS survey (4-6 months after birth), respondents in all states except West Virginia reported the number of SLEs (of 14) in the year before birth. We compared prevalence of any postpartum substance use and polysubstance use between demographic categories (age, race/ethnicity, education, and health insurance) using weighted prevalence estimates and chi-square tests. To compare prevalence of any

substance use and polysubstance use between respondents with and without mental health conditions, ACEs, and SLEs, we calculated adjusted prevalence ratios (aPRs).

Results: Of 1,920 survey respondents with non-missing data for all substances, 25.6% (95% confidence interval (CI): 22.8%-28.7%) of women reported any substance use, and 5.9% (95% CI: 4.6%-7.6%) reported polysubstance use 9-10 months postpartum. There were no significant differences in prevalence of any substance use or polysubstance use by age. There were significant differences in rates of any substance use by education and health insurance, and rates of polysubstance use by race/ethnicity and health insurance. Prevalence of any postpartum substance use was 1.8 (95% CI: 1.3-2.4), 1.6 (95% CI: 1.2-2.1) and 1.9 (95% CI: 1.4- 2.4) times higher among respondents with clinically relevant depressive symptoms, depression, and anxiety, respectively, adjusted for demographics. Compared with respondents who reported no stressors, respondents who reported 3 or more ACEs or SLEs had 1.7 to 3.5 times greater prevalence of any substance use. For polysubstance use, aPRs for depressive symptoms, depression, anxiety, ACEs, and SLEs were stronger than APRs for any substance use. Mental health conditions were associated with 2.7 to 4.4 times greater polysubstance use prevalence. Polysubstance use prevalence was also 3.9 to 8.0 times greater among respondents reporting 3 or more ACEs or SLEs.

Conclusions: Depressive symptoms, depression, anxiety, ACEs, and SLEs were significantly associated with higher prevalence of postpartum use of any substance. These associations were even stronger postpartum polysubstance use.

Public Health Implications: Approaches to improve postpartum health can include screening and treatment for depression, anxiety, and substance use disorders; psychosocial support services; and strategies to improve retention in substance use disorder treatment programs.

Caregiver's Decision-Making Experiences About Infant Feeding Practices During the Early Phase(S) of the COVID-19 Pandemic

Scientific Research/Data Abstracts

Authors: Presenting Author-Gayle Shipp, PhD in Human Nutrition, M.S. in Nutritional Science

Non-Presenting Author - Sarah Comstock, PhD

Non-Presenting Author - Jean Kerver, PhD (Nutrition), MSc (Epidemiology)

Category/Categories: Collateral damage of COVID, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: Other

Background: The recommended duration for exclusive breastfeeding (BF) is six months, but many people experience challenges and discontinue BF prior to meeting their own BF goals. Accumulating evidence suggests that the COVID-19 era created new BF challenges and it is unknown how it has impacted women in meeting their BF goals. Therefore, our objective was to identify the infant feeding decision-making experiences of people who were pregnant or BF during the early phase(s) of the COVID-19 pandemic.

Study Questions: Will the early era of COVID-19 impact women's decisions to initiate and continue to breastfeed? What factors will influence infant feeding decision-making experiences of people who were pregnant or BF during the early phase(s) of the COVID-19 pandemic?

Methods: Selected participants from the Michigan Archive for Research on Child Health (MARCH) prospective pregnancy cohort study were screened for inclusion criteria (BF during March-December 2020). Eligible participants were invited to participate in semi-structured qualitative interviews exploring BF experiences during COVID-19 (n=9). Interviews were recorded, transcribed, and analyzed using theoretical thematic analysis

Results: In the heterogeneous sample, the primary theme that arose was feelings of ambivalence. Participants shared typical challenges when BF (e.g., issues with latching, C-section, tongue-tie) and general negative feelings (e.g., overwhelmed, stressful, frustrated). Participants particularly expressed BF difficulties related to the pandemic (e.g., no visitors in the home, virtual lactation consultation, limited breaks at work) and stringent hospital procedures (e.g., limited support, staffing shortage, limitations with visitors). Their perception of support was "limited," however, participants did identify positive experiences (e.g., virtual support groups, ability to BF longer because of being home).

Conclusions: All participants identified common BF challenges, as identified in the literature. However, our findings reveal that these challenges may have been heightened due to the pandemic. In addition, pandemic-related changes within organizations (e.g., hospital and work) and limited social support

posed additional challenges; however, it opens up an opportunity to address new and existing barriers with innovative ways to support women who want to BF.

Public Health Implications: The main results of this qualitative study shed light on aspects (positive and negative) of the maternity care system (regarding breastfeeding support and women's perception of support) resulting from changes due to the pandemic. These findings may help to inform clinical and policymakers to confront the challenges of the “status quo” and help inform new models of breastfeeding support and promotion.

Trends and Maternal Characteristics of Smoking During Pregnancy Among Mothers in Florida, 2016-2020

Scientific Research/Data Abstracts

Authors: Angel Watson, MPH, RHIA

Category/Categories: Tobacco, smoking, vaping, Birth defects/disability and MCH populations

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: Birth and/or death certificates

Background: Smoking during pregnancy increases the risk of pregnancy complications and adverse birth outcomes, including preterm birth, low birthweight, birth defects, and infant mortality. In Florida, the percentage of mothers who smoked during pregnancy has steadily declined from 9.5% in 2000 to 3.7% in 2020. While smoking during pregnancy has decreased over the years, disparities still exist.

Study Questions: What is the trend of maternal smoking during pregnancy? Does the prevalence of maternal smoking during pregnancy differ by demographics? What maternal characteristics are associated with smoking during pregnancy? What maternal characteristics are associated with quitting smoking during pregnancy?

Methods: This analysis used 2016-2020 Florida birth certificate data. Trends were analyzed using Join Point and Cochran-Armitage. Multivariate regression models were used to estimate adjusted risk ratios (ARR) and 95% confidence intervals (CI) using STATA (v.15.1). Regression Models were adjusted by race/ethnicity, age, education, marital status, alcohol use, previous preterm birth, prenatal care, parity, nativity, Medicaid status, father's name on birth certificate, and rurality.

Results: In Florida, there were 1,099,760 births from 2016 to 2020. Mothers who smoked during pregnancy significantly decreased by 27.5%, from 5.1% in 2016 to 3.7% in 2020 with an annual percent change of -7.48. The highest prevalence of smoking during pregnancy was among non-Hispanic White mothers, at 2.8 times the percentage of non-Hispanic Black mothers. The prevalence of smoking during pregnancy decreased across all age groups examined. Though smoking during pregnancy decreased among all education levels examined, the prevalence of smoking during pregnancy was highest among mothers who did not graduate high school at 8.4% in 2020. The strongest characteristics significantly associated with smoking during pregnancy were non-Hispanic White (ARR = 4.67, 95% CI: 4.53, 4.81), U.S. born (ARR = 4.50, 95% CI: 4.27, 4.74), alcohol use (ARR = 3.40, 95% CI: 3.22, 3.60), and being on Medicaid (ARR = 3.27, 95% CI: 3.17, 3.37). The strongest characteristics significantly associated with quitting smoking during pregnancy were greater than high school education (ARR = 1.25, 95% CI: 1.20, 1.30), age less than 20 (ARR = 1.20, 95% CI: 1.11, 1.30) and Hispanic ethnicity (ARR = 1.19, 95% CI: 1.11, 1.28).

Conclusions: From 2016 to 2020, there was a significant decrease in the prevalence of smoking during pregnancy. Decreases were seen across all age groups and education levels examined. Despite the

declines in smoking during pregnancy, non-Hispanic White mothers were about five times more likely to smoke during pregnancy than non-Hispanic Black mothers. Having more than 12 years of education was the strongest predictor for quitting smoking during pregnancy.

Public Health Implications: Smoking during pregnancy is a modifiable risk factor. Tracking and monitoring trends in smoking patterns across demographic characteristics helps to measure the progress of meeting the healthy people 2030 Maternal, Infant, and Child Health 10 objective to increase abstinence from cigarette smoking among pregnant women to 95.7%. Utilizing this information can help guide program planning and policy development.

Preterm Birth Rates during the COVID-19 Pandemic in 2020 Compared with 2017–2019 Across 12 U.S. States

Scientific Research/Data Abstracts

Authors: Presenting Author-Ghasi Phillips-Bell, ScD, MS

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Non-Presenting Author - Khaleel Hussaini

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Non-Presenting Author - Sonal Goyal

Non-Presenting Author - Jessie Hammond

Non-Presenting Author - Elizabeth Harvey

Non-Presenting Author - Dominique Heinke

Category/Categories: Collateral damage of COVID, Infant mortality; pregnancy outcomes

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: Birth and/or death certificates

Background: In 2020, the first year of the COVID-19 pandemic, many jurisdictions implemented stay-at-home orders and other policies such as social distancing and masking to mitigate the spread of SARS-CoV-2. During this time, some investigators observed declines in preterm birth, yet others reported no change. The examination of state provisional birth certificate data provides an opportunity to promptly examine trends during an emergency without having to wait for final data files to be released.

Study Questions: Were preterm birth rates in select U.S. states different during the COVID-19 pandemic in 2020 compared with 2017–2019?

Methods: We measured monthly preterm birth rates (number of births <37 completed weeks gestation per 100 live births) in 12 states (DE, FL, IL, LA, MA, MS, NE, OR, TN, VT, WI, WY) using final birth certificate data from 2017–2019 and provisional birth certificate data from 2020. We restricted the sample to singleton live births delivered in-state to resident mothers with gestational age reported. We assessed monthly differences in preterm birth rates by examining rate differences and 95% confidence intervals estimates between 2020 and 2017–2019 within each state and in pooled analyses.

Results: In 2020, the 12-state pooled analysis showed preterm birth rates were lower in March and April (overall rate difference = -0.3%; CI -0.6, -0.1) and slightly higher in October and November (overall rate difference = 0.4%; CI 0.1, 0.7) than rates during 2017–2019. Confidence intervals for these rate differences did not include zero, suggesting that 2020 rates during these four months were significantly different than the 2017–2019 rates. In state-specific analyses, monthly rate differences from 2020 compared with averaged 2017–2019 ranged from -2.2% to 5.0% overall and from -1.8% to 1.0% in the states with the largest numbers of monthly births (>4000) (FL, IL, LA, MA, TN, WI).

Conclusions: We found some evidence of a pattern of modest decline in preterm birth rates during March and April of 2020, followed by a slight increase in rates during October and November of 2020. A multi-state partnership facilitated prompt examination of preterm birth trends during the pandemic before final data files were available.

Public Health Implications: Ongoing monitoring is needed to assess the effect of the COVID-19 pandemic and public health and policy responses on pregnancy, birth outcomes, and other maternal and child health indicators. During a public health emergency, states can use provisional vital records data for immediate and ongoing tracking of birth outcomes. Collaborative work between states allows for conceptualization of strategies, determining shared methodologies, and comparison of findings.

Disaggregating Race and Ethnicity Data to Advance Health and Racial Equity: COVID-19 Vaccination Data Among Pregnant People as a Case-Study

Scientific Research/Data Abstracts

Authors: Presenting Author-Hanna Shephard, MPH

Non-Presenting Author - Susan Manning, MD, MPH

Non-Presenting Author - Eirini Nestoridi, MD

Non-Presenting Author - Darien Mather, PhD, MPH

Non-Presenting Author - Sharon Pagnano, MPH

Non-Presenting Author - Mahsa Yazdy, PhD, MPH

Presenting Author - Megan Hatch

Category/Categories: Data: innovation, quality improvement, communication, Racism, equity, social justice

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Linked data file

Background: With recent efforts to increase COVID-19 vaccination among pregnant people, Hispanic and non-Hispanic Black pregnant people have been highlighted as having the lowest rates of vaccine uptake during pregnancy despite disproportionately higher rates of COVID-19. However, these large race/ethnicity categories limit actionability. Data disaggregation efforts are needed to call attention to disparities within groups that require further research, tailored outreach, and resource allocation.

Study Questions: 1. How does COVID-19 vaccination uptake during pregnancy differ by maternal race/ethnicity? 2. Within large race/ethnicity groupings, which racial/ethnic subpopulations have the highest and lowest rates of vaccination uptake during pregnancy?

Methods: We estimated COVID-19 vaccine uptake (receipt of >1 vaccine doses) during pregnancy retrospectively among pregnancies resulting in live birth during May 2021—October 2021 by linking COVID-19 vaccination data from the Massachusetts (MA) Immunization Information System to data from MA birth certificates. Birthing people could select from a list and/or write-in all races and ethnicities with which they identified on the birth certificate. We disaggregated broad race/ethnicity categories into more detailed racial/ethnic subgroups to make within group comparisons.

Results: Among 30,711 pregnancies, vaccine uptake during pregnancy was highest among those who identified as Asian (45.9%), but within this group ranged from as low as 25.8% among those who also identified as Cambodian to 67.8% among those who identified as Japanese. And while vaccination was

lowest among Black pregnant people (16.0%), it was even lower among those who identified as Cape Verdean (10.5%) and highest among those who also identified as European (30.0%). Vaccine uptake among American Indian/Alaska Native (AI/AN) pregnant people was 19.5% overall but much higher among those who also identified as European (35.6%) and lowest among those who also identified as Black (19.5%). Among Hispanic pregnant people, 16.5% were vaccinated during pregnancy overall, but this estimate was higher among those who identified as European (38.5%) and lowest among those who also identified as Puerto Rican (11.2%). Finally, vaccination uptake among White pregnant people was 42.2% overall, but ranged from as low as 16.7% among those who also identified as Cape Verdean to 57.8% among those who also identified as Chinese.

Conclusions: COVID-19 vaccine uptake among pregnant people in MA was lowest among racially and ethnically minoritized pregnant people; however, there is tremendous heterogeneity within groups that is masked when aggregating data into large race/ethnicity categories. Disaggregating data can provide more meaningful and detailed information about subgroup populations in diverse and marginalized communities.

Public Health Implications: Vaccination access and outreach strategies are developed at the state level, yet state-level estimates on vaccination uptake among pregnant people are not widely available. Moreover, data are often aggregated into large race/ethnicity groupings that conceal the diversity of the subpopulations within these groupings. Given the disparate impact of COVID-19 on communities of color, there is an urgent need for public health agencies to invest in adequate reporting on race and ethnicity as a first step to advance health and racial equity.

COVID-19 pandemic- Emotional, Economic Hardships Experienced by Birthing People, A Learning opportunity- New Jersey Pregnancy Risk Assessment Monitoring System, 2020

Scientific Research/Data Abstracts

Authors: Presenting Author-Genevieve Lalanne-Raymond, RN, MPH

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Non-Presenting Author - Marilyn Gorney-Daley, DO, MPH

Non-Presenting Author - Lisa Asare, MPH

Category/Categories: Maternal health, Collateral damage of COVID

Method of Presentation: Poster Presentation

Data Methods: Using new data linkages, Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, PRAMS, WIC

Background: New Jerseyan Black women experience seven times the rate of death from pregnancy-related causes compared to their white counterparts. Child health outcomes are equally concerning. Published studies confirm the pre-pandemic persistent racial/ethnic health disparities and their exacerbation during the COVID-19 pandemic. These results illuminated the deep racial inequities, and gaps in public health and health care systems in the U.S. Per the literature, the discontinuation and/or scaling back of lifeline services during the pandemic is believed to have exacerbated preexisting socioeconomic and emotional challenges.

Study Questions: Considering the COVID-19 pandemic, what can we learn to better prepare for future eventualities, NJPRAMS 2020?

Methods: In NJ, for July 2020 to December 2020 births, the PRAMS COVID-19 supplement was disseminated. NJDOH utilized Statistical Analysis System (SAS) to perform a data linkage between NJ-PRAMS, WIC, and Birth Certificate data and created an analytical dataset weighted by the Centers for Disease Control and Prevention (CDC) to provide a representative estimate of proportions in specific categories and actual persons. The weighted data is used to examine the impact of the COVID-19 pandemic on NJ's birthing people (BP). The team calculated the response rates by maternal race/ethnicity (NH White, NH Black, Hispanic, and others), age (<20; 20-24; 25-34, 35+) health insurance coverage (Private, Medicaid, Others).

Results: The hardships experienced during the COVID-19 pandemic by NJPRAMS BP are grouped into 2 main categories-1) Mental/ Emotional (more anxious, depressed, partner more violent or argumentative than usual) 2) Economic (loss of job, pay cuts in the household, problem paying rent or mortgage, became homeless, had to relocate). 76% of the BP who took the survey and answered the COVID-

related questions experienced at least one of these hardships due to the pandemic. The highest rates are amongst 20-24 age group-80% and covered by Medicaid-78%. When adjusted by race-ethnicity, NH White women were more likely to experience emotional hardships-59%, 51%, 47% NH White, NH Black, Hispanic, respectively. NH Black and Hispanic households were more likely to experience economic hardships 69%, 64%, respectively compared to their NH White counterparts 46%.

Conclusions: The variability in the prevalence of hardships by race/ethnicity and age is evident. The pandemic highlights the need to pass evidence-informed policy reforms aimed at establishing a sustainable, non-traditional perinatal workforce (NTPW) trained to provide equitable community-based care and to equip BPs with the skills needed to navigate the healthcare system and be ready to address potential challenges/hardships that may arise with future eventualities.

Public Health Implications: With the expansion of the Medicaid benefits to cover doula services, the establishment of the Colette Lamothe-Galette Community Health Worker Institute (CLG-CHWI), and NJ's Governor proposed Fiscal Year 2023 budget that allocates \$500,000 to expand the reach of CLG-CHW to NJ MCH populations, NJDOH is leading a pivotal shift toward a sustainable NTPW. NJDOH trains and integrates CHWs into care teams among priority populations to offer equitable and culturally responsive care outside the clinical setting into communities.

Breastfeeding Among Recently Pregnant Mothers With and Without Disability- Pregnancy Risk Assessment Monitoring System (PRAMS) Data, 2018-2020

Scientific Research/Data Abstracts

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Non-Presenting Author - Lee Warner

Non-Presenting Author - Suzanne Folger

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Non-Presenting Author - Beatriz Salvesen Von Essen

Category/Categories: Birth defects/disability and MCH populations, Maternal health

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: PRAMS

Background: Breastfeeding is recommended globally as it supports optimal growth and development for most infants. Some evidence suggests mothers with disability breastfeed at lower rates than mothers without disability; however, there is limited population-based data on breastfeeding by disability status.

Study Questions: Do breastfeeding outcomes and information sources differ by disability status?

Methods: We analyzed 2018-2020 data from the Pregnancy Risk Assessment Monitoring System (PRAMS) for 24 sites that included the Washington Group Short Set of Questions on Disability. PRAMS, a population-based, site-specific surveillance system, collects self-reported data on behaviors and experiences before, during, and shortly after pregnancy among mothers with a recent live birth. To measure disability, respondents answered six questions on difficulty with seeing, hearing, walking, remembering, self-care, and communicating and could select: "no difficulty," "some difficulty," "a lot of difficulty," or "I cannot do this at all." Respondents were categorized as having any disability if they selected "a lot of difficulty" or "I cannot do this at all" for any of the questions. Breastfeeding outcomes evaluated were breastfeeding initiation and continuation at one, two, and three months postpartum. Respondents were also asked to select any sources from which they obtained breastfeeding information from the following: "my doctor," "nurse/midwife/doula," "breastfeeding/lactation specialist," "my baby's doctor," "breastfeeding support group," "breastfeeding hotline," "family/friends," or "other." Using survey-weighted multivariable logistic regression, we calculated unadjusted and adjusted

prevalence estimates and prevalence ratios (PR) and 95% confidence intervals (CIs) for breastfeeding outcomes and information sources by disability status. We adjusted for race/ethnicity, age, education, parity, delivery mode, and PRAMS site.

Results: Among 41,862 mothers, 6.3% reported any disability. In unadjusted analyses, a lower proportion of mothers with disability than without reported breastfeeding initiation (83.5% vs 87.0%) and continuation at one (68.7% vs 76.9%), two (55.9% vs 67.2%), and three months (48.1% vs 60.1%) postpartum. After adjustment, the prevalence of breastfeeding initiation was no different among mothers with and without disability (aPR: 0.99; 95% CI: 0.97-1.02). However, breastfeeding continuation remained lower among mothers with disability than those without at one (aPR: 0.95; 95% CI: 0.91-0.99), two (aPR: 0.90; 95% CI: 0.85-0.95), and three months (aPR: 0.88; 95% CI: 0.82-0.94) postpartum. Sources of breastfeeding information also differed by disability status. In adjusted analyses, mothers with disability compared with those without disability were less likely to receive information about breastfeeding from their doctor (74.6% vs 79.0%; aPR: 0.95; 95% CI: 0.91-0.99), a nurse/midwife/doula (71.9% vs 75.9%; aPR: 0.95, 95% CI: 0.91-0.99), or their baby's doctor (66.9% vs 71.6%; aPR: 0.94; 95% CI: 0.89-0.98) and more likely to receive information from a breastfeeding support group (27.3% vs 24.1%; aPR: 1.13 95% CI: 1.01-1.27).

Conclusions: In adjusted analyses, mothers with disability were less likely to report breastfeeding continuation and more likely to receive information from a support group and less likely from health care providers or doulas compared with mothers without disability.

Public Health Implications: Strategies to ensure mothers, regardless of disability status, receive ongoing breastfeeding support, including breastfeeding information from providers and support professionals, can improve breastfeeding outcomes.

Validating ICD-10-CM Codes with the CSTE (Tier 1) Neonatal Abstinence Syndrome Standardized Surveillance Case Definition

Scientific Research/Data Abstracts

Authors: Presenting Author-Hanna Shephard, MPH

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Non-Presenting Author - Eirini Nestoridi, MD

Category/Categories: Data: innovation, quality improvement, communication, Birth defects/disability and MCH populations

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using new data systems

Data Source: Birth defects registry/surveillance, Birth and/or death certificates

Background: Massachusetts (MA) 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 BDMP NAS Surveillance System (NSS) receives International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnostic code reports from all birthing hospitals in MA to ascertain potential cases of NAS. NSS then leverages medical record abstraction and clinical review to classify cases in accordance with the Council of State and Territorial Epidemiologists (CSTE) (Tier 1) NAS Standardized Case Definition. While this system yields high-quality data, the burden of medical record abstraction and clinical review is high. Assessing the validity of ICD-10-CM codes alone for NAS identification per the CSTE NAS case definition can help discern the value-add of active surveillance compared with ICD-10-CM code-based surveillance.

Study Questions: 1. How valid is ICD-10-CM code-based surveillance for identifying infants with NAS per the CSTE NAS Standardized Case Definition? 2. What is the added value of active surveillance methodology for NAS identification in accordance with the CSTE NAS case definition compared with ICD-10-CM code-based surveillance alone?

Methods: We estimated the sensitivity, specificity, and positive predictive value (PPV) of six ICD-10-CM codes reported to NSS during April 1, 2020–March 31, 2021 to validate code-based ascertainment against the active surveillance system. Reported codes were P96.1 (neonatal withdrawal symptoms from maternal use of drugs of addiction) and five others (P04.49, P04.14, P04.17, P04.1A, and P04.40) related to fetal exposure to substances. The CSTE NAS Standardized Case Definition includes eight case types: one confirmed, two probable, and five suspect. We assessed the validity of each ICD-10-CM code for all case types combined and individually.

Results: P96.1 was the most reported code, found among 617 infants reported to NSS, followed by P04.49, reported among 402 infants. Codes P04.17 and P04.1A were rarely reported (7 and 9 infants,

respectively). For all case types combined, P96.1 had the highest sensitivity (94.1%), followed by P96.1 and/or P04.49 (87.5%). However, P96.1 had low specificity (16.9%) and PPV (28.4%) for all case types; P04.17, P04.1A and P04.40 had very low sensitivity (range=25.0–60.0%) and specificity (range=13.5%–13.8%) for all case types. For identifying confirmed cases only, codes were less sensitive (range= 44.3%–64.1%), with P96.1 being the most sensitive. For probable and suspect cases, codes had very low sensitivity (range=0.3%–25.0%) but high specificity (range=75.0%–99.7%).

Conclusions: ICD-10-CM codes had low specificity and PPV for identifying confirmed cases of NAS and low sensitivity for identifying probable and suspect cases. Jurisdictions limited to passive, ICD-10-CM code-based surveillance may consider prioritizing P96.1 and P04.49 over less sensitive codes such as P04.17, P04.1A and P04.40.

Public Health Implications: Though more time and resource-intensive than ICD-10-CM code-based surveillance, active surveillance methods may be preferred when implementing the CSTE NAS Standardized Case Definition. Thus, resource allocation for medical record abstraction and clinical review of NAS cases may be considered.

Differences in Health Conditions and Behaviors Between Women who Experienced a Fetal Death and Women who Experienced a Live Birth

Scientific Research/Data Abstracts

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Non-Presenting Author - Reena Oza-Frank, PhD, MPH

Presenting Author - Samantha Batdorf, MPH

Category/Categories: Infant mortality; pregnancy outcomes, Women's health

Method of Presentation: Poster Presentation

Data Methods: Using new data systems

Data Source: PRAMS, Other

Background: In Ohio, fetal deaths make up nearly half of reportable feto-infant deaths, but the etiology and prevention of fetal mortality is not well understood (Gregory et al., 2019). Understanding differences in demographics, health conditions and behaviors between women who experienced a fetal death and those who experienced a live birth could help identify strategies to reduce fetal deaths.

Study Questions: Do demographics, health conditions, and behaviors surrounding pregnancy differ between women who experienced a live birth and women who experienced a fetal death?

Methods: The Ohio Pregnancy Assessment Survey (OPAS) is a statewide, population-based survey of mothers modeled after the Pregnancy Risk Assessment Monitoring System. OPAS participants are sampled from the population of women who gave birth to a live infant in the survey year; the response rate in 2020 was 38.4%. The Ohio Study of the Associated Risks of Stillbirth survey (Ohio SOARS) is similar to OPAS, and includes questions about experiences related to stillbirth. The Ohio SOARS questionnaire was sent to all women who experienced a reportable fetal death (occurring at 20 weeks gestation or later) in 2020; the response rate was 25.6%. We compared responses to questions that appeared in both surveys. Using SAS survey procedures to account for the complex sampling design (OPAS only) and weighting, we requested 95% confidence intervals (CIs) for each estimate. If CIs did not overlap, results were considered significantly different, excluding those estimates based on unweighted numerators less than 20 or with confidence intervals greater than 1.2 times the estimate.

Results: Women who experienced a fetal death were significantly more likely to be Black (32% vs. 19%) and to have had a household income less than \$16,000 before pregnancy (33% vs. 20%) compared with women who experienced a live birth. Women who experienced a fetal death were significantly more likely to have experienced depression or anxiety before and during pregnancy, compared with women who experienced a live birth (pre-pregnancy: 50% vs. 37%; during pregnancy: 49% vs. 34%). Pre-pregnancy asthma (18% vs. 12%), hypertension (12% vs. 6%), and diabetes (12% vs. 3%) were more common among women who experienced a fetal death, though estimates were unstable.

Conclusions: Women who experienced a fetal death were more likely to be Black and more likely to have very low household incomes, compared with women who experienced a live birth, underlining the role of social determinants of health in birth outcomes. Women who experienced a fetal death were more likely to have chronic health conditions prior to pregnancy. Mental health conditions before and during pregnancy were also more common among women who experienced a fetal death. Research is needed to understand if this could be attributable to previous poor birth outcomes. Conclusions were limited by low response rates. Additional years of data will improve our ability to compare fetal death data across additional measures, and stratify measures by demographic factors, including race.

Public Health Implications: Combined with OPAS, Ohio SOARS is a useful surveillance tool for comparing the experiences of women who experienced a fetal death with women who experienced a live birth.

Family Connects Chicago: Stakeholder Recommendations for Marketing a Universal Postpartum Home Visiting Program

Scientific Research/Data Abstracts

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Category/Categories: Home visiting, Community collaboration

Method of Presentation: Poster Presentation

Data Methods: Program evaluation or surveillance evaluation

Data Source: Other

Background: 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 varies across neighborhoods and services have historically focused on 'at-risk' families, leaving some families unsupported and others receiving duplicative or mismatched services. 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 contains 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. During the first two years of Family Connects Chicago (FCC) implementation, marketing and outreach were limited due to COVID. However, to facilitate acceptance of FCC's new service model to Chicago families, and as the program expands to new hospitals, further outreach and marketing are critical.

Study Questions: What recommendations do key stakeholders suggest for marketing Family Connects Chicago, a citywide, universal postpartum home visiting program?

Methods: A formative evaluation of the FCC pilot was conducted to inform the city-wide expansion of FCC. Using purposive sampling, the evaluation includes 45 semi-structured key informant interviews with nurse home visitors (NHVs), community partners, and administrators from the 2 FCC "lead agencies": CDPH, which employs NHVs who support birthing families at three hospitals, and a large hospital that employs their own NHVs to serve its birthing population. Interviews were recorded and transcribed verbatim. Analysis was conducted in Dedoose software using a deductive coding approach.

Results: Participants shared a variety of recommendations for marketing Family Connects Chicago. Primary themes centered around the need to: (1) Support diverse marketing methods, especially the use of social media and other highly visible promotion platforms, including TV/radio advertisements, billboards, and posters; (2) Support comprehensive provider education, as increased awareness of FCC among a wide range of local medical and social service professionals may facilitate program reach and acceptance at various entry points; (3) Move the focus of timing of marketing, as the immediate postpartum period was perceived as insufficient for marketing FCC to families whereas consistent messaging during prenatal care was recommended as more effective; (4) Take advantage of opportunities, as targeted, strategic marketing efforts and verbiage may promote public health nursing while de-stigmatizing its utilization.

Conclusions: Stakeholder recommendations focus on the significance of various marketing and outreach strategies to ensure continuity of comprehensive messaging across the city as well as increased awareness, reach, and acceptance of FCC among local providers and families alike.

Public Health Implications: The findings from this analysis can be used to inform marketing and outreach efforts as FCC expands throughout the city of Chicago. Stakeholder recommendations presented in this analysis also provide insight for other home-visiting programs and their marketing strategies.

Lessons Learned from Indigenous Midwives and Birthworkers in the Americas

Scientific Research/Data Abstracts

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Category/Categories: Maternal health, Racism, equity, social justice

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: Other

Background: Native American women in the United States (U.S.) experience severe disparities in infant and maternal mortality. Adequate prenatal care is associated with improved pregnancy outcomes; however, a substantial proportion of Native American women enter prenatal care late and/or attend fewer than the recommended number of visits. Culturally incongruent care, and perceived negative health care experiences contribute to under-utilization of prenatal care within this population. Offering prenatal care services that are culturally congruent may increase care utilization among Native American mothers, resulting in improved prenatal care utilization.

Study Questions: Interviews explored a variety of topics, but the primary research questions were: How do Indigenous midwives and birthworkers describe their work as connecting pregnant people with Indigenous models of care? What are the important elements of Indigenous pregnancy care?

Methods: Our team conducted one-on-one semi-structured interviews with Indigenous mothers, birth workers, doulas, midwives and representatives of Indigenous-centered prenatal and birthing organizations. Researchers employed deductive content analysis to analyze interview transcripts. Transcripts were uploaded into Nvivo qualitative analysis software and coded using a modified cutting and sorting technique. The Principal Investigator and three co-investigators separately reviewed transcripts to generate an exhaustive list of codes that represent unique ideas presented in the data that relates to Indigenous ways of knowing, being and doing in relation to prenatal care. Two coders then reviewed the transcripts, applying codes created by the co-Principal Investigator. The research team grouped codes into themes and sub-themes that describe elements of Indigenous prenatal care.

These were reviewed and approved by an external advisory board representing Indigenous midwives, birthworkers and organizations that support Indigenous pregnancy care.

Results: The goal was to use this information to identify a conceptual framework for Indigenous culturally congruent maternity care that can be applied and adapted to diverse communities. Indigenous pregnancy care ideally is delivered through a midwifery model by an Indigenous provider from the same community. Culturally congruent Indigenous pregnancy care incorporates traditional beliefs, practices and ceremonies; Uses a trauma-informed, strengths based and patient-centered approach; Provides wrap-around services; Builds a trusting relationship between provider and patient; Practices cultural humility; Actively deconstructs power dynamics and hierarchies in patient-provider relationship; Cares for social identity and rites of passage associated with pregnancy/motherhood; and Values and attends to familial relationships

Conclusions: Indigenous models of pregnancy care offer services that may benefit Native American women; however, this health care workforce operates in an unsupportive political landscape. Policies that support midwifery practice, birthworkers and community health workers are needed to support culturally congruent models of Indigenous midwifery care. These efforts will require strong partnerships with health care institutions.

Public Health Implications: Indigenous models of pregnancy care may increase prenatal care utilization among Native American women, but better integration and supportive policies are needed to support this type of care.

Stillbirths Among People with COVID-19 Illness in Pregnancy and COVID-19 Vaccination Status Among Pregnant People in Tennessee

Scientific Research/Data Abstracts

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Category/Categories: Immunization/infectious disease, Infant mortality; pregnancy outcomes

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using new data linkages

Data Source: Birth and/or death certificates, Linked data file

Background: Pregnant people with COVID-19 are at increased risk for severe illness and adverse pregnancy outcomes. COVID-19 vaccination is recommended for pregnant people, yet they have lower rates of vaccination than the general population. COVID-19 during pregnancy is associated with increased risk of stillbirth, however vaccination status among such cases has not been assessed.

Study Questions: 1. Do stillbirth rates among those with COVID-19 during pregnancy differ from those without COVID-19? 2. Among those with COVID-19 during pregnancy, do stillbirth rates differ during the period of Delta variant predominance compared to pre-Delta? 3. What was the vaccination status of pregnant people with COVID-19 who experienced stillbirth?

Methods: Tennessee-residents' final and provisional birth and fetal death certificate data from March 1, 2020 – December 25, 2021 were deterministically linked to PCR-confirmed COVID-19 laboratory data from the Tennessee National Electronic Disease Surveillance System Base System. Stillbirths were defined as fetal deaths at ≥ 20 weeks gestation or ≥ 350 grams birthweight. Births and stillbirths with implausible gestational age estimates (< 37 weeks) were excluded. Obstetric estimate of gestational age at first PCR-positive specimen was used to establish COVID-19 status during pregnancy. The first COVID-19 positive laboratory test date was used to classify variant period as either pre-Delta or Delta; the period of Delta predominance was defined as June 27 – December 25, 2021 based on national data. We generated stillbirth rates and conducted chi-square tests to assess differences by COVID-19 status and variant period. We used the Tennessee Immunization Information System to determine COVID-19 vaccination status at time of infection among persons with COVID-19 during pregnancy and stillbirth outcome eligible for vaccine (December 15, 2020 – December 25, 2021).

Results: We identified 8,927 persons with COVID-19 during pregnancy and 61 stillbirths among persons with COVID-19 during pregnancy. The stillbirth rate among people with COVID-19 during pregnancy was

6.83 deaths per 1,000 live births and fetal deaths (LB+FD), not statistically different from people without COVID-19 during pregnancy (6.38 per 1,000 LB+FD; $p=0.61$). Among those with COVID-19 during pregnancy, the stillbirth rate was 12.35 per 1,000 LB+FD during the period of Delta variant predominance, compared to 5.46 per 1,000 LB+FD pre-Delta ($p=.0016$). Among those with COVID-19 during pregnancy who experienced a stillbirth outcome and were eligible for COVID-19 vaccine, none (0/43) had evidence of COVID-19 vaccination prior to infection.

Conclusions: Among those with COVID-19 during pregnancy, the stillbirth rate during the period of Delta variant predominance was more than double the stillbirth rate pre-Delta. There was no evidence of vaccination at the time of infection among COVID-19 cases eligible for vaccine who experienced stillbirth outcome. Limitations include small sample size for stillbirth data, potential overestimation of stillbirth rate during the Delta period due to ongoing pregnancies, and the inability to account for reinfections.

Public Health Implications: Findings from these analyses reinforce the importance of COVID-19 vaccination outreach efforts for pregnant people. Further study of data from the period of Omicron variant predominance is warranted to continue to monitor outcomes among persons with COVID-19 during pregnancy.

Postpartum Support for Ohio Women who Experienced a Stillbirth

Scientific Research/Data Abstracts

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Category/Categories: Maternal health, Infant mortality; pregnancy outcomes

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using new data systems

Data Source: Other

Background: Stillbirth affects approximately 1 in 160 births in the US. In Ohio, the stillbirth rate has remained the same over the past decade, with a rate of 6.3 per 1,000 live births in 2019; in 2020, there were 750 stillbirths in the state. Research in this area has traditionally focused upon identifying and addressing risk factors for stillbirth. However, less is known about how to support mothers following a stillbirth most effectively, an important aspect of improving mental health. This research identifies the availability of several hospital-based services following stillbirth in Ohio, as well as perceptions of mothers affected by stillbirth about the helpfulness of those services.

Study Questions: To what extent are there gaps in postpartum support for women following a stillbirth?

Methods: We analyzed both qualitative and quantitative data from the 2020 Ohio Study of Associated Risks of Stillbirth (Ohio SOARS) survey. Ohio SOARS is an annual, population-based survey monitoring maternal health and experiences among women who experienced a stillbirth in Ohio. All 696 women identified as having a stillbirth in 2020 from Ohio's fetal death certificate data and meeting the inclusion criteria of residency status and complete contact information were invited to participate. Invitations were sent 2-6 months following delivery using either a mail or web survey mode with telephone reminder calls. We examined various aspects of care that women received during the pre-pregnancy, prenatal, and postpartum periods. Specifically, we focused on gaps in hospital services, grief support, and postpartum visits. The limitations of the study included a small sample size and restriction of data collection to women with a stillbirth in a single state.

Results: 179 women completed the 2020 Ohio SOARS survey. Mothers identified several services that would have been helpful but were not offered by hospitals as frequently desired. In Ohio, 72% of mothers who experienced a stillbirth said a cooling bed was/would have been helpful, but only 54%

were offered this service. Additionally, 48% bathed their baby or would have wanted the opportunity to bathe their baby, but this was only offered to 29%. 76% indicated that a baby and family photo was/would have been helpful, when only 60% were offered this service. Many mothers indicated that they received adequate support in the grieving process from their doctor or midwife (78%), counseling staff (79%), and nursing staff (93%) at the hospital.

Conclusions: Overall, we found that although the most frequently offered gestures of in-hospital support tended to be identified as the most helpful by mothers, there were several areas where in-hospital support could be improved. Many of these items could be cost-neutral, such as offering to bathe the baby, or to take a photo of the baby with the family. Other items require additional resources, such as cooling beds, to assist with extending the time families can spend with their babies in the hospital.

Public Health Implications: These findings can be used to improve the services that hospitals provide to the women who experience a stillbirth, including mental health care for mothers.

Developing and Validating a Measure of Caregiver Topical Fluoride Hesitancy

Scientific Research/Data Abstracts

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Category/Categories: Child/adolescent health, Data: innovation, quality improvement, communication

Method of Presentation: No Preference

Data Methods: New data techniques

Data Source: Other

Background: Despite the foundational importance of oral health, growing numbers of caregivers express topical fluoride hesitancy. This is despite evidence that fluoride is safe and prevents caries (the most common noncommunicable disease). This leads to poorer oral health. Yet, no conceptual model or measure of caregivers' topical fluoride hesitancy exists to evaluate hesitance and support interventions to reduce hesitance and improve children's oral health outcomes.

Study Questions: We sought to 1) develop a conceptual model of caregivers' topical fluoride hesitancy, 2) develop a measure of caregivers' topical fluoride hesitancy, the Fluoride Hesitancy Identification Tool, and 3) establish its psychometric properties.

Methods: To develop our conceptual model and item content, we conducted 56 interviews, 9 cognitive interviews, and 3 usability interviews with fluoride-hesitant caregivers of children recruited in 2019-2020 primarily through the University of Washington and Seattle Children's Hospital. The research team developed items based on the conceptual model and interview results. Twelve pediatric dental providers and researchers reviewed the items. To psychometrically evaluate the measure, we fielded the measure in 2020-2021 in two separate samples of fluoride-hesitant caregivers recruited from similar sources. We used confirmatory factor analyses (CFA) in sample_1 (n=512) to refine the measurement model. With sample_2 (n=588), we: used CFA to test the refined model, identified the final items set, conducted item response theory (IRT), performed classical test theory reliability, and conducted validity analyses.

Results: Qualitative interviews resulted in a conceptual model with 5 topical fluoride hesitancy domains: (1) Feeling topical fluoride is unnecessary, (2) Keeping unnecessary chemicals out of child's body, (3) Concerns topical fluoride is harmful, (4) Topical fluoride uncertainty, and (5) Feeling pressured to get topical fluoride. We developed an initial set of 33 items measuring each of these domains. CFA in sample_1 supported the 5-domain model and dropping 7 items due to cross-loadings, correlated error terms, and low loadings (RMSEA=0.088, CFI=0.97, TLI=0.97). The final model fit acceptably in sample_2 (RMSEA=0.079, CFI=0.98, TLI=0.98). To reduce respondent burden, each domain's scale was shortened to 4 items. Cronbach's alphas for each domain except trust were greater than 0.87 (trust=0.77). IRT showed that each scale elicited the most reliable responses for individuals with average to high levels of topical fluoride hesitancy. Finally, each domain correlated in the expected direction and magnitude with other variables supporting construct validity.

Conclusions: Topical fluoride hesitancy appears to be multifactorial, consisting of 5 domains. It tends to be motivated by a caring and protective caregiver, rather than a resistant one. The Fluoride Hesitancy Identification Tool, a 20 item tool, consisting of 20 items, appears to be a reliable and valid measure of each the 5 domains of caregivers' topical fluoride hesitancy.

Public Health Implications: Oral health providers can use the Fluoride Hesitancy Identification Tool to evaluate caregivers' hesitancy to better understand and respond to individuals' concerns about topical fluoride. Researchers can use the Fluoride Hesitancy Identification Tool to understand the causes and correlates of topical fluoride hesitancy and develop interventions to reduce topical fluoride hesitancy and refusal and improve children's long term oral health outcomes.

Continuity of Early Intervention Services in New York City During the COVID-19 Pandemic

Scientific Research/Data Abstracts

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Category/Categories: Birth defects/disability and MCH populations, Collateral damage of COVID

Method of Presentation: No Preference

Data Methods: Policy assessments or evaluations

Data Source: Other

Background: The NYC Early Intervention Program (EI) provides therapeutic services to children < 3 with developmental delays or disabilities. In response to COVID-19, the New York City (NYC) Early Intervention (EI) Program rapidly transitioned from delivering home-based services in-person to delivering those same services remotely using video technology. In-person delivery of EI services was suspended from March 24 - July 6, 2020. This study describes EI service use from March 24 - December 31, 2020, and identifies child characteristics associated with teletherapy uptake, delayed resumption of EI services until after July 6, 2020, and discontinuation of services altogether.

Study Questions: How quickly did children who were receiving EI services in early March 2020 resume any EI services after March 23rd, and what child characteristics were associated with teletherapy uptake, delayed resumption of services, and discontinuation of services altogether?

Methods: Administrative data were obtained from the New York Early Intervention System (NYEIS). The study cohort included children who received 1 or more of the following therapeutic and support services between March 1st and March 17th, 2020: Occupational Therapy (OT), Physical Therapy (PT), Speech and Language Therapy (SLP) or Special Instruction (SI). Dependent variables included: time to service resumption in days, and EI service resumption status defined as 1) teletherapy uptake, 2) delayed resumption of services, and discontinuation of services. Independent variables included: child demographic characteristics, the types of services received during March 1-17, 2020, and whether the child was diagnosed with autism spectrum disorder or a condition that makes them automatically eligible for EI or had 1-2 or 3-5 developmental delays. Cumulative frequency analysis described patterns of service re-uptake over time. Frequency analysis described the study cohort and quantified the percentage of children falling into each EI service resumption category. Multinomial logistic regression

identified child characteristics that were independently associated with EI service resumption timing or discontinuation.

Results: The proportion of children who transitioned to teletherapy-only was 25% on March 24th, rising to 78% by July 6th. By December 31st, 2020, 87% of the cohort had resumed either teletherapy or in-person services. Resumption during the teletherapy-only period occurred more often among Black (82%) and Latinx (82%) children than among White (75%) and Asian (75%) children, and among children with autism spectrum disorder (ASD) (86%) than among children who were automatically eligible (82%), had 3-5 domains of delay (77%) or had 1-2 domains of delay (70%).

Conclusions: Continuity of EI services during the COVID-19 public health emergency was a critical priority. Timely policy changes facilitated swift return to services and avoided exacerbation of the long-standing racial disparities in access to EI services.

Public Health Implications: These data demonstrate that a large municipal service system can respond nimbly to mitigate and recover from a systemwide shutdown, and that telehealth is a viable approach for delivering early intervention services at scale when in-person services are not available.

Stressors Experienced by Women with a Live Birth During the COVID-19 Pandemic, 29 U.S. Sites, Pregnancy Risk Assessment Monitoring

Scientific Research/Data Abstracts

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Category/Categories: Collateral damage of COVID, Mental/behavioral health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: PRAMS

Background: The COVID-19 pandemic dramatically impacted people's lives, introducing new stressors and exacerbating existing ones. Studies have documented the negative impact of stress on the physical and mental health of pregnant and postpartum women.

Study Questions: What stressors were experienced among women with a live birth during the COVID-19 pandemic in 2020? Was there an association between specific stressors and experiencing increased anxiety or depression among these women?

Methods: We analyzed 2020 data from 29 United States sites that implemented the Pregnancy Risk Assessment Monitoring System (PRAMS) COVID-19 experiences supplement October 2020–June 2021 among women with a live birth April-December 2020. We examined the following stressors reported by women due to the COVID-19 pandemic: economic (household member lost job, reduced work hours, received unemployment), mental health (increased anxiety or depression), childcare (loss of childcare, increased care-taking responsibilities), partner (increased arguments or aggression), food insecurity, housing (moved/relocated or homeless), and COVID-19 during the pregnancy (respondent or household member told they had COVID-19). We created a stressor score to categorize the number of stressor-types respondents' experienced (none, 1-2, 3-4, 5-6, and 7). We calculated weighted prevalence estimates for each type of stressor overall and each stressor score category, and by maternal characteristics (age, race/ethnicity, education, delivery health insurance, pregnancy health conditions, and pre-pregnancy health conditions). We calculated prevalence ratios, adjusting for maternal age,

maternal race/ethnicity, marital status, insurance at delivery, and jurisdiction of residence to estimate associations between stressors (separate types and stressor score) and increased anxiety or depression due to the pandemic.

Results: Among 14,154 women with a recent live birth, 54.9% experienced economic stressors, 53.3% mental health stressors, 41.6% childcare stressors, 18.3% partner stressors, 17.1% food insecurity, 11.7% housing stressors, and 9.9% COVID-19 stressor. Overall, 47% of women experienced 1-2 stressor types and 28.4% experienced 3-4 stressors. Specific stressor categories were associated with increased report of anxiety and depression. Women who experienced economic stress (anxiety aPR: 1.46, 95% CI:1.38-1.55; depression aPR: 1.69, 95% CI: 1.55-1.86); housing stress (anxiety aPR: 1.35, 95% CI:1.26-1.45; depression aPR: 1.64, 95% CI: 1.47-1.83), childcare stress (anxiety aPR:1.53, 95% CI: 1.44-1.61; depression aPR:1.77, 95% CI:1.61-1.94), food insecurity (anxiety aPR: 1.76, 95% CI: 1.67-1.85; depression aPR: 2.28, 95% CI:2.08-2.49), and partner stress (anxiety aPR: 1.81, 95% CI: 1.72-1.90); depression aPR: 3.02, 95% CI:2.79-3.27) were all more likely to experience more anxiety and more depression. Women who experienced 5-6 stressors were most likely to experience more anxiety compared to no stressors (aPR: 1.86, 95% CI:1.78-1.94) and more depression (aPR: 1.52, 95% CI: 1.41-1.63).

Conclusions: In our study, experiencing economic, housing, childcare, food security, and partner stress due to COVID -19 were associated with increased anxiety or increased depression. Women who experienced partner stress and food insecurity had the strongest association with experiencing increased depression and anxiety.

Public Health Implications: This study contributes to the existing body of literature on the stress that has been caused and heightened by the COVID-19 pandemic. Pregnant and postpartum women can benefit from strategies to address pandemic-related stressors and mental health.

Health Insurance Gaps During the Perinatal Period, 7 U.S. States, PRAMS 2019

Scientific Research/Data Abstracts

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Category/Categories: Health insurance or safety net care, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: PRAMS

Background: Continuous health insurance coverage supports access to health services in the pre-pregnancy and postpartum periods, yet gaps in insurance have been noted in the perinatal period, particularly for those publicly insured by Medicaid during pregnancy.

Study Questions: What are the patterns of gaps in health insurance during 1 month pre-pregnancy through 9-10 months postpartum among women with a live birth in 2019?

Methods: Among women with a live birth in 2019, the proportion covered by different types of health insurance were assessed using data from the Pregnancy Risk Assessment Monitoring System (PRAMS) core, Opioid Supplement, and Opioid Call Back Survey. Insurance types were private (including TRICARE), public (Medicaid/CHIP/SCHIP/other governmental), other (including Marketplace/Health Care Exchange), or no insurance. Among women with insurance during pregnancy, an insurance gap was defined as having no insurance at any of the following time points: 1 month before pregnancy, 3-6 months postpartum or 9-10 months postpartum. Analyses were restricted to the 7 states with available

data at each time point. Women with missing data for insurance at any time point were excluded. Maternal sociodemographic characteristics for the sample were examined. Weighted prevalence estimates for health insurance types were calculated at each of the four time points. Among women with public and private insurance during pregnancy, the weighted prevalence of insurance gaps from 1-month pre-pregnancy through 9-10 months postpartum was assessed. Differences in the prevalence of any insurance gap, comparing women with public and private insurance during pregnancy, were evaluated using a Rao-Scott chi-squared test.

Results: The sample included 1,928 women. The majority were aged 25 to 34 years (61%), non-Hispanic white (61%), and had at least some college education or an associate degree (68%). During pregnancy, approximately 51% of women had private insurance, 38% had public insurance, 8% had other insurance, and 2% had no insurance. Respectively, 9%, 6%, and 8% of women had no insurance 1 month pre-pregnancy, 3-6 months postpartum, and 9-10 months postpartum. Overall, 23% of women with public insurance during pregnancy and 3% of women with private insurance during pregnancy experienced any insurance gap during 1 month before pregnancy through 9-10 months postpartum ($p < .0001$). Among women with public insurance during pregnancy, 16% had no insurance 1 month pre-pregnancy, 10% had no insurance 3-6 months postpartum, and 12% had no insurance 9-10 months postpartum. Among women with private insurance during pregnancy, less than 2% had no insurance at any other time point.

Conclusions: Overall, women with public health insurance during pregnancy had a higher prevalence of having an insurance gap during 1 month pre-pregnancy through 9-10 months postpartum, compared to women with private insurance coverage during pregnancy.

Public Health Implications: Health insurance coverage is not only important during pregnancy, but also before and after pregnancies; these time frames can also reflect interconception periods. Insurance gaps can be a barrier to necessary care. This analysis extends the literature on gaps in health insurance to look at coverage in the late postpartum period and may be informative for ongoing discussions among states to further expand Medicaid coverage for the full year postpartum.

How Staff-Participant Relationships Affect Goal Attainment in the TIES Home Based Family Support Program

Scientific Research/Data Abstracts

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Category/Categories: Home visiting, Maternal health

Method of Presentation: No Preference

Data Methods: Program evaluation or surveillance evaluation

Data Source: Other

Background: Home-based family support programs are designed to support at-risk mothers and their families. Home visiting models typically serve pregnant and parenting women with multiple risk factors, but few models are equipped to address the complex needs of families affected by maternal substance use. The Team for Infants Exposed to Substance use (TIES) Program is a home-based family support program that serves this population exclusively. The model design, staff education and expertise, and intensive services support TIES participants in achieving significant positive outcomes in six key domains: maternal substance use, parenting skills, child health, maternal health, income, and housing. To date, studies have primarily focused on how the home visitor-participant relationship affects program engagement. This study evaluates the TIES home visitor-participant relationship and its effect on program outcomes.

Study Questions: We hypothesize that TIES goal attainment is influenced by the therapeutic relationship between home visitors and participants.

Methods: This study involves a retrospective review of TIES program data collected from 2012-2020 as standard practice. Goals are assessed at five time points using the TIES Individualized Family Service Plan (IFSP) goal attainment scale, a validated instrument. The staff-participant relationship is assessed two times using the Working Alliance Inventory (WAI), a validated assessment of therapeutic alliance. We used univariate analysis to explore distributions and dispersion for independent variables; descriptive statistics to assess the differences between staff and participant WAI scores at both time points; and multilevel modeling to analyze the effect of the therapeutic relationship on goal attainment. Study limitations include inconsistent data collection for both tools and potential response bias as indicated by participant WAI scores clustered at the high end of the assessment scale.

Results: An analysis of 110 participants showed that when accounting for home visitor WAI scores in multilevel models, the factor by which goal scores improved from intake to discharge increased across all goal areas except for housing stability. Specifically, the scores improved from 0.56 to 0.70 for maternal substance use, from 0.58 to 0.75 for parenting, from 0.58 to 0.67 for child health, from 0.32 to

0.34 for maternal health, from 1.1 to 1.2 for income. Housing scores decreased from 0.53 to 0.48. The home visitor assessment of the staff-participant relationship is a significant factor in goal attainment while the participant assessment of the relationship is not statistically significant in any goal attainment domain.

Conclusions: Results suggest that the stronger the participant-home visitor relationship, as assessed by the home visitor, the greater the improvement in goal attainment over time. These results stress the importance of building trust by mutually defining goals and celebrating accomplishments to maximize participants' growth and success.

Public Health Implications: This study adds to the current literature on home visiting by examining how the therapeutic relationship between home visitors and participants affects program outcomes, not just program engagement. These results highlight the benefits of joint goal setting and decision-making in home visiting interventions. The results should inform program development and home visitor training and education, as the expertise that allows home visitors to build strong therapeutic relationships supports optimal outcomes.

Factors Associated with COVID-19 Vaccination Uptake Among Women of Reproductive Age – Fall ConsumerStyles and Estilos Surveys, 2021

Scientific Research/Data Abstracts

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Category/Categories: Immunization/infectious disease, Data: innovation, quality improvement, communication

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: Other

Background: COVID-19 vaccination reduces the risk of severe illness from COVID-19, and data continue to accumulate showing the safety and effectiveness of vaccination during pregnancy. CDC recommends COVID-19 vaccination for people who are pregnant, breastfeeding, and who are trying to become pregnant now or in the future. However, COVID-19 vaccination coverage among pregnant people is lower than the general population, and disparities persist among racial and ethnic minority groups.

Study Questions: We assessed demographic and other characteristics associated with COVID-19 vaccination among a probability-based sample of women of reproductive age, including women currently or planning to become pregnant.

Methods: Using the 2021 Porter Novelli Fall ConsumerStyles and Estilos surveys, we assessed characteristics associated with COVID-19 vaccine uptake among women of reproductive age (18-44 years) [WRA]. Porter Novelli conducts these surveys via KnowledgePanel, a probability-based online panel in the United States. The ConsumerStyles' FallStyles survey was fielded from September 24 through October 7, 2021 and included 3,500 adults who responded to previous 2021 surveys. Estilos is the version of ConsumerStyles exclusively for Hispanic respondents and included approximately 1,000 Hispanic adults. Data from both surveys were weighted to be nationally representative. We present differences in demographic and other characteristics by receipt of COVID-19 vaccination (≥ 1 dose) using Chi-square tests ($p < 0.05$). People who were pregnant or planning pregnancy were combined due to small numbers.

Results: Overall, 492 WRA in ConsumerStyles and 341 in Estilos were included in these analyses. In both surveys, about 69% of WRA received ≥ 1 dose of a COVID-19 vaccine, which did not differ by

pregnancy/planning status. Several factors differed significantly by COVID-19 vaccination. In ConsumerStyles, Non-Hispanic Black women (7.5%), those without a high school education (29%), without underlying medical conditions (44%), and who had a history of COVID-19 (10%) were less likely to have received COVID-19 vaccination. Those with regular visits to a healthcare provider (74%) were more likely to be vaccinated. In Estilos, WRA with more than college education (18%) and an underlying medical condition (14%) were less likely to have received COVID-19 vaccination.

Conclusions: Several factors—race/ethnicity, education level, presence of underlying conditions, history of COVID-19, and regular healthcare visits-- were significantly associated with COVID-19 vaccine uptake among WRA. Understanding these factors can help tailor communication and outreach strategies to improve COVID-19 vaccination uptake in this population.

Public Health Implications: These data provide unique insights into subgroups of WRA, which could help inform messaging about COVID-19 vaccination. For example, the findings related to uptake among Hispanic WRA reinforce the need for culturally competent materials in Spanish. Lower uptake among those with a history of COVID-19 infection emphasizes the need to focus messaging on the importance of vaccination despite previous infection for this population. Higher uptake among those who have regular visits with a healthcare provider reinforces the importance of provider communication, but also emphasizes the need for strategies to reach groups who are marginalized and have less access to healthcare.

Community-based Full Spectrum Doula Care: Opportunities and Challenges to Support Reproductive Autonomy in Atlanta, Georgia

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Elizabeth Mosley, MPH, PhD

Non-Presenting Author - Subasri Narasimhan, MPH, PhD

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Category/Categories: Reproductive health/family planning, Community collaboration

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Other

Background: A full spectrum doula is “a non-medically trained community care worker who offers support to people during the full spectrum of pregnancy”. There are evidence gaps about the scope of work for abortion doulas and how other doulas view them.

Study Questions: (1) How does the doula community in metro-Atlanta view doula-supported abortion services? (2) How do abortion doulas describe their services? (3) What are the facilitators and barriers to accessing abortion doula support in Atlanta?

Methods: This cross-sectional, observational study utilized concurrent mixed methods (qualitative and quantitative) exemplified abortion doula care in Georgia. Data were collected in the Fall 2021 from adult participants who had been practicing as a doula in Georgia at least six months. Analysis was conducted from November 2021 to February 2022. Descriptive and bivariate analyses were calculated from quantitative data. Qualitative interview data were fidelity checked, de-identified, and coded using a semi-deductive coding structure with a constant comparative method resulting in deductive and inductive codes. The survey included demographics and doula practice information, abortion attitudes, and stigma felt by abortion doulas. In-depth interviews asked participants to elaborate on their survey answers about abortion attitudes and experiences of abortion stigma as well as abortion client stories and ways to improve doula care in Georgia.

Results: Our data revealed three key themes: doulas of all kinds center reproductive autonomy; abortion doula services have many benefits; and abortion doula service challenges and potential solutions. Regardless of their scope of doula offerings, most participants saw the value of abortion

doulas in supporting pregnant clients. Abortion doulas highlighted key benefits such as holding space for their client and offering educational resources on accessing abortion services in Georgia. However, several challenges to access were identified including affordability of abortion doula services and restrictive legislation. When asked how these challenges could be solved, abortion and non-abortion doulas cited a need for destigmatizing abortion work and advocating for pro-abortion legislation in Georgia.

Conclusions: While it was originally hypothesized that non-abortion doulas would be disapproving of those that offer abortion services, our findings revealed mostly the opposite. Most participants supported the role of abortion doulas who support pregnant people through a major reproductive health decision, and many were interested in how to provide abortion support outside clinical settings. It is imperative for all doula training organizations to include abortion and to follow the lead of existing abortion doula collectives.

Public Health Implications: This study's public health implications include organizational support for full spectrum doula collectives in Georgia as well as educating doulas and abortion providers on the benefits of and challenges to accessing abortion doula services. By supporting all clients through their reproductive health experiences, doulas ensure they feel adequately supported through reproductive experiences that can be isolating and stigmatizing.

Support and Advocacy for Black Mothers: Increasing Breastfeeding Rates Through Midwife and Doula Services

Scientific Research/Data Abstracts

Authors: Presenting Author-Chanell Haley, PhD

Non-Presenting Author - Tyra Gross, PhD

Non-Presenting Author - Chandra Story, PhD

Non-Presenting Author - Katherine Theall, PhD

Non-Presenting Author - Cathy McElderry, PhD

Non-Presenting Author - Kahler Stone, DrPh

Category/Categories: Maternal health, Women's health

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: Other

Background: Health organizations recommend that breastfeeding is initiated within one hour of birth and that infants be exclusively breastfed for six months. Despite such recommendations, Black infants in Tennessee have lower breastfeeding rates consistently compared to other racial/ethnic groups. Prior studies suggest that utilizing midwife and/or doula services may improve breastfeeding initiation and duration rates among Black mothers. Given the persistent breastfeeding disparity, we explored the impact of doula/midwife care on the breastfeeding behaviors of Black mothers residing in Tennessee.

Study Questions: Why do some Black mothers choose to have a midwife and/or doula during their birthing experience? Does having a midwife and/or doula increase the likelihood of breastfeeding initiation within one hour of birth? Does having a midwife and/or doula increase duration rates?

Methods: Study data were collected using a researcher-developed questionnaire designed to examine breastfeeding barriers and facilitators. Convenience sampling was used to recruit eligible participants through social media platforms. Inclusion criteria included adult mothers, women of child-bearing age (18-45 years old), who self-identified as Black and were Tennessee residents during their most recent pregnancy and delivery. Binary and ordinal logistic regression analyses were used to examine the relationship between midwife/doula services and respondent's breastfeeding behaviors. Open-ended questions were used to inquire about reasons to have a doula/midwife. Thematic analysis has begun and will be completed to assess qualitative responses.

Results: One hundred seventy-seven respondents (mean age 35.5 years old) were included in the data analysis. Fourteen percent of participants reported having a midwife and 12% reported utilizing doula services. Results demonstrate a statistically significant relationship between having a midwife and/or doula and initiating breastfeeding within one hour of birth. Compared to participants with a midwife,

those without a midwife were at an increased odds of not initiating breastfeeding within an hour of birth (OR = 4.5; 95% CI, .1.017, 20.51; p = .032). Those without a midwife had a decreased likelihood of breastfeeding for longer durations (95% CI = -1.910, -.301; p = .007). Similarly, those without doula services had greater odds of not initiating breastfeeding within one hour (OR = 5.1; 95% CI = 1.15, 22.47; p = .047). However, doula services were not a statistically significant determinant of breastfeeding duration rates. Preliminary qualitative findings on the use of midwife or doula services include patterns of advocacy, support, holistic care, and fear of dying during childbirth.

Conclusions: Current study findings indicate that the utilization of a doula and/or midwife may increase breastfeeding initiation rates within one hour. Additionally, midwife services were a significant variable for longer breastfeeding continuance.

Public Health Implications: This study adds to the growing body of breastfeeding literature and potential facilitators for Black mothers. Accessibility to doula or midwifery care may assist in improving breastfeeding behaviors among Black women through additional support and advocacy. Furthermore, incorporating health paraprofessionals in the Black birthing experience can lead to positive, equitable maternal health outcomes.

Prenatal Care Utilization Experiences of Women with a Live Birth during the COVID-19 Pandemic, Pregnancy Risk Assessment Monitoring System

Scientific Research/Data Abstracts

Authors: Presenting Author-Beatriz Salvesen von Essen, MPH

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Non-Presenting Author - Sascha Ellington

Category/Categories: Maternal health, Healthcare quality improvement

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: PRAMS

Background: Prenatal care (PNC) can address risks for adverse perinatal outcomes and includes education and counseling on recommended behaviors during and after pregnancy. The COVID-19 pandemic resulted in changes to healthcare utilization, including pregnancy-related care. Telehealth visits expanded access to essential health services during the COVID-19 pandemic.

Study Questions: 1. What is the prevalence of attending in-person and virtual visits for PNC in 2020 during the COVID-19 pandemic, and did attendance vary by maternal characteristics? 2. Does receipt of healthcare provider screening and counseling during PNC appointments vary by type of appointments attended?

Methods: We analyzed data from 29 sites implementing the Pregnancy Risk Assessment Monitoring System (PRAMS) COVID-19 experiences supplement. Data were collected from a subset of women with a live birth during 2020 that were sampled for PRAMS. We estimated the weighted prevalence of type of PNC appointments attended (in-person only, virtual only, both, or none), overall, and by select maternal characteristics (age, race/ethnicity, education, delivery health insurance, and pre-pregnancy and pregnancy health conditions). Among respondents who received PNC, we examined self-reported

receipt of healthcare provider screening and counseling on specific topics, stratified by PNC appointment type. We used chi-square tests to compare distributions ($p < 0.05$ statistically significant).

Results: Among 14,154 women with a live-birth in 2020 who completed the supplement, 66.2% reported attending in-person only PNC appointments, 1.2% virtual appointments only, 31.5% both, and 1.1% no PNC. PNC utilization differed by age, race/ethnicity, education, and health insurance at delivery. In-person only appointments were more frequently reported by women aged <20 years (75.9%), by non-Hispanic individuals reporting multiple races or another race (i.e., not reporting White, Black, American Indian/Alaska, Native, or Asian/Pacific Islander) (68.8%), \leq high school education (68.8%), and uninsured (71.1%). No PNC was also highest for these subgroups (aged <20 years: 2.1%; non-Hispanic another/mixed race: 3.6%; \leq high school education: 1.9%; uninsured: 5.0%). Among those attending in-person appointments only, the most common reasons were preferring to see their providers in-person (78.2%) and unavailability of virtual appointments (30.2%). Healthcare providers asked most women about a range of topics during PNC appointments, regardless of appointment type. Women attending virtual appointments only more frequently reported being asked about sensitive topics compared to women who received in-person only appointments or both: drug use (virtual: 85.4%, in-person: 78.2%, both: 82.4%), feeling down or depressed (virtual: 88.9%, in-person: 78.0%, both: 84.6%), being hurt emotionally or physically by someone (virtual: 85.2%, in-person: 70.1%, both: 77.7%), and HIV testing (virtual: 66.3%, in-person: 55.8%, both: 61.9%).

Conclusions: Overall, attendance to PNC was high among respondents, with most women reporting having in-person PNC visits during their pregnancy. Virtual visits were attended by nearly a third of women in conjunction with in-person visits. Additionally, provider-screening and counseling about sensitive topics during virtual appointments were higher.

Public Health Implications: This study shows variations in PNC utilization experiences during the COVID-19 pandemic in 2020. Increased access to virtual PNC appointments may help enhance PNC and facilitate healthcare provider screening and counseling during pregnancy. Further research is needed to identify opportunities to increase access to virtual healthcare appointments to all women during pregnancy.

Impact of Serious Mental Illness on Maternal and Infant Outcomes In Delaware, 2010-2019 – Retrospective Analysis of Linked Mother-Infant Dyads

Scientific Research/Data Abstracts

Authors: Khaleel Hussaini, PhD

Category/Categories: Maternal health, Infant mortality; pregnancy outcomes

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: New data techniques, Using new data systems, Using new data linkages, Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Hospital discharge data

Background: The Substance Abuse and Mental Health Services Administration defines serious mental illness (SMI) as someone over 18 having (within the past year) a diagnosable mental, behavior, or emotional disorder that causes serious functional impairment that substantially interferes with or limits one or more major life activities. The 2020 National Survey on Drug Use and Health estimates that approximately, one in 20 adults (5.4% or 14 million) in the U.S. have SMI and the prevalence of SMI is higher in females than males. There are limited cohort studies that assess whether SMI is associated with maternal and infant outcomes.

Study Questions: Is there an increase in SMI prevalence among women who delivered during 2010 to 2019 in Delaware? Is SMI independently associated with adverse maternal outcomes (pre-eclampsia, severe maternal morbidity [SMM], postpartum hemorrhage [PPH])? Is SMI independently associated with adverse infant outcomes (preterm birth [PTB], low birth weight [LBW], neonatal abstinence syndrome [NAS], and neonatal deaths)?

Methods: We conducted a retrospective analysis of 96,273 mother-infant pairs consisting of singleton live births in Delaware during 2010-2019 using linked hospital discharge containing maternal delivery hospitalizations and newborn admission data and linked birth and death certificate data. We used ICD-9-CM/ICD-10-CM to assess SMI. We calculated SMI prevalence during 2010-2019, and the percent change from 2010-2014, during ICD-9-CM usage, and from 2016 (first full-year of ICD-10-CM) to 2019. We calculated adjusted odds ratio (AOR) with 95% confidence intervals (CI) for the association of SMI with pre-eclampsia, SMM, PPH, PTB, LBW, NAS, and neonatal deaths adjusting for a priori confounders: age, race and ethnicity, payer of birth, prenatal care, pre-pregnancy weight status, parity, previous PTB, and cigarette use during pregnancy for all models, plus pre-eclampsia and cesarean mode of delivery for SMM and PPH outcomes; pre-eclampsia and pre-pregnancy diabetes for PTB and LBW outcomes; and maternal substance use disorder for NAS. We used $\alpha \leq 0.05$ to determine statistical significance.

Results: There were 96,723 mother-infant pairs in Delaware during 2010-2019 of which 4,193 women (4.4%) had SMI. SMI prevalence increased by 26% from 2010 (4.6%) to 2014 (5.8%), and by 23% from 2016 (3.0%) to 2019 (3.7%). Pre-eclampsia was higher among women with vs. without SMI (5.0% vs.

3.2%; AOR = 1.5; CI: 1.3-1.7) SMI, while SMI was not associated with SMM and PPH. Infants of women with vs. without SMI were significantly more likely to be born premature (10.6% vs. 8.1%; AOR = 1.2; CI: 1.0-1.3), have low birth weight (9.5% vs. 7.1%; AOR = 1.3; CI: 1.1-1.3), be diagnosed with NAS (6.5% vs. 1.9%; AOR = 1.5; CI: 1.2-1.8) and experience neonatal death (0.8% vs. 0.4%; AOR = 1.9; CI: 1.3-2.6).

Conclusions: The prevalence of SMI in Delaware increased both in the years before and after the transition to ICD-10-CM. In this population-based retrospective cohort study of mother-infant pairs, SMI was associated with pre-eclampsia, PTB, LBW, NAS, and neonatal death, but not with SMM and PPH.

Public Health Implications: The increasing prevalence of SMI among women with a recent live birth, and the associated morbidity and mortality suggests the need to identify upstream interventions for reducing the burden of SMI.

Overview of Maternal Mortality and Factors Contributing to Maternal Deaths in New Mexico, 2015-2018.

Scientific Research/Data Abstracts

Authors: Presenting Author-Jessica Fuchs, MPH

Non-Presenting Author - Eirian Coronado, MA

Non-Presenting Author - Melissa Schiff, MD, MPH

Category/Categories: Maternal morbidity and mortality, Maternal health

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: Birth and/or death certificates, Other

Background: In recent years, national- and state-level agencies have targeted maternal mortality—defined by the CDC as a death that occurs during pregnancy or within one year of pregnancy—due to rates increasing in the United States. One effort to combat this issue was the creation of Maternal Mortality Review Committees (MMRCs), which are state-level committees that review maternal mortality data and draft recommendations to providers, hospitals, state government, and other actors to prevent maternal mortality in the future. The New Mexico (NM) MMRC has reviewed pregnancy-associated deaths to better understand the scope of the problem and associated factors specifically in NM.

Study Questions: What is the rate of pregnancy-associated-but-not-related and pregnancy-related mortality in New Mexico? What factors are associated with pregnancy-associated deaths in NM?

Methods: Information was extracted for all pregnancy-associated deaths in NM from 2015-2018 that were reviewed by the MMRC. Based on information collected from birth records, death certificates, medical records, autopsy reports, and other sources, the MMRC determined whether each death was pregnancy-associated-but-not-related or pregnancy-related, whether the death was preventable, and what factors contributed to the death. Examples of contributing factors include substance use disorder (SUD), mental health (MH), discrimination, and obesity. Descriptive analyses examined patterns by race, insurance status, timing of death in relation to pregnancy, cause of death, and committee determinations of pregnancy-relatedness, preventability, and contributing factors to deaths. Pregnancy-associated-but-not-related and pregnancy-related mortality ratios were calculated.

Results: There were 77 deaths in NM during the 2015-2018 period. The Pregnancy-Associated-Not-Related Mortality Ratio was 40.2 deaths per 100,000 live births (n=39). The Pregnancy-Related Mortality Ratio (PRMR) was 25.8 deaths per 100,000 live births (n=25). SUD contributed to 46.8% of cases and was listed as the primary cause of death in 5.2% of cases. Sixteen percent of all deaths were overdoses. MH contributed to 41.6% of all cases and was listed as the primary cause of death in 19.5% of cases. Seventy-eight percent of all cases were determined to be preventable by the MMRC. There was a 4.6-

fold greater PAMR among those with Medicaid compared to those with private insurance. Over half of all cases (62.3%) died between 43 days and 365 days after pregnancy. A limitation of this analysis is the small sample size, which limits our ability to detect statistical differences in ratios.

Conclusions: The majority of pregnancy-associated deaths in NM are preventable. Pregnant and postpartum people in NM are disproportionately affected by SUD and MH. Insurance status appears to have a significant impact on one's chance of maternal death. More than half of all cases die 43-365 days after pregnancy. Further research must be completed to determine why disparities exist, particularly with a focus on Medicaid cases, those affected by substance use and mental health conditions, and cases that occur in the postpartum period, to prevent future maternal deaths in New Mexico.

Public Health Implications: This study highlights who in NM is disproportionately affected by maternal death—those on Medicaid, with substance use or mental health conditions, or in their postpartum period—and demonstrates whose care to target to work towards health equity.

Patterns of Postpartum Follow Up in Gestational Diabetes Patients

Scientific Research/Data Abstracts

Authors: Presenting Author-Jenifer Akinduro, M.D., M.S.

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Non-Presenting Author - Djhenne Dalmacy, M.S.

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Non-Presenting Author - Stephen Thung, M.D.

Non-Presenting Author - Seuli Brill, M.D.

Category/Categories: Chronic Disease, Women's health

Method of Presentation: Poster Presentation

Data Methods: Using existing data sources in innovative ways

Data Source: Other

Background: Gestational diabetes (GDM) is an increasingly common pregnancy complication associated with significant maternal and neonatal morbidity, affecting 6% of live births in the US. Women with a history of GDM have a 10-fold increased risk of developing type 2 diabetes (T2DM), with the highest relative risk within the first five years after delivery. Postpartum primary care follow-up can play a critical role in diabetes prevention. Despite recommendations for universal follow-up glucose testing after delivery by the American Diabetes Association and the American College of Obstetrics and Gynecology, little remains known about how often individuals with GDM access primary care after pregnancy.

Study Questions: Assess transitions of care from the obstetric to the primary care setting by identifying postpartum patterns of follow-up care in gestational diabetes patients (GDM)

Methods: Women aged 15 to 51 years old who had a delivery between 2015 and 2018, were discharged alive, and had continuous enrollment from 180 days before to 366 days after the delivery date, were identified from the MarketScan database using CPT codes. The association of diabetes-related follow-up (DRF) and diabetes diagnosis was assessed using logistic regression.

Results: A sample size of 282,006 women was identified from the MarketScan database. Patients with and without DRF were identified and separated based on pre-existing diabetes diagnosis or GDM diagnosis. The DRF adjusted odds ratio for patients with pre-existing diabetes was 10.29 (95% CI 9.93-10.67) versus 4.11 (95% CI 3.98-4.25) for GDM patients. Regional distinctions in DRF were detailed via adjusted odds ratio, with the North Central (Midwestern U.S.) region serving as control. Women in the North East had an adjusted odds ratio of 1.32 (95% CI 1.28-1.37) versus women in the South (OR 1.05, 95% CI 1.02-1.08) and the West (OR 1.03, 95% CI 1.00-1.07). Our study cannot assess if there are racial

disparities in postpartum follow-up among GDM patients as racial demographic data is not included in the IBM MarketScan database.

Conclusions: The data demonstrate that the rates of follow-up care in postpartum GDM patients are significantly less than in patients with pre-existing diabetes. Women with GDM in the South and West are participating in less DRF when compared to women in the North East. Across all groups, women in the North Central are least likely to participate in DRF compared to all other regions. These decreased rates of DRF in postpartum GDM patients represent missed opportunities for early T2DM prevention and early surveillance.

Public Health Implications: Further investigations identifying root causes of low rates of DRF can inform clinical implementation strategies to improve longitudinal postpartum GDM care. Potential strategies to increase postpartum primary care for diabetes prevention among GDM patients include obstetric to primary care handoff protocols and patient awareness campaigns. Additionally, African-American, Hispanic, American Indian, and Pacific Islander patients have higher rates of GDM. Further investigations should be done to assess postpartum GDM follow-up by race to elucidate any racial disparities in follow-up among racial/ethnic minorities.

Racial Disparities in Prescription Opioid Pain Reliever Use Following Pregnancy. Findings from the Michigan Pregnancy Risk Assessment Monitoring System (MI-PRAMS).

Scientific Research/Data Abstracts

Authors: Presenting Author-Peterson Haak, BS, PhD Candidate

Presenting Author - Hannah Bovia, MPH

Non-Presenting Author - Jill Hardy, MS

Non-Presenting Author - Patricia McKane, DVM, MPH

Non-Presenting Author - Chris Fussman, MS

Category/Categories: Racism, equity, social justice, Healthcare quality improvement

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using existing data sources in innovative ways, Other

Data Source: Birth and/or death certificates, Linked data file, PRAMS

Background: Prescription opioid pain-relievers are a vital tool for controlling pain and assisting the healing process, especially following cesarean section delivery. However, their use at the population-level can carry risks that must be addressed through adequate follow-up care.

Study Questions: 1) How common is postpartum prescription opioid pain-reliever use in a population-representative sample of Michigan mothers? How has this changed over time and does use vary by mode of delivery? 2) Are there disparities in postpartum pain relief by maternal race/ethnicity? 3) How adequate is screening for prescription opioid use during postpartum visits?

Methods: We analyzed population-representative data from MI-PRAMS for 2016-2020. Using SAS-callable SUDAAN, we calculated weighted frequencies and 95% confidence intervals (CI), tested for trends, and examined relationships between opioid pain-reliever use and maternal race-ethnicity using binomial logistic regression to adjust for confounders.

Results: Postpartum prescription pain reliever use is common in Michigan, but has been decreasing steadily in recent years, from 23.6% (CI: 21.1-26.2) in 2016 to 14.6% (CI: 12.5-17.0) in 2020. This change is largely driven by less pain reliever use following vaginal delivery, decreasing from 13.2% (CI: 10.8-15.9) in 2016 to 5.4% (CI: 3.9-7.5) in 2020. Opioid pain reliever use following c-section delivery has remained more constant, averaging 38.8% (CI: 36.6-41.1) across these five years. Prescription opioid pain reliever use following c-section was most prevalent among non-Hispanic white mothers (40.8%; CI: 37.6-44.2) and about half as prevalent among non-Hispanic Black mothers (22.7%; CI: 20.2-25.3). Use among mothers from all other race/ethnicity groups (31.9%; CI: 26.7-37.6) lies between this difference. For every 100 white mothers reporting prescription opioid pain-reliever use following c-section delivery,

only 55 Black mothers (risk ratio [RR]: 0.55; CI: 0.54-0.57) and 78 mothers from other race-ethnicity groups (RR: 0.78; CI: 0.77-0.79) reported use. Following multivariate adjustments for maternal education, federal services eligibility, race-based mistreatment in healthcare during pregnancy, close relationships with someone struggling with substance abuse, and adequacy of prenatal care, these deficits remained statistically significant. For every 100 non-Hispanic white mothers reporting prescription pain-reliever use, only 68 non-Hispanic Black mothers (adjusted RR: 0.68; CI: 0.66-0.70) and 85 mother from other race-ethnicity groups (adjusted RR: 0.85; CI: 0.84-0.87) reported use. Screening for prescription opioid pain-reliever use at postpartum visits is low, with only a third (35.6%; CI: 34.2-37.0) of those receiving postpartum care reporting that their provider asked whether they were using prescription opioid pain-relievers. It is unknown whether the 1 in 9 mothers receiving no postpartum care are ever screened for pain-reliever use after pregnancy. Our findings face some limitations. Population-level data are informative and can quantify disparities but lack the detail to truly discern over-prescription or under-prescription for postpartum pain relief. The broad wording of our survey questions also lacks information on dose, frequency, and source of pain-relievers used.

Conclusions: These findings highlight lower use of opioid pain-relievers among non-white mothers in Michigan following c-section deliveries across 2016-2020. Comprehensive support via postpartum visit screenings for prescription pain-reliever use is wholly inadequate.

Public Health Implications: There are ample opportunities to improve equitable prescribing and use of prescription opioid pain-relievers following pregnancy.

Reproductive Coercion and Postpartum Depression: Findings from the Missouri PRAMS (2012-2020)

Scientific Research/Data Abstracts

Authors: Presenting Author-Lisa Giles, MPH

Presenting Author - Alisea Brooks, BA in International Studies, Master of Public Health & Master of Social Work candidate

Non-Presenting Author - Karen Harbert, MPH

Non-Presenting Author - Venkata Garikapaty, PhD, MSc, MS, MPH

Category/Categories: Maternal health, Reproductive health/family planning

Method of Presentation: Poster Presentation

Data Methods: Using existing data sources in innovative ways

Data Source: PRAMS

Background: Reproductive coercion (RC) occurs when one partner interferes with contraception use and pregnancy in order to maintain control in the relationship. This behavior can occur in the form of manipulating pregnancy outcomes, pregnancy pressure, or attempting to impregnate a partner regardless of her desire to become pregnant. Studies have demonstrated a link between RC and interpersonal violence. However, little is known about the relationship between RC and postpartum depressive symptoms (PDS).

Study Questions: Which socio-demographics are associated with experiencing reproductive coercion among women in Missouri? Is there an association between reproductive coercion and postpartum depressive symptoms?

Methods: Data from the 2012-2020 Missouri Pregnancy Risk Assessment Monitoring Survey (PRAMS) was analyzed to assess RC and depressive symptoms that occurred after pregnancy. This study counted mothers as experiencing RC if they reported, 1) They wanted to be pregnant later or didn't want to be pregnant ever and 2) Their reason for not doing anything to keep from getting pregnant was "my husband or partner didn't want to use anything." Bivariate analysis was conducted using the chi-square test to examine maternal characteristics and RC. Logistic regression was used to determine if experiencing preconception RC could predict postpartum depressive symptoms. Covariates that were adjusted for were pre-pregnancy depression, race, insurance, mother's age, federal poverty level (FPL), education, pre-pregnancy smoking or drinking, and marital status.

Results: Of 9,498 PRAMS respondents in Missouri, 3.2% qualified as experiencing RC, and 13.2% reported experiencing PDS. Bivariate analyses showed sociodemographic characteristics associated with RC included being less than 20 years old, Black race, having 12 or fewer years of education, unmarried, low income, smoked before pregnancy, and received Medicaid benefits. Results of multivariate analyses revealed that pre-pregnancy depression (aOR=3.3, 95% CI: 2.8-4.0), being in the 0-100% FPL and 101-

200% FPL (compared to 201%+ FPL), respectively (aOR=2.0, 95% CI: 1.5-2.6, aOR=1.5, 95% CI: 1.2-1.9), and being unmarried (aOR=1.3, 95% CI=1.1-1.6) were significant predictors of PDS. When adjusting for covariates, mothers who experienced RC were significantly more likely to report PDS than mothers who didn't (aOR=1.5, 95% CI: 1.1-2.2). Limitations of the study included that the true amount of PDS experienced may be underestimated due to the self-reporting nature of the PRAMS survey. Additionally, not having a PRAMS question that could determine the RC status outright may have led to overestimation of RC among respondents.

Conclusions: Reproductive coercion was found to be associated with an increased odds of developing postpartum depressive symptoms. The socio-demographics of women in Missouri more likely to be affected by RC concurs with the literature.

Public Health Implications: Screening for RC and pre-pregnancy depression could be an important step toward reducing rates of PDS. The factors associated with PDS might inform interventions to improve PPD treatment, victim service support, healthy relationships education, and access to sexual and reproductive health care, possibly mitigating risks and improving outcomes for women postpartum.

Implementation of Screening Tool and Online Cognitive Behavioral Therapy Intervention for Maternal Depression and Related Behavioral Conditions in Illinois

Scientific Research/Data Abstracts

Authors: Presenting Author-Katherine Craemer, MPH

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Non-Presenting Author - Stacie Geller, PhD, MPA

Non-Presenting Author - Pauline Maki, PhD

Category/Categories: Maternal health, Mental/behavioral health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Implementation science, Program evaluation or surveillance evaluation

Data Source: Other

Background: Mental health disorders are the leading cause of maternal mortality in Illinois. Approximately 33% of pregnant persons with depression have anxiety and 30% with depression report suicidal ideation. While mental health disorders are common during pregnancy and postpartum, these conditions are often underdiagnosed and undertreated, particularly in pregnant persons from under-resourced areas.

Study Questions: The purpose of this project was to improve screening and treatment for depression and related mental health disorders by implementing Computerized Adaptive Testing for Mental Health (CAT-MH) in routine clinic care and provide new resources including a free, on-line cognitive behavioral therapy (CBT) intervention (Sunnyside for Moms) and free consultation services through Illinois DocAssist (IDA).

Methods: Twenty-two (76%) of the 29 perinatal providers completed a 1-hour, in-person or webinar training and were given resources on how to use CAT-MH, referral and medication treatment options for different CAT-MH results, and contact information for IDA consultations. Providers also received a Sunnyside brochure for patients. CAT-MH screening modules included major depressive disorder (MDD), depression severity, generalized anxiety disorder (GAD), suicide risk, substance use disorder (SUD) and post-traumatic stress disorder (PTSD).

Results: Between July 1, 2019, to March 4, 2022, 731 CAT-MH screens were completed; 116 (15.8%) screens had positive results. The prevalence of positive screens was MDD 10%, GAD 7%, suicide risk 12%, SUD 3% and PTSD 2%. Referral and medication rates were very low; only 23 (14%) of positive screens had an applicable referral (e.g., social work, psychiatry, Sunnyside, behavioral health, human service center) and only 23 (14%) were started on medications. Forty-nine (66%) of positive MDD

screens were positive for at least 1 other condition: GAD, SUD, PTSD. GAD was the most common co-morbidity (n=49, 63.5%), 26 (53%) of which were moderate or severe GAD. CAT-MH screening took an average of 8 minutes and 13 seconds to complete. Providers perceived CAT-MH as better than the Edinburgh Perinatal Depression Screener and PHQ-9, however, lack of Electronic Medical Record (EMR) integration and length of time required to complete the CAT-MH was a barrier. Of the 116 positive screens, only 2 patients enrolled in Sunnyside and 5 (23%) providers used IDA. Despite training and support from clinic leadership, use of IDA and referral rates and enrollment in Sunnyside were very low.

Conclusions: CAT-MH meets patients' needs and is a more comprehensive than existing mental health screening tools. Integrating CAT-MH into the EMR would aid in making use of this tool during routine prenatal care more feasible and sustainable. While Sunnyside and IDA were perceived as helpful resources, their uptake was minimal. Most positive screens (n=82, 71%) did not receive a referral or treatment. Barriers to Sunnyside enrollment may be attributed to method of onboarding and a lack of provider knowledge on how to address mental health concerns for elevated, but not clinically significant depressive symptoms.

Public Health Implications: Routine use of CAT-MH screening can capture a more comprehensive overview of mental and behavioral health disorders than existing screening tools. However, referrals to mental health resources and medication management must be increased to meet established need.

Getting the Kids Ready: A New National Measure of Kindergarten Readiness

Scientific Research/Data Abstracts

Authors: Anne Day Leong, PhD, MSW

Presenting Author-Reem Ghandour, DrPH, MPA

Category/Categories: Child/adolescent health, Data: innovation, quality improvement, communication

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: National Survey of Children's Health

Background: Comprehensive National-level data on kindergarten readiness has historically not been available in the United States. In an effort to address this gap, the Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB), in partnership with Child Trends and experts throughout the nation, has developed, tested, and refined the index: Healthy and Ready to Learn (HRTL). HRTL is a 29-item measure embedded within the annual National Survey of Children's Health (NSCH) that assesses children ages 3-5 years on five dimensions of kindergarten readiness. Scoring the item provides estimates if a child is on track, in need of support, or at risk on the five dimensions of: early learning, social-emotional development, self-regulation, physical health, and motor development. This presentation will provide an overview of the development, testing and refinement of survey items between 2016 and 2022, introduce how the summary and domain-specific measures are expected to be calculated, and inform future users how the data may be accessed and used to inform policy and programs.

Study Questions: Healthy and Ready to Learn will provide public use data with national-level estimates of kindergarten readiness on the five dimensions of early learning, social-emotional development, self-regulation, physical health, and motor development. In order to test the validity of this unique measure, HRSA MCHB engaged in a multi-year, multi-pronged process to evaluate the wording and framing of individual survey items, the scope and foci of the domain-specific and summary measures, and options for age-specific scoring of both. This process led to the refinement and augmentation of the final set of HRTL items selected for inclusion in the 2022 NSCH.

Methods: As a part of the NSCH, the suite of HRTL items will be administered annually, and data will be released to the public in October each year. HRTL items will also be embedded in the upcoming 2023 Longitudinal Cohort Study of NSCH (LC). The LC will follow the 2018-2019 cohort of the NSCH to learn more about the impacts of the Covid-19 pandemic, with a special focus on learning and development.

Results: Drawing on 6 years of testing and refinement, HRTL has evolved from 62 candidate survey questions to the current 29-item measurement tool. The original 62 items were identified through expert review and consultation and subsequently tested at multiple sites across the country to identify 43 items for cognitive testing through the National Center for Health Statistics. Sixty cognitive interviews

were conducted with caregivers of children between the ages of 3-5 to provide further insight and refinement. Finally, the resulting 43 items were further tested through three community organizations to establish 29 items that provided sufficient variation and distinctions by age.

Conclusions: The concluding 29-item measure is intended for use as a tool to assess kindergarten readiness at a population level. This unique measurement tool will be utilized in national surveys through HRSA MCHB and will be made publicly available. Data produced by HRTL will be available for free public use to examine estimates in school readiness over time, location, and demographics. As a part of the larger NSCH, the data will also be available to examine correlates with kindergarten readiness in the NSCH dataset.

Public Health Implications: Kindergarten readiness has been linked to later academic success, lower dropout rates, and improved health and wellness as children age. The US currently has a largely private system of early childhood education, with regulatory authority largely held at the State level. National-level data on kindergarten readiness allows the research community to estimate the impacts of divergent early education policies across states, and begin to explore communities where children are lagging behind. Information gleaned from this public use data set provides potential to inform discussions on national early education programs such as Head Start, the Child Care Development Fund, or later discussions on universal child care.

Geographic Differences in Preconception Health Indicators - Ohio, 2020

Scientific Research/Data Abstracts

Authors: Presenting Author-Michelle Menegay, PhD, MPH

Non-Presenting Author - Natalie DiPietro Mager, PharmD, MPH, PhD

Non-Presenting Author - Reena Oza-Frank, PhD, MS-MPH, RD

Category/Categories: Women's health, Environment; place and health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: Other

Background: Improving preconception and interconception health are key strategies to optimize women's health as well as pregnancy outcomes. The National Preconception Health and Health Care Initiative's Surveillance and Research work group has identified ten indicators as the highest priority measures for state surveillance regarding the preconception health status of reproductive-age women (also referred to as tier 1 indicators). However, statewide estimates may obscure differences among subpopulations and inadvertently overlook important subgroups at risk, especially in large states such as Ohio that encompass several distinct geographical areas.

Study Questions: Does the prevalence of selected tier 1 preconception health indicators differ among Ohio women with a live birth by county type?

Methods: We analyzed 2020 Ohio Pregnancy Assessment Survey (OPAS) data. OPAS is a statewide, PRAMS-like population-based survey that monitors maternal health and experiences among women who experienced a live birth in Ohio. OPAS collects data from a stratified sample of women selected from Ohio's birth certificate data who are invited to participate in OPAS 2-6 months following delivery using one of three survey modes (mail, web, or telephone). We conducted descriptive analyses using survey weights to estimate weighted prevalence and 95% confidence intervals of the tier 1 preconception health indicators overall and by county type (rural, Appalachian, metropolitan, suburban). We performed Rao-Scott Chi-Square tests, accounting for the complex survey design, to assess geographic differences in the following seven preconception health indicators: heavy alcohol consumption, depression, folic acid intake, hypertension, current smoking, unwanted pregnancy, and postpartum use of a most or moderately effective method of contraception. The limitations of the study include the restriction of data collection to women who gave birth in a single state in a single year, use of unadjusted estimates, and limited sample size to include additional indicators.

Results: In Ohio, 5,539 women had a live birth and completed the 2020 OPAS. Higher percentages of women in Appalachia (30.8%) reported having depression before pregnancy compared to women in metropolitan areas (19.6%). Additionally, 18.3% of women in Appalachia and 14.4% in rural areas reported smoking cigarettes at the time of survey compared to 9.8% of women in metropolitan areas. About 27.3% of women in Appalachia and 39.2% in rural areas reported taking a multivitamin every day

compared to their counterparts residing in metropolitan and suburban areas (38.2% and 43.7%, respectively). We did not find any geographic differences in pre-pregnancy hypertension diagnosis, heavy alcohol consumption, unintended pregnancy, or postpartum contraceptive use.

Conclusions: Women in Appalachia or rural areas fared worse than women in metropolitan or suburban areas on specific tier 1 preconception and interconception health measures including depression, smoking, and multivitamin use.

Public Health Implications: In a geographically diverse state, differences in preconception health by location of residence emphasize the need for regional customization of prevention messages to improve health behaviors, particularly in regions with persistent health disparities. In Ohio, prevention messages and associated services specific for women who live in Appalachia or rural areas are essential to improve preconception health.

Post-Neonatal Mortality Rates of Term Infants in the US: Father's Education Matters

Scientific Research/Data Abstracts

Authors: Presenting Author-Abigail Whitney, MD

Non-Presenting Author - Kristin Rankin, PhD

Non-Presenting Author - James Collins, MD, MPH

Category/Categories: Infant mortality; pregnancy outcomes, Fatherhood/men's involvement

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Linked data file

Background: An expanding published literature highlights the contribution of paternal factors to preterm birth (PTB) rates. Interestingly, a recent study found that paternal education had a stronger impact on PTB than maternal education (Ekeke et al, MCHJ, 2021). Approximately one-third of post-neonatal (28-365d) deaths occur among term infants, and post-neonatal mortality (PNM) is characterized by racial disparities. The relationship between paternal education, maternal race, and the post-neonatal mortality rate (PNMR) of term infants is unknown.

Study Questions: To determine the contribution of paternal education to the overall and cause-specific PNMR of term infants and the racial disparity therein.

Methods: Crude, stratified, and multivariable Poisson regression analyses were performed using the 2017 National Center for Health Statistics US period linked live birth- infant death data files. Only term (37-42 weeks) singleton births with acknowledged fathers and a non-missing value for paternal education were included. Overall and cause-specific PNMR were calculated according to paternal education. Maternal adjustment factors included race/ethnicity, age, marital status, education attainment, parity, cigarette smoking, first trimester initiation of prenatal care, insurance status, and infant sex. We calculated race-specific adjusted population attributable risk % (PAR%) of paternal education on PNMR in infants of African-American and White women.

Results: The PNMR of term infants decreased as paternal education level increased. Term infants born to fathers with < 12 years of education (n=392,275) had a PNMR of 1.8/1,000 compared to only 0.4/1,000 for fathers with a Master's Degree or higher (n=333,477); RR = 4.2 (3.5, 5.0). The adjusted RR of PNM for term infants born to fathers with < 12 years of education (compared to Bachelor's Degree or higher) equaled 1.5 (1.3, 1.8). Regarding cause-specific mortality, the paternal education disparity was widest for PNMR due to Sudden Unexplained Infant Death (SUID) [RR= 8.0 (5.6, 11.4)], followed by unintentional injuries [RR= 4.8 (3.1, 7.4)], and congenital anomalies [RR= 2.3 (1.6, 3.2)]. The adjusted RR of PNM due to SUID for paternal education <12 years (compared to Bachelor's degree or higher) was 1.7 (1.3, 2.1). The PNMR of infants born to African-American women was twice that of infants born to White

women [RR= 2.0 (1.8, 2.2)]. No effect modification of paternal education by race was observed. However, 82% of African-American women had paternal education attainment less than a Bachelor's degree compared to 62% for White mothers. Most striking, the adjusted PAR % of paternal education on PNMR was 60.9% for term infants born to African-American women versus 35.8% for White women.

Conclusions: Low paternal education attainment is an important risk factor for PNM among term infants independent of commonly cited maternal characteristics. Reflecting the greater prevalence of low paternal education attainment among births to African-American (compared to White) women, this intriguing phenomenon is particularly salient to the term African-American infant's post neonatal survival disadvantage.

Public Health Implications: Paternal education attainment should be considered when examining social determinants of term PNM. This is a potential area of intervention for researchers and policy makers committed to reducing term PNMR in the US.

Maternal Hesitancy about Childhood Vaccines Among Pregnant and Recently Pregnant Women, and Intent for their Baby to Receive Recommended Vaccines

Scientific Research/Data Abstracts

Authors: Katherine Kahn, MPH

Non-Presenting Author-Hilda Razzaghi, PhD

Non-Presenting Author - Carla Black, PhD

Non-Presenting Author - Tammy Santibanez, PhD

Category/Categories: Immunization/infectious disease, Child/adolescent health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: Other

Background: This is the first study on the prevalence of hesitancy about childhood vaccines among pregnant women in the United States using a survey module developed by CDC.

Study Questions: What percentage of pregnant women indicated being hesitant about childhood vaccines and do not plan for their baby to receive childhood vaccines as recommended, what factors are associated with maternal hesitancy about childhood vaccines, and have there been any changes in vaccine hesitancy during the ongoing COVID-19 pandemic?

Methods: An Internet panel survey of pregnant and recently pregnant women 18–49 years in the United States conducted in April of 2020 (n=2,264) and 2021 (n=2,290) included questions on hesitancy about recommended childhood vaccines; the survey will also be conducted in April 2022. 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 somewhat/very hesitant about recommended childhood vaccines, were not at all confident that recommended childhood vaccines are necessary, safe, or beneficial, and did not plan for their baby to receive childhood vaccines as recommended was assessed. Bivariate analyses with Wald chi squared statistics and pairwise comparison t-tests were performed.

Results: The proportion of April 2021 survey respondents who reported not being at all confident that all recommended childhood vaccines are necessary, safe, or that benefits outweigh risks was 9.7%, 10.7%, and 10.1%, respectively. The proportion of women reporting being somewhat/very hesitant about childhood shots increased from 30.9% in April 2020 to 38.2% in April 2021, and those who reported not planning to follow the recommended childhood vaccine schedule for their baby increased from 34.8% to 39.8%. In both years, respondents more likely to report hesitancy about childhood vaccines included those who had public or no insurance, had not received influenza and/or Tdap

vaccines during their pregnancy, and reported hesitancy about influenza and/or Tdap vaccination during pregnancy. Respondents reporting plans to deviate from the recommended childhood vaccination schedule were also consistently more likely to be younger (18-24 years) and non-Hispanic Black. Analyses will be updated when April 2022 survey data arrive in June 2022.

Conclusions: Nearly 2 in 5 surveyed pregnant women in the United States were hesitant about childhood vaccines recommended for their baby. Vaccine hesitancy among pregnant and recently pregnant women increased during the pandemic, which could lead to lower vaccination coverage among infants. Monitoring vaccine hesitancy among pregnant women could help immunization programs develop and target methods to increase vaccine confidence and coverage among pregnant women and their babies, particularly among groups identified as being more likely to be hesitant, such as Black women.

Public Health Implications: Providers should continue to recommend influenza and Tdap vaccines to all pregnant women, address any concerns, and also educate them about recommended childhood vaccines for their baby. Early conversations about childhood vaccines could help ensure women understand the importance of vaccinating their baby according to the recommended schedule.

Reducing the Number of Uninsured and Underinsured Adolescents: Key Stakeholders, Initiatives, and Opportunities for Advocacy

Scientific Research/Data Abstracts

Authors: Melissa Tibbits, PhD

Non-Presenting Author-Theresa Nguyen, B.S.

Non-Presenting Author - Carey Wheelhouse, MSPAS, PA-C

Non-Presenting Author - Brandon Grimm, PhD

Non-Presenting Author - David Palm, PhD

Category/Categories: Health insurance or safety net care, Child/adolescent health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Policy assessments or evaluations

Data Source: Other

Background: Background: Research indicates that many adolescents do not have adequate access to physical, mental, and behavioral health care. In 2019, the National Academies of Sciences, Engineering, and Medicine report *The Promise of Adolescence: Realizing Opportunity for All Youth* provided several recommendations focused on improving access to health care. One recommendation focused on strengthening the financing of health care services to reduce the number of uninsured and underinsured adolescents. Proposed strategies focus on Medicaid and include initiatives such as Medicaid expansion and increasing reimbursement rates. There is a dearth of research on factors influencing the implementation of these recommended strategies.

Study Questions: Study Questions: This study addressed three research questions: (1) Who are the stakeholders working to decrease the number of uninsured and underinsured adolescents in Nebraska; (2) To what extent are the recommended health care financing strategies being implemented in Nebraska; and (3) What additional work is needed to improve implementation?

Methods: Methods: Semi-structured interviews were conducted with 28 participants in January of 2022. Participants were recruited from across the state of Nebraska and included leaders from health care organizations, non-profit agencies, and advocacy groups. Interviews were recorded and transcribed verbatim. Mutually agreed upon themes were determined by three members of the research team and these themes were used to code the transcripts using NVivo software.

Results: Results: Most health care financing stakeholders in Nebraska come from the medical field, with additional stakeholders coming from advocacy organizations and non-profits focused on children, families, patients, and individuals with disabilities. Due to substantial collaboration and advocacy among stakeholders, Medicaid expansion was adopted in Nebraska and currently is being implemented. Despite similarly sustained and coordinated advocacy, adoption of other well-supported initiatives such as

increased Medicaid reimbursement rates, 12-month continuous Medicaid eligibility, and express lane Medicaid eligibility have been less successful. One perceived barrier is the focus on reducing costs rather than increasing access to care among State governmental agencies. Aside from implementing changes to the Medicaid program, key recommendations for additional work focused on providing incentives to increase the number of providers, reducing barriers to care by providing services such as transportation and technology that would enable telehealth services, and investing in outreach to increase insurance enrollment for eligible adolescents.

Conclusions: Conclusions: Although Nebraska has had some success in implementing the recommended health care financing strategies, additional work is needed to ensure all adolescents have adequate insurance coverage and are able to afford and access health care.

Public Health Implications: Public Health Implications: Overall, this study suggests that having a well-coordinated network of stakeholders may not be enough to substantially change Medicaid policy in the absence of State governmental support for these initiatives. Additional advocacy efforts are needed to broaden the pool of stakeholders and build support for health care financing within State governmental agencies. Additionally, resources are needed to ensure adolescents who are eligible for services are able to access them.

Stress Measurement in Middle/High Income Women: Revision of the PRAMS Stressful Life Events Scale

Scientific Research/Data Abstracts

Authors: Janine Hill, PhD, MPH, BS

Category/Categories: Infant mortality; pregnancy outcomes, Maternal morbidity and mortality

Method of Presentation: No Preference

Data Methods: Using existing data sources in innovative ways

Data Source: PRAMS

Background: In the United States, overall infant mortality rates have decreased by 16% since 2005. However, the Black rate of 10.97 infant deaths per 1,000 live births is still more than twice the non-Hispanic White rate of 4.67 (Ely & Driscoll, 2020). Perceived stress has been associated with adverse birth outcomes, such as low birth weight, preterm birth, and postpartum depression (Herrick, 2000; Hogue et al., 2001; Hogue & Vasquez, 2002; Lima et al., 2018; Sable & Wilkinson, 2000; Szegda et al., 2018; Whitehead et al., 2002). Stress could also contribute to the persistent racial/ethnic disparities in adverse birth outcomes (Giscombé & Lobel, 2005; Dominguez, 2008). Additionally, acute and chronic stress, both operationalized as the presence of stressors, have been linked to adverse birth outcomes (Culhane & Elo, 2005; Culhane et al., 2002; Hogue et al., 2001; Owen et al., 2017; Weber et al., 2020).

Study Questions: The major purposes of this study were to identify types of stressors experienced in middle-/high-income Black and White women who have recently had a child and to ultimately develop a revised SLE scale to include events that can be used in a multiethnic, higher-income group. The research was necessary because the current PRAMS SLE includes a number of items more likely endorsed by a primarily low-income population and does not adequately capture stressors facing middle-/high-income Black and White women.

Methods: Using the combined Phase 5-7 PRAMS dataset (2004 – 2015) from 34 states, frequency of endorsement of stressors was examined by both race and income, separately and jointly. In addition, psychometric analyses including reliability and a principal component analysis (PCA) were conducted.

Results: Racial differences were most pronounced in the frequency of stressors endorsed. Middle-/high-income Black women were 2.6 times more likely than middle-/high-income White women to endorse four to six stressors, 3.4 times more likely to endorse seven to 12 stressors, and 1.4 times less likely to endorse zero stressors. A review of the Cronbach's alpha showed the PRAMS SLE scale to be slightly less reliable in a middle/high-income Black and White population compared to a lower income group (Cronbach's alpha 0.58 and 0.65, respectively). Based on PCA analysis, the most frequently endorsed stressors sorted into three factors: partner-related, financial, and emotional.

Conclusions: Black middle-/high-income women were more likely to endorse stressors about lacking emotional support from friends and family, issues conceiving/bringing a baby to term, arguing with husband/partner more than usual, and handling household responsibilities. In contrast, middle-/high-

income White women were more likely to endorse experiencing gender discrimination and being upset by political/societal changes.

Public Health Implications: One of the five goals of Healthy People 2030 is to “eliminate health disparities, achieve health equity, and attain health literacy to improve the health and well-being of all” (U.S. Department of Health and Human Services, 2020, p. 2). It is, therefore, important to pursue all lines of inquiry to explicate this problem, including further investigation of maternal stress as a risk factor for adverse birth outcomes.

Exposure to Domestic Violence and racial disparities in breastfeeding in North Dakota (ND PRAMS 2017-2019)

Scientific Research/Data Abstracts

Authors: Presenting Author-Grace Njau

Non-Presenting Author - Lexie Schmidt

Non-Presenting Author - MichaelLynn Kanich

Non-Presenting Author - Andrew Williams, PhD MPH

Non-Presenting Author - Matthew Schmidt

Non-Presenting Author - Anastasia Stepanov

Category/Categories: Racism, equity, social justice, Violence and injury prevention

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: PRAMS

Background: In 2019, the overall breastfeeding initiation rate in the US was 84.1%, yet only 76.6% of American Indian (AI) women initiated breastfeeding. Exposure to domestic violence (DV) may influence breastfeeding via high stress and low social support. In ND, AI women have greater exposure to DV than other racial/ethnic groups. Evidence regarding DV and breastfeeding is limited, especially among AI women.

Study Questions: We explored whether DV partially explains racial/ethnic disparities in breastfeeding initiation in ND.

Methods: Data for 2214 women were from 2017-2019 ND Pregnancy Risk Assessment Monitoring System. Breastfeeding initiation was maternal response to “Did you ever breastfeed or pump breast milk to feed your new baby, even for a short period of time?” (yes/no). DV was assessed for both 12 months before and during pregnancy based on maternal report (yes/no) of violence from a husband/partner, family member, someone outside of family, or ex-husband/partner. An “Any DV” variable was created if women reported “yes” to any DV. Logistic regression estimated odds ratios and 95% confidence intervals for breastfeeding initiation among AI and Other race/ethnicity women compared to White women. In separate models, we included DV to assess whether DV accounted for racial/ethnic disparities. Models were adjusted for maternal demographic, medical, and behavioral factors.

Results: AI women had 51% reduced odds to initiate breastfeeding(OR:0.49 95%CI:0.31,0.59) compared to white women. Including the “Any DV” during pregnancy reduced the odds of breastfeeding initiation among AI women by 15%(OR:0.42 95%CI:0.30,0.59) compared to white women. Results were similar for DV before and during pregnancy.

Conclusions: Findings suggest that AI women are less likely to initiate breastfeeding than white women, and DV does not explain the disparity but widens the disparity.

Public Health Implications: This study highlights the consistent, negative association between exposure to domestic violence and breastfeeding initiation and duration. Through community-based work, and inclusion of health care workers such as postpartum doulas, strengthening of cultural ties to the tradition of breastfeeding may improve breastfeeding rates in AI populations.

Breast and Cervical Cancer Screening in IL Before and After ACA Full Implementation, and During COVID (2020)

Scientific Research/Data Abstracts

Authors: Trang Pham, MD, MS

Presenting Author-Trang Pham, MD, MS

Non-Presenting Author - Kristin Rankin, PhD

Non-Presenting Author - Arden Handler, DrPH, MPH

Category/Categories: Women's health, Healthcare quality improvement

Method of Presentation: No Preference

Data Methods: Program evaluation or surveillance evaluation

Data Source: Other

Background: Women of color bear a disproportionate burden of breast and cervical cancer in the US. The Affordable Care Act (ACA) not only expanded insurance coverage, but also included breast and cervical cancer screening as two of the recommended preventive services required to be available without cost sharing. Studies indicate increases in insurance coverage and the use of well-woman preventive care after the ACA. Results related to the effect of the ACA on mammography and cervical cancer screening, however, have been mixed. Importantly, with the advent of the COVID pandemic, there has been a recent notable decline in breast and cervical cancer screening in the US.

Study Questions: The current study explores rates of breast and cervical cancer screening in Illinois, focusing on differences in screening rates before and after the ACA, and between 2020 (COVID year) and the post-ACA years (2016-2018).

Methods: Using Illinois Behavioral Risk Factor Surveillance System (BRFSS) data from 2012-2020 we examined breast and cervical cancer screening rates; these data are only available during even years. We examined the following outcomes: 1) For 40-64 year olds, having a mammogram within the last 2 years as recommended by the US Preventive Services Task Force (USPSTF); and, 2) For 21-65 year olds with no prior hysterectomy, having a pap smear within the last 3 years or having a hrHPV test within the last 5 years as recommended by the USPSTF. (The hrHPV testing variable is only available from 2016; thus we examined cytology and hrHPV testing for 2016-2020 only). Screening rates were examined overall and by multiple covariates stratified by timing with respect to ACA implementation and the COVID-19 pandemic. Chi-square tests were performed to determine differences between 2016-2018 versus 2012-2014 and 2020 versus 2016-2018. All percentages were weighted, and specialized techniques were used to account for the complex sample survey design.

Results: In the years 2012-2020, almost 73% (95% CI 71.3, 74.5) of IL women 40-64 years old reported having a mammogram in the last two years. While there were no significant differences across time, there were stark disparities overall by race/ethnicity ($p=0.009$), with the lowest rates for Hispanic

women (66.3%, 95% CI 60.0, 72.5). The effect of COVID on breast cancer screening was significant for uninsured women (54.8%, 95% CI 45.9, 63.6 in 2016-2018 versus 32.2%, 95% CI 14.3, 50.1 in 2020). Utilizing the combined cytology and/or hrHPV testing estimates, rates of cervical cancer screening among women 21-65 decreased significantly from 74.8% (95% CI 72.7, 76.8) in 2016-2018 to 69.2% (95% CI 65.2., 73.2) in 2020 (p=0.01).

Conclusions: Improving rates of breast and cervical cancer screening are both objectives included in Healthy People 2030. However, even prior to COVID, rates of cervical cancer screening had been decreasing with further declines noted during the pandemic.

Public Health Implications: During the COVID 19 pandemic, access to and utilization of basic preventive health care was often neglected. It is essential to double down on efforts to ensure that those at highest risk are prioritized with respect to education, outreach, and access to breast and cervical cancer screening.

Extremes of Socioeconomic Deprivation and Privilege and Preterm Birth, Florida, 2015–2019

Scientific Research/Data Abstracts

Authors: Presenting Author-Ghasi Phillips-Bell, ScD, MS

Non-Presenting Author - Yousra Mohamoud

Non-Presenting Author - Russell Kirby

Non-Presenting Author - Sharyn Parks Brown

Non-Presenting Author - Yvette Cozier

Non-Presenting Author - Carrie Shapiro-Mendoza

Category/Categories: Environment; place and health, Infant mortality; pregnancy outcomes

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Birth and/or death certificates, Linked data file, Other

Background: The preterm birth rate in Florida and the nation is approximately 1.5 times higher for non-Hispanic Black infants than non-Hispanic White infants. The non-Hispanic Black-White disparity is not fully explained by individual-level social, behavioral, or clinical risk factors. There is increasing emphasis on understanding the role structural and area-level factors play on health. The Index of Concentration at the Extremes (ICE) is a measure of spatial polarization that simultaneously captures extremes of socioeconomic deprivation and privilege.

Study Questions: Is extreme socioeconomic deprivation associated with increased odds of preterm birth? Does the association vary by preterm birth subtypes?

Methods: In this cross-sectional study, we analyzed 388,384 Florida birth records on gestational age and demographic characteristics for nulliparous women. We linked this data with 2015–2019 American Community Survey census-tract household income and race/ethnicity to assess extreme socioeconomic deprivation and privilege from three ICE measures: 1) ICE_INC: low vs. high household income (20th vs. 80th percentiles), 2) ICE_INC+WB: income combined with race/ethnicity (number of non-Hispanic White vs. Black residents), and 3) ICE_INC+WH: income combined with race/ethnicity (number of non-Hispanic White vs. Hispanic residents). We assessed preterm birth overall (<37 completed weeks gestation) and by subtypes: 1) early (<34 weeks) and late (34–36 weeks) and 2) spontaneous and medically-indicated deliveries. These preterm birth categories were compared with term births (37–41 weeks gestation) in random effects multinomial logistic regression models. We calculated adjusted odds ratios (aOR) and 95% confidence intervals (CI) for each ICE measure. Estimates were adjusted for census tract poverty (below 200% of federal poverty line) and individual-level maternal age (5-year increments from 15 through 44 years), race/ethnicity (Hispanic, non-Hispanic Black, and Non-Hispanic White), and location

(continuous latitude and longitude coordinates) to account for maternal residences that were not spatially independent.

Results: Approximately 9% of births were preterm. Compared with term births, higher proportions of women with preterm births were 15–19 or 35–44 years of age, non-Hispanic Black, and resided in the most high-poverty census tracts. Women who lived in areas with extreme socioeconomic deprivation for variable ICE_INC+WB had 6% increased odds (aOR=1.06, 95%CI: 1.01, 1.12) of preterm birth than women who lived in areas with extreme socioeconomic privilege. Among non-Hispanic White and Hispanic women, we observed no association between ICE_INC+WH and overall preterm birth in the fully adjusted model. When examining preterm birth subtypes for all three ICE measures, aORs for residing in areas of extreme deprivation vs. privilege ranged from 1.10 (95% CI: 1.01, 1.20) to 1.16 (95% CI: 1.07, 1.26) for early preterm birth and 1.09 (95% CI: 1.01, 1.18) to 1.13 (95% CI: 1.06, 1.22) for indicated preterm birth.

Conclusions: Overall preterm birth was associated with socioeconomic deprivation when comparing Black populations in low-income households with non-Hispanic White populations in high-income households. For all ICE measures, extreme socioeconomic deprivation was associated with increased odds of early or indicated subtypes of preterm births.

Public Health Implications: Eliminating preterm birth disparities may require a multifaceted approach that addresses area-level extremes of socioeconomic privilege and deprivation.

Shifts in Early Childhood Developmental Screening and Referral in Statewide Home Visiting: Comparing Pre-Pandemic and Pandemic Timepoints

Scientific Research/Data Abstracts

Authors: Presenting Author-Kathryn Oscanyan, MPH

Category/Categories: Home visiting, Child/adolescent health

Method of Presentation: Poster Presentation

Data Methods: Program evaluation or surveillance evaluation

Data Source: Other

Background: Developmental Screening plays a critical role in early identification of children at risk for delays. Home Visiting programs routinely screen young children and provide referrals for appropriate services. However, the COVID-19 pandemic caused disruptions to normal screening practices, including the use of virtual visits which hindered observation and assessment of children. It is important to understand the effects that service disruptions have on early identification for potential developmental delays and resulting linkage to services.

Study Questions: How did screening practices change from pre-pandemic to pandemic timepoints? What effect did service disruptions have on developmental screening and referral?

Methods: Developmental screening data from two time points was analyzed using descriptive statistics to determine changes in screening volume, assessment scores, and referral totals. The two time points were pre-pandemic (2018-2019) and pandemic (2020-2021).

Results: The number of developmental screenings decreased between pre-pandemic and pandemic timepoints (14.7%). Scores in all five domains of the screening tool increased from pre-pandemic to pandemic by an average of 6.6 points. However, the number of referrals for early intervention increased by nearly 60%.

Conclusions: The decrease in the number of screenings between the time points was not unexpected due to decreases in enrollment and difficulty engaging families in virtual service delivery. Although domain scores increased between the time points, an increased number of early intervention referrals were provided, which was unexpected. Home Visitors providing virtual services were more apt to refer a child for further assessment if the score was in a monitoring zone. Prior to the pandemic, home visitors would continue to monitor a child with a similar score. Additionally, pre-pandemic developmental screening included the guardian-child dyad with the Home Visitor available for observation and assessment support. During the pandemic, Home Visitors were not able to provide in-person observation and support to encourage age-appropriate development.

Public Health Implications: This study provides a baseline to show that while developmental screening scores increased from pre-pandemic to pandemic, the decision to refer shifted to a more conservative

approach. Expanding on this idea would highlight other shifts in protocol due to virtual or remote service delivery. In addition, this study underscores the importance of appropriate developmental screening protocol, regardless of the setting.

Experience of Increased Verbal Conflicts and Intimate Partner Violence around the Time of Pregnancy Due to the COVID-19 Pandemic

Scientific Research/Data Abstracts

Authors: Presenting Author-Denise D'Angelo, MPH

Non-Presenting Author - Martha Kapaya, MPA, MA

Non-Presenting Author - Beatriz Salvesen von Essen, MPH

Non-Presenting Author - Lee Warner, PhD

Non-Presenting Author - Lauren Zapata, PhD

Non-Presenting Author - Jessica Meeker, PhD, MPH

Non-Presenting Author - Nickolas Agathis, MD

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Non-Presenting Author - Heather Clayton, PhD

Non-Presenting Author - Rosalyn Lee, PhD

Non-Presenting Author - Yanet Ruvalcaba, PhD

Category/Categories: Violence and injury prevention, Collateral damage of COVID

Method of Presentation: No Preference

Data Methods: Other

Data Source: PRAMS

Background: Studies have documented increased verbal fighting, increased intimate partner violence (IPV), and challenges accessing health care services during the COVID-19 pandemic. Experiencing IPV around the time of pregnancy is associated with adverse health outcomes for women and infants.

Study Questions: What is the prevalence of reporting more verbal conflicts and more aggression from a husband or partner due to the COVID-19 pandemic? Are these experiences associated with postpartum health outcomes and health care utilization?

Methods: We used 2020 data from the Pregnancy Risk Assessment Monitoring System collected in 29 sites to assess the prevalence of reporting increased verbal conflicts or increased physical, sexual, and emotional aggression from a husband or partner due to the COVID-19 pandemic among women with a recent live birth. We calculated prevalence estimates overall and by maternal characteristics, physical IPV before and during pregnancy, and stressors reported as due to COVID-19 such as economic, housing, food, mental health, and childcare challenges. We calculated prevalence ratios, adjusting for age, race/ethnicity, marital status, insurance at delivery, and jurisdiction of residence to estimate

associations between both increased verbal conflicts and increased aggression and postpartum smoking, postpartum depressive symptoms, postpartum checkup attendance, and infant birth outcomes.

Results: Among PRAMS respondents with a recent live birth (n=14,084), approximately 18% reported increased verbal conflicts, and 3% reported increased physical, emotional, or sexual aggression from their husband or partner due to the COVID-19 pandemic. A higher proportion of those who reported increased verbal conflicts or increased aggression also reported stressors such as partner relationship problems in the 12 months before delivery, physical IPV before or during pregnancy, and COVID-related economic, housing, food, mental health, and childcare challenges compared with women who did not report these stressors. Experiencing either increased verbal conflicts or increased aggression was associated with postpartum smoking (adjusted prevalence ratio [aPR] 1.55, 95% confidence interval [CI] 1.28 – 1.86 for verbal conflicts; aPR 2.19, 95% CI 1.47 – 3.27 for aggression) and postpartum depressive symptoms (aPR 1.79, 95% CI, 1.55 – 2.07 for verbal conflicts; aPR 2.28, 95% CI 1.60 – 3.23 for aggression). There were no significant differences in postpartum checkup attendance, infant birth weight, preterm birth, or breastfeeding initiation.

Conclusions: Overall, nearly one in five women with a recent live birth reported increased verbal conflicts with their husband or partner due to the COVID-19 pandemic. Three percent reported increased physical, emotional, and sexual aggression. Those who reported increased verbal conflicts and increased aggression were more likely to experience COVID-19-related economic, housing, food, mental health, and childcare stressors compared with women who did not experience increases. Experiences with increased verbal conflicts and aggression were associated with postpartum smoking and postpartum depressive symptoms.

Public Health Implications: This study adds to the literature on the effects of the COVID-19 pandemic on partner conflict and intimate partner violence and association with women's postpartum health. Findings support the need for ongoing efforts to prevent intimate partner violence and ensure the availability of resources during times of hardship.

Toward Whole Child Approaches to Mitigate Impacts of Mental, Emotional, and Behavioral Problems Among US Children and Promote Flourishing

Scientific Research/Data Abstracts

Authors: Presenting Author-Christina Bethell, PhD, MPH, MBA

Category/Categories: Child/adolescent health, Mental/behavioral health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using existing data sources in innovative ways, Other

Data Source: National Survey of Children's Health

Background: Recent disparities in morbidity and mortality confirm widespread and growing prevalence of mental, emotional and behavioral problems (MEB) among US children, further exacerbated by the pandemic and other societal conflicts and stressors. Policy, program and services efforts to prevent and mitigate impacts of MEB require population-based and child subgroup data on mutable factors associated with increased MEB as well as factors that can lower negative impacts and promote positive health outcomes for children with MEB.

Study Questions: What is the prevalence of MEB among US children across levels and types of evidence based social health risks (SHR) and relational health risks (RHR)? To what extent do family protective factors mitigate negative impacts of MEB on children's self-regulation, school engagement and social relationships across different levels and combinations of SHR and RHR? Do associations vary across race/ethnicity and household income subgroups of children?

Methods: Data from a combined 2016-2019 National Survey of Children's Health (NSCH) dataset was used to estimate variations in the prevalence of MEB among US children age 3-17 based on evidence-based social health risks (SHR) and relational health risks (RHR) indices they experienced. Stratified regression analyses were conducted to assess associations between family protective factors the self-regulation, school engagement and social relationships of children with MEB across levels and combinations of SHR and RHR. Differences in associations were evaluated by race/ethnicity and household income.

Results: Nearly 70% (67.6%) of US children with mental, emotional, and behavioral problems (MEB) experienced significant social health risks (SHR), like food insufficiency, and/or relational health risks (RHR), like Adverse Childhood Experiences. Prevalence of MEB varied from 15.1% to 60.4% across subgroups of children based on their SHR and RHR status. RHR were more strongly associated with MEB than were SHR alone. Children with MEB and any number of both SHR and RHR had 55% lower adjusted odds of demonstrating good self-regulation (SR) skills compared to those without these risks; yet those with stronger family resilience and parent-child connection were substantially more likely to demonstrate good SR regardless of the SHR and RHR they experienced. In turn, children with MEB and

stronger SR skills had 4.35 greater adjusted odds of engaging in school, 1.60 greater odds of missing an above-routine of school days and 1.37 greater adjusted odds of bullying victimization and/or perpetration. Findings were consistent across race/ethnicity and household income subgroups of children.

Conclusions: Shifts are needed in child mental health promotion, prevention, diagnosis, and treatment to separately assess and address RHR as well as SHR. Public health approaches are needed that engage families, youth and the range of child serving professionals in collaborative efforts to prevent and mitigate RHR and SHR and promote family protective factors for all children.

Public Health Implications: Study findings and methods can be used by child health professionals, program leaders and policy makers to advance evidence-based practices to prevent MEB and reduce school-related and social impacts of MEB by lowering SHR and RHR and promoting family protective factors.

Non-Use of Contraception due to Partner Wishes and Maternal and Infant Health Outcomes

Scientific Research/Data Abstracts

Authors: Presenting Author-Denise D'Angelo, MPH

Non-Presenting Author - Jennifer Bombard, MSPH

Non-Presenting Author - Kathleen Basile, PhD

Non-Presenting Author - Rosalyn Lee, PhD

Non-Presenting Author - Yanet Ruvalcaba, PhD

Non-Presenting Author - Heather Clayton, PhD

Non-Presenting Author - Cheryl Robbins, PhD

Category/Categories: Violence and injury prevention, Reproductive health/family planning

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: PRAMS

Background: Approximately 8% of women in the United States report any lifetime experience of reproductive coercion, a form of intimate partner violence (IPV) in which a partner interferes with autonomous decision making about pregnancy. Experiencing reproductive coercion has been associated with other forms of intimate partner violence and unintended pregnancy.

Study Questions: What is the relationship between reporting that a partner did not want to use contraception at the time of conception and maternal and infant health outcomes among women with a recent live birth?

Methods: We used 2016 – 2020 data from the Pregnancy Risk Assessment Monitoring System in 22 sites to assess the prevalence of women who had an unintended pregnancy reporting that they did not use contraception when they got pregnant because their husband or partner did not want to use anything. We examined correlations with maternal characteristics and partner relationship factors (chi-square p-value <.05). We calculated prevalence ratios, adjusting for age, race/ethnicity, marital status, and insurance at delivery to understand associations between non-use of contraception due to partner wishes and maternal behavioral risk factors, health care utilization, postpartum contraceptive use, and infant birth outcomes.

Results: Among PRAMS respondents who had an unintended pregnancy (n=29,236), approximately 5% reported non-use of contraception due to partner wishes. A higher proportion of those who reported this experience were 20-24 years of age, Black non-Hispanic, high school educated, insured by Medicaid at delivery, reported relationship problems in the 12 months before delivery, and experienced physical

IPV before or during pregnancy compared with women who did not report non-use of contraception due to partner wishes. Non-use of contraception due to partner wishes was associated with lower prevalence of entering prenatal care in the first trimester and attending a postpartum checkup (adjusted prevalence ratio [aPR] 0.7, 95% confidence interval [CI] 0.6 – 0.9, for both). Higher prevalence was observed for postpartum sterilization (aPR 1.4, 95% CI 1.1-1.7) and report of partner not wanting to use a birth control method postpartum (aPR 2.8, 95% CI 2.0 – 3.8).

Conclusions: Non-use of contraception due to partner wishes was associated with reduced health care utilization around the time of pregnancy, higher use of sterilization postpartum, and report of partner not wanting to use a method of birth control postpartum.

Public Health Implications: Findings shed light on the association between non-use of contraception due to partner wishes and lower prevalence of health care utilization around the time of pregnancy and higher non-use of contraception due to partner wishes in the postpartum period. Prevention efforts may include strategies that increase awareness about reproductive coercion and evidence-based approaches that empower and support women and girls to enhance communication skills and self-efficacy related to reproductive choices.

Chronic Comorbidities and Adverse Perinatal Outcomes Among Women with Mental Health/Substance Use Disorders Delivering Live Singleton Births -- Illinois, 2016-2017

Scientific Research/Data Abstracts

Authors: Presenting Author-Julia Howland, MPH

Non-Presenting Author - Amanda Bennett, MPH PhD

Non-Presenting Author - Kristin Rankin, PhD

Category/Categories: Mental/behavioral health, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using new data linkages, Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Hospital discharge data, Linked data file

Background: Mental health and substance use (MH/SU) disorders are a significant cause of morbidity and mortality among pregnant and postpartum women and are associated with adverse outcomes among their children, including preterm birth, childhood morbidity, and MH/SU disorders in adolescence. Understanding the prevalence of MH/SU disorders among women and their association with perinatal outcomes can inform public health and clinical practice.

Study Questions: How do rates of chronic comorbidities and adverse perinatal outcomes, including obstetric comorbidities, severe maternal morbidity (SMM), and preterm birth, differ among women with versus without MH/SU disorders?

Methods: Birth certificate (BC) data was used to identify Illinois resident women with a singleton live birth occurring in Illinois hospitals during 2016-2017. Using a probabilistic approach, BCs were matched to hospital discharge data (HDD) for the maternal delivery hospitalization. In HDD, records with any MH/SU disorder International Classification of Diseases version 10 diagnosis code were selected based on Clinical Classification Software (CCS) categories 650-652, 660-661, and 656-670. Deliveries were categorized as having MH-only, SU-only, both MH and SU disorders, or no MH/SU disorders identified. Deliveries with chronic comorbidities (e.g., obesity, anemia), obstetric comorbidities (e.g., gestational hypertension and diabetes), preterm birth (<37 weeks obstetric estimate gestation on BC), and SMM (using CDC algorithm to identify any of 21 conditions from HDD diagnosis and procedure codes) were identified. Rates of MH/SU disorders at delivery were compared across covariates (age, race/ethnicity, primary payer at delivery, urban-rural status of residence county, marital status, parity, adequacy of prenatal care, and educational attainment) using Chi-square tests. Crude and adjusted rate ratios (RR) and 95% confidence intervals were estimated using log-binomial regression models for chronic and obstetric comorbidities and preterm birth and Poisson regression models for SMM. Adjusted models included all covariates previously listed.

Results: Nearly 10% of Illinois women with a singleton delivery during 2016-2017 had a MH/SU disorder identified at delivery. In bivariate analyses, younger, non-Hispanic white, rural, less educated, publicly insured, and unmarried women were significantly more likely to have MH/SU disorders compared with their counterparts ($p < 0.05$). Non-Hispanic White women were significantly more likely to have only a MH or co-diagnosed MH/SU disorders ($p < 0.05$), while non-Hispanic Black women were significantly more likely to have only a SU disorder identified ($p < 0.05$). Women with versus without any MH/SU disorder had significantly higher rates of chronic comorbidities [41.7% vs. 29.1%; adjusted RR=1.37 (1.35-1.39)], obstetric comorbidities [18.3% vs. 17.9%; adjusted RR=1.18 (1.15-1.21)], SMM [113 per 10,000 vs. 63 per 10,000; adjusted RR=1.82 (1.60-2.08)], and preterm birth [12.3% vs. 7.5%; adjusted RR=1.47 (1.41-1.52)].

Conclusions: MH/SU disorders occur in approximately 1 out of 10 deliveries in Illinois, disproportionately among younger women, non-Hispanic White, rural, less educated, publicly insured, and unmarried women. Women with MH/SU disorders at delivery have higher rates of co-occurring chronic comorbidities and adverse outcomes, including obstetric comorbidities, SMM, and preterm birth.

Public Health Implications: MH/SU disorders are associated with chronic, maternal, and birth outcomes, which highlights the importance of integrating preconception, prenatal, and mental/behavioral healthcare for women.

Comparison of Breastfeeding Practices Among Mothers With Term and Preterm Births

Scientific Research/Data Abstracts

Authors: Binitha Kunnel, MS

Non-Presenting Author-Rebecca Mannel, MPH, IBCLC

Non-Presenting Author - Nancy Bacon, MS, RDN/LD, CDCES

Category/Categories: Infant mortality; pregnancy outcomes, Maternal health, Breastfeeding practices,

Method of Presentation: Poster Presentation

Data Methods: Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, PRAMS

Background: Preterm birth (<37 weeks) is one of the primary causes of infant mortality and occurs in over 10% of Oklahoma births. Breastfeeding reduces the risk of many acute and chronic diseases for both term (37– 40 weeks) and preterm babies, including diabetes, obesity, childhood cancers and numerous infections. Preterm infants are particularly susceptible to necrotizing enterocolitis, sepsis, retinopathy of prematurity and bronchopulmonary dysplasia, all of which have reduced incidence when these babies are fed human milk.

Study Questions: The purpose of this study was to examine and compare the prevalence of breastfeeding (BF) initiation and duration among mothers who gave birth term or preterm. The study will also investigate disparities in BF duration by the mother's age, race and Hispanic origin.

Methods: Data were analyzed from the Oklahoma Pregnancy Risk Assessment Monitoring System (PRAMS) for years 2016-2019 that included 6,182 respondents (weighted response rate 56.1%). Bivariate and multivariate associations between BF duration and term and preterm as well as selected maternal demographics were assessed using prevalence rates and adjusted risk ratios (ARR) with 95% confidence intervals (C.I). All analyses were conducted using SAS callable SUDAAN.

Results: Overall, 86.0% of new mothers reported initiating BF with 57.6% reporting continuing to breastfeed up to 8 weeks or more. Over 48% of mothers exclusively breastfed to 8 weeks or more. The prevalence of BF initiation was more or less the same for mothers who gave birth term or preterm however prevalence of BF to 8 weeks or more and exclusively BF to 8 weeks or more were significantly lower among mothers who had preterm births. Examining by race and Hispanic origin, there were no significant differences in prevalence of BF initiation, duration or exclusivity between mothers who had term or preterm births. While not statistically significant, non-Hispanic Black and non-Hispanic American Indian mothers reported lower rates of BF initiation, duration and exclusivity. BF practices differed significantly between term and preterm births for teenage mothers (< 20 years) and older mothers (≥ 30 years). Teen mothers who gave birth preterm initiated breastfeeding at significantly higher rates than teen mothers who gave birth term (95.1% vs. 79.9%). In contrast, older mothers who gave birth preterm

had significantly lower rates of BF duration and exclusivity. Adjusting for maternal age, race and Hispanic origin, education, and income, mothers with preterm births were less likely to breastfeed to 8 weeks or more (ARR = 0.69, 95% C.I. = 0.5 - 0.9) and were also less likely to breastfeed exclusively to 8 weeks or more (ARR = 0.65, 95% C.I. = 0.5 - 0.9).

Conclusions: Mothers of preterm infants initiate BF, but are less likely to continue with either any BF or exclusive BF to 8 weeks or more. Non-Hispanic American Indian and non-Hispanic Black mothers and older mothers in general have lower rates of BF.

Public Health Implications: Factors that influence breastfeeding duration and exclusivity for preterm infants need to be identified and addressed to improve breastfeeding rates and ultimately long-term health outcomes for these vulnerable babies.

Timing of Prenatal Care Initiation and Loss to Follow-Up Among Infants Who Fail Hearing Screen in Virginia

Scientific Research/Data Abstracts

Authors: Parker Brodsky, MPH

Non-Presenting Author-Dane De Silva, PhD, MPH

Category/Categories: Birth defects/disability and MCH populations, Child/adolescent health

Method of Presentation: No Preference

Data Methods: New data techniques, Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Hospital discharge data, Linked data file

Background: Nearly 2 out of every 1,000 infants screened for hearing loss are diagnosed with permanent hearing loss nationally; however, loss to follow-up rates remain high among screened infants. In Virginia, 60.8% of infants who failed their initial screening received a diagnosis in 2020; the remainder were lost to follow-up. Current studies highlight the association between maternal factors and newborn health outcomes; however, there is a lack of literature on the relationship between timing of prenatal care initiation and loss to follow-up throughout the hearing screening process.

Study Questions: We sought to evaluate the relationship between early prenatal care and the likelihood of being lost to follow-up among infants who failed their initial hearing screen.

Methods: This cross-sectional analysis utilized data from 2017-2020 Virginia Early Hearing Detection and Intervention (VA EHDI) linked to Vital Statistics Data for all infants born in Virginia who failed their initial hearing screen. Records were excluded if the infant was a multiple, born out-of-state, or passed their initial hearing screen. The exposure was early prenatal care, defined as care beginning <27 weeks gestation. The outcome was being lost to follow-up, which was defined as not receiving a diagnosis (permanent or no hearing loss) after failing an initial screen. Multivariable logistic regression was conducted to model prenatal care initiation and loss to follow-up and was adjusted for confounders. Because early prenatal care initiation may not be adequate, a sensitivity analysis was conducted using the Kotelchuck index as the exposure.

Results: N = 6,010 mothers of singletons who failed the initial screen were included in the study. Of these infants, 37.1% were lost to follow up before the diagnostic stage. The unadjusted model showed that infants born to women who began prenatal care prior to 27 weeks gestation were less likely to be lost to follow-up compared with infants whose mothers received late or no prenatal care (OR 0.72, 95% CI: 0.58, 0.89), and remained significant after adjustment for maternal confounders (OR 0.77, 95% CI: 0.61, 0.96). Sensitivity analyses showed that women receiving inadequate or intermediate prenatal care were more likely to be lost to follow-up, even after adjustment of confounders. While temporality between the exposure and outcome can be established, the cross-sectional nature of this study design cannot ascertain causality.

Conclusions: This research identifies that both early prenatal care and adequate prenatal care are associated with higher likelihoods of receiving a diagnosis after failing the initial hearing screen.

Public Health Implications: Findings suggest validating the need to focus on prenatal care education to limit loss to follow-up, as current prenatal education does not include information on hearing screening, and may help to better connect missed infants to services and decrease any burden on families.

Caminos a la Seguridad: What Spanish-Speaking Survivors of Partner Violence Need to Plan for Safety

Scientific Research/Data Abstracts

Authors: Alisa Velonis, MPH, PhD

Presenting Author-Patricia O'Campo, PhD

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Non-Presenting Author - Molly McGown, MPH, MA

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Category/Categories: Violence and injury prevention, Refugee/Immigrant population health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Other

Data Source: Other

Background: The COVID-19 pandemic and its protracted fallout have exacerbated factors known to increase the rate of intimate partner violence (IPV). Reduced access to social networks, childcare- and school-related stressors, and more limited access to health and social services exist alongside historic levels of economic insecurity and shifting public health guidance, all of which are shown to increase the risk of violence. Compounding historic, systemic, and structural forces mean these disruptions have impacted Latinx communities in the US particularly hard, further increasing Latinas' risk of IPV and intensifying the well documented need for evidence-based IPV interventions. To respond to this need, researchers in Chicago, Miami, and Toronto are creating Caminos a la Seguridad, a set of web-based apps that are linguistically and culturally tailored to Spanish-speaking Latinas. As part of the formative research for this intervention, we used Concept Mapping methodology to identify Latinas' priority safety needs.

Study Questions: 1. What are the key concerns and resource needs that influence Spanish-speaking IPV survivors' decisions about safety? 2. How are these concerns prioritized, and how do these priorities change when survivors are considering staying or leaving the relationship or if they have children?

Methods: Concept mapping is a semi-quantitative, iterative process in which participants brainstorm responses to a focal question, then sort and rate those items according to a set of pre-defined criteria. Sixteen Spanish-speaking Latina survivors of IPV and Latina-serving service providers generated over 70 responses to the question "when Latinas experience abuse by a partner, what might they need to plan for safety?" These responses were distilled into 38 unique items, which were then rated by 50 participants across all three communities. Participants were asked to rate these items separately for

women considering leaving their relationship, women planning to stay in their relationship, and (c) women with dependent children. Multidimensional scaling and hierarchical cluster analyses were conducted, resulting in graphic representations illustrating the relative importance of each item and the relationships between them.

Results: Our results suggest nine discrete clusters of statements. Significant differences in cluster ratings were seen when considering whether or not survivors were thinking of leaving the relationship, and moderate differences were identified when considering if survivors had children. Preliminary data also suggest that information in Spanish about child custody rights and access to childcare may be as or more important for early safety planning efforts as having an emergency bag packed or access to emergency resources (housing, financial aid).

Conclusions: These initial results will inform our ongoing app development project and suggest our Caminos a la Seguridad may need separate safety plans for women who are ready to leave their relationship versus those who are not, as well as safety plans tailored for women with children.

Public Health Implications: These findings support the importance of tailoring safety planning activities for the context of the survivor. Public health messages and resources promoting generic safety measures may not meet the needs of many Latinas, particularly survivors who elect to remain in their relationship. Resources supporting parents, such as childcare, are equally essential for supporting survivor safety.

Surveillance of Mental Health and Substance Use Hospitalizations among Women of Reproductive Age: Impact of the Transition to ICD-10

Scientific Research/Data Abstracts

Authors: Presenting Author-Amanda Bennett, PhD, MPH

Non-Presenting Author - Angela Rohan, PhD

Non-Presenting Author - Julia Howland, MPH

Category/Categories: Mental/behavioral health, Women's health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: Hospital discharge data

Background: Mental and substance use disorders can lead to significant morbidity and mortality among women of reproductive age (WRA). Nationally, 2 in 10 women have a mental illness and nearly 1 in 10 women have a substance use disorder during their lifetime. A population-based mental health surveillance indicator was previously developed to comprehensively identify hospitalizations related to mental health and/or substance use (MHSU) among WRA. This study assessed how this indicator was affected by the transition from International Classification of Diseases version 9 (ICD-9) to version 10 (ICD-10).

Study Questions: How does the ICD-9 to ICD-10 transition affect MHSU-related hospitalization rates for mental health and substance use among WRA in Illinois?

Methods: Illinois hospital discharge data from 2012-2019 were used for all inpatient hospitalizations of resident females ages 15-44. Discharges for 2015-Q4 (immediate period after ICD transition) and for delivery hospitalizations (identified via diagnosis related groups, diagnosis codes, and/or procedure codes) were excluded. MHSU-related hospitalizations were identified by a principal diagnosis code of a mental or substance use disorder (Clinical Classification Software categories 650-652, 656-662, and 670) or the presence of any acute MHSU-related injury (in ICD-9, any of 3 external cause-of-injury fields; in ICD-10, any of 25 diagnosis code fields). Post-censal estimates for Illinois resident females ages 15-44 were used to calculate hospitalization rates per 10,000 WRA. Rates were compared within both the ICD-9 period (2012-2015-Q3) and ICD-10 period (2016-2019), and aggregate rates across time periods were also compared. Z-tests were used to assess differences between hospitalization rates.

Results: Among Illinois WRA during the study period, there were 220,652 MHSU-related hospitalizations. During the ICD-9 period, the MHSU-related hospitalization rate was 131.1, with similar rates in 2012 vs. 2015 ($p=0.78$). During the ICD-10 period, the MHSU-related hospitalization rate for Illinois WRA was 147.6, with similar rates in 2016 vs. 2019 ($p=0.10$). The MHSU-related hospitalization rate during the ICD-10 period was significantly higher than the rate during the ICD-9 period ($p<0.0001$). The hospitalization rate for mental disorders was significantly higher after the ICD-10 transition (ICD-

9=102.7, ICD-10=119.5; $p<0.0001$), with the largest rate differences in mood disorders (ICD-9=78.0, ICD-10=88.4; $p<0.0001$) and schizophrenia/psychotic disorders (ICD-9=13.2, ICD-10=17.8; $p<0.0001$). The substance use disorder hospitalization rate was significantly higher after the ICD-10 transition (ICD-9=17.9, ICD-10=18.7; $p<0.0001$), but the hospitalization rate for acute MHSU-related injuries was significantly lower after the ICD-10 transition (ICD-9=10.1, ICD-10=9.4; $p<0.0001$).

Conclusions: The rate of MHSU-related hospitalizations among Illinois WRA was 12% higher with the ICD-10 version versus the ICD-9 version of a surveillance indicator; this increase was unlikely to be related to secular trends. Hospitalizations for mood or psychotic disorders accounted for most of this increase. While this surveillance indicator may be used to assess population mental health for WRA, the ICD-9 and ICD-10 versions do not appear to be comparable in Illinois.

Public Health Implications: To assess and improve population mental health, public health programs need standardized, population-based measurement methods for surveillance. While a surveillance indicator for MHSU hospitalizations may be used to assess population mental health for WRA, the ICD-9 and ICD-10 versions are not comparable in Illinois.

Handling the “Drive-By” Delivery: An Assessment of Emergency Preparedness in Obstetric Care in a Rural State

Scientific Research/Data Abstracts

Authors: Presenting Author-Annie Glover, PhD, MPH, MPA

Non-Presenting Author - Carly Holman, MS

Non-Presenting Author - Diane Brown, MPH, CE, BS

Non-Presenting Author - Megan Nelson, MSW

Category/Categories: Maternal health, Healthcare quality improvement

Method of Presentation: No Preference

Data Methods: Policy assessments or evaluations, Program evaluation or surveillance evaluation

Data Source: Other

Background: Safe and timely access to risk-appropriate care of obstetric services is critical in ensuring improved health outcomes for pregnant patients and infants. Pregnant people in rural communities have less access to health services and a greater risk of adverse health outcomes, including severe maternal morbidity and mortality. More rural hospitals are closing every year, and those that previously had obstetric services are having to close units due to low birth volume, workforce shortages, and funding. These closures lead to more high-risk patients without prenatal care, unplanned home births, the utilization of emergency rooms for childbirth, and greater travel distances to reach care. Those rural hospitals that remain open without obstetric services do not have the capacity to provide emergency obstetric services yet are often called upon to provide these services during emergencies. Currently there are no federal guidelines on the delivery of emergency obstetric care in rural hospitals within the United States. The WHO’s Emergency Obstetric Care (EmOC) package was created for low resource international settings to address the main causes of maternal morbidity and mortality, including hemorrhage, prolonged or obstructed labor, postpartum sepsis, preeclampsia or eclampsia, and ectopic pregnancy. This study adapted the WHO EmOC package to assess EmOC readiness of hospitals serving rural and frontier communities in Montana.

Study Questions: What is the capacity of small hospitals, that do not have a dedicated labor and delivery unit, to safely manage and care for emergency obstetric patients in a rural state?

Methods: The research team adapted the WHO EmOC core indicators and a national survey on emergency obstetric services to Montana’s setting and health system. Two physicians and one nurse reviewed the survey instrument. The survey included questions about hospital characteristics, staffing, training, transport, medical products, equipment, technology, obstetric care indicators, services, and emergent events history. The electronic survey was sent to the Director of Nursing via REDCap at the 34 hospitals in Montana that do not have a labor and delivery unit, and data collection occurred 10/18/21-

12/10/21. The study achieved a 94% response rate (N=32). Summary statistics were calculated using STATA.

Results: While none of the hospitals in this sample have a labor and delivery unit, 50% reported that they delivered at least one patient in their emergency room in the last two years. A third (34%) reported that they'd experienced a close call or other unanticipated adverse outcome in the last two years. Notably, nearly half (44%) reported that they had an obstetric unit that closed prior to the period the survey covered reflecting the national trend of closures of rural labor and delivery services. Out of the 34 surveyed hospitals, just one met all standards the WHO has set for basic emergency obstetric care in international settings; most facilities met just two or three of the main components of this framework. Approximately a third of facilities reported having written protocols describing circumstances and procedures for transporting patients in an obstetric emergency.

Conclusions: As rural hospitals continue to close and/or close their obstetric units, additional resources must be directed toward staff training and obstetric emergency preparedness in those facilities that are left. Systems of transport, referral, and emergency telemedicine supports should be built and strengthened.

Public Health Implications: This study highlights critical gaps in emergency preparedness in obstetric care in rural communities. Pregnant people living in rural communities face greater risks for obstetric complications and severe maternal morbidity than their more urban counterparts; service gaps represent a double burden for these patients. Improving maternal health outcomes for rural patients must include interventions that enable health systems to overcome unique obstacles related to distance, travel, and resource scarcity.

Telehealth Implementation for Contraceptive Care During the COVID-19 Pandemic at Health Departments in two Southern States: A Mixed Methods Approach

Scientific Research/Data Abstracts

Authors: Presenting Author-Michael Smith, DrPH, MSPH

Non-Presenting Author - Kate Beatty, PhD, MPH

Non-Presenting Author - Amal Khoury, PhD, MPH

Non-Presenting Author - Liane Ventura, MPH

Non-Presenting Author - Jordan de Jong, MA

Category/Categories: Reproductive health/family planning, Collateral damage of COVID

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Policy assessments or evaluations, Using new data systems, Other

Data Source: Other

Background: The emergence of COVID-19 presented challenges to providing routine, but important, healthcare services. Telehealth was widely implemented to maintain healthcare access nationally. Health department (HD) family-planning clinics provide fundamental contraceptive services. Differences in capacity to implement contraceptive services via telehealth existed across state and local HD clinics early in the COVID-19 pandemic. This study examines telehealth implementation for contraceptive care, including facilitators and barriers, in family-planning clinics in two Southern states using a mixed methods approach.

Study Questions: The primary questions are: Which contraceptive services were offered via telehealth in HD clinics during the early months of the COVID-19 pandemic? Furthermore, did telehealth services differ significantly by state? The secondary question is: What were the facilitators and barriers to telehealth implementation identified by clinic staff?

Methods: To answer the primary research questions, a cross-sectional survey of HD clinic administrators in two Southeastern states was conducted in 2020 (response rate: 87%; n=112 clinics). States 1 and 2 were selected due to the similarities in organizational structure (centralized HD governance) and legislative environments. This survey included questions about telehealth service provision during the initial months of COVID-19 (March – June 2020). Differences were assessed with Chi-Square tests. Twenty semi-structured key informant interviews were conducted with HD staff in 2020 to answer the secondary research question. Interviews were recorded, transcribed, and coded using a two-phase process. Data were analyzed thematically via a team-based approach.

Results: Eighty-two percent of clinics in state 1 offered any contraceptive service via telehealth compared to 30% of clinics in state 2 ($p<.0001$). Significantly more clinics in state 1 reported offering

contraceptive counseling, refilling hormonal contraceptives, and STI care via telehealth compared to state 2. Significantly more clinics in state 1 provided initial hormonal contraceptive methods and emergency contraception via telehealth compared to state 2 where no clinics offered these services through telehealth. Facilitators and barriers were identified by respondents from both states. Most notably, Medicaid reimbursement and electronic infrastructure and technology were facilitators. As noted by a respondent from state 1: "It was an approval from Medicaid that gave us permission to offer telehealth to Medicaid patients." Barriers included a lack of policies and procedures to implement telehealth service provision. A respondent from state 2 noted: "We do not have telehealth capabilities at our department. We do not have the software, the equipment, no policies or procedures."

Conclusions: Telehealth service provision for contraceptive care varied between state 1 and state 2 during the early phase of COVID-19. Findings underscore the importance of state-level policy and procedures for HD family-planning clinics. Medicaid reimbursement policy and directives from HD agency leadership are key to realizing telehealth service provision among HDs. Further research is needed to understand the drivers and obstacles of telehealth provision at the state-level.

Public Health Implications: System-level support for telehealth implementation may be a main factor in maintaining service access during public health crises, such as implementing policies to maintain service provision and continued insurance reimbursement. Furthermore, it is crucial to invest in infrastructure to support telehealth.

Special Supplemental Nutrition Program for Women, Infants, and Children Support and Early Introduction of Infant Cereal—United States, 2013–2014

Scientific Research/Data Abstracts

Authors: Presenting Author-Kristin Marks, PhD, MPH

Non-Presenting Author - Ellen Boundy, ScD, MS

Non-Presenting Author - Jasmine Nakayama, PhD

Non-Presenting Author - Ruowei Li, MD, PhD

Non-Presenting Author - Heather Hamner, PhD, MS, MPH

Category/Categories: Child/adolescent health, Chronic Disease

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: WIC

Background: Infants younger than 4 months are not ready for complementary foods (solid or liquid other than breast milk or infant formula), and early introduction may increase their risk of obesity and diabetes. Almost half of U.S. infants participate in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), which provides nutrition education and support to low-income families.

Study Questions: What WIC information do participants receive about introducing complimentary foods and is there an association of receiving educational information with early introduction of cereal?

Methods: We used data from a longitudinal study of 1,951 WIC participants who completed phone surveys about their infant's nutrition. We described the prevalence of receiving WIC information and early introduction (< 4 months) of cereal by maternal and infant characteristics, assessing differences by chi-square tests. Using multivariable logistic regression, we modeled the association of receiving WIC information on cereal introduction with early introduction of cereal, adjusting for maternal and infant characteristics.

Results: Thirty-six percent of infants had complementary foods early; 48% of these were introduced early to infant cereal. Overall, 40% of women reported not receiving WIC information about the timing of cereal introduction. Women who were Hispanic, first-time mothers, older than 25, had more than a high school education, had received the WIC breastfeeding food package at month 1, or who were not participating in the Supplemental Nutrition Assistance Program were less likely to receive information. There was no association between receiving WIC information and early cereal introduction (adjusted odds ratio: 1.07; 95% CI: 0.77–1.47).

Conclusions: Almost one-sixth of infants were given cereal early. We found that receipt of WIC information about cereal had no association with early introduction of cereal.

Public Health Implications: These findings offer opportunities to improve content, delivery, and completeness of WIC support to prevent early introduction of cereal and promote health.

Racial and Ethnic Disparities in Topics Discussed by Healthcare Providers During Prenatal Care Visits, PRAMS, 2018 - 2019

Scientific Research/Data Abstracts

Authors: Presenting Author-Megan O'Connor, MPH

Non-Presenting Author - Ashley Busacker, PhD

Non-Presenting Author - Antoinette Nguyen, MD, MPH

Non-Presenting Author - Ada Dieke, DrPH, MPH

Non-Presenting Author - Beatriz Salvesen von Essen, MPH

Non-Presenting Author - Denise D'Angelo, MPH

Category/Categories: Racism, equity, social justice, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: PRAMS

Background: Guidance for prenatal care (PNC) and women's preventative health services include recommendations for counseling to maintain and improve health during pregnancy and across the lifespan. Differences in the delivery of individual patient PNC counseling could lead to inequitable care.

Study Questions: What is the prevalence of healthcare providers asking about recommended topics during PNC visits, and does it differ by race and ethnicity?

Methods: We used 2018-2019 PRAMS data from 34 jurisdictions (N= 66,274) to describe the prevalence of healthcare providers asking about behavioral topics and experiences during PNC visits. Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based, site-specific surveillance system, collects self-reported data on behaviors and experiences before, during, and shortly after pregnancy among women with a recent live birth. We calculated prevalence estimates and 95% confidence intervals (CI) overall and by race and ethnicity (American Indian/Alaska Native (AI/AN), Asian/Pacific Islander (A/PI), Hispanic/Latino (H/L), Non-Hispanic Black (NHB), Non-Hispanic White (NHW), and another/multiple race) of healthcare provider asking about weight gain during pregnancy, preference for HIV testing, cigarette smoking, alcohol use, drug use, prescription medication use, experiences of violence, feelings of depression, plans for breastfeeding, and plans for postpartum contraception use. Differences by race and ethnicity were assessed using Chi-Squared tests (Chi-Squared p-value <0.001).

Results: Overall prevalence of healthcare provider asking about recommended topics during PNC varied widely, ranging from cigarette smoking (95.1% [95% CI: 94.8%-95.3%]) to weight gain during pregnancy (58.4% [95% CI: [57.8%-59.1%])). The prevalence varied significantly by race and ethnicity for all topics. A lower proportion of A/PI (76.4% [74.3%-78.3%]) and NHW respondents (77.9% [77.2%-78.5%]) reported being asked about their drug use than respondents who were AI/AN (91.4% [88.7%-93.5%]), NHB (88.0%

[87.0%-89.0%]), H/L (85.6% [84.7%-86.6%]), and another/multiple race (84.1% [81.7%-86.3%]). A lower proportion of NHW respondents reported being asked if they wanted to be tested for HIV (56.0% [55.1%-56.8%]) than those who were NHB (75.6% [74.2%-77.0%]), H/L (71.5% [70.2%-72.7%]), AI/AN (68.6% [65.0%-72.1%]), another/multiple race (64.8% [61.5%-67.9%]), and A/PI (62.2% [59.95%-64.5%]). A lower proportion of A/PI (76.4% [74.4% - 78.3%]) and NHW respondents (80.2% [79.6% - 80.9%]) reported being asked about postpartum contraception use than NHB (90.6%, [89.5% -91.5%]), AI/AN (89.9% [87.8% - 91.8%]), and H/L (88%, [87.1% - 88.8%]) respondents.

Conclusions: The majority of postpartum women reported being asked about all topics by their PNC provider. However, differences were found in asking about topics, such as drug use, HIV testing, and postpartum contraception, with women from certain racial and ethnic minority groups more likely to report being asked about these topics.

Public Health Implications: All women receiving PNC need to receive the recommended counseling during PNC visits, regardless of race or ethnicity. Additional research into factors that may influence topics discussed by providers during PNC visits, including the role of provider implicit bias in counseling, is warranted.

Donor Human Milk Use in Neonatal Intensive Care Units, United States, 2020

Scientific Research/Data Abstracts

Authors: Ellen Boundy, ScD, MS, RN, CNM

Non-Presenting Author-Erica Anstey, PhD

Non-Presenting Author - Jennifer Nelson, MD

Category/Categories: Healthcare quality improvement, Infant mortality; pregnancy outcomes infant feeding/nutrition

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Other

Background: Human milk provides numerous significant health benefits for infants with very low birth weight (VLBW) (<1500 grams), which affects more than 50,000 infants in the US each year. Benefits include decreased risk of necrotizing enterocolitis, late-onset sepsis, chronic lung disease, retinopathy of prematurity, and neurodevelopmental impairment. When mother's own milk is insufficient, donor human milk is the first recommended substitute for infants with VLBW. Current use of donor milk in US Neonatal Intensive Care Units (NICUs) is not well-described.

Study Questions: What are the current hospital practices around donor milk use for VLBW infants in US NICUs?

Methods: The Maternity Practices in Infant Nutrition and Care (mPINC) survey is a biennial census of all US hospitals providing maternity care. In mPINC 2020, hospitals with a NICU were asked: among infants weighing <1500 grams, how many (few (0-19%), some (20-49%), many (50-79%), most (≥80%), or donor milk not available) receive donor human milk at any time while in the NICU. Descriptive statistics were calculated to examine donor milk use by NICU level (III or IV) and hospital characteristics.

Results: Among 616 hospitals with a NICU, 13.0% reported that donor milk is not available for infants with VLBW; however, over half (54.7%) of hospitals reported that most infants with VLBW do receive donor milk. In addition, 17.2% reported many, 10.1% reported some, and 5.0% reported few infants with VLBW receive donor milk while being cared for in the NICU. Donor milk availability for infants with VLBW was more common among hospitals with a level IV NICU, higher annual birth volume (≥5000 births/year), non-profit and teaching hospitals, those with the Baby-Friendly hospital designation, and those located in the Midwest and Southwest regions.

Conclusions: Most, but not all, hospitals with NICUs have donor milk available for infants with VLBW.

Public Health Implications: Identifying and addressing barriers that limit hospitals' provision of donor milk for infants with VLBW could help ensure these infants have donor milk when needed.

Differences in Hospital Low-Risk Cesarean Measures: Which is better in Florida and for Which Purpose?

Scientific Research/Data Abstracts

Authors: Presenting Author-Estefania Rubio, MD, MPH

Non-Presenting Author - Chinyere Reid, MBBS, MPH

Non-Presenting Author - Renice Obure, MPH

Non-Presenting Author - William Sappenfield, MD, MPH, CPH

Non-Presenting Author - Jason Salemi, PhD, MPH, FACE

Category/Categories: Data: innovation, quality improvement, communication, Maternal morbidity and mortality

Method of Presentation: Poster Presentation

Data Methods: Program evaluation or surveillance evaluation

Background: In 2020, cesarean delivery for Nulliparous, Term, Singleton, Vertex (NTSV) births in the US increased from 25.6% (2019) to 25.9%, farther from the Healthy People 2030 goal of 23.6%. The NTSV cesarean measure vastly represents low-risk first time birth cesareans even though, a small proportion of mothers with high-risk conditions are kept in the denominator. Low-risk cesarean measures developed by Joint Commission (JC) and the Society for Maternal Fetal Medicine (SMFM) exclude additional high-risk conditions requiring cesarean to refine the measure.

Study Questions: How does using different definitions for the low-risk cesarean measure impact the rate? What is the impact of using different data sources when calculating the low-risk cesarean measure?

Methods: We conducted a Florida-based evaluation study to compare several approaches to calculating low-risk cesarean delivery rates. All analysis was conducted using birth certificate (BC) data merged to inpatient hospital discharge (HD) data using a hierarchical deterministic data linkage strategy from 2016 to 2019. Low-risk cesareans were identified using five different definitions: 1) NTSV-BC was based on data from BC; though linked, HD data were not used. It designates NTSV and does not exclude high-risk conditions. The second and third measures leveraged all data elements available in the linked dataset to designate NTSV and to exclude several high-risk conditions. 2) NTSV-JC-linked utilized JC exclusions, 3) NTSV-SMFM-linked utilized SMFM exclusions. The last two measures were based solely on data from HD data; though linked, BC data were not used. Parity cannot be assessed adequately on HD data, therefore, these measures designate TSV (term, singleton and vertex): 3) TSV-JC-HD with JC exclusions and 4) TSV-SMFM-HD with SMFM exclusions. Hospital differences between NTSV-BC measure and each of the other 4 measures (NTSV-JC-linked, NTSV-SMFM-linked, TSV-JC-HD and TSV-SMFM-HD) were calculated overall and by NICU level. The distribution was plotted using violin plots.

Results: Overall, the median low-risk cesarean rate decreased across the measures, from NTSV-BC 30.7%, NTSV-JC-linked 29.3%, NTSV-SMFM-linked 29.2%, TSV-JC -HD 19.4% and TSV-SMFM-HD 18.5%. A similar trend was seen by NICU level. For each of the measures, level II had the highest median low-risk cesarean rates (NTSV-BC: 32.8%, NTSV-JC-Linked: 31.4%, NTSV-SMFM-Linked: 31.4%, TSV-SMFM-HD: 19.2%), with the exception of level III NTSV-JC-HD: 21.3%. A comparison of the median low-risk births overall and by NICU level, showed a decreasing trend across the linked measures. A similar trend was seen across HD measures. There was a wide gap in low-risk cesarean rates between linked measures and HD measures. However, as these rates increased this gap narrowed.

Conclusions: Measures that use birth certificate alone or combined with inpatient hospital discharge produce similar NTSV cesarean rates. However, there is a significant drop in the rate when low-risk cesareans are calculated using inpatient hospital discharge alone. This is due to an increase in the at-risk population since parity is not included.

Public Health Implications: Studies based on commonly-used, publicly available data sources such as the National Inpatient Sample from the Healthcare Cost and Utilization Project do not have the ability to determine NTSV cesareans adequately.

Associations Between Adverse Childhood Experiences and Special Health Care Needs Among California Children Aged 0-17 Years

Scientific Research/Data Abstracts

Authors: Presenting Author-Marina Chabot, MSc

Non-Presenting Author - Anna Flynn, PhD

Non-Presenting Author - David Reynen, DrPH, MA, MPPA, MPH, CPH

Non-Presenting Author - Sarah Leff, MPH

Category/Categories: Birth defects/disability and MCH populations, Child/adolescent health, children with special health care needs,

Method of Presentation: No Preference

Data Methods: Using existing data sources in innovative ways

Data Source: National Survey of Children's Health

Background: The link between adverse childhood experiences (ACEs) and adult health outcomes is well documented. However, the relationship between ACEs and children with special health care needs (CSHCN) is less well understood. CSHCN are defined as having chronic physical, developmental, behavioral, or emotional conditions requiring health and related services beyond those required by children generally. Understanding the relationship between ACEs and CSHCN could inform the use of interventions that may lead to fewer children developing special health care needs.

Study Questions: What is the prevalence of ACEs among California children overall and by special health care needs status? Is there a significant relationship between ACEs and CSHCN after adjusting for other factors? What are the distributions of the five National Survey of Children's Health (NSCH) criteria that constitute CSHCN?

Methods: We used aggregated 2016-2020 NSCH data (California: n=3308) where ACEs are defined as children experiencing one or more parent/guardian-reported adverse events, such as abuse, neglect, and household/community challenges (domestic violence, divorce, incarceration). NSCH defines CSHCN using five parent/guardian-reported criteria: needs/uses prescription medication(s); needs/uses above-routine medical, mental health, or education services; has functional limitations; needs/uses specialized therapies; and needs/uses treatment/counseling for emotional, behavioral, or developmental (EBD) conditions. We assessed the association between ACEs and CSHCN using bivariate statistics (Rao-Scott χ^2) and multivariable logistic regression, adjusting for selected characteristics. Unknown temporality is a limitation of this study.

Results: Among California children aged 0-17 years, more than one in three (36%) experienced ACEs and one in seven (14%) had a special health care need. Children who experienced ACEs were more likely to be CSHCN ($\chi^2=64$, $p < 0.0001$): 11% (0 ACEs), 14% (one ACE), 24% (two ACEs) and 36% (three or more ACEs). After adjusting for selected child/family characteristics, the odds of CSHCN status were

significantly higher among children with three or more ACEs than among children with no ACEs (Odds Ratio, OR: 3.5, 95% Confidence Interval, CI: 2.2 – 5.9, $p < 0.0001$). Age was significantly associated with CSHCN; each additional year increased the likelihood of being CSHCN (OR: 1.08, 95% CI: 1.05 – 1.11, $p < 0.0001$). Males were more likely than females to be CSHCN (OR: 1.5, 95% CI: 1.1 – 1.9, $p = 0.008$). The most commonly reported CSHCN criterion was need/use of prescription medications (59% of CSHCN), followed by elevated use of services (57%), EBD conditions (49%), specialized therapies need/use (30%), and functional limitations (27%).

Conclusions: Among children aged 0-17 years, ACEs exposure was significantly associated with having special health care needs. Given that NSCH data are cross-sectional, causality is unknown and the pathway between ACEs exposure and having special health care needs could be bidirectional.

Public Health Implications: Our findings highlight the critical need for systems of care to assess and support the entire ecosystem surrounding children, including their families, neighborhoods, and communities. Focusing on primary prevention of ACEs by supporting families, intervening early, and building resilience could help prevent the development of some special health care needs.

An Examination of Preventable Feto-Infant Mortality, Mississippi 2018-2020

Scientific Research/Data Abstracts

Authors: Laurin Kasehagen, PhD

Category/Categories: Infant mortality; pregnancy outcomes, Racism, equity, social justice

Method of Presentation: No Preference

Data Methods: Other

Data Source: Birth and/or death certificates

Background: Mississippi has one of the highest infant mortality rates in the United States. Mortality among Black infants is twice that of White. Mississippi also has a disproportionate number of Black infants born weighing ≤ 1500 grams (g).

Study Questions: What is the rate of excess feto-infant mortality (FIM) within Mississippi? Does excess FIM differ by race?

Methods: Using the Perinatal Periods of Risk (PPOR) framework, we conducted three analyses—overall population and race-specific—of resident births and fetal deaths with a gestational age ≥ 20 weeks and delivery weight ≥ 500 g for 2018-2020. We evaluated 109,505 resident live births and fetal deaths for the overall analysis and 47,457 Black live births and fetal deaths and 59,719 White live births and fetal deaths for race-specific analyses. We used maternal race to classify the race of live births and fetal deaths. We calculated an overall FIM rate (infant deaths ≤ 1500 g); Newborn Care (NC) (infant deaths occurring before 28 days and weighing ≥ 1500 g); and Infant Health (IH) (infant deaths occurring 28-364 days and weighing ≥ 1500 g). To calculate the excess FIM rates, we subtracted the Mississippi rate from a US standardized PPOR reference group rate. We used the most conservative (i.e., the highest) reference group rates for comparing deaths in Mississippi to the US. To calculate the number of excess (i.e., potentially preventable) deaths, we multiplied the number of live births and fetal deaths in Mississippi per 1,000 by the excess rate.

Results: In the overall analysis, we identified 1,182 fetal and infant deaths (709 Black and 473 White). The overall FIM rate for 2018-2020 was 10.79 (risk period FIM rates: MHP-4.35; MC-3.10; NC-1.20; IH-2.15). The estimated number of excess feto-infant deaths was 604 (risk period preventable deaths: MHP-274; MC-185; NC-22; IH-123). Maternal race-specific FIM rates were: Black 14.94 (MHP-6.30; MC-4.36; NC-1.26; IH-3.01) and White 7.27 (MHP-2.80; MC-2.14; NC-1.09; IH-1.24). Using race-specific US reference groups, the estimated number of potentially preventable feto-infant deaths was 220 (MH-80; MC-97; NC-1; IH-42) for Black women and 119 (MHP-57; MC-44; NC-5; IH-13) for White women.

Conclusions: Both Black and White Mississippians experience excess FIM compared with their US reference group counterparts.

Public Health Implications: The PPOR framework correlates each risk period with prevention strategies to reduce the likelihood of feto-infant death. To address risk period specific excess mortality, the Mississippi State Department of Health plans to assess fair and just access to care for pregnant and postpartum women; reassess facility risk-appropriate care levels; examine women's preconception health and perinatal health; revise training protocols for hypertension treatment; implement a new evidence-based home visiting intervention for women and infants; and implement a universal risk screening tool for woman and infants participating in the home visiting program.

Health and Behavioral Characteristics among Persons with a Recent Live Birth with and Without Disabilities, 2018-2020, Nebraska

Scientific Research/Data Abstracts

Authors: Jessica Seberger, MA

Non-Presenting Author-Erika Fuchs, PhD, MPH

Category/Categories: Maternal health, Birth defects/disability and MCH populations

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: PRAMS

Background: Over 10% of reproductive-aged women in the United States have a disability, yet there is no difference in desire to have children between women with and without disabilities. Women with disabilities may have different pregnancy-related experiences. Understanding areas where women with disabilities experience challenges can help focus programmatic efforts aiming to improve health outcomes.

Study Questions: Are there differences in health and behavioral characteristics and experiences before, during, and after pregnancy between people with and without disabilities?

Methods: Nebraska Pregnancy Risk Assessment Monitoring System (PRAMS) data from 3,426 completed surveys representing 52,493 Nebraskans who gave birth to live infants between late 2018 through 2020 were used to examine differences in pregnancy intention, smoking in the 3 months before pregnancy, depression in the 3 months before pregnancy, depression during pregnancy, postpartum depression (defined as “always” or “often” feeling down, depressed, or hopeless or having little interest or little pleasure in doing things she usually enjoyed since delivery), chronic health conditions, breastfeeding (ever, 4 weeks postpartum, 8 weeks postpartum), and infant safe sleep practices among people with and without disabilities. Participants self-reported difficulty with seeing, hearing, communicating, self-care, walking or climbing steps, and remembering or concentrating. Disability status was defined as either not having a disability (no difficulty doing an activity or some difficulty doing an activity) or having a disability (a lot of difficulty or could not do an activity at all) based on difficulty with ≥ 1 of the activities. Analyses were conducted in SAS 9.4 using survey weights. Statistical significance of chi-squared tests was assessed at $p < 0.05$.

Results: The prevalence of ≥ 1 disability was 5.6% (4.6%-6.6% 95% confidence interval (CI)). Difficulties with remembering and seeing were most commonly reported overall. Those with a disability were more likely than those without a disability to report that their pregnancy was unintended (40.8% (31.5%-50.1% 95% CI) vs. 20.7% (18.8%-22.6% 95% CI)) and that they smoked tobacco or e-cigarettes (38.0% (28.4%-47.7% 95% CI) vs. 17.9% (15.9%-19.9% 95% CI)). While women with a disability were less likely to report ever breastfeeding compared to those without a disability (84.8% (78.4%-91.2% 95% CI) vs. 91.4% (90.1%-92.8% 95% CI)), there was no significant difference in breastfeeding at 4 or 8 weeks. Women

with a disability were less likely than women without a disability to report that their baby was put to sleep on their back (81.3% (75.4%-87.2% 95% CI) vs. 88.1% (85.6%-89.6% 95% CI)) and that their baby sleeps alone always or almost always (66.6% (57.5%-75.6% 95% CI) vs. 78.4% (76.5%-80.3% 95% CI)). At each time point, depression was significantly more often reported by those with a disability compared to those without a disability. There were no differences between groups in having hypertension, preeclampsia, or eclampsia during pregnancy.

Conclusions: Women with disabilities have different perinatal health and behavioral experiences. Unintended pregnancy, tobacco or e-cigarette use, and depression were more common among women with disabilities.

Public Health Implications: Evidence based screening and referral for medical and social needs among persons with disabilities are important throughout the perinatal period.

Self-Reported COVID-19 Behaviors in 2020 North Dakota Pregnancy Risk Assessment Monitoring System COVID-19 Supplement

Scientific Research/Data Abstracts

Authors: Presenting Author-Andrew Williams, PhD MPH

Non-Presenting Author - MichaelLynn Kanichy

Non-Presenting Author - Lexie Schmidt

Non-Presenting Author - Matthew Schmidt

Non-Presenting Author - Anastasia Stepanov

Non-Presenting Author - Grace Njau

Category/Categories: Collateral damage of COVID, Maternal health

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: PRAMS

Background: Despite the documented risk of poor pregnancy outcomes associated with COVID-19 infection, there is limited data regarding COVID-19 prevention practices among pregnant women.

Study Questions: The purpose of this analysis is to describe COVID-19 health and social behavior practices during pregnancy.

Methods: Data for 135 women (weighted n=1996) were drawn from the 2020 ND Pregnancy Risk Assessment Monitoring System COVID-19 supplement. Participants self-reported 'always,' 'sometimes,' or 'never' to whether they adhered to health behaviors and social behaviors to avoid getting COVID-19 while pregnant. Health behaviors included wearing a mask in public, washing hands for 20 seconds with soap and water, using alcohol-based hand sanitizer, and covering coughs and sneezes with tissue or elbow. Social behaviors included avoiding gatherings, staying at least 6 feet away from others, only leaving home for essential reasons, trips outside of home were short, and avoiding having visitors in home. Data is summarized using weighted percentages, weighted frequencies, and nonparametric statistics for the overall sample, as well as by race, age, income, education, and marital status.

Results: The sample was majority White (75%), married (74%), no college degree (58%) and over 30 years of age (52%). Income was divided into tertiles: \geq \$85,000 (33%), \$48,000 - \$84,999 (32.8%), and \leq \$47,999 (34.2%) White women reported higher rates of never covering cough (2.9%), never washing hands (4.8%), never wearing a mask (7.5%) and never using hand sanitizer (6.3%). American Indian women reported higher rates of never social distancing (12.0%) and never avoiding groups (15.9%). Married women, women under the age of 30, women without a college degree and low-income women consistently reported higher rates of never adhering to health and social behaviors to avoid COVID-19.

Conclusions: As the COVID-19 supplement was instituted amid the Fall 2020 COVID-19 wave in which North Dakota had one of the highest case rates and fatality rates in the world, the low adherence to prevention guidelines – especially social guidelines – reflects that reality. Overall, approximately 2-6% of women ‘never’ adhered to health behavior recommendations, yet rates for ‘never’ adhering to social behavior recommendations were twice as high. Group differences were consistently observed by demographic factors, yet differences by race were most apparent. White women reported worse adherence to all 4 recommended health behaviors, and 3 of 5 recommended social behaviors. AI/AN women reported high rate of never adhering to social distancing and avoiding groups.

Public Health Implications: As COVID-19 moves to being endemic, these data can help shape future public health recommendations for North Dakota. Identifying demographic groups with low adherence to COVID-19 prevention recommendations can inform targeted efforts to understanding why adherence is low, and to create tailored messaging and programs to improve adherence rates.

Race-Ethnicity Misclassification in Hospital Discharge Data and the Impact on Differences in Severe Maternal Morbidity in Florida

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Chinyere N. Reid, MBBS, MPH, CPH

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Non-Presenting Author - Chinwendu Ilonzo,

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Category/Categories: Data: innovation, quality improvement, communication, Maternal morbidity and mortality

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Other

Data Source: Birth and/or death certificates, Hospital discharge data, Linked data file

Background: Hospital discharge (HD) records contain important information that is used in public health and health care sectors. However, race and ethnicity information collected on HD records may be inaccurate or missing. Hence, assessing and improving the quality of race and ethnicity reported in HD records is vital in identifying differences in health outcomes such as severe maternal morbidity (SMM). SMM, a serious unexpected complication of labor and delivery, is a leading indicator of maternal health and health care quality.

Study Questions: What is the quality of race-ethnicity reported on hospital discharge records and what is the impact on SMM rate at a state and hospital level?

Methods: We conducted a population-based retrospective study of live births using linked vital statistics (VS) and HD records from 2016 to 2019 (n=783,753). VS data was used as the gold standard because this information is generally solicited from mothers. Overall race-ethnicity misclassification at the state- and hospital-level were assessed using sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) measures. Hospitals were required to have a minimum number of births and SMM events for inclusion; sufficient numbers were only available for Hispanic, Black and White births. Risk ratio and percent difference of rates analyses were used to estimate the impact of race-ethnicity misclassification on SMM at the state- and hospital-level.

Results: At the state level, non-Hispanic Native American or Alaskan Native (NH-NAAN) was the most misclassified race/ethnicity (PPV: 25.2%, sensitivity: 28.2%) and was commonly classified as non-Hispanic Asian Pacific Islander (NH-API, 30.3%) in HD records. NH-API was next with misclassification (PPV: 85.4%, sensitivity: 57.3%) and was commonly classified as non-Hispanic White (NH-W, 5.8%) or

non-Hispanic Other (5.5%); then NH-W (PPV: 89.6%, sensitivity: 90.7%) was commonly classified as Hispanic (7.6%); Hispanic (PPV: 91.0%, sensitivity: 80.8%) commonly classified as NH-W (6.3%); and non-Hispanic Black (NH-B; PPV: 95.7%, sensitivity: 91.8%) was commonly classified as Hispanic (1.9%). At the hospital level, wide variation in sensitivity and PPV with negative skewing was identified particularly for NH-W, Hispanic, and NH-API groups. Misclassification did not result in large differences in SMM rates at the state-level for all race/ethnicity categories when compared to NH-W except for NH-NAAN. The percent difference between NHW and NH-NAAN was 75.8%. However, at the hospital-level, Hispanics had wide variability of the percent difference in SMM rates when using HD data compared to VS data and were more likely to have underestimated SMM rates.

Conclusions: In comparison to VS, wide variability exists in the quality of race, ethnicity, and race/ethnicity in HD records and may underestimate the differences in some minority groups. Similarly, SMM rates are frequently underestimated at the hospital-level when using HD data, particularly for the Hispanic population group.

Public Health Implications: Health differences in maternal care and SMM are a public health priority, and hospital discharge records are used to identify race and ethnicity differences in health outcomes. Reducing race-ethnicity misclassification on HD records is key in assessing and addressing SMM differences and better inform surveillance, research, and quality improvement efforts.

Examination of Pregnancy-Related Deaths among Black and White Women by Payer and Prenatal Care Timing Modified by Race, Illinois 2015-2017

Scientific Research/Data Abstracts

Authors: Presenting Author-Ananya Stoller, MPH (May 2022)

Non-Presenting Author - Cara Bergo, PhD, MPH

Category/Categories: Maternal morbidity and mortality, Maternal health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Linked data file, Other

Background: From 2008-2017, an average of 75 Illinois women died each year while pregnant or within one year of pregnancy. Black women were 3 times as likely as White women to die from a pregnancy-related cause. The Maternal Mortality Review Committees (MMRC) review all pregnancy-associated deaths and decide which deaths are pregnancy-related. Insurance status and prenatal care timing have been shown to be associated with better health outcomes, but the effect among Black versus White women is unknown.

Study Questions: (1) What is the relative risk of pregnancy-related mortality by type of insurance among White and Black Illinois women in 2015-2017? (2) What is the relative risk of pregnancy-related mortality by timing of prenatal care? (3) How are these associations modified by race?

Methods: These data were compiled using MMRC records (numerator) and birth certificate data (denominator) to assess pregnancy related mortality ratios. Data included MMRC records for White and Black pregnancy-related deaths to Illinois residents during 2015-2017 (n=70) and live births from Illinois birth certificate data 2015-2017 (n=325158). Log binomial regression was used to assess differences in pregnancy related mortality ratios and their associations. Insurance status was coded as Medicaid or not Medicaid. Prenatal care timing was coded as first trimester versus later or no prenatal care. All models were adjusted for maternal age, race, and education.

Results: Illinois women on Medicaid have a 3.6 times greater risk of pregnancy-related mortality versus those not on Medicaid (adjusted Risk Ratio (aRR)=3.6, 95% Confidence Interval (CI): 2.0, 6.4). Among White women, women on Medicaid had a 4.3 times greater pregnancy-related mortality ratio versus those not on Medicaid (aRR=4.3, 95% CI: 1.9, 9.6). Among Black women, women on Medicaid had a 2.2 times greater risk of pregnancy-related mortality versus those not on Medicaid (aRR=2.2, 95% CI: 1.0, 4.9). Illinois women with late or no prenatal care entry have a 1.8 times greater risk of pregnancy-related mortality versus those with early prenatal care entry (aRR=1.8, 95% CI: 1.1, 3.0). Among White women, women with late or no prenatal care had a 1.5 times greater risk of pregnancy-related mortality versus those with early prenatal care (aRR=1.5, 95% CI: 0.7, 3.3) compared to among Black women,

women with late or no prenatal care had a 2.1 times greater pregnancy-related mortality ratio versus those with early prenatal care (aRR=2.1, 95% CI: 1.1, 4.0).

Conclusions: Illinois women on Medicaid have a greater risk of pregnancy related mortality compared to those not on Medicaid. Illinois women with late or no prenatal care have a greater risk but not statistically different pregnancy related mortality compared to those with first trimester care. The payer association was stronger among White women while the prenatal care association was stronger among Black women.

Public Health Implications: The findings suggest that racial health inequities must be considered when implementing an intervention aimed at reducing pregnancy-related mortality as the effect on different populations' risks may not be equivalent. Future research should consider additional factors such as parity, comorbidities, and insurance disruptions.

Kalamazoo Maternal and Child Health Universal Access Form Investigation

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Catherine Kothari, PhD

Non-Presenting Author - Joi Presberry, MPH

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Presenting Author - Jaide Woods-Dawson, MS

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Non-Presenting Author - Brenda O'Rourke, RN

Category/Categories: Data: innovation, quality improvement, communication, Racism, equity, social justice

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Implementation science, New data techniques

Data Source: Other

Background: Social screening within medical settings has increased dramatically and has the potential to reduce risk through linkage to community resources. However, the typical diagnostic approach to screening presents barriers to patient disclosure, especially for people of color who have historically been mistreated by medical systems. Cradle-Kalamazoo, an academic-community initiative, piloted a Resource-First approach for young families: (1) Form for indicating which community resources someone wants to learn more about, and (2) Community health worker (CHW) who will follow-up.

Study Questions: How do end-users perceive the form (its content, its format, how it will be used), and how likely are they to complete it in various clinical and community scenarios?

Methods: A REDCap-questionnaire was sent to the Community Voice Panel, a standing panel of 90 Kalamazoo mothers who signed up to provide feedback on various aspects of health, economic and social systems of care. Forty-five members (one-third women of color) completed the 25-item questionnaire, which included four potential implementation scenarios: During WIC appointment, text link sent as part of WIC reminder, via tablet at doctor's office, via QR code posted in various public spaces. Pearson Chi Square ($\alpha = 0.10$) was used to compare responses by race and income.

Results: Respondents indicated that the form was easily understandable (97.8%, n=44), and that they would be willing to complete it. A strong majority noted the importance of convenience (88.7%, n=39) and wanted more information about “next steps” on the form (90.9%, n=40). Over half (59.1%, n=26) noted privacy concerns, particularly women of color. Of the five proposed scenarios, approximately two-thirds of respondents preferred to complete the form during their WIC appointment, via link before their WIC appointment, or via tablet at their doctor’s appointment, as opposed to via QR code on a public flyer. Women of color were more open to having CHW approach them with the form than white women. There were no differences by socio-economic status.

Conclusions: The Resource-first project team used these findings to revise the form with additional resources suggested by respondents; otherwise, given that most respondents found it easy to understand, the form was kept the same. The project team also prioritized the WIC intake scenario for the pilot launch and, based upon respondents’ emphasis on convenience and their specific recommendations to have it available at churches and hair salons, expanded their list of community settings.

Public Health Implications: This project illustrates an alternative approach to social screening and follow-up (Resource-first), as well as an innovative method (Community Voice Panel) for vetting process changes with end users to optimize acceptability, reach, and utility. Developing effective ways to facilitate resource linkage can reduce social risk and increase healthcare provider trust, especially important among communities of color.

Association of Daytime (Activity Space) Racial and Economic Segregation Measured Using Mobile Phone GPS with Pre-Term Birth in Metro Atlanta

Scientific Research/Data Abstracts

Authors: Presenting Author-Katherine Campbell, MPH

Non-Presenting Author - Meredith Dixon, MPH

Non-Presenting Author - Courtney Victor, MPH

Non-Presenting Author - Michael Kramer, MS, PhD

Category/Categories: Infant mortality; pregnancy outcomes, Racism, equity, social justice

Method of Presentation: Poster Presentation

Data Methods: Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, Other

Background: Adverse birth outcomes, such as preterm birth, disproportionately affect Black women and women with low socioeconomic status. Disparities in outcomes have been associated with attributes of women's residential neighborhood including concentrated racial and income inequality measured from Census data. The social context of places is also shaped by routine and daily mobility of the population at large, creating more versus less social mixing and exposure during the daytime. Mobile phone data can be used to estimate mixing or segregation of economic and race/ethnicity groups through routine population mobility to describe a novel aspect of women's residential neighborhood during the day.

Study Questions: Do women living in census tracts with daytime micro-segregation and income concentration have higher odds of experiencing preterm birth compared to those whose reside in tracts with lower levels of micro segregation and inequality?

Methods: Data for women who gave births from 2018 to 2020 in Metro Atlanta were abstracted from vital statistics, including gestational age and maternal residential census tract. Mobile phone GPS data from CUEBIQ were used to estimate racial/ethnic density and median household income density in each census tracts as a function of where devices moved throughout the day. Each device was assigned the racial and economic composition of its own home tract, then racial and income Index of Concentration at Extremes (ICE) was calculated as the mixing of mobile devices in each neighborhood in the city. Tracts were categorized as concentrated disadvantage if the ICE was less than -0.5 and concentrated privileged if the ICE was greater than 0.5. Logistic regression models are used to estimate odds of pre-term birth in census tracts with micro-segregation and income inequality. Limitations include use of proxy data for mobility instead of data on individual participant daytime location.

Results: There were 202,373 births included in the analytic sample, 9.1% of births were pre-term. Black women had a higher rate of pre-term birth compared to White women (11% versus 7.8%). Daytime racialized ICE ranged from (-0.88 to 0.94) and income ICE ranged from (-0.84 to 0.89). Census tracts with higher daytime micro-segregation were associated with higher odds of PTB compared to tracts not in

the extremes (OR = 1.27, 95% CI= 1.19, 1.36). Census tracts with higher daytime income inequality were also associated with higher odds of PTB (OR = 1.28, 95% CI= 1.23, 1.33).

Conclusions: The social context of women's neighborhoods are shaped by daytime mobility and population mixing. Pre-term birth risk is higher among women in census tracts with greater racial micro-segregation and more income disparity.

Public Health Implications: Access to and utilization of place is not equal among racial/ethnic groups and income categories. Distribution of resources and services can be allocated to census tracts with higher rates of micro-segregation and income inequality.

Colorado Local Syndromic Surveillance Data Sharing for School-Based Suicide Prevention

Scientific Research/Data Abstracts

Authors: Alix Hopkins, MPH, RN

Presenting Author-Meredith Henry, MPA

Non-Presenting Author - Yushiuan Chen, MPH

Non-Presenting Author - Kyla Muñoz, MPH

Category/Categories: Data: innovation, quality improvement, communication, Mental/behavioral health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Using existing data sources in innovative ways

Data Source: Other

Background: Suicide death rates among youth aged 10-18 years have increased steadily over the last decade in the Tri-County Health Department (TCHD) jurisdiction. While school districts are able to reach large youth populations, they lack access to timely data to better understand real-time burden of suicide. Colorado Local Syndromic Surveillance (SyS) is a system for near real-time monitoring of hospital visits and prompt detection of data anomalies. The goal of the ongoing SyS Data Sharing for School-Based Suicide Prevention Initiative is to connect hospital emergency department (ED) data, TCHD's suicide prevention team, and mental health/crisis response school district partners to improve situational awareness and support suicide prevention efforts.

Study Questions: How can near real-time SyS data can help improve situational awareness for multiple community partners and support community suicide prevention efforts?

Methods: The initiative aims are to establish communication with school district partners, monitor weekly suicide-related ED trends among youth, and provide timely notification reports when alerts are detected. TCHD SyS, Maternal and Child Health, and Child Fatality Review Team staff identified key stakeholders and leveraged partnerships to provide informational SyS sessions to school district partners. TCHD SyS began monitoring suicide-related ED trends among youth residents of participating school districts' corresponding zip codes in the statistical application, ESSENCE, using an exponentially weighted moving average to identify alerts. TCHD staff met with participating school district personnel during the pilot period to gather qualitative feedback to improve the reports.

Results: Queries were created in ESSENCE for two school districts, serving over 94,000 students, to monitor ED visits for suicidal ideation and suicide attempt. During the pilot period, two alerts were identified and notification reports were shared with school district partners. The alert reports included the indicator case definition, suicide-related ED trends, stratification by sex and age, and recommendations for further action. Feedback provided by school staff led to modified report templates

including geographic and race/ethnicity stratification. These reports will be utilized by our partners for timely situational awareness and targeted suicide prevention and outreach.

Conclusions: While school district partners have access to retrospective data sources, SyS provides near-real-time information allowing partners an opportunity to address suicide prevention in a more proactive way. School districts may utilize this data to enhance suicide prevention training for school staff, inform decision-makers, or form task forces, as one such school district has begun since the inception of our partnership. Future work includes continuing to enhance information sharing and build additional partnerships with other school districts, youth-serving organizations, and health systems engaged in suicide prevention.

Public Health Implications: Syndromic Surveillance is a completely new data source for school district partners and is a non-traditional method of data sharing for SyS. While school district partners have access to retrospective data sources, SyS provides timely, near real-time ED data allowing partners an opportunity to address suicide prevention in a more proactive way. This is an innovative strategy for public health in regards to our ability to share timely SyS data with school districts to inform and support their mental health and youth suicide prevention efforts.

Nurse Home Visiting in Times of Vulnerability: Measuring the Effects of the COVID-19 Pandemic on Nurse-Family Partnership Client Mental Health

Scientific Research/Data Abstracts

Authors: Presenting Author-Jordan Sciandra, Master of Public Health

Category/Categories: Collateral damage of COVID, Mental/behavioral health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using existing data sources in innovative ways

Data Source: Other

Background: Nurse-Family Partnership (NFP) is one of the largest home visitation programs in the United States, serving over 55,000 first-time, low-income birthing capable people and their babies per year. Throughout the COVID-19 pandemic, the National Service Office (NSO) for NFP monitored changes in client health outcomes to better inform program implementation during unprecedented times. This evaluation specifically focuses on the results of mental health screenings for NFP clients prior to and during the COVID-19 pandemic.

Study Questions: What proportion of NFP clients had a screening score indicating an experience of anxiety or depression during the COVID-19 pandemic, and how does that proportion compare to clients screened prior to the pandemic?

Methods: Nurse-home visitors utilize the Patient Health Questionnaire 9 (PHQ9) to screen for indications of depression and the Generalized Anxiety Disorder 7 (GAD7) to screen for indications of anxiety. These data were identified for a cohort of NFP clients who received services in the year and a half since the start of the pandemic (mid-March 2020 – September 2021) and compared to the same data collected for NFP clients during the year and a half prior to the pandemic (September 2018 – mid-March 2020). Chi-squared analyses were utilized to compare outcomes overall and stratified by client race and ethnicity. A limitation of the study was that significantly lower rates of mental health screenings were completed during the pandemic compared to prior to the pandemic. This was due in large part to NFP nurse-home visitors being deferred from home visiting services to assist with their local health departments' COVID-19 response efforts.

Results: During the pandemic period there was no observed change in the overall rates of clients with a mental health screening indicating anxiety or depression. However, when the data were stratified by race and ethnicity, significant increases in the percentage of clients with indicated depression were observed for Asian and Pacific Islander clients (5.4%, $p < 0.05$) and Hispanic clients (2%, $p < 0.05$). However, a critical consistent finding was that during both study time periods, NFP clients experienced suspected anxiety and depression at greater rates than the general U.S. birthing population; prior to and during the COVID-19 pandemic, 43.1% and 42.9% of NFP clients respectively had a GAD7 screening

indicating anxiety. Similarly, prior to and during the pandemic, 41.5% and 42.2% of NFP clients respectively had a PHQ9 screening indicating depression.

Conclusions: NFP clients experienced symptoms of anxiety and depression at greater rates than the general U.S. population both prior to and during the COVID-19 pandemic, and for certain racial and ethnic groups, the pandemic has significantly exacerbated those mental health challenges.

Public Health Implications: The results of the analysis of NFP client mental health indicate that the individual and collective stresses of first-time parenting, poverty, and discrimination negatively impact the mental health of birthing capable people, and for some, the COVID-19 pandemic has exacerbated these stressors. Results from evaluations like this one will be useful for both NFP program implementation and national public health practices for enhancing strategies to support vulnerable first-time parents.

Maternal Economic Mobility and Infant SGA Rates: The Effect of Father's Early-Life Socioeconomic Position

Scientific Research/Data Abstracts

Authors: Presenting Author-Blair Simon, MD

Non-Presenting Author - James Collins, MD, MPH

Non-Presenting Author - Shayna Hibbs, MD

Non-Presenting Author - Kristin Rankin, PHD

Category/Categories: Birth defects/disability and MCH populations, Infant mortality; pregnancy outcomes

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: Birth and/or death certificates

Background: Small for gestational age (weight for gestational age < 10th percentile, SGA) infants are at increased risk first-year mortality, morbidity, childhood mortality, and chronic illness during adulthood. A handful of published studies show that women's changing economic position from early-life to adulthood is associated with infant SGA rates. Paternal socioeconomic position (SEP) has received increased research and public health attention as a major contributor to adverse birth outcome. A prior study found that paternal low SEP was associated with an increased risk of SGA independent of maternal demographic characteristics including race/ethnicity (Enstad et al, MCHH, 2019). The extent to which paternal SEP modifies the relationship between maternal economic mobility and infant SGA rates is unknown.

Study Questions: This study aims to investigate the relationship between maternal economic mobility, paternal socioeconomic position (SEP), and infant SGA rates. The modification of the relationship between maternal economic mobility and infant SGA rates based upon paternal SEP is the focus of the study.

Methods: Stratified and multilevel logistic regression analyses were executed on the Illinois transgenerational dataset of parents (born 1956-1976) and their infants (born 1989-1991) with appended U.S. census income information. The study was limited to singleton infants born in the Chicago metropolitan area (because of the availability of US census income data) to impoverished-born (defined as early-life residence in the lowest or highest quartile census tract income distribution or the geographically broader community area for the 1956-1960 cohort) of Chicago-born mothers and whose fathers were acknowledged on their birth certificate. Father's early-life SEP was defined by neighborhood income at the time of his birth.

Results: The incidence of impoverished-born women's upward economic mobility among births (n=3,777) with early-life low SEP fathers was less than that of those (n= 576) with early-life high SEP

fathers: 56% vs 71%, respectively, $p < 0.01$. The incidence of affluent-born women's downward economic mobility among births ($n=2,370$) with early-life low SEP fathers exceeded that of those ($n=3,822$) with early-life high SEP fathers: 79% vs 65%, respectively, $p < 0.01$. The adjusted RR of infant SGA for maternal upward (compared to lifelong impoverishment) economic mobility among fathers with early-life low and high SEP equaled 0.68 (0.56, 0.82) and 0.81 (0.47, 1.42), respectively. The adjusted RR of infant SGA for maternal downward (compared to lifelong residence in affluent neighborhoods) economic mobility among fathers with early-life low and high SEP were 1.37 (0.91, 2.05) and 1.17 (0.86, 1.59), respectively.

Conclusions: Paternal early-life SEP is associated with maternal economic mobility (both upward and downward); however, it does not impact the relationship between maternal economic mobility and infant SGA rates.

Public Health Implications: Paternal SEP should be considered when examining the social determinants of adverse birth outcome. Public policy initiatives designed to improve father's early-life SEP can lead to lower infant SGA rates by facilitating impoverished-born women's upward economic mobility and preventing affluent-born women's downward economic mobility.

Prevalence and Trends in Maternal Substance Misuse Among American Indian and Alaska Native Women in the Pacific Northwest

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Jenine Dankovchik, BSc

Non-Presenting Author - Chiao-Wen Lan, MPH, PhD

Presenting Author - Tam Lutz, MPH

Non-Presenting Author - Elizabeth Waddell, PhD

Non-Presenting Author - Jodi Lapidus, PhD

Category/Categories: Mental/behavioral health, Maternal health

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Hospital discharge data

Background: Neonatal exposure to alcohol and other drugs can result in a variety of adverse outcomes. American Indians and Alaska Natives (AI/AN) experience a high risk for substance misuse throughout their life course, including during pregnancy. The odds of in utero exposure to alcohol and other drugs for AI/AN infants is more than double that of non-Hispanic white (NHW) infants. There is a paucity of data assessing prenatal substance exposure among AI/AN; however, interventions to support AI/AN mothers require understanding patterns of AI/AN maternal substance use, as well as the risk factors for AI/AN women.

Study Questions: This study is an epidemiologic assessment of antepartum maternal substance use disorders (SUD) among AI/AN which characterizes substance-related diagnoses and examines risk factors associated with maternal SUD.

Methods: We conducted a population-based retrospective analysis using Oregon and Washington inpatient hospital discharge data between 2012 and 2016. Data were corrected for racial misclassification through probabilistic linkage. All AI/AN and NHW female residents who delivered a live-born infant in a reporting hospital during the study period were included (N=13,842 and 349,398 respectively). We identified maternal substance use using ICD-9-CM and ICD-10-CM diagnosis codes indicating use of alcohol or drugs of abuse.

Results: For AI/AN, the odds of having a substance-affected delivery were 2.0 times higher (CI: 1.8, 2.3) in Oregon and 3.3 times higher (CI: 3.1, 3.5) in Washington than that for NHW. From 2012 to 2016, the proportion of substance-affected deliveries among AI/AN women increased. The average annual percent increase was 19.7% (p=0.0491) in Oregon and 14.8% (p=0.0366) in Washington. Among AI/AN mothers who used any substances, the most common were narcotics, cannabis, and stimulants (35.9%, 36.5%, and 30.8% of substance-affected deliveries, respectively). A statistically significant increase of 22.2%

annually in cannabis use was seen in Washington beginning in Q3 of 2014, corresponding with the beginning of recreational marijuana sales in the state. Among substance-affected deliveries, polysubstance use was common, with 54% of AI/AN mothers who had used drugs or alcohol having documentation of more than one substance on the delivery record.

Conclusions: A higher proportion of substance-affected deliveries was found among AI/AN women compared to NHW, and an increasing trend in maternal substance use was seen. Narcotics, cannabis, and stimulant use were the most common, and polysubstance use was seen in more than half of all substance-affected deliveries.

Public Health Implications: This study demonstrated an increase in prevalence of substance use among AI/AN mothers delivering in Oregon and Washington hospitals, which has implications for the health of AI/AN infants and the mother-child dyad postnatally. The maternal substance use disparity between AI/AN and NHW mothers points to a need for tribal community input to understand this health issue within the broader context of historical trauma and socioeconomic challenges experienced by this population, especially for addressing barriers to treatment among women using polysubstance. The health inequities call for culturally-tailored, sustained postnatal care for AI/AN mothers and infants, as well as increasing availability and utilization of evidence-based and integrated services to support pregnant AI/AN women in the Northwest.

Managing Crises from the Kitchen Table: Experiences of Domestic and Sexual Violence Advocates in the Early Days of the COVID-19 pandemic

Scientific Research/Data Abstracts

Authors: Lisa Sophia Haen, MPH

Non-Presenting Author-Alisa Velonis, PhD, MPH

Non-Presenting Author - Molly McGown, MA, MPH

Category/Categories: Collateral damage of COVID, Leadership/workforce development Occupational Health

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: Other

Background: For sexual and domestic violence advocates, changes in working conditions due to Illinois' COVID-19 "Stay-at-Home" order went well beyond the location of their desks. With little warning, the need for services and safety for domestic and sexual violence survivors changed, resources necessary to respond decreased, and advocates found themselves isolated from their colleagues, trying to keep their clients safe with only a phone or internet connection. These changes impacted the mental health of advocates and posed an unprecedented occupational health issue, negatively affecting the wellbeing of advocates and their households, yet receiving little public recognition.

Study Questions: How did the COVID-19 pandemic and its mitigation efforts impact the occupational and emotional well-being of domestic and sexual violence advocates?

Methods: Using convenience and snowball sampling, 22 advocates and administrators from ten sexual and domestic violence organizations across the Chicagoland area were recruited. Two focus groups and eighteen individual interviews were conducted over the phone or via videoconferencing between September – November 2020. All conversations were recorded and transcribed verbatim. Thematic content analysis was used to guide coding. Member checking with participants and additional knowledge translation sessions with local advocacy workgroups were held in the summer of 2021.

Results: Participants described ways in which the conditions surrounding the early months of the pandemic impacted their occupational and emotional wellbeing. The primary themes centered around: (1) Concern for Clients, especially those locked down with their abusers and unable to reach out for support, which left advocates feeling helpless; (2) Remote Work Challenges resulting from a lack of available and secure technology and pressure to "prove" productivity to managers; (3) Difficulty Disconnecting when remote work brought the trauma of others into participants' homes; (4) Loss of Peer Support, as the ability to problem solve and process secondary trauma with colleagues decreased; and (5) Burnout, as these pandemic-related occupational stressors accumulated and exacerbated existing systems-level workplace challenges.

Conclusions: Remote advocacy work had significant ramifications as it impacted participants' occupational and emotional well-being. Quality support for survivors is directly linked to quality support for advocates. As COVID-19 continues to present an ongoing threat to public health, participants shared their recommendations about getting through the current emergency and preparing for the next one.

Public Health Implications: The findings of this analysis can be used by a variety of stakeholders to inform strategies that aim to improve the work conditions for domestic and sexual violence advocates in the context of COVID-19 and other public health emergencies. The experiences and recommendations noted by the study participants also show that attention needs to be placed on the occupational and emotional wellbeing of domestic and sexual violence advocates even outside of the parameters of a pandemic.

Assessing the Capacity of Montana's Maternal and Neonatal Health System to Provide Geographic- and Ability-Equitable Access to Risk Appropriate Care

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Carly Holman, MS

Presenting Author - Annie Glover, PhD, MPH, MPA

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Non-Presenting Author - Megan Nelson, MSW

Non-Presenting Author - Amanda Eby,

Category/Categories: Maternal health, Healthcare quality improvement

Method of Presentation: No Preference

Data Methods: Policy assessments or evaluations, Program evaluation or surveillance evaluation

Data Source: Other

Background: Access to risk-appropriate care improves maternal and neonatal health by ensuring that birthing people and infants receive care at facilities prepared to meet their needs. Significant disparities exist in accessing risk-appropriate maternity care in Montana across geography, race, and disability. Rural communities have limited to no obstetric services and less access to specialty care. Rural American Indian Alaskan Native birthing people are additionally disadvantaged, traveling farther to access care, resulting in more births at hospitals without obstetric services. For birthing people with disabilities, access is further impeded by inaccessible care settings. Montana decided to conduct an environmental scan of the status of risk-appropriate care in the state by implementing the Centers for Disease Control (CDC) Levels of Care Assessment Tool (LOCATe) as part of a broader maternal health system needs assessment to address health disparities and improve maternal health outcomes.

Study Questions: What is the status of equitable risk-appropriate maternal and neonatal care in Montana?

Methods: The research team implemented version 9.2 of the LOCATe classifying facilities into levels based on equipment, staff, and volume of services. Montana added a module to LOCATe to gather additional information on training, transport, and accessible perinatal care settings. The data collection occurred from July 23, 2021, to October 31, 2021. All 26 birthing facilities were sent the online survey; 25 (96%) participated. CDC analyzed the LOCATe data using a scoring system that refers directly to staffing and service specifications in the American College of Obstetricians and Gynecologists (ACOG), Society of Maternal and Fetal Medicine (SMFM), and American Academy of Pediatrics (AAP) guidelines. The research team analyzed the needs assessment data using STATA.

Results: LOCATE-assessed levels for maternal care ranged from <Level I to Level IV. Most (76%) of facilities LOCATE-assessed at Level I or lower. For neonatal care, most (48%) facilities LOCATE-assessed at Level I, 32% at Level II, and 20% at Level III. Montana does not have any Level IV neonatal care facilities. Close to half (44%) of facilities do not have a transport plan for complicated obstetric patients. Most (96%) facilities reported having an accessible patient room for obstetric patients with a physical disability. Few (19%) reported having adaptive equipment, including a scale, changing table, and bassinet. Over half (54%) have assistive listening devices for obstetric patients with a hearing impairment.

Conclusions: The results of this study underscore the importance of adequately staffed and equipped facilities at each level of care and regionalized relationships. Improving the provision of risk-appropriate care involves strengthening each facility to have the skills, resources, and capacity to provide equitable perinatal care and operate at the height of their level.

Public Health Implications: Ensuring birthing people receive care at a facility prepared to meet their needs will require statewide coordination of all available perinatal care. While perinatal regionalization has led to improved outcomes for birthing people and infants, the structure and strategies that work in one system might not meet the needs of another. Each state must identify regionalization strategies that address the inequities in obstetric care delivery, shaping a system that improves perinatal care utilization and birth outcomes for all birthing people.

Disparities and the Intersectionality of Substance Use, Emotional Health, and Violence Among Wisconsin American Indian and Alaska Native Birthing Persons

Scientific Research/Data Abstracts

Authors: Presenting Author-Marissa Hogan, MPH

Non-Presenting Author - Samantha Lucas-Pipkorn, MPH

Non-Presenting Author - Mireille Perzan, MPH

Non-Presenting Author - Meg Diedrick, MPH

Category/Categories: Mental/behavioral health, Racism, equity, social justice

Method of Presentation: No Preference

Data Methods: Using existing data sources in innovative ways

Data Source: PRAMS

Background: American Indian/Alaska Natives (AI/ANs) face numerous disparities due to intentional and systematic injustices they have faced and continue to face. These injustices, including stolen land and children, cultural oppression, and forced assimilation, are the root cause of the historical trauma experienced by AI/ANs today. According to Dr. Maria Yellow Horse Brave Heart, historical trauma is “cumulative emotional and psychological wounding over the lifespan and across generations, emanating from massive group trauma.” Dr. Brave Heart states that with historical trauma comes the historical trauma response - a set of characteristics both survivors and their descendants may experience due to group trauma. The historical trauma response features include depression, low self-esteem, anger, suicidal ideation, dissociation, internalization of ancestral suffering, and self-destructive behaviors, including substance misuse. The historical trauma response contributes to numerous health disparities that AI/ANs face, including disparities in substance use, emotional health concerns, and violence—resulting in AI/ANs in Wisconsin having the highest rates of suicide and substance-use-related deaths and hospitalizations. Additionally, according to the Association on American Indian Affairs, 84.3% of AI/AN women experience violence in their lifetime.

Study Questions: Do AI/AN birthing persons experience substance use, emotional health concerns, and violence more frequently than other racial/ethnic groups? How often do these experiences co-occur in AI/AN birthing persons?

Methods: Although data on AI/ANs are often unavailable, the Wisconsin Department of Health Services, in partnership with the Great Lakes Inter-Tribal Epidemiology Center, conducted a Pregnancy Risk Assessment Monitoring System (PRAMS) oversample of AI/AN birthing persons in 2020. We used these data to examine the intersectionality of substance use, emotional health concerns, and violence among birthing persons in Wisconsin, focusing on disparities between AI/AN birthing persons compared to

other racial/ethnic groups. Differences in outcomes by race/ethnicity were assessed using weighted chi-square tests.

Results: AI/AN birthing persons experienced higher rates of substance use, emotional health concerns, and physical violence before and during pregnancy compared to other racial groups. AI/ANs experienced the highest percentage of physical abuse before or during pregnancy of all racial/ethnic groups (15.6%). Additionally, AI/ANs were more likely to smoke cigarettes in the 3 months before and during the last 3 months of pregnancy than white populations. Also, more AI/ANs experienced depression before, during, and after pregnancy than white populations. Among AI/ANs reporting 6 or more stressors in the year before birth, 45% smoked cigarettes during the last 3 months of pregnancy, which is significantly higher than the 17% who smoked in that time period among those reporting 1 to 2 stressors.

Conclusions: Results from PRAMS provide additional evidence to what is already known about the disparities AI/AN people face related to substance use, emotional health, and violence. However, this data is unique because it focuses specifically on birthing persons and provides insight into the co-occurrence of these issues.

Public Health Implications: As a result of these findings, we suggest screening for and treating the co-occurrence of substance use, mental illness, and violence for all AI/AN birthing persons using culturally appropriate and trauma-informed methods and without blame.

Application of Perinatal Periods of Risk Analysis Results for American Indian/Alaska Native and Non-Hispanic Black Populations in Wisconsin

Scientific Research/Data Abstracts

Authors: Presenting Author-Meg Diedrick, MPH

Non-Presenting Author - Madeline Kemp, MPH

Category/Categories: Infant mortality; pregnancy outcomes, Data: innovation, quality improvement, communication

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Other

Data Source: Birth and/or death certificates

Background: In Wisconsin, there are persistent, unacceptable inequities in fetal and infant mortality, with the greatest impact on American Indian/Alaska Native and non-Hispanic Black populations. Developed by CityMatCH, the perinatal periods of risk (PPOR) analysis framework can be used to identify prevention areas to reduce inequities.

Study Questions: What factors contribute to racial/ethnic inequities in fetal and infant mortality in Wisconsin? What are best practices for disseminating PPOR results so that they have greater impact?

Methods: Data sources included Wisconsin birth certificates, linked birth and infant death certificates, and fetal death certificates from 2015-2019. Lowest observed fetal and infant mortality rates were calculated based on a population of Wisconsin residents who were non-Hispanic white, 20+ years of age, and had 13+ years of education. Following the PPOR framework, excess deaths for American Indian/Alaska Native and non-Hispanic Black populations were sorted into one of four periods of risk based on birthweight and age at death: Maternal Health/Prematurity, Maternal Care, Newborn Care, and Infant Health. Comparisons of cause-specific mortality rates and a Kitagawa analysis were conducted within periods with highest excess deaths. In preparation for presenting the findings at a May 2022 community event, qualitative feedback on the dissemination of PPOR results was obtained from interdisciplinary public health professionals with strong expertise in community-engaged work. Multiple discussions provided time for reflection on both the positive and negative potential impacts of presenting the findings.

Results: For both American Indian/Alaska Native and non-Hispanic Black populations, the most excess deaths occurred within the Infant Health period (20 and 119 excess deaths, respectively), closely followed by the Maternal Health/Prematurity period (13 and 109 excess deaths). Within the Infant Health period, 43% of excess American Indian/Alaska Native deaths and 60% of excess non-Hispanic Black deaths were due to sudden unexpected infant death (SUID). Within the Maternal Health/Prematurity period, the Kitagawa analysis identified that 57% of excess American Indian/Alaska Native deaths and 100% of excess non-Hispanic Black deaths were due to higher rates of low birthweight. Feedback on dissemination identified avoiding stigmatizing language (e.g., target

population, reference population) as a priority. Dissemination should also focus on using results for action and prioritizing implications of findings over analyses methods. Calls to action should highlight systemic factors that impact health and promote upstream interventions. Wisconsin PPOR results will be used to inform a statewide Infant Mortality Reduction Plan and will be disseminated through presentations, action-oriented handouts, and reports.

Conclusions: Focusing prevention efforts toward reducing SUID and increasing birthweight among American Indian/Alaska Native and non-Hispanic Black communities in Wisconsin may help to reduce inequities in fetal and infant mortality. Dissemination of PPOR results should be tailored to community audiences and should focus on utilization of the findings.

Public Health Implications: PPOR analyses are often used to direct equity activities in communities. However, it is important that these results are presented and disseminated in a respectful, accessible, and equitable manner. This presentation will offer insight into successes and further actions that could be taken by data staff to ensure their work around PPOR has the greatest impact.

Mental Health as a Family Experience: Relationship of Paternal Characteristics on Maternal Perinatal Depressive Symptoms in a Matched Sample

Scientific Research/Data Abstracts

Authors: Clarissa Simon

Non-Presenting Author-Anne Bendelow

Non-Presenting Author - Michael Bryan

Non-Presenting Author - Craig Garfield

Category/Categories: Fatherhood/men's involvement, Mental/behavioral health

Method of Presentation: Poster Presentation

Data Methods: Using new data systems, Using new data linkages

Data Source: Birth and/or death certificates, PRAMS, Other

Background: Postpartum depression rates recorded during delivery hospitalizations increased significantly in the United States from 2000-2015 and are now reported by 13% of women with a recent live birth. Perinatal depression at delivery is linked to over \$100 million in increased health care costs, and evidence has demonstrated the downstream effects of perinatal depression on partners, children, and families.

Study Questions: What is the prevalence of maternal perinatal depressive symptoms by paternal, maternal and infant characteristics using self-reported data from mothers and fathers from two parallel linked surveys aimed at reaching new parents?

Methods: Data from the pilot Pregnancy Risk Assessment Monitoring System (PRAMS) for Dads study was merged with the ongoing Georgia PRAMS surveillance data using infant birth certificates. Eligibility for both studies included Georgia residency, in-state birth, and presence of identifying information. Eligible fathers were those for whom the infant's mother had been sampled in PRAMS during the period from October 15, 2018-July 3, 2019. Descriptive statistics using weighted prevalence estimates, χ^2 and 95% confidence intervals (CIs) were used to compare (a) the distribution of select maternal and paternal characteristics among sampled pairs and (b) paternal and birth certificate characteristics between mothers who report postpartum depressive symptoms to those who did not. Analyses were conducted in SAS (version 9.4) and weighting was used to account for the complex survey design.

Results: Among the 243 dyadic pairs, 27 (10.6%) fathers and 31 (16.0%) mothers reported depressive symptoms after their infant was born. Prevalence of maternal postpartum depressive symptoms varied by marital status, with unmarried mothers more likely to experience depressive symptoms (27.9%) compared with married mothers (10.0%). Maternal postpartum depressive symptom prevalence was higher for mothers paired with fathers who did not have a primary care physician (22.6% compared with

8.2% of fathers with a primary care physician (PCP)), and fathers having no recent doctor visits (24.0% compared to 10.3% of fathers who did visit a doctor for a health care visit). Maternal postpartum depressive symptom prevalence did not vary by paternal self-reported health status, paternal depressive symptoms, or birth outcomes.

Conclusions: Using a unique linked dataset of mother-father dyads during the perinatal period, this analysis examines the interplay of maternal mental health with paternal health behaviors and paternal, maternal, and infant characteristics. Maternal symptoms were linked to measures of father-reported experiences and behaviors related to use of health care services; these differences in prevalence support the role of paternal health to better support maternal mental health via increased social support. Data sets linking perinatal maternal and paternal experiences are rare; here, we successfully matched 91.4% of participants. The current lack of state, regional or federal-level data availability on maternal and paternal depressive symptoms makes monitoring prevalence, changes over time, and family-level risks challenging.

Public Health Implications: Our study informs family science by providing evidence of the interconnectedness of mental health within family systems and among new parents, data that can help guide interventions aimed at meeting the mental health needs of mothers during the vulnerable perinatal time period.

Effects of the COVID-19 Pandemic on Experiences Surrounding Pregnancy Among American Indian and Alaska Native Birthing Persons in Wisconsin

Scientific Research/Data Abstracts

Authors: Non-Presenting Author-Marissa Hogan, MPH

Presenting Author - Meg Diedrick, MPH

Non-Presenting Author - Mireille Perzan, MPH

Non-Presenting Author - Samantha Lucas-Pipkorn, MPH

Category/Categories: Collateral damage of COVID, Racism, equity, social justice

Method of Presentation: Poster Presentation

Data Methods: Using existing data sources in innovative ways

Data Source: Birth and/or death certificates, PRAMS

Background: American Indian/Alaska Natives (AI/ANs) face numerous health, social, and economic disparities. Most recently, these disparities can be seen in the outcomes of the COVID-19 pandemic. AI/ANs in Wisconsin have the highest COVID-19 death rates compared to all other racial/ethnic groups (1.3 times greater than white populations). Prior to COVID-19, disparities in maternal and child health for AI/ANs have been present. Despite a declining statewide infant mortality rate, the infant mortality inequity experienced by AI/AN populations compared to white populations persists. As data on AI/AN populations usually are lacking due to small numbers, often resulting in being combined with other racial groups into an 'other' category with limited meaning, further understanding of the systemic factors and social determinants of health affecting this population is needed.

Study Questions: Knowing that there are disparities in both COVID-19 outcomes and maternal and child health for AI/AN populations, what challenges did AI/AN birthing persons in Wisconsin face during the COVID-19 pandemic? Did these challenges differ from other racial/ethnic groups?

Methods: The Wisconsin Department of Health Services, in partnership with the Great Lakes Inter-Tribal Epidemiology Center, conducted a Pregnancy Risk Assessment Monitoring System (PRAMS) oversample of AI/AN birthing persons in 2020. This oversample also included supplemental questions on COVID-19. 2020 Wisconsin PRAMS data were analyzed using both quantitative and qualitative methods. Differences in outcomes by race/ethnicity were assessed using weighted chi-square tests. We conducted a qualitative review of back-page survey comments to gain additional insights.

Results: Over 6% of AI/AN participants reported COVID-19 infection during pregnancy. The pandemic affected interactions with healthcare systems before, during, and after pregnancy. Twenty-eight percent of AI/AN birthing persons reported missing or delaying a scheduled visit out of fear of being exposed to COVID-19. Among all racial/ethnic groups, AI/AN birthing persons were most likely to miss or delay a

scheduled visit because they had to care for other children or family members (18%). Qualitative analysis showed that many AI/AN birthing persons experienced stress during healthcare visits or delivery due to visitor policies not allowing the in-person presence of a partner or other family members. The pandemic also affected financial security, with more AI/AN birthing persons reporting household income loss (50.8%) than any other racial/ethnic group. Government assistance was not reliable for all who needed it, with 12.2% of AI/AN birthing persons having not received their initial stimulus payment despite believing they were eligible. While 23% of AI/AN birthing persons applied for unemployment insurance, just 16% reported receiving it.

Conclusions: The COVID-19 pandemic affected the quantity and quality of healthcare visits surrounding pregnancy for many AI/AN birthing persons. The pandemic also led to a loss of income for many AI/AN birthing persons, with government assistance not reaching all who needed it.

Public Health Implications: This information shows there is a need for services to support AI/AN birthing people following public health emergencies.

Social Influences of Paternal Perinatal Health and Behaviors: findings from Pregnancy Risk Assessment Monitoring System (PRAMS) for Dads, Georgia, 2018-2019

Scientific Research/Data Abstracts

Authors: Presenting Author-Raj Dalal, BA

Non-Presenting Author - Clarissa Simon, PhD; MPH

Non-Presenting Author - Anne Bendelow, MPH

Non-Presenting Author - John James Parker, MD

Non-Presenting Author - J Michael Bryan, PhD, MPH

Non-Presenting Author - Craig Garfield, MD MAPP

Category/Categories: Fatherhood/men's involvement, Men's health

Method of Presentation: Poster Presentation

Data Methods: Using new data systems

Data Source: Birth and/or death certificates, Other

Background: With fathers comprising over 60% of the adult male population, the perinatal period provides an opportunity to improve paternal, maternal, child and family health. Unlike maternal healthcare use, few studies have examined paternal use during this time.

Study Questions: What is the prevalence of and predictors for poor health and healthcare utilization in the perinatal period among fathers using state-based representative data?

Methods: Fathers were eligible to participate if they were listed as the second parent on the infant's birth certificate and the infant's mother was randomly sampled for the 2018-2019 Georgia PRAMS. From October 2018-June 2019, fathers in Georgia were surveyed 2-6 months postnatally on topics including mental and physical health, healthcare, and substance use. Chi-squared testing, weighted prevalence estimates, and multivariable logistic regression models examined which paternal sociodemographics were associated with self-reported health and healthcare system interaction.

Results: In this weighted representative sample of 266 respondent fathers, 38% were ≥ 35 , 45% had less than a college education, and 53% reported no primary care provider (PCP), including nearly 80% of Hispanic fathers. Nearly half (45%) of fathers had no reported health care visits. A higher proportion of unmarried fathers did not have a PCP (66%) compared with married fathers (46%). A higher proportion of fathers without a GED or high school degree did not utilize healthcare services (61%) or visit a PCP (68%) despite having the greatest proportion of self-reported poorer health (46%), compared with fathers with at least a high school degree. After controlling for race/ethnicity, marital status, and age, those with less than a high school education had a lower prevalence of having a PCP (adjusted PR

[aPR]=0.3, $p<0.05$) and poorer health status (aPR=0.3, $p<0.05$), compared to those with more education. Insured fathers were more likely to have a PCP (aPR=5.8, $p<0.05$) or a recent health care visit (aPR=6.3, $p<0.05$) compared with those who were uninsured.

Conclusions: Our findings suggest that men's health and healthcare utilization may be adversely impacted in the transition to fatherhood. The prevalence of fathers reporting not having a PCP and not having a recent health care visit is higher than population estimates for men over 18. We also identify which fathers are at particularly high risk for poorer health and decreased healthcare utilization. The perinatal period can be used as an opportunity for providers to screen fathers.

Public Health Implications: During prenatal and well-child visits, clinicians and social workers have the opportunity to encourage fathers to improve their healthcare utilizations and health behaviors, which can indirectly improve family health. Future research on fatherhood could look to expand this research approach to other states or to a national scale.

Living in a Food Desert and Adverse Birth Outcomes in Virginia: An analysis of birth certificate data, 2016-2020

Scientific Research/Data Abstracts

Authors: Presenting Author-Ksenia Primich, MPH

Non-Presenting Author - Dane De Silva, PhD, MPH

Category/Categories: Maternal health, Infant mortality; pregnancy outcomes

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Birth and/or death certificates

Background: In Virginia, 9.6% of live births were preterm (<37 weeks gestation), and 8.3% of all live born infants were considered low birthweight (<2,500 grams) in 2020. However, maternal sociodemographic factors do not fully explain these rates alone. A growing body of research suggests an association between living in a food desert (FD), or an area with identified food insecurity, and adverse health outcomes. Nationally in 2020, an estimated 14.8% of U.S. households were identified as food-insecure, and varied by state. Therefore, we sought to examine the associations between living in food deserts and adverse birth outcomes, namely preterm birth, low birthweight, and small-for-gestational age (SGA) in Virginia.

Study Questions: Are pregnant women living in food deserts more likely to experience adverse childbirth outcomes, compared to women not living in food deserts?

Methods: This analysis was a cross-sectional study of all singleton live births born in 2016-2020 to resident Virginian women using Vital Statistics Data. These data were linked to county-level food insecurity data from Feeding America Map the Meal Gap as a proxy for living in a FD. Our primary outcomes of interest were preterm delivery, low birthweight, and small-for-gestational age. Multivariable logistic regression was used to model the association between our exposure and outcomes. We adjusted for maternal sociodemographic confounders in a tiered fashion. Given the cross-sectional nature of this study, data are limited in ascertaining causality.

Results: A total of N= 476,636 resident VA women with a singleton birth between 2016 and 2020 were included. The average county-level food insecurity during this time period was 11.6%. Adjusted models showed that for every increase in percent of county-level food insecurity, there was a 1.83 (95% CI: 1.30-2.54) odds of having a preterm birth, 2.17 (95% CI: 1.52-3.09) odds of having a low birthweight infant, and 2.95 (95% CI: 2.19-3.99) odds of having a small-for-gestational age infant.

Conclusions: Findings suggest that living in a food insecure county is associated with poor birth outcomes in Virginia. Future research on interventions and/or how existing food assistance programs may help this population are required.

Public Health Implications: Findings suggest a need for more support in addressing food insecurity, such as bolstering existing food assistance programs (e.g., SNAP and WIC) and continuing advocacy surrounding the health effects of food insecurity. With the COVID-19 pandemic having exacerbated food insecurity in the country, food insecurity warrants continued attention and policies to support birthing persons living in a food desert or food insecure area.

Examining COVID-19 Risk Reduction Behaviors and Diagnosis in Oregon's Pregnant Population Using the Pregnancy Risk Assessment Monitoring System

Scientific Research/Data Abstracts

Authors: Bonnie Bloxom, MPH

Non-Presenting Author-Suzanne Zane, DVM, MPH

Category/Categories: Collateral damage of COVID, Racism, equity, social justice

Method of Presentation: No Preference

Data Methods: Policy assessments or evaluations, Other

Data Source: PRAMS, Other

Background: To mitigate community transmission during the COVID-19 pandemic, wearing masks, avoiding large groups, and social distancing were recommended. Groups suspected of increased risk of severe illness due to COVID-19, including pregnant people, were advised to take extra precautions. Literature indicates that among U.S. racial/ethnic groups, White people are least likely to practice COVID-19 risk reduction. However, little information exists about pregnant people and how adherence to COVID-19 risk reduction behavior may vary across race/ethnicity.

Study Questions: Are there differences in COVID-19 risk reduction behaviors and diagnosis among pregnant people in Oregon across race/ethnicity?

Methods: Data were obtained from the Oregon Pregnancy Risk Assessment Monitoring System COVID-19 supplement administered between July-December 2020 (weighted response rate 64.2%). Question items included frequency of adherence to COVID-19 risk reduction behaviors (wore a mask, avoided gatherings of >10 people, stayed ≥ 6 feet from others when left home), reported COVID-19 diagnosis by healthcare provider while pregnant, and inability to stay home while pregnant due to job/responsibilities. Each item was independently evaluated as an outcome measure. Chi-square analysis was used to evaluate associations between outcome variables and respondents' race/ethnicity. Prevalence ratios were calculated by dichotomizing race/ethnicity into two categories: Hispanic and Non-Hispanic persons of other races, and White; response categories for COVID-19 behaviors were dichotomized into "always" and "sometimes/never".

Results: Reported COVID-19 risk reduction behaviors among pregnant people included 88% always wearing a mask, 63% always avoiding gatherings, and 71% always staying ≥ 6 feet from others. Compared to White respondents, Hispanic and Non-Hispanic persons of other races were 1.11 times (95% CI 1.10, 1.12) more likely to report wearing a mask, 1.35 times (95% CI 1.33, 1.38) as likely to report avoiding large groups, and 1.33 times (95% CI 1.30, 1.35) as likely to report having engaged in social distancing. Approximately 4% of respondents reported having COVID-19 while pregnant, with the highest rates reported among Hispanic (7.5%; unweighted n=288), Non-Hispanic (NH) Pacific Islander (7.0%; n=48), NH American Indian/Alaska Native (AI/AN) (6.7%; n=38), and NH Black/African American

(6.7%; n=103) people. A majority (57%) of participants reported they did not have a job/responsibilities that prevented them from staying home while pregnant, with Hispanic and Non-Hispanic persons of other races 1.13 times (95% CI 1.10, 1.16) as likely to be able to stay home.

Conclusions: Our results showed higher prevalence of COVID-19 risk reduction behaviors among Hispanic, NH Pacific Islander, NH AI/AN, and NH Black/African American pregnant people in Oregon, along with more ability to not have job responsibilities that prevented staying home. However, these groups were more likely than White respondents to report diagnosis of COVID-19.

Public Health Implications: Oregon Health Authority funded >170 community-based organizations in COVID-19 response efforts to ensure culturally and linguistically responsive services, which may be associated with risk reduction behaviors among pregnant Hispanic and Non-Hispanic persons of other races. Higher prevalence of protective behaviors did not equate to lower rates of COVID-19 diagnoses. Broader systemic-level actions may address structural factors and potentially help rectify inequities. Our data do not account for structural determinants and complex factors contributing to health inequities associated with risk of SARS-CoV-2 diagnosis.

Stakeholder Perspectives on Nurse Home Visitor Readiness and Training in a Universal Postpartum Home Visiting Program

Scientific Research/Data Abstracts

Authors: Kristine Zimmermann, PhD, MPH

Non-Presenting Author-Lisa Haen, MPH

Non-Presenting Author - Allissa Desloge, MPH

Non-Presenting Author - Arden Handler, DrPH

Non-Presenting Author - Jessica Wilkerson

Non-Presenting Author - Candice Robinson, MD, MPH

Non-Presenting Author - Jennifer Vidis

Category/Categories: Home visiting, Leadership/workforce development

Method of Presentation: Poster Presentation

Data Methods: Implementation science, Program evaluation or surveillance evaluation

Data Source: Other

Background: Perinatal home visiting is a promising strategy for improving maternal and infant health outcomes. In response to persistent racial and ethnic disparities in these outcomes, in late 2019, the Chicago Department of Public Health (CDPH) began implementing Family Connects Chicago (FCC) in collaboration with 4 pilot hospitals and several community organizations. Chicago is the first large city to implement Family Connects, a universal postpartum home visiting program in which visits are conducted by nurses. FCC's structure includes both CDPH and hospital nurses working as nurse home visitors (NHVs). Recognizing that FCC's expansion requires increasing the public health nursing workforce in Chicago, this study examines key considerations related to NHV readiness and training.

Study Questions: What factors should be considered in ensuring NHV readiness and training in a postpartum nurse home visiting program?

Methods: The FCC formative evaluation included 45 semi-structured interviews conducted between 2020-2022 with program stakeholders, comprising CDPH staff (n = 18), partner hospitals (n = 13), and other collaborators (n = 14). Of these, 16 were with FCC NHVs, employed by CDPH or a partner hospital. We conducted phone interviews, which were recorded and transcribed verbatim; coded transcripts using a deductive process; and using Dedoose software, analyzed codes and code groups to identify themes.

Results: FCC NHVs engage in multiple roles, including recruiting postpartum families for FCC, conducting in-person or telehealth home visits, building and maintaining rapport and trust with families, and assessing and documenting family needs. Two primary themes related to preparedness for these roles

were identified: (1) NHV Background: FCC NHVs possessed wide-ranging backgrounds in clinical and public health practice. Attitudes about the FCC model, its implementation, and training needs varied due to differences in NHV backgrounds. NHVs with previous home visiting experience drew upon their prior knowledge, experience, and community relationships, but required training to adapt to the FCC model. In contrast, less experienced NHVs requested training to increase their skills to support their effectiveness. (2) NHV Training Needs and Expectations: NHVs valued training opportunities to practice skills, particularly around unfamiliar tasks (e.g., family risk assessment, data management system), and easy access to support resources (e.g., technical support, on-demand training videos). They relied on both formal training and peer support for skill building and troubleshooting. Other readiness considerations included safety during home visits (e.g., personal safety, COVID) and ensuring sufficient staffing to meet program needs.

Conclusions: Due to differences in prior experience, NHV training needs may vary, even within agencies, and may need require individual-level tailoring. Communication of clear expectations for NHVs, within and across partner agencies, is critical to ensure a common understanding of FCC goals and strategies and implementation consistency. Finally, long-term support for HVNs requires ongoing training resources and facilitating collaboration among NHVs.

Public Health Implications: Expansion to universal nurse home visiting in a large urban community requires consideration of the prior skills and experience of public health nurses, ongoing training opportunities for NHVs, as well as coordination across partner agencies to ensure implementation consistency.

Fathers, Breastfeeding and Safe Infant Sleep Practices: Findings from the Pregnancy Risk Assessment Monitoring System (PRAMS) for Dads, Georgia, 2018-2019

Scientific Research/Data Abstracts

Authors: Presenting Author-John James Parker, MD

Non-Presenting Author - Clarissa Simon, MPH, PHD

Non-Presenting Author - Anne Bendelow, MPH

Non-Presenting Author - Michael Bryan, MPH, PHD

Non-Presenting Author - Criag Garfield, MD, MAPP

Category/Categories: Fatherhood/men's involvement, Men's health

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: Program evaluation or surveillance evaluation, Using new data systems

Data Source: PRAMS

Background: Healthy People 2030 aims to increase the proportion of infants who are a) breastfed at one year and b) placed on their back to sleep. Growing evidence links father involvement with improved child and maternal outcomes; however, limited studies collect data directly from fathers about breastfeeding and safe sleep practices.

Study Questions: What are the associations between paternal characteristics and breastfeeding and safe sleep among a state-representative sample of fathers.

Methods: This is a cross sectional observational study of data gathered from a novel Pregnancy Risk Assessment Monitoring System (PRAMS) for dads. PRAMS for Dads sampled fathers for whom the infant's mother had been sampled in PRAMS during the period from October 15, 2018–July 3, 2019. The overall response rate was 31.7, which is a limitation of the study. Survey data included sociodemographic and validated survey measures. Data were weighted for sampling design, noncoverage and nonresponse to be representative of Georgia resident fathers listed as married or unmarried with a paternity acknowledgment form. Weighted percentages and Poisson multivariable regression were used for analysis.

Results: Of 266 respondents, 86% of fathers report their infants ever breastfed and 62% reported any breastfeeding at 8 weeks. Fathers who wanted their child to breastfeed were more likely to report their infants ever breastfed (aPR=1.40; 95% CI, 1.15-1.70) and were breastfeeding at 8 weeks (aPR=2.26; 95% CI, 1.53-3.34), than fathers who had no opinion or who did not want the child to breastfeed. In our adjusted analysis, Hispanic fathers, non-Hispanic other fathers, and fathers who had at least some college were associated with higher rates breastfeeding; fathers who were married and fathers with a bachelor's degree were more likely to report their child was breastfeeding at 8 weeks as compared to

father without these characteristics. Of the 237 fathers (99%) who lay their child to sleep, most fathers reported placing their child on their back to sleep (81%); however only 32% reported doing so on an approved sleep surface. The majority of fathers report being told to place their child on the back (84.8%) and to use a crib, bassinet or pack in play (77.9%), however less than half report being instructed on all four safe sleep measures (48.8%). Non-Hispanic black fathers (aPR=0.72; 95% CI, 0.57-0.91) were less likely to put their child on their back to sleep than non-Hispanic white fathers. Limited by our small sample size, use of an approved sleep surface was not significantly associated with any of the paternal characteristics, however, the first time fathers demonstrated lower proportions of approved sleep surface use (aPR= 0.60; 95% CI, 0.36-1.01) relative to fathers with more than one child.

Conclusions: Among this state-based representative sample of fathers, infant breastfeeding rates and safe sleep practices are suboptimal. Infant outcomes vary by paternal characteristics suggesting opportunities for outreach to include fathers in promotion of breastfeeding and infant safe sleep.

Public Health Implications: Perinatal surveillance of fathers can be useful in identifying trends in paternal and infant health that can help improve key health outcomes.

Understanding COVID-19 Barriers to Healthy Pregnancy for American Indian and Alaska Native Pregnant People Using Oregon PRAMS

Scientific Research/Data Abstracts

Authors: Presenting Author-Natalie Roese, MPH

Non-Presenting Author - Candice Jimenez, MPH

Category/Categories: Collateral damage of COVID, Racism, equity, social justice

Method of Presentation: Oral Presentation (appx. 20-25 mins)

Data Methods: No or not applicable

Data Source: PRAMS

Background: The COVID-19 pandemic poses particular risks for pregnant and recently pregnant people, who are at higher risk of severe illness and hospitalization from COVID-19 than the general population. This risk is exacerbated for American Indian and Alaska Native (AI/AN) pregnant people who experience higher rates of COVID-19 and face financial and structural barriers to continuity of care across pregnancy. Together these factors pose substantial barriers to safe and healthy pregnancy and delivery during the COVID-19 pandemic.

Study Questions: How did the COVID-19 pandemic affect the pregnancy, birth and postpartum experiences for AI/AN birthing people in Oregon?

Methods: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS) collects data on maternal attitudes and experiences. Starting in July 2020, a COVID-19 supplement was added to the PRAMS survey. AI/AN birthing people were identified by records with any mention of AI/AN race or Tribal affiliation. The analytic sample includes all AI/AN (n=137) and non-Hispanic White (NHW, n=368) PRAMS respondents in June-December of 2020. AI/AN responses were compared to NHW responses using Chi-squared or Fisher's exact tests.

Results: AI/AN respondents who gave birth in 2020 reported higher financial stressors ($p=0.019$) and greater discrimination ($p=0.004$) than reported in 2018-2019. AI/AN respondents had a lower income distribution than NHW respondents ($p<0.0001$) and were more likely to use Medicaid as the primary source of payment ($p=0.0017$). AI/AN respondents were more likely to experience healthcare discrimination on the basis of income ($p<0.0001$), age ($p=0.0002$), or race/ethnicity ($p<0.0001$). Data from the COVID-19 supplement indicate that AI/AN respondents were more likely to report not having a phone ($p=0.0438$), cellular data ($p=0.0016$), or space ($p=0.0127$) as barriers to virtual prenatal care (PNC) and report delayed or cancelled PNC appointments due to lost insurance ($p=0.0015$) or fear of COVID-19 ($p=0.0084$). AI/AN respondents had more difficulty finding masks ($p=0.0281$), sanitizer or soap ($p=0.0144$) and disinfectant ($p=0.0432$) and faced greater food insecurity ($p=0.0069$), problems paying bills ($p<0.0001$), in addition to losing childcare ($p=0.0168$), having to move ($p<0.0001$) and becoming homeless ($p=0.0048$). In the hospital, more AI/AN respondents reported having no support person allowed ($p=0.026$), being separated from their infant ($p=0.0381$), higher preterm birth ($p=0.0054$) and

longer hospitalizations ($p=0.0548$). After birth, AI/AN respondents were more likely to receive no postpartum care ($p=0.0071$) and have canceled checkups ($p=0.0283$) and postponed immunizations ($p=0.0452$) for their infant.

Conclusions: Across pregnancy, delivery, postpartum and infant care, AI/AN birthing people who delivered in the second half of 2020 faced significantly higher barriers to protecting themselves from COVID-19 and were more likely to experience financial and emotional stressors than NHW respondents or AI/AN respondents of previous years. These COVID-19 stressors were coupled with increased barriers to sufficient prenatal, postpartum and infant care.

Public Health Implications: Underlying structural and financial barriers to continuity of care for AI/AN pregnant and birthing people are compounded during healthcare crises. This increases the risk of complications for birthing people and infants, with generational consequences yet to be determined. Increasing the workforce of local MCH providers and traditional caregivers can strengthen community healthcare networks and provide additional support during times of crisis.

Mental Health of Children with Learning Disabilities in the United States

Scientific Research/Data Abstracts

Authors: Julie Donney, PhD, MPH

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Category/Categories: Mental/behavioral health, Child/adolescent health

Method of Presentation: Poster Presentation

Data Methods: No or not applicable

Data Source: National Survey of Children's Health

Background: When children with learning disabilities (LD) enter school, they repeatedly exposed to experiences of failure that contribute to feeling different, less skilled, and less valued. Children with LD have difficulty incorporating and interpreting information from social interactions, making it challenging to manage conflict or sustain prosocial interactions. As a result, they are often less accepted or chosen to be friends and more frequently bullied by their peers. Isolation, rejection, and victimization contribute to feelings of loneliness and depression. Supportive family and school environments are critical in helping children with LD's meet social-emotional and cognitive demands placed on them, protecting their mental health.

Study Questions: (1) To what extent are LD associated with mental health problems among children in the United States? (2) Which children with LD have the greatest risk of mental health problems?

Methods: Data from the 2018-2019 NSCH were used to examine the relationship between LD and mental health. Weighted bivariate associations between LD, mental health problems, and covariates were calculated using chi-square tests of independence. Sequential logistic regression modeling was used to examine the association between LD and mental health when controlling for child and family factors (age, race, sex, income, education, family structure, adverse childhood experiences (ACEs)) in the first model; and when adding school factors (safe, special education, bullied) to the second model. Predicted odds were converted to prevalence rate ratios (PRR) using the PREDMARG statement within the RLOGIST procedure.

Results: Children with LD were 4.77 times as likely to have anxiety ($p < .01$), 6.94 times as likely to have behavior/conduct problems ($p < .01$), and 4.25 times as likely to have depression ($p < .01$) compared to children without LD. After adjusting for child and family factors, LD remained significantly associated with anxiety (aPRR= 3.86, 95%CI 3.46, 4.31), behavior/conduct problems (aPRR= 5.38, 95%CI 4.77, 6.07), and depression (aPRR=2.75, 95%CI 2.29, 3.31). After adding school factors, LD remained significantly associated with anxiety (aPRR=1.40, 95%CI 1.21, 1.63) and behavioral/conduct problems (aPRR=1.39, 95%CI 1.20, 1.60, $p < .01$), but not depression (aPRR=0.89, 95%CI 0.69, 1.14; $p = .35$). Children with LD who were bullied or experienced multiple ACEs were more likely to have anxiety, depression, and behavior/conduct problems. Children with LD who lived in households with income $< 100\%$ FPL and teens

with LD were more likely to have depression. Boys with LD and children with LD who attended unsafe schools were more likely to have behavior/conduct problems.

Conclusions: Learning disabilities are associated with an increased risk of mental or behavioral disorders in children and adolescents, especially among children with LD who experience bullying, multiple ACEs or live in poverty. Teens with LD, boys with LD, and those attending unsafe schools may also need additional support in protecting their mental health.

Public Health Implications: Mental health problems are increasing among children. Suicide attempts among adolescents doubled between 2007 and 2017 and increased another 31% between 2019 and 2020, sounding the alarm for prevention and intervention strategies. This study helps identify children and adolescents with increased risk of mental and behavioral problems.

Paternal Leave Practices and Associations with Infant Outcomes in a State-Based Representative Sample of Fathers, Georgia, 2018-2019.

Scientific Research/Data Abstracts

Authors: Presenting Author-Katherine Bean, MD, MHMS

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Non-Presenting Author - Craig Garfield, MD, MAPP

Category/Categories: Fatherhood/men's involvement, Racism, equity, social justice

Method of Presentation: No Preference

Data Methods: No or not applicable

Data Source: Other

Background: While the benefits of maternity leave for mothers and infants are clear (e.g. improved breastfeeding, healthcare utilization, vaccination rates), research into the association between paternity leave and father and infant outcomes is minimal.

Study Questions: What are the relationships between paternity leave utilization, paternal sociodemographic factors, and infant outcomes using a state-based representative sample of new fathers in Georgia?

Methods: Fathers were eligible to participate if they were listed as the second parent on the infant's birth certificate and the infant's mother was randomly sampled for the 2018-2019 Georgia Pregnancy Risk Assessment Monitoring System (PRAMS). Fathers were surveyed 2-6 months following an infant's birth via mail, online, and telephone surveys in English or Spanish. Chi-squared testing and weighted percentages were used to assess paternal leave, breast feeding practices, and safe sleep practices (e.g. on back, in crib). Survey data were weighted for sampling design, noncoverage and nonresponse to produce estimates representative of the eligible population of fathers in Georgia.

Results: Of 857 fathers sampled, 231 (32%) completed survey materials. Among sampled fathers, 172 (67%) were married, 96 (41%) obtained a high school diploma or GED, 30 (15%) reported income at or below the Federal Poverty level (FPL), and 163 (69%) had health insurance. Paternity leave was reported by 171 (73%) of fathers, of whom 45 (26%) took 1 month. Fathers with a higher reported income and more than a high school education also reported a higher prevalence of paid leave ($p < 0.05$), compared with those with lower incomes and less education. Fathers reporting longer leave also reported a higher prevalence of breastfeeding initiation and duration and safe surface (e.g. placed in crib, not placed on couch) compared with fathers reporting shorter duration of leave ($p < 0.05$).

Conclusions: Fathers reporting longer paternity leave had a higher prevalence of improved infant outcomes (e.g. breast feeding, safe sleep practices), compared with those reporting shorter leave duration; however, results varied by specific measures of initiation and duration of breastfeeding, and safe sleep position and environment. Variation in paternity leave length and type, including paid compared to unpaid, also varied by sociodemographic factors, including income and education.

Public Health Implications: While paternity leave is limited in the United States, these findings emphasize the possible influences of increased paternal leave on infants and families, including the need to investigate how the type and duration of paternity leave is linked to improved infant health outcomes.