

2019 CityMatCH Conference Compendium



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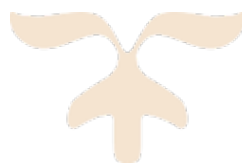
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Program & Policy Track

Oral Abstracts



Using Fetal Infant Mortality Review (FIMR) Program Data to Increase the Knowledge and Capacity of Community Providers

Authors: Sally Dixon

Title: Using Fetal Infant Mortality Review (FIMR) Program Data to Increase the Knowledge and Capacity of Community Providers

Issue: In July of 2017, when St. Joseph County (SJC), Indiana reached 7 SUID cases for the year, our FIMR team focused on increasing awareness of SUID and improved safe sleep messaging.

Setting: SJC is in Northern Indiana and a mix of urban and rural communities with a population of 270,434. The ethnic/racial breakdown is 73% White, 14% Black, 9% Hispanic and 4% Other. The county infant mortality rate is 8.7 (2013-2017): 5.1 for white infants, 18.9 for black infants and 10.8 for Hispanic infants. While our providers and agencies were teaching families about safe sleep, our community lacked a shared, consistent message.

Project: We explored what other cities had done to address SUID and entered into an agreement with the New York City Department of Health to adopt their “Stay Close. Sleep Apart.” campaign. Both SJC hospitals and most agencies serving families participated in the campaign and we used our FIMR data to share the most common factors present in SUID cases. Similar information was shared with print, television and radio media while the FIMR Coordinator began presentations for families and providers. Over 30 presentations were shared with clinicians, educators, hospitals, families and social service agencies over a one-year period. A common assumption in our community was that SUID was happening to mothers who were under the influence of drugs or to uncaring parents. The ability to share that the most common factor in SUID was the absence of placing the baby to sleep using the ABC’s of safe sleep was an important counter message.

Accomplishments/Results: The campaign began in August of 2017 and that year ended with 11 SUID, compared to 2 and 3 cases the two prior years. The best evidence we have of the effectiveness of our approach is the decline in the incidence of SUID. SJC had 1 SUID in 2018 and as of today, 3/1/2019, SJC has gone over 1 year without a SUID. We are in the process of developing a tool to assess how our FIMR recommendations are influencing and changing the practice of clinical providers and social service agencies.

Barriers: Barriers to our effort included the prominent, contrary view of a local university professor whose research advocates bed sharing for breastfeeding mothers. When the local newspaper covered the increase in SUID, he wrote an opinion suggesting the deaths likely included maternal drug use and bed sharing with a non-parent adult. The ability to share the actual factors helped us refute these inaccurate claims. Our other challenge was limited public health funding in Indiana.

Lessons Learned: The SJC FIMR Program learned that we can increase the capacity and effectiveness of existing programs and professionals through the data obtained through case reviews. While one year may be too soon to claim complete success, we are encouraged using the same model to roll out pregnancy intention and social determinants screening to clinical providers. Financial costs were minimal with this approach, except for printed materials, because we used the strength and reach of our existing community programs, professionals and institutions.

Information for Replication: Most of the work for this program was conducted through the FIMR Program and accompanying Community Action Team that already exists. The key partners/stakeholders were representatives from the hospitals and community agencies that participate in FIMR. The New York City Department of Health kindly shares their Stay Close. Sleep Apart. campaign images for free after signing an MOU. A local printing company prints the flyers at a discounted rate using funds from our FIMR budget.

Supporting Bereaved Parents Through Peer Support and Provider Education

Authors: Ada Johnson

Title: Supporting Bereaved Parents Through Peer Support and Provider Education

Issue: According to the CDC, approximately 1% of all pregnancies end in stillbirth and the Mayo estimates that another 1/5 end in miscarriage, yet providers are often at a loss for how to support bereaved parents during this traumatic time. Bereaved parents report feeling totally alone, unacknowledged, and unsure of how to process their experience and get the support that they need. In our experience, peer support and community building with other bereaved parents is important for those experiencing loss at all stages of their process.

Setting: Hawthorn Grief Care is centered in Rhode Island, although we also provide distance bereavement doula support and provider consults. We work with parents who are expecting loss, are in the midst of experiencing loss, and after loss, including many years later and with providers who wish to learn how to best support bereaved parents, or who need their own vicarious trauma support.

Project: Hawthorn Grief Care works to support bereaved parents in accessing peer support and to train and support providers on how to best interface with miscarriage, stillbirth and infant loss. We offer one-on-one accompaniment and support to bereaved parents, group support and community building with other parents who have experienced loss, and assistance with ritual and ceremony for babies gone too soon. We also work to educate the community and perinatal health providers on how to best support and implement support systems for bereaved parents.

Accomplishments/Results: In our direct experience, we have seen profound shifts for bereaved parents as they connect with community and are able to acknowledge their babies in public and be witnessed as parents. They express hope, integrate their loss, and are better able to discuss their grief. We also worked with providers who report feeling significantly more confident and capable at interacting with clients experiencing loss. We are actively seeking research partners in order to study the effectiveness of peer led and directed support after Miscarriage, Stillbirth and Infant Loss.

Barriers: There is often so much silence and shame around pregnancy and infant loss, and as a result bereaved parents don't ask for support or assume professionals will be able to provide support in an appropriate way. Providers imply to us they don't understand the benefit of peer support until they encounter this important component of care for bereaved parents. We attempt to overcome these barriers by community building for bereaved parents and educating providers about the potentially transformative experience of bereaved parents realizing they are not alone.

Lessons Learned: The power of peer support and accompaniment is evident in every support group, community event and ceremony that we are involved with. Bereaved parents tell us that knowing that they are not alone is life changing. Providers have express thanks for the opportunity to learn about best practices when working with bereaved families. We highlight equity by providing free support groups, community events, a sliding scale that goes to zero, training and support to Black and People of Color birth workers serving communities disproportionately impacted by loss.

Information for Replication: N/A

Promoting Equity in Early Childcare Workforce Development: Lessons from a Culturally- and Linguistically-Relevant Trauma Training Initiative

Authors: Diana Chaves and Benjamin Rosado

Title: Promoting Equity in Early Childcare Workforce Development: Lessons from a Culturally- and Linguistically-Relevant Trauma Training Initiative

Issue: At least 1 in 5 children in Boston are exposed to one or more Adverse Childhood Experiences (ACEs), which can have long-term implications for physical, mental and behavioral health. Due to inequitable access to safety and healing resources, immigrant communities face a disproportionate ACEs prevalence. Spanish-speaking early childcare providers, particularly family- or -home-based providers, can serve as key “life lines” or protective factors in supporting of the resilience of Latinx immigrant young children and families. However, the majority of trauma-informed early childhood workforce development efforts have focused on primarily English-speaking, center-based providers, thus furthering the inequities faced by young children and families and indicating the need for culturally and linguistically-relevant initiatives.

Setting: Early childcare providers serving Spanish-speaking young children and families in the Boston, Massachusetts area.

Project: The Boston Public Health Commission’s Capacity Building & Training Initiative is a program of the Division of Violence Prevention that aims to create trauma-informed and equitable systems in Boston and beyond. A key strategy of CBTI is workforce development, which is recognized by the Centers for Disease Control and Prevention as an important violence prevention approach. CBTI achieves this in part through the delivery of multi-session public training institutes for providers designed to increase their trauma-informed knowledge and skills. Since 2014, over 5,000 providers have received training through single- or multi-session courses. In 2018, we identified Spanish-speaking early childcare providers, particularly family-based or in-home daycares, as an underserved population of providers. We translated our Trauma & Resilience Training Institute for Early Childcare Providers, a multi-module, interactive course aimed at increasing provider’s capacity to serve young children and families affected by trauma, and held our first bilingual pilot in May of 2018. We then engaged in a year-long process of engaging key stakeholders in focus group and interviews, as well as reviewing literature on best practices, to continually refine the training and ensure its cultural and linguistic relevance. The outcomes were measured via pre- and post-test survey questionnaires measuring changes in provider knowledge.

Accomplishments/Results: Thus far, approximately 80 providers serving over 800 children have participated in the training series, with one-quarter being Spanish-speaking. We have scheduled two

additional exclusively Spanish-language training series prior to September 2019, with an anticipated 45 providers participating total. In addition to qualitative evaluation surveys, pre- and post-test survey questionnaires are administered prior to and following the training. An evaluation by Boston Children's Hospital found a statistically significant ($p < .01$) difference in trauma-related knowledge and preparedness following the training.

Barriers: Limited staffing capacity for translation and delivery, resulting in implementation delays. We addressed this through hiring practices recognizing the importance of bilingual/bicultural applicants, and as a next step, focusing on training-of-the-trainer and other models that supports participants in disseminating this innovative content in their communities.

Lessons Learned: This initiative highlights the importance of a health equity lens when promoting trauma-informed systems of care for young children and families. Through creating a culturally- and linguistically-relevant trauma curriculum for early childcare providers, we addressed a gap in existing workforce development and violence prevention efforts.

Information for Replication: N/A

Preventing Pregnancy-Related Deaths: Lessons Learned from 13 Maternal Mortality Review Committees

Authors: Susanne Trost, Emily Petersen, Kelsey Coy, and David Goodman

Title: Preventing Pregnancy-Related Deaths: Lessons Learned from 13 Maternal Mortality Review Committees

Background: Maternal Mortality Review Committees (MMRCs) are multi-disciplinary committees that convene at the state or local level to comprehensively review deaths of women during or within a year of pregnancy, and identify opportunities for prevention. MMRCs have access to medical and social service records, in addition to vital statistics information.

Study Questions: What percent of pregnancy-related deaths were determined to be preventable by MMRCs, and what strategies can be implemented to eliminate preventable pregnancy-related deaths?

Methods: We analyzed data received from 13 state MMRCs on pregnancy-related deaths that occurred between 2013 and 2017; Arizona (2016), Colorado (2014–2015), Delaware (2013–2016), Florida (2017), Georgia (2013–2014), Hawaii (2015–2016), Illinois (2015), Mississippi (2016–2017), North Carolina (2014–2015), Ohio (2013–2016), South Carolina (2014–2017), Tennessee (2017) and Utah (2015–2016). We calculated the percent of deaths that were determined to have been preventable, and used chi-square tests to assess whether preventability differed by race/ethnicity. We also conducted thematic analyses of 1) factors that may have contributed to deaths, and 2) recommendations to prevent future deaths.

Results: The 13 MMRCs made preventability determinations for 264 (96%) of 285 pregnancy-related deaths reviewed. A total of 166 (63%) deaths were determined to be preventable. Preventability did not significantly differ between black and white women ($p=0.1$), or between Hispanic and white women ($p=0.2$), with 57% of deaths among black women, 68% among white women, and 61% among Hispanic women determined to be preventable. A total of 994 contributing factors were identified for 212 pregnancy-related deaths; each pregnancy-related death was associated with 4-5 contributing factors. Main themes in contributing factors included patient factors (e.g., nonadherence to medical regimens or advice, low health literacy), provider errors (e.g., ineffective, inappropriate, or delayed treatment; missed or delayed diagnosis; failure to refer or seek consultation), and system-level factors (e.g., poor case coordination, lack of guiding policies and procedures, inadequate or unavailable personnel or services). A total of 429 recommendations were identified for 174 pregnancy-related deaths, with 2-3 recommendations on average identified per death. Recommendations to address non-adherence and low health literacy included standardizing patient education to ensure providers relay consistent messages, expanding access to patient navigators and peer support programs, establishing perinatal psychiatry units, and ensuring access to interpreter services. Recommendations related to minimizing

provider errors included improving handoff communication, implementing a maternal early warning signs system, using telemedicine when no obstetrician is available, and implementing standard training for new clinicians on patient safety bundles. Lastly, recommendations pertaining to systems-level factors included extending Medicaid coverage to one year postpartum, developing and enforcing policies to address severe pregnancy and postpartum complications, and establishing maternal levels of care for all hospitals.

Conclusions: Over two-thirds of pregnancy-related deaths were determined to be preventable. Efforts should be made to address the multifactorial contributors to pregnancy-related mortality, and implement recommendations for preventing future deaths based on MMRC findings.

Public Health Implications: Multi-level improvements need to be implemented to help eliminate preventable pregnancy-related deaths.

Pre-Existing Health Conditions and Race as Determinants of Severe Maternal Morbidity in the District of Columbia, 2016-2017

Authors: Rebecca Winter, Patricia Lloyd, Anjali Talkwalkar, Lindsay Djinge, and Fern Johnson-Clarke

Title: Preexisting Health Conditions and Race as Determinants of Severe Maternal Morbidity in the District of Columbia, 2016-2017

Background: Addressing maternal mortality and morbidity is a high priority for the District Government. The DC Health Department uses a life course approach to address perinatal health and health disparities, recognizing that a person's health is determined by factors present prior to conception, and that poverty and racism profoundly affect psychosocial well-being. Severe maternal morbidity (SMM) is a critical measure of maternal health and is defined as unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health. SMM includes 21 morbidities based on diagnoses and procedures received during the hospital stay. For every 10,000 District residents who delivered a baby in a hospital within the District of Columbia (DC) in 2014, 205 experienced a severe maternal morbidity (SMM) during the delivery hospital stay. The rate exceeded the 2014 national rate of 140 SMM per 10,000 deliveries.

Study Questions: This study used hospital discharge data from the District's acute care hospitals during 2016-2017 to examine the association between District-resident women's sociodemographic characteristics, comorbid health conditions and experiences of SMM during delivery hospital stays.

Methods: Logit regression was used to assess the association between having at least one non-fatal SMM and sociodemographic factors (race, age, and insurance type) and comorbidities (preexisting or gestational diabetes, obesity, drug or alcohol use during pregnancy, mental health related diagnoses and preexisting or gestational hypertension).

Results: During the two-year study period, 17,688 District-resident women delivered a live birth in a District of Columbia hospital and 403 women experienced at least one SMM. Women with hypertension (preexisting or gestational) had three times greater odds of experiencing at least one SMM during their delivery hospital stay (adjusted odds ratio (AOR): 3.2; 95% CI: 2.6, 4.0) compared to women with no report of hypertension. The odds of SMM were two times greater among Black District-resident women, compared with White District-resident women (AOR: 2.1, 95% CI: 1.5, 2.8).

Conclusions: Among all comorbidities explored, hypertension emerges as having the strongest association with SMM.

Public Health Implications: The findings from this analysis, that race and hypertension were associated with SMM, support the District's current strategy to address perinatal and preconception health.

Further research is needed to better understand the pathways of SMM risk, so that appropriate safeguards and interventions can be identified and implemented. Results will be shared with the District's newly formed Maternal Mortality Review Committee, and may help the District prioritize appropriate strategies to avoid future preventable maternal morbidity and mortality.

Framing an Ecological Systems Approach: How State Title V Maternal and Child Health Block Grant Programs Address Maternal Mortality/Morbidity

Authors: Patricia Fanflik, Michele Lawler, and Ellen Volpe

Title: Framing an Ecological Systems Approach: How State Title V Maternal and Child Health Block Grant Programs Address Maternal Mortality/Morbidity

Background: Each year in the United States, approximately 700 women die of pregnancy-related causes, and more than 50,000 experience pregnancy complications. Chronic conditions may be putting women at higher risk of pregnancy complications. Title V of the Social Security Act is a key source of support for states/jurisdictions in promoting and improving the health of mothers, children, and families. Through the Maternal and Child Health (MCH) Block Grant, the federal government distributes funding to each state/jurisdiction. The unique federal/state partnership provides states with appropriate flexibility to respond to state-specific needs of the MCH population through evidence-based strategies. Programmatic approaches for addressing identified MCH needs are determined by the state, which results in a broad range of Title V program activities. An Ecological Systems approach provides a framework that brings together multiple components of public health systems that highlight individual, interpersonal, community, and societal factors to promote greater clarity and direction toward effective service delivery. Examining public health issues through Ecological Systems helps to identify factors that impact health, while considering multiple socio-cultural influences. This framework has gained attention in the field of health promotion and is often utilized in the development of prevention/intervention strategies. There is a paucity of research examining maternal mortality/morbidity reduction strategies using an Ecological Systems approach.

Study Questions: What does an Ecological Systems approach to maternal mortality/morbidity look like in State Title V MCH programs?

Methods: This study utilized a qualitative research design. Secondary data was gleaned from State MCH Block Grant Application/Annual Reports archived in the Title V Information System. Data examining state maternal mortality/morbidity activities was extracted and shared with each state to confirm for accuracy. Data was analyzed using content analysis to ascertain concepts, patterns, and themes. A limitation of this study is the use of self-reported data and potential sources of bias.

Results: A majority of states/jurisdictions reported maternal mortality reviews and/or other activities to address maternal mortality/morbidity. Although the study was not developed within a preexisting framework, data analysis revealed multiple system involvement underlying maternal mortality/morbidity reduction strategies. States developed or augmented strategies targeting individual, interpersonal, community, and societal level factors that encompass an Ecological Systems approach. Central to this finding was a state's ability to leverage other funding to address the

comprehensive needs of the MCH population. States were successful in convening partners and leveraging resources to strengthen systems of care to address maternal mortality/morbidity.

Conclusions: An Ecological Systems approach offers a comprehensive understanding of this critical public health issue to inform program development and improvement. Findings from this research will help build on the evidence base to strengthen strategic planning in developing standards and guidelines to assist State MCH Programs. This approach can target prevention strategies and enhance access to preventive and primary care health services to reduce future deaths.

Public Health Implications: Understanding this health issue requires a comprehensive understanding of all factors that contribute to maternal mortality/morbidity and can assist states in developing more cogent public health recommendations to decrease maternal deaths and to address issues that lead to maternal morbidity.

Centering Women's Voices in Maternity Care Quality Improvement: A Demonstration Project of the Reducing Peripartum Racial/Ethnic Disparities Bundle

Authors: Andria Cornell, Chanel Porchia-Albert, Marci Rosa, Poulette Brewster, Kaitlin Doyle, and Shanon McNab

Title: Centering Women's Voices in Maternity Care Quality Improvement: A Demonstration Project of the Reducing Peripartum Racial/Ethnic Disparities Bundle

Issue: In 2016, the Alliance for Innovation on Maternal Health (AIM) released the patient safety bundle: Reduction of Peripartum Racial/Ethnic Disparities. This bundle equips hospitals and health professionals with evidence-based strategies to address inequities that systematically and negatively affect women of color. While other bundles developed by AIM are accompanied by a toolkit to support implementation, a hospital toolkit to advance birth equity is not widely available. Furthermore, reducing disparities in maternal health and advancing birth equity requires authentic partnership between the communities served by the hospitals and the hospital and health professionals. These partnerships are the foundation of readiness for change but resources to support building them are limited.

Setting: Within AIM, AMCHP, Northwell Health, Ancient Song Doula Services, and Public Health Solutions, which administers the Jamaica-Southeast Queens Healthy Start program, came together for a demonstration project of the Reduction of Peripartum Racial/Ethnic Disparities Bundle. The first demonstration site is Long Island Jewish Medical Center (LIJMC), a hospital with more than 9,000 births per year (the largest maternity program in New York) located on Long Island. The demographic make-up of births at the hospital include: 45% foreign-born, 38% with Medicaid as the payer, 36% White, 21% Black, 20% Hispanic origin, and 23% Asian or Pacific Islander.

Project: The demonstration project launched on January 2018 at LIJMC with nearly 100 health professionals and administrators. Clinical leaders and partners shared the bundle to build commitment to reducing maternal health disparities. Since the launch, Northwell Health focused on calculating a baseline severe maternal morbidity (SMM) rate at LIJMC, strategizing to monitor this outcome over time, and exploring the SMM rate by race with Ancient Song Doula Services and Public Health Solutions serving individuals who birth at the hospital. The project partners then co-designed a facilitated conversation guide and at the end of 2018, the community partners hosted focus groups with women of color who birthed at LIJMC to identify quality improvement opportunities in their own words. The project team will communicate findings to hospital leadership to prioritize action steps from the bundle and integrate patient partners into ongoing activities.

Accomplishments/Results: The findings of the focus groups demonstrate the value of a safe space, created and nurtured by trusted organizational partners, for individuals to express their birth stories and identify improvement opportunities. We honor these stories by grounding our efforts in their voices.

Barriers: Building community-clinic partnerships takes time that is essential for building trust (“Progress at the speed of trust”). Other essentials include appropriate compensation for community partners' expertise and their vital role as a bridge to individuals served by the hospital. We are committed to fostering a sustainable team that prioritizes transparency and equality.

Lessons Learned: Our take home messages are that equity is not owned by a single sector and clinic-community partnerships are essential to identify and implement joint accountability for birth equity; progress will happen, but at the speed of trust; taking time to invest in readiness and capacity for health equity will increase the likelihood of success for bundle implementation.

Information for Replication: N/A

Timing and Intensity of Early Intervention (EI) Service Utilization and Outcomes Among a Safety-Net Population of Children

Authors: Beth McManus, Zachary Richardson, Margaret Schenkman, Natalie Murphy, and Elaine Morrato

Title: Timing and Intensity of Early Intervention (EI) Service Utilization and Outcomes Among a Safety-Net Population of Children

Background: Federal per child early intervention (EI) appropriations have declined while accountability for improving children's development and function has increased. Indeed, it is critical to understand high value EI services and systems.

Study Questions: To examine EI service timeliness and intensity, and the association between service intensity and outcomes.

Methods: Secondary data analysis of linked pediatric primary care electronic health record and EI program records from 10/1/2014 to 9/30/2016 from a large, urban safety net health system and EI program. Sample children (n=722) were less than 35 months of age with a developmental disability or delay. Outcome measures were EI timeliness (days from referral to EI care plan), service intensity (hours/month) overall and for core EI services (physical [PT], occupational [OT], and speech therapy [ST], developmental intervention [DI]), and change in function (measured using the Child Outcomes Summary on a 13-point scale). Adjusted quantile median regression estimated timeliness and intensity. Adjusted linear regression estimated change in function. We included measures of condition type and severity, race and ethnicity, family income, insurance type, sex, birthweight, and language.

Results: A majority of children (n=722) were male (63%). 62% were under 12 months old, 29% were 12-24 months, and 9% were 24-35 months old. 92% had a household income of less than \$20,000 annually. Median [IQR] days to receive an EI care plan was 56 [1, 110]; only 43% of sample children received an EI care plan within the 45-day deadline. Median [IQR] EI intensity (hours/month) was 2.7 [2.3, 3.6]. Children living above the FPL received greater OT intensity (b=1.94, 95% CI=0.9, 3.0). Greater clinical severity was associated with receipt of more intensive PT and DI. Compared to infants, 2-year olds received a care plan almost 2 months sooner (b=-52.0, 95% CI=-79.7, -24.3). An additional hour per month of EI service was associated with a 3-point functional gain (b=3.0, 95% CI=1.5, 5.9) among children with complete outcomes information (n=448).

Conclusions: Greater EI service intensity was associated with better functional gains, yet most study children received delayed care and/or low service intensity.

Public Health Implications: Clinical and EI record linkages could serve as a framework for improving EI processes. For example, as EI systems, locally and statewide, are improving functionality of their electronic data capture systems, opportunities exist for surveillance of service use and quality assurance projects to mitigate disparities and to optimize functional outcomes among EI-enrolled children.

A Mixed Methods Analysis of Family-Centered Care and Early Intervention (EI) Service Use Intensity

Authors: Beth McManus, Zachary Richardson, Margaret Schenkman, Natalie Murphy, and

Elaine Morrato

Background: Family-centered services are essential for pediatric rehabilitation. Many parents of children with developmental disabilities experience caregiver burden. When parents have the resources and capacity to fully engage in the planning and implementation of child's rehabilitation, outcomes are more optimal. Nationally, 1/3 of parents report low satisfaction with the family-centeredness of their Early Intervention (EI) care and, in some states, only ½ of eligible families actively engage in EI care planning. However, EI-specific care processes among EI-enrolled families are not well understood nor is their relationship with EI service use.

Study Questions: The purpose of this study is to examine parent- and provider-reported EI care processes and describe the association between perceptions of EI care quality and EI service intensity.

Methods: This was a sequential mixed methods analysis. Participants included EI parents (n=24) and providers (n=31) from one urban EI program (1/1/18-6/1/18). Parents were eligible to participate if they had a child who was currently receiving EI care from the study program. Parent and provider perceptions of EI care quality were measured using the Measures of Processes of Care. The MPOC-SP (29-items, 7-point scale) was administered electronically to EI providers; the MPOC-56 (56-items, 7-point scale) was administered electronically to parents. We then linked survey responses with children's characteristics and service use ascertained through EI records. Low satisfaction was defined as more than 1SD below mean on sub-scale responses. We first estimated the correlation between parent and provider MPOC scores and then used adjusted linear regression to estimate the association between EI service intensity (hours/month) and MPOC scores accounting for child characteristics.

Results: Parents [M=5.6, SD=1.3] and providers [M=4.0, SD=1.4] reported low satisfaction related to receipt / provision of general information. Parent and provider sub-scale scores were not correlated except that parent-reported receipt of specific information was inversely associated with provider-reported provision of general information ($r=-0.4$, $p<.05$). In the adjusted models, total parent scores were positively associated with EI service intensity ($b=1.08$, $SE=0.49$). Parent perceptions related to respectful and supportive care were positively associated with EI intensity ($b=1.57$, $SE=0.56$). Parents whose primary language was English had higher total MPOC scores ($b=2.01$, $SE=0.87$).

Conclusions: We found that EI parents and providers reported high quality EI care delivery, with the exception of information sharing. Greater service intensity was associated with perceptions of better overall care quality.

Public Health Implications: Despite widespread advocacy of family-centered care principles, research regarding family-oriented pediatric rehabilitation service delivery is relatively sparse. Our study findings highlight opportunities for EI care quality improvement in the areas of parent-provider communication and care planning, including mitigating language barriers.

Mapping Innovation at the Intersection of Early Childhood Health, Equity, and Learning

Authors: Sarah Shea Crowne, Kelley Devlin, Colleen Bernard, and Sarah Shea Crowne

Title: Mapping Innovation at the Intersection of Early Childhood Health, Equity, and Learning

Issue: Over the past decade, public/private sector funders, policymakers, and practitioners have increasingly recognized that promotion of healthy child development is an essential building block for long-term health and learning. However, a gap in knowledge persists about the individual approaches and methodologies currently used by communities, states, and networks to improve early childhood systems that promote health equity. This gap presents possibilities to identify early childhood initiatives at each level and develop a repository of information for stakeholders.

Setting: With a national scope and cross-sector focus, the Early Childhood Health Equity (ECHE) Landscape Project is funded by the Robert Wood Johnson Foundation and co-led by two non-profit organizations: National Institute for Children’s Health Quality (NICHQ) and Child Trends. Through multi-pronged activities, the NICHQ/Child Trends team is systematically gathering and synthesizing information about the innovative approaches being applied at the intersection of early childhood and health equity, while engaging stakeholders around progress, challenges, and opportunities. Our intended audience includes a wide range of professionals and policymakers – as well as the children, parents, families, and communities they serve.

Project: The ECHE Landscape Project is addressing the existing knowledge gap noted here by analyzing the range of national, state, and local initiatives that promote equity in education and wellness among children ages 0-8 and their families. Efforts are focused upon improving early childhood health outcomes by elevating promising practices that cultivate more effective, equitable child/family-serving systems, including those that deliver maternal child health (MCH) supports and services. The ECHE Landscape Project aims to inform programming and policymaking in the early childhood field and to support decision-making among communities, policymakers, and funders. The Project also seeks to develop high-quality products, such as a map and profiles of promising practices, that can be shared publicly.

Accomplishments/Results: Launched in late 2018, the ECHE Landscape Project is in its early stages. We have begun robust information-gathering activities, including an environmental scan of early childhood initiatives that prioritize health equity in their approach to serving children and families. In 2019, the Project will convene multisector stakeholders to provide insights on the current status of early childhood and health equity initiatives, as well as reflections on emerging themes and next steps for project components.

Barriers: Given our broad strategies to uncover approaches and methodologies that address early childhood and health equity, one barrier we have encountered is difficulty identifying smaller initiatives

at the community-level, as well as those focused on serving hard-to-reach populations, both of which tend to have less visibility. Another barrier we face is determining when and how to reach saturation in our landscape analysis, through which we aim to be as comprehensive as possible.

Lessons Learned: We expect that lessons learned will include the critical importance of inclusivity, equity, and representation in all ECHE Landscape Project activities – from engaging stakeholders across disciplines, settings, and identities – to thinking about what products will best reach and serve intended audiences. As our work continues, we will gather additional lessons learned on key takeaways, process improvements, and broader implications for public health.

Information for Replication: Going forward, we also plan to replicate and scale-up our multisector stakeholder engagement activities in 2020 and disseminate outcomes, resources, and products.

Reducing Prematurity and Promoting Infant Vitality with Neighborhood Coalitions

Authors: De Lena Scales

Title: Reducing Prematurity and Promoting Infant Vitality with Neighborhood Coalitions

Issue: Every week approximately three babies die before their first birthday in Franklin County, Ohio. CelebrateOne, a place-based, collective impact initiative, was developed as a result of recommendations set forth by the Greater Columbus Infant Mortality Task Force in 2014 to reduce infant mortality in areas with the highest rates, deemed priority neighborhoods. Multiple industry leaders, as well as community-based, faith-based, and health-focused agencies, have partnered in these areas, resulting in an abundance of programming to address multiple facets of the infant mortality issue. Unfortunately, lack of coordination of this programming has led to gaps in care and confusion among residents as to where to turn for needed services.

Setting: CelebrateOne priority neighborhoods known as Linden, Northeast, and Northland have some of the highest infant mortality rates in Franklin County. These areas are also home to rich programming, passionate community leaders, and motivated residents with the common goal of making neighborhoods safer and healthier for moms-to-be, babies, and families.

Project: In 2018, CelebrateOne employed Neighborhood Integration Managers (NIMs) to convene priority neighborhood community partners, as well as neighborhood-based preconception, prenatal, and postpartum service providers to assess service utilization gaps, identify ways to increase awareness of services among providers and residents, and to formulate action plans to facilitate better coordination of available programming. The NIMs entrusted to do this work live, play, and worship in these areas. They are considered trusted members of the community and are able to serve as neighborhood integrators and regional communicators while building and maintaining relationships with strategic partners. In Linden, Northeast, and Northland, the NIM's reputation within the community resulted in the creation of alliances among local agencies that traditionally do not work together. These newfound alliances are facilitating closure of service gaps and enhancing opportunities for agency collaboration, ultimately removing barriers for expectant mothers.

Accomplishments/Results: More than 64 stakeholders in Linden, Northeast, and Northland, comprising residents, community organizations, government institutions, and faith leaders, have committed to working in tandem to reduce infant mortality in these areas. As a result, the number of scheduled infant safe sleep training increased by 50%, a directory of services was developed as a quick reference guide for area agencies and service providers, and the awareness of community health and social wellness services increased by 100% among stakeholders. With continued commitment, the long-term outcomes will include a decrease in the number of babies born too small or too soon and the elimination of preventable sleep-related deaths.

Barriers: The multitude of stakeholders involved has made it difficult to select meeting times convenient for everyone. Alternating meeting times and locations have helped facilitate the involvement of all interested parties.

Lessons Learned: Infant mortality reduction cannot be done in isolation. While multiple agencies are each working toward this common goal, a lack of coordination can stifle the results of this work. Utilizing reputable community leaders to integrate area resources can eliminate service gaps so that expectant women and their networks can receive what they need for a healthy pregnancy and beyond.

Information for Replication: N/A

17P Prematurity Prevention in Tarrant County: Participation, Barriers and Birth Outcomes

Authors: J'Vonnah Maryman, Kyrah Brown, Rose Kimball, and Marisol Vazquez

Title: 17P Prematurity Prevention in Tarrant County: Participation, Barriers and Birth Outcomes

Issue: In Texas, the pre-term birth rate among African-American women is 41% higher than the rate among all other women. Women who have had prior pre-term birth, as well as African-American women, are at increased risk of pre-term birth nationwide and in Tarrant County. Based on simple observation and current numbers, 17P staff at Tarrant County Public Health believe African-American women are being underserved by the program. Tarrant County's mission is to uncover any barriers to entry of the program for African-American and other women. This is important because use of 17P has been proven to reduce prematurity.

Setting: This project took place in Ft. Worth, TX. Data from the 17P program were analyzed for participants who utilized the 17P injection and those who were referred to the program but did not receive injections. Participants were referred to the program through local clinics as well as other sources. The goal of the program is to provide case management and education to all women referred.

Project: Patient data was collected by 17P staff over the course of three years beginning in (DY4-DY7). A total of n=364 participants were referred to the program during this time. Out of the 364 patients, 225 were actively participating (active) and 103 were not actively participating (inactive). Active participants were defined as those who were actively receiving the 17P injection. Inactive participants were defined as those who were not actively receiving the 17P injection based on preidentified reasons.

Accomplishments/Results: The majority of all patients referred to the program were Hispanic, and the majority of active patients were Hispanic. JPS referred the highest frequency of all patients to the program. The majority of both active and inactive patients used Medicaid as their insurance type. Of all women referred to the program, 15.2% were in the program prior to the current pregnancy. The most frequent gestational age for active patients was 16 weeks. The top three reasons for non-participation overall and by race are as follows (in order of frequency): the patient was too late to start the program, the patient was eligible but their doctor declined, the patient was loss to follow-up for unspecified reasons. African-American women appear to be more likely to become inactive after initial referral to 17P. A total of 79 African-American women were referred to 17P; 45 of the referred began actively receiving 17P injections while 27 did not. Results from the analysis suggest that adherence to the 17P shot schedule results in better birth outcomes for patients.

Barriers: Barriers to program evaluation included missing data. Many cases had to be excluded from analysis due to missing data.

Lessons Learned: Future data collection should minimize missing data and ensure data collection methods are consistent over the years. It is important to note that quantitative data does not reveal participant perspectives on possible barriers, so periodic qualitative assessments should be conducted to measure program success.

Information for Replication: N/A

Non-Latina White and African-American Women's Unhealthy Pregnancy-Related Behaviors and Early (<34 weeks) Preterm Birth Rates in Chicago: Fathers Matter!

Authors: Aaron Weiss, Carla DeSisto, Nana Matoba, and James W. Collins Jr.

Title: Non-Latina White and African-American Women's Unhealthy Pregnancy-Related Behaviors and Early (<34 weeks) Preterm Birth Rates in Chicago: Fathers Matter!

Background: An expanding published literature shows that paternal non-acknowledgement and low socioeconomic position (SEP) are strong risk factors for adverse birth outcomes. Most pertinent, a recent study found that paternal acknowledgement on the birth certificate explained a larger proportion of the racial disparity in preterm birth (PTB) rates than maternal education (Desisto et al., Ann Epi, 2018). The mechanisms underlying the association of paternal acknowledgement, SEP, and adverse birth outcomes are incompletely understood.

Study Questions: To what extent is the proportion of excess early (<34 weeks' gestation) PTB rates among non-acknowledged and acknowledged low SEP fathers, compared to acknowledged high SEP fathers, attributable to mother's unhealthy pregnancy-related behaviors?

Methods: Oaxaca-Blinder decomposition analyses were performed on the Illinois Transgenerational Birth File of infants (1989-1991) and their parents (1956-1976) with appended US census income information. Paternal SEP was defined by the neighborhood income at the time of his birth and at the time of his infant's birth. Maternal unhealthy pregnancy-related behaviors included inadequate prenatal care usage, low weight gain, or cigarette smoking. Our objective measurement of father's SEP at the time of delivery may be inaccurate for those who didn't live in the same house or census tract as the mother.

Results: Among non-Latina White women, the early PTB rate for those with non-acknowledged (N=3,260), acknowledged low SEP (N=1,430), and acknowledged high SEP (N=9,141) fathers equaled 4.02%, 1.82%, and 1.19%, respectively ($p<0.001$). In Oaxaca decomposition models (controlling for maternal age, education, and marital status), White mother's unhealthy pregnancy-related behaviors were responsible for 20.3% and 41.4% of the explained disparities in early PTB rates for non-acknowledged and acknowledged low SEP (compared to acknowledged high) fathers, respectively. Among African-American women, the early PTB rate for non-acknowledged (N=22,727), acknowledged low SEP (N=4,426), and acknowledged high SEP (N=365) fathers equaled 6.72%, 4.34%, and 3.29%, respectively ($p<0.001$). African-American mother's unhealthy pregnancy-related behaviors were responsible for 24.6% and 20.7% of the explained disparities in early PTB rates for non-acknowledged and acknowledged low SEP fathers, respectively.

Conclusions: In both races, paternal non-acknowledgement and low SEP are strong determinants of early PTB. Most striking, the mother's unhealthy pregnancy-related behaviors explain a significant proportion of the increased risk in early PTB among both non-acknowledged and acknowledged low SEP (compared to acknowledged high) fathers.

Public Health Implications: We encourage maternal and child health practitioners to consider paternal acknowledgement and SEP when designing intervention programs to improve birth outcomes.

Using Collective Impact to Achieve Success

Authors: Angela Newman-White and Marie Jones

Title: Using Collective Impact to Achieve Success

Issue: Cuyahoga County has consistently produced higher rates in poor birth outcomes and infant mortality than the state and the nation. The 2016 preterm birth (PTB) rate for the county was 11.8% (Black PTB- 16%; White PTB-9.2%), compared to the state at 10.3%. Similarly, Cuyahoga County's low birth rate (LBW) was 10.9% (Black LBW- 15.8%; White LBW- 7.7%) compared to the state at 8.7%. The 2012-16 overall Cuyahoga County infant mortality rate was 9.0, with the disparity of 2.8 (Black IMR - 15.4; White IMR- 5.6).

Setting: In the 44128 zip code the infant death rate was 23.1 in 2015, compared to 15.9 in Cleveland, 10.5 in Cuyahoga County, 7.4 in Ohio and 5.9 in the U.S. The majority of the deaths occurred in 4 "hot spots" with 77.4% of babies dying due to complications from preterm birth and 5.7% in unsafe sleep environment.

Project: Using the collective impact framework, a multi-disciplinary team identified 3 key areas to support healthier birth outcomes which included: education, advocacy, and programming. Breastfeeding is a protective factor for infant mortality. Residents expressed the need for breastfeeding support in their community, specifically within the churches. With support of a local program, we were able to solicit proposals from faith based institutions to establish or enhance breastfeeding friendly spaces. The purpose was to raise awareness and normalize breastfeeding in public spaces. Up to 10 awards in the amount of \$500 were made available to churches and child care centers in 44128. When assessing access to labor and delivery, we discovered a gap on the east side of the county. With 7 labor and delivery hospitals, only 2 are located on the county's east side, where half of the births occur and the higher incidence of infant death occurs. Support from family and your community is a protective factor for infant mortality. Residents requested to increase opportunities for engagement through community events to develop relationships and decrease stress. A series of events were coordinated to highlight strengths in the community and to raising awareness.

Accomplishments/Results: Between 2007-2016, 80 infant deaths occurred in 44128 zip code, with an IMR of 21.84 for that time period. From 2017-2018, 5 infant deaths occurred with an IMR of 6.66 for that time period, which is lower than the Cuyahoga County average of 8.14. These 5 deaths in a 2 year period explain a 68.75% reduction in infant deaths in that zip code.

Barriers: Barriers in the process included effective strategies to measure impact of breastfeeding spaces in churches. In the future, we will look at data collection to show impact. We also were unable to implement a policy to support expansion of labor and delivery services within the time frame but we will continue to pursue this effort ongoing.

Lessons Learned: Community involvement in planning and implementation of efforts is key to success. There is value to funding non-traditional strategies to improve health outcomes.

Information for Replication: Strong Partnerships with community residents; funding to support implementation of identified strategies and activities

Investing in Place as a Social Determinant for Mothers and Children: MCH and Rhode Island's Health Equity Zones

Authors: Deborah Garneau and Jaime Comella

Title: Investing in Place as a Social Determinant for Mothers and Children: MCH and Rhode Island's Health Equity Zones

Issue: Rhode Island (RI) has made strides over the last decade to improve population health outcomes yet, disparities persist. Research shows that population-wide improvements in health outcomes cannot be achieved without addressing the underlying causes of inequities in health outcomes. Utilizing the Health Impact Pyramid framework, RI set out to create an infrastructure that allowed communities to lead efforts to address the social determinants of health (SDOH) impacting their residents. This presentation will describe how the Rhode Island Department of Health (RIDOH) has changed the way it carries out its mission by focusing on addressing SDOH, eliminating health disparities, and achieving health equity. It also will describe the key components of its Health Equity Zone initiative which has been scaled up across the state, and validated for replication in other states.

Setting: Rhode Island's Health Equity Zones began with 11 designated local collaboratives and currently includes 9 local collaboratives of varying sizes.

Project: Health Equity Zones (HEZs) are contiguous geographic areas small enough to have a significant impact on improving health outcomes, yet large enough to impact multiple communities. HEZs start by building collaboratives that include diverse stakeholders, and are designed to provide an effective, community-led infrastructure that can drive the transformation of policies and systems for healthier living over the long term. Collaboratives demonstrate meaningful, authentic engagement of all stakeholders, providing a unified vision and effective platform for collective action at the local level. RI's model is organized around a four-year funding cycle, during which HEZs are required to: Build a community-based collaborative to focus on collective impact; Conduct a baseline assessment of the health status of residents living within the HEZ; Develop a plan of action informed by the community needs assessment; Implement the plan of action, relying primarily on evidence-based strategies; Collect information on the implementation of the action plan and provide regular reports to RIDOH; and, Develop a sustainability plan.

Accomplishments/Results: In the 4 years of the program, 9 HEZs across our state have been able to form strong collaboratives, define their unique needs, and address them with innovative solutions. Notable improvements to services available for women, infants, children and adolescents include: Walking School Bus programs and community-led initiatives to increase awareness about mental health, among others. There is no question of the impact HEZ infrastructure is having on both our ability as the state's health department to align our goals with community-led initiatives and to improve the lives of our MCH population in the most vulnerable communities.

Barriers: The early barrier to this project was identifying and fostering strong community collaborative infrastructures that had the capacity to handle large public health investments. An ongoing barrier to the success of the initiative is categorical funding streams that leave little room for funding the infrastructure necessary to sustain successful collaboratives.

Lessons Learned: We have learned several lessons throughout this process about creating sustainable infrastructure, conducting comprehensive community-led needs assessments, scaling investments to reflect community readiness, and having clear, collective decision making frameworks that both empower communities, and empowers public health to provide support to local communities.

Information for Replication: N/A

Partnering with Public Health to Create a Health Equity Zone

Authors: Helena Girouard and Dixie Morgese

Title: Partnering with Public Health to Create a Health Equity Zone

Issue: The Florida Department of Health in Volusia County (DOH) has a demonstrated history and commitment to reduce social and health inequities. As funding for public health and other social services continues to diminish, communities must resort to localized interventions such as targeted place-based strategies in neighborhoods with the highest disparities.

Setting: The 32114 ZIP code is located within the City of Daytona Beach on the east coast of Volusia County in central Florida with a population of 31,815. The demographic breakdown of residents living in ZIP code 32114 is 50.6% Black, 42.7% White and 6.7% other with a total population of 31,385. Almost 1 out of 5 families in 32114 are living below the 200% poverty level and the unemployment rate is 12.3%. ZIP code 32114, which is in the northeast health quadrant of the county, has been identified as having the highest need for intervention based on negative health indicators. In the 2015 Community Health Needs Assessment survey, residents in 32114 reported homelessness, alcohol/drug addiction, mental health issues, unemployment, poor nutrition, overweight/obese and child abuse/neglect as the top health concerns. This ZIP code which has the highest percentage of African American population (50.6%) within the county, also has the highest death rates for infants, cancer, coronary heart disease, diabetes and stroke than all other health quadrants. In Volusia County, infant death rates are generally higher in predominantly African American communities than any other racial groups.

Project: DOH has been recruiting, hiring and training residents to serve as front-line staff in community based programs in ZIP code 32114. This strategy enables the agency to provide culturally appropriate services to clients with a clear understanding of the lived experiences of those they serve while also addressing structural inequities related to healthcare access, gender, race, income, transportation and economic development. To decrease barriers related to transportation and access to care for services related to the social determinants of health, DOH has invited partners that provide assistance with housing, maternal/child health services, early learning needs, transportation, veteran services, utilities etc. to share space.

Accomplishments/Results: As a result of the partnership, organizations involved are working on a streamlined eligibility and intake process and documents to reduce replication and undue stress to consumers. The partners held a one day meeting to understand the eligibility requirements of each program so they can develop a cross-referral process. DOH has secured a building in ZIP code 32114 which will house programs and partners targeting the identified needs. Residents are becoming engaged in changing the narrative and driving change!

Barriers: Eligibility requirements are redundant across programs and agencies and often untenable for consumers.

Lessons Learned: If health equity is the goal, authentic community engagement and partnership development are critical.

Information for Replication: Partnership development and community engagement necessitates communities and health departments to secure dedicated staff with a passion for continuously digging deeper to challenge the status quo. It also requires ceding control to the community being served through community dialogue, hiring staff from the community and locating services in the target community.

Collaborating with Local Government in the Goal Toward Health Equity

Authors: Dixie Morgese and Angelo Graziano

Title: Collaborating with Local Government in the Goal Toward Health Equity

Issue: Health and Human Service agencies are often not integrating efforts with municipal government to address maternal and child health needs. In the 32114 Zip Code of Daytona Beach Florida, multiple social determinants of health have an impact on residents. These include poverty, crime, low birth weight, child maltreatment, trauma exposure, domestic violence, unemployment, and homelessness.

Setting: Daytona Beach Florida, located in the County of Volusia in the Northeast Central part of Florida.

Project: Homeless Outreach Team (H.O.T.), which is a collaborative with Healthy Start, Daytona Beach Police Department, Homeless Coalition, and Halifax Health aimed at providing effective interventions for homeless pregnant women and homeless families with young children.

Accomplishments/Results: Development of a process for police to connect homeless pregnant women/families to the Healthy Start Family Place for linkage to housing Reduction of time waiting for safe shelter from an average of 78 days to 24-48 hours Leveraging of \$50,000 in local funds for concrete support to help families get to safe shelter Establishment of regularly scheduled multidisciplinary staffing activities that incorporates legal, child welfare, law enforcement, OB/GYN, Pediatric, housing, public health, peer support, and home visiting/care coordination to more effectively wrap around the parents to rapidly house and address critical health needs with the family.

Barriers: After rapid shelter is provided, affordable housing long term can be a challenge Parents with a developmental disability need specific services to evaluate and diagnose prior to accessing SSD Homeless families can be afraid of police and not recognize they are trying to help Staff need training about expectations for supporting families who may have trauma Women as single head of households may not achieve a living wage that can support stable housing even when working full time. Barriers are addressed through training, relationship-building, and identifying additional partners to support the effort.

Lessons Learned: Police are nice and willing to help. Police can be a vital partner in helping support maternal and child health. Having a walk-in place based structure supports partnerships. Finding safe places for families is critical to positive outcomes.

Information for Replication: N/A

Pregnant Pause: Falling Rates of Teen Pregnancy in Central Falls

Authors: Beata Nelken, Rachel Hill, Liz Taliaferro, and Sarah Bourne

Title: Pregnant Pause: Falling Rates of Teen Pregnancy in Central Falls

Issue: Central Falls (CF) historically has had the highest teen pregnancy rate in Rhode Island. Teenage pregnancy is correlated with decreased academic achievement and increased risk of poverty, preterm birth, and low-birth weight. Research shows that comprehensive sexual health education reduces adolescent pregnancy and STIs while access to confidential sexual health and family planning services reduces unintended pregnancy. This project aims to reduce teenage pregnancy rates through: 1. SexEd by BrownMed, a sexual health education program and, 2. A School-Based Health Clinic (SBHC) with Title X services.

Setting: Programs are held in Calcutt Middle School (CMS) and Central Falls High School (CFHS), accessing approximately 70% of teens in the city. CF has the lowest median income in the state, is approximately 70% Latino, and has a large immigrant population. Sexual health education previously was variable in content and compliance and not comprehensive. Confidential health care access is limited in CF and roughly only 70% of the population has health insurance, the majority RteCare.

Project: In 2014, Blackstone Valley Community Health Center opened the SBHC in CFHS. SBHC provides multilingual, confidential sexual health care without parental consent. The SBHC Director tracks contraception use, teen pregnancy data, and STI incidence. In 2014, Sex Ed by Brown Med began sending medical students to teach an evidence-based sexual health curriculum to 7th graders at CMS, and eventually expanded to CFHS in 2018.

Accomplishments/Results: As of 2018, CF no longer holds the highest teen pregnancy rate in RI. Over 500 students receive healthcare at SBHC annually and over 200 have been started on contraception. Since 2016, teenage pregnancy has decreased by 55%, with the rate of decline more than doubling since 2015, and incidence of Chlamydia has decreased by 28%. Approximately 450 total students have completed the Sex Ed by Brown Med program. The data demonstrates a significant improvement in sexual health knowledge and willingness to engage in dialogue around sexual health.

Barriers: Reduced staff hours, consistent funding for birth control, and many non-reimbursable visits are barriers to sustainability. The heavy mental health burden among students consumes significant provider time. Occasional breaches of confidentiality have occurred. Access to sexual health care after completion of high school is limited, hindering care among 18 to 19-year-olds. SexEd by BrownMed relies on medical student volunteers with demanding schedules and navigating the landscape of the education system can be challenging.

Lessons Learned: Title X SBHCs successfully provide convenient, confidential, multicultural, multilingual care. Providing Title X services to uninsured adolescents is financially challenging. Physicians, parents, and teachers are not consistently providing sexual education, despite many sexually active and curious

adolescents. Behavioral health conditions among adolescents are under treated and can cause risky behaviors.

Information for Replication: This model is financially easy to replicate among patients of RiteCare, but more expensive to replicate among uninsured or privately insured patients due to in-kind services and medications provided. Grant funding has helped the current model. City School Boards are reluctant to approve Title X school services.

What Does It Take to Overcome Community Barriers to Addressing Adolescent Sexual and Reproductive Health?

Authors: Melissa Tibbits, Brenda Council, Tambudzai Phiri Ndashe, and Erika Lehmann

Title: What Does It Take to Overcome Community Barriers to Addressing Adolescent Sexual and Reproductive Health?

Issue: Promoting the sexual and reproductive health (SRH) of adolescents is important to achieving several Healthy People 2020 objectives. Still, many communities struggle to effectively implement adolescent SRH initiatives due to local and national politics that make it difficult to utilize evidence-based SRH interventions such as comprehensive sex education. This presentation will describe the partners and processes that made it possible to build political will to address adolescent SRH in one urban, Midwestern county.

Setting: The Adolescent Health Project was developed and implemented in Douglas County, Nebraska.

Project: The Adolescent Health Project began in 2015 as a partnership between the Women's Fund of Omaha and 7 local grantee organizations. These organizations include the local health department, two federally qualified health centers, one women's health center, and three small clinics that provide services to specialized populations. More recently two additional grantee organizations joined the project – a large city-wide pediatric health care practice and a large city-wide general health care practice. All grantees provide free STI testing and treatment to 15-24 year olds at their clinics, and offer STI testing and educational outreach at community organizations and community events. Three grantees also provide free contraception to 15-24 year olds. Grantees also work with a variety of community organizations (e.g., bars, clubs, libraries, restaurants, tattoo shops) to distribute free condoms. In addition to serving as the coordinating agency, the Women's Fund of Omaha uses traditional and social media to provide accurate SRH information and publicize the free Adolescent Health Project services. The Women's Fund of Omaha also provides ongoing trainings to Adolescent Health Project grantees, community groups and parents about a variety of adolescent SRH topics, including "Askable Adults" training, which aims to ensure adults are knowledgeable and comfortable enough to answer adolescents' sexual health questions. The project utilizes Youth Participatory Action Research and monthly and quarterly assessments to track the delivery of services, as well as qualitative data collection to monitor system changes within the partner organizations and across Douglas County.

Accomplishments/Results: A key accomplishment of the Adolescent Health Project has been to align the 9 grantees around a common goal, and to promote collaboration between grantees. The Adolescent Health Project also has been successful at engaging community partners in various sectors, including youth serving organizations such as Girl Scouts and Mentor Nebraska, which has led to changes in

discussion and norms about adolescent SRH in Douglas County. Further, over 200 community organizations have signed on to distribute condoms, and to date, more than 2 million condoms have been distributed. Other accomplishments include: a statistically significant increase in STI testing as a result of the initiative; increases in the percentage of females who choose the most effective birth control methods; and implementation of comprehensive sex education in the largest school district.

Barriers: Key barriers have been changing norms within specific communities in Douglas County, such as faith communities, and encouraging STI testing among males.

Lessons Learned: The Adolescent Health Project demonstrates that it is possible to build political will to promote adolescent SRH using strategic partnerships.

Information for Replication: Strong partnerships across sectors is critical to promoting adolescent SRH. Health departments can play an important role by providing epidemiological information, education, and clinical services.

Youth Participatory Action Research: An Innovative Tool in Evaluating Youth-Focused Health Intervention Programs

Authors: Scout Black, Patrick Dorion, Erika Lehmann, Molly Ashford, Katera Brown, Sabina Eastman, Bella Filips, Luke Koesters, Logan Miller, and Jamie Sutula

Title: Youth Participatory Action Research: An Innovative Tool in Evaluating Youth-Focused Health Intervention Programs

Issue: Culturally responsive evaluation and assessment are essential to ensuring public health interventions dismantle, rather than uphold, health disparities. Researchers are adopting innovative methodologies designed specifically to this end. One method, participatory research, reduces power imbalances by engaging members of the effected population as partners in evaluation to increase the equity, validity, and value of evaluation research.

Setting: The Adolescent Health Project (AHP), an initiative in Omaha, Nebraska, focuses on increasing equitable access to no-cost STD testing and treatment services, no-cost contraceptive counseling and services, and factual and non-stigmatizing information related to sexual and reproductive health.

Project: Youth Participatory Action Research (YPAR) is a relatively new but widely accepted method of incorporating the voices and perspectives of youth and young adults into evaluation and is particularly useful when evaluating youth-serving programs. This approach can increase the quality of the evaluation process and the validity of the findings and benefit the community the program serves by fostering a new generation of researcher and advocates for change. To aid in evaluating the AHP, we partnered with a diverse group of young people as paid youth research interns in the evaluation of the AHP.

Accomplishments/Results: In addition to increasing the validity of the evaluation and elevating the capacity of young researchers and advocates in Omaha, our YPAR work brought many valuable and actionable research results. Findings from our data collected by youth, from youth, for the improved outcomes of youth were enthusiastically received by program grantees, management, and funders. Examples of YPAR projects include Mystery Shopping to identify ongoing implementation challenges in clinics, and in-depth interviews with diverse groups of young people to better understand differing views on sexual and reproductive health by youth involved in multiple systems (e.g. foster care, juvenile justice, etc.). Beyond the standard reports and stakeholder presentations, our youth researchers created innovative ideas for furthering the reach of their findings by engaging with the community as well.

Barriers: Specific barriers encountered when integrating YPAR into the existing evaluation included initial grantee management buy-in and achieving scientific rigor while honoring the life course trajectory of our youth researchers. Solutions to these barriers emerged throughout the course of the YPAR work,

including creative findings presentations with stakeholders, as well as dedicated evaluation staff to provide guidance, support, and mentorship to youth researchers.

Lessons Learned: Parameters for the YPAR project must be clearly defined, including the expectations of the youth and young adult researchers, the guardrails of their research projects, and the timeline of their work. Designating a staff person to lead the YPAR work provides the knowledge, consistency, and trust necessary to facilitate a successful ongoing YPAR project.

Information for Replication: Identifying champions within the program, including at the grantee, management, and funder levels, ensures the YPAR results are valued, utilized, and funded. Providing clear expectations, budgets, and deliverables from the beginning may help with necessary buy-in. Additionally, by working directly with evaluation product users, YPAR projects can align directly with stakeholder needs while maintaining the integrity of the YPAR process.

Results of an Innovative Sex Education Program for Teens in the Foster Care System

Authors: Kathryn Luchok, Linda Robinson, Xumei Fan, Isabella Bubier, Zola Jane Aplin, and Sarah Christenbury

Title: Results of an Innovative Sex Education Program for Teens in the Foster Care System

Background: Traditional sex education does not address reproductive illiteracy. It is often fear-based and ineffective because it ignores emotional connection, discourages mindfulness and undermines empowerment. Unintended pregnancy/parenting have lifelong effects on educational and employment options of teen parents and the health/development of their children. Girls in foster care are 2.5 times more likely to get pregnant than girls in general. Nearly half of girls in foster care have been pregnant by age 19 and almost one-third have at least one child. They are also more likely to put their own children into the foster care system, continuing the cycle. This high-risk population already is at a deficit due to the lack of medically accurate sex education in schools in South Carolina. South Carolina ranks 11th out of 51 in teen pregnancies among 15-19 year olds. Innovative ways to reach teens with messages that will stick with them are needed to increase mindfulness as teens embark on their reproductive destinies.

Study Questions: Will innovative sex ed increase foster teen's intentions to use condoms and contraception? Will they gain information about contraceptive choices and confidence in talking to health providers and group home staff about reproductive health? Will group home staff increase their comfort level with discussions about reproductive health and become better advocates for teens under their care?

Methods: Pre-post intervention design. 108 teens and 60 group home staff in 7 locations. Two workshops with teens and one with staff. Surveys included PREP questions to allow comparisons to established sex ed programs. Collected narrative data from open-ended questions on posttest. Process: counted number trained; observation of workshops. Data entered and analyzed with SPSS—frequency; chi-square p, ANOVA across groups. Narrative data reviewed for themes. Study was limited in geographic scope.

Results: For teens, intentions to use condoms and contraception increased by over 25%. Knowing where to get birth control, understanding birth control choices and feeling more comfortable talking to a health provider about contraception increased in post-test (<.001) to over 85% of participants. Gains were higher for boys; no differences for other demographics. . For staff, increases in knowledge and comfort discussing and advocating for reproductive health. Narrative themes--workshops were superior to previous sex education, more straightforward, more concrete and understandable

Conclusions: New methods of sex-ed are needed to engage teens, especially high risk teens. It can increase their mindfulness in making decisions about sexual activity that could ultimately lead to

reductions in unintentional pregnancies. Parallel training for staff reinforces reproductive health messages and assistance for teens under their care.

Public Health Implications: Methods can be replicated and tested in other groups. Findings indicate the approach is effective and is ready for a wider test using comparison/intervention group analysis.

Hurricane-Related Stressors and Postpartum Depression Symptoms among Women with a Recent Live Birth in Puerto Rico, PRAMS – Zika Postpartum

Authors: Brenda Bauman, Katherine Kortsmitt, Denise D’Angelo, Beatriz Salvesen Von Essen, Lawrence House, and Lee Warner

Title: Hurricane-Related Stressors and Postpartum Depression Symptoms among Women with a Recent Live Birth in Puerto Rico, PRAMS – Zika Postpartum

Background: Survivors of a major natural disaster may experience mental health effects in addition to other disaster-related stressors such as difficulty meeting basic needs for food and shelter. Hurricanes Irma and Maria struck Puerto Rico in September 2017, shortly before implementation of the Pregnancy Risk Assessment Monitoring System–Zika Postpartum Emergency Response [PRAMS-ZPER] 2.0 study, a population-based survey on experiences related to Zika virus exposure among women who recently delivered a live-born infant. The study provides an opportunity to explore postpartum depressive symptoms (PDS) and associated factors following the hurricanes.

Study Questions: To what extent were exposures to hurricane-related stressors, after controlling for potential confounders, associated with PDS?

Methods: We analyzed data from women who participated in both the hospital survey (November–December 2017, 2–3 months post-hurricanes) and telephone follow-up survey (February–March 2018, 5–6 months post-hurricanes) of PRAMS-ZPER 2.0 (n=1,230). Data on maternal characteristics, infant health outcomes, respondent relationship status during pregnancy, and Zika-related health concerns, were obtained from the hospital survey. Information on PDS, mental health service needs to deal with depression, anxiety, grief or other issues related to the hurricanes, and post-hurricane experiences (stressors) were obtained from the telephone survey. Hurricane-related stressors included difficulties obtaining basic needs for the baby (food, water, shelter) and financial difficulties (money to take care of baby, paying bills, getting money from the bank). We defined PDS as “always or often” feeling down, depressed, or hopeless, and/or experiencing little interest/pleasure in doing normal activities. We calculated prevalence of PDS and selected characteristics and estimated adjusted prevalence ratios (aPR) and 95% confidence intervals (CI) with multivariable logistic regression to examine associations between hurricane-related stressors and PDS, after controlling for potential confounders.

Results: Among all women, 10.7% had PDS; 7.1% reported needing mental health services; and 49.7% reported hurricane-related stressors [24.8%, difficulties obtaining basic needs and 41.6%, financial difficulties]. Among women who reported mental service needs, 52.1% reported they were able to get the needed mental health service. After controlling for potential confounders such as maternal age,

education, recent pregnancy intention, relationship status, cigarette smoking and alcohol use status during the last 3 months of pregnancy, and infant health outcomes, exposures to hurricane stressors were significantly associated with PDS. Compared to women without PDS, those with PDS were more likely to report difficulties obtaining basic needs [aPR (95% CI)=1.5 (1.1-1.9)] and financial issues [1.5 (1.1-1.9)]. Women with PDS were also more likely to report mental health service needs [4.2 (3.2-5.6)].

Conclusions: One in ten women with a recent live birth in Puerto experienced PDS after Hurricanes Irma and Maria. PDS was associated with hurricane-related stressors and reported need for mental health services, 5-6 months after the hurricanes.

Public Health Implications: Access to screening, referral, and treatment is needed to address PDS. Further examination of the contributors of PDS and other mental health issues following disasters may provide insight for intervention opportunities.

Disaster recovery: How the Fetal and Infant Mortality Review (FIMR) Process can be an instrument to help in preparedness

Authors: Rosemary Fournier and Cindy Calderon

Title: Disaster recovery: How the Fetal and Infant Mortality Review (FIMR) Process can be an instrument to help in preparedness

Issue: In September 2017, Hurricane Maria struck Puerto Rico, devastating the island and plunging its 3.4 million residents into a desperate humanitarian crisis. The storm caused one of the longest power outages in recorded history, displaced thousands of people and caused extensive damage to the island's hospitals and health care facilities. A number of public health concerns emerged in the aftermath of Maria, including a rise in mental health disorders, increased risk of infectious diseases, and a growing burden from unaddressed chronic disease care needs, limited access to healthcare, medications, and an exodus of healthcare professionals after the storm. Even prior to the storm, health outcomes among Puerto Rico residents were a concern. Rates of infant mortality were 7.57 deaths for every 1,000 residents in 2015, compared with 5.8 per 1,000 in the mainland U.S. In disasters, infants are a vulnerable population. NICU babies are particularly vulnerable due to their physiologic immaturity and their dependence on technology for life-sustaining physiologic support. Infants requiring such special medical care require adequate institutional preparedness plans to continue to receive optimum care and plans on how to resolve the unexpected challenges.

Setting: Puerto Rico is an island territory of the United States, located in the northeast Caribbean Sea. Disasters, whether natural or man-made, are especially threatening to the lives of people who are technology dependent. A disaster is defined as a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Any area that experiences disasters such as hurricanes, earthquakes, super storms, wildfires, and infectious epidemics may benefit from this presentation.

Project: Prior to the storm, Puerto Rico had a fully functional Fetal and Infant Mortality Review (FIMR) program. The goal of FIMR is to enhance the health and well-being of women, infants, and families by improving community health resources and service systems available to them. The FIMR approach involves discussion by multidisciplinary teams about fetal and infant death cases in the community and the identification of associated health and related service and system problems. Recommended actions for addressing these problems follow from the case review process.

Accomplishments/Results: After initial recovery in Puerto Rico, the first FIMR meeting was a focus group discussion with neonatologists. The team identified the challenges they confronted and were able to make a list of recommendations to share with hospitals and the disaster preparedness teams. As a result, the hospitals have made changes to improve their preparedness plans.

Barriers: Unexpected challenges such as severe damage to communication systems , slow recovery of basic needs such as electricity and water, and severe damage to infrastructure increasing geographical isolation of island making it more difficult for aid to arrive.

Lessons Learned: Experience after a disaster provide valuable lessons to consider when actualizing or developing preparedness plans that may mitigate infant mortality and morbidity. FIMR provides a forum focused on infant mortality where experiences may be shared and recommendations to improve preparedness may be identified.

Information for Replication: N/A

Nuclear and Radiological Emergencies and Reproductive Health: What Health Departments Need to Know

Authors: Duane House

Title: Nuclear and Radiological Emergencies and Reproductive Health: What Health Departments Need to Know

Learning Objectives:

1. Know the types of nuclear and radiological emergencies and the phases of a radiation emergency response.
2. Describe unique considerations for the care of pregnant and postpartum women, women of reproductive age (aged 15-44 years), and newborn infants in a nuclear or radiological emergency.
3. Be able to enhance preparedness and response plans to address reproductive health in nuclear or radiological emergencies.
4. Be able to create communication messages regarding reproductive health during nuclear or radiological emergencies.

Session Description: Pregnant women and newborns have unique needs during any public health emergency, and evidence from nuclear or radiological emergencies has shown negative effects for both pregnant women and newborns. Information on the effects of nuclear or radiological emergencies on non-pregnant women of reproductive age (15-44 years) is more limited. While nuclear or radiological emergencies have not occurred as frequently as other emergencies (e.g., hurricanes, wildfires, floods, or disease outbreaks), they can have a significant impact on public health. Maternal and child health programs in city and county public health departments play a critical role in meeting the needs of pregnant and postpartum women, non-pregnant women of reproductive age, and newborn infants, and it is important to be prepared for any emergency. In this workshop, we will build knowledge and skills to support response activities within MCH programs for nuclear or radiological emergencies. The workshop will describe the fundamentals of nuclear and radiological emergencies, key partners in responding to a nuclear or radiological emergency, what available science says about the effects of a nuclear or radiological emergency on these populations, unique care needs for the population, and ways to plan for and communicate about the populations needs during an emergency response. This workshop is intended for all MCH program officials to add to overall emergency preparedness and response capabilities. The workshop includes didactic presentations and group activities to meet learning objectives.

Session Justification: MCH programs in local health departments are well suited to provide expertise in addressing MCH needs in emergencies. Nuclear or radiological emergencies can happen at any time and include situations such as nuclear power plant, transportation, or industrial accidents and radiological

dispersal (e.g., dirty bomb) or nuclear weapons (e.g., improvised nuclear device or a nuclear bomb). Local agencies including health departments will lead response efforts in affected communities. The proposed workshop is relevant to many CityMatCH participants, as it will advance knowledge and skills needed for emergency preparedness and response in general and for nuclear and radiological emergencies. The presentation is intended to enhance the capacity of local departments in being prepared for public health emergencies. Participants will also receive information about resources at CDC and in their own local area including information on radiation experts in their states.

Breastfeeding Education Starts at the Very Beginning: Strategies to Help Kids Understand that Breastfeeding is Normal

Authors: Dia Michels

Title: Breastfeeding Education Starts at the Very Beginning: Strategies to Help Kids Understand that Breastfeeding is Normal

Learning Objectives: Attendees will be able to:

- 1) Understand why it is both beneficial and necessary to teach children about breastfeeding, and how this knowledge contributes to thriving families.
- 2) Identify practical strategies for educators to help kids understand that breastfeeding is normal.
- 3) List at least 3 breastfeeding promotion resources to share with families.

Session Description: Breastfeeding has long-reaching benefits for babies, mothers, families, and communities. However, modern cultural norms and the stigma surrounding breastfeeding prevent children from being exposed to this normal and natural act of parenting. Teaching children about breastfeeding familiarizes them with how important breastmilk is to infant development, promotes a better understanding of how mothers provide for their babies, and encourages healthy life choices. This presentation identifies strategies and tools that parents, librarians, educators, health care providers, and community members can use to educate children about this important form of sustenance. Using books, songs, dolls, and activities, children will understand that all mammals, including humans, are designed to raise their young on breastmilk. Parents are told that breast is best, but it's time for children to be taught that 'breast is normal.'

Session Justification: People who come from a breastfed home or grow up learning about breastfeeding are more likely to choose, or encourage their partner, to breastfeed their own children. It is vital that we promote breastfeeding education for children in order to reduce the stigma around breastfeeding, and increase breastfeeding rates across all socioeconomic groups, giving all infants their best chance for a healthy start in life.

First Food Deserts, Lactation Pods, Equity, Oh My! A Local Health Department's Journey to Elevating Lactation Spaces and Systems

Authors: Katarina Grande, Kristine Omen, Tori Varland, Rebecca LeBeau, Rachel Kulikoff, Allie Valitchka, Stephanie Lindsley, and Lauren Biro

Title: First Food Deserts, Lactation Pods, Equity, Oh My! A Local Health Department's Journey to Elevating Lactation Spaces and Systems

Issue: Over 90% of Dane County mothers initiate breastfeeding--a rate that exceeds the Healthy People 2020 goal. However, sustaining breastfeeding remains a challenge, particularly for people of color and those impacted by economic injustice. Eight weeks after birth, 46% of Black mothers and 56% of those living in poverty breastfeed in Dane County. Structural barriers include having to return to work shortly after having a baby, lack of access to lactation consultants and doulas, stress, and working in low-paying industries. Historically, our public health department has worked to address this inequity via 1:1 lactation support and less so around policies and systems. In 2018, we established a Maternal and Child Health Community Team to focus on lactation inequities through a policy and systems lens.

Setting: Public Health Madison & Dane County is located in Madison, Wisconsin, and serves 530,000 Dane County residents. Our health department is located in a strip mall, in a zip code with poor birth outcomes. Our initiatives aim to serve those working in businesses around the health department, as well as women of color and families impacted by economic injustice throughout the county.

Project: We conducted an environmental scan of lactation spaces around our public health office and found very few nearby lactation spaces. Of 30 businesses surveyed, only one had a lactation room available for public use. By designating the area as a "First Food Desert," we re-allocated grant funds to purchase a freestanding lactation pod. Additionally, we developed an internal lactation policy, supported the creation of lactation rooms in public locations where families experiencing poverty frequently visit, developed a Board of Health resolution to support pro-maternal health legislation, provided funding to three community-based organizations that offer culturally appropriate breastfeeding support to women of color, and collaborated with our local Breastfeeding Coalition to map public lactation rooms in our county.

Accomplishments/Results: The results of addressing gaps in community-wide lactation support from a policy and systems lens will take time to appear in county-wide breastfeeding statistics. Immediate outputs are daily use of the lactation pod, the creation of 13 lactation rooms throughout the county, and innovative cross-governmental partnerships. Importantly, our initiatives have led to increased visibility of lactation as a public health issue--further elevated by featuring our work in the mayor's blog and on social media.

Barriers: Shifting to a Public Health 3.0 approach toward breastfeeding has required time, as partnerships are foundational to this work. Through partnership with community organizations

supporting women of color, we receive input that guides our work. We have challenging and necessary conversations about systemic racism and tense history with the health department. Our partnership continues to grow as we strive to elevate their work and take an equity mirror to our internal systems and structures.

Lessons Learned: Public health has traditionally approached lactation support from a direct service approach. Adding a systems lens--through establishing lactation rooms in zip codes with poor birth outcomes, supporting pro-maternal health policies, and working closely with organizations supporting women of color--requires time, partnerships, and openness to Public Health 3.0.

Information for Replication: -Cost of lactation pod was \$15,000 (funded by Title V MCH grant dollars) - \$5,000 in funds for micro-grants for building lactation rooms (funded by Title V MCH grant dollars) -Staff time (30% of an MCH Public Health Navigator, 50% of a MCH Public Health Specialist, 10% of Public Health Supervisor, 10% Evaluator, 10% Population Health Fellow, 10% WIC Nutritionist, 10% WIC limited term employee, 5% social work intern) -Key partners: Harambee Village Doulas, African American Breastfeeding Alliance of Dane County, Centro Hispano

Improving Breastfeeding Continuity of Care through Local and State Partnerships

Authors: Harumi Reilly

Title: Improving Breastfeeding Continuity of Care through Local and State Partnerships

Issue: Four out of five infants born in 2014 started off breastfeeding, however, this achievement is not equitably shared. Socio-demographic factors are associated with rate disparities which contribute to health inequities. Low-income and black families are disproportionately burdened by structural barriers limiting their capacity to breastfeed. With funding from CDC, the Breastfeeding Public Health Partners, NACCHO and ASTHO, are simultaneously providing local and state support to improve breastfeeding rates through continuity of care (COC). This partnership has a greater impact because it ensures inter-agency collaboration to maximize impact.

Setting: NACCHO is supporting the establishment of COC in 36 communities, including Racial and Ethnic Approaches to Community Health (REACH) grantees. Communities in Illinois, New York, and Texas are working with their State Physical Activity and Nutrition Program (SPAN) recipients. These REACH and SPAN recipients are receiving joint technical assistance from ASTHO and NACCHO to improve policies and practices

Project: NACCHO provided similar support in the past to 72 communities and published peer-reviewed articles documenting the successful implementation and corresponding TA given. Through this project, communities provided 92K support encounters, hosted 3K support groups and conducted activities to ensure services met families' needs. Most sustained their work post-funding. Project evaluation showed that NACCHO TA model met the need of public health staff and lactation support, providers. NACCHO is repeating this successful TA model provided in the past, and now is piloting joint TA with ASTHO.

Accomplishments/Results: By coordinating efforts and simultaneously providing TA at state and community level, we hope this innovative strategy will assist grantees in achieving results awhile strengthening state and local breastfeeding partnerships. This presentation will discuss how TA coordination impacted work in Illinois, New York, and Texas.

Barriers: The presenter will discuss common barriers reported by communities, while working to improve practices and policies to establish community continuity of care among maternity care, workplace and community agencies. It will also highlight how the BPHP partnership has helped states navigate potential barriers and achieve their work goals within the three priority areas. Through evaluation of NACCHO's recent breastfeeding project, some challenges reported were getting internal buy-in and establishing key community partnerships to effectively advance breastfeeding goals in their community. Despite the challenges, with over 1,500 hours of NACCHO TA and training, grantees

increased organizational capacity and established 830 partnerships. NACCHO has recognized similar barriers through current grantees and has been providing intensive one-on-one TA.

Lessons Learned: This session will share how joining efforts and strengthening partnerships at the local and state level create environments that enable breastfeeding as a feasible choice. Individually, through 5 years of TA work, NACCHO and ASTHO identified common barriers and key facilitators that communities and states face in implementing breastfeeding policies and practices. Both organizations are now leveraging their organizational knowledge and skills, and individual funding to benefit a broader audience and ensure state-wide collaboration and sustainability of efforts. Partnering for Collective impact is a recommendation provided to grantees, and by collaborating with ASTHO, we are setting the example to be followed in supporting breastfeeding!

Information for Replication: N/A

Improving Breastfeeding Rates through Local and State Partnerships: ASTHO's Breastfeeding State Learning Community

Authors: Ify Mordi

Title: Improving Breastfeeding Rates through Local and State Partnerships: ASTHO's Breastfeeding State Learning Community

Issue: Women across the economic spectrum experience common barriers to breastfeeding: policies and practices that do not actively support women from breastfeeding in hospitals through their return to work; a community's or family's beliefs that make it less acceptable for women to breastfeed; and individual breastfeeding challenges that could be addressed with support from peers or professionals. Developing comprehensive, integrated strategies to address these barriers can more effectively support mothers. The Association of State and Territorial Health Officials (ASTHO) and the National Association of County and City Health Officials (NACCHO) are part of the Breastfeeding Public Health Partners (BPHP) group which increases awareness of evidence-based and innovative activities occurring at the national, state, and local levels. Through this partnership, ASTHO and NACCHO are simultaneously providing local and state support to improve breastfeeding rates. This partnership has a greater impact on public health outcomes because it ensures inter-agency communication and collaboration to promote breastfeeding support efforts.

Setting: In 2018, ASTHO, with support from the Centers for Disease Control and Prevention (CDC), convened a five-year ASTHO Breastfeeding Learning Community comprised of State Physical Activity and Nutrition Program (SPAN) state recipients. Illinois, New York, and Texas will be working simultaneously at the state level, with support from ASTHO, and at the local level, with support from NACCHO, to improve policies and practices around breastfeeding.

Project: From 2014-2018, ASTHO utilized its collaborative Learning Community model to support 19 state health agencies to increase their capacity to implement evidence-based breastfeeding programs, practices, and services in three priority areas, 1) birthing facilities, 2) professional and peer support, and 3) workplace compliance with the federal lactation accommodation law. ASTHO is continuing its learning community to support CDC's 2018 SPAN state recipients, offering training and technical assistance including virtual convenings and webinars, "on-demand" technical assistance, and peer support through mentor-mentee relationships.

Accomplishments/Results: By coordinating efforts and simultaneously providing technical assistance support and targeted virtual resources at the state and community level, these innovative activities and strategies will assist states in building capacity for breastfeeding promotion and support. This presentation will discuss how coordination has progressed in Illinois, New York, and Texas; ASTHO's goal

is for 75% of state health agency participants to report increased coordination and cross-sector collaborations within their state. To evaluate efforts, ASTHO will conduct a pre- and post-assessment among participating states.

Barriers: This presentation will discuss the barriers Illinois, New York, and Texas faced while working to improve practices and policies around breastfeeding. It will highlight how the BPHP partnership helped states navigate potential barriers and achieve their work goals within the three priority areas. In ASTHO's previous Learning Community, barriers to increasing breastfeeding rates included engaging specific groups and building partnerships.

Lessons Learned: This session will share how joining efforts and strengthening partnerships at the local and state level can create environments that promote and support breastfeeding. While individually, ASTHO and NACCHO are supporting community-level and state breastfeeding efforts respectively, both organizations are leveraging their individual funding support to benefit a broader audience and ensure state-wide collaboration and sustainability of efforts.

Information for Replication: N/A

Our Journey is Our Journ3i: Community Connections for Catalyst Change

Authors: Quatia Osorio

Title: Our Journey is Our Journ3i: Community Connections for Catalyst Change

Learning Objectives:

1. Enable participants to seek connections with their perinatal networks.
2. Develop a plan of action based on current maternal health landscape.
3. Commit to a plan of perinatal community network support.

Session Description: Our session will address the racial inequities, discriminative and oppressive maternal health care system while providing pinpoint size light on reproductive justice on womb holding; persons. We discuss the grassroots movement of community collaborative and collective care for maternal child health for expecting families.

Session Justification: The goals for Our Journ3i are to continue assessing the needs of the community for maternal health services through services, classes, and training. The healthcare system, community resources, and needs are continually changing work. The maternal child health and perinatal community led and focused initiatives are necessary through creative mediums which promote, assess, educate and facilitate change.

Perinatal and Infant Oral Health Quality Improvement (PIOHQP) Initiative

Authors: Katrina Holt

Title: Perinatal and Infant Oral Health Quality Improvement (PIOHQP) Initiative

Issue: The Health Resources and Services Administration's Maternal and Child Health Bureau (MCHB) funded the multiyear Perinatal and Infant Oral Health Quality Improvement (PIOHQP) Initiative to reduce the prevalence of oral disease in pregnant women and infants through improved access to high-quality oral health care (i.e., preventive services, restorative treatment, and education). The expected outcomes of the initiative, which targets pregnant women and infants at high risk for oral disease, are increased utilization of oral health services and improved oral health. The group presentation will include a MCHB-funded PIOHQP project, the MCHB-funded learning collaborative technical assistance and training (TA/T) provider, and the MCHB-funded independent program evaluator. The presentation will highlight PIOHQP projects' experiences and perspectives, the impact of projects' contextual environments, TA/T provider support, and lessons learned and promising practices.

Setting: Sixteen projects were funded in Arizona, California, Colorado, Connecticut, Maine, Maryland, Massachusetts, Minnesota, New Mexico, New York, Rhode Island, South Carolina, Texas, Virginia, West Virginia, and Wisconsin. Funding for 3 projects continued through 2018 and for 13 projects continues through 2019. PIOHQP projects are based in health departments, non-profit organizations, universities, and hospital systems.

Project: The TA/T provider fostered a cross-state collaborative environment to help PIOHQP projects learn from other projects to promote comprehensive oral health services for pregnant women and infants at high risk for oral disease. Project support included virtual learning events (webinars), in-person learning sessions (meetings), a discussion list, a buddy system, and individualized TA/T on a variety of topics including data and analysis, evaluation, organizational collaboration, quality improvement, and program infrastructure and capacity.

Accomplishments/Results: Projects worked to develop evidence-informed models to integrate oral health care into perinatal and infant primary-care-delivery systems to (1) increase pregnant women's utilization of preventive oral health care; (2) increase the percentage of children who have dental homes by age 1; (3) reduce the prevalence of oral disease in pregnant women and infants, ultimately reducing dental caries throughout early childhood; and (4) reduce oral health care expenditures.

Barriers: Projects encountered an array of challenges including insufficient funding to sustain efforts, difficulties with service reimbursement, regulatory requirements preventing service-delivery innovation, and resistance from both medical professionals and oral health professionals to expanding oral health services delivery. Projects also faced cultural, geographic, and language barriers within their target populations.

Lessons Learned: Projects, in their efforts to improve access to high-quality oral health care, developed a variety of approaches influenced by state and institutional policy and procedures and by the availability of resources. The presentation will complement presentations by the Rhode Island PIOHQI project and Altarum, the independent program evaluator. The presentation will share lessons learned from supporting a cross-state collaborative environment to help projects learn from other projects and will also share successes and challenges encountered throughout the process.

Information for Replication: N/A

It Takes a Village: Cross Collaboration Successes within the Perinatal & Infant Oral Health Quality Improvement (PIOHQI) Project

Authors: Sadie DeCourcy

Title: It Takes a Village: Cross Collaboration Successes within the Perinatal & Infant Oral Health Quality Improvement (PIOHQI) Project

Issue: HRSA's Maternal and Child Health Bureau (MCHB) funded the Perinatal and Infant Oral Health Quality Improvement (PIOHQI) grant to improve oral health services for pregnant women and infants at high risk for oral disease. Our grouped presentation will include one of the PIOHQI grantees, the program technical assistance provider, and the organization contracted by MCHB to perform the independent program evaluation. We will present a holistic view of the experiences and perspectives of PIOHQI program participants, the impact of grantees' contextual environments, how they worked together with the TA provider, and some of the lessons learned and promising practices developed through the program.

Setting: The RI PIOHQI project (RI PIOHQI) is a statewide initiative coordinated through the Rhode Island Department of Health Oral Health Program. The activities focused on increasing preventive dental visits for both pregnant women and very young children through a coordinated effort that involved medical and dental providers, WIC, Family/Home Visiting, Head Start, and others.

Project: The RI PIOHQI took a multi-pronged approach to achieve its goals. The approach was based on focus groups with key providers (prenatal, pediatric, family/home visitors, dentists, and dental hygienists) and key data points gathered from Medicaid and the Pregnancy Risk Assessment Monitoring Survey (PRAMS). Through a combination of education, outreach, and referrals, the RI PIOHQI was able to bridge gaps between different providers and promote preventive dental visits with these populations.

Accomplishments/Results: Some major accomplishments for the RI PIOHQI are: the creation of an Age One Champion Directory to help medical providers link families with infants to dentists; development of talking points and training for family support providers; and building partnerships with various programs and organizations including the Family/Home Visiting Program, WIC, two federally qualified health centers, private medical offices, and individual providers and nonprofits through our PIOHQI Advisory Board. An overarching accomplishment is increasing the number of children age 1-2 with Medicaid who received dental care from 3,260 in 2015 (the start of the grant) to 6,095 in 2018.

Barriers: Barriers include: sustainability, lack of dental providers (especially oral surgeons), resistance among both dental and medical professionals to expand oral health services, and convincing partners that oral health is important. The RI PIOHQI set out to work with other programs to ensure that the

goals and objectives of the project would continue. For example, the RI Oral Health Commission Preventive Modalities subcommittee agreed to absorb the work of the Advisory Board post grant. The RI PIOHQI also used the approach of academic detailing and mini-residencies to decrease resistance among both medical and dental providers.

Lessons Learned: The RI PIOHQI worked to not only integrate oral health care into existing health service delivery models, develop approaches that were heavily influenced by state policy, environmental factors, and available resources, but also to breakdown silos and work with new partners to increase access to oral health care. The RI PIOHQI will complement presentations by the Center for Oral Health Systems Integration and Improvement (COHSII) and Altarum, the organization contracted by MCHB to perform the independent program evaluation.

Information for Replication: N/A

A Realist Approach to Evaluation of the Perinatal & Infant Oral Health Quality Improvement (PIOHQP) Grant Program

Authors: Sheryl Mathis, Tara Fowler, Chantell Frazier, Hendi Crosby-Kowal, Cydney Black, Mayte Canto, and Pamela Vodicka

Title: A Realist Approach to Evaluation of the Perinatal & Infant Oral Health Quality Improvement (PIOHQP) Grant Program

Issue: HRSA's Maternal and Child Health Bureau (MCHB) funded the multi-year Perinatal and Infant Oral Health Quality Improvement (PIOHQP) grant program to improve oral health services for pregnant women and infants at high risk for oral disease. Our grouped presentation will include one of the PIOHQP grantees, the program technical assistance (TA) provider, as well as the organization contracted by MCHB to perform the independent program evaluation. We will present a holistic view of the experiences and perspectives of PIOHQP program participants, the impact of grantees' contextual environments, how they worked together with the TA provider, and some of the lessons learned and promising practices developed through the program.

Setting: PIOHQP projects were based in health departments, non-profit organizations, universities, and hospital systems. Grantees sought to establish state-wide projects in Arizona, California, Colorado, Connecticut, Maryland, Maine, Massachusetts, Minnesota, New York, New Mexico, Rhode Island, South Carolina, Texas, Virginia, West Virginia, and Wisconsin.

Project: As part of our evaluation, Altarum reviewed applications and periodic reports, conducted semi-structured interviews with project directors and key stakeholders of the 16 PIOHQP projects, and performed in-depth site visits with nine of these projects. Site visits allowed us to collect additional in-depth and observational information. We organized our evaluation around the Realist Framework, which underscores the critical impact of contextual factors on programming and emphasizes understanding what works, for whom, and under what conditions.

Accomplishments/Results: PIOHQP grantees conducted locally tailored combinations of workforce development, community outreach, standards of practice modification, policy development, and stakeholder engagement to improve integration of oral health and primary care services. Successful workforce development activities included guideline-driven training that reached across disciplines and were useful and valuable to providers. Many grantees established clinical pilot sites at Community Health Centers to test targeted strategies designed to address patient challenges and needs. While states used similar strategies overall, each customized their approach to address the local population and environment. Through collaborative events, states were able to learn strategies from each other that contributed to successes and improvements.

Barriers: Not surprisingly, grantees encountered multiple complex challenges including: insufficient sustained funding; difficulties with service reimbursement; regulatory requirements preventing service delivery innovation; and resistance among both dental and medical health care professionals to expand oral health service delivery, among others. Grantees also faced challenges within their target populations that included cultural, language, and geographic barriers, among others.

Lessons Learned: Grantees, in their efforts to integrate oral health care into existing health service delivery models, developed approaches that were heavily influenced by state policy, environmental factors, and available resources. Our discussion will complement presentations by the Rhode Island PIOHQI grantee and the program's Technical Assistance provider, the Center for Oral Health Systems Integration and Improvement (COHSII). We will share lessons learned from successes and challenges experienced by these grantees. Discussion will highlight the environmental and contextual influences that should be considered to apply findings to other service delivery settings.

Information for Replication: N/A

Linking Reproductive Health Data to Policy: Comparison of the City Health Dashboard and the Local Reproductive Freedom Index

Authors: Ben Spoer and Allegra Wilson

Title: Linking Reproductive Health Data to Policy: Comparison of the City Health Dashboard and the Local Reproductive Freedom Index

Background: Individual control over reproductive choices can have a strong impact on women's health outcomes, but the effects of policy can be complex. Two tools, the City Health Dashboard and the Local Reproductive Freedom Index (LRFI), aim to drive local-level change by providing data and resources for city officials, public health professionals, and reproductive health advocates and policymakers. The City Health Dashboard (www.cityhealthdashboard.org) is an online tool that provides city-level data on 37 actionable measures of health outcomes, health determinants, and health equity for the 500 largest U.S. cities. The 2017 LRFI is a National Institute for Reproductive Health initiative that evaluates the strength of reproductive health, rights, and justice policies of 40 U.S. cities.

Study Questions: What is the association between reproductive freedom and reproductive health-related outcomes in 40 cities?

Methods: The Dashboard presents two reproductive health metrics on its site: teen births and prenatal care. Both metrics are 2014-16 natality data from National Vital Statistics System. The LRFI assigns cities a score from 0 to 5 based on 37 reproductive freedom policies, such as paid family leave, STI funding, and abortion clinic access. A score of 5/5 indicates that a city has strong policies that advance reproductive freedom for its residents. The Dashboard conducted a correlation analysis between city-level estimates of teen births and prenatal care and LRFI scores for the 40 cities represented in the LRFI.

Results: Cities with higher LRFI scores were associated with lower rates of teen births ($r=-0.54$, $p<0.05$) and higher prenatal care utilization during pregnancy ($r=0.48$, $p<0.05$). We conducted a sensitivity analysis to address potential for bias stemming from the use of county-level population denominators in city-level estimates, which were used due to data masking policies. When we restricted the dataset to only include cities that used city-level population denominators (teen births= 37 cities; prenatal care= 30 cities), we found that the relationships were still statistically significant for teen births ($r=-0.56$, $p<0.05$) and prenatal care ($r=0.53$, $p<0.05$). While there were temporal discrepancies between Dashboard and LRFI datasets, it is unlikely that the difference in data years would substantially affect the results.

Conclusions: There is a meaningful association between cities with more reproductive freedom and better reproductive health outcomes. The City Health Dashboard and LRFI are important tools for understanding reproductive freedom and reproductive health at the city level.

Public Health Implications: Having individual control over reproductive choices helps women and their partners foster thriving families, setting up local communities for full and healthy futures. Linking reproductive freedom policies to reproductive health outcomes serves as a call to action and identifies opportunities for local leaders in cities across the country to take action.

Evaluating Race and Ethnicity Reported in Hospital Discharge Data and its Impact on the Assessment of Health Disparities

Authors: Renata Howland and Tsu-Yu Tsao

Title: Evaluating Race and Ethnicity Reported in Hospital Discharge Data And Its Impact on the Assessment of Health Disparities

Background: Hospital discharge data are an important source of information for monitoring population health and health service utilization at local, state, and national levels. These systems are also used to assess racial and ethnic disparities in the quality of care. However, broader use of these data has been limited by the lack of consistent, high quality information on race and ethnicity. In 2014 the New York State Department of Health implemented a new initiative to improve the quality and granularity of race-ethnicity information collected in the Statewide Planning and Research Cooperative System (SPARCS), the state's hospital discharge data system. No studies to date have examined the quality of race-ethnicity in SPARCS since this initiative. Additionally, there are limited studies nationally that validate race-ethnicity in hospital discharge data or provide estimates of the impact on assessing disparities, which would inform broader surveillance, research, and quality improvement efforts.

Study Questions: To assess the quality of race-ethnicity in hospital discharge data and examine the impact on the identification of disparities in select health outcomes in New York City (NYC).

Methods: Delivery hospitalizations from SPARCS were linked with 2015 New York City birth certificates. Using the birth certificate as a gold standard, we examined the sensitivity and positive predictive value (PPV) of hospital discharge race-ethnicity and estimated the impact of misclassification on racial/ethnic disparities in severe maternal morbidity (SMM) and preventable hospitalizations, defined using national algorithms of diagnosis and procedure codes. This study may have limited generalizability to other hospital discharge records; however these delivery records represented nearly 10% of all hospitalizations and include a diverse set of patients.

Results: Non-Hispanic white and black race had relatively high sensitivity and PPV. Hispanic ethnicity and Asian race had moderate sensitivity and high PPV, but were often misclassified as 'Other' and specific sub-groups were under-utilized. As a result, health disparities may be underestimated for those of Hispanic ethnicity and Asian race, particularly for measures such as preventable hospitalizations that use population denominators drawn from another data source.

Conclusions: The quality of hospital discharge data varies by race/ethnicity and may underestimate disparities in some groups. Future research should validate findings with other data sources, identify driving factors, and evaluate progress over time.

Public Health Implications: These findings are relevant for individuals who use hospital discharge data and look at trends by race and ethnicity. By providing information on the validity of information and the potential impact of misclassification, this study provides usable information for researchers who are interested in health equity.

Pride, Love & Twitter Rants: Combining Machine Learning and Qualitative Techniques to Understand What Our Tweets Reveal About Race

Authors: Thu Nguyen, Shaniece Criss, Amani Allen, M. Maria Glymour, and Quynh Nguyen

Title: Pride, Love & Twitter Rants: Combining Machine Learning and Qualitative Techniques to Understand What Our Tweets Reveal About Race

Background: Racial disparities in birth outcomes persist, and discrimination may be an important contributor to these disparities. Most research on discrimination have relied on self-reported experiences of discrimination, and the social and cultural context has been largely ignored. While individual self-reports of discrimination are valuable in documenting individual experiences, the social context of place can provide a broader ecological perspective for understanding one's experiences in relation to the broader social environment. An Eco social approach to the study of discrimination views discrimination as operating across multiple levels over the life course; and reflecting systemic prejudice, which has emergent properties of its own despite individual level experiences. The objective of this study is to describe variation in sentiment of geotagged tweets using race-related terms and identify themes characterizing social context related to race.

Study Questions: How is race/ethnicity discussed on Twitter? What are some of the methods to analyze and summarize large amounts of unstructured text data related to race/ethnicity?

Methods: Using Python, we applied a Stochastic Gradient Descent Classifier to conduct sentiment analysis of 1,249,653 race-related tweets from 2015-16. To evaluate the accuracy of the sentiment algorithm, manual labels were compared against computer labels for a random subset of 6,600 tweets. A qualitative content analysis was conducted on a random sample of 2,100 tweets to gain insight into discussions using race-related terms on social media and to identify themes.

Results: Agreement between computer labels and manually generated labels was 74%. Approximately 620,000 tweets were about Blacks, 205,000 about Hispanics, 270,000 about Asians, and 60,000 about Middle Eastern groups. The top Twitter terms were "n*gga" (42.6%), "Mexican" (8.4%), "Thai" (4.2%), and "Asian" (4.0%). Tweets referencing Middle Eastern groups (12.5%) or Blacks (13.8%) had the lowest positive sentiment compared to tweets referencing Asians (17.7%) and Hispanics (17.5%). The content analysis revealed most tweets were represented by the following categories: negative sentiment (45%), positive sentiment such as pride in culture (25%), and navigating intimate relationship (15%). The spectrum of negativity included non-derogatory use of racial slurs, complaints, insults using profane language, and hostility mentioning violence. It was also common to encounter negative sentiment tweets were not derogatory. The present analysis was based solely on the text within the tweet; images and videos could not be analyzed. We used race-related keywords to identify tweets. However, tweets

that do not use racial slurs or neutral racial terms may be race-related. The analysis includes only geotagged tweets, which may vary from tweets without geotagged information. This study assessed the social environment via online tweets, and these may differ from in-person interactions. However, when assessing expressed attitudes and beliefs online, people may feel less inhibited due to anonymity and invisibility of being online.

Conclusions: This study harnesses expansive and relatively untapped social media data to develop a novel area-level measure of racial sentiment. New approaches to measuring the social context may enhance research on social context and health.

Public Health Implications: New measures of racial attitudes and bias are needed to fully capture and investigate the impact of racism on health.

Creating a Safe, Developmental, Childcare Play Space Within a Health Home Visiting System of Care - "Happy Town"

Authors: Vella Black-Roberts

Title: Creating a Safe, Developmental, Childcare Play Space Within a Health Home Visiting System of Care - "Happy Town"

Learning Objectives:

1. How to develop a drop in play space in public healthcare setting to support home visiting programs.
2. Overview of Policies, Procedures and Program Development Strategies.
3. Discussion of the need for Developmental Screening using ASQ for high risk parents of infant/toddlers.
4. The need for hiring skilled child development professionals.
5. Why mental health consultants are recommended to support developmental and behavioral intervention strategies and healthy parent/child relationships Program design strategies.

Session Description: Home visiting programs (HVP) offer a unique opportunity to provide an array of much-needed services to women, men and families. Alameda County Public Health Dept. HVP staff discovered that one of its clients most needed and desired services was on-site child care. On-site child care was found to be mutually beneficial. Once clients learned that on-site child care was available and given opportunities to meet child care staff and learn, tour, the child care site for themselves, they quickly fell in love with it. Clients found the site to be a nurturing and inviting environment where children and families could come together and not to worry or be concerned about the safety of their children. Consultation was provided by BSMWT clinicians and ACPHD staff supported the engagement with families for children with difficult behavioral or developmental concerns. A monthly consultation time was created for Happy Town childcare staff to meet to discuss trauma and psycho-social issues presented by families attending the drop-in site. Opening in 2019, HT was created to support the need for conducting ASQ assessments, to provide child observations and to offer a place that was safe for families to come to learn to engage in ACPHD home visiting program offerings while not having to worry about the safety of their children. The offering has successfully met the needs of our Home visiting programs and is now sought as a child safe space for other county programs. Our presentation will address HTs journey from inception to present, lessons learned and our continuing efforts to improve the service through adaptation and adjustment to meet the changing needs of clients and public health department programs.

Session Justification: Alameda County home visitation programs include group education and ASQ assessments, and have been shown to be successful in meeting program needs and assisting case

managers/home visitors in meeting the needs of the children they serve. Happy Town (HT) has also been found crucial to creating a safe, developmental, child care play space within a Public Health Dept. Home Visiting System of Care ("Happy Town"), where children, parents and staff can thrive and come together. HT has also been shown to be a viable option for creating and designing a child care play space in a large urban public health facility. The workshop will address the topics cited above and expand on how the various Alameda County home visitors utilize Happy Town to connect with their families and to conduct ASQs and other child development activities.

Recommendations to Promote a Restorative, Trauma-Informed Approach to California Proposition 64 Marijuana Tax Funds

Authors: Stephanie Guinosso, Kanwarpal Dhaliwal, Maryann O'Sullivan, Kenneth Epstein, and Christina Bethell

Title: Recommendations to Promote a Restorative, Trauma-Informed Approach to California Proposition 64 Marijuana Tax Funds

Issue: Tax revenues from sales of marijuana in 33 states (and D.C.) are being used to improve public and population health through prevention and treatment of substance abuse and mental health. This project engaged stakeholders in California to specify and advance healing-centered and trauma-informed approaches in the expenditures of marijuana tax dollars made available through Proposition 64: The Control, Regulate and Tax Adult Use of Marijuana Act

Setting: A multi-disciplinary, statewide advisory committee consisted of leaders, advocates, providers, and health experts in California community-based organizations and institutions. The target population is California's children, youth and communities impacted by the War on Drugs.

Project: This advisory committee specified a framework, principles and recommendations for promoting approaches to the expenditure of Proposition 64 marijuana tax funds addressing adverse childhood and community experiences and trauma. Environmental and best practice literature scans, key informant interviews, policy analysis, listening sessions and formal advisory committee assemblies to specify policy recommendations were employed.

Accomplishments/Results: A 4-part framework, 6 policy criteria and 4 categories of detailed recommendations advanced a culturally responsive, racially just, trauma-informed and healing-centered approach guides expenditure decision processes. The recommendations were to: (1) adopt a relationship and engagement-centered assessment, intervention and healing model; (2) foster integrated, multi-sectoral training and capacity building at all levels; (3) require cross-sector collaboration; (4) employ a learning-centered innovation, measurement and evaluation strategy. Recommendations have implications for Medicaid and other agencies.

Barriers: Barriers included turnover within teams and reaching consensus among a diverse group of leaders on an innovative framework. Despite these challenges, the framework was successfully created.

Lessons Learned: Diverse stakeholders uniformly agreed that all efforts to prevent and effectively treat substance abuse and mental health problems in communities must rest on compassionate, dependable, and trustworthy relationships fostering interpersonal and community connections. Public health .

strategies that support such approaches are essential and are needed authentically engages individuals and communities most effected by trauma and the War On Drugs. Diverging from traditional approaches, recommendations require paradigm shifting mindsets and methods for policymakers and the public health, service and community based organizations that will receive California's substantial yearly expenditures under Proposition 64.

Information for Replication: N/A

Moving Toward Flourishing for US Children: Building Family Resilience and Connection Amidst Ongoing Adversity

Authors: Naragerel Gombojav, Christina Bethell, and Robert Whitaker

Title: Moving Toward Flourishing for US Children: Building Family Resilience and Connection Amidst Ongoing Adversity

Background: Human flourishing, defined as living a meaningful and engaged life, is well documented in adults across levels of adversities. Less is known about indicators of flourishing among US children, especially for those facing circumstances like adverse childhood experiences (ACEs), chronic illness or poverty.

Study Questions: The objective was to estimate national and state prevalences of flourishing among US children age 6 to 17 years, examine associations with indicators of family resilience and connection and assess variations in associations across children's ACEs exposure levels, special health care needs status and complexity and level of poverty.

Methods: Combined data from the 2016 -2017 National Survey of Children's Health were used to calculate national and across state prevalences of a 3-item flourishing index for children age 6-17 (n =51,156); operationalized in the NSCH across three constructs associated with flourishing: (1) whether children show curiosity and interest in learning new things; (2) whether children persist to complete tasks they start; and (3) whether children can remain engaged and regulate emotions by being able to stay calm and in control when faced with a challenge. Logistic regression analysis was used to calculate the adjusted odds of flourishing across scores on a 6-item family resilience and connection index (FRCI). Adjusted odds were separately calculated for each of 4 levels of ACEs exposure, by special health care needs status and complexity and by levels of poverty.

Results: The flourishing index and family resilience and connection index (FRCI) had internal consistency reliability of .67 and .84, respectively and factor analyses yielded single factors. The prevalence of flourishing was 40.3%, ranging from 29.9% to 45.0% across states. Compared to children with a 0-1 FRCI score, those with 2-3 and 4-6 FRCI scores had 2.11 (95% CI 1.86-2.39) and 3.71 (95% CI 3.31-4.15) greater adjusted odds of flourishing, respectively. A similar gradient appeared across levels of ACEs, poverty level, and special health care needs status and complexity. Sociodemographic characteristics were less predictive of flourishing. One quarter (24.7%) of US children both flourish and had a 4-6 FRCI score; 7.0% of children with "more complex" special health care needs and 22.4% of those with below poverty household incomes did so.

Conclusions: While fewer than half of US school age children meet flourishing criteria, even in the face of adversity, many are still flourishing in the context of family resilience and connection. These findings

are consistent across all levels of ACEs, special health care needs status and complexity and levels of poverty.

Public Health Implications: Across the sectors of healthcare, education, and human services, evidence-based programs and policies to increase family resilience and connection could increase flourishing in US children, even as society addresses remediable causes of childhood adversity. As the nation continues to address long-standing health inequities and the remediable adversities in children's lives, there are opportunities to increase child flourishing by supporting the development of family resilience and connection. These efforts could increase the level of meaning and engagement that children have in their relationships and activities in their homes, schools, and neighborhoods.

Including the Voices of Experts by Experience in the Research Grantmaking Process

Authors: Kimberly Coleman-Phox, Shanell Williams, Sky Feuer, Larry Rand, Linda Franck, and Miriam Kuppermann

Title: Including the Voices of Experts by Experience in the Research Grantmaking Process

Issue: Communities of color are disproportionately affected by preterm birth (PTB; defined as delivery at <37 weeks gestation). In California, the PTB rate among Black women is 55% higher than among white women. Despite decades of research, racial inequities in PTB and other poor birth outcomes persist and remain poorly understood. Studies are typically designed with minimal if any input from affected individuals, and most funders award funding absent involvement from community stakeholders. Incorporating the voices of affected individuals into study design and funding decision-making could improve our understanding of PTB, and lead to novel and effective approaches to decreasing disparities.

Setting: The University of California San Francisco (UCSF) Preterm Birth Initiative (PTBi-CA) is a place-based research initiative which aims to eliminate disparities in preterm birth and improve outcomes of infants born preterm in San Francisco, Fresno, and Oakland.

Project: PTBi-CA's research portfolio spans topics ranging from analysis of molecular contributors to PTB to testing interventions for pregnant women and preterm infants. In addition to conducting our own "in house" research, we fund innovative research projects by soliciting proposals that address our aims. Proposals are reviewed by a UCSF scientific review committee, PTBi-CA's leadership team, and members of our Community Advisory Board (CAB). CAB members, most of whom identify as women of color, have experienced PTB or are clinicians or frontline staff at local organizations serving women at high risk for PTB. Unique scoring criteria for each group of reviewers insures that funded proposals are scientifically rigorous, community-engaged, address questions of interest to families affected by prematurity, include study participants and the broader community in dissemination plans and align with our priorities and existing portfolio.

Accomplishments/Results: CAB participation in the review process has resulted in new proposal requirements, improved infrastructure, and increased opportunities to incorporate the voices of affected individuals during proposal development. For example, the application now requires a one-page plain language summary of the project background, aims, community-engagement efforts and impact, which is a significant component of the review. We host informational webinars for potential applicants where PTBi-CA staff answer questions about the review process and CAB members provide feedback on strategies for participant recruitment, community engagement and dissemination. Researcher demand for pre-submission and post-award CAB consultation has increased as a result. Finally, CAB members requested "teach-ins" where staff provide overviews of each proposal and answer

questions in preparation for the proposal review meeting. Through six award cycles (2016-2018), we have received 68 proposals, funded 32 projects and awarded over \$2.2 million dollars in research funding.

Barriers: Research application review is time-consuming and CAB members have multiple competing responsibilities. Convening members across geographies to review proposals in-person is logistically challenging. Removing barriers to participation including stipends for service, child care and transportation are critical to success.

Lessons Learned: By including the voices of experts by experience, researchers and funders can learn critical information about the needs and preferences of potential study participants and the communities in which they live, and develop, execute, and fund novel approaches to reducing disparities in preterm birth.

Information for Replication: N/A

Authentic Community Engagement: Community Leads Birth Equity Movement

Authors: Chemyeeka Tumblin, Gianna Hanson, D'Yuanna Allen-Robb, and Lillian Maddox-Whitehead

Title: Authentic Community Engagement: Community Leads Birth Equity Movement

Issue: Nashville, TN celebrates 9,925 first birthdays for babies born in our city year; however, at our healthiest, this number should be 10,000 first birthdays. While there have been modest improvements in Nashville's infant mortality rate (7.5 infant deaths per 1,000 live births in 2016 decreased to 7.0 infant deaths per live births in 2017), striking racial disparities exist. Non-Hispanic Caucasian infants are twice more likely to celebrate their first birthday than African American infants and racial infant mortality inequities are concentrated in various Nashville neighborhoods.

Setting: One such neighborhood, Napier Place and Sudekum Apartments houses over 800 apartments with just over 2,100 individuals, mostly African American women (>90% community population). The Sudekum/Napier community has one of the lowest incomes, highest unemployment rates and poorest birth outcomes in Nashville. With support from the CityMatCH Equity in Birth Outcomes Institute in 2016, the Metro Public Health Department partnered with Sudekum/Napier residents and community stakeholders to host to create a birth equity movement, placing African American women at the center of all activities and decisions.

Project: Perinatal Periods of Risk (PPOR) data were shared with residents and community businesses/organizations through a series of events over a period of 6 months. After listening to residents, several approaches were planned and implemented: 1). "It Takes A Village Community Baby Shower" events were held in 2017 and 2018 as a means of bringing resources directly to the residents' community; 2). Community baby photo-shoot and safe sleep awareness campaign featuring babies born in the neighborhood; 3). Special community listening session to capture unique perspective of African American women in the Community Health Assessment (CHA) process, and: an internal institutional change process to recommend, adopt and practice authentic community engagement with African American residents as well as a clinical screening protocol to identify previous history of preterm birth among Family Planning and WIC customers.

Accomplishments/Results: The results of these collective efforts include: 1) 1,248 screenings of clinical customers for their previous preterm birth history of which 86% were referred and connected to a home-visiting/case management service to support healthy perinatal care; 2). 31 healthy, term live born infants (100% African American infant vitality) who celebrated their first birthday living in the Sudekum/Napier community, and; 3). Institutional recommendation for the Metro Public Health Department to adopt an authentic community engagement policy based on the early success of the birth equity movement.

Barriers: One barrier encountered is mistrust of institutions. Residents are (rightfully) mistrustful and

to overcome this barrier, staff/partners began showing up to community events (game nights) outside of “work” hours and without discussing resources or information.

Lessons Learned: A lesson learned is the need for the “Community Engagement Policy”. Currently, community engagement is not supported as a standard systemic approach. As a result of the birth equity movement success, it is clear that such a policy advances equity with measureable results.

Information for Replication: Replication consideration includes low cost (\$2,500) for supplies and resident compensation for their time and food. Additionally, staff should complete Implicit Association Tests and Bias training before initiating a community engagement approach.

Mom Knows Best! Elevating the Voice of Moms Through Building and Sustaining a Community Advisory Board

Authors: Jennifer Weitzel and Kristine Omen

Title: Mom Knows Best! Elevating the Voice of Moms Through Building and Sustaining a Community Advisory Board

Issue: Nurse-Family Partnership (NFP) is an evidence-based, nurse home visiting intervention with over 40 years of research showing significant improvements in the health and lives of first-time moms and their children experiencing poverty. Implementation sites can expect to experience these improvements in their communities when NFP is delivered with model fidelity. One model element is the convening of a long-term community advisory board (CAB) that reflects the composition of our community.

Setting: This intervention is in Dane County, WI with families (specifically mothers with young children) as the intended audience.

Project: The CAB was established in 2017 and is comprised entirely of current and former NFP moms. Dane County is replete with non-profit organizations, advisory boards and advocacy groups. Within the maternal-child sector, these groups tend to be overrepresented by the same individuals and organizations; notably absent are the voices of those utilizing community services and programs. In an effort to create an advisory board that was truly reflective of our community, we were intentional in our decision to only recruit board members who are current or past NFP moms. A primary goal of this project was to provide opportunities for CAB members to gain leadership and advocacy skills. During this presentation, participants will learn about the development of Dane County's NFP CAB. Presenters will share how the CAB was developed utilizing principles of collaborative leadership and developmental evaluation. The audience will learn practical steps for outreach, agenda development, and facilitation in ways that privilege the voice and priorities of the community.

Accomplishments/Results: By consensus, the CAB decided to alternate meetings between working meetings and guest speakers. Accomplishments of the working meetings include: asset mapping and the development of tip sheets and letters by moms for moms, offering affirmations and words of encouragement. Leadership opportunities that CAB members participated in include: attendance at the YWCA's annual Health Equity Summit and the Wisconsin Women's Health Alliance annual policy summit. One CAB member has earned her certification as a lactation consultant. Board members have the opportunity to share their personal stories with a local advocacy group in an effort to repeal a policy allowing Medicaid to seek reimbursement for birth costs for parents who are unmarried.

Barriers: Presenters will share collective leadership strategies to address barriers related to facilitating

effective meetings while allowing the moms to drive the agenda. Presenters will also discuss how we strive to acknowledge power differentials and maintain transparency as to the health department's agenda in supporting the work of the CAB. Lastly, the presenters will share the ways in which traditional barriers such as childcare, transportation, compensation for time and general costs were successfully addressed.

Lessons Learned: This provides an exemplar of the community as co-leaders on the spectrum of community engagement in promoting and protecting public health. Privileging the lived experience of families in Dane County is an example of authentically elevating community voices.

Information for Replication: Operational costs for one year of CAB meetings is approximately \$2500. PHMDC has utilized grant funding to support these costs. Presenters will share a breakdown of these costs.

Capacity Building - Parents as Peers AND Equals

Authors: Helena Girouard, Dixie Morgese, and Julie Barrow

Title: Capacity Building - Parents as Peers AND Equals

Issue: Current culture led stakeholders to embrace using peers in the workforce to draw upon funding sources and to have a "parent voice", but cultivating peers as system leaders and professional equals took a paradigm shift, policy adoption and institutional change that transcended the initial capacity of our existing system.

Setting: The thrive by five Collaborative (tb5) and One Voice for Volusia mobilizes members that serve the prenatal to five community in Flagler and Volusia Counties of Florida, impacting the 4-county judicial circuit. Implementing Peers/Parent Leaders improved access to care for families and improved the system of care overall.

Project: Following TA in Adaptive Leadership from Georgetown University, tb5 began recognizing parents/families as equal partners using the Strengthening Families Protective Factor (SFPF) framework. This led to the creation of the "no wrong door" Family Place, a public and private sector partnership engaging 25 agencies to contribute to parent led family centered resources. Both agency representatives and families benefit from being on equal footing during family dialogues and hiring parent partners/leaders emerged as a best practice. Peers increased access to resources and trained thousands of people in the workforce on "Living the Protective Factors" and Trauma Informed Care.

Accomplishments/Results: Parent Leaders are employed in major sectors of our community serving prenatal to five population. Parent Leaders advance in employment opportunities, sit on organizational boards, hold committee leadership positions and speak before legislators/policy makers. Tb5 Pritzker Fellow is a peer with lived experience accessing service systems behavioral health, corrections, housing, child care, and home visiting. tb5 Partner Agencies from Executives to front-line are trained in SFPF Leaders mentor and guide Peers, & work with policy makers to create communities/workplaces where Peers can receive benefits, education and training, and adaptive work environments Peers AND those they serve have increased access to; insurance, safe housing, prenatal/pediatric care, safe sleep environments, quality childcare, reading programs, safe neighborhoods, and parenting programs. Gained National technical support from CityMatCH, EC-LINC, CSSP, Georgetown University and the Pritzker Foundation. Tb5 collaborative provides state and national support regarding promoting peers.

Barriers: Peers often lack "soft skills" requiring front end investment/adaptation to establish equity that takes time, resources and utilizing community partners to obtain educational support, financial literacy, access to affordable housing, quality childcare, adaptive scheduling, and trained management Level 2 Background screens, financial histories, lack of familial support and trauma and substance abuse histories all require changes in work policies and hiring practices and advocating to improve legislative standards/state policies that prohibit hiring qualified peers. Stigma is a barrier. Greatest outcomes

occurred when Community Leaders across sectors advocate for Peers highlighting their unique personal qualities that support the SFPF framework and contribute to replicating protective factors throughout the community.

Lessons Learned: Employing Peers in the workplace results in high RIO when done with a commitment to equity. It remains one of the most humane ways of improving parental resilience in high risk and hard to access populations. Believing Peers are Equal is one thing, ensuring they are equal by establishing workforce investments and policies is another.

Information for Replication: Creating or using existing collaborations and coalitions to mobilize and support the peer model only requires an in-kind investment. Starting Certified Peer positions tied to guaranteed funding streams such as Medicaid or managed care Using mentoring to improve soft-skills and increase employ-ability has the highest ROI. Peer shadowing, working in cohorts and networks of peers is effective Utilize existing workforce initiatives and programs to improve Peer skill acquisition and providing internal supports such as in-service trainings, shadowing opportunities and on-line learning programs and night classes. Assisting Peer to obtain scholarships and grants for next level career opportunities. Providing SFPF training to both community members and agencies to ensure fidelity to the framework.

Understanding Racism as a Root Cause of Racial Health Disparities

Authors: Zea Malawa and Solaire Spellman

Title: Understanding Racism as a Root Cause of Racial Health Disparities

Learning Objectives:

1. Recognize how historic events and policies shape the racial health disparities we in the US today.
2. Examine racism as a root cause of persistent racial health disparities
3. Discover a guiding framework for designing interventions that address systemic racism.

Session Description: The field of public health has identified racial health disparities as a chief concern for decades. While there have been a myriad of published articles describing the severity and complexity of these disparities, they persist into present day relatively unchanged. We believe this lack of progress can be explained, in part, by a failure to acknowledge that racism is at the root of these racial disparities. Many public health practitioners believe more should be done to address our country's systemic racial inequities, but few people feel able to create meaningful change, and even fewer feel that it's their responsibility. As a result, many opt to pursue programmatic fixes and Band-Aid solutions over addressing the underlying structural, interpersonal, and historical racism. We hope to empower public health practitioners by introducing the 'Racism as a Root Cause' (RRC) framework for addressing racism as an underlying determinant of disparate health outcomes. During this workshop, we will first explore the history of racism in this country to cultivate participants' understanding of how racist practices and policies from the past have created the inequities we see in the present. We will then help participants understand how racism is a root cause of health disparities. We will finish by introducing a guiding framework for creating initiatives that address systemic racism and allowing participants to practice using the framework during an activity where participants will design their own interventions. We hope this approach can help guide and structure the important work dismantling racism so Black, Indigenous and other racially marginalized groups can finally have an equal opportunity for good health.

Session Justification: The public health community has acknowledged that social factors impact health, and those health impacts vary by race. Our society has started to recognize that rather than biology or poverty, historical and present-day racism is a root cause of health inequities. This understanding has evolved over the course of centuries, yet our impact has been limited because we have failed to successfully develop interventions that address the core issue of racism. This workshop presents Racism as a Root Cause approach (RRC) as a new framework for developing strategies, policies and mechanisms to dismantle the root causes of health disparities.

The Link Up for Black Health Care Professionals

Authors: Misty Wilder

Title: The Link Up for Black Health Care Professionals

Issue: Over the past 20 years maternal and infant health outcomes have improved, i.e., infant mortality and worsened, i.e., maternal mortality, while the black and white disparity in outcomes has remained. Often, for a variety of reasons, the African American (AA) lived experience is absent from MCH leadership in addressing these disparities. Yet, not only AA inclusion, but AA MCH leadership and direction is critical to creating authentic change at an individual, community, and policy level. A convergence of heightened awareness, shifting political climate and widespread publicity of the maternal mortality crisis has created a space for action.

Setting: North Texas Area, Tarrant County Black Healthcare Professionals

Project: The UNTHSC Healthy Start initiative created the Link Up as a forum for Black health professionals to convene and identify strategies to address Black infant, maternal and child health outcomes. Participants included medical, mental health counselors, academics, public health workers, social workers, community health workers, and others. To our knowledge, this is the first local effort to gather a multidisciplinary group of Black health professionals to collectively address an issue that is close to home. Link Up is in its infancy phase, but future steps include listening sessions with seasoned elders who have been engaged in social justice work, strategic planning, health equity consultation and Summit on Black Health.

Accomplishments/Results: Link Up engaged young Black professional (i.e. Millennials) to address maternal and child health concerns, which is a new approach in the North Texas area. Unlike other health concerns such as cancer and heart disease, African American maternal and child health has received less attention in our local community. A safe place was created to share concerns and ideas free from judgment or perceptions of “anger.” Individuals begin to problem solve and connect on future projects and community events. Synergy was created leaving the group excited and ready to address infant and maternal mortality. Although some of the attendees are already a part of the MCH community, there was a consensus that an effort such as “Link Up” was needed and overdue.

Barriers: Individuals expressed concern that the backbone agency, a university, influence and restrict decision-making process or outcomes, that is, a fear of being silenced by the backbone organization. Another concern was when or if to include allies. Would this collaboration restrict freedom or how the conversation is framed? These concerns are based on past history and experiences of some group members. Sustainability of the group and keeping individuals engaged while recognizing the time needed to achieve long term outcomes were challenges also voiced.

Lessons Learned: Although the idea to convene a Black health professional group has been brewing for some time, the political climate has created a sense of urgency and action to disparities through an African American lived experience lens. We recognize that this work and approach is difficult and

painful, but necessary and worth the effort. This forum has created a safe space to discuss the effects of racism on our families and address the most significant concerns of our time.

Information for Replication: N/A

Using a Staff-Driven Committee to Transform Health Equity: The Denver Public Health Story

Authors: Jessica Forsyth

Title: Using a Staff-Driven Committee to Transform Health Equity: The Denver Public Health story

Issue: In 2016 Denver Public Health (DPH) began its health equity transformation. DPH is an innovative, nationally recognized public health department that collaborates with partners to inform, educate, offer services, and promote policy change to make Denver a healthy community for all people. DPH engaged in many practices that worked to achieve health equity, yet many of those practices were not documented nor was there a common understanding of how DPH programs and services operationalize equity. In addition, DPH is a key department in a large safety-net institution, Denver Health. This provided challenges and opportunities to make meaningful systemic changes. To transform our work and culture, DPH leadership committed to ensuring that health equity was embedded across all areas and not viewed as a term without weight.

Setting: Location; Denver Audience: DPH leadership, staff, and communities we serve.

Project: DPH is on the path to truly embrace the power of health equity in the design, implementation, and evaluation of programs, policies, and practices. In order to transform our work and our culture, DPH leadership committed to embedding health equity across all areas and levels of leadership. As such, the cross-divisional and diverse Health Equity Committee was formed to identify key health equity objectives for our 3-year strategic plan. This session will demonstrate the power of a staff-driven committee to positively impact both staff and leadership in an informative and inclusive way to advance equity. We will also describe staff-led key strategies to advance equity including igniting leadership transformation, training and learning opportunities for all staff, community engagement, and the hiring of a health equity coordinator for the department.

Accomplishments/Results: Over the course of two years, we maximized resources to build the equity capacity of our workforce and to build better services with the community. By utilizing a committee of cross representative department members, we were able to spread equity messages and learnings more effectively across all program areas. Through building our employee understanding and commitment to health equity, we enter into year three of our strategic plan ready to engage authentically and consistently with the community. One tangible result was the creation and implementation of Data and Equity Principles, a tool to ensure community voice is paramount across our data-driven programmatic work. Additionally, we are also using data to measure culture change in our department and drive individual program goals to advance equity across all areas of our work - from administration to population-level work to direct services.

Barriers: Key barriers include establishing a common understanding of equity and how to operationalize

true equity across all programs and services; and, issues of race and racism and how it impacts staff belonging, inclusion and advancement at DPH.

Lessons Learned: Engaging teams from the entire department (internal community engagement) is critical to the success of igniting leadership. Long term goals with yearly strategies and action steps establish progress toward the long road to equity. Creating space to celebrate and share frustrations can move equity work forward.

Information for Replication: N/A

Racial/Ethnic Differences in Long-Acting Reversible Contraception Use Following the Affordable Care Act's Contraceptive Coverage Mandate

Authors: Alyssa Bosold

Title: Racial/Ethnic Differences in Long-Acting Reversible Contraception Use Following the Affordable Care Act's Contraceptive Coverage Mandate

Background: Women of color in the US experience disproportionately high rates of unintended pregnancy. Increasing access to long-acting reversible contraception (LARC)—implants and IUDs—can reduce unintended pregnancy. Studies prior to the Affordable Care Act (ACA) demonstrate generally that women of color were less likely to use LARC when compared to non-Hispanic white women. The ACA's 2012 Contraceptive Coverage Mandate (CCM) expanded access to contraception by requiring all new private insurance plans to cover FDA approved methods, including LARC, without cost-sharing. Research is necessary to better understand the CCM as it relates to LARC use disparities.

Study Questions: This study examines associations between LARC use and self-reported race/ethnicity in periods before and after CCM implementation. Specifically: 1) What are the associations between race/ethnicity and LARC use before (2006-2010) and after (2013-2015) the CCM? 2) What are the associations between race/ethnicity and LARC use by type (i.e. comparing IUD use, implant use, and referent non-use of LARC) before and after the CCM?

Methods: Using weighted data from the 2006-2010 and 2013-2015 National Survey of Family Growth (a nationally representative survey of women ages 15-44), associations between race/ethnicity, LARC use, and type of LARC were examined among women at risk of unintended pregnancy. Associations were examined by direct categorical comparison between the two survey periods and logistic regression methods within each survey period. Regression analysis controlled for: education, age, male sexual partners in the past year, prior discontinuation of non-LARC hormonal methods, marital status, income, prior abortion, parity, and insurance status and type. Insurance was added as a covariate to isolate the influence of the CCM from that of expanded insurance coverage generally under the ACA.

Results: LARC use overall was 8.3% in the 2006-2010 period; lower than the 17.7% LARC use in the 2013-2015 period. In 2006-2010, non-Hispanic black women were less likely than non-Hispanic white women to use LARC (OR=0.59, 95%CI 0.38-0.92). In 2013-2015, there were no significant differences in LARC use between non-Hispanic white and black women (OR=0.86, 95% CI 0.54-1.37). Regression analyses of both survey periods showed no significant differences when comparing non-Hispanic white women to non-Hispanic black and Hispanic women in terms of LARC use by method type. The exception was non-Hispanic black women in the 2006-2010 survey, who were less likely than non-Hispanic white women to use the IUD (RRR= 0.56, 95% CI 0.35-0.89).

Conclusions: Results suggest that the CCM may be associated with decline in LARC use disparities between non-Hispanic black and white women. Study limitations are: causality cannot be determined from cross-sectional surveys; factors such as provider behaviors and changing practice patterns may be unmeasured confounders; and broad racial/ethnic categories ensure large samples but mask diversity within racial/ethnic groups.

Public Health Implications: Continued research should study access to contraception through the CCM in combination with other factors, to understand impact on LARC use disparities. Such research must acknowledge a history of forced sterilization and structural racism in family planning. Broadening understanding of contraceptive access, informed by a reproductive justice perspective, is essential for eliminating inequity in family planning and improving health outcomes.

The Association Between Pregnancy Intention and Use of a Highly Effective Contraceptive Method Postpartum: Results from the 2012-2015 RI-PRAMS

Authors: Brittany Mandeville, Hanna Kim, and Annie Gjelsvik

Title: The Association Between Pregnancy Intention and Use of a Highly Effective Contraceptive Method Postpartum: Results from the 2012-2015 RI-PRAMS

Background: In 2010, half of all Rhode Island pregnancies were unintended (52%). These unintended births are linked to worse outcomes for mothers and their children. Only 68% of women at risk of unintended pregnancy use contraceptives consistently and correctly, and those who do not account for 96% of unintended pregnancies. Women with one unintended birth have an elevated risk of having a subsequent unintended birth. Few studies have examined the association between pregnancy intention and postpartum contraceptive choice, and no studies have examined this association in Rhode Island mothers.

Study Questions: Is there an association between pregnancy intention and the use of a highly effective contraceptive method postpartum in recent Rhode Island mothers?

Methods: Data from the 2012-2015 Rhode Island Pregnancy Risk Assessment Monitoring System (RI-PRAMS) (n=4,687) were analyzed to examine the association between pregnancy intention and use of a highly effective contraceptive postpartum. Women who self-reported that they wanted to be pregnant then or sooner were considered to have an intended pregnancy. We considered an unintended pregnancy to include those who wanted to be pregnant later, not at all, or were unsure. Respondents who indicated using female or male sterilization, an intrauterine device (IUD), or an implant postpartum were considered to use a highly effective contraceptive. Multivariable logistic regression was used to calculate the odds of using a highly effective contraceptive method postpartum, adjusting for race/ethnicity, education, Women, Infants, and Children (WIC) program participation and age. All analyses accounted for weighting and complex survey design of the RI-PRAMS.

Results: Between 2012 and 2015, 42.2% of Rhode Island mothers had an unintended pregnancy. 28.3% of those with an intended pregnancy used a highly effective contraceptive postpartum, compared to 39.8% of intended pregnancies ($p<0.001$). After controlling for demographics and socioeconomic position, mothers with an unintended pregnancy had higher odds of using a highly effective contraceptive postpartum (AOR=1.42, 95% CI=1.22-1.67) compared with mothers with an intended pregnancy. Hispanic mothers (AOR=2.03, 95% CI=1.68-2.45) and mothers with current Medicaid coverage (AOR=1.56, 95% CI=1.30-1.88) had higher adjusted odds of using a highly effective contraceptive postpartum compared to White, Non-Hispanic and those with private insurance. A limitation was the inability to control for mother's anticipating future birth

Conclusions: Rhode Island mothers with a recent unintended pregnancy have higher odds of using a highly effective method of contraception postpartum than those with an intended pregnancy.

Public Health Implications: The higher risk of subsequent unintended birth among mothers with a previous unintended birth is not explained by their initial postpartum contraceptive use. Reproductive health is not stagnant and is dependent on decisions made through time. More research is necessary to observe the pattern of use among mothers with a prior unintended pregnancy beyond the postpartum period.

Valuing Women's Health: How Local Governments Can Transform Women's Options by Funding Comprehensive Reproductive Health Care

Authors: Elena Lavarreda and Jenny Dodson Mistry

Title: Valuing Women's Health: How Local Governments Can Transform Women's Options by Funding Comprehensive Reproductive Health Care

Issue: Women, trans men, and other people who can become pregnant deserve to make decisions about whether and when to become a parent based on what is right for their lives and their family. Yet too often, economic considerations constrain their decision, whether they choose to end or continue a pregnancy. In this series of linked abstracts, advocates from New York City and Miami will talk about how local government, including local departments of health, can provide funding and programmatic support to abortion funds and community-based doulas, who have long provided essential reproductive health care services but have been excluded from the traditional health care system. The New York Abortion Access Fund (NYAAF), like all abortion funds, provides grants to help people access abortion care who cannot otherwise pay for the procedure. Even though Medicaid covers abortion care in New York, New Yorkers need financial support from NYAAF for a range of reasons including high deductibles, concerns about confidentiality or their citizenship status, being uninsured, or being insured through other federal government policies that are subject to restrictions on abortion coverage. NYAAF also serves people from outside of New York who travel to the state for care.

Setting: New York City Low-income people in need of abortion care Abortion funds and abortion providers

Project: Abortion funds are very effective at their primary aim: to ensure people who need an abortion are able to access one despite financial barriers. However, with limited budgets, they cannot meet the full needs of the communities they serve. NYAAF collected data on the need for additional funding in New York City and on their current client mix that shaped this proposal, and educated elected officials and health officials on what an abortion fund is and how it works. They were also essential community organizing and education by sharing patient stories that demonstrated need.

Accomplishments/Results: This initiative provides an innovative model for health departments seeking to support comprehensive reproductive health care. It is an important step towards incorporating abortion care into the full spectrum of health care, while also addressing abortion-specific barriers to how the procedure is paid for.

Barriers: The primary barrier was opposition from anti-choice organizations and some members of the City Council to directly funding abortion care. As an all-volunteer organization, NYAAF also needed to update their policies and procedures to meet the reporting requirements of a local grant.

Lessons Learned: NYAAF will share what they learned from their first effort to partner with local government, including recommendations for how local health officials can find their local abortion fund and build a relationship. It is important for local officials to work closely with abortion funds and other grassroots efforts that increase access to health care to design an initiative that meets community need and keeps patients and volunteers safe.

Information for Replication: Because NYAAF is an all-volunteer organization, they provided their time and expertise at no cost. Entities considering replicating this should especially think through the possibility of state-level preemption and analyze the various funding mechanisms available in their city government to determine the best way to fund a similar initiative.

From Engagement to Sustainability: A Partner Continuum

Authors: Amy Mattison Faye, Nell Fuller, and Stephanie Isaacs

Title: From Engagement to Sustainability: A Partner Continuum

Issue: Over half (54%) of pregnancies in South Carolina are identified as unintended. Many unintended pregnancies and births have health, economic, and societal consequences for the women and the families. Despite the fact that for every \$1 invested in family planning, states can save in Medicaid costs, there continues to be reluctance and limited capacity for large-scale improvements for provision of contraceptive care.

Setting: Choose Well is a statewide contraceptive access initiative that works with over 150 clinical partners including Title X health centers, federally qualified health centers, rural health clinics, free clinics, and hospitals throughout all 46 counties in South Carolina.

Project: Using principles of collective impact, Choose Well collaborates with health systems to improve access to quality contraceptive care, remove cost-barriers for highly effective contraceptives, and disseminate information regarding all contraceptive methods. In order to support over 150 clinical partners' adoption and implementation of the initiative, Choose Well has developed a Partner Continuum model. The Partner Continuum visually demonstrates the stages of progress as identified by activities and milestones that align with the overarching strategies of the initiative. In addition, the continuum aids in monitoring an organization's stage of implementation. All partner organizations progress through stages of engagement, onboarding, operationalizing, learning and adapting, to the final stage of sustainability. Examples of activities to track progress include completion of initial readiness assessment, identified implementation team, participated in training, complies with reporting, conducts quality improvement efforts, implements system level changes, and disseminates lessons learned.

Accomplishments/Results: Recent assessment of our clinical partner's continuum stage found 50% in the operationalizing stage. Using this tool realistic goals have been set based on the clinic's stage and completion of stage activities. Grounded on current progress within the continuum, we anticipate 75% of Partners to progress beyond the operationalizing stage into learning and adapting and 25% will have moved into the sustaining stage by 2021.

Barriers: Although the continuum is visually linear, a partner may slide backwards due to several common challenges within clinical settings such as staff turnover, delays in training, and transition of electronic health record systems. Based on partner clinic experiences, the continuum provides a realistic timeline for implementation including these potential setbacks with implementation.

Lessons Learned: Implementation of a complex project with numerous partners can be cumbersome for supporting staff. This tool allows foundation staff to quickly identify a clinic's progress, communicate

clearly with partner's key milestone and activities, identify challenges that may interfere with progress, the time necessary for course correction, and the time required to transition from one stage to the next. This tool provides all partners, key stakeholders, and staff a common language for clearly defining progress and goal setting. The continuum tool can be adapted and applied to various health initiatives as a resource for program staff and key stakeholders to monitor implementation.

Information for Replication: N/A

Early Intervention and Special Education Trajectories: Insights for Developmental Screening and Surveillance

Authors: Katharine McVeigh, Matthew Romo, and Phoebe Jordan

Title: Early intervention and special education trajectories: insights for developmental screening and surveillance

Background: Little is known about how children use Individuals with Disabilities Education Act (IDEA) services across EI, early childhood special education (ECSE), and K-12 special education (SE).

Study Questions: What are the primary trajectories of EI, ECSE, and SE service use? What are the risk profiles of each trajectory?

Methods: Sequence analysis was used to identify the most common IDEA service use trajectories for all children in the study population (N=113,627). Frequency analysis was used to describe each trajectory with regard to EI and DOE characteristics, as well as maternal demographic characteristics, pregnancy risk factors, and birth outcomes.

Results: Five primary service use trajectories were identified: 1) continuous use of multiple services across EI/ECSE/SE (13.0%); 2) EI and intermittent ECSE/SE (16.1%); 3) EI without transition to DOE schools or services (23.9%); 4) low EI use and mostly speech therapy in ECSE/SE (38.4%); 5) older entry to EI and consistent use of ECSE/SE (8.6%). Disability and delay profiles, service intensity and educational outcomes varied across trajectories. Children with early entry into services were more likely to have adverse birth outcomes (e.g., preterm birth, low birthweight, and NICU use), whereas children with older entry or low use of EI generally had mothers with fewer pregnancy risk factors and had better birth outcomes. Children with low use of EI and mostly speech therapy in ECSE/SE more often had a Latina mother (45.0% vs. 39.1%) and children with older entry to EI and consistent use of ECSE/SE more often had a Black mother (32.6% vs. 26.7%) compared with the overall population of children who used IDEA services. Children with older entry to EI also more frequently had a mother without previous children (44.7% vs. 39.4%).

Conclusions: Each pattern was characterized by distinct use of core services and educational outcomes. Disparities in IDEA service use exist for mothers of color, as well as for first-time mothers.

Public Health Implications: Findings offer insight into potential areas for improvement in both EI, ECSE, and SE service delivery, highlight the value of integrating EI and DOE data, and reinforce the guidance that accurate developmental screening and consistent developmental surveillance for all children is of utmost importance regardless of pregnancy risk factors and birth outcomes.

Nearly Perfect: The Delaware Early Detection Initiative

Authors: Patricia Gellasch and Frances Glascoe

Title: Nearly Perfect: The Delaware Early Detection Initiative

Issue: In 2011, Delaware's medical societies and other organizations discovered enrollment in Early Intervention (EI) was 49th among the 50 United States. Delaware's young children were unlikely to receive the benefits of early intervention known to improve short- and long-term child/family outcomes. Minimal use of accurate developmental-behavioral screens within primary care was the most apparent reason for the low ranking.

Setting: The initiative took place in the State of Delaware. Among the participating societies were the Nemours Foundation and Delaware's: Academy of Medicine, Chapter of the American Academy of Pediatrics (AAP), Public Library system, Speech and Hearing Association, Autism Society, Department of Education, and Child Development Watch. Screening was completed by primary care clinics. Children in the state and their families benefited from the initiative. All Nemours practices participate in the Screening Initiative and contributed 47% of screens. Of 120 eligible Non-Nemours practices, there are 24 active clinics that collectively contributed 53% of screens.

Project: Working with the Lieutenant Governor and the Delaware General Assembly, various professional groups effected legislative funding for freely accessible developmental-behavioral screening via a web-based screening service, PEDS Online. Delaware Division of Public Health was designated the lead agency. Training via CME conferences and technical support were provided - creation of a web site housing how-to videos, fliers, and two-way consent forms. Delaware Help Me Grow (2-1-1 line) was placed in charge of referral coordination/project monitoring.

Accomplishments/Results: Rates of screening increased each year. By 2018, about 40% of clinics used PEDS Online; with about 40% of children in the birth to 3-year age range receiving screening. Delaware's early intervention enrollment rose to 17th among US States. Clinics most successful in implementing PEDS Online tended to be those making use of the PEDS Online Parent Portal. With this approach, parents complete screens from home or in office waiting rooms (e.g., via tablet PCs). Because the 96110 billing code does not include RVUs for physician time, it makes sense to engage parents in the task of completing measures.

Barriers: Immediate economic benefits of screening do not appear to be drivers for uptake. Despite no-cost access to screens and readily available reimbursement (96110 screening code), ~ 60% of clinics have yet to deploy PEDS Online or any other accurate screening tools. Implementation challenges were apparent from the many clinics that signed up to use PEDS Online but failed to use the service. Referral rates from clinics were not optimal. About 50% of children with high risk results were not referred to services.

Lessons Learned: Implications for the future include improving publicity of the initiative through newsletters and scholarly publications. Offer training via conferences to encourage universal participation. Training does not require a focus on economic benefits to clinics but instead improved understanding of screening test results, the value of EI, and familiarity with resources, a known driver of referrals. Clinic champions and implementation support will become a new focus for the planned training events to improve implementation. Referral support/care-coordination appear essential. Special education programs will begin to contact clinicians about non-referred children with high risk results.

Information for Replication: N/A

Assessing Child Safety Using a Home Safety Index Compared to Injury Reporting among Missouri Toddlers, 2010-2013

Authors: Elizabeth McCarthy, Daniel Quay, Rebecca Lander, and Venkata Garikapaty

Title: Assessing Child Safety Using a Home Safety Index Compared to Injury Reporting among Missouri Toddlers, 2010-2013

Background: Unintended accidents are the leading cause of death for young children. Generally, studies that focus on child safety evaluate injuries and vary in scope and scale. However, few studies examine child safety while accounting for environmental factors.

Study Questions: This study seeks to determine how measuring child safety with an index compared to measuring child safety using only injury data affects interpretations of household safety.

Methods: The Missouri Pregnancy Risk Assessment Monitoring System (PRAMS) survey collects data on a stratified sample of all mothers who had a live birth in Missouri during a given year. The data for this study came from the Missouri Child Health Assessment Program Survey (MoCHAPS), a 2-year follow-up to PRAMS that collects data through mailed surveys. The data collected by MoCHAPS focuses on a variety of topics pertaining to the health of mothers and toddlers, including child safety. This research uses data on safety behaviors and child injury collected on toddlers born between 2010 and 2013.

Results: Data were analyzed using two methods to determine home safety: a single injury variable was compared to a safety index that encompassed both physical injury and environmental factors. First, the responses to a single question reporting if the child had been injured was analyzed using chi-square analysis to evaluate relationships with injury. Urban location was the only variable that was independently associated with safety risk ($p < 0.05$). Secondly, an index was created that rated home safety based upon mother's responses regarding childhood injuries, firearm safety, car seat use, and other environmental safety variables. Safety index scores ranged from 0-15, with a mean score of 3.1. The higher the score, the more safety concerns were present, indicating a less safe environment. The safety index was analyzed using linear regression. Maternal race, marital status, age, maternal depression, and urban location were associated with elevated safety index scores ($p < 0.05$).

Conclusions: Based upon these results, it is demonstrated that using a multitude of factors rather than a single variable allows the development of a clearer picture of toddler home safety in Missouri. The safety index accounts for the presence and use of environmental safety features which can prevent injuries, something not captured in the former approach. As such, the index approach is able to present a more complete picture of what influences home safety. The safety index identifies a greater number of maternal and household characteristics associated with low safety practices, allowing public health professionals greater precision in efforts to improve child safety and education around child injury.

Public Health Implications: This study demonstrates that using a safety index changes the focus for outreach regarding information on home safety. As such, public health professionals may be better equipped to help parents with regard to environmental safety factors that help lessen the risk of injury, rather than focusing on injury after-the-fact.

Faith, Family, Social Ties and Networks: Recruitment Strategies to Engage Brazilian Immigrant Families in Maternal and Child Health Research

Authors: Ana Cristina Lindsay, Luisa Rabello, Thaymara Batista, Amanda Melo, and Mary L. Greaney

Title: Faith, Family, Social Ties and Networks: Recruitment Strategies to Engage Brazilian Immigrant Families in Maternal and Child Health Research

Background: Racial and ethnic disparities in morbidity and mortality for mothers and children exist in the United States. Evidence documents that ethnic minority populations are underrepresented in research. Several reasons may account for this underrepresentation including racial/ethnic minorities' fear and mistrust of research, lack of access to health care and social services, employment constraints, scheduling conflicts, participation-associated costs, language barriers, and cultural differences, etc. Nonetheless, participation of ethnic minority populations in research studies is essential for addressing health disparities. Brazilians comprise a rapidly growing immigrant population group in the United States. Although Brazilians share many of the cultural characteristics of other Latin American populations, an important cultural difference is that Portuguese, and not Spanish is the official language spoken by Brazilians.

Study Questions: What are effective strategies to reach, recruit, and enroll Brazilian immigrants in maternal and child health research studies?

Methods: Using a data collection log we collected information on methods used to reach, recruit, and enroll participants into three community-based maternal and child research studies. The studies used qualitative (focus groups, in-depth interviews) and quantitative (face-to-face and telephone interview surveys) methods to examine a range of maternal and child health research topics including: 1) the human papilloma virus and the human papilloma virus vaccine, 2) gestational weight gain, and 3) early childhood (2-5 years) obesity prevention. Direct recruitment methods which included in-person outreach at community, church, and social (household parties) events, and personal contacts (family, friends) in combination with snowball technique were conducted by bilingual, bicultural health sciences research assistants who were members of the target community. Indirect recruitment methods included posting flyers in social services, faith-based, and health care organizations, and announcements in social media (Facebook).

Results: Our results showed that the most successful recruitment and enrollment strategies included a combination of direct and indirect methods. Our results showed that the most successful direct methods to reach, recruit, and enroll participants in all three studies were personal contacts (i.e., family, friends) in combination with snowball techniques and face-to-face contacts at church (e.g., meeting people after services), community and social events (household parties). In addition, we found that in

one of the three studies, Facebook was a successful indirect method for recruiting pregnant women. Our results showed this to be an effective method to recruit and enroll pregnant women, second only to personal contacts in combination with snowball technique. Moreover, we found that having a research team that is linguistically and culturally competent was crucial in helping the target population overcome barriers to participating in research.

Conclusions: Our findings suggest that recruitment and enrollment of hard-to-reach immigrant populations will be more successful when researchers and study staff have an understanding of the social context of the target population, build trust and respect, and share common linguistic and cultural understanding of the target population.

Public Health Implications: Findings provide information on effective methods for reaching, recruiting and enrolling Brazilian immigrants in maternal and child health research. This knowledge may be also valuable for recruiting and enrolling research participants from other underrepresented population groups the United States.

Safe Sleep Initiatives: Collaboration Strategies to Promote Community Inclusion and Engagement

Authors: Leilani Spence and Morrstein Holman

Title: Safe Sleep Initiatives: Collaboration Strategies to Promote Community Inclusion and Engagement

Issue: Infant Mortality is a major indicator of community health. Shelby County, (MEMPHIS) Tennessee has experienced high infant death rates, and the community seeks to improve the chances of babies living beyond their first birthday. Between 2012-2014, 178 infant deaths per 100,000 live births in Shelby County were reported due to sudden unexpected infant death (SUID), compared to 87 per 100,000 live births in 2013 nationally. SUID includes sudden infant death syndrome (SIDS), accidental suffocation or strangulation in bed, and unknown causes. In 2013, 25% of all infant deaths in Shelby County (32 out of 127) were determined to be sleep-related by the local child death review team.

Setting: Memphis, TN

Project: To address sleep-related unintentional infant injuries and deaths, the Shelby County Health Department (SCHD) implemented a safe-sleep awareness campaign to promote and educate on infant safe sleep environments through outreach, partnerships and collaborations. Safe sleep training/education along with pack and plays are provided to families, at no cost. For the fiscal year, 2014-2015, the SCHD distributed and provided safe sleep education resources to over 600 families. One hundred percent of staff members in the Maternal Child Health Section (MCH) are “Safe Sleep Ambassadors”! Additionally, MCH provided training to other SCHD department staff that provide outreach and education, i.e.: TB Control Section and Health Planning and Promotion. Safe sleep resources/education, including pack and plays, are available at sites other than SCHD and its public health clinics. The motto of “no wrong door” regarding the provision of safe sleep resources has been paramount. SCHD collaborates to provide safe sleep resources/education at birthing hospitals and other partnering agencies that serve families. This strategy helps to address the socio-economic barriers that confront many-- especially high risk families. SCHD implemented a robust and innovative infant safe sleep campaign. Public Service Announcement (PSAs): radio and television, billboards, movie theater spots, mass transit bus wraps, blogs, Facebook, Twitter, gas toppers, fans, and focus groups were several of the platforms used to ensure consistent messaging. SCHD has partnered with the local fire departments to educate first responders, utilizing the DOSE (Direct on Scene Education) model identifying potentially unsafe infant sleep environments. .

Accomplishments/Results: Data for 2014 demonstrate improvement in regard to sleep-related deaths, with 15% of all infant deaths (20 out of 133) determined to be sleep-related compared to 25% in 2013.

Barriers: Pack n Plays/portable cribs: To prevent chances of families requesting >one portable crib, a data base was developed that allowed for verification. Inconsistent Messaging in the Community: Social Media was engaged to promote UNIFIED Messaging

Lessons Learned: Multifaceted safe sleep outreach educational initiative that includes community and stakeholder collaborations can be replicated to address unintentional injuries and sleep related deaths. The continued expansion of such a project will address infant mortality concerns as well as, ensure and strengthen positive outcomes for infants. To chart the path for sustainability and success, the SCHD will work diligently with community partners to ensure public health policies and programs are in place to combat infant mortality and to ensure health equity for all babies.

Information for Replication: Collaboration serves as an effective means of outreach and education.

FATHERS ENGAGE, FATHERS SUPPORT, FATHERS MATTER: Strategies for Male/Fatherhood Involvement in MCH programs

Authors: Leilani Spence, Morristein Holman, Tunishia Kuykindall, and Greg Dixon

Title: FATHERS ENGAGE, FATHERS SUPPORT, FATHERS MATTER: Strategies for Male/Fatherhood Involvement in MCH programs

Issue: Maternal Child Health (MCH) programs/interventions/initiatives are often not designed or funded for activities to engage fathers and males (bonus fathers, step-fathers, brothers, uncles) and fathers. There is a need to broaden the lens beyond providing MCH outreach and education from the (M) in Maternal, i.e.; MOM to that of MALES! Fathers play a very important role with ensuring healthy outcomes for families, youth and infants. It is very important for fathers to bond with children, understand a child's mental and physical needs and to be confident in his abilities as a well-rounded father/father figure.

Setting: Shelby County, (Memphis) Tennessee.

Project: FATHERS ENGAGE, FATHERS SUPPORT, & FATHERS MATTER: The learning objectives for the project: 1. Best practices for recruiting and engaging males/fathers 2. Suggestions for Communicating Effectively with males/fathers 3. WHY male/fatherhood engagement is important. Activities Social Marketing: Bus Wraps, Movie Theater ads, and print media Male/Fatherhood Focus Groups "Listening Tours": The listening tours were conducted by males for males. Topics included the importance of breastfeeding and the ABCs-safe sleep (to dispel generational learned behaviors). Participants were encouraged to speak openly concerning parenting concerns, mental health issues, ACEs (Adverse Childhood Experiences) and health concerns. The focus groups hosted were nonjudgmental by design. Positive comments were received from the focus groups and the information obtained has helped to inform outreach activities. Supportive Fatherhood Trainings "Daddy Boot Camps" hosted within the walls of the Correctional Center- a (4) hour training class that provided incarcerated males with parenting skill that are transferrable once released from incarceration. Topics included: infant safe sleep, shaken baby syndrome, health literacy, (communicating with the baby and with the mother of the baby), feeding and changing a baby and prevention of unintentional injuries. This session is a hands on event for the participants and the participants are unable to move from "learning stations" until the skill has been met. Inclusive of the training - male instructors are included on the agenda to provide motivational encouragement for the males to prevent recidivation. Pre and Post tests are given and upon completion of the class, each participant is provided a certificate. Outcome evaluations support that the participants report knowledge gain and feel more empowered as fathers/males!

Accomplishments/Results: Accomplishments include the activities were successful with connecting with males/fathers.

Barriers: For a successful fatherhood/male program, there should be a male role model/outreach worker/leader. Males respond much more favorability and tend to be more trusting of conversing with a male. Trainings must be age, culturally and linguistically appropriate. Trained facilitators should be employed for hosting focus groups.

Lessons Learned: Fathers/males that are involved in the lives of children can have a very positive outcomes. Research supports that fathers/males that are involved in a child's life can help promote healthy outcomes for every stage of a child, from infancy to adulthood. Combating and reducing infant mortality is a global concern, and including fathers and empowering fathers with outreach and education activities will have a long lasting impact.

Information for Replication: N/A

Investing in Today's Youth Trailblazers and MCH Leaders of Tomorrow: Lessons Learned and Resources Developed Through Virtual Community of Practice

Authors: Iliana White

Title: Investing in Today's Youth Trailblazers and MCH Leaders of Tomorrow: Lessons Learned and Resources Developed Through Virtual Community of Practice

Issue: Adolescence is a critical stage of development in which knowledge, attitudes, and behaviors molded during this period continue to be influential in one's health and well-being. Often, however, the voice of the youth is not involved, integrated, or prioritized when it comes to the various policy and program development that impacts this population. In 2015, the Association of Maternal and Child Health Programs launched a virtual Community of Practice (CoP) focused on improving the capacity of MCH professionals and advocates to increase youth engagement in Title V programming. The CoP was created in response to the identified needs of the association's members, including MCH directors, adolescent health coordinators, and other program managers in public health initiatives that deal with youth. (Data from member assessments, environmental scans of MCH programs, and annual conference evaluations).

Setting: The CoP convened virtually, to allow MCH professionals from over 20 states to contribute content for learning and capacity building.

Project: This CoP enabled a core group of MCH professionals and stakeholders to share knowledge and resources to build expertise toward solving problems that youth engagement could potentially alleviate. When initially launched, the CoP found it was hard to organize and locate a lot of the best and promising practices within MCH related to youth engagement in a more central or streamlined location. In addition, many of the CoP members were undertaking some initial steps in cultivating youth engagement within their MCH divisions, so they were piloting some strategies and approaches to see what could work. Because of this, a key deliverable of this community of practice surfaced: the development of a best practices toolkit, focused on strategies that MCH professionals can utilize to increase youth engagement in their initiatives, programming, and framework. In late 2018, AMCHP released this culminating product: an online learning module titled "Best Practices for Youth Engagement: A Resource for Title V/Maternal and Child Health Programs." The module houses an inventory of promising and best practices for youth engagement in MCH programs, derived from the CoP experience.

Accomplishments/Results: Over the course of three years, the CoP has convened a series of 25 virtual learning sessions, highlighted different MCH programs that are implementing approaches to increase

engagement and leadership, as well as offered some innovative solutions to challenges experienced by the members of the CoP. The number of participants in the CoP started with 20 in 2015 and grew to its peak of 35 members by the beginning of 2018.

Barriers: Some of the common barriers in meaningful youth engagement that were explored included resistant buy-in from agency leadership, limited understanding of positive youth development as it applies to building leadership in adolescents, and limited resources (e.g. financial, personnel) to convene consistent engagement opportunities with youth. The CoP discussed these barriers in learning sessions, and the online module offers links to resources that can help MCH professionals find creative solutions to these challenges.

Lessons Learned: Youth engagement in MCH and greater public health programming lies along a continuum, all of which has much value.

Information for Replication: N/A

Expanding the Vision and Practice of Youth Engagement in Local Public Health

Authors: Maritza Valenzuela

Title: Expanding the Vision and Practice of Youth Engagement in Local Public Health

Issue: Including communities and youth in programs that impact them—with compensation for their time and expertise—is a health equity issue. As health agencies put more emphasis on community engagement, practical and adaptable models are needed. Successes in hiring youth can inform engagement of other community members.

Setting: Denver Public Health (DPH) is an innovative public health department that collaborates with partners to make Denver a healthy community for all people. DPH's Youth Health program sits in the Community Health Promotion Division and seeks to ensure that all young people in Denver are equally able to live healthy lives and achieve their goals/success, while also advancing DPH's meaningful engagement of young people as experts on their own lives.

Project: DPH on-boarded its first Youth Advisors (YAs), hired as half-time contract employees integrated into program teams, in 2015. In 2017 DPH created Youth Leader (YL) positions to make it possible for youth to engage with programs without having to take on a half-time job. The first YLs were hired to lead the 2017 youth-focused community health assessment. From 2017-2018 they worked 4-8 hours per month as independent contractors. The YL model was a success and was soon applied to DPH's two Communities That Care coalitions.

Accomplishments/Results: Benefits noted by 2017-2018 YLs included the experience of being treated as equals by adults, contributing to meaningful work, and learning that their peers shared many of their struggles. Exit interviews with 2015-2018 YAs provided qualitative data on their growth in skills and abilities. In follow-up interviews those YAs identify significant benefits from the experience. YAs hired in 2018 and adult staff will complete periodic assessments of their perceptions of youth involvement, adult involvement, and youth-adult interaction. YAs and YLs will also be surveyed on their pre and post knowledge, skills, and abilities.

Barriers: A challenge for both models is the shifting circumstances of youth's lives as they complete high school or college and change their priorities. DPH addresses this by recruiting and hiring for multiple positions and programs at once and by no longer asking for a 2-3 year commitment from YAs. DPH addresses the challenge of funding youth through leadership support and emphasizing the benefits of employing YAs and YLs (typically realized organically).

Lessons Learned: In supervising YAs it is important to apply a coaching approach; most adult staff will need to be trained to do so. YAs should be hired at least in pairs to ensure they have peer support on the job. Annual reviews, exit interviews, and post-exit interviews are recommended for YAs. Weekly

check-ins are important between YAs and their supervisor as well as between YAs and key adult staff. YLs will need orienting to public health as well as program goals and activities.

Information for Replication: Replication is facilitated by leadership support, staff support, and dedicated funds for youth engagement. Partnership with an administrative agency may be necessary to circumvent administrative barriers to paying youth. At DPH YAs are paid \$15/hour (based on a wage survey of local agencies employing YAs) and YLs paid \$13/hour. It is important to have at least 1 adult staff with a strong commitment to youth-adult partnerships and enough legitimate power to advocate for hired youth.

Mile High Youth Thrive: An Evolving Youth Violence Prevention Initiative in Denver

Authors: Maritza Valenzuela

Title: Mile High Youth Thrive: An Evolving Youth Violence Prevention Initiative in Denver

Issue: The scope of Denver's youth violence problem and the work to address it spans seven priority areas: intentional injury, fights and threats, bullying, gang violence, dating and sexual violence, self-directed violence and suicide, and human trafficking and exploitation. In 2014 and 2017 community health assessments young people identified violence as a key concern. Last year saw Denver's highest homicide numbers since 2014. Of the 67 homicides committed in 2018 nearly half (31) of those killed were 25 or younger. DPH recently finished an analysis of gun-specific youth violence data. From 2011 to 2016 the rate of Black or African American youth killed (taking into account their representation in the population) was more than three times higher than that of white youth. Additionally, Denver Black or African American youth are victims of crimes involving guns (28%) disproportionate to their total population (11%).

Setting: In 2015 Denver had a population of more than 100,000 young people ages 13-25; this effort addresses youth ages 10-24. Despite its long history of youth violence prevention (YVP) efforts dating back to 1988 and attention from national organizations, no efforts exist to connect groups addressing different forms of violence or the risk and protective factors that they share.

Project: In 2015 Denver Public Health (DPH) began working towards a local public health approach to YVP. In 2016 DPH established the Mile High Youth Thrive coalition with a mission to develop a comprehensive strategic YVP plan, build collaborative partnerships across systems, and leverage limited YVP resources. Developing a citywide YVP strategic plan is a best practice promoted by the Centers for Disease Control and Prevention.

Accomplishments/Results: To date the coalition has grown to 20 participating organizations, completed resource mapping and a gaps analysis, developed 21 specific recommendations, and hosted or participated in 5 community events to collect input on YVP needs and solutions. In annual evaluation surveys coalition participants have noted an increase in cross-collaboration among YVP partners. Members have partnered on at least three grant proposals. In 2019 the coalition will release a YVP Call to Action and the release of a DPH report on youth gun violence will add weight to its message. Additionally, with the disparities in gun deaths and victimization so starkly clear, a new effort to reduce deaths among boys and young men of color is underway, led by Denver My Brother's Keeper.

Barriers: Internal barriers included lack of funding for a full FTE on the project, no youth participation in the coalition, and the limitations of DPH as a non-governmental agency. External barriers included lack of city leadership on YVP, the slow nature of the work, partner weariness over time, and communities weary of being surveyed and studied.

Lessons Learned: Building relationships with YVP staff across sectors is essential to generating trust and mutual aid (themselves positive outcomes) that persist over time. Significant staff time is required to support a coalition. Technical assistance provided by a national organization from 2015-2018 was essential, as was participation in national networks like UNITY and Cities United.

Information for Replication: A baseline requirement is relationships with individuals in key partner organizations. Leveraging the reputation and/or power of local public health is helpful. Resources needed are staff time (20%-100% FTE), meeting space, and support from public health leadership. Staff should be skilled in building relationships and trust, relating to law enforcement professionals, and managing “turf” issues.

Substance Use Disorders and Co-Occurring Mental Health Issues Across the Life Course: A Multi-Jurisdictional Approach to Policy Development and Implementation

Authors: Sanaa Akbarali and Stacy Collins

Title: Substance Use Disorders and Co-Occurring Mental Health Issues Across the Life Course: A Multi-Jurisdictional Approach to Policy Development and Implementation

Issue: Substance use disorders (SUDs) and co-occurring mental health issues are a growing public health challenge in the US. In 2016, 11.4 million people misused prescription opioids and 42,000 people died from opioid-related overdoses. The number of infants diagnosed with neonatal abstinence syndrome (NAS) has increased five-fold since 2000. Women face challenges in receiving appropriate treatment, comprehensive behavioral health care and follow up. Furthermore, infants and children whose parents use opioids have a higher prevalence of Adverse Childhood Experiences (ACEs), including emotional, physical and social abuse, neglect, and domestic violence.

Setting: Using a learning community model, ASTHO and AMCHP implemented a multi-jurisdictional, HRSA-funded

Project: “Promoting Innovation in State MCH Policymaking (PRISM).” The goal of PRISM is to build state MCH capacity to advance policies that address SUDs and co-occurring mental health issues. The five-year project will involve three state cohorts. Cohort 1 includes Arkansas, Commonwealth of the Northern Mariana Islands, Iowa, New Mexico, South Carolina, and Washington.

Project: PRISM integrates evidence-informed strategies through in-person meetings, in-depth technical assistance provided by subject matter experts, virtual learning, and peer-to-peer sharing to encourage information exchange and collaborative problem-solving. The goal of PRISM is to support multi-disciplinary state teams in advancing SUD and mental health policies that promote prevention and treatment for MCH populations. Teams are comprised of State Health Officials, Title V Directors, Substance Abuse/Mental Health Directors, Medicaid, Local Health Officials and MCH Directors. Guided by a robust logic model and evaluation plan, the PRISM team will capture both process and outcome measures through pre and post-assessments and key informant interviews. Cohort one projects include advancing policies that promote screening and treatment prioritization for pregnant women, staff training on S-BIRT, and expansion of telehealth to treat addiction and mental health disorders in women living in underserved areas.

Accomplishments/Results: ASTHO and AMCHP established a stakeholder committee to provide guidance on project activities and deliverables. In collaboration with the stakeholder committee, the

team developed a “Menu of Policy Options,” outlining potential areas in which states are focusing their work. Cohort one jurisdictions have developed comprehensive action plans to guide their work over the next 1.5 years.

Barriers: Aligning federal agency priorities and national organization initiatives in mental health and SUD has been challenging. However, PRISM leverages existing initiatives and provides additional capacity building to mitigate over-burdening. PRISM recognizes the importance of adapting to changing dynamics by encouraging states to engage state leadership and integrate PRISM work plans into existing efforts.

Lessons Learned: Work with national and federal partners to enhance efforts and align goals to implement program and policy change. Stress the importance of policy change at all levels. Engage community-level leadership. Identify champions in communities, health care systems, and other settings.

Information for Replication: Full project reports and project evaluation results will highlight successes and opportunities for other states to adopt similar initiatives that including stakeholder for leveraging existing funding streams, and policy wins.

Policy Strategies to Advance Equitable Care for and Treatment of Substance Use Among Pregnant and Parenting Women

Authors: Natalie Foster

Title: Policy Strategies to Advance Equitable Care for and Treatment of Substance Use Among Pregnant and Parenting Women

Issue: In the US, the prevalence of opioid use among pregnant women at delivery has quadrupled from 1999-2014. Prenatal exposure to substances can result in a wide range of withdrawal symptoms for infants, including neonatal abstinence syndrome (NAS), and can cause negative short- and long-term health and developmental outcomes. For pregnant and parenting women, seeking support or treatment for substance use disorder (SUD) can be more challenging due to stigma and fear of legal ramifications. Addressing barriers preventing equitable access to care and treatment services is a critical component of overcoming the opioid crisis that has affected communities throughout the country. Through the development of policy strategies supporting the mother/baby dyad, addressing special populations, and decreasing provider stigma, states are aiming to improve health outcomes of women, infants, and families affected by SUD.

Setting: In 2018, The Association of State and Territorial Health Officials (ASTHO), with funding from the CDC, launched the Opioid Use Disorder, Maternal Outcomes, and Neonatal Abstinence Syndrome Initiative (OMNI) Learning Community to support states in policy implementation to address identification and treatment of pregnant and postpartum women with SUD and strengthen systems of care for infants prenatally exposed to substances. State teams are made up of multidisciplinary representatives who can leverage their expertise and resources to effectively impact policy change. Cohort 1 states include: Alaska, Florida, Illinois, Kentucky, Nevada, Ohio, Pennsylvania, Tennessee, Rhode Island, Vermont, Washington, and West Virginia.

Project: ASTHO's Learning Community model integrates several implementation strategies including organized meetings, centralized technical assistance, consultation from subject matter experts, dissemination of educational materials and resources, and networking opportunities to promote peer-to-peer learning and problem-solving. States in the OMNI Learning Community have identified policy goals addressing opioid use among pregnant and postpartum women and infants prenatally exposed to substances. Several states are focused on incorporating health equity into their work including, Alaska's work providing treatment to rural populations, Pennsylvania's efforts to expand universal screening, and Rhode Island's goals to address provider bias and discrimination.

Accomplishments/Results: Through technical assistance and virtual learning sessions, ASTHO supports Cohort 1 states' policy goals to improve equitable access to care and treatment for pregnant and

postpartum women with SUD. With the support of outside evaluators, ASTHO has a robust evaluation plan to assess the impact of the learning community on policy outcomes and team partnerships. Through facilitated action planning, all teams have developed a comprehensive action plan to guide their work.

Barriers: To address staff turnover and competing priorities, OMNI teams are actively engaging state agency leadership and leveraging key stakeholders. Additionally, ASTHO encouraged states to develop project work plans based on existing initiatives and leverage OMNI to provide additional capacity to achieve success.

Lessons Learned: This session will share how states are incorporating health equity into policy development through cross-collaboration and engagement of community-level and local and state agency leadership. By highlighting state efforts, we will describe state success in working towards policy goals and ensuring equitable care and treatment for substance use among women, infants, and families.

Information for Replication: N/A

Obstetric Care of Women with Opioid Use Disorder: Implementation of AIM Program Safety Bundle Within State Perinatal Collaboratives

Authors: Amy Ushry and Jeanne Mahoney

Title: Obstetric Care of Women with Opioid Use Disorder: Implementation of AIM Program Safety Bundle Within State Perinatal Collaboratives

Issue: Opioid use in pregnancy has escalated dramatically in recent years and has become the leading cause of maternal mortality across the U.S. Medical cost of maternal opioid use (OUD) and fetal exposure is over 1.5 billion dollars annually. Public health and all health care providers need to take an active role. Substance use disorders affect women across all racial and ethnic groups and all socioeconomic groups. Less than 10% of U.S. pregnant women with opioid use disorder are receiving medication assisted treatment (MAT), the standard of care.

Setting: The Alliance for Innovation in Maternal Health (AIM) developed “The Obstetric Care of Women with Opioid Use Disorder” maternal safety bundle and tool kit of evidence based strategies, staff training materials and metrics to support hospital systems and maternity care providers to provide universal screening, support MAT, follow algorithms through prenatal, intrapartum, postpartum and neonatal care and to measure outcomes. The goal of this work is for mom and infant to go home together in a safe environment. AIM teamed up with the American Academy of Pediatrics to support the maternal and infant dyad. Work is ongoing in IL, TN, NY and MD.

Project: Through the AIM alliance, leaders in maternal and neonatal substance use and exposure treatment, and public health and hospitals comprising state perinatal collaboratives, the AIM bundle is utilized throughout the participating states. Focus includes stigma reduction, provider waiver training for prescribing MAT, universal screening, assessment of safe discharge sites, breastfeeding, rooming in, improved child welfare and community services connections, and engaging maternal care for infants. Participating hospitals log process and structure measure implementation and length of stay and discharge location for mom and infant. AIM provides coordination and technical assistance with state collaboratives and fosters sharing between state teams.

Accomplishments/Results: Participating states differ in level of activity. In IL, 110 hospitals participate accomplishing 3 regional women-specific MAT waiver trainings for providers, provided staff training on stigma reduction and supporting maternal care for substance exposed infants. NY is doing in person and webinar statewide provider training and identified local champions to support hospital teams. TN developed their metrics systems and identifying hospital teams of OB and Neonatal providers. MD has started the initiative with all 31 birth hospital participating. More outcome data will be available prior to September 2019

Barriers: Barriers include: fear for women using opioids to seek treatment and fear of losing their infants to foster care; stigma by staff and public on pregnant women using opioids; the unethical push to withdrawal pregnant women from opioids; lack of support for new mothers to care for and keep their infants; most public funding for maternal opioid treatment ends when their Medicaid expires 42 to 60 days postpartum.

Lessons Learned: This is a new program. Lessons learned to date include thorough planning at the community level to support antenatal and postpartum women and to support public messaging to support women of reproductive age who are opioid users. Additionally public identification of AIM and state perinatal collaboratives as the intersection of maternal and infant care.

Information for Replication: The AIM program is supported by a cooperative agreement from HRSA and housed at the American College of Obstetricians and Gynecologists (ACOG). The American Academy of Pediatrics has provided ACOG funding from the CDC with a sub award to collaborate on dissemination of efforts to improve the care of women with opioid use disorder and their infants.

Atlanta Healthy Start Initiative: Making a Difference, Saving Lives

Authors: Kimberley Broomfield-Massey, Janina Daniels, Catrina Williams, Kwardel Lewis, Nediedra Motley and Rahkia Williams

Title: Atlanta Healthy Start Initiative: Making a Difference, Saving Lives

Issue: Despite general declines in infant mortality in the United States, racial/ethnic disparities persist in perinatal outcomes such as maternal mortality, low birthweight and preterm birth. For example, in Fulton County, GA between 2013 and 2015, non-Hispanic Black infants died at three times the rate of non-Hispanic White infants (average Infant Mortality Rate was 11.8 for non-Hispanic Blacks and 4.1 for non-Hispanic Whites). In 2016, in Fulton County, the low birth weight rate among non-Hispanic Black women was twice the rate of their non-Hispanic White counterparts (13.68% and 6.98% respectively). The disparities are as dire for maternal mortality. In 2017, there were 9 deaths among non-Hispanic Black mothers compared to 1 death among non-Hispanic White mothers. The Atlanta Healthy Start Initiative (AHSI) addresses these disparities and improves maternal and infant health outcomes among Black families.

Setting: Based on the evidenced need, AHSI serves non-Hispanic Black women residing in Atlanta, Georgia. Recruitment is focused on the South and South West regions of the city; which have the highest rates of infant mortality, low birthweight, and maternal mortality.

Project: AHSI serves some of the most vulnerable families utilizing extensive outreach services to recruit hard-to-reach women. Once recruited, a team of Family Support Workers (FSWs), who work alongside a Nurse Case Manager, provide home visitation services to provide risk assessments, mental health screenings and referrals, linkages to prenatal care and needed health and social services, health education, information and referrals, personal goal planning and care coordination. Additionally, AHSI provides group health education through monthly “Sister Circle” groups, which promote self-care, stress management and social connections as well as group breastfeeding education through “Magic Milk Mommies” (M3). The evaluation utilizes a mixed method design to track process and outcome data such as length of time in program, services received, pregnancy outcomes, and client satisfaction.

Accomplishments/Results: In client satisfaction surveys, clients continually report receiving support and education from their FSWs which results in women reporting they are more knowledgeable, self-confident, and empowered; and taking better care of their health and of their child(ren). Consequently, between 2014 – 2018, approximately 97% of AHSI women, infants and children had a medical home. During those years, compared to other Black women in Fulton County, AHSI participants consistently had lower rates of premature births, very low birthweight births, infant deaths and maternal deaths. Additionally, 100% of M3 participants initiated breastfeeding and overall breastfeeding initiation among AHSI participants has risen to 89%.

Barriers: Funding for transportation and health education activities continues to be a challenge. However, AHSI has received other sources of funding which partially supports M3. AHSI has also partnered with public transportation to receive discounted transportation cards.

Lessons Learned: Utilizing lay workers who reflect the population served, as part of the provider team helps to engage and strengthen individual and family involvement in the home visit. This model contributes to improved pregnancy outcomes, infant health, and decreased cost of medical care as clients and workers bond through shared language, social-economic status, race/ethnicity and life experiences.

Information for Replication: N/A

Food Resource Access Barriers Among Food-Insecure Clients Receiving Maternal Child Health (MCH) Home Visiting Services From A Local Health Department

Authors: Joanna Hemmat, Maria McCarroll Stock, Alisa Brooks, and Jennifer Ferraro

Title: Food Resource Access Barriers Among Food-Insecure Clients Receiving Maternal Child Health (MCH) Home Visiting Services from a Local Health Department

Background: The Fairfax County Health Department (FCHD) Maternal Child Health (MCH) Home Visiting Programs strives to improve MCH outcomes by addressing health, psychosocial and economic challenges experienced by families. The population served is low income, uninsured/underinsured, primarily Latina, high-risk pregnant women and mothers of children <3 years old. In Fairfax County, 8.7% of children are food insecure. Food insecurity, defined by the USDA as “the limited or uncertain access to enough food by a lack of money or other resources”, is associated with multiple adverse child health outcomes and is a source of embarrassment and anxiety for families. Rapport established between MCH home visiting public health nurses (PHN) and their clients creates trust and the opportunity to discuss this sensitive issue in the safety of the home environment. Therefore, MCH home visiting nurses are trained to implement universal screening, referral and follow-up of food insecure families, as a component of child health home visits. To create accurate referral resource information, MCH staff established partnerships with community stakeholders including the local food council, food banks, SNAP and WIC.

Study Questions: What is the proportion of households in this high-risk population experiencing food insecurity? Do food insecure clients access suggested resources? What are the barriers among clients who did not access food resources?

Methods: Between July 2017–June 2018, MCH PHNs used the Hunger Vital Sign™ tool, to screen all families with children from birth to 3 years old receiving a home visit. PHNs engaged with families screening positive for food insecurity to provide information about food resources and develop a plan to access them. At the next follow-up, PHNs asked food insecure clients if they accessed the resources. Those who did not access resources were asked why not in an open-ended question. Content analysis was conducted to develop themes describing food-resource access barriers.

Results: Between July 2017–June 2018, 772 unique clients were screened for food insecurity; 35.0% (n=270) screened positive. Of mothers who screened positive, follow-up information was unavailable for 22.6% (n=61). Among food insecure clients with follow-up data, 26.3% (n=55) accessed food resources

and 73.7% (n=154) did not. Most clients who did not access food resources were Latina (n=128; 83.1%) and primarily spoke Spanish (n=119; 77.3%). Among families who did not access food resources, the most common barriers mentioned were transportation (n=52; 33.8%), time (n=37; 24.0%), and no current need (n=37; 24.0%). Other common barriers included lack of child care, challenges with child's or mother's health, and inclement weather.

Conclusions: Over one-third of MCH clients screened positive for food insecurity, most of whom did not access the food resources recommended, with transportation and time being the principal barriers.

Public Health Implications: This analysis will inform recommendations for public health home visiting practice for families with young children to explicitly discuss potential barriers with clients and collaboratively work with families to identify solutions, as well as actions community partners can take to improve access to food. Additional research will assess the effectiveness of these changes and impacts on food insecurity in this vulnerable population.

Empezando con Salud: Beginning with Health Begins with Community Empowerment A Partnership Between Primary Care and Culturally Specific Home Visiting

Authors: Veronica Lopez Ericksen

Title: Empezando con Salud: Beginning with Health Begins with Community Empowerment A Partnership Between Primary Care and Culturally Specific Home Visiting

Learning Objectives:

1. Learn about a culturally specific home visiting program that prioritizes our Latinx community in Multnomah County, their medical as well as their mental health needs.
2. Hear about the challenges of integrating a public health home visiting program with primary care clinical services and the ways in which such a partnership attempts to create organizational shift toward providing trauma informed services.
3. Share their learning by experiencing a client's full participation in the program.

Session Description: In this interactive workshop, participants will have the opportunity to learn about Popular Education methodologies that promote community wellness, empowerment, and healing from trauma. The Maternal Child Medical Home of Multnomah County Health Department was developed in response to the growing needs of a traumatized community, our Latinx population of East Multnomah County. In partnership with the East Primary Care Clinic, our medical home program uses the home visiting model not only to provide increased access to their primary care provider for medical services, but also to raise the community voice about the needs of families facing the toxic stress of the threats of deportation, public charge, and family separation. The community provided input into the topics of interest to discuss in community gatherings. Community members celebrated cultural holidays in ways that were familiar, culturally appropriate and culturally specific to the Latinx community. The primary care clinic staff and the home visiting staff participated jointly in training focused on trauma informed approaches to care. To be truly culturally specific means to hire staff represent the culture they serve and to hire the supervisor as a member of the same community in order to support the represented staff. The more culturally specific programs we develop, fund, and support, the less instances of community trauma and the more healing from that trauma can be achieved.

Session Justification: Our Latinx community has suffered great trauma being in the crossfires of the immigration debate. At Multnomah County, we have attempted to promote cultural healing ways for the community by integrating our public health home visiting model with primary care services. Our home visitors serve as cultural ambassadors for the Latinx community- they offer insight to the whole family situation by being guests in their client's homes and they bring clinic cultural brokerage to

families, taking the time to answer questions and provide reassurance about the medical care in the U.S. Home visitors are the conduits for meeting the family's needs by referring them to culturally appropriate community services. Integration of the two entities does not come without challenges and we have addressed them by centering around the common goal of providing quality care for one of our most valuable communities.

Leveraging a Home Visiting Program to Increase Family Resilience Against the Health Impacts of Climate Change in New Orleans

Authors: Mary Alexander and Mara O'Brien Hahn

Title: Leveraging a Home Visiting Program to Increase Family Resilience Against the Health Impacts of Climate Change in New Orleans

Issue: Climate change has direct impacts on the health of communities. Recognizing that infants, children, and pregnant women are particularly vulnerable to these impacts, New Orleans Health Department's (NOHD) Healthy Environments program and family health program, Healthy Start New Orleans (HSNO), launched an innovative collaboration to promote family resilience.

Setting: Families in New Orleans, LA

Project: The Healthy Environments program developed community vulnerability maps for climate-related health impacts to identify vulnerable neighborhoods and created educational materials for residents about the impacts of climate change on health. As trusted community messengers, HSNO's home visitors and CHWs are uniquely positioned to deliver these messages to the community during home visits, community outreach, and through targeted door-to-door campaigns. HSNO also augmented its existing educational curriculum to incorporate tools and resources to help families respond to climate change impacts. For example, during the summer the program educates all families on the dangers of extreme heat and provides cooling items like water bottles and portable fans. Participants conduct a knowledge assessment after each mini-lesson to monitor the effectiveness of the education. The programs also collaborated on emergency preparedness planning to ensure the department was prepared to respond to the needs of families in the result of a climate-change related disaster.

Accomplishments/Results: This existing collaboration was a crucial factor in the department's ability to swiftly implement a comprehensive response to the Zika virus. Efforts including targeted outreach to neighborhoods where families experienced increased exposure to vectors due to lack of A/C conditioning and inadequate screens on doors and windows. Healthy Environments and HSNO staff provided education on mosquito bite prevention and connected families with resources to fortify their homes against mosquitos. As a result, the department was able to prevent local transmission of the virus.

Barriers: Many staff had limited experience educating families about environmental health topics. Implementing this partnership required additional training for all staff on environmental health topics and the reasons that infants, children, and pregnant women are particularly vulnerable to the health impacts of climate change.

Lessons Learned: Local health departments and family health programs can play a critical role in increasing family resilience against the health impacts of climate change.

Information for Replication: N/A

Promoting Breastfeeding and Safe Infant Feeding After a Disaster; Lessons Learned by Experience

Authors: Cindy Calderon

Title: Promoting Breastfeeding and Safe Infant Feeding After a Disaster; Lessons Learned by Experience

Learning Objectives:

1. Enable participants to acquire knowledge of possible challenges for breastfeeding and safe infant feeding after a disaster.
2. Enable participants to develop a post disaster preparedness plan that promotes safe infant feeding and breastfeeding.
3. Enable participants to identify partners to collaborate in developing a post disaster preparedness plan that promotes safe infant feeding and breastfeeding.

Session Description: Infants are a vulnerable population after a disaster, dependent on the care of surviving adults. Maintaining adequate nutrition is essential to sustain life and growth, and for an appropriate response it is necessary that safe infant feeding and breastfeeding support strategies be included in the development of preparedness plans. An effective safe infant feeding and breastfeeding support plan requires the collaboration of stakeholders in developing and implementing strategies in each of the phases of a disaster: Rescue/Emergency, Response/Recovery, and Mitigation/Prevention. This workshop is intended for all public health professionals whose responsibilities in an emerging disaster shifts to ensuring the wellbeing and safety of infants among others. There is no better way to learn than by experience. In this workshop MCH Staff from Puerto Rico will share the experience in promoting safe infant feeding after the disaster of hurricane Maria and will offer participants the opportunity to outline a plan to develop a preparedness plan for safe infant feeding and to identify possible resources and collaborators for its development.

Session Justification: Disaster preparedness requires a multidisciplinary collaboration that understands and prioritizes the needs of the most vulnerable populations. Among the most vulnerable population, the needs of the infants are unique because their survival and well-being depends on adults. Safe infant feeding and breastfeeding require an organized plan with viable strategies and collaboration between first responders, organizations, and federal and state agencies. Challenges experienced after a disaster help assess previous plans and offer the opportunity to propose alternatives to address them. The disasters that we have experienced in the last year have prompted the need to continue to develop better responses and mitigation plans due to the long term effect on health and wellbeing of the affected populations. Disaster preparedness is one of the unavoidable emerging needs MCH programs need to address, and a priority in disaster preparedness is safe infant feeding and breastfeeding support.

Lactation Shouldn't Stop When an Emergency Begins: Collaborative Planning to Increase Maternal Child Resiliency in Disasters

Authors: Allison Wilson, Paulina Erices, and Christine Billings

Title: Lactation Shouldn't Stop When an Emergency Begins: Collaborative Planning to Increase Maternal Child Resiliency in Disasters

Issue: Emergencies, including public health outbreaks, acts of terror, and natural disasters, often catch us off guard. Research indicates that infants and young children are most at-risk during an emergency due to their immune system's immaturity and dependence on adult's care. Continuation of breastfeeding is the safest infant feeding method as it protects baby against infection and hypothermia, is readily available, and reduces parent-baby stress response by supporting an established routine. Moreover, it is not dependent on clean water and ability to sterilize equipment. In 2018, Jefferson County Public Health recognized our need to be prepared and developed a formal plan to guarantee that our infant and child residents will receive appropriate care in an emergency.

Setting: Jefferson County Colorado is the fourth most populated county in Colorado with 534,543 people. It closely shares borders with 4 other Denver-metro counties. English, Spanish, Russian and Vietnamese are the main primary languages of families.

Project: The Infant Feeding in Emergencies Project activities included 1) Research evidence-based practices (American Academy of Pediatrics, United States Breastfeeding Committee, SafelyFed, and others) and collect local interviews to inform the development of an infant feeding emergency preparedness plan 2) Develop this plan with the Maternal Child Health Team, Nursing Students, Emergency Preparedness, Environmental Health, and WIC 3) Account for cultural and language considerations 4) Purchase supplies to have Infant Feeding Kits on hand to deliver to shelters 5) Create 3 materials in 4 languages: Safe Infant Feeding in Emergencies reference sheet; Fact sheet on Power Outage and Food Safety; How to Use, Clean and Store a Hand Breast Pump 6) Hold bilingual World Health Organization Infant Feeding in Emergencies training for community lactation professionals 7) Social media and messaging plan to be activated with partners in an emergency

Accomplishments/Results: Our plan is finalized, infant feeding kits have been created, and materials have been finished and translated. Next steps include presenting this project to the Regional Homeland Security Mass Care group, creating our messaging plan, and holding a bilingual training in summer 2019 with a diverse group of lactation professionals and peer counselors. The training will measure level of knowledge and increased capacity in our county to support infant feeding in emergencies at specific shelter sites.

Barriers: Potential barriers include the inability for lactation professionals to respond to resource requests due to the nature and location of the emergency event. To overcome this, we have ongoing

incident command training for staff, and our training this summer will create a registry of lactation professionals in our county that can respond.

Lessons Learned: It is important for local health departments to review their emergency preparedness plan to determine if it includes infant feeding in an emergency. Lack of protocol may mean that support is not coordinated or available for families to continue to breastfeed. Our training this summer will solidify the community capacity and help identify any remaining gaps in our county so that we can work with a variety of partners to support families from all cultural backgrounds if and when we face an emergency.

Information for Replication: Our total up-front costs were approximately \$5,000 for translation, printing, materials and supplies for kits, and training. A detailed checklist can be found on the Safe Infant Feeding reference sheet and provided in the presentation along with all materials created and evaluation results from our summer 2019 WHO Infant Feeding in Emergencies community training. The project sustainability needs are minimal and built into existing staff roles and free repeat training. Partnerships within our health department, emergency management, mass care professionals, shelter managers, hospitals, clinics, Milk Bank, lactation counselors and peer counselors were key for coordination and increased awareness.

Tribal PRAMS: Gathering Meaningful Health Data on American Indian Mothers in New Mexico

Authors: Ayanna Woolfork and Alison McWhorter Anderson

Title: Tribal PRAMS: Gathering Meaningful Health Data on American Indian Mothers in New Mexico

Issue: While surveillance systems, such as the Pregnancy Risk Assessment Monitoring System (PRAMS), aim to capture perinatal data, frequently these survey methods fail to capture adequate data on the health of American Indian (AI) women and infants, resulting in a limited scope of the health status of these populations. Sample sizes from current data collection are often too small to generate reliable estimates for the AI maternal population, and this often limits the availability of meaningful data for tribes and tribal programs addressing critical maternal and child health matters.

Setting: The Tribal PRAMS project take place in New Mexico. Participants are identified from New Mexico birth certificates; half of Navajo new mothers and all non-Navajo identifying mothers who give live birth in the state are invited to participate.

Project: The methodology for Tribal PRAMS largely mirrors the methodology for New Mexico PRAMS and the CDC PRAMS projects. The current methodology for the Tribal PRAMS project lasts over a 90 day period per batch. Each batch is composed of the mothers who gave live birth within a given month. On day 1, participants are mailed a survey instrument and letter explaining the project. On day 15, participants who we have not received responses from, are mailed a reminder tickler. On day 30, non-responsive participants are mailed a second survey instrument and letter. Day 45 of this period begins the telephone interview attempts. Phone numbers are researched and provided to the Tribal PRAMS database by our partners at DOH and each mother has five phone contact attempts that take place over a 45 day period. The final attempt for contact is made by community health representative for mothers that identified themselves as living on tribal lands.

Accomplishments/Results: As of January 2019, there were 336 completed surveys. The program has about a 30% completion rate across all three survey

Methods: with nearly 75% completed by mail, and fewer completed by online and via phone.

Barriers: The Tribal PRAMS program continues to work towards increasing the response rate, which has remained at approximately 30%. The team is currently in the process of determining the best methodology for increasing survey responsiveness among American Indian mothers, including increasing the number of mailed surveys, increasing the allowed number of phone calls per mother, or adding a second reminder postcard, or tickler. To address initial challenges in quality control and human error in data entry, standard procedures have been developed to allow for data entry to be double checked and for mailed survey packets to be examined prior to mail-out. These quality control methods have increased data accuracy and reduced the likelihood of confidentiality breaches during mail-out.

Lessons Learned: As Tribal PRAMS continues its first year of data collection, the evaluation aims to find and address challenges in data collection methodology. These findings will serve to inform current practice and similar projects in the future. Using this evaluation has exposed gaps in the current PRAMS survey methodology, including the need for extra survey mailings and a shift in efforts for particular survey methods.

Information for Replication: N/A

Racial/Ethnic and Nativity Inequities in Adverse Birth Outcomes Among Immigrants in NYC: What's Stress Got To Do With It?

Authors: Joanna Almeida, Candice Belanoff, Kristin Erbetta, and Vani Bettegowda

Title: Racial/Ethnic and Nativity Inequities in Adverse Birth Outcomes Among Immigrants in NYC: What's Stress Got To Do With It?

Background: Many immigrants in the US have historically had better birth outcomes (e.g. preterm birth (PTB)) than their US-born counterparts. This 'immigrant advantage' has been observed across various racial/ethnic groups and countries of origin. However, with increased years in the US and subsequent generations of US-born offspring, the protective effect of foreign nativity is eroded. A wide array of sociodemographic, behavioral and medical variables are known risk factors for PTB, yet do not entirely explain this pattern in immigrants' birth outcomes. As such, there is renewed interest in psychosocial factors such as stress to understand their role in reproductive health and in inequities.

Results: of extant studies have been mixed and few have attended to differences by nativity and country of origin.

Study Questions: Using a population sample of women who delivered an infant in New York City, NY (NYC), this study had three aims. First, we examined whether prenatal exposure to stressors differs by race/ethnicity and nativity status. Second, we tested the associations between four types of stressors and PTB, and finally we investigated the role of stressors in accounting for inequities in PTB across race/ethnicity and nativity status.

Methods: Using the 2009-2013 Pregnancy Risk Assessment Monitoring System (PRAMS) data for NYC (n=6,379), we conducted logistic regression accounting for survey design to estimate the association between multiple forms of stress (emotional, financial, partner and trauma-related) during 12 months prior to delivery and PTB, and to examine the contribution of these stressors to inequities in PTB across race/ethnicity and nativity status.

Results: Preliminary results: (without data on specific country of origin) demonstrate that compared to US-born whites, foreign and US-born blacks and Hispanics had higher prevalences of each type of stressor. Rates of stress among foreign and US-born Asians and women who identified as another race/ethnicity did not differ from US-born whites. US and foreign-born blacks (OR: 2.69, 95%CI, 2.02-3.57 and OR: 2.34, 95%CI, 1.69-3.23, respectively), and US and foreign-born Hispanics (OR: 2.65, 95%CI, 1.93-3.63 and OR: 1.35, 95%CI, 1.01-1.79, respectively) had significantly increased odds of PTB relative to US-born white women. When adjusting for all four stressors and maternal covariates, no stressor type was significantly associated with PTB. However, the effects of race/ethnicity and nativity were attenuated among all groups, and foreign-born Hispanics no longer had significantly higher odds of PTB.

Conclusions: The finding that foreign-born women, particularly Hispanics did not demonstrate an 'immigrant advantage' may be due to participants' specific countries of origin, which we could not examine with preliminary data. Specifically, the largest proportion of Hispanics in NYC are Puerto Rican (Mainland and Island-born), who are known to have poorer birth outcomes than non-Hispanic whites.

Public Health Implications: Treating racial/ethnic groups as monolithic categories can mask heterogeneity in reproductive health outcomes by country of origin, as well as the role that stress could play in each groups' birth outcomes. While the stressors we examined may explain some of the elevated risk of PTB among women in this sample, other factors like discrimination and anti-immigrant sentiment, could further explain inequities by race/ethnicity and nativity, and warrant investigation.

Examining Disparities in the Relative Risk of Gestational Diabetes Mellitus Among Asian Subgroups in Minnesota, 2016-2017

Authors: Regina Marino, Mira Sheff, and Renee Kidney

Title: Examining Disparities in the Relative Risk of Gestational Diabetes Mellitus Among Asian Subgroups in Minnesota, 2016-2017

Background: In Minnesota, Asian women have the greatest prevalence of gestational diabetes mellitus (GDM) among all racial/ethnic groups. However, the Asian racial/ethnic category includes women who have vastly different cultural practices and dietary habits. Minnesota is home to the largest Hmong population in the United States. Yet few studies have examined how the prevalence and risk of GDM differs between Asian subgroups, and very sparse, if any, research exists describing the prevalence of GDM among Hmong women.

Study Questions: What is the risk for gestational diabetes for Asian women by Asian subgroup, as compared to non-Hispanic White women?

Methods: Using 2016-2017 data from the birth certificate, we examined the prevalence and relative risk of gestational diabetes among Asian women who gave birth to a singleton infant in Minnesota. We used a chi-square test to determine if the prevalence of GDM differed by Asian subgroup. Additionally, we calculated the crude and adjusted risk ratios (aRRs) and 95% confidence intervals (CIs) of gestational diabetes for all Asian women combined and for the following Asian subgroups, as compared to non-Hispanic White women: Asian Indian, Chinese, Filipino, Korean, Vietnamese, Cambodian, Hmong, Laotian, and Other Asian. Adjusted risk ratios were adjusted for maternal age, insurance type, maternal education level, nativity (U.S.-Born or born outside the U.S.), and parity.

Results: Overall, 12.8% of Asian women in Minnesota who gave birth to a singleton infant had gestational diabetes. The prevalence of gestational diabetes differed by Asian subgroup (p -value <0.0001), with Other Asian women having the lowest prevalence (9.4%) and Asian Indian women having the highest prevalence (16.6%). After adjusting for maternal age, insurance type, maternal education level, nativity (U.S.-Born or born outside the U.S.), and parity, the risk of gestational diabetes for all Asian women was 80% greater than that for non-Hispanic white women (aRR = 1.80, 95% CI 1.6-2.0). Among all Asian women, Asian Indian (aRR = 2.17, 95% CI 1.9-2.5) and Hmong (aRR = 1.91, 95% CI 1.7-2.1) women had the greatest risk of GDM; Other Asian (aRR = 1.26, 95% CI 1.1-1.5), Cambodian (aRR = 1.41, 95% CI 1.0-1.9), and Filipino (aRR = 1.49, 95% CI 1.1-2.0) women had the lowest risk of GDM, as compared to non-Hispanic White women.

Conclusions: The risk of GDM among Asian women varies within Asian subgroups, with Asian Indian women having the greatest risk and Other Asian women having the lowest risk of GDM, as compared to

non-Hispanic White women.

Public Health Implications: Women of Asian descent have a higher prevalence of GDM as compared to women in other racial/ethnic groups. However, in most studies examining race/ethnicity and gestational diabetes, Asian women are aggregated into one racial/ethnic category. This study illustrates that aggregating all Asian women into one racial/ethnic category may mask differences in relative risk for gestational diabetes among women in different Asian subgroups. Rates for GDM should be presented with the “Asian” racial category disaggregated into Asian subgroups whenever possible to better illustrate the health risks and outcomes of Asian women.

Preterm Birth Among Non-Latinx Black Parents in Massachusetts: Is There Really Just One Rate?

Authors: Candice Belanoff

Title: Preterm Birth Among Non-Latinx Black Parents in Massachusetts: Is There Really Just One Rate?

Background: While Massachusetts enjoys one of the lower overall rates of preterm birth (PTB) in the United States (US) (8.9% as of 2017), there persists a large gap by race, with 11.2% of non-Latinx Black (NLB) infants born preterm compared to 8.1% of non-Latinx White (NLW) infants. It is also well-known that a substantial proportion of NLB births in Massachusetts are to non-US-born parents. Given the likely large variation in socioeconomic and societal exposures associated with various countries of origin, we sought to describe PTB rates among NLB people giving birth in Massachusetts, by country of origin, and examine individual and area-level socioeconomic conditions which could explain some of the observed variation.

Study Questions: Does the rate of preterm birth (PTB) among people who are non-Latinx Black vary by country of origin? Do individual and contextual socioeconomic indicators explain any observed variation in PTB rates?

Methods: We used birth certificate data from Massachusetts for live, singleton births between 2011 and 2015 in the three major metropolitan areas. We included births to NLB people who were born in the US or a country for which there were at least 100 births during the time period ($n = 26,659$). Data on country of origin, marital status, education and age were obtained from the birth file. A census tract-level, composite measure of social opportunity was obtained from the Child Opportunity Index (COI) and linked to the birth record. PTB rates by country of origin were estimated, and logistic regression was used to estimate the effect of country of origin in the presence of the individual-level and area-level indicators.

Results: Rates of singleton, PTB ranged substantially by birthing parent's country of origin, from 3.96% (Angola) to 12.62% (Barbados and Trinidad & Tobago). In the model only including country of origin, significantly lower PTB rates were observed among people from Cameroon, Cape Verde, Ethiopia, Ghana, Kenya, Nigeria and Somalia, compared to those from the US. In the adjusted model accounting for individual-level socioeconomic indicators, PTB was still significantly, negatively associated with the previous countries, as well as Angola and Haiti, with aORs ranging from 0.34 (95%CL 0.13, 0.93) for Angola to 0.82 (95% CL 0.73, 0.94) for Haiti. The inclusion of COI data did not change these findings and was not significant. No country had a significantly higher rate of PTB compared to the US. A limitation to the current analysis is not knowing time since migration, as previous studies have suggested that longer tenure in the US may degrade the health of people of color, owing to exposure to racism and assimilation to US culture.

Conclusions: Non-US-born NLB parents may have lower risk of PTB, however, accounting for socio-

economic indicators did not explain the variation. Future studies should examine circumstances surrounding, and time since migration, as well as experiences of social marginalization in the US.

Public Health Implications: Health care providers and public health practitioners should be aware that people's risk of PTB may range widely within racial/ethnic categories, and that catch-all racial/ethnic groupings likely mask highly variable PTB rates.

PCMH Kids: A Patient Centered Medical Home Community that Works for Children and Families

Authors: Patricia Flanagan

Title: PCMH Kids: A Patient Centered Medical Home Community that Works for Children and Families

Issue: Population health improvement models often focus on the needs of high cost adult patients with chronic illnesses, a model that does not adequately address the needs of children and families in pediatric practices. Different approaches and strategies are needed to effectively identify at risk children and families as health plans frequently use algorithms which do not accurately predict the needs of child populations. Pediatric transformation needs integrating behavioral health with attention to mental health issues in parents and caregivers.

Setting: Rhode Island, through its PCMH Kids program, developed a state-wide pediatric relevant patient centered medical home transformation program, including a framework for increasing behavioral health capacity within primary care and a framework to identify at risk children and families.

Project: PCMH Kids is a multi-payer primary care payment and delivery system reform initiative focused on the unique needs of children and families. Health plans financially supported and engaged with pediatric practices under common agreements built around practices progressively implementing service delivery requirements and becoming patient centered medical home. Goals include: 1) improving quality through population health screening; 2) developing and applying a framework to identify "at risk" children; 3) building capacity for behavioral health to identify and address behavioral health needs within primary care. Quality measure have standardized measurement specifications and practices report on BMI screening and counseling, developmental screening, customer experience as identified by CAHP survey scores, ED usage as identified in All Payer Claims Data Base. The program developed a three domain pediatric sensitive high risk framework to identify at risk children and families. Practices have participated in 3 behavioral health learning collaboratives to improve: use of ADHD evidence based clinical guidelines, screening for postpartum depression in pediatrics and screening adolescents for substance use disorders.

Accomplishments/Results: Screening rate improvements: BMI 55% to 93%; Developmental 42% to 86% Customer experience rates improved : Access 40% to 80%; Office staff Communication: from 65% to 74% Emergency usage decreased by 2.5% At risk framework is being tested (results available 5/19) ADHD: practices implemented office protocols for ADHD treatment and management, and implemented medication management contracts Postpartum depression screening: improved 28% to 77% Screening adolescents for substance use disorder is being implemented with results available 5/19).

Barriers: It is easy to overlook the opportunities inherent in a strong pediatric care system because the consequences for poor health are often manifested in adulthood. With pediatrician led advocacy, support from the RI Office of the Health Insurance Commissioner and Executive Office of

Health and Human Services, health plans agreed to support a 9 practice pilot program. Based on results, PCMH Kids has expanded to 47 pediatric practice sites.

Lessons Learned: Health plans do not fund the pediatric programs with the same level as the adult patient centered medical home initiative. Advocacy for children's health requires constant attention. Pediatric practices need support (infrastructure payment, coaching assistance, learning from others, team model) to make the culture changes needed to transition to value based payment. Families raising children depend on robust, integrated, resourced programs at the community level.

Information for Replication: N/A

1st Five Healthy Mental Development Program: Implementation Lessons Learned in an Urban Border Community

Authors: Jenny Sharrick, Grace Tunning, and Michelle Holst

Title: 1st Five Healthy Mental Development Program: Implementation Lessons Learned in an Urban Border Community

Issue: Iowa's 1st Five Healthy Mental Development Initiative, a Help Me Grow affiliate, was first implemented as part of a multi-state cohort to assist states in building the capacity to support children's healthy mental development. The Assuring Better Child Health and Development Program (ABCD) was the foundation of 1st Five beginning in 2006 which indicated that early intervention can change the trajectory of a child's life. Using observation alone, primary care providers were not accurately identifying 30% of developmental concerns and therefore many children at-risk were falling through the cracks.

Setting: 1st Five was developed as a public-private partnership working with primary care providers and public health entities to implement standardized developmental screening at well-child visits according to the American Academy of Pediatrics recommendations. At this time, 58% of pediatric or family practices engaged with 1st Five have implemented such screening. This is an 18% improvement since 2014.

Project: Once a provider identifies developmental delay, the child and family are referred into a short-term, enhanced care coordination program, which connects the family to a team of resources that best suits the needs of the child's development. 1st Five aims to support a two-generational approach in the hopes that we can improve outcomes for both parents and children across the life course. For every one referral into the program, there are 3-4 referrals into the community. 1st Five serves all families regardless of ability to pay or insurance status and connects them to services that best fit their family's needs.

Accomplishments/Results: Since 2007, 1st Five has supported nearly 18,000 children and made over 42,000 connections to community resources. 1st Five is administered by the Iowa Department of Public Health and implemented through Title V agencies in 88 of 99 Iowa counties, including in many urban settings. While urban areas have more community resources, gaps exist in equity and accessibility of early childhood mental health services.

Barriers: 1st Five in Council Bluffs faces unique challenges due to being a border community between two states. Barriers for engaging medical providers include the hierarchical structures in place for decision-making at hospital-based clinics. This is especially prominent for the clinics that we serve because decisional capacity often resides in a different state. Additionally, because of the geographic

location, some families choose to doctor in Nebraska; however, we cannot recruit providers outside of Iowa thus excluding a potential population in need. Additional barriers for families in our area include a lack of medical providers and community resources with capacity to serve the 15% of the local population that speaks Spanish.

Lessons Learned: The most prominent lesson learned is that relationship building with providers takes time and persistence. Barriers affecting families include a lagging children's mental health network. At this time, mental health services specifically for children birth to 5 don't exist. A lesson learned is that while the program is very effective for families who get connected to community resources, 1st Five is still identifying gaps in resources available to families due to the lagging children's mental health network.

Information for Replication: N/A

Using Data and Quality Improvement to Address Health Equity for Children Diagnosed with Autism Spectrum Disorder and other Developmental Disabilities

Authors: Paige Bussanich and Anna Corona

Title: Using Data and Quality Improvement to Address Health Equity for Children Diagnosed with Autism Spectrum Disorder and other Developmental Disabilities

Issue: The number of children identified with autism spectrum disorder (ASD) and other developmental disabilities (DD) has increased considerably in recent years to approximately 1 in 59 children in the U.S., as reported by the CDC. The rising incidence of ASD/ DD and heightened focus on early identification and intervention has led to an increased demand on states to develop and improve systems of care to assure that all children receive timely identification, diagnosis, and intervention services. However, due to these necessary services being segmented across different systems, one of the greatest inequities children with ASD/DD and their families face is accessing a comprehensive system of care that is supportive of their needs. Indeed, among families of children with special health care needs, including those with ASD/DD, four out of five report that their children do not receive care in a well-functioning system, according to the National Survey of Children's Health.

Setting: Activities took place across nine states in a variety of settings, including: Title V programs, State public Health Departments, family-led organizations, and University Centers of Excellence in Developmental Disabilities.

Project: As a part of the 2019 State Public Health Autism Resource Center's Peer-to-Peer Exchange, nine grantees shared their successes and challenges in using data and quality improvement (QI) to address health equity, specifically in: 1) Using data to identify and monitor disparities; 2) Using QI methodology to identify opportunities for improvement in a local context; and 3) Engaging individuals impacted by the identified inequities.

Accomplishments/Results: The Peer-to-Peer exchange model was designed to foster learning and sharing of best practices and action steps among participants to improve their capacity to improve their state's systems of care for children and families with ASD/DD. This presentation will focus on those opportunities and action steps that state leaders are taking to increase their knowledge and skills needed to use data and QI to advance health equity for individuals with ASD/DD and their families.

Barriers: The most common barriers for grantees were centered around workforce capacity, incomplete data, language needs, and disparities in care based on race and class. However, as a result of this project, grantees have identified strategies for addressing health equity in program design and implementation as well as the inclusion of individuals from underrepresented groups in leadership roles.

Lessons Learned: Understanding the extent of health inequities within a specific context is the first step in addressing the issue. Inequities based on race, ethnicity, socio-economic status, and location of residence make it exceedingly difficult for some children and families to reach their full potential for health and life in the community. As this presentation will demonstrate, QI and data-driven approaches provide strategies and information to target modifiable aspects of providing access and care delivery to advance health equity and help us to understand and subsequently monitor inequities in access to care for children with ASD/DD and their families. Furthermore, meaningful engagement with individuals most affected by inequity helps ensure that change efforts are locally valued, effective, and sustainable.

Information for Replication: N/A

Findings from a Benefit-Cost Analysis of Residential Asthma Interventions Using Medicaid Data

Authors: Brendan Brown

Title: Findings from a Benefit-Cost Analysis of Residential Asthma Interventions Using Medicaid Data

Issue: Research suggests that 40% of asthma risk may be attributable to residential triggers, which are not fully addressed in the clinical setting. The aim of this Medicaid cost analysis was to measure the apparent effects, on costs of the Maryland Medicaid program, of an intervention which combines environmental health education, environmental assessment and remediation to mitigate asthma exacerbation triggers (e.g., temperature shifts, dust, and molds) in the homes.

Setting: The Green & Healthy Homes Initiative (GHHI) implemented a multicomponent, multi-trigger asthma in-home intervention program for 270 children ages 2-14 residing in Baltimore City.

Project: GHHI provides a multicomponent, multi-trigger asthma in-home intervention program that includes environmental health education, environmental assessment, and remediation to mitigate asthma exacerbation triggers (e.g., temperature shifts, dust, and molds) in the homes. The evidence-base for home-based, multi-trigger, multi-component asthma interventions is strong. Implementation of such programs have been shown to reduce acute care visits by .57 per person per year and return \$5.30 - \$14.00 for every \$1 invested.

Accomplishments/Results: The program costs of \$649,786 resulted in \$396,262 total cost of care savings for the treatment group comparing 12 months pre and post intervention. Findings provide means and medians of the change in costs for Medicaid total cost of care and asthma-related costs over the 12-month baseline (pre-intervention) and the 12-month follow-up (post-intervention) for treatment (-\$1658, -\$913), Tier 1 (-\$530, -\$1,154), Tier 2 (-\$2959, -\$468) and control (-\$898, -\$1,238). Regression analysis results for follow-up costs and changes in costs, for overall and asthma-related costs, using a variety of functional forms and estimation methods, did not show any consistent evidence of significant treatment effects. The asthma program was able to produce a 61% return on investment in Medicaid savings, while demonstrating that leveraged weatherization and energy efficiency funds can be cost effectively integrated to complete in home asthma.

Barriers: The main barriers were access to administrative data that was overcome through multidisciplinary team of researchers that collaborated to complete the study.

Lessons Learned: The study provides evidence that asthma home visiting programs can significantly reduce medical costs for pediatric asthmatics. This study shows upstream investments used to address social determinants of health to improve health outcomes.

Information for Replication: N/A

Neighborhood Inequality: How Neighborhood, Child-Family Characteristics, and Distance Influence Infant Emergency Department Utilization

Authors: Surya Manickam, Patrick Vivier, Michelle Rogers, Elisabeth McGowan, Raul Smego, and Richard Tucker, and Betty Vohr

Title: Neighborhood Inequality: How Neighborhood, Child-Family Characteristics, and Distance Influence Infant Emergency Department Utilization

Background: The rate of infant emergency department (ED) utilization is high for Neonatal Intensive Care Unit (NICU) graduates—placing an increased burden on families, neonates, and EDs in terms of time, cost, and stress. Some visits are preventable and non-urgent. Neighborhood (NH) characteristics have been shown to impact health.

Study Questions: Identify how living in a high risk neighborhood (NH), distance to the ED vs. primary care provider (PCP), and family and infant risk factors associate with each other and NICU graduate ED use.

Methods: Prospective cohort study, secondary analysis of 1391 pre- and full-term infants hospitalized for >5 days in an 80-bed single room level 3-4 NICU. Addresses were geocoded to identify block group. Census data were used to create a NH risk index, categorized into high (≥ 75 ile) and low risk (< 75 ile), and consisting of % adults with no high school education, % single-parent households, % household crowding, % renter-occupied housing units, % vacant homes, % families below 100% of the federal poverty limit, % non-white, and % housing units built before 1950. Bivariate analyses of the association of maternal and infant characteristics with NH risk and infant ED use were conducted using Stata v14. A multivariate logistic model of 90-day infant ED use accounting for clustering within families was computed.

Results: In the bivariate analyses, gestational age, birth weight, feeding method at discharge, future readmission, Medicaid, sepsis, and days in the NICU were associated with NH risk. Maternal age, race/ethnicity, primary language, gravida, marital status, number in home, education, DCYF involvement and history of domestic violence were also associated with NH risk. Maternal mental health was not associated with NH risk. There was also an association between NH risk and ED use in the first 30 and 90 days post-discharge, as well as with multiple ED visits in the first 90 days. Distance to the ED was associated with ED utilization. NH risk was associated with decreased distance to the ED and PCP. In the multivariate model, high NH risk (OR 1.60; 95% CI 1.09-2.35), early preterm gestational age (OR 1.65; 95% CI 1.18-2.30), adverse maternal mental health (OR 1.58; 95% CI 1.15-2.17), and non-English speaking/Hispanic ethnicity (OR 2.17; 95% CI 1.37-3.47) emerged as the predictive factors for 90-day infant ED utilization.

Conclusions: Infant NICU graduates residing in high risk NHs are associated with increased ED utilization, in addition to higher rates of social and environmental risk factors. Accounting for NH can, therefore, help identify NICU graduates most at-risk, facilitating implementation of preventative services. Additional studies are needed to identify the specific modifiable characteristics of NHs that contribute to adverse outcomes and to facilitate public health initiatives. Structural competency and acknowledging structural violence may allow for a more foundational approach.

Public Health Implications: By accounting for NH, we can identify the NICU graduates most at-risk of utilizing the ED and provide them with the proper in-home services, education, and supportive measures proactively, decreasing family stress and lowering ED utilization costs. This study also continues the call for broader policy changes to reduce NH socioeconomic and health disparities.

Neighborhood Risk Indices: Comparisons of Relationship with Pediatric Emergency Department Revisits

Authors: Adam Sullivan, Annie Gjelsvik, Michelle L. Rogers, Amal Trivedi, Siraj Ammanullah, and Patrick Vivier

Title: Neighborhood Risk Indices: Comparisons of Relationship with Pediatric Emergency Department Revisits

Background: It is a challenge for clinicians to incorporate social determinants of health into practice without additional data collection burden. Geography-based indices are a way to minimize this burden, but they can be difficult to compute and may not be validated.

Study Questions: To compare several geography-based social determinant indices' association with repeat pediatric emergency department (ED) visits.

Methods: We used 2005-2014 data from a hospital network that provides two-thirds of pediatric ED and 90% of inpatient services in Rhode Island. There were 384,767 index visits for patients age 0-17. Patients' home addresses were geocoded to identify the Census block group. We used 2010-2014 Census data to re-create 3 commonly used geography-based neighborhood risk indices. Each index, along with the percent of families living in poverty, was divided into quintiles for analyses. The data were randomly split into a 70% sample for training and internal validation, and 30% for testing and external validation. Using the training sample, we built a model and then validated the area under the curve (AUC) in the testing sample. All analyses were additionally stratified by insurance type.

Results: Overall, 9.7% of pediatric ED visits had a revisit within 30 days. For each index and for poverty, the odds of a 30-day revisit increased as neighborhood risk increased. The adjusted odds ratios for the highest quintile of neighborhood risk compared to the lowest quintile ranged from 1.18-1.47. AUC demonstrated average predictive ability (PA) for each index (0.60). Stratifying by insurance showed improved PA among those with private insurance (AUC 0.51 for no index vs. 0.56-0.57 with an index) but no improved PA among children with public or no insurance.

Conclusions: Overall neighborhood socioeconomic disadvantage indices showed strong gradients with risk of 30-day ED revisit, although there was little difference in PA between indices. When stratified by insurance, which can represent individual-level poverty, there were different relationships by insurance coverage. Among children with public insurance, indices did not provide additional PA. Among children with private insurance, using an index or poverty improved PA. The use of neighborhood poverty is computationally more efficient as well as more interpretable than any of the other indices.

Public Health Implications: Poverty at both the individual and neighborhood levels are important predictors of child health outcomes.

Rhode Island's Health Equity Indicator List – A Tool For Measuring In-State Disparities and Progress Towards Health Equity

Authors: Christopher Ausura and Larry Warner

Title: Rhode Island's Health Equity Indicator List – A Tool For Measuring In-State Disparities and Progress Towards Health Equity

Issue: Health Equity cannot be achieved without directing attention to, and tackling, the social determinants of health (SDOH). Social, economic, and environmental inequities result in adverse health outcomes, they affect communities differently, and have a greater influence than individual choices or access to healthcare. In Rhode Island we believe that reducing health inequities can improve opportunities for every resident. However, to effectively identify opportunities and monitor the impact of initiatives meant to address SDOH, we consistently find a need for comprehensive SDOH surveillance systems. To address this issue the Rhode Island Department of Health (RIDOH) led an effort to produce a statewide standard set of health equity indicators.

Setting: Led by RIDOH, the Community Health Assessment Group (CHAG) engaged partners, from government to academia, philanthropy, the nonprofit and healthcare sectors, in the process of developing the health equity indicators. These indicators are meant to be widely applicable throughout the state.

Project: To improve surveillance of the socioeconomic and environmental factors that drive health inequities, RIDOH collaborated with members of the CHAG to develop the state's first set of Health Equity Indicators. CHAG members spent more than two years developing this set of indicators through a 4-phase process: 1-Identified policy priorities and reviewed similar work nationally and internationally. 2-Examined 180+ potential indicators. 3-Selected a core set of indicators. 4-Encouraged use of the indicators as the statewide standard to assess progress toward health equity in RI.

Accomplishments/Results: The Statewide Health Equity Indicators include 15 determinants of health in five domains that affect health equity: integrated health care, community resiliency, physical environment, socioeconomics, and community trauma. Data come from various sources and these indicators have the capacity to produce data based on geographic location, race/ethnicity, disability status, income level, or other demographic characteristics. We believe wide dissemination and uptake of these will allow us to better characterize the needs of communities and the impact of various initiatives on our population.

Barriers: Important barriers to the process undertaken with this initiative were the lack of recommended best practices for identifying and evaluating health equity at the State level; and the lack of available data at the City and Town level for many of the conditions we know impact health

outcomes. The Statewide Health Equity Indicators are frequently proxy measures due to the two barriers outlined.

Lessons Learned: While undertaking this work, we had to balance the desire to be perfect, the need to be inclusive of diverse perspectives, and the need to maintain progress and develop a finished product. We reconciled stakeholder interest in specific indicators against the availability and utility of the data (i.e. limitations due to the sample size, and frequency of collection). We encountered differences in preferred terminology, but worked to arrive at language which is understandable to many audiences and acceptable to the group. We also worked to maintain both academic/scientific rigor and public utility of the final product and communications tools. Our inclusive and iterative process resulted in a framework and indicator list which satisfied criteria established by the group, and has been vetted with community stakeholders.

Information for Replication: N/A

Medicaid Asthma Hotspots and Environmental Determinants in Rhode Island

Authors: Julian Drix, Deborah Pearlman, Michelle Rogers, and Patrick Vivier

Title: Medicaid Asthma Hotspots and Environmental Determinants in Rhode Island

Background: Documented disparities in pediatric asthma include race/ethnicity, socioeconomic status (SES), health insurance, and geography. In Rhode Island over 70% of all pediatric asthma emergency department (ED) visits are covered by Medicaid. Existing density maps of asthma claims data show geographic disparities but this could be due to density of Medicaid enrollees. We mapped asthma claims in the entire pediatric Medicaid claims database to analyze asthma hotspots within Medicaid.

Study Questions: What are the geographic distributions and disparities for asthma in RI's pediatric Medicaid population? How do the rates and geographic distribution of Medicaid pediatric asthma emergency department visits and in-patient hospitalizations differ from the statewide pediatric population? Are there associations between disproportionate burdens of asthma and communities with disproportionate burdens of environmental risk factors?

Methods: We analyzed all claims for children age 0-18 enrolled in Medicaid between 2013-2017. Asthma claims were identified as primary diagnosis asthma: ICD-9 493.xx or ICD-10 J45. Home addresses from eligibility files were geocoded to map at municipal and census tract resolutions. Rates calculated included: any asthma claim (prevalence), ED visits, and inpatient hospitalizations within pediatric population and among children with asthma. Small Numbers Data Policy was applied to suppress unstable rates with a high relative standard error. Maps generated in ArcGIS with natural break quintiles. Environmental risk factors mapped with EPA EJSCREEN data visualization tool. Limitations include lack of historical address data – addresses used for geocoding were at the time of the data transfer not necessarily time of claim.

Results: Higher asthma ED and hospitalization rates in Medicaid compared to general pediatric population (Hospital Discharge Data – HDD). Statewide Medicaid asthma ED rates were 10.4/1000 vs 7.1/1000 (HDD), hospitalization rates were 2.5/1000 vs 1.3/1000 (HDD). Geographic disparities persisted within Medicaid population: ED rates in RI's four urban core cities were 13.2/1000 while non-core cities were 7.2/1000. Hospitalizations in core cities were 3.3/1000 vs. 1.7/1000 in non-core. While statewide Medicaid ED rate was 46% higher than general population, Medicaid core city rate was 8% higher and non-core city rate was 60% higher compared to general population.

Conclusions: Higher pediatric asthma rates in Medicaid confirm associations between asthma and SES. Greater geographic disparities among general population compared to Medicaid suggests some but not all of disparities in outcomes are due to SES and poverty. However, persistence of geographic disparities and concentrated hot spots within Medicaid population suggests factors beyond SES contribute to disparities in asthma outcomes. Residential segregation generates racial/ethnic

differences in geography, with associated difference in environmental risk factors. Observed correlations between mapped asthma rates and environmental factors (traffic density and proximity, diesel particulates, and respiratory hazard index) suggest that traffic-related air pollution and ambient air quality is a contributing factor to disparities in asthma outcomes.

Public Health Implications: Study results support geographic focus for asthma interventions and promote need for neighborhood / municipal interventions of environmental justice risk factors including housing conditions and air quality. Maps can inform transportation planning and air quality improvement plans. Further study on residential displacement using addresses from monthly eligibility files would address data limitations of study.

Useful Tools and Skills to Develop Teen Leaders

Authors: Darrus Sands and Jess Alder

Title: Useful Tools and Skills to Develop Teen Leaders

Learning Objectives:

1. Understand the value and need for youth development practices.
2. Understand concrete steps to introduce youth development to your agency.
3. Understand adolescent brain development.
4. Understand the impact of media on teens interactions and how it influences relationships.

Session Description: Starting conversations with young people about relationships can feel overwhelming, scary, and uncomfortable. This session provides adults who work young people the tools to start conversations about their relationships and life, how teens use media and the impact media has on relationships, as well as a general overview on the importance of youth development in social change and advocacy.

Session Justification: This workshop will help youth serving organizations think deeper about their involvements and strengthen their youth serving efforts. This workshop will give attention to the gaps in services that both large and small youth serving organizations tend to have a focus on solutions from both a systemic and operational viewpoint. We want participants to leave with a more vast understanding of the delicacy of adolescent development and an understanding of the opportunity adults have in helping to shaping their lives.

Scaffolding Support Around Youth, a model for school-based intervention for disengaged teens

Authors: Peter Rempelakis and Jeremiah Woodbury

Title: Scaffolding Support Around Youth, A Model for School-Based Intervention for Disengaged Teens

Learning Objectives:

1. Attendees will understand better a role for local public health in addressing absenteeism and dropout prevention as a social determinant of health.
2. Attendees will develop skills in strength based approaches to youth of color.
3. Attendees will become more adept at engaging youth in discussions about their lives.

Session Description: Youth Development Network is a case-management and mentoring program that works with chronically absent students in three Boston public high schools. This session will present our academic year and summer youth employment program, our method of engaging youth and skills necessary in becoming a support to young people. Participants will have an opportunity to watch a video of our students advocating for what they need from educators and to discuss case scenarios.

Session Justification: While BPHC and other agencies remain very active in addressing the needs of mothers and infants, this workshop will focus on supporting young people at a critical time in which they will be making decisions that impact their lives and the lives of their future children. In the same sense that we seek to ameliorate the effects of a systemic approach of seeing students as their metric value to the school, this presentation looks at a "whole person" approach at a critical time of life in considering all of the stresses and choices in front of them. It is an opportunity to discuss the most basic human need of all, relationships.

Princes to Kings Youth Mentorship Initiative: Engaging Minority Males to Increase High School Graduation Rates

Authors: Kobi Dennis

Title: Princes to Kings Youth Mentorship Initiative: Engaging Minority Males to Increase High School Graduation Rates

Learning Objectives:

1. Understand the importance of youth mentorship programs in reducing high School dropout rates among males of color.
2. See the relationship between Social Determinants of Health and Health Outcomes in minority youth.
3. 3. Leverage community institutions to create transdisciplinary programming for minority youth.

Session Description: Students who graduate with a regular diploma four years after starting ninth grade is one of 26 leading health indicators selected by Healthy People 2020 to communicate high priority health issues. Through concerted efforts, The Rhode Island Department of Health Maternal and Child Health program has developed and sustained an initiative to address high school graduation in minority youth, a population with disproportionately low high school graduation rates. The Princes to Kings Mentorship Initiative (P2K) aims to address this disparity through innovative programming that is community-led, culturally grounded and incorporates elements of existing evidence-based programs. This presentation will discuss the program model, challenges, and share program outcomes to-date.

Session Justification: In keeping with the Minority Youth Mentoring Mission to ensure that Rhode Islanders are informed of the issues affecting minority youth by compiling data, providing resources and supporting programming that advances the economic, education, social and political well-being of minority youth, it is imperative to communicate the program objectives, current findings and outcomes, and challenges to individuals and organizations that have a stake in youth wellbeing. The successes of the initiative, paired with our responsibilities as shared community members, can motivate a wider dialogue and practicum, for building and sustaining programming that provides our youth the essential needs they need to live healthy and resilient lives. CityMatCH holds the fundamentals we seek to link to, those of specification towards leadership knowledge and the concentration on minority, urban populations. We feel strongly we can contribute to the overall CityMatCH mission statement and would be honored to be included in the dialogue.

Advancing Access, Quality, and Equity in School Health Services Delivery for the School-age Youth Population

Authors: Wendy Doremus

Title: Advancing Access, Quality, and Equity in School Health Services Delivery for the School-age Youth Population

Issue: All children and youth deserve to have decent opportunities to grow, develop, learn, and lead a healthy life. Yet, despite recent increases in rates of health insurance coverage for children and their families, health disparities persist among youth, particularly those living in poverty. Children of low socioeconomic status typically have greater health risks, poorer health, and lower life expectancies. Education is a powerful predictor of health outcomes and in a reciprocal way, health impacts educational attainment. Since levels of academic achievement affect lifetime trajectories of health, it is critical to address barriers to educational attainment. School-age youth need high quality, coordinated healthcare to foster academic success and good health across the life span. A systems approach that includes state health and state education agencies collaboration is essential to address improving services, programs, policies, practices, and standards that ensure equitable access for all students to quality health services in schools. Measurement is needed to identify the extent to which state-level structures and processes necessary for supporting school healthcare service delivery are in place and functioning.

Setting: Project participants for the development phase of the instrument were drawn from a national pool and the pilot was conducted in Rhode Island. The population expected to benefit from the activities is school-age youth.

Project: This three phase project was conducted to develop the instrument. This first phase entailed an extensive literature search to develop operational quality domains and indicators. Phase two involved content expert input to refine the instrument. In the third phase, the measure was pilot tested in Rhode Island.

Accomplishments/Results: This macro health systems project developed an evidence-based measure of state-level structures and processes that supports quality school health services delivery. It is called the State-level School Health Infrastructure Measure (SSHIM). The pilot test was implemented in cooperation with school health services-related personnel from Rhode Island Departments of Health and Education in the last phase of this project. Content Validity Index analysis was calculated, along with a test-retest for reliability of the measure. Seven domains were identified, along with indicators for each domain.

Barriers: A critical potential barrier throughout the project was finding, arranging, and aligning individuals' schedules to allot time for participation in this project. Assistance from the RIDOH Academic

Center/Public Health Scholar Program with arranging meetings with personnel from state agencies was essential in facilitating community-based clinical personnel participation for the pilot test.

Lessons Learned: This project produced a valid and reliable measure that is feasible and cost effective, and may assist states in cross-sector collaboration. The focus is to direct efforts toward improving state-level structure and process supports that can advance equitable, quality, accessible school health services delivery for the school age population. The scope of changes, as a result of this project, may impact school health, educational, and public health programs, policies, and health system delivery in Rhode Island and possibly across the US, if the measure is widely adopted and implemented.

Information for Replication: The cost of conducting this project was negligible since it required very little equipment or investment of personnel time. In actual practice, responding to the identified needs would take more financial and workforce capital and effort. Resources needed to for this project were minimal as expected and only included printing, materials, local travel, and residual in-kind work contribution by the student researcher. The pilot test required two hours of time from state personnel and an additional 45 minutes for the pilot retest. Key partners included Rhode Island Department of Health (RIDOH) school health program staff, and their personnel time was covered as part of an established RIDOH Academic Center/Public Health Scholar Program partnership agreement. For the Rhode Island Department of Education (RIDE) and other state-level employees, time was requested as an in-kind contribution.

Underlying Cause and Distribution of Infant Mortality in a Statewide Assessment from 2005-2016 by Infant, Maternal, and Neighborhood Characteristics

Authors: Ailis Clyne, Lauren Schlichting, and Patrick Vivier

Title: Underlying Cause and Distribution of Infant Mortality in a Statewide Assessment from 2005-2016 by Infant, Maternal, and Neighborhood Characteristics

Background: Though infant mortality in the United States (US) has declined approximately 15% from 2005 to 2014, the US still exhibits higher rates compared to other industrialized nations. States often report the distribution of infant deaths by race/ethnicity, maternal age, prematurity, and birth defect. However, comprehensive analyses of other risk factors at birth may identify subpopulations at higher risk in order to guide prevention strategies.

Study Questions: To examine risk factors for infant mortality and identify the leading causes of infant death in a statewide study of births from 2005 to 2016.

Methods: All Rhode Island (RI) births from 2005-2016 were included in the analyses and were linked to death certificate and KIDSNET (a statewide Child Health Information System) data. Rates of infant (0-364 days), neonatal (0-27 days), and post neonatal (28-364 days) mortality were calculated for individual risk factors. Causes of death by mortality type were examined. Bivariate analyses were conducted for infant, neonatal, and post neonatal mortality by infant, maternal, and neighborhood characteristics. A multivariable logistic model of the risk of infant mortality adjusting for indicated risk factors was computed.

Results: From 2005-2016, there were 136,753 births and 717 infant deaths, an infant mortality rate of 5.2 deaths per 1,000 live births. There were 527 neonatal deaths (3.9 per 1,000 live births) and 190 post neonatal deaths (1.4 per 1,000 live births). Top causes of infant mortality were: prematurity and low birth weight (20.4%), congenital malformations (14.5%), placenta complications (12.0%), SIDS (9.2%), and maternal pregnancy complications (5.4%). After adjusting for other risk factors, prematurity showed a significant association with infant mortality. Infants born before 28 weeks had 38.1 (95% Confidence Interval (CI): 24.84-58.46) higher odds of mortality compared to term infants ($p < 0.01$). Infants born between 28-31 weeks and between 32-36 weeks also had higher odds of mortality compared to term infants. Low 5 minute Apgar score, birth defects, less than 10 prenatal visits, and maternal weight gain less than 25 pounds were significantly associated with higher odds of infant mortality, although to a lesser extent ($p < 0.01$). Similar associations were observed in the adjusted multivariable model for neonatal mortality. In the adjusted post neonatal mortality model, less than 10 total prenatal visits and maternal weight gain did not show significant associations with post neonatal mortality.

Conclusions: Prematurity was the risk factor associated with the highest infant mortality rate and was the leading cause of death across the state. Understanding the leading causes of infant death for the two different time periods is important for designing interventions in RI. Substantial reductions in the infant mortality rate will require improving strategies to prevent preterm births and using factors identifiable at birth to focus prevention efforts on those at higher risk.

Public Health Implications: Leading causes of neonatal mortality point towards interventions aimed at ensuring maternal access to prenatal care and optimizing maternal health during pregnancy, while leading causes of post neonatal mortality point towards efforts aimed at reducing risks for infant sleep-related deaths, injuries, and illnesses.

CelebrateOne Community Connector Corps: Bringing Community Based Organizations to the Table to Reduce Infant Mortality

Authors: Erika Clark Jones

Title: CelebrateOne Community Connector Corps: Bringing Community Based Organizations to the Table to Reduce Infant Mortality

Issue: Since 2010, every year in Franklin County, Ohio, 150 babies do not live to the age of one. Ohio ranks 39th out of 50 states in overall infant mortality and 32nd out of 34 states for Black infant mortality. Locally, black babies are dying at a rate of 2.5 times that of white babies. CelebrateOne was created in November 2014 with the goal of reducing the community's infant mortality rate by 40% and cutting the racial disparity gap in half by 2020.

Setting: Franklin County, Ohio--more specifically, the initiative focuses on the 8 Columbus neighborhoods most impacted by infant mortality, neighborhoods that are clustered around the urban core and also experience high rates of poverty, violence, and other health inequities.

Project: The CelebrateOne Community Connector Corps program is designed to connect disconnected women in 8 high priority neighborhoods to health and social supports. The program identifies and trains 24 local residents each year as Community Health Workers (CHWs) who work within these target neighborhoods with the goal of reducing infant mortality over a three year period. The program partners with community-based organizations, recruits and sponsors neighborhood residents (coined as Connectors) to go through CHW training at The Ohio State University (OSU), sponsors a nine-month, paid internship at a community agency and facilitates monthly skill-building trainings for participants. Connectors focus on connecting women with prenatal care, home visiting, smoking cessation, safe sleep resources, long-acting reversible birth control, and other resources that impact the health and wellbeing of mothers, babies, and communities. The program is collaborative in nature, involving 16 diverse community-based organizations as internship host sites, as well as close relationships with a local workforce development organization and OSU.

Accomplishments/Results: In the three years of the CelebrateOne Community Connector Corps program, there was a 21.6% reduction in Infant Mortality in the 8 CelebrateOne priority areas. In addition, 95 individuals have completed the community health worker certification program through The Ohio State University College of Nursing. Of those 95, 79 obtained their CHW certification over the 3-year period. Over 25,400 women have engaged in the program with 78% of moms receiving prenatal care in the first trimester in Franklin County.

Barriers: Due to the program design (a workforce development model that emphasizes resident-to-resident engagement), many Connectors experience the same challenges as the clients they serve. Thus,

we have made program modifications to address these barriers, in partnership both with OSU and the community-based agencies, including providing additional pre-employment training, offering more clarity on program requirements, and modifying the monthly training curriculum.

Lessons Learned: 1) Partnership with community members and community-based organizations is key, lending community credibility, reinforcing collective impact, and supporting neighborhood capacity. 2) Prioritize program structure and provider training but remain flexible. The nature of the work, the population served (both Connectors and clients), and the diversity of partner agencies means that no one size fits all, but creating structure (handbooks, clear recruitment strategies, policies, procedures, trainings, marketing, regular meetings) is critical for program success.

Information for Replication: The CelebrateOne Community Connector Corps Program is made possible through a three-year, \$1.7 million grant from the United Health Foundation as well as additional funding from The Crane Foundation and Ohio Department of Medicaid. Key collaborators include community-based agencies, various departments at Columbus Public Health, and The Ohio State University College of Nursing.

High Male Program Participation Helps Reduce Black Infant Mortality: An Evaluation of Palm Beach County's Community Voice Program

Authors: Jeffrey Goodman

Title: High Male Program Participation Helps Reduce Black Infant Mortality: An Evaluation of Palm Beach County's Community Voice Program

Background: From 2004-2006, Palm Beach County (FL) had a three-year White infant mortality rate of 4.8 and a Black rate of 12.6 – making the county eligible to participate in a statewide initiative that was implemented in 2007 to address persistent racial disparities. In 2009, a local team introduced Community Voice a program that seeks to improve Black infant mortality by training community residents to be lay health advisers. Lay health advisers have the knowledge to disseminate correct information to family and friends. By 2017, Community Voice has graduated 4,767 lay health advisers, 39% of whom are men. This paper reports data from a quasi-experimental evaluation of this program.

Study Questions: Was implementation of Community Voice related to reduction of racial disparities in key birth outcomes in Palm Beach County compared to a neighboring county?

Methods: Researchers used mixed methods for this evaluation. A comparative time series analysis examined the change in low birthweight, preterm birth, adequate prenatal care percentages and infant mortality rates in targeted zip codes after Community Voice was implemented. The analysis also compared these indicator changes to zip codes in Broward County with comparable mothers, both demographically and medically using the Florida Department of Health CHARTS website zip code-level data. For qualitative analysis, researchers distributed a health education questionnaire to male participants to determine health education knowledge and a focus group was conducted with males on why they joined, and remained, in the program. No data were collected on the community residents who the Lay Health Advisers talked to, so outcomes only could be measured on the community level. In addition, there were other programs operating in these zip codes so, although Community Voice had the greatest penetration, changes in birth outcomes could not be solely attributable to the program.

Results: Time Series Analysis: All four birth outcomes showed improvement after implementation, three of which were statistically significant ($p < .05$). Comparative Analysis: The improvement for all four outcomes in the targeted zip codes was significantly greater than in the Broward County zip codes. Knowledge gain: Male Community Voice graduates had an average 10-point higher score than males who did not participate in/graduate from the program. The mean difference was significant at 90% confidence.

Conclusions: Introducing Community Voice to Palm Beach County zip codes was followed by statistically significant improvement in Black birth outcomes. Community Voice zip codes performed better than comparable zip codes in neighboring Broward County during an 11-year period, as well as a higher percent improvement than the state in all four birth outcomes from 2006-2016. Local Community Voice graduates have greater knowledge of good prenatal practices. Men in the program have been engaged and retained at a much higher than expected rate, compared to other programs. These men said they joined the program because someone they respected asked them to; they stayed with the program because they felt empowered to make a difference.

Public Health Implications: Making specific efforts to engage males can lead them to become active participants in the prenatal stage, resulting in better birth outcomes for the community

Using Human Centered Design to Reduce Infant Mortality: A Case Study of the IM CoIIN in the Border States

Authors: Lawrence Reichle, Katherine Selchau, Stephanie Yoon, Sarah Ball, and Vanessa Lee

Title: Using Human Centered Design to Reduce Infant Mortality: A Case Study of the IM CoIIN in the Border States

Issue: Human-centered design (HCD) and design thinking are innovative approaches to problem solving involving building deep empathy with your consumers, extensive brainstorming, and building prototypes. Through the Health Resources & Services Administration (HRSA)'s Collaborative Improvement & Innovation Network to Reduce Infant Mortality (IM CoIIN), the Border States CoIIN, led by PCI and supported by Abt Associates, is pioneering the use of HCD to reduce infant mortality by designing interventions to increase early prenatal care utilization among primarily Latina women residing in four US border states. Due to the success of HCD in similar settings, there is a likelihood that HCD is an appropriate method to effectively address the need for innovating infant mortality reduction methods.

Setting: (please see "Issue")

Project: State teams conducted the Inspiration and Ideation phases of HCD. Activities involved facilitated design exercises including, "How Might We" innovation brainstorming, user journey mapping, visual thinking, story boarding, design sprints, prototype development, and user simulation and testing. An assessment was conducted among representatives of the state teams at baseline (Year 1) and midline (Year 2) to measure knowledge and level of comfort with implementation of HCD and innovation. A 23-item questionnaire that included both structured and open-ended questions was completed through in person meetings and electronically via email.

Accomplishments/Results: Four Ideation Workshops and Design Sprints with 100+ participants were held. Teams conducted lightning talks, asked How Might We questions, created idea sketches, and developed 14 prototypes. Four prototypes were selected to advance to the demonstration phase: a prenatal transfer record to document prenatal visits taking place in other countries, a mobile messaging system for teens to ask confidential questions about pregnancy testing, a web-based screening and self-referral tool to link women with providers, and a pregnancy "passport" to reduce time between confirmation of pregnancy and first prenatal visit. Prototypes continue to be tested and evaluated for effectiveness as part of the iterative HCD process.

Barriers: HCD and design thinking can be successfully applied in the public health context to create interventions aimed at reducing infant mortality. Barriers encountered included resistance to

change/innovation, stakeholder engagement, learning a new methodology, limited resources and staff turnover. In-person trainings and one-on-one coaching on HCD techniques and tools can overcome resistance by key stakeholders and partners new to these methods. In-person sessions also helped to increase the pace of learning and innovation.

Lessons Learned: (please see "Barriers")

Information for Replication: N/A

Prevalence and Content of Postpartum Care Visits Among Women with a Recent Live Birth

Authors: Martha Kapaya, Brenda Bauman, Denise D'Angelo, Ada Dieke, Leslie Harrison, Megan O'Connor, and Sharoda Dasgupta

Title: Prevalence and Content of Postpartum Care Visits among Women with a Recent Live Birth

Background: The postpartum period is a critical time for a woman and her infant for assessing their health and wellbeing. Postpartum care can improve breastfeeding rates, prevent rapid repeat pregnancies, and facilitate management of chronic conditions. Clinical guidelines have typically recommended that a visit for postpartum care include assessment of emotional well-being, contraceptive counseling, and chronic disease management. Few studies have examined the extent to which postpartum care content aligns with clinical guidelines in a large population-based sample of postpartum women.

Study Questions: To assess overall prevalence of having a postpartum care visit (PPCV) among women with a recent live birth, to assess content of postpartum care visits, and to examine reasons for not having a PPCV.

Methods: We used 2016 Pregnancy Risk Assessment Monitoring System (PRAMS) data from 30 sites (N=34,247) to calculate prevalence estimates and 95% confidence intervals (CIs) for PPCV, topics discussed during PPCV (nutrition and weight management, birth spacing, birth control methods, depression, cigarette smoking, and intimate partner violence), and services received (birth control method such as pill or condom, insertion of long acting contraceptive method (LARC), or a test for diabetes as indicated), and reasons for no PPCV among women with no PPCV. Prevalence of PPCV was examined overall, and by select maternal characteristics. Multivariable logistic regression was used to calculate adjusted prevalence ratios to assess maternal characteristics associated with PPCV.

Results: Overall, 89.4% of women reported a PPCV. Prevalence of PPCV was highest among women at >300% of the federal poverty level (96.3%), with >high school education (93.4%), and 1st trimester entry into prenatal care (91.4%). In adjusted analyses, PPCV was higher among women with 1st trimester entry into prenatal care versus no prenatal care (Adjusted Prevalence Ratio (aPR) =1.24, 95% CI: 1.02, 1.51), >high school education versus less (aPR=1.09, 95% CI: 1.04, 1.14), and Medicaid coverage versus no insurance (aPR=1.05, 95% CI: 1.01, 1.09). Birth control (88.5%) was the topic most frequently discussed during PPCV, and birth spacing was the least discussed (48.7%). Receipt of a birth control method such as pill or condom was the most common service reported (46.4%), while insertion of a long lasting reversible contraceptive method (LARC) was the least reported service (19.9%). Among women with no PPCV, the most common reasons for no visit were thinking a PPCV was not needed (47.4%), having too many other things going on (36.6%), and not having health insurance (17.9%).

Conclusions: Early entry into prenatal care was associated with PPCV. The proportion of women

receiving recommended PPCV counseling and services ranged from 19.9% to 88.5%, but most received information about birth control. About 1 in 10 women did not receive a PPCV. Almost half of women with no PPCV reported thinking they did not need a visit. One limitation is that PRAMS measures only a selection of the recommended PPCV components which limits ability to assess comprehensiveness of PPCV content.

Public Health Implications: Providers can educate pregnant women during prenatal care on the importance of PPCV to increase attendance.

Use of a Reproductive Life Planning Tool at the Well Baby Visit to Address Women's Primary Care and Contraceptive Needs

Authors: Arden Handler, Alejandra Zocchi, Sarah Oldender, Cara Bergo, Keriann Uesugi, Rachel Caskey, and Arden Handler

Title: Use of a Reproductive Life Planning Tool at the Well Baby Visit to Address Women's Primary Care and Contraceptive Needs

Background: Postpartum (PP) women are at high risk of unintended pregnancy and most do not receive contraception until the 4-6-week PP visit. However, there is high non-attendance (11%-40%) at the PP visit compared to the highly utilized Well-Baby Visit (WBV). Because women are more likely to obtain care for their infants, compared to their own PP care, they are likely to attend multiple Well-Baby Visits during the PP period. As such, the WBV is increasingly acknowledged as a site of care where maternal health issues can be addressed.

Study Questions: The objective of this study was to test the impact of a streamlined self-administered Reproductive Life Planning Tool (RLPT) for all postpartum women attending a 2-month WBV with their infant on subsequent receipt of primary health care and contraception.

Methods: A single-site system-level pilot study of PP women was conducted. During Phase 1, a control group (n=50) was enrolled, followed by a washout period; during phase 2, an intervention group (n=50) was enrolled from a general pediatric clinic while at their infant's 2-month WBV. After review of the RLPT by the pediatrician, women in need of contraception or additional primary care were given the opportunity to schedule a visit for themselves on the same day as their infant's next WBV or the first available visit. We expected that by offering women the opportunity for a primary care visit on the same day as their infants' next WBV, the likelihood of adherence would be much greater than just offering a referral. A baseline and six-month survey of both intervention and control women were completed and medical records at baseline and at 6 months PP were reviewed.

Results: Analysis conducted to date revealed no significant differences between the intervention and control groups at baseline. At the two-month WBV, 80% of women in both groups reported attendance at a postpartum visit for themselves and 68% reported being offered effective contraception. Of the women in each group who reported a need for primary care, 90% of women in the intervention group reported scheduling or had a visit scheduled versus only 60% of women in the control group ($p = .08$). Additional future analysis will compare actual (from medical chart review) and reported use of primary care and contraception by six months postpartum.

Conclusions: Use of a simple RLPT at the two-month WBV appears to provide a "safety net" to ensure

that women who do not attend a PP visit for themselves are referred to additional primary or contraceptive care.

Public Health Implications: Integration of women's and infant's care in the postpartum period helps to ensure that women's needs for care are elevated during a time when much of the focus has been on the infant.

Women's Preferences for Postpartum Care and the Possibility of a Two-Generation Approach

Authors: Cara Bergo, Bethany Dominik, Sarah Olender, Alejandra Zocchi, Rachel Caskey, and Arden Handler

Title: Women's Preferences for Postpartum Care and the Possibility of a Two-Generation Approach

Background: Postpartum women are at particularly high risk of unintended pregnancy. While some women have access to contraception in the hospital after delivery, women typically do not receive contraception until the 4-6-week postpartum visit; however, estimates for non-attendance at the postpartum visit are low and range from 11%-40%. In contrast to the PP visit, the Well-Baby Visit (WBV) is highly utilized. Because women are more likely to obtain care for their infants, compared to their own PP care, they are likely to attend multiple Well-Baby Visits during the PP period. Acknowledging the WBV as a site of care where maternal health issues can be addressed speaks to the need for a two-generation approach to postpartum care.

Study Questions: The objective of this study was to obtain women's input about their preferred approach to the receipt of postpartum care including family planning and mental health care and to assess whether there is support for a two-generation approach to postpartum care.

Methods: Twenty in-depth qualitative interviews with immediate postpartum women were conducted to better understand women's views with respect to postpartum care for themselves. To clarify issues raised in the qualitative interviews, an additional 50 brief close-ended interviews with immediate postpartum women and 50 interviews with women 2-4 months postpartum were conducted. Qualitative interviews were transcribed and analyzed for key themes using Dedoose software. Quantitative interviews were analyzed in SAS using simple frequencies, bivariate analysis, and multivariable analysis.

Results: Postpartum women face a dilemma: they express a desire to return to their prenatal provider but also express a strong desire for convenience of care in the postpartum period. One woman stated that she would prefer going to the same clinic as her infant, "it'll make it better and it'll make it less – not waste my time because I could just for ease go with her doctor and then go with my doctor." When specifically asked about their preferences in the quantitative interviews, 90% of women preferred a doctor who can care for both mothers and infants and 94% expressed interest in care at the same clinic and time as their baby.

Conclusions: Given what we know about low-income women's actual use of postpartum care, barriers and challenges related to convenience may explain why women do not carry through on their intentions to obtain postpartum care. The data suggest that providing care to postpartum women at the WBV might be a reasonable approach.

Public Health Implications: Women support a two-generation approach to postpartum care which

integrates the delivery of their own care with their infant's care. A two-generation approach would reduce barriers to care and increase focus on the mother's health during the crucial PP period.

Quality Housing Matters: Advancing Equity in Birth Outcomes

Authors: Rose Anderson-Rice, Nhial T. Tutlam, and Pamela K. Xavierius

Title: Quality Housing Matters: Advancing Equity in Birth Outcomes

Issue: Lack of access to quality housing is linked to poor pregnancy outcomes, outcomes that are exacerbated through poverty, safety, and environmental exposures. In the Saint Louis region, the infant mortality rate for Black babies is three times greater than for White babies. Building upon collective impact efforts around infant mortality in the region (FLOURISH St. Louis), the FLOURISH-MORE initiative is working toward racial equity in birth outcomes by focusing on housing.

Setting: Clinton Peabody (CP), a 358 unit housing complex owned by the St. Louis City Housing Authority (CHA), is the focus of an intervention designed to improve housing conditions for residents.

Project: As a result of the St. Louis Cohort 3 of CityMatCH Institute for Equity in Birth Outcomes (2016 to the present), there have been significant efforts focused on understanding the data, selecting a topic to focus on, and engaging the community in addressing disparate infant mortality rates. Through engagement with residents, housing authority personnel, and key stakeholders in the region, it was decided to focus our efforts at CP. The intervention will focus on education to residents around renters' rights, developing Public Service Announcements, and looking at policy and advocacy to improve access to quality housing. The long-term goal is to help in mobilizing communities to uplift community voice. The process has been instrumental to setting the foundation for this work. This has included the need to include housing experts to the FLOURISH-MORE team that has added Ascend Saint Louis, and the St. Louis Metropolitan Equal Housing Opportunity Council (EHOC), and Legal Services of Eastern MO.

Accomplishments/Results: Maintained high level of engagement from residents and stakeholders. Expanded the participants in FLOURISH-MORE to include housing experts. Engaged the tenant association board. Cultivated and developed community champions by developing their capacity to undertake this work. Intervening events have played a role in elevating the importance of this work, as mice and rat infestation at CP gained media attention and a law suit was filed by the Missouri Attorney General against CHA.

Barriers: Navigating the system around health and housing. Challenging with new leadership at the tenant association board. Lack of funding for this initiative, outside of technical support and an engaged group of people.

Lessons Learned: Understanding the narrative around housing and infant mortality has proved to be a powerful lesson learned. Initially we thought the Boston model (i.e., reserved housing for pregnant women) might be adopted in Saint Louis, but that was not supported. Understanding the time and support necessary for a community to be present and to have power, is a second important lesson. The community pushed us in this direction of housing. Community participants have been featured

prominently in the Health Equity Works publication and recognized at the 2018 EHOC housing conference in Saint Louis.

Information for Replication: MFH provides funding to FLOURISH St. Louis as well as St. Louis IEBO community meetings for transportation, meals, and child care.

Healthy Beginnings at Home: A Pilot Housing Stabilization Program to Reduce Infant Mortality

Authors: Christina Ratleff

Title: Healthy Beginnings at Home: A Pilot Housing Stabilization Program to Reduce Infant Mortality

Issue: Safe and stable housing is widely regarded as a key social determinant of health impacting pregnancy outcomes. Research findings show that housing instability or a shelter stay during pregnancy, increases a woman's risk of having a premature birth by 200%. In Franklin County, Ohio, prematurity is the leading cause of infant mortality. For black infants, the numbers are devastatingly high. In comparison to white infants, black infants are significantly more likely to be born preterm, and three times more likely to die before their first birthday. Housing instability and homelessness may play critical roles in these persistent perinatal health inequities. Given the significant impact of safe, stable and affordable housing on maternal and child health, rental assistance programs may be a promising approach to improve birth outcomes.

Setting: CelebrateOne is a community-wide, collective impact initiative that aims to reduce the Franklin County infant mortality rate and the disparity gap between black and white infant deaths by 2020.

Project: Healthy Beginnings at Home (HBAH) is an innovative initiative designed to improve perinatal outcomes among women experiencing housing instability. With funding from the Ohio Housing Finance Agency and other partners, CelebrateOne developed the HBAH pilot study to demonstrate the impact of safe, stable and quality housing on maternal health and birth outcomes. Healthy Beginnings at Home, a partnership between the Columbus Metropolitan Housing Authority (CMHA), CelebrateOne, and the Homeless Families Foundation (HFF), provides rental assistance and wrap-around services to 50 Medicaid-enrolled pregnant women who are experiencing housing instability. Participants in the intervention group receive integrated care coordination from a team of providers which includes a housing stability specialist (master-level social worker), CelebrateOne community health worker and CareSource nurse case manager. An evaluation is being conducted by Nationwide Children's Hospital and Children's HealthWatch on the effectiveness of the program. The study will examine the impact of rental assistance and housing stabilization services on maternal health and birth outcomes.

Accomplishments/Results: We launched enrollment in August 2018 and have succeeded in enrolling 100 families in the study. To-date, we have housed 28 families, and six women have given birth.

Barriers: The pace of enrollment into the study was slow partly because of certain social and economic barriers disqualifying otherwise eligible women. For example, some of the most vulnerable women screened for the study were ineligible due to seeking prenatal care late, or high utility debt. As a result, we had to extend our recruitment period from four to six months and expand study criteria.

Lessons Learned: Our Findings Indicate That Developing And Nurturing Relationships With Implementing Partners Is Vital To Driving Cross-Sector Work. We Learned That The Amount Of Time Required To Receive IRB Approval Was Greater Than Anticipated.

Information For Replication: Once This Intervention Is Rigorously Evaluated And Proven Effective, Celebrateone And Its Partners Hope That This Project Will Lead To Greater Investment In Housing Stabilization Supports With Rental Assistance And A Recognition Of Social Determinants Of Health As Crucial Components In Addressing The Issue Of Infant Mortality Locally, Statewide And Nationally.

Income Inequality and Racial Disparities in Pregnancy-Related Mortality in the US

Authors: Dovile Vilda, Maeve Wallace, and Lauren Dyer

Title: Income Inequality and Racial Disparities in Pregnancy-Related Mortality in the US

Background: Non-Hispanic (NH) black women are 3 to 4 times more likely to die during pregnancy and postpartum than NH white women in the US. In this study, we aim to deepen understanding of factors underlying patterns of maternal death in the US by moving beyond individual-level explanations and examining the associations between state-level income inequality and pregnancy-related mortality rates (PRM) among NH black and NH white populations across the US.

Study Questions: Is state-level income inequality significantly associated with pregnancy-related mortality rates in the total population and among NH black and NH white populations separately?

Methods: We estimated overall and race-specific 5-year pregnancy-related mortality rates (2011-2015) for each state based on ICD-10 code for underlying cause of death (O.00-O.99) as reported on death records provided by the National Center for Health Statistics. Gini coefficients for income inequality in each state in 2011 (5-year lag), 2013 (2-year lag) and 2015 were derived from ACS data. Log-Poisson regression with robust standard errors estimated pregnancy-related mortality rate ratios (RR) and 95% confidence intervals (CI) associated with an IQR increase in indicators of income inequality overall and separately within black and white populations.

Results: Across all states, higher five-year and two-year lagged income inequality were associated with 43% and 44% increase in PRM among black women (RR=1.43, 95% CI=1.05, 1.94 and RR=1.44, 95% CI=1.06, 1.95, respectively), independent of the state poverty level and the size of the black population. Contemporaneous (2015) higher income inequality was also associated with 49% increase in PRM among black population (RR=1.43, 95% CI=1.05, 1.94). Gini coefficient for income inequality was not associated with pregnancy-related mortality among white population. This was a cross-sectional analysis, and therefore we are unable to draw causal conclusions or examine trends in both PRM and income inequality over time. We conducted the analysis at the state-level, a jurisdictional level relevant to the development and implementation of policy that may address income inequality or PRM. However, it may be the case that income inequality at a more local (city or county) level has a bigger impact on reproductive health and inequities.

Conclusions: Using vital records data from 2011-2015, we found that state-level income inequality was significantly associated with black but not white PRM. Investigating the context in which these deaths occur and taking into account the role of state-level factors is critical to explaining the persisting racial inequity in maternal mortality in the US.

Public Health Implications: Pregnancy-related mortality remains a significant concern in the US where

vast disparities in the experience of maternal death divide the population along racial lines. Concurrently, increasing income inequality may be underlying adverse trends in population health as segments of the population increasingly lack access to the resources and opportunities needed to achieve and maintain a healthy life. Efforts to reduce maternal death in the US should continue to expand a focus beyond individual- and clinical-level risk factors to explore the harmful contexts in which women live. Identification of policy-amenable conditions including income inequality may prevent future deaths and help to advance maternal population health equity.

Entrepreneurship as a Pathway to Economic Security for Home Visiting Clients

Authors: Jose Caballero, Tanya Rovira-Osterwalder, Jacqueline Belloso, and Kiko Malin

Title: Entrepreneurship as a Pathway to Economic Security for Home Visiting Clients

Issue: Many families receiving home visiting services experience high levels of stress due to financial insecurity. Families describe potentially life-changing tradeoffs when faced with financial crises, as well as frustration about being unable to sustain successful small businesses due to lack of resources, credit or information. Entrepreneurship can be a pathway to economic security in low income, marginalized communities of color where residents may not have access to traditional jobs due to educational barriers and life stressors. Yet small business ideas may be thwarted by structural and institutional racism, classism and sexism that make it difficult for people of color to obtain loans and build credit.

Setting: The Starting-Out-Strong-Family-Support-System-of-Care is housed within the Alameda County Department of Public Health in Oakland, California. Starting Out Strong serves pregnant women, fathers, and families of young children.

Project: The Financial Tools and Solutions project (FTS) is a financial education and grants program that is integrated into Starting Out Strong. FTS participants complete a financial coaching series and can then apply for mini-grants to support financial goals. Home visiting clients interested in entrepreneurship were invited to participate in an additional eight-session small-business workshop series. Following best practices of business incubator programs, workshop participants were asked to pay a sliding scale buy-in of \$25 to \$100 prior to beginning the series. The buy-in would be returned upon completion of the program, along with a small matching grant. This was designed as an incentive to retain attendance, and as startup capital.

Accomplishments/Results: Sixteen FHS home-visiting-clients participated in the entrepreneurship workshops. Fourteen clients moved forward with their business proposals and were funded. The small businesses included car detailing services, catering services, clothing retail, event coordinating, beauty services, and doula services. Participants used the grants to purchase equipment, permits/licenses/certifications, or marketing materials. Clients reported that these entrepreneurship opportunities were not only income-generating opportunities for their families but also engendered a deep sense of pride and were a legacy for their children.

Barriers: Clients reported that existing small-business workshops did not meet their needs. We formed a partnership with a local organization that specializes in economic development with underserved communities to design and implement a client-centered workshop series that was responsive to the needs of communities of color. Clients also reported being reluctant to trust traditional financial institutions. To counter this, ACPHD established a partnership with Self-Help-Credit-Union, thus allowing grant funding to be directly disbursed to clients.

Lessons Learned: It takes only a few thousand dollars to help clients embark on the promise of entrepreneurship and create their own pathway towards economic security. The clients who participated in the workshops had strong entrepreneurial spirits and were willing to invest in their business ideas – all they needed was seed funding. Lack of access to social networks and start-up-capital has its roots in discriminatory and racist policies and practices that Public Health Departments must be poised to dismantle. PHDs can improve economic self-sufficiency in communities of color by addressing the root causes of economic inequities and focusing on upstream-strategies that support financial wellbeing for people of color.

Information for Replication: This project would not have been possible without external funding. Three foundations provided necessary support. The right partnerships were also critical to the success of the project. It was necessary to have partners that could offer home visiting clients financial products that we, as a public health department that is knowledgeable about and engaged with the community, could help shape, promote and facilitate access to. These included: small business workshops that were culturally appropriate and able to meet the clients where they were with their business goals formalized lending circles that helped clients save money and improve their credit scores a financial institution rooted in the community that was willing to work with a government agency to facilitate putting small grants in the hands of the entrepreneurs

B'more for Healthy Babies Turns 10: Evolution Toward Equity

Authors: Stacey Tuck and Cathy Costa

Title: B'more for Healthy Babies Turns 10: Evolution Toward Equity

Issue: After a decade of rising infant mortality and with the fourth highest infant mortality rate in the country and a fivefold Black-White disparity in the infant mortality rate, in 2009, Baltimore launched B'more for Healthy Babies (BHB), a collective impact initiative that includes more than 150 partners to prevent infant mortality and eliminate disparities in maternal and child health outcomes.

Setting: BHB operates citywide in Baltimore, Maryland, where more than 70% of residents are people of color, and with painful legacies of redlining, racism, and community disinvestment.

Project: Grounded in life course and socioecological theory, BHB began as a race-neutral initiative and mounted an aggressive multilevel campaign to tackle infant mortality by increasing access to and quality of health services and mobilizing community citywide and in targeted neighborhoods to increase demand for services and change health behaviors and community norms to support infant vitality. With the catalyst of BHB's selection for the first cohort of the CityMatCH Equity Institute in 2013 and advocacy from community, partners, and staff, BHB has evolved into an explicitly anti-racist initiative. BHB has undertaken five years of Equity Coalition work to increase our collective capacity to improve equity, including adopting anti-racist partner principles; training all leaders and staff and across BHB, MCH direct services (e.g., home visiting, WIC, early intervention, Title X), and more than 60 partners on Undoing Racism with the People's Institute for Survival and Beyond; and holding monthly caucuses on dismantling internalized racial oppression. BHB sought greater community accountability by establishing a citywide Community Advisory Board in 2017 and created earning opportunities for community members throughout the initiative. BHB disaggregates data by race, has set aggressive goals for disparity reduction, and has changed its need assessment processes, including revamping its Fetal-Infant Mortality Review. While maintaining a critical focus on improving access to and quality of services, BHB deepened its efforts on public policy advocacy and increasing access to income and material supports to address the social determinants of health and provider outreach to address racism in the local health care system.

Accomplishments/Results: After 10 years, Baltimore has seen an historic 36% decrease in infant mortality, a 38% decrease in the Black-White disparity in infant mortality, and advances in other major population health measures. In January 2019, BHB launched its five-year strategic refresh with an anti-racist call to action with the full support of its Steering Committee and Community Advisory Board.

Barriers: Organizations participating in the collective impact initiative are in different places along the continuum toward equity, and evolving BHB required significant relationship building and training.

Lessons Learned: Public health and social services agencies can work in partnership with community to reduce previously intractable racial disparities in infant mortality using a multilevel intervention and advocacy campaign to support the health of mothers and children of color.

Information for Replication: BHB has been supported for 10 years by CareFirst BlueCross Blue Shield (\$750,000 per year) and braids funds from federal, state, and local public and philanthropic sources to achieve public health aims. BHB is led by the Baltimore City Health Department with lead implementation partners Family League of Baltimore and HealthCare Access Maryland and has more than 150 partners.

Innovations in the FIMR Process to Eliminate Disparities in Baltimore City

Authors: Sinmidele Badero, Rebecca Dineen, and Sinmidele Badero

Title: Innovations in the FIMR Process to Eliminate Disparities in Baltimore City

Issue: B'more for Healthy Babies (BHB), Baltimore City's collective impact initiative to prevent infant mortality and improve maternal and child health outcomes, uses the Fetal-Infant Mortality Review (FIMR) process to understand the drivers of mortality and set its agenda for community action. Both science and women of color tell us that chronic stress fueled by racism and racial residential segregation (isolation) is leading to Baltimore's two- to fivefold Black-White disparity, but FIMR as traditionally implemented was not fully illuminating these issues.

Setting: FIMR operates in Baltimore, Maryland, where more than 70% of city residents are people of color, and with approximately 150-180 stillbirths and infant deaths annually.

Project: BHB undertook a Perinatal Periods of Risk (PPOR) analysis that showed 61% of its racial disparity is driven by very preterm delivery and further that hypertensive conditions (chronic, gestational, preeclampsia, and eclampsia) were the most significant drivers of this disparity. Over two years, FIMR set out to review all cases involving maternal hypertension, beginning with a facilitated discussion of the PPOR results and the strong association of poor birth outcomes and hypertension with experiences of racism. FIMR revised the maternal interview guide to elicit more information about experiences of racism and discrimination, adverse childhood experiences, neighborhood cohesion, strengths, and stressors, and hired a non-clinical woman of color who had herself experienced a loss to outreach to mothers and conduct interviews. The team used a series of 12 GIS maps covering factors including racial residential segregation, vacancies, redlining history, violence, healthy food availability, and environmental hazards to assess stressors in mothers' environments. In addition, staff worked with data partners to develop a timeline of mothers' experiences over the life course that included childhood interactions with systems with legacies of institutional racism, including social services, education, and juvenile justice.

Accomplishments/Results: FIMR has reviewed 29 cases to date with a total of 35 expected by May 2019. Findings include extreme stress due to isolation, dismissal of maternal concerns by providers, challenges caring for children with health problems due to previous preterm birth, and poor postpartum linkage to primary care. A full analysis of aggregate data will be conducted in June 2019. The team has made more than 20 recommendations to BHB for eliminating racial disparities.

Barriers: Barriers experienced include the need for team members to shed biases and develop a common understanding of the racism's impact on infant mortality, the deficit-oriented documentation of mothers' encounters with health and other systems, and obtaining maternal interviews. These were countered through facilitated group conversations, interviewing mothers about strengths, and hiring an interviewer with lived experience of infant loss.

Lessons Learned: FIMR is a dynamic process that can be augmented with multiple sources of qualitative and quantitative data along with support and education to team members to illuminate issues driving the racial disparity in a community's infant mortality rate and point to specific actions for change.

Information for Replication: Baltimore City FIMR is funded with a state grant of \$95,000. Innovations to the FIMR process were undertaken with existing resources. Key partners include health care providers, birthing hospitals, community-based organizations, faith-based leaders, and community residents.

Community Action and Accountability to Prevent Infant Mortality

Authors: Stacey Tuck, Stacey Stephens, Ronald Fountain, and Cathy Costa

Title: Community Action and Accountability to Prevent Infant Mortality

Issue: To eliminate racial disparities in infant mortality, B'more for Healthy Babies (BHB), Baltimore City's collective impact initiative to improve maternal and child health outcomes, needed to evolve from soliciting input from the community to working in partnership with the community with clear accountability for adhering to an anti-racist approach.

Setting: BHB operates citywide in Baltimore, Maryland and heavily in two neighborhoods, Upton/Druid Heights (U/DH), a neighborhood that is nearly 100% African American, and Patterson Park North and East (PPNE), Baltimore's most diverse neighborhood with a large immigrant population.

Project: In 2010, BHB selected U/DH and PPNE, neighborhoods with among Baltimore's highest infant mortality rates, for targeted community mobilization. Lead organizations in U/DH (University of Maryland Promise Heights) and PPNE (Baltimore Medical System) created teams of community health workers to conduct outreach, education, and group-based programming for pregnant women and families and convene Community Collaboratives to coordinate services. In 2015, teams conducted a series of 20 "community conversations" in each neighborhood to identify residents' gifts and talents and vision for making the neighborhood a healthy place to raise a child. They undertook several successful projects with residents from 2016 to present, including community training in Undoing Racism, mini-grants for resident-led projects, peer breastfeeding support, and peer weight management support. To increase community accountability for BHB citywide, BHB created a 14-member Community Advisory Board (CAB) of residents with lived experience in Baltimore, providing training in Undoing Racism and working with CAB members through a difficult, sometimes painful process to create guidelines and a mechanism for holding BHB accountable to meeting residents' true needs and dismantling racism in the policies and practices of maternal and child health services. CAB members now sit on Fetal-Infant Mortality Review and BHB coalitions and have testified on state and local legislation, directed allocation of private philanthropic funds for BHB to support work to train doulas of color, and served as community ambassadors for safe infant sleep.

Accomplishments/Results: Teams in U/DH and PPNE have become indispensable to residents. There have been significant improvements to health indicators, including two years of zero infant mortality in U/DH, which only Baltimore's wealthiest neighborhoods have matched. Citywide, the Black-White disparity in infant mortality decreased by 38% since 2009. The CAB is holding a series of accountability presentations from BHB programs in 2019 to ensure all are training leaders and staff and implementing equity-focused improvement plans.

Barriers: Baltimore's history of short-lived initiatives and egregious institutional racism has led to mistrust, requiring lengthy trust and relationship building. A lack of models for true community

accountability in maternal and child health has required a challenging trial-and-error approach to partnering with CAB members to devise accountability mechanisms.

Lessons Learned: Working in true partnership with the community is necessary to achieve radical transformation in maternal and child health outcomes and services, and leaders and staff must be willing to be vulnerable throughout the difficult process of shifting power.

Information for Replication: Teams in U/DH and PPNE and the CAB are supported by funds from CareFirst BlueCross Blue Shield, with a \$10,000 seed grant for the CAB from Johns Hopkins. Key partners in U/DH and PPNE include numerous community-based agencies and community organizers.

Mental Health and Access to Services Among American Indian/Alaska Native Women of Reproductive Age

Authors: Chiao-Wen Lan and Sujata Joshi

Title: Mental Health and Access to Services Among American Indian/Alaska Native Women of Reproductive Age

Background: Background. Mental health disorders are a growing public health concern, yet many of them are often undiagnosed and untreated. Literature has reported that women battling with mental illnesses had a higher one-year unintended pregnancy rate. Additionally, unintended pregnancy and a previous history of depression are known risk factors for postpartum depression, which could have negative consequences for the mother, infant, and family. However, there is a scarcity of literature documenting how women of reproductive age with diagnosed mental health disorders were linked to services.

Study Questions: This study sought to examine the prevalence of mental disorders and transfer for mental health treatment among hospitalized American Indian and Alaska Native (AI/AN) women of reproductive age in Washington.

Methods: We used inpatient hospital discharge data from 2011 to 2014 in Washington. Data were corrected for AI/AN misclassification through linkage with the Northwest Tribal Registry. We identified documented mental disorders through the International Classification of Disease, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis codes. We limited our analysis to non-pregnant women aged 15 to 49 years old. We controlled for socio-demographic factor such as age. We investigated the association between mental disorders and linkage to psychiatric care using logistic regression. Women who received care in Veteran Administration hospitals were not included in the data set.

Results: A total of 559,611 reproductive-aged women were hospitalized in Washington between 2011 and 2014. Of those, AI/AN women had a significantly higher rate of documented mental disorders than non-Hispanic White (NHW) women (38.4% vs. 31.5%, $p < 0.0001$). Of those AI/AN women with a diagnosed mental disorders, 41.4% had a diagnosed substance use disorders (SUD), while 23.6% of NHW women had a SUD ($p < 0.0001$). Among women diagnosed with mental disorders, NHW women were more likely to be transferred to a psychiatric facility than their AI/AN counterparts (2.22% vs. 1.19%, respectively) after discharge from the hospital (odds ratio 1.91, 95% CI: 1.52, 2.40).

Conclusions: Mental health conditions are prevalent among women of reproductive age and a substantial proportion of those go untreated. The results suggest that AI/AN women suffered from higher rates of mental health programs compared with their NHW counterparts. A significantly higher rate of documented mental disorders, including substance use disorders, was found in AI/AN

reproductive-aged women compared to NHW women in Washington. Further, fewer AI/AN received psychiatric or rehabilitation care than NHW.

Public Health Implications: Women who got admitted to a hospital represent a significant window of opportunity for identification and intervention for the safety and psychological wellbeing of women and their families. Connecting women needing support to appropriate treatment is vital. There is a need for community input to learn the types of services needed in the AI/AN communities to address mental health issues among AI/AN women of reproductive age. Program developers should consider how services are received in AI/AN communities to reduce barriers to care. Reproductive-aged women with a diagnosis of mental disorders require not only timely and effective treatment, but also tailored and culturally appropriate care and preventive services.

Identifying What Works for Us: Addressing Ethical Concerns in Maternal Mental Health Disparities Research through Community Engagement

Authors: Danette McLaurin Glass, Natalie Hernandez, Jemea Dorsey, Kimberley Broomfield-Massey, Janina Daniels, Erika Pope, Orita Semple, Ramona Bailey, and Cheryl Love

Title: Identifying What Works for Us: Addressing Ethical Concerns in Maternal Mental Health Disparities Research through Community Engagement

Issue: Perinatal mood and anxiety disorders (PMADs) are the most common complication of pregnancy, affecting up to 1 in 5 childbearing women, with higher rates among poor minority women. Effective screening tools and treatment strategies for combating PMADs have been developed but these tools may not accurately assess PMADs in women of color creating inequities. A community-based participatory research (CBPR) partnership identified PMADs as a prioritized issue due to the number of women it affects and the lack of research specifically on racial/ethnic minority women. To advance maternal mental health equity and achieve the best possible outcomes for mothers, children, and families, it is vital to develop culturally and contextually responsive interventions that are responsive to the women's lived experiences. However, limited research with pregnant women and mental health has resulted in insufficient data to promote evidence-informed maternal mental health care.

Setting: Activities took place in Atlanta Georgia in communities that experience poverty, unstable housing, crime, low levels of educational achievement, high levels of unemployment, and poor health status indicators. The communities that engaged with the CBPR partnership are majority African American (88%), have an average household income of \$23,243, a 21% unemployment rate, 38% poverty rate, and are ranked the lowest on a constellation of neighborhood health and quality of life compared to other parts of Atlanta.

Project: Several strategies were used to improve the ethical conduct of maternal mental health research. All stakeholders were involved in the development of the Institutional Review Board process and training. This entailed community conversations to get at ethical concerns community stakeholders had and co-learning on best methodologies to address ethical concerns. The CBPR partnership developed an extensive training that provided information about the research process, population of interest (low-income women of color), PMADs, research with pregnant women, and cues on how to read the individual's body language and facial expressions. The training employed a multiple intelligences approach with five implementation sites. The training consisted of didactics, media, math, music, hypothetical scenarios, role-playing, and the teach-back method. Research partners decided on this process because of existing distrust of academic partners, to ensure integrity and fidelity in the research process, the stigmatization of mental health, and concerns related to research with pregnant women.

Accomplishments/Results: Data collected from these sessions, informed the development of a tool-kit for a culturally and contextually appropriate informed consent process, including simplified informed consent documents with infographics, providing verbal information and visual aids, and “teach-back”. These methods will lay the groundwork to test the efficacy of this approach as we strive to include diverse populations in research and advance maternal health equity.

Barriers: Conflicting schedules, consensus, and lack of additional financial resources were major barriers to the process and implementation of trainings.

Lessons Learned: The CBPR approach challenged the team to question pre-existing assumptions. Clear leadership and ongoing communication were critical to developing and sustaining our partnership throughout this process. Engaging various community partners in different ways and at different points in the process was central to successfully developing our toolkit.

Information for Replication: N/A

Beyond Bath Bombs: Partner's Response to Postpartum Depression

Authors: December Maxwell and Regina Praetorius

Title: Beyond Bath Bombs: Partner's Response to Postpartum Depression

Background: Postpartum depression is a significant public health concern due to the physical, emotional, economic, and life course outcomes. Postpartum depression affects individual mothers and infants and there are significant public health concerns (Gress-Smith, Luecken, Lemery-Chalfant, & Howe, 2012). PPD severity is influenced by social support, including partner support (Robertson, Celasun, & Stewart, 2003). Less known is how partners perceive postpartum depression, and more specifically, what they have done to help their partner experiencing PPD. Understanding what has worked for partners of those experiencing PPD can lead to better partner-support interventions intending to reduce the impact PPD has on not only the mother, but the infant as well.

Study Questions: "What do partners do to support the person experiencing PPD?"

Methods: Using a guide for conducting a qualitative study using quotes from Reddit (Caplan & Purser, 2017), sampling for this study began by identifying AskReddit threads from which to gather data. The most recent AskReddit thread relevant to the search was asking users the question "Husbands who've had their wives experience postpartum depression, what did you do to help ensure your wife made it through that rough patch?" The thread had 294 comments total which were extracted. Thematic analysis with inductive coding was done by two researchers, within Atlas.ti (v.8.1). Themes were then defined and named for coherent reporting of the results.

Results: Themes include 1) Just be there for her, 2) Seek outside support, 3) Understand what she goes through, 4) Your coping is important and 5) Not all partners make it through it. These experiences included in the study may not be the norm; those called to comment on Reddit had obviously contributed to support their partners during the post-natal period which leaves out those who may not have even noticed/contributed to supporting their partner.

Conclusions: Partners explained the importance of just being there for their partner with PPD and doing anything necessary to support them including both emotional and tangible supports. Partners also expressed the importance of understanding postpartum depression and how it works in order to reduce feelings of resentment and to be able to adequately support their partner, as well as seeking outside support. Partners also explained the importance of understanding the partners idealized mothering, change in identity, hormonal shifts, and role changes. In addition, partners mention how important partner coping is and how to ensure the partner is supported as well during the postpartum period.

Public Health Implications: These key themes identify the importance of programs to provide support to families postpartum at reducing the stress and strain from PPD. In addition, the themes speak to the

necessity of advocating for increased familial leave following the birth of a child, particularly in the United States, which has notoriously limited paid leave for families. Also, having comprehensive education on PPD for all members of the family prior to and after the birth of the child may increase partner's understanding and therefore, increase support for the mother and child when the mother is experiencing PPD.

Examining Perinatal Health among American Indian Moms in New Mexico, 2012 to 2015

Authors: Alison McWhorter Anderson and Sheldwin Yazzie

Title: Examining Perinatal Health Among American Indian Moms in New Mexico, 2012 to 2015

Background: As seen in previous studies, American Indian and Alaska Native (AI/AN) women experience significant health disparities when compared to other racial and ethnic groups in the United States, including higher rates of infant mortality, premature birth, and teen birth rates.

Study Questions: The purpose of this study is to analyze data from the New Mexico Pregnancy Risk Assessment and Monitoring System (NMPRAMS) survey for years 2012 to 2015. The objective is to examine and compare behaviors, attitudes, and experiences of American Indian (AI) new mothers. This analysis aims to show areas where AI new mothers and infants are doing well or need additional support.

Methods: The NMPRAMS survey collected maternal and child health data before, during, and after pregnancy in which participants, randomly selected from birth certificates, chose to complete their survey either through a mailed questionnaire or via a telephone interview. Eligible mothers were New Mexico residents with live births between 2012 and 2015. Descriptive statistical analyses were conducted using STATA 14.2. Non-Hispanic White (NHW) new mothers were used as the comparison group for analysis.

Results: A sample of 752 AI and 4050 NHW new mothers participated in the survey. A statistically higher proportion of AI new mothers were unmarried compared to NHW new mothers, 78% [95% CI: 74.2, 81.2] and 54% [95% CI: 47.7, 59.8], respectively. AI mothers were statistically more likely than NHW new mothers to have an annual household income below \$20,000, 65.0% [95% CI: 60.1, 69.5] versus 39% [95% CI: 33.2, 45.1], respectively. Among AI women, 66% received first trimester prenatal care, 95% did not smoke during pregnancy, and 67% breastfed for at least two months. Among American Indian new mothers, 65% [95% CI: 61.4, 68.8] experienced unintended pregnancies, compared to 48% [95% CI: 48.3, 56.1] of NHW new moms.

Conclusions: The majority of American Indian women who participated in NMPRAMS were between the ages of 20 and 29, were unmarried, received an annual household income of less than \$20,000 per year, and were not giving birth for the first time. Among American Indian new mothers, a higher proportion did not smoke during the last three months of pregnancy when compared to those who reported smoking during the three months prior to pregnancy. A nearly equal proportion of American Indian new mothers breastfed for two or more months postpartum when compared to Non-Hispanic White new mothers.

Public Health Implications: The results suggest there are opportunities for future work in addressing several areas of maternal health, including access to first trimester prenatal care, breastfeeding, and family planning. Additional analyses are planned to identify associated protective and risk factors that could allow for identification of key leverage points in addressing these issues.

Menstrual equity: Increasing access to menstrual hygiene products for Providence, RI students

Authors: Ellen Cynar

Title: Menstrual Equity: Increasing Access to Menstrual Hygiene Products for Providence, RI Students

Issue: Many young menstruating students around the world lack adequate access to menstrual hygiene products (MHPs). While MHPs are a basic necessity, they can be very relatively expensive for low-income students. In turn, inadequate access to MHPs can affect students' ability to manage their health and succeed in and out of school. A growing number of cities and states are addressing MHP access issues by providing products for free in school settings. In a survey of Providence, RI students about MHP utilization and preferences, cost and site availability were cited as the two leading barriers for students to acquire MHPs. Additionally, students reported missing or being late to physical, school, and social activities due to menstruation and lack of access to MHPs.

Setting: The Providence Menstrual Hygiene Product pilot took place in Providence, RI public schools with the intent of reaching middle and high school students who menstruate.

Project: This pilot provided free MHPs to Providence students in four schools (two middle and two high) over the course of four months in 2019. Timed dispensers carrying the free products were installed in a mix of women and gender-neutral school bathrooms. Machines were restocked based on demand and as part of the routine bathroom maintenance. The City of Providence Healthy Communities Office coordinated various aspects of the pilot including: funding machines and products; working with facilities management for machine selection, installation, and stocking; supporting communication to school staff about the pilot; and facilitating needs assessments and evaluation of the pilot.

Accomplishments/Results: Data is currently being collected for this pilot including: product utilization and trends; student perception of the pilot and product availability; and student attendance at pilot schools.

Barriers: The primary barrier was coordinating initial MHP procurement and distribution logistics in bathrooms. Our facilities management team was able to leverage experience in other school districts to identify machines and restocking strategies.

Lessons Learned: While the full impact of the pilot has not been realized at the time of this abstract submission, there has been a strong demand for MHPs within the first few weeks. We hope that this pilot supports a growing body of public health work about menstruation and product access in the United States; to date, research is highly concentrated internationally. There still is a significant social stigma about menstruation; we hope this pilot will highlight the role that schools and municipal government can play in normalizing the conversation around menstruation equity; and the health and education impacts of MHP access for students.

Information for Replication: N/A

Reproductive Life Planning in the Physician's Office: A pilot program

Authors: Shannon Maloney

Title: Reproductive Life Planning in the Physician's Office: A pilot program

Issue: Despite substantial evidence and widespread national support, women's preconception health is often neglected - leading to preventable maternal and neonatal health complications. Efforts to incorporate preconception health in the physician's office typically focus on preconception care - preparing for a pregnancy, often anticipated to occur within one year. This approach misses opportunities to address health and lifestyle factors that cannot be appropriately modified in the short term. Two leading predictors of pregnancy complication - maternal age and obesity - require long term planning for adequate prevention. Awareness of the importance of preconception health early on and having a reproductive life plan can help prevent against pregnancy complications due to these factors. This project seeks to develop a convenient tool to promote preconception health, including developing a reproductive life plan, into family practice physician annual visits.

Setting: The project occurs in two family practice clinics in Omaha, Nebraska - a mid-size city in the Midwest. These clinics serve a diverse audience, including one clinic which targets primarily Medicaid populations. Targeted population for the intervention include females of reproductive age above the age of majority in Nebraska (ages 19-44).

Project: Using a patient engaged approach, this project develops a preconception health module for use in primary care settings. The module includes a preconception health screening and reproductive life planning tool, developed with feedback from targeted patient audiences. The screening tool is designed to briefly assess the patient's health status, personal values and desires regarding reproduction and family planning. It is completed once per year in preparation for the annual visit. The tool innovatively incorporates both health related and reproductive life planning questions into one screening tool. A patient profile is then generated, with noteworthy items flagged for physician's notice. The physician engages in a brief discussion regarding the importance of preconception health for all women of reproductive age, reviews flagged items and guides the patient in creating a working reproductive life plan. The screening tool and reproductive life plan are maintained in the patient record and revisited/updated each year.

Accomplishments/Results: This project is in the initial stages, with feedback from sample patients and healthcare providers.

Barriers: While the Affordable Care Act mandates coverage of preconception health as a covered service for annual preventive care, in most cases preconception health emerges as an additional topic for physicians to cover in an already crowded 15 minute annual visit. We worked with physicians to develop a workflow that minimized burden on physicians and reduced visit time requirements by asking the patient to complete much of the preparatory work before the annual visit and automating much of

the screening process. Providers spend time counseling patients on topics specific to their health status and personal preferences.

Lessons Learned: A streamlined process for incorporating preconception health into annual visits eases physician burden and reduces barriers. We believe that a patient-engaged approach with physician partnerships, which features the patient and physician as key partners in the intervention design, results in a useful and practical tool that benefits the patient.

Information for Replication: N/A

The Gabby System: Moving Towards Improved Preconception Health Through a Web-Based Health Promotion System

Authors: Kylie Woodall, Marie Pluviose-Philip, Leanne Yinusa-Nyahkoon, Cleveranne Julce, Nireesha Sidduri, Juan Fernandez, Zhe Zang, Angela Wangari Walter, Jessica Howard, Timothy Bickmore, and Brian Jack

Title: The Gabby System: Moving Towards Improved Preconception Health through a Web-Based Health Promotion System

Background: Black and African American women are twice as likely as white women to have babies born prematurely, at low birth weight, or who die soon after birth. Black and African American women are also 3 to 4 times at greater risk for pregnancy-related deaths than white women. The Gabby System is a culturally relevant, individually tailored web based program designed to help young black and African American women 18 to 39 years old improve their preconception health status, minimize their health risks, and improve their potential future pregnancy outcomes. Due to its web based platform the Gabby System is easy to access and has been reported as trustworthy by the target population. Various strategies have been implemented to engage users in interacting with the Gabby system over a 6 month period as they attempted to progress through the Trans theoretical Model stages of health behavior change.

Study Questions: What are effective strategies to engage young black and African American women in a web-based health promotion program aimed at assessing health risks and facilitating health behavior change?

Methods: A mixed methods study was completed with 500 participants who self-identified as a black or African American woman, aged 18-35, not currently pregnant, and having access to a computer and the internet. All participants completed a health survey at baseline and their stage of health behavior change was assessed for each identified health risk. 250 participants were randomly assigned to interact with the Gabby System for a minimum of six months, and the control group received standard educational pamphlets to minimize their health risks. At the end of 6 months the intervention group participated in an interview with a member of the research team to discuss their experiences interacting with the Gabby system.

Results: Comparison of the data at enrollment and after 6-12 months of Gabby system usage showed progression along the continuum of health behavior change - particularly, indicating positive health behavior change in the domains of nutrition, physical activity, and reproductive health. Participants identified specific components of the system that kept them engaged and recommended additional features that may increase their engagement and use of the Gabby system.

Conclusions: Results suggest that a web-based system, such as the Gabby System, is able to help promote positive health behavior change related to some health risks especially when it's designed to be culturally relevant and tailored to the target population.

Public Health Implications: Web-based platforms may help augment health promoting behavior change among young black and African American women, a population who have historically experienced health disparities within the US.

Creating a Preconception Health Program

Authors: Chemyeeka Tumblin

Title: Creating a Preconception Health Program

Issue: Davidson County's Perinatal Periods of Risk data for the years 2011-2014 provided results which showed that Non-Hispanic Black Women had a rate of 4.5 total fetal and infant deaths compared to the reference group of Non-Hispanic White Women due to maternal health or prematurity. Non-Hispanic White infants were more likely to celebrate their first birthday than African American infants according to the data. Nashville, TN, at its healthiest, should celebrate 10,000 first births. Currently the number is 9,925.

Setting: The Nashville Metropolitan Health Department (MPHD) serves the Davidson County community. Nashville has seen an influx in jobs, growing infrastructure and progressive changes in the city's built environment. However at the same time the city has seen an influx in housing disparities, food deserts, and the need for more efficient transportation. The creation of a Preconception Health Program both aids the public, as well as, the employees of MPHD as well.

Project: The creation of a Preconception Health Program within MPHD resulted from the identified needs in the Davidson County Perinatal Periods of Risk 2011-2014.

Accomplishments/Results: Since the creation of a Preconception Health Program and hiring a Preconception Health Initiatives Program Coordinator the Health Department has created internal relationships among Work Place and Maternal Child Health programs. The immediate result of this relationship was a partnership used to create a Family Engagement Packet which is now a part of internal policy to be given to all expectant parents (adoption, guardianship, etc.) before they take family leave. The packet highlights community resources for parents, Preconception and Interconnection health facts and Fourth Trimester messaging. The Program Coordinator has been the lead on implementing PATH, a pregnancy attitude screening, within the Metro clinics, as well as, created a draft Community Engagement Toolkit to be used department wide as a result of the Equity in Birth Outcomes initiative.

Barriers: One barrier was that the department as a whole did not have a specific policy in place for community engagement. The Preconception Health Initiatives Coordinator created a toolkit for proposal based off the work done with the Maternal Child Health Division with the Fetal Infant Mortality Program.

Lessons Learned: The creation of the position allowed for equity in strategic planning around issues effecting Birthing Outcomes of African American women. Through creating a position that focuses on determinants of health and their effects on birthing outcomes the department is able to better address racial disparities within its Maternal Child Health program through adding preconception-focused lenses to project outcomes.

Information for Replication: N/A

Increasing Access to Family Planning for Uninsured Women: A Model for Success in Providing Dedicated Women's Healthcare

Authors: Yokarla Veras, Rachel Hill, Patricia Giglio, and Valerie Almeida Monroe

Title: Increasing Access to Family Planning for Uninsured Women: A Model for Success in Providing Dedicated Women's Healthcare

Issue: The need to improve healthcare for uninsured women is recognized globally. Patients at free clinics report lower health related quality of life for all aspects of women's health. These patients are less likely to utilize preventative care and screenings including Pap smears and mammograms.¹ Health literacy contributes to this disparity among uninsured patients; lower health literacy is associated with lower uptake of screenings and poor health outcomes.²⁻⁴ However, the majority of patients at free clinics are interested in health education classes.¹ Health care access for the uninsured in Rhode Island (RI) is limited to non-profit volunteer clinics and subsidized charity care. Free clinics often do not provide specialty care. This project seeks to improve access to women's health care, including family planning services.

Setting: Clinica Esperanza/Hope Clinic (CEHC) is a free clinic in the Olneyville neighborhood of Providence, RI. The clinic cares for an uninsured, primarily Spanish-speaking population.

Project: Women's Clinic (WC) began in 2015 as a partnership between Alpert Medical School at Brown University (AMS) and CEHC to provide specialty women's health care. In 2018, WC partnered with Family Medicine and OB/Gyn residency programs. WC is staffed by medical students, residents, attending physicians, and navegantes (community health workers). A two-pronged approach is utilized to provide family planning services: patient visits and navigante-led group sessions. Providers counsel patients on issues including preconception health, contraception, and infertility. Patients undergo age appropriate screening. Patients with complex gynecologic issues or prenatal care are referred to the OB/Gyn resident clinic which provides services at low or no cost. Navegantes hold group sessions while patients await their appointments. These sessions focus on family planning, general women's health, nutrition, prenatal, and breastfeeding education.

Accomplishments/Results: WC has provided care for over 300 women since implementation. In 2019, approximately 20 women are scheduled monthly, with an estimated 240 visits this year. WC has successfully established a framework that increases access to women's health and family planning. The goal is to make comprehensive, patient-centered, culturally sensitive women's health care accessible to uninsured women within a single clinic.

Barriers: Barriers encountered include (1) limited funding, (2) inability to perform minor procedures, (3) high patient no-show rates, and (4) limited availability of volunteer physicians. 1. Funding for supplies is

obtained through the medical student group at AMS and donations from a local hospital network. 2. Resources required for minor procedures (i.e. tenaculums) continue to be limited. Additionally, cost of medications or procedures is a limiting factor for patients. 3. No-show rates improved after implementation of pre-appointment telephone reminders. 4. Availability of volunteer physicians improved after partnering with local residency programs. However, availability continues to limit frequency of monthly clinics and the waiting list for WC is over 100 patients.

Lessons Learned: Involvement of medical students, residents, and physicians has been a successful model for retaining physician volunteers. Navegantes play important roles in addressing family planning needs. Partnership with local residency programs provides a reliable option for referral to higher level care.

Information for Replication: N/A

Health Care Service Utilization and Needs Among Women Desiring Pregnancy in the Next Year

Authors: Hannah Simons, Julia Kohn, and Gabrielle Stopper

Title: Health Care Service Utilization and Needs Among Women Desiring Pregnancy in the Next Year

Background: Pre-pregnancy care facilitates preparation for pregnancy and optimizes health by identifying and addressing social, behavioral, and medical factors before pregnancy. Little is known about the health care needs of females who desire pregnancy but are not yet pregnant.

Study Questions: The objectives of this study were to describe health service utilization and needs among females desiring pregnancy in the next year, and to assess associations between service utilization and both insurance type and continuity in coverage.

Methods: We conducted a cross-sectional online survey of females ages 18–44 in 2016 using a probability-based web panel designed to be representative of the U.S. adult population. 2,540 female respondents completed the survey in English or Spanish. In this analysis, we included non-pregnant females reporting that they desired pregnancy in the next year ($n=291$). Our main variables were preventive health service utilization in the past two years and self-reports of diagnosed medical conditions relevant to pregnancy: asthma, heart disease, hypertension, diabetes, depression, and anxiety. We selected a set of 12 preventive services (e.g., well-woman/annual exam, birth control counseling/provision, dental care, cholesterol screening, help preparing for pregnancy) and created a count index, dichotomized into high (3 or more) and low (0–2) service utilization. We conducted logistic regression to explore associations between service utilization and both insurance type (employer-based/Medicaid/none) and continuous insurance coverage.

Results: The weighted mean age was 31 years. Sixty-two percent had employer-sponsored health insurance, 11% had Medicaid, and 15% were uninsured. Ten percent had been without coverage in the past two years. About half had never given birth (52%). Among females desiring pregnancy in the next year, a substantial minority reported ever being told by a provider that they had one of the selected medical conditions: depression (19%), anxiety (18%), asthma (11%), hypertension (8%), and diabetes (6%). The most frequent preventive health services reported were well-woman or annual exam (60%), dental care (59%), blood pressure screening (38%), contraceptive care (36%), and immunization (32%). Approximately 25% of females desiring pregnancy in the next year had accessed services for planning and preparing for pregnancy. The mean number of preventive health services accessed was 3.5; 14% had not received any preventive services in the past two years. Respondents with Medicaid or no insurance coverage were less likely to have accessed 3 or more preventive services than those with employer-based coverage (odds ratio [OR] Medicaid=0.3, 95% CI 0.1, 0.7; OR none=0.4, 95% CI 0.2, 1.0). Preventive service utilization did not differ by insurance continuity.

Conclusions: Most females desiring pregnancy reported receiving preventive health services in the past two years; however, only one quarter reported a discussion with a health care provider around

preparing for pregnancy. Nearly one in five reported a depression or anxiety diagnosis, while smaller percentages reported asthma, hypertension, and diabetes.

Public Health Implications: These findings have potential implications for maternal health and women's health throughout the lifespan and may inform efforts to improve health service delivery to women who are seeking pregnancy. Ongoing health needs may require more intensive, patient-centered interventions before, during, and after pregnancy.

Expanded Access to Folic Acid Through Medicaid Administrative Policy Change: What Difference Did it Make?

Authors: Kara Mathewson, and Stephanie Hartwig

Title: Expanded Access to Folic Acid Through Medicaid Administrative Policy Change: What Difference Did it Make?

Issue: Folic acid supplementation prior to and early in pregnancy helps prevent birth defects and promotes adult health. While folic acid can be purchased over the counter, a provider prescription may increase economic access to and individual motivation for vitamin supplementation. Prior to 2015, the Wisconsin Medicaid pharmacy benefit only covered folic acid for women who were already pregnant, who may have already missed the crucial window of fetal development when folic acid could have prevented defects.

Setting: A policy change was made to the Wisconsin Medicaid pharmacy benefit, affecting non-pregnant women eligible for Medicaid from 2015 to the present.

Project: Advocacy resulted in a change in the Medicaid pharmacy benefit, in effect since May 15, 2015, which allows providers to be reimbursed by Medicaid for prescribing prenatal vitamins to non-pregnant women as well pregnant women. This change expanded economic access to folic acid for women planning a pregnancy or other women who could potentially become pregnant. We evaluated the effect of this policy change on pre-pregnancy folic acid supplementation using population data from the Wisconsin Pregnancy Risk Assessment Monitoring System (PRAMS). We hypothesized that daily folic acid intake would increase among Medicaid-insured women following the policy change. Using a Difference-in-Difference analysis, a robust method for evaluating population-level interventions, we ran a regression model, adjusting for secular trends and characteristics of the intervention group. This analysis was run with 2012 to 2015 as the pre-intervention period, and 2016 as the post-intervention, controlling for trends in the non-Medicaid population.

Accomplishments/Results: A significant difference in pre-pregnancy folic acid supplementation was found in the year following the policy change, with an average proportion of 20.1% of Medicaid-insured women supplementing before the change and 26.4% supplementing after the change ($p=.02$). However, in 2017, the proportion of Medicaid-insured women taking a folic acid supplement daily returned to the pre-intervention trend.

Barriers: It is not possible to say with certainty whether the population behavior change observed in 2016 can be attributed to the policy change; however, we theorize that it may be due to a combination of the policy change and an educational campaign by partners to improve Medicaid provider use of the folic acid benefit.

Lessons Learned: The results of this policy evaluation suggest that policy change alone may not change individual behavior (provider or patient), but may indicate the need for a coordinated educational or motivational campaign to maximize awareness and utilization of the policy.

Information for Replication: The policy change was an administrative change approved by state Medicaid leadership.

Can a Web-Based Health Information Program Facilitate Engagement in Preconception Care?

Authors: Leanne Yinusa-Nyahkoon, Cleveranne Julce, Angela Wangari Walter, Jessica Howard, Timothy Bickmore, and Brian Jack

Title: Can a Web-Based Health Information Program Facilitate Engagement in Preconception Care?

Background: Black and African American women have poorer birth outcomes than women of any other racial group. Preconception care aims to improve the health of women well before pregnancy, and national guidelines recommend that primary care practitioners provide preconception care to all women. A variety of factors challenge black and African American women's access to primary care services and additional limitations exist once access is gained. The Gabby system, however, is a web-based computer program designed to assess preconception health risks of young black and African American women and deliver individual culturally tailored health education to minimize these risks. Gabby has been described as credible and trustworthy by the target population, and has the potential to facilitate engagement in primary care services for this underserved population.

Study Questions: How do young black and African American women perceive a web-based health information program can facilitate their engagement in primary care services?

Methods: 50 members of the target population interacted with the Gabby system for >6 months. At the conclusion of system use, focus groups and semi-structured individual interviews were completed to examine users' experiences interacting with the Gabby system, actual or planned integration of the Gabby system into users' primary care setting, and system content and features that facilitate users' engagement in primary care.

Results: Young, black and African American women reported that interactions with the Gabby System empower them to seek out and more actively participate in primary care clinical encounters by 1.) Providing credible and trustworthy health information; 2.) Preparing users to be active participants in the clinical encounter, 3.) Providing ongoing support for health behavior change outside of the clinical context, and 4.) Acknowledging and affirming the unique health challenges of black and African American women.

Conclusions: Web-based health information technology has the potential to facilitate engagement in preconception care services within in a primary care setting for young black and African American women.

Public Health Implications: Improving young black and African American women's engagement in preconception primary care may positively impact birth outcomes, and is a necessary next step towards improving the patient centered care experience for this underserved population.

Implementation of a Health Information Technology System for Young Black and African American Women in a Community-Based Clinical Site

Authors: Nireesha Sidduri, Cleveranne Julce, Angela Wangari Walter, Leanne Yinusa-Nyakhoon, Jessica Howard, Zhe Zhang, Juan Fernandez, Timothy Bickmore, and Brian Jack

Title: Implementation of a Health Information Technology System for Young Black and African American Women in a Community-Based Clinical Site

Background: Black and African American (AA) women are more than two times as likely to deliver a low-birth weight infant as white women. The preconception care approach focuses on the health of a woman before she becomes pregnant, as a means to eliminate health disparities in birth outcomes. An embodied conversational agent called “Gabby”, was designed to deliver web-based preconception care to Black and AA women by assessing health risks and delivering culturally tailored interventions to minimize these risks and disparities in birth outcomes. Gabby is now being disseminated beyond the research environment into the community for women receiving services from Healthy Start programs.

Study Questions: What elements, both internal and external, contribute to the successful implementation of a health IT intervention at a community-based site?

Methods: Using a semi-structured interview guide based on the Consolidated Framework for Implementation Research (CFIR), members of the research team explored five domains (Intervention, Inner-setting, Outer-setting, Individuals Involved, and Process) with seven Healthy Start leaders, clinicians, and administrative staff in an effort to better understand their perspectives about each domain.

Results: Attributes of the Intervention Characteristics domain were favorable at the Healthy Start as stakeholders perceived Gabby to have a strong evidence base, aligned closely with the Healthy Start preconception care assessments, and believed Gabby was low in complexity and costs. Outer setting - We faced several unanticipated challenges, one of which was establishing a Memorandum of Understanding with the site. This process involved legal counsel from each organization which delayed implementation activities for almost a year. Inner setting characteristics included a strong learning climate and organizational culture, established goals and feedback loops among staff. Coordination and effective communication among various tiers of stakeholders will be improved upon for future sites to streamline implementation processes. Process - An engaged and activated site champion was critical in getting support from additional site staff. Our collaborative relationship with the site champion resulted in more effective and sustained planning and execution of pre-implementation tasks. Site training of the Gabby system augmented prior knowledge about Gabby system components, enhanced motivation of

the Individuals Involved in the implementation, and increased self-efficacy about introducing Gabby to clients.

Conclusions: Integrating the Gabby system into community-based health sites will bring about a shift in the extant clinical practice paradigm of preconception care in that it will augment the interaction between patient and provider, rather than replacing it. Accessibility of the system, strong learning climate and organizational culture within the site, and commitment from the site champion all played a critical role in the motivation for site adoption of the Gabby system. Unanticipated challenges and barriers like high staff turnover and instability around government funding influenced the implementation process.

Public Health Implications: Lessons learned and the general principles of the CFIR implementation and evaluation processes investigated at the pilot site will assist our implementation at additional sites and facilitate the creation of a Gabby Implementation Manual.

Marital/Cohabiting Status, Neighborhood Evictions, and Preeclampsia Among African American Women: a Multi-Level Analysis

Authors: Shawnita Sealy-Jefferson, Dawn P. Misra, and Rhonda Dailey

Title: Marital/Cohabiting Status, Neighborhood Evictions, and Preeclampsia Among African American Women: A Multi-level Analysis

Background: Lack of stable housing is an important determinant of physical and mental health. Evictions, in which tenants are legally removed from rental properties is an important driver of housing instability. Over 2 million low-income renters are evicted in the U.S. every year, which causes damaging changes to daily life for families. Complex relationships between physical and social features of neighborhoods and other social determinants of health have been linked to adverse birth outcomes. However, no studies have examined the independent and joint association between evictions, marital/cohabiting status, and odds of preeclampsia.

Study Questions: We examined whether the association between marital/cohabiting status and preeclampsia was modified by neighborhood-level evictions.

Methods: We spatially linked survey, medical record, and current address data from the Life Influences on Fetal Environments Study (2009-2011) of postpartum AA women from Metropolitan Detroit, MI, to publicly available data on block-group level counts and rates of eviction judgements from 2009-2011. History of preeclampsia during the index pregnancy and was abstracted from the medical records of study participants, and occurred in 5.25% (n=64) of the sample (n=1,219). Eviction count and rate variables were rescaled by their interquartile ranges (75th versus 25th percentiles). The denominator for the rate calculations was renter occupied households from the 2000 and 2010 U.S. Census. Women reported whether they were married to or cohabiting with the father of their baby. We used two-level hierarchical generalized linear models to estimate the association between marital/cohabiting status, a cross-level interaction with neighborhood level eviction counts and rates ($p < 0.05$ for interaction considered statistically significant), and risk of preeclampsia, accounting for individual-level covariates.

Results: In the unconditional model, the intra-class correlation coefficient for block group variance in preeclampsia was 95%. This means that 95% of the total variation in probability of preeclampsia is accounted for by block group level factors, leaving 5% of the variability to be accounted for by individual or other factors. We also found statistically significant variation in odds of preeclampsia across neighborhoods (estimate: 63.01, z-value: 3.07, $p = 0.001$). The individual level association between marital status and preeclampsia, controlling for educational attainment, age, and income was not significant (OR: 1.11, 95% CI: 0.43, 2.83). However, there was a significant cross-level interaction between neighborhood eviction counts and marital status ($p = 0.03$). Specifically, women who were married or cohabiting with the father of their baby, and who lived in neighborhoods with high eviction judgements, had significantly higher odds of preeclampsia, than women who lived in neighborhoods

with low evictions (OR: 2.92, 95% CI: 1.09, 7.84). We observed no significant association when we examined the impact of eviction judgement rates on odds of preeclampsia.

Conclusions: Future studies should examine the mechanisms of the reported multi-level association, to better understand the unique stressors of married/cohabiting African American women who live in neighborhoods with high eviction judgements, and to identify potential intervention targets.

Public Health Implications: This is the first empirical study of the impact of neighborhood level evictions, an important contributor to housing instability, on an important complication of pregnancy among married/cohabitating African American women.

Findings from a Multi-Year Group Prenatal Care Evaluation: Opportunities for Improving Birth Outcomes in a Clinical Setting

Authors: Ndidiamaka Amutah-Onukagha

Title: Findings from a Multi-Year Group Prenatal Care Evaluation: Opportunities for Improving Birth Outcomes in a Clinical Setting

Background: African American women face the heaviest burden of preterm birth and infant mortality compared to all racial/ethnic groups. African American women are also more likely to deliver infants with low birthweight. In order to address the increase in preterm birth and low birthweight, March of Dimes funded a community-based preterm birth prevention pilot initiative, Healthy Babies are Worth the Wait (HBWW). HBWW implements the CenteringPregnancy group prenatal model that combines three major components of care—health assessment, education, and support—into a program in a group setting.

Study Questions: The purpose of this study was to evaluate the CenteringPregnancy program's effectiveness to reduce the disparity in preterm birth among African Americans and non-Hispanic whites in Burlington County, New Jersey.

Methods: Study data was gathered through a multi-level, multi-evaluation approach, from individual interviews with program staff, and focus groups with CenteringPregnancy participants. Secondary data from the patient data system at the health center was also included in the evaluation. Using the Dedoose qualitative research software, interviews, focus groups, and surveys were transcribed verbatim and analyzed to evaluate the program.

Results: Study findings highlight that birth outcomes were improved for women that participated in CenteringPregnancy. Black female participants had birth outcomes that were similar to non-Hispanic White women participants. Of the 65 CenteringPregnancy participants tracked by this evaluation, none identified barriers to receiving care from the program. Overall, women reported positive feedback regarding the CenteringPregnancy program. In addition to enjoying the program, CenteringPregnancy was described as being more beneficial when compared to traditional one on one care.

Conclusions: The study demonstrates that in general, Black women that participated in CenteringPregnancy had similar birth outcomes to White women that participated in CenteringPregnancy. Patients that received group prenatal care were satisfied with their involvement in CenteringPregnancy. The program benefits served as a cushion for stressors that women often face during pregnancy.

Public Health Implications: Results from this evaluation of CenteringPregnancy can be used to improve the group-prenatal care model. Findings can be used to improve program facilitation, staff performance, and patient experience.

Using Human Centered Design to Tackle Perinatal Health Disparities

Authors: Malini Nijagal, Devika Patel, Jennifer Laio, Lara Chehab, Schyneida Williams, and Amanda Sammann

Title: Using Human Centered Design to Tackle Perinatal Health Disparities

Background: There are stark racial and socioeconomic disparities in perinatal care access and outcomes in San Francisco. Studies conducted across the U.S. reveal that publicly-insured women, especially women of color, face multiple structural and practical barriers when accessing care, including discrimination, stress and discoordination of services. These barriers create inequities in care which lead to worse outcomes including preterm birth, infant mortality and maternal mortality.

Study Questions: What does person-centered care --that which is respectful and responsive to individual's needs, values and preferences-- look like from the perspective of publicly-insured, pregnant women in San Francisco, and what viable human-centered solutions can be designed to achieve this?

Methods: We used Human-Centered Design methodology to understand barriers to achieving person-centered perinatal care and to inform novel opportunities for care improvement. Need finding was conducted using unstructured, in-context ethnographic interviews across a diverse cohort of individuals including publicly-insured women of different ethnic, socioeconomic and social cohorts; healthcare providers; clinic staff; hospital staff; community health workers; and public health nurses. Themes were identified using the grounded theory approach. These themes informed structured brainstorming sessions which generated multiple potential solutions. An advisory group of 4 community members, 4 healthcare workers and 4 health system leaders reviewed the solutions and identified the most promising for further refinement.

Results: Empathy interviews were conducted with 25 individuals and brainstorming sessions were performed with 55 stakeholders including patients, community members and Community Based Organization (CBO) leaders, health system leaders, staff and clinicians, Medicaid health plan representatives, and OB/GYN and Midwifery trainees. Three main themes emerged, from which seven interventions were recommended for further refinement and implementation. Themes/Interventions: (1) Burdens Build; we must reduce barriers and fragmentation of care: --Expand telehealth access: to connect women from their primary provider office to specialty services (MFM) --Co-locate government and other services within high-need neighborhoods --Share information between agencies and clinics (2) Pregnant women triage their life; we must deliver value by meeting their unique needs --Restructure prenatal care team to include Community Health Workers ("Support Sisters") and design visits to focus on comprehensive needs and prioritize agency, empowerment and education --Provide access to perinatal super-navigators: to help clinics connect pregnant women to available services across SF (3) Every touchpoint is essential; we must build trust and partnership between families and the healthcare system. --Create opportunities for care teams and families to build relationships outside of healthcare setting --Invest into community wellness and empowerment

Conclusions: Our Human-Centered Design process revealed multiple unmet needs and opportunities to achieve person-centered perinatal care for publicly-insured women in San Francisco. The identified interventions are now being considered for implementation by health system and city leaders as a path towards achieving perinatal health equity.

Public Health Implications: Human-Centered Design methodology can be used to center the needs and priorities of affected communities when engaging in health equity efforts.

"I Have Value": Changing the Culture of Adolescent Parenthood through a Hospital-based Pipeline of Young Parent Success Programs.

Authors: Ariel Childs

Title: "I Have Value": Changing the Culture of Adolescent Parenthood through a Hospital-based Pipeline of Young Parent Success Programs.

Issue: Expectant and parenting adolescents striving for optimal physical, emotional and social health are competing against a framework that assumes they will not succeed. However, the negative outcomes associated with adolescent pregnancy (poverty, low educational attainment, unemployment, chronic stress and fragmented family systems) are not simply a symptom of pregnancy itself, but instead of the adolescent's exposure to social inequity throughout their life-course. The evidence-base surrounding adolescent parenting suggests that a young parent's newfound identity can be an impetus to promote positive health behaviors, reinvest in their professional or educational goals, and encourage greater social stability. This can only happen if we provide adolescent parents with the opportunity to leverage their strengths, promote growth, and identify areas in need of targeted support.

Setting: Boston Massachusetts, expectant and parenting adolescents under 25.

Project: Proud2Parent Programs of Brigham and Women's Hospital's Stronger Generations Initiative leverages pregnancy and parenting as a positive opportunity for growth in a young person's life. Our pipeline of Young Parent Success Programs provides trauma-informed support to young families working toward family stability and self-sufficiency. Our goal is to empower young parents as leaders within their community, and to arm them with skills and knowledge to not only achieve their own personal goals, but to be a resource and agent of change for their fellow young parent peers. Our programs provide comprehensive and holistic support built on leadership development, social connectedness, community resources, and skills-based coaching. By offering an array of programming, we are able to meet the young parent where they are at, and provide them with clinical, community-based or peer-led support. At Brigham and Women's Hospital, we are taking an innovative approach to supporting young families by leveraging our clinical partnerships, collaborating with community organizations, and partnering with program participants. This presentation will provide an overview of Proud2Parent programs and discuss how a medical institution can act beyond the clinical sphere, to organize a multi-sectored, upstream, public health intervention promoting positive health and social outcomes for adolescent families.

Accomplishments/Results: Our programmatic accomplishments include clinical wins with breastfeeding rates, contraception utilization, and pregnancy spacing/intendedness, as well as measurable improvements in perceived social support, generalized self-efficacy, and perceived stress. Our program

participants also illustrated growth in the areas of self-empowerment and leadership development, life skills, health behaviors, and personal goal setting.

Barriers: The programmatic barriers we encountered include low-recruitment (solution: a multi-faceted recruitment strategy integrating grassroots outreach and social media marketing), capacity challenges in supporting the diverse needs of young families (solution: partner with community organizations to expand and enhance our reach) and addressing social inequities inhibiting participant success (solution: strengthen our network of young parent service providers and resources).

Lessons Learned: Pregnant adolescents' engagement with health care provides a unique opportunity for us to offer a protective system that addresses their social and environmental sources of stress. Beyond each of our participant's success, our programs' greatest achievement is our young parent leaders taking the work into their own hands, empowered to change the stigma and stereotypes surrounding young parenthood, and driving forward community-wide health equity.

Information for Replication: N/A

Healthy Start New Orleans Fatherhood Initiative: Implementation of an Evidence-Based Fatherhood Program

Authors: Mary Alexander, Kevin Sherman, and Mara O'Brien Hahn

Title: Healthy Start New Orleans Fatherhood Initiative: Implementation of an Evidence-Based Fatherhood Program

Issue: There's been increasing focus on the role fathers play in health and development of children and families. While involved fathers can have significant beneficial impacts on maternal mental health, birth outcomes, and child development, children reared in father-absent homes are at increased risk for health and behavioral problems. Despite this research family health programs still largely target only mothers and there are few examples of quality programs specifically for fathers.

Setting: Fathers and father figures in New Orleans, LA

Project: HSNO developed a fatherhood program, Crescent City Dads (CCD), to complement its existing family health activities. CCD has a unique service model which combines a cohort-based fathers group using an evidence-based curriculum with family-based home visiting services and family social events. Each cohort completes comprehensive intake assessments and pre-tests to help program staff understand their needs and measure their baseline knowledge about and attitudes towards parenting. Program staff review the assessments and customize the class series to meet the needs of the cohort. Participants then complete a post-test assessment at the conclusion of the series to gauge the effectiveness of the class series. Staff also compare the percentage of HSNO female participants who report partner involvement prenatally and postpartum prior to the implementation of CCD and after the program's implementation to see if the program increases partner involvement over time.

Accomplishments/Results: Results from cohort assessments have shown the class series is effective at increasing participant knowledge of and attitudes towards parenting. HSNO female participants have reported increased rates of partner involvement one year after the implementation of CCD, but program staff will continue to monitor these rates quarterly to see if partner involvement rates continue to improve.

Barriers: There are currently limited services for fathers in New Orleans and a lack of awareness in the community about the importance of fatherhood. In order to address these issues HSNO began conducting an annual Fatherhood Summit that brings together diverse partners to learn about the impact of fathers on family outcomes and build cross-sector partnerships. HSNO conducted a follow-up session to the 2018 Fatherhood Summit where community partners mapped the landscape of services for fathers in New Orleans and identified opportunities for improved collaboration. Additionally, some fathers were initially resistant to participate in a fatherhood program. In order to overcome this HSNO hired a fatherhood coordinator with lived experiences similar to the target fathers, relies upon key

community opinion leaders to obtain father buy-in, and conducts classes in barber shops within at-risk communities to reduce barriers to participation.

Lessons Learned: Fathers and father figures can serve a critical role in improving family health outcomes. In addition, many men desire to be good fathers but lack the knowledge and support to do so. Family health programs can begin to address these issues by ensuring program activities are inclusive of fathers and developing spaces for fathers to gather and learn. It is important to note the term "fathers" can include a range of "father figures" who may or may not be a biological parent.

Information for Replication: N/A

A Mixed-Methods Assessment of the Impact of a Fatherhood Program on Parental Behaviors

Authors: Amina Alio, Delaney Dretto, Valerie Garrison, Alice McAdam, Arthur Dilbert, Sherita Bullock, and Ann Dozier

Title: A Mixed-Methods Assessment of the Impact of a Fatherhood Program on Parental Behaviors

Background: One-third of U.S. children are living in a home without their biological father, with a number of factors influencing the father's degree of involvement. Fathers today have more responsibility in nearly every aspect of parenting, from spending leisure time with children to nurturing, caregiving and providing moral guidance and support. Children's welfare is ultimately enhanced when fathers are positively engaged in their lives. However, despite much evidence that fathers' involvement is positively associated with improved child well being, there is limited research on the success of parenting programs and interventions that focus on fathers. Evaluation is an essential component for delivering effective fatherhood programs.

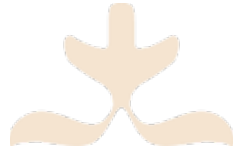
Study Questions: The objective of this project was to assess a Fatherhood Program in Rochester, NY, based on the 24/7 DAD curriculum. Specific aims for this project include: (1) to describe the characteristics of program participants; and (2) to explore program impact on participating fathers' knowledge of parenting and self-reported behavior changes using scores from pre- and post-assessments in the five domains of the Protective Factors Instrument: family functioning and resiliency; social support; concrete support; nurturing and attachment; and child development and knowledge of parenting.

Methods: A multiple-methods approach was used to analyze qualitative and quantitative data. Participant intake forms and pre- and post-program assessments were analyzed to describe program participants' characteristics, and measure the impact of the program on father's behaviors over time. Qualitative comments from evaluation forms and a focus group were used to further explore fathers' perceptions of the program and effect on their parenting. Qualitative data were analyzed using a content and thematic approach.

Results: The results provide insight as to the sociodemographics of the fatherhood program participants (race/ethnicity, age, employment status, annual income, etc.). Five main themes emerged from the qualitative analysis, including: overall perceptions of the program, impact of program on fathers, reasons for joining program, challenges, and suggestions. Results indicate participants' protective factors scores increased from pre- to post-assessment, with the greatest improvement in the areas of nurturing, attachment, and child development and knowledge of parenting.

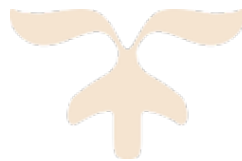
Conclusions: Fathers in this study found their participation in the program to be an overall positive experience that helped improve their parenting skills. Results of this study affirm that Black and White fathers from lower SES communities want to participate in and can greatly benefit from programs tailored to their parenting needs.

Public Health Implications: Due to a dearth of research on effective perinatal fatherhood programs, this study helps to fill a gap in the literature. Study results increase understanding of the impact of fatherhood programs on fathers' parenting knowledge and behaviors and will help to inform the planning, design and improvement of fatherhood programs.



Program & Policy Track

Poster Abstracts



Challenges and Opportunities to Train the Public Health Workforce

Author: Dr. Magali Angeloni

Topic: Workforce

Title: Challenges and Opportunities to Train the Public Health Workforce

Background: Studies have reported that no more than 23% of the government employees working in public health have formal education in public health, and that approximately 40% of government employees are planning to retire by 2020. Other studies suggest that training in informatics, and management/leadership skills should also be offered. However, developing the public health workforce has been a great challenge for years. This study examined the current challenges to train public health workers in state health departments.

Study Questions: What are the current challenges and opportunities to train public health workers at state health departments using TRAIN (Training Finder Real-Time Affiliate Integrated Network) as a learning management network?

Methods: The study population was all 25 state health departments that used TRAIN as a learning management system and therefore were considered TRAIN Affiliates in 2014 (TRAIN is sponsored by the Public Health Foundation and is a robust tool equipped with critical features to organize, administer and track training frequency, volume, topics, competencies, and even to conduct needs assessments, which would facilitate regional or national efforts.). The Internal Review Board (IRB) from the University of Illinois at Chicago approved the study and interview tool that was administered to TRAIN Administrators and performance improvement managers. All data were collected and analyzed using NVivo 12. Limitations include the small number of agencies participating in the study and the differing training policies each agency has in place.

Results: We determined key organizational features of the 7 agencies. We also identified four (4) common elements among TRAIN-affiliated state health departments [(1) underuse of TRAIN as a training tool, (2) inadequate ownership of training within the organization, (3) insufficient valuation of and budgeting for training, and (4) emerging collaboration and changing perceptions about training stimulated by agency preparation for accreditation.]

Conclusions: The study found that although the same learning management system (TRAIN) is used in the 7 participating state health departments, training is not universally tracked or reported; approaches for training vary in each agency and training responsibility rests most often on staff who volunteer their time, have no training budget and lack the hierarchy to make a difference. Preparing for public health accreditation through the Public Health Accreditation Board (PHAB) seems to be promoting training, as agencies prepare their workforce development plan for the first time.

Public Health Implications: Public health is changing, new topics are emerging, and professionals are challenged to handle new responsibilities in areas such as climate health, informatics, and quality improvement, making training the workforce a crucial need. While a decentralized system and lack of a training budget are barriers, a more profound challenge appears to be a generalized underappreciation of training from both, staff and management. This study urges public health leaders to take action and place workforce development in a higher priority. Training responsibility must be assigned, centralized and placed at a high organizational level, to ensure training policy is standardized, measured, and adhered to.

Blueprint for Systems Change: AUCD's Diversity and Inclusion Toolkit

Author: Mr. Luis Valdez-Lopez

Topic: Workforce

Title: Blueprint for Systems Change: AUCD's Diversity and Inclusion Toolkit

Issue: The Association of University Centers on Disabilities (AUCD) undertook a major effort to address the growing diversity of people with disabilities. Over 36% of the population in the US identifies themselves as a member of a racial and ethnic minority. Additionally, over 56 million Americans have a disability associated with a long-term physical, sensory, or cognitive condition. People with disabilities experience many of the same challenges of other marginalized groups. Despite progress being made in the move toward ensuring service providers and leaders are members of marginalized groups, recruiting, preparing and supporting professionals and leaders at the intersection of disability and race presents great challenges. Disparities also continue for people with disabilities; there is overrepresentation of students from diverse racial and ethnic backgrounds in special education in some states, while others have poorly researched but pervasive instances of underrepresentation of English language learners in special education.

Setting: The primary focus is on three audiences in the disability community: Federal funders, including the Administration on Intellectual and Developmental Disabilities (AIDD) and the Maternal and Child Health Bureau (MCHB); National organizations, including the Association of University Centers on Disabilities; and University-based centers and programs, including University Centers for Excellence in Developmental Disabilities Education, Research, and Service (UCEDD) and Leadership in Neurodevelopmental and Related Disabilities (LEND) programs.

Project: The Toolkit provides objectives, strategies, resources and examples intended to serve as a foundation for launching a national effort that will enhance diversity and cultural competence of faculty, staff and students; cultivate partnerships; respond to increasingly diverse communities across the country; and develop strategies for continuing efforts to better serve diverse populations. Short-term efforts include cultural brokering, language translation and interpretation, intentional recruitment and hiring, and development of mentorship models.

Accomplishments/Results: In FY2018, under a National Training Initiative through the Administration on Intellectual and Developmental Disabilities (AIDD), AUCD awarded 24 Diversity Fellowships to individuals across the network to support recruitment and retention of diverse trainees, and build cultural and linguistic competence within their Centers.

Barriers: Our research identified three areas where barriers exist that contribute to racial and ethnic disparities in health and health care, and proposed a framework for addressing cultural competency through 1) organizational interventions intended to support leadership and workforce to be

representative of the population being served, 2) structural interventions that guarantee access by the population being served, like language access, and 3) clinical interventions that enhance practitioners' knowledge and skills connected to "the relationship between sociocultural factors and health beliefs and behaviors and to equip providers with the tools and skills to manage these factors appropriately."

Lessons Learned: AUCD recognizes that each network member center brings different resources, partnerships, initiatives, and other considerations to the effort to increase diversity, inclusion, and cultural and linguistic competency within their organizations. Additionally, the geographic location of each Center provides a different cultural community context in which to address the goals of greater diversity within the organization and in the systems within which the organization operates.

Information for Replication: This Diversity & Inclusion Toolkit is informed by existing research and multiple stakeholders. Evidence-based and grassroots input are blended purposefully to reflect academic and community perspectives. The voices of many network members and partners are woven throughout this product, and reflect the following range of stakeholders: 1) leading experts in diversity, inclusion, and cultural and linguistic competence in the UCEDD and LEND networks; 2) AUCD network leadership including select members of the Board of Directors, Council chairpersons, and Special Interest Group (SIG) leaders; 3) specific audiences including AUCD and AIDD staff, people with disabilities and their family members, UCEDD and LEND Directors, researchers, clinicians, educators, trainees, staff, and advisory group members; and 4) community partners representing immigrant support networks, organizations for disabled people, faith communities, community artists, social justice activists, health equity councils, philanthropists, LGBT rights and advocacy groups, and federally-funded cultural and linguistic competence TA providers.

A Medical Student “Pocket” Guide to Community-Based Resources

Author: Miss Shreya Ramayya

Topic: Workforce

Title: A Medical Student “Pocket” Guide to Community-Based Resources

Issue: Many providers understand the role of upstream factors that impact the health of their patients but often lack the practical knowledge and experience to connect patients to the appropriate community resources to address these social determinants of health. Providers may practice for years before becoming familiar with the appropriate resources in surrounding communities. Furthermore, there is no streamlined approach to facilitate the “handoff” of patients from one setting to the next. A need therefore exists to educate and empower future providers to connect patients with valuable community resources early in their clinical training as a way of ultimately improving health outcomes.

Setting: This is a community resource guide specific to Rhode Island that aims to bridge theory and practice for Alpert Medical School (AMS) students.

Project: The guide is structured to mirror topics (healthcare access, substance use, interpersonal violence, immigration, LGBTQ patient care, etc.) covered in AMS’s required clinical skills training course known as Doctoring. Relevant resources for each category are presented in a flowchart based on a comprehensive review of community-based health and social service organizations in the state. This format enables students to efficiently find the most appropriate resource given the patient’s particular need(s), with a second tier available for students to access additional information as needed.

Accomplishments/Results: We consulted community leaders to curate information for the guide and medical students to ensure the guide was intuitive and user-friendly. Recognizing the need to keep up with technological advances, the guide is supplemented by QR codes and an interactive website containing the information from the guide, as well as forms to collect community feedback to maintain the relevance of resources. Currently, the guide takes the form of a two-tiered system to allow for quick reference and provide in-depth information when necessary. The printed guide is condensed enough to be carried in white coat pockets, and the supplementary resources is sufficiently detailed to allow providers to make quick referrals.

Barriers: The landscape of community resources is constantly changing. In collaboration with the RI Department of Health, the team will update the guide periodically to ensure its sustainability and relevance. Another challenge that emerged was balancing simplicity with enough detail to render the guide useful for diverse patient encounters. Lastly, implementation is contingent upon AMS administrative oversight to ensure integration into the medical school’s clinical skills curriculum.

Lessons Learned: One key lesson from this process is that we recognized the lack of a single, cohesive tool documenting resources from a broad range of categories. We learned that collaboration and building on the work of others was crucial, as many organizations had similar lists of resources. Lastly,

we had to work within the existing framework of the Rhode Island community and receive input from key stakeholders, including local administrators and health officials.

Information for Replication: This project was driven by medical students hoping to better understand the resources available in their community. The project required minimal funding, but required the consultation and support of many community leaders and organizations.

How MCH Professionals in Health Departments Engage with Abortion-Related Work

Author: Dr. Katie Woodruff

Topic: Workforce

Title: How MCH Professionals in Health Departments Engage with Abortion-Related Work

Background: Local and state health departments have been involved with abortion-related work for over 50 years. In the past decade, laws have required health departments to take on new roles in relation to abortion, including developing and enforcing the use of state-mandated information materials, collecting abortion data beyond traditional vital statistics, and implementing regulations targeting abortion facilities. Many such laws are not evidence-based, and some make it more difficult for women to obtain abortions. Little is known about how MCH professionals view and implement abortion-related activities. This study is the first to explore perspectives of MCH professionals within health departments on this topic.

Study Questions:

1. What types of activities are MCH professionals conducting around abortion?
2. What barriers and facilitators do MCH professionals encounter when engaging in abortion-related activities?
3. How do MCH professionals view abortion work in relation to their professional identity and mission?

Methods: Between November 2017 and June 2018, we conducted semi-structured interviews with MCH professionals in state and local health departments (N=22). Recruited through purposive sampling, interviewees represented state (n=12) and local (n=10) health departments in the Northeast (n=5), Midwest (n=3), West (n=9), and South (n=5). Interviews explored abortion-related activities within each health department, challenges and opportunities when integrating abortion into the department's portfolio, and views on the appropriate role of MCH in abortion work. Thematic analysis was conducted using deductive and inductive methods.

Results: Respondents described a spectrum of approaches to abortion-related work. Many described engaging with abortion only when required by law and as prescribed by law. Some brought a public health perspective to implementing mandated activities, for example by utilizing the scientific expertise of their agency to develop mandated information materials, or convening providers to ensure new processes and materials were workable. Some took initiative to incorporate abortion into other activities, such as training staff who interact with clients about abortion. Barriers and facilitators to abortion work included factors that were external to the health department (e.g., political climate, funding), organizational (MCH leadership), and individual (professional views on the role of MCH). Notably, many MCH professionals did not see abortion as relevant to their work. Respondents working in local health departments tended to report having more flexibility to address abortion work than those

in state health departments. Limitations/results of this qualitative exploration cannot be widely generalized.

Conclusions: In both constrained and supportive policy environments, MCH leadership was an essential factor determining whether and how health departments engaged with abortion. While some MCH professionals in health departments take steps to ensure that abortion-related work is consistent with public health values and practice, many perceive abortion as falling outside of the MCH professional identity or mission.

Public Health Implications: MCH leadership appears critical in driving abortion-related work that conforms with public health professional values rather than solely implementing what is required by law. MCH professionals may need to engage in values clarification and/or professional education on the links between abortion access and MCH outcomes, in order to increase willingness and capacity for abortion-related work aligned with public health values.

Boots on the Ground Supporting Emergency Response: Federal Approach to Supporting Health Departments & Communities through Deployment of Local Resources

Author: Van Tong

Topic: Workforce

Title: Boots on the Ground Supporting Emergency Response: Federal Approach to Supporting Health Departments & Communities through Deployment of Local Resources

Issue: The Centers for Disease Control and Prevention (CDC) remains committed to supporting mothers, babies, and families during times of crisis. From the 2016 Zika virus response to the natural disasters of the 2017 hurricanes to the opioid epidemic, CDC has successfully leveraged their innovative approach to address local community needs during crises affecting maternal and child health by implementing the Local Health Department Initiative (LHDI).

Setting: Sites for LHDI were selected through an application process and included locations across the contiguous US as well as some pacific islands.

Project: LHDI's features allow for capacity to be built and maintained in the community by hiring highly qualified local resources to support health departments in addressing emergencies and public health epidemics. The LHDI augments the traditional federal grant-based resource approach by hiring and deploying a Field Assignee (FA). The FA's work is tailored to the needs of the health department with community and provider outreach, surveillance, referral to services, infant follow-up, and laboratory testing.

Accomplishments/Results: The direct relationship CDC has with the FAs and health departments informs federal response activities by identifying gaps, need for technical assistance, and effective ways to translate emerging data into action at the community level. To illustrate the impact of this model, we will use case studies from the 2016 Zika emergency response, opioid epidemic, and hurricane response.

Barriers: Barriers included limited resources during times of emergencies.

Lessons Learned: The case studies will showcase how local resources are supporting communities in their efforts to rebuild and remain resilient during traumatic situations. CDC will share stories from the field from families, health departments, and providers to illustrate the impact of deploying local resources to communities, particularly in addressing maternal and child health challenges. The presentation will communicate the importance of building upon the capacity from each response to apply lessons learned to protect mothers and babies from emerging threats.

Information for Replication:N/A

Measuring U.S. Maternal Mortality, National Vital Statistics System 2013-2017

Author: Elise Parks

Topic: Maternal mortality

Title: Measuring U.S. Maternal Mortality, National Vital Statistics System 2013-2017

Background: Though the addition of the standard pregnancy checkbox to the death certificate has been found to improve detection of maternal deaths, recent studies suggest it may also result in an overestimation of the maternal mortality ratio (MMR). Because coding rules require death certificates with a checked pregnancy checkbox to be coded to a maternal death ICD-10 code (excluding those of accidental, suicidal, or homicidal causes) regardless of actual cause of death, non-specific and “other” ICD-10 codes serve as a catch-all for deaths which may not be easily classified within maternal ICD-10 codes. Non-specific causes of death have been found to be increasing among states with the checkbox; one study suggested non-specific ICD-10 codes may have accounted for 83 percent of the increase in the U.S. MMR from 2008-9 to 2013-4. Here, we describe U.S. MMR estimates and examine deaths coded to non-specific maternal causes.

Study Questions: What percentage of maternal deaths are coded to non-specific causes of death among states with the standard checkbox? Does the national MMR estimate change when considering only states which have added the standard checkbox?

Methods: Maternal mortality ratios-- defined as the number of deaths from any cause related to, or aggravated by, pregnancy or its management excluding accidental or incidental causes during pregnancy and childbirth, or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 100,000 live births-- were calculated using National Vital Statistics System (NVSS) 2013-2017 data accessed through CDC WONDER. Two national MMRs were calculated; the first included all 50 states and D.C., and the second excluded the eleven states that had not added the standard pregnancy checkbox to the death certificate by January 1, 2013. Non-specific causes of death included ICD-10 codes O26.8 (other specified pregnancy-related conditions); O95 (obstetric death of unspecified cause); and O99.8 (other specific diseases and conditions).

Results: The crude national maternal mortality ratio was 21.6 deaths per 100,000 live births. Excluding states which had not yet adopted the standard checkbox, the rate was 25.3 deaths per 100,000 live births. Among states with the checkbox there were 3,601 maternal deaths during 2013-2017; 45.1% of these deaths were coded to the non-specific ICD-10 codes. Of these, O26.8 accounted for 50.2% of the non-specific deaths.

Conclusions: Excluding states without the standard pregnancy checkbox resulted in an increased MMR, and the non-specific causes of death accounted for nearly half of the maternal deaths during 2013-2017. All states except California had adopted the standard pregnancy checkbox by the end of 2017; refining

usage of the checkbox and non-specific codes is the next step towards improving NVSS maternal mortality data.

Public Health Implications: This study describes how the current maternal mortality data system remains severely limited, stemming in part from coding inconsistencies related to the standard pregnancy checkbox. While state-led maternal mortality review committees are working to measure and prevent maternal mortality through in-depth case review, their work often begins with NVSS data. Quality assurance for vital statistics remains an important element of maternal mortality surveillance.

Health Resources and Services Administration

Maternal Mortality Summit

Author: Kacie McLaughlin

Topic: Maternal mortality

Title: Health Resources and Services Administration Maternal Mortality Summit

Issue: Each year more than 300,000 women across the globe die from complications associated with pregnancy or childbirth. The World Health Organization (WHO) reports that maternal mortality rates have fallen globally by nearly 44 percent from 1990 to 2015; however, the maternal mortality rate has increased in the United States (U.S.). In 2015, the U.S. ranked 46th among the 181 countries with a maternal mortality rate that is among the highest of developed countries. Due to the high and rising rates in the U.S., the Health Resources and Services Administration (HRSA) hosted their first maternal mortality summit in June 2018. They invited 6 countries who either have low or decreasing rates of maternal mortality or morbidity. Invited countries included the United Kingdom (U.K.), Finland, India, Rwanda, Brazil, and Canada. The purpose of the summit was to develop comprehensive solutions to address maternal mortality and severe maternal morbidity.

Setting: The meeting took place June 19-21, 2018 at HRSA headquarters in Rockville, Maryland. The summit was a convening of over 130 subject matter experts including government representatives, non-governmental organizations, state partners, academic partners, consumer advocacy organizations, other maternal health stakeholders who participated through webcast viewership in addition to international attendees. The intended audience was those working to increase positive pregnancy outcomes in the U.S. and abroad such as health care practitioners and public health professionals.

Project: HRSA's Office of Global Health (OGH) and Maternal and Child Health Bureau (MCHB) convened the HRSA Maternal Mortality Summit "Promising Global Practices to Improve Maternal Health Outcomes," in June 2018. HRSA hosted the summit in collaboration with other U.S. government agencies and partners. During the summit presentations, maternal health experts identified challenges that women experience in receiving quality health care from the preconception, pregnancy, labor, delivery, postpartum and interconception care periods. Participants shared approaches, evidence-based practices, data, policies, health system strategies, programs, and clinical practices that countries have undertaken to improve maternal health outcomes. The summit identified promising approaches that, with further analysis and research to both identify determinants and design interventions, that could inform national strategies and global efforts to reduce maternal mortality rates.

Accomplishments/Results: The results and recommendations from the conference were presented to members of Congress. As a result, HRSA was awarded an additional \$40 million for fiscal year 2019 to support and create new and existing health interventions designed to address maternal mortality and severe maternal morbidity.

Barriers: Because there were major differences between the U.S maternal health workforce and the

workforce in other countries it was difficult to compare the 25 systems of care. However, the said differences helped HRSA employees, federal partners, and other stakeholders create and modify new and existing programs to meet maternal care needs using innovative strategies.

Lessons Learned: It is helpful to look outside the U.S. borders to find solutions for any domestic health crises.

Information for Replication: The planning of the HRSA Maternal Mortality Summit required the participation and collaboration of all offices and bureaus throughout the agency. In addition, HRSA relied upon the expertise and participation of partners and stakeholders in the private sector to ensure all topics and areas of discussion were included in the program agenda.

Obesity and Pregnancy-Related Death: An Analysis Of Data from Fourteen State Maternal Mortality Review Committees

Author: Alexander Ewing

Topic: Nutrition/mat mort

Title: Obesity and Pregnancy-Related Death: An Analysis of Data from Fourteen State Maternal Mortality Review Committees

Background: Approximately 27% of women 18-44 years of age have obesity [body mass index (BMI) ≥ 30] in the US. Obesity is associated with complications of pregnancy, including gestational diabetes and preeclampsia, and has been proposed as a risk factor for pregnancy-related death. However, evidence supporting this association is limited.

Study Questions: Of all pregnancy-related deaths, what proportion were deaths of women with obesity, and for how many did obesity contribute to the death? Was a contributing factor of obesity associated with any particular cause of death?

Methods: We used data on 290 pregnancy-related deaths with recorded BMIs contributed by maternal mortality review committees (MMRC) in 14 US states. MMRCs are multidisciplinary committees that review death certificates and other linked records, including birth certificates and prenatal care records. This analysis used data on pre-pregnancy BMI from the prenatal care record (or birth certificate if prenatal care BMI was missing), cause of death, and MMRC determinations of whether a death was pregnancy-related and whether obesity contributed, to the death. Potential answers for the latter were “yes,” “no,” “probably” and “unknown.” Distributions of continuous variables were compared using t-tests, and log binomial regression was used to calculate prevalence ratios for specific causes of death according to whether or not obesity contributed to the death.

Results: Among 290 women with pregnancy-related deaths with a valid pre-pregnancy BMI, 44% had obesity. The MMRCs indicated if obesity contributed to 207 of these deaths. Obesity was determined to have contributed, or probably contributed, to 53% of pregnancy-related deaths of women with obesity and 26% of all pregnancy-related deaths. Among pregnancy-related deaths of women with obesity, average BMI was higher in women where obesity contributed or probably contributed to death, compared to women where obesity did not contribute (40.9 vs. 34.3, p-value < 0.01). For all pregnancy-related deaths, obesity contributing to death was associated with higher prevalence of select causes of death, including cardiomyopathy [prevalence ratio (PR): 6.3, 95% confidence interval (CI): 2.3-17.4], cardiovascular (PR: 2.5, 95% CI: 1.3-4.8) and embolism (PR: 3.2, 95% CI: 1.4-7.0), compared with a determination that obesity did not contribute.

Conclusions: Obesity contributed to 1 in 4 pregnancy-related deaths reviewed. The average BMI for pregnancy-related deaths where obesity contributed was in the category of morbid obesity. y.

Moreover, pregnancy-related deaths where obesity contributed were more likely to have a cardiovascular-related cause of death, compared to those where obesity did not contribute.

Public Health Implications: These results reinforce the importance of obesity as a contributor to poor health outcomes in pregnancy. Obesity, particularly morbid obesity, may be a risk factor for life-threatening cardiovascular and embolic complications during pregnancy, requiring urgent evaluation, management and/or referral to minimize poor outcomes.

Breastfeeding Trends and Experiences Among Missouri Mothers: Results from a Population-Based Study, 2012-2017

Author: Miss Elizabeth McCarthy

Topic: Nutrition

Title: Breastfeeding Trends and Experiences Among Missouri Mothers: Results from a Population-Based Study, 2012-2017

Background: Breastfeeding is associated with a variety of positive short- and long-term health and behavioral benefits for both infants and mothers. The American Academy of Pediatrics recommends that all babies be exclusively breastfed for the first six months of life. Despite this recommendation, between 2012-2017 only 69% of Missouri mothers breastfed their infants for at least one month, and only 83% initiated any sort of breastfeeding. The Missouri Pregnancy Risk Assessment Monitoring System (PRAMS) surveys new mothers to gain insight into behaviors that affect health outcomes for mothers and their babies, including experiences surrounding breastfeeding initiation and duration. This study uses PRAMS survey and vital statistics data to understand reasons for early breastfeeding cessation and non-initiation among Missouri women with a recent live birth.

Study Questions: To delineate which populations are at highest risk of not initiating and/or ceasing breastfeeding, and identify factors that promote or decrease breastfeeding initiation and duration among higher-risk populations.

Methods: The PRAMS survey is sent to a random sample of Missouri women with a recent live birth, and asks about experiences before, during, and after birth. PRAMS weighted data from 2012-2017 were analyzed using SAS to identify sociodemographic groups less likely to initiate breastfeeding, or to initiate but only continue breastfeeding for a short time, and reasons for breastfeeding cessation.

Results: Women with private or no insurance were significantly more likely to initiate breastfeeding (89.8%/86.4% vs 74.7%, $p<0.01$) and continue breastfeeding for at least 8 weeks than women on Medicaid (69.1%/74.6% vs. 41.0%, $p<0.0001$), though Medicaid recipient mothers had higher odds of discussing breastfeeding during prenatal visits (AOR=1.88, $p<0.0001$). Medicaid recipients were significantly less likely to initiate breastfeeding because they did not like breastfeeding (AOR=1.39, $p<0.0001$), or found it too hard (AOR=3.19, $p<0.0001$). African-American women tend to receive breastfeeding information from sources other than family or friends (AOR=1.30, $p<0.05$), and more likely to stop breastfeeding because of return to work or school (AOR=3.49, $p<0.01$). Additionally, 60% of women who stopped breastfeeding early reported that it was because they were not producing enough milk.

Conclusions: Breastfeeding rates in Missouri remain similar to national trends, but could still be improved, particularly among women receiving Medicaid and the African-American population. PRAMS

findings suggest that increased education among populations at high risk of not breastfeeding are not translating to increased breastfeeding rates. Further research is needed to understand the degree to which hospital practices, social support factors, and breastfeeding success are linked, and which factors most influence breastfeeding success.

Public Health Implications: Currently, only 15 of the more than 80 Missouri birthing hospitals are breastfeeding-friendly and comply with “Show Me 5” (SM5) breastfeeding standards. With the findings from this study, SM5 and similar programs can better focus on populations that will receive greatest benefit from improved breastfeeding education, and can improve educational effectiveness. Additionally, these findings suggest that many women stop breastfeeding because of low milk supply, which indicates the need for continued breastfeeding support and education through the months following birth.

Advancing Rural Maternal and Child Health (MCH) Nutrition Initiatives for Childhood Obesity: Application of PSE Approaches

Author: Dr. Dena Herman

Topic: Nutrition

Title: Advancing Rural Maternal and Child Health (MCH) Nutrition Initiatives for Childhood Obesity: Application of PSE Approaches

Issue: Obesity is disproportionately represented among low-income women and children, racial ethnic minorities including American Indian/Alaskan Native (AI/AN) populations and in rural settings. Reducing health disparities is a Healthy People 2020 goal, yet few strategies have proven successful long-term or at the population level. Healthy eating and active living (HEAL) initiatives realize greater impact when including Policy, System and Environmental (PSE) actions. These are widely informed through the Spectrum of Prevention framework. However, this framework does not include contributions from the individual level (I) – often where many nutrition interventions begin.

Setting: Four State Department of Public Health (DPH) MCH nutrition teams participated in this technical assistance (TA)/capacity-building effort: California, Oregon, Washington, and Arizona (Winslow Indian Health Care Center). These states are working with low-income women and children to improve nutrition and physical activity indicators.

Project:

Objectives

1. Test a PSE conceptual framework with 4, State DPH, MCH nutrition teams.
2. Inform the science and practice of applying a PSE framework for action through development of best practices protocols. Teams are provided PSE training via completion of an online series of 5 modules and MCH-specific TA tailored for each team including the PSE framework being tested. Each team developed a strategic plan to be evaluated for: a) resource allocation for implementation; b) commitment of essential partners.
3. alignment with state childhood obesity strategic plan.
4. potential changes in infrastructure/systems to promote sustainability.
5. potential to reduce state healthcare costs; and
6. feasibility of replication in other states. Informing PSE science and practice will be assessed by inclusion of the PSE conceptual framework and the methods chosen for implementation.

Accomplishments/Results: We developed a community of practice (CoP) that met monthly for a total of 11 months to discuss topics in a PSE online training series and to support the development of

individual strategic plans using PSE interventions. Each team received personalized TA to focus on their state-specific situations. The leadership team overseeing the project developed an index to evaluate the quality of the PSE strategic plans developed. Each of the 4 teams expressed increases in the number of traditional and/or non-traditional partnerships formed and improvements in demonstrating skills to work through “upstream” processes to institutionalize PSE strategies.

Barriers: Barriers included adequate time to work on additional programmatic solutions to address the needs of MCH populations to improve health and nutrition. Identifying non-traditional partners and developing these relationships is a time-consuming process, but teams realized the value in reaching out to build these networks to improve long-term health outcomes. Garnering support to include PSE interventions from “upstream” leaders was difficult for some teams, while for others PSE was already institutionalized making it easier to develop and move forward with project ideas.

Lessons Learned: HEAL initiatives have proven more successful than individual approaches in improving community health indicators. Rural and AI/AN communities have unique challenges to preventing childhood obesity that require individualized and local solutions. Utilizing an approach that includes both individual and PSE strategies may be a more effective way to address these specific communities’ health challenges.

Information for Replication: This project was supported by the Health Resources Services Administration, Maternal and Child Health Bureau, #T79MC00013.

Analyzing Disparities in Preterm Birth and Low Birth Weight in New Orleans Using the Child Opportunity Index

Author: Ms. Katharine Bruce

Topic: BO

Title: Analyzing Disparities in Preterm Birth and Low Birth Weight in New Orleans Using the Child Opportunity Index

Background: Across the United States, research has shown pronounced racial disparities in birth outcomes, including preterm birth (PTB) and low birth weight (LBW). In 2016, the March of Dimes reported that Louisiana had the third greatest racial disparity in PTB, with the rate of PTB 49% higher among black women compared to all other races. These disparities persist among women of comparable age and education, and the underlying causes of these disparities remain unclear.

Study Questions: Is neighborhood-level opportunity associated with PTB or LBW in New Orleans, Louisiana?

Methods: We used geocoded vital records data to analyze whether neighborhood-level opportunity was associated with PTB or LBW. The study population included all births to mothers with a home address in the New Orleans metropolitan area from 2011-2015. This analysis was limited to non-Hispanic black (black) and non-Hispanic white (white) mothers, representing 84.6% of all births to women residing in New Orleans. To characterize neighborhood-level opportunity, we used the Child Opportunity Index (COI) calculated at the census tract level. COI is a composite measurement of relative opportunity within a metropolitan area, calculated as the average z-score of 19 indices - 8 educational, 6 health/environmental, and 5 social/economic. COI scores are grouped into 5 levels, ranging from very low to very high. Multi-level modeling, adjusting for maternal race and age, was used to assess the relationship between COI and birth outcomes of interest.

Results: Our population included 61,818 births, 53.0% of which were to white mothers. White mothers were 7 times as likely to live in high or very high opportunity neighborhoods compared to black mothers (odds ratio: 7.026, 95% Confidence Interval [CI]: 6.766 – 7.297). After adjusting for maternal age and race, women in moderate, low, and very low opportunity neighborhoods were more likely to experience PTB compared to women in very high opportunity neighborhoods, with the lowest opportunity level representing the greatest odds (adjusted odds ratio [aOR]: 1.207, CI: 1.083 – 1.344). There was no statistically significant difference in odds of PTB between high and very high opportunity neighborhoods. Women at all levels were more likely to have a LBW birth compared to women living in the highest opportunity neighborhoods, with the lowest level of opportunity representing the greatest odds (aOR: 1.269, CI: 1.135 – 1.419).

Conclusions: White mothers in New Orleans were more likely to live in neighborhoods with high COI scores compared to black mothers. Living in lower COI neighborhoods was associated with increased odds of PTB and LBW.

Public Health Implications: Multidimensional measures of disadvantage, such as COI, could enable public health professionals to better understand the intersecting factors that contribute to racial disparities in birth outcomes. Public Health institutions should consider using COI and other measures of structural disadvantage to better quantify, address and track disparities in birth outcomes. However, much of the racial disparity in rates of PTB and LBW is not explained by differences in neighborhood-level factors. State and local health departments should explore available data sources to investigate other possible contributors to that disparity.

Women Connect: Providing Resources to at-Risk Mothers and Children in New Jersey

Author: Ms. Anna Niroomand

Topic: BO

Title: Women Connect: Providing Resources to at-Risk Mothers and Children in New Jersey

Issue: Approximately 1.6 million children in the United States will experience homelessness over the course of a year. Children who experience homelessness or are born into homelessness are at higher risk for mental health issues, exposure to violence, developmental delay and frequent illnesses. Single females head 84% of homeless families. Women Connect's goal is to minimize the toxic stress by teaching mothers how to be their children's primary advocate through knowledge of resources offered through private and public organizations for basic necessities, including health care

Setting: The Center for Great Expectations (CGE) is a NJ support center for homeless pregnant or parenting women in substance use recovery and their children. CGE provides individualized treatment and support within a home environment to help families escape from generational cycles of trauma, abuse, drug addiction, and homelessness. This female population averages an Adverse Childhood Experience Study (ACES) score of 5.

Project: The goal of Women Connect is to design small group sessions that empower disadvantaged mothers to build a supportive environment for their family. Needs-based assessments were utilized to identify their educational needs. As a result, our curriculum is comprised of seven teaching sessions: "Mock Interviews", "Stress Reduction Techniques", "Yoga and Fitness", "Healthy Eating", "Healthy Relationships", and "Sexually Transmitted Infections and Diseases", "Healthy Sexuality, Self-Esteem, and Contraceptive Use". One-hour sessions are held on a monthly basis. Identical pre- and post-tests comprised of problem-solving based questions are used to assess the success of each session. The post-test includes both testing of discrete knowledge regarding the day's lesson as well as personal evaluation of acquired said knowledge.

Accomplishments/Results: 2018-2019 results demonstrate a 100% success rate for improving knowledge on the session topic. The current average pre-test score is 62% and average post-test score is 86%. The sample size for each session varied from 3-6 women, depending on attendance and the number of times the session has been conducted. Women Connect's success demonstrates that individual sessions focused on connecting adults to available resources increase their capability to provide a better, safer, healthier childhood for at-risk children.

Barriers: With great efforts and many failures, Women Connect was able to form a sustainable community relationship with CGE. Realizing that the clients of CGE come into and leave the center at various points in the year, we began to repeatedly use needs-based assessments to reset our understanding of what information would be most useful to the current mothers.

Lessons Learned: Women Connect recognizes that creating a brighter future for these families involves not only access to care but also recognizing the health, economic and social neglect that has faced their families for generations. Mothers should be empowered by a research skill set to strengthen their ability to advocate for their child's needs in order to create resiliency in the face of systemic social barriers. We will continue to work to provide interactive sessions to identify community and medical resources, maximize employment prospects, and promote healthy behaviors for the overall health of these families.

Information for Replication:N/A

Sacred Space: A Qualitative Interpretive Meta-Synthesis of Women's Lived Experiences with Out-of-Hospital Births

Author: Ms. Sarah Robinson

Topic: BO

Title: Sacred Space: A Qualitative Interpretive Meta-Synthesis of Women's Lived Experiences with Out-of-Hospital Births

Background: In approximately one third of the 11,000 births that occur daily in the United States, women report experiencing trauma (Martin et al., 2015). Birthing trauma can lead to birth-related post-traumatic stress disorder (P-PTSD) and postpartum depression (PPD; Soet, Brack, & Dilorio, 2003). Disempowering births have lifelong consequences on maternal self-esteem (Forssén, 2012). In turn, maternal mental health issues have numerous public health effects, particularly relating to decreased safety and negative health outcomes for the infant (Letourneau et al., 2012). Lasting influences of postpartum mental health disorders also have an impact on family outcomes (VanderKruik et al., 2017). As such, understanding how to improve the birth experience has the potential to reduce postpartum mental health issues which can improve outcomes for both mother and child.

Study Questions: The purpose of this study is to capture the lived experiences women who chose to give birth outside the hospital to determine what environmental factors influence their decisions.

Methods: A qualitative interpretive meta-synthesis is a method used in the social work profession to identify themes across multiple published qualitative studies (Aguirre & Bolton, 2013). Qualitative articles were found using a search of online databases. Articles were included in the study if the design was qualitative and participants were pregnant women who chose to give birth outside of the hospital. Once articles were identified, two researchers processed the articles for themes. Next, the quotes published in the articles were imputed into Atlas.ti to discover additional themes. Finally, the researchers triangulated their findings and came to an agreement on central themes.

Results: The literature search yielded 2,635 articles. After screening, 12 articles met the eligibility criteria. Participants had a mean age of 25 and represented a variety of racial and ethnic groups. Common themes noted by the researchers were: Personal agency: participants expressed the importance of personal agency or the feeling of being in control throughout their birth. Birthing ideology: participants expressed that an out-of-hospital birth aligned more closely with their beliefs. Many of the mothers expressed the desire to have a natural birth and avoid intrusive medical intervention. Psychology of space: many participants made the decision to have an out-of-hospital birth because of their views of the birthing space. Mothers felt an out-of-hospital birth would reduce their anxiety and allow them to have vital support networks in place. Dissatisfaction with intrapartum care: many of the mothers chose to have an out-of-hospital birth due to negative experiences they had

with care during their pregnancy. Mothers expressed feeling powerless in their choices surrounding their birthing.

Conclusions: The themes reveal important factors influencing mothers' decisions to give birth outside of the hospital. Overall, mothers felt an out-of-hospital birth gave them more control over their birthing experience.

Public Health Implications: Understanding the environmental factors which influence mothers decisions of where to give birth can give providers insight into the decision-making process mothers undergo when planning their birth. Acknowledging mothers' desires to feel in control throughout their birth has the potential to reduce birth trauma and negative mental health outcomes.

Infant Mortality in Missouri: Rural and Urban Trends and Disparities

Author: Dr. Rebecca Lander

Topic: BO

Title: Infant Mortality in Missouri: Rural and Urban Trends and Disparities

Background: Consistent with national trends, infant mortality rates (IMR) in Missouri have experienced a steady decline over the past two decades though infant mortality overall remains 5%-10% above national trends, with ongoing significant racial disparities. Missouri is a largely rural state, with two large population centers (St. Louis City and Kansas City), and several mid-size cities; of the 114 counties in the state, 101 are classified as rural. The health challenges facing mothers and infants in urban environments are distinct from those facing rural residents, including significant logistical limitations on access to healthcare in rural regions.

Study Questions: To evaluate trends in neonatal/postneonatal mortality in urban and rural Missouri counties.

Methods: Missouri vital statistics data for deaths between 2010-2017 were analyzed to identify patterns in neonatal (age ≤ 27 days) and postneonatal (age 28 days–1 year) mortality in rural and urban areas in Missouri. Rate ratios between infant mortality rates in rural versus urban environments were calculated for a variety of characteristics, including maternal age and marital status, race and ethnicity, and cause of infant death.

Results: Statewide, infant mortality is more likely for infants born to the youngest (age ≤ 20) and oldest (age > 40) mothers. Postneonatal mortality is 18% higher among infants in rural counties than urban, though mortality rates for rural vs. urban neonates are comparable. The leading cause of death (LCOD) for rural neonates is complications associated with congenital anomalies (124.0 per 100,000 live births), whereas for urban neonates the LCOD is complications associated with prematurity and low birthweight (LBW) (85.9 per 100,000 live births). Older infants in rural counties are also more likely to die from unintentional injuries (RR=1.06) than their urban counterparts, and are significantly more likely to have deaths attributed to SIDS (RR=4.26).

Conclusions: Rural and urban communities face different challenges that can influence patterns of infant mortality. Mothers in rural counties are more likely to receive inadequate prenatal care (Kotelchuck index), increasing the likelihood of adverse birth outcomes or non-detection of developmental conditions that can affect infant health after birth. High IMR associated with complications of LBW in urban areas is likely to be driven by the larger urban African American population, which continues to experience disparately high rates of LBW births. Elevated SIDS deaths in rural counties may reflect limitations on the medicolegal investigative infrastructure in rural Missouri.

Public Health Implications: While 37% of Missourians live in rural counties, only 18% of physicians practice there, and many rural Missourians must travel long distances or face significant waits before they are able to access care for themselves or their children. The Missouri Department of Health and Senior Services (DHSS) is pursuing activities to increase access to care in rural counties. In 2017, the Missouri legislature passed Senate Bill 50, mandating consistent reporting of levels of neonatal and maternal care, which will improve DHSS' ability to identify areas of greatest need for higher-level care.

Examining the Role of Gestational Age on Infant Mortality in the District of Columbia, 2012-2016

Author: Dr. Patricia Lloyd

Topic: BO

Title: Examining the Role of Gestational Age on Infant Mortality in the District of Columbia, 2012-2016

Background: Over the last ten years the infant mortality rate (IMR) in the District of Columbia (DC) has decreased from 13.1 per 1,000 live births in 2007 to 7.1 in 2016; however, during the last five years there has been little change. While it is recognized that low gestational age is a risk factor of infant mortality, the extent to which low gestational age contributes to the overall DC IMR has not been explored.

Study Questions: What is the contribution of (a) differences in the gestational age distribution of live births in DC and the United States (US), and (b) differences in the gestational age-specific mortality rates in DC and the US to the overall difference between the DC and US IMR? And, how many infant deaths could be prevented if the District of Columbia had the same gestational age distribution among live births as in the overall US?

Methods: The 2012-2016 DC Natality and Mortality data, and 2015-2016 United States (US) Linked Birth/Infant Death Records with known gestational age were used. This analysis applies Kitagawa's method of decomposition to examine the contribution of the differences in the gestational age distribution of live births and gestational age-specific mortality rates in DC and the US, on the overall difference between the DC and US IMR. This analysis also applies the direct method of standardization using the 2015-2016 gestational age distribution of US live births to estimate a 2012-2016 DC IMR that is adjusted for differences in the gestational age distribution of live births between DC and the US. One main limitation of this analysis is that we do not account for other factors that may drive the infant mortality rate, such as maternal age and race and ethnicity. Future analyses will extend this decomposition approach to incorporate additional sociodemographic factors.

Results: During 2012-2016, there were a total of 361 DC infant deaths, resulting in an overall IMR of 7.6 per 1,000 live births. Approximately 80% of the difference in IMR between DC and the US was attributed to the differential distribution in gestational age and, 20% was attributed to the difference in the gestational age-specific mortality rates. Additionally, using the direct method of standardization, we found that DC had the same gestational age distribution of live births as the US, the 2012-2016 DC IMR would be 6.1 per 1,000 live births.

Conclusions: The difference in the 2012-2016 DC IMR and 2015-2016 US IMR was largely explained by the difference in the distribution of gestational age of live births in DC and the US. Additionally, if the District of Columbia had the same gestational age distribution among live births as in the overall US, approximately 65 infant deaths may have been prevented during this 5-year period.

Public Health Implications: Results from this analysis allow policymakers to quantify the extent to which low gestational age contributes to infant mortality in DC and provides data to support programs aimed at reducing preterm birth rates in DC.

An Assessment of the Perinatal Quality Indicator Project in Florida Hospitals

Author: Dr. Chinyere Reid

Topic: BO

Title: An Assessment of the Perinatal Quality Indicator Project in Florida Hospitals

Background: Great strides continue to be made in measuring and improving the quality of hospital care for Florida's mothers and babies. Florida Perinatal Quality Collaborative (FPQC) offers hospital health care quality improvement (QI) initiatives using evidence-based guidelines and practice on leading perinatal issues. FPQC's Perinatal Quality Indicator (PQI) Projects supports QI efforts by providing hospital-specific perinatal indicator reports.

Study Questions: How useful do participating Florida delivery hospitals find the Perinatal Quality Indicator (PQI) Project reports in supporting their QI efforts/practices?

Methods: Thirty-six Florida hospitals currently participating in the FPQC's Perinatal Quality Indicator (PQI) project were surveyed to identify and assess the usefulness of the PQI project in their QI practices. Thirty-three (86%) hospitals responded. Descriptive results were generated through the Qualtrics online survey system.

Results: In 2018, 74% of hospitals described their ability to understand and interpret their QI indicator reports as excellent or very good; 61% described their hospital team's ability to understand and interpret the reports as excellent or very good. Many (55%) hospitals described themselves or their team's ability to explain the QI indicator reports to other team members as excellent or very good. Depending on the measure, 58% of hospitals selectively shared their QI indicator reports with other team members and 42% always shared with their QI team. The majority (77%) of hospitals reported sharing findings from their QI indicator report with hospital leadership. Hospitals reported that their QI indicator report frequently (55%) or occasionally (45%) led to action such as further exploring the situation, notifying hospital leadership, providing provider/staff education, or developing QI activities. Most hospitals rated the FPQC's overall performance as excellent, with receiving data/indicator reports (38%) and participating in QI initiatives (34%) ranked as the most valuable FPQC activities for hospitals. All hospitals reported that they were either highly likely/likely to recommend that their hospital participate in an upcoming FPQC initiative, stating that, "As a magnet designated hospital, by participating in QI projects, it helps us to continue to strive for better processes", "We put patient safety and quality first ... participation in FPQC initiatives helps us maintain those important aspects of care", and "I think it brings awareness to an issue and change follows".

Conclusions: Most hospital respondents reported being able to understand and interpret their hospital's QI report. Although most respondents shared PQI reports with other team members and leadership personnel, almost slightly more than half rated their ability in explaining these shared reports as very good or better. This suggests that further training may be needed. Additionally, further

investigation as to why almost half of hospitals use of their QI indicator reports only occasionally led to improved QI activities and practices.

Public Health Implications: In an effort to meet hospital QI needs, the FPQC and their partners will continue to collaborate and support hospitals through QI strategies in order to promote and sustain improved health care quality and health outcomes for mothers and babies.

The Contribution of Preterm Birth to Infant Mortality Among Non-Hispanic Black/White Infants in Rhode Island, 2008-2017

Author: William Arias

Topic: BO

Title: The Contribution of Preterm Birth to Infant Mortality among Non-Hispanic Black/White Infants in Rhode Island, 2008-2017

Background: Rhode Island infant mortality mirrors a well-known association of preterm birth with other national and state data. However, little is known of the contribution of preterm birth to infant mortality between Non-Hispanic Black infants and Non-Hispanic White infants. Addressing disparities in infant mortality and racial equity continues to be a public health focus in Rhode Island.

Study Questions: What is the contribution of preterm birth to the Black/White infant mortality gap in Rhode Island?

Methods: The 2008-2017 Rhode Island Linked Birth/Infant Death File was used to select RI-resident infant deaths (gestational age greater than 20). The Kitagawa decomposition method was used to calculate the gestational age distribution and gestational-specific mortality components of excess infant mortality between Non-Hispanic Black and Non-Hispanic White infants.

Results: During 2005-2017, there were 94 Non-Hispanic Black and 205 Non-Hispanic White infant deaths. Sixty-eight percent of the race/ethnic disparity in infant mortality was due to extreme preterm birth (<28 gestational weeks), which represented virtually all the gestation age distribution component. The other third (31%) is attributable to differences in gestational age-specific mortality, of which most was due to early term (13%).

Conclusions: About two-thirds of the racial disparity in infant mortality is due to an excess of extreme prematurity.

Public Health Implications: Current initiatives on reducing racial disparities in infant mortality should refocus the predictors of extreme preterm birth in Rhode Island.

Improving a Prenatal Referral Network to Reduce Infant Mortality

Author: Dr. Jennifer Miller

Topic: BO/IM

Title: Improving a Prenatal Referral Network to Reduce Infant Mortality

Issue: Between 2014-2016 Sedgwick County, KS had a 3-year infant mortality rate of 6.6 per 1,000 live births while the State of Kansas had a rate of 6.0. Through the review of fetal and infant deaths, Sedgwick County's Fetal and Infant Mortality Review (FIMR) program identified that pregnant women were not being referred to services readily available in the county. FIMR members recommended improvement of the referral system for high risk/high need pregnant women as a method to reduce infant mortality.

Setting: The project took place in Wichita, located in Sedgwick County, Kansas. The primary beneficiaries from the Integrated Referral and Intake System (IRIS) implementation were pregnant women who were being connected to needed support services. The secondary beneficiary were the physicians and social service agencies that were interconnected through IRIS and can now provide streamlined services.

Project: IRIS was identified as a potential solution to the disjointed referral system in Sedgwick County. Sedgwick County Division of Health took the lead role in this pilot project to test the feasibility of implementing this electronic, web-based, and HIPAA compliant referral network. The Division of Health recruited a group of community organizations that provided prenatal support services. Services included healthcare system navigation, prenatal education, nutrition assistance, and others. Approximately 20 organizations and programs came together and began the work to implement IRIS in September 2018. In seven months, the group completed all implementation-related activities and scheduled the IRIS launch for March 2019.

Accomplishments/Results: This project successfully brought together a diverse group of organizations/programs to participate in the implementation process of IRIS. The group worked to configure the system in ways that were applicable to all organizations/programs, and designed community standards that were mutually beneficial. Partner organizations and their staff will be trained to use the system in February 2019, allowing the group to meet their original launch date of March 2019. Additional results from the referral data will be available by the time of the CityMatCH conference.

Barriers: One barrier to implementation was getting all the parties needed for the pilot to the table and arranging meetings at times that worked for most parties. Another barrier was addressing the legal issues of each organization as some identifiable data will be shared in IRIS.

Lessons Learned: Selecting a focus area for the pilot study was critical to successful partnering and the implementation of IRIS. Another important lesson learned was having the right partners at the table

from the beginning. Finally, determining in advance when and how additional partners would be brought into the system after the pilot helped with facilitating conversations about the system to partners who weren't readily engaged with the pilot.

Information for Replication: Implementing IRIS required time and dedication of the partner organizations. The implementation process relied heavily on finding common ground to meet the needs of each organization/program involved in the pilot. Additionally, IRIS requires having a Community Champion and Community Manager that lead implementation efforts and oversee the system. Finally, a cost is associated with the IRIS technology.

Understanding the Impact of Maternal Demographic Characteristics on Adequate Prenatal Care Utilization

Author: Ashley Seybold

Topic: BO/PNC

Title: Understanding the Impact of Maternal Demographic Characteristics on Adequate Prenatal Care Utilization

Background: Research shows that women who receive late (after the first trimester) or no prenatal care (PNC) are more likely to experience adverse birth outcomes. Receiving early and regular (or adequate) care is essential to ensure optimal outcomes for both mother and child. Many factors can predispose a woman to increased or decreased utilization of care, including her demographic characteristics. The purpose of this study was to examine associations between maternal demographic characteristics and adequate PNC utilization.

Study Questions: What is the association between a woman's demographic characteristics and her utilization of adequate prenatal care?

Methods: This study utilized Ohio Department of Health vital statistics data; specifically, resident birth files. The study population included 6,024 Montgomery County, Ohio resident women who gave birth to one or more live infants in 2017. Logistic regression was used to test for associations between receiving adequate care and maternal age, race/ethnicity, marital status, educational attainment, and insurance type. Unadjusted and adjusted odds ratios were found for each exposure of interest through univariate and multivariate logistic regression analyses. To maintain consistency, analyses referent groups were identified based on the population majority.

Results: Results identified significant associations between adequate care utilization and maternal age, race/ethnicity, marital status, educational attainment, and insurance type. Multivariate regression indicated that women who were Black, non-Hispanic (OR:0.76, 95% CI: 0.66, 0.87, $p<.001$) or other, non-Hispanic (OR:0.66, 95% CI: 0.47, 0.91, $p=.011$), under 20 years of age (OR:0.74, 95% CI: 0.58, 0.96, $p=.025$), had less than a high school degree (OR:0.69, 95% CI: 0.50, 0.95, $p=.023$), or self-pay for care (OR:0.35, 95% CI: 0.25, 0.48, $p<.001$) had a reduced likelihood of receiving adequate care. Women who were 40 years or older (OR:2.41, 95% CI: 1.38, 4.23, $p=.005$), married (OR:1.27, 95% CI: 1.09, 1.49, $p=.002$), or had private insurance (OR:1.37, 95% CI: 1.17, 1.62, $p<.001$) had an increased likelihood of receiving adequate care.

Conclusions: Significant disparities exist among Montgomery County women receiving adequate prenatal care. Younger, unmarried, less educated, self-paying, minority women are less likely to receive adequate care compared to their counterparts. Coincidentally, these women also experience poorer birth outcomes. Access and utilization of prenatal care is complex. Although these findings can provide initial insights into identifying priority populations, further quantitative and qualitative analyses are

needed to understand additional related factors (health behaviors, preconception health, clinical factors) and barriers (social determinants of health) to receiving adequate care.

Public Health Implications: Findings from this study will be used to determine the prevalence of adequate prenatal care utilization and the risk factors associated with under-utilization of adequate care. Information will be used to identify priority populations for access to prenatal care initiatives.

Striving to Reduce Smoking During Pregnancy in West Virginia---An Analysis Utilizing Pregnancy Risk Assessment Monitoring System Data, 2009-2016

Author: Monica Pegram

Topic: BO/smoking

Title: Striving to Reduce Smoking During Pregnancy in West Virginia---An Analysis Utilizing Pregnancy Risk Assessment Monitoring System Data, 2009-2016

Issue: Smoking during pregnancy has been linked to negative health outcomes (e.g. preterm birth, intrauterine growth restriction and sudden infant death syndrome (SIDS)). West Virginia (WV) has consistently ranked number one when it comes to pregnancy smoking rates. Between 2000-2008 PRAMS and WV Vital Statistics data indicated that nearly 30% of WV mothers smoked during their most recent pregnancy.

Setting: WV implemented new programs and initiatives statewide. WV also evaluated the needs of prenatal providers across the state to improve the quality of care given to women who smoke during pregnancy. The goal is reducing the smoking pregnancy rate across the state.

Project: In 2009, the WV Office of Maternal, Child and Family Health and the WV Division of Tobacco Prevention developed a media campaign through a contract targeting pregnant smokers in the state. After the campaign in 2009, the “Tobacco Free Pregnancy Initiative” launched. This initiative educated women of child bearing age and pregnant women on the dangers of tobacco use and emphasized the importance of face-to-face cessation counseling to health care providers. In 2015 the WV Department of Health and Human Resources renewed its efforts to reduce smoking during pregnancy. WV’s Perinatal Partnership assessed birthing hospitals across the state and identified those with the highest birthing rates, maternal smoking rates and preterm delivery rates. A survey administered to prenatal providers aimed to understand the needs in provider’s offices to assist in tobacco cessation for pregnant women. In July 2015, multiple partners including WV OMCFH developed the “Smoking During Pregnancy Project” to address the continued high rates pregnant smokers. The project developed training and intervention programs for prenatal and pediatric providers to counsel women on reducing smoking rates during and after pregnancy. The Help2Quit Project conducted its first training for providers aimed at reducing smoking before, during and after pregnancy.

Accomplishments/Results: The survey results showed prenatal providers wanted increased tobacco prevention efforts focusing on individuals interacting with pregnant women. From 2009-2016, WV PRAMS data noticed a significant decrease in maternal smoking from 28.9% in 2009 to 22.8% in 2016. This is not to say that all the work done directly affected these rates, but to say that by implementing different approaches, changes can occur.

Barriers: WV is a rural state; prenatal providers and assistance with tobacco cessation can be inaccessible. The trainings provided by Help2Quit were conducted at providers' offices or during grand rounds; reaching over 500 physicians, midwives and nurses across the state.

Lessons Learned: A multifactorial approach is warranted when addressing high prenatal smoking rates. There is not a one size fits all approach and WV still has improvements to make to continue to decrease the prenatal smoking rates. However, by reducing these smoking rates, funds spent on the care of the infants from preterm birth and intrauterine growth restriction can be reduced.

Information for Replication: Although there is no information about replication, key partnerships with Tobacco Prevention, Perinatal Partnership and organizations geared toward the health of mothers and babies are needed to brainstorm and create different ways to address prenatal smoking rates in your state.

Ranking Social Determinants of Health Variables and its Impact on Infant Mortality and Preterm Birth in Cuyahoga County, Ohio

Author: Mr. Richard Stacklin

Topic: BO/SDOH

Title: Ranking Social Determinants of Health Variables and its Impact on Infant Mortality and Preterm Birth in Cuyahoga County, Ohio

Background: Social determinants of health play a major role on the well-being of citizens in a community. Infant mortality is often considered a measure of the well-being of citizens. In Cuyahoga County, OH, analysis was used to measure if an association existed between determinant-related variables and infant mortality or preterm birth. If an association existed, identify which determinants could best explain the variability of infant mortality or preterm birth in this community.

Study Questions: Is there an association between social determinants of health and infant mortality or preterm birth in Cuyahoga County? What determinants best explain variability in infant mortality or preterm birth in Cuyahoga County?

Methods: Zip code level census data were used for nine determinant-related variables. A rank index score from 1 to 5 was evenly distributed among the 51 zip codes. The 9 index scores were summed and then an overall rank index score was produced for all zip codes (range 1.0 – 5.0). Birth and death data were analyzed to get an infant mortality rate and preterm birth rate by zip code. These rates were used to measure association with the determinants rank index score. Then a multiple linear regression model was used to see which of the nine determinant variables best explained variability in infant mortality or preterm birth. There are a few limitations to this study. One issue is the fact that the time periods for the data sources are not for the same years. Another issue is around selection bias of variables to explain social determinants; not 100% certain the variables selected were the best ones to use. Because people self-identify their race for the census, it may not be necessarily correct in terms of how vital statistics or society might identify a person.

Results: Infant mortality rank and the rank index score was significantly correlated, $p=.859$, $p=0.00$. Preterm birth rank and the rank index score was also significantly correlated, $p=.86$, $p=0.00$. Multiple linear regression analyses were conducted. Two predictors (median rent-to-income percentage & percentage of black residents) explained 76.9% of the variance of infant mortality. Two predictors (percentage of black residents & less than a high school diploma) explained 81.4% of the variance of preterm birth. Maps were created to show the location of rank index scores for the determinants as well as the association of the determinants and infant mortality by zip code.

Conclusions: There is an association between determinants and infant mortality or preterm birth. Percentage of black residents in a zip code was highly significant for both factors. The zip codes with the

highest determinant rank scores all located on the east side of the county where majority of African Americans live.

Public Health Implications: Racism is a root cause of social determinants and a major public health issue. Segregation is not healthy for the well-being of a community (Cuyahoga Metro area - 5th most segregated out of top 100 metro areas in US). Historical policies like redlining are highly associated with the determinants and infant mortality maps of today.

Addressing the Barriers to Non-Emergency Medical Transportation

Author: Patrice Allen Brady

Topic: BO/SDOH

Title: Addressing the Barriers to Non-Emergency Medical Transportation

Issue: In 2017, 18,800 babies were born in Franklin County, Ohio; 35% were born in eight areas within the city of Columbus with historically high infant mortality rates, deemed high priority neighborhoods. For expectant mothers that live in these areas, particularly Medicaid-eligible mothers, accessing prenatal care can be challenging. Neighborhood-based prenatal care is often not available, resulting in pregnant women needing to travel to obtain obstetric services. Medicaid-eligible women without reliable transportation have the option to utilize paid non-emergency medical transportation (NEMT) through the county or their Medicaid managed care organization (MCO), though significant challenges have been noted by system users, including: prolonged waiting times, inability to contact drivers, stipulations against bringing other passengers to appointments, and an inability to be transported anywhere besides their appointment and home (e.g., to work, a pharmacy, or childcare facility). According to Fetal-Infant Mortality Review data, transportation issues are considered a significant stressor for women during pregnancy and often lead to disruptions in prenatal care.

Setting: In 2016, Columbus, Ohio won the \$40M Smart City Challenge and formed a public/private partnership known as Smart Columbus. Smart Columbus aims to use technology to improve the NEMT experience for Medicaid-eligible pregnant women seeking prenatal care.

Project: CelebrateOne, Columbus' infant mortality reduction initiative, and partners shared with Smart Columbus the community's NEMT challenges. During 2017 to 2018, Smart Columbus and Sidewalk Labs conducted key informant interviews with expectant mothers and other key stakeholders to learn more about transportation issues impacting prenatal care access, and to gain an overall better understanding of Columbus' NEMT system. From these interviews, lapses in communication between healthcare providers, drivers, NEMT brokers, MCOs, and patients were found to be the primary barriers to NEMT services. To address these communication challenges, Smart Columbus, CelebrateOne, Ohio State University, and two of Central Ohio's largest MCOs initiated a project to improve NEMT with enhanced technology. With implementation of a rideshare-like system with multiple patient interfaces (i.e., call center, web portal, and smartphone app), and expansion of NEMT trips beyond medical appointments, this project aims to reduce transportation-related issues during pregnancy and enhance prenatal care access.

Accomplishments/Results: Through a competitive bidding process, a vendor was selected to implement the project. Five hundred Medicaid-eligible pregnant women from the high priority neighborhoods will be recruited to participate starting June 2019. Participants will be randomly assigned to receive either existing transportation services from their current MCO or Smart Columbus' expanded transportation options.

Barriers: Success of this project assumes that participants have access to phone and/or internet services to interact with the various patient interfaces.

Lessons Learned: Unreliable transportation and inconsistent user experience has been noted as an issue for Medicaid-eligible pregnant women in Franklin County, despite the availability of NEMT services. By utilizing advances in technology, prioritizing pregnant women with grant dollars, and leveraging new and existing community partnerships, transportation barriers have the potential to be eliminated, prenatal care access improved, and the general autonomy of pregnant women enhanced.

Information for Replication: N/A

Translating a Social Determinants Approach for MCH Equity Promotion: The Case of Adverse Birth Outcomes

Author: Dr. Katherine Theall

Topic: BO/SDOH

Title: Translating a Social Determinants Approach for MCH Equity Promotion: The Case of Adverse Birth Outcomes

Issue: Stark racial inequities in reproductive outcomes exist, despite advancements in obstetric care quality and safety, improved access to prenatal care, and more per capita spending on health care than any other country in the world. With a nearly 4-fold increase in the pregnancy mortality rate among non-Hispanic black women versus non-Hispanic white women and non-Hispanic black babies dying at twice the rate of white infants in the U.S., we cannot waste time on strategies aimed at closing these gaps.

Setting: Louisiana and the city of New Orleans; targeting medical and public health practitioners as well as the community and policy-makers.

Project: Regional research on the health of women and girls in Louisiana, conducted by our academic team in close partnership with the state and local New Orleans community, included an in-depth examination of the social determinants that may be driving racial inequities in adverse birth outcomes. A research report launch event was held to present results to various community partners, including medical practitioners and policy-makers, and to brainstorm on potential solutions at multiple levels. The larger report was followed by publication of a policy brief and op ed, as well as formation of a local maternal and child health (MCH) collaborative who have been actively trying to translate research into action.

Accomplishments/Results: We have successfully presented to our local council members, who acted on one policy recommendation—hiring an MCH epidemiologist in the local New Orleans health department. As a collaborative, we are acting on additional recommendations through new projects and grant applications and we continue to share findings and recommendations with local and state communities and policy-makers.

Barriers: Barriers include the resources needed to fully translate and disseminate the work and to hold the collaborative together. Additional barriers or challenges include bringing diverse partners outside of public health to the table to fully address the many social factors that may be driving inequities.

Lessons Learned: Translation of research is no small task and the appropriate resources must be provided to make action-oriented research successful. Language around inequities, particularly racial inequities, must be carefully crafted and should be utilized for awareness-building, particularly outside the health and public health arenas. The work highlights the important roles that research, leadership

and practice play in translation; as well as the importance of an equity framework. How specific social determinants are researched and subsequently translated must be considered.

Information for Replication: Approximate budget was \$50,000 for media and communications support for report, policy brief and other publications as well as coalition coordination. This does not include research support to conduct the initial research. Resources utilized in this project came from university support. Key partners/stakeholders included local and regional MCH partners such as the local and state health departments, local CBOs (especially local doula organizations) and clinical and policy partners, as well as national birth equity organizations (National Birth Equity Collaborative, NBEC) and national racial equity organizations (The People's Institute for Survival and Beyond, PISB).

Adverse Childhood Experiences, Health Risk Behaviors and Health Outcomes in Adults in New Hampshire

Author: Ms. Paulette Valliere

Topic: ACES

Title: Adverse Childhood Experiences, Health Risk Behaviors and Health Outcomes in Adults in New Hampshire

Background: Adverse childhood experiences are experiences that occur in the first 18 years of life. They include emotional, verbal, physical or sexual abuse, neglect, and dysfunctional family conditions or events such as parental separation, mental illness, substance abuse, domestic violence, or incarceration. National studies have demonstrated a link between adverse childhood experiences and health risk behaviors or adverse health outcomes in adulthood.

Study Questions: Does the New Hampshire-specific data show a similar association between adverse childhood experiences and health risk behaviors and/or negative health outcomes in adulthood, as has been demonstrated in other studies.

Methods: Questions about seven adverse childhood experiences were added to the 2016 Behavioral Risk Factor Surveillance System survey instrument to assess childhood trauma in the form of abuse, neglect, and serious household challenges including witnessing violence between adults, living with someone with a drug or alcohol problem, living with someone with a mental illness, and living with someone who had been incarcerated. The frequencies of adult health risk behaviors or outcomes were analyzed and cross-tabulated with the frequencies of individual or grouped adverse childhood experiences, with post-stratification by age.

Results: The New Hampshire-specific analysis shows that adults who experience a range of negative health outcomes and/or engage in unhealthy behaviors often reported more adverse childhood experiences than those who did not. Those who reported no unhealthy behaviors and/or better health outcomes more frequently reported zero adverse childhood experiences. Adverse childhood experiences were more frequently reported among women than men, among persons of lower vs. higher educational attainment, and persons of lower vs. higher income. A high total number of adverse childhood experiences was associated with poor general health, poor mental health, diagnosed depressive disorders, risky behavior for human immunodeficiency virus infection, smoking cigarettes, binge drinking, heavy drinking, and not using a seat belt.

Conclusions: New Hampshire-specific results are consistent with national findings. Having more adverse childhood experiences is associated with having more negative health outcomes in adulthood. Because significant adversity during childhood is associated with a marked and lasting effect on well-being throughout life, the prevention of childhood trauma will have a beneficial effect on children throughout the life-course.

Public Health Implications: Because significant adversity during childhood is associated with a marked and lasting effect on well-being throughout life, the prevention of childhood trauma will result not only in healthier childhoods, but healthier adulthoods, as well. Early childhood programs must be supported to enhance their reach and their impact on the lives of children, which will in turn have a lasting positive effect on the well-being of the entire population.

Positive Childhood Experiences and Adult Mental and Relational Health Status Across Adverse Childhood Experiences Exposure Levels in a Statewide Sample

Author: Dr. Narangerel Gombojav

Topic: ACES

Title: Positive Childhood Experiences and Adult Mental and Relational Health Status Across Adverse Childhood Experiences Exposure Levels in a Statewide Sample

Background: Experiences shape a child's development and adult health. Prevalence and associations between adverse childhood experiences (ACEs) and adult depression, poor mental health (D/PMH) and insufficient social and emotional support have been documented. However, co-occurrence of positive childhood experiences (PCEs) and ACEs and impacts on adult mental and relational health is less known.

Study Questions: The objective of this study is to evaluate associations between adult reported PCEs with adult D/PMH and adult social and emotional support (ASES) across ACEs exposures levels.

Methods: The data used were from the cross-sectional 2015 Wisconsin Behavioral Risk Factor Survey (WI BRFS), a representative, telephone survey of non-institutionalized Wisconsin adults age 18 and older (n =6188). PCEs included 7 positive interpersonal experiences with family, friends and school/community. Standard BRFS ACEs and ASES variables were used. Estimated prevalence and adjusted odds ratio (AORs) were evaluated for: (1) PCEs exposure; (2) having D/PMH by each PCEs, ACEs, and ASES; (3) receiving ASES by each PCEs and ACEs.

Results: Overall, 52.3% of WI adults and 30.5% of those with D/PMH reported 6-7 PCEs. The adjusted odds of D/PMH were 5.37 (95% CI 4.00-7.21) and 2.15 (95% CI 1.67-2.76) times greater for adults reporting 0-2 and 3-5 PCEs versus 6-7 PCEs, respectively. The AORs of D/PMH were significantly higher for negative responses across each PCEs. Stratified regressions showed similar results across ACEs exposure levels. The adjusted odds of D/PMH were 3.57 (95% CI 2.71-4.70) and 2.32 (95% CI 1.79-3.00) times greater for adults reporting "sometimes/rarely/never" and "usually" to getting the social and emotional support they needed versus "always". Associations were consistent across ACEs exposure levels. The adjusted odds adults reported "always" receiving ASES were 3.83 (95% CI 2.89-5.06) and 1.35 (95% CI 1.01-1.81) greater for adults with 6-7 and 3-5 PCEs vs. with 0-2 PCEs, respectively. ACEs exposure level was not associated with reports of "always" on the ASES variable when controlling for PCEs.

Conclusions: PCEs are independently and negatively associated with D/PMH and positively associated with ASES across levels of ACEs. The development of standardized measures of PCEs and other positive health and resilience indicators is important when building the applied science of promoting child and adult flourishing and fostering resilience in the face of adversity.

Public Health Implications: The concurrent assessment of PCEs and ACEs in clinical and human service settings may overall reduce risks for D/PMH and attenuate the negative impacts of ACEs. Promoting PCEs in children and fostering adult social and emotional support is central to healing from trauma and building resilience.

Making Sense of ACEs: Stories of Resilience

Author:

Topic: ACES

Title: Making Sense of ACEs: Stories of Resilience

Prevalence and Associated Risk Factors of Postpartum Depression, Pennsylvania, PRAMS Data 2012-2015

Author: Dr. Nhiem Luong

Topic: Mental Health

Title: Prevalence and Associated Risk Factors of Postpartum Depression, Pennsylvania, PRAMS Data 2012-2015

Background: Postpartum depression (PPD) affects 8-20% of mothers and is associated with adverse infant and maternal outcomes. With an estimate of 140,000 resident births annually in Pennsylvania, understanding PPD epidemiology is important for PPD detection, prevention, and control strategies.

Study Questions: The study aims to identify the prevalence and risk factors associated with PPD in Pennsylvania.

Methods: Weighted 2012-2015 Pennsylvania Pregnancy Risk Assessment Monitoring System (PRAMS) surveillance data were analyzed. Self-reported PPD was determined based on mothers' responses to two questions: "since your baby was born, how often have you felt down, depressed, or sad?" and "since your baby was born, how often have you had little interest/pleasure in doing things?" Mothers responding "always" or "often" to either question were classified as experiencing PPD. Prevalence of PPD was calculated based on the number of mothers experiencing PPD. Descriptive statistics were used to describe mothers' characteristics. Chi-square/Fisher's exact tests were used to determine between-group differences. Risk factors associated with PPD were analyzed using logistic regression models. All analyses were performed using the Stata software (version 13; STATA Corp., College Station, TX), taking into account for the complex survey design. P values less than 0.05 (two-tailed) were considered statistically significant

Results: A total of 4,022 PA mothers with live birth(s) during 2012-2015 were included. The overall prevalence of PPD was 12.1% (515 mothers), it was 12.4% (108), 14.8% (156), 10.9% (127), and 10.1% (124) for 2012, 2013, 2014, and 2015, respectively. Mothers ≤ 19 years were more likely to experience PPD (19.8%) compared with 12.3% and 8.3% among mothers 20-34 and ≥ 35 years, $p < 0.001$. Around 17.5% of black mothers experienced PPD compared with 14.7% and 10.9% among Asian and white mothers, $p = 0.004$. Mothers who were unmarried, had lower educational attainment, or lower income were more likely to experience PPD than their counterparts: 16.9% in unmarried versus (vs.) 8.6% in married mothers; 16.2% in mothers with a high school degree or below vs. 7.4% in mothers with a bachelor/higher degree; and 21.1% with income $\leq \$15,000$ compared with 7.1% in mothers with income greater than \$52,000. Results from multivariable logistic models revealed significant risk factors for PPD including depression before getting pregnant (adjusted odds ratio [aOR]: 3.7, 95% CI: 2.3-6.0), abuse before/during pregnancy (aOR: 3.5, 95% CI: 1.6-7.3), mother's job loss (aOR: 2.1, 95% CI: 1.3-3.4),

extended time away from husband/partner (aOR: 2.3, 95% CI: 1.1-4.5), arguing more with a husband/partner (aOR: 1.6, 95% CI: 1.4-2.4), and husband/partner not wanting pregnancy (aOR: 1.7, 95% CI: 1.1-2.9). Mothers ages ≥ 35 were less likely to report PPD (aOR: 0.6, 95% CI: 0.3-0.9).

Conclusions: PPD is common in Pennsylvania and the prevalence declined during the study period. Mothers who were pregnant at a younger age, black, unmarried, or had low income or low education were more likely to experience PPD. Depression before getting pregnant, abuse before/during pregnancy, job loss, husband/partner not wanting pregnancy, or arguing more with a husband/partner increase the odds of experiencing PPD

Public Health Implications: PPD programs and prevention efforts should be focused on mothers with these characteristics.

The Association Between Breastfeeding and Self-Reported Postpartum Depression Symptoms Among Rhode Island Mothers

Author: Georgiana McTigue

Topic: Mental health

Title: The Association Between Breastfeeding and Self-Reported Postpartum Depression Symptoms Among Rhode Island Mothers

Background: Postpartum depression (PPD) affects between 10-20% of mothers in the United States and is a major cause of morbidity in postpartum women and their infants. Past research has indicated a negative effect of PPD on breastfeeding initiation and duration, and recent evidence suggests that breastfeeding may be protective against PPD.

Study Questions: What is the association between breastfeeding and self-reported postpartum depression symptoms among Rhode Island mothers?

Methods: Data was taken from the 2012-2015 Rhode Island's Pregnancy Risk Assessment Monitoring System (PRAMS). Participants that reported "always" or "often" feeling down, depressed, or hopeless, or having had little interest or pleasure in doing things since giving birth were classified as demonstrating PPD symptoms. Breastfeeding duration was divided into three categories, extended (8+ weeks), curtailed (<8 weeks), or no breastfeeding, and participants were classified based on their reported breastfeeding length paired with infant birth certificate data. 4,424 women with valid information for both PPD symptoms and breastfeeding duration were included in the study. Multivariable logistic regression analyses were used to obtain odds ratios for having PPD adjusted for maternal age, race/ethnicity, and education. All analyses accounted for the weighting and complex sample design of PRAMS.

Results: Preliminary results indicated that the majority of RI new mothers breastfed for at least 8 weeks (63.34%), while a quarter stopped breastfeeding prior to 8 weeks (24.32%). 12.34% of new RI mothers never breastfed. The prevalence of PPD among women who breastfed for at least 8 weeks was 10.7%, compared to 14.3% among mothers who did not breastfeed at all. Among RI mothers, those who never breastfed had 1.48 (95% CI 1.10, 1.99) and those who had curtailed (<8 weeks) breastfeeding had 1.17 (95% CI 0.91, 1.51) the odds of reporting PPD symptoms compared to those with extended (8+ weeks) breastfeeding, after adjusting for age and race/ethnicity. After additionally adjusting for education, those with no breastfeeding had 1.32 (95% CI 0.99, 1.78) and those who had curtailed breastfeeding had 1.10 (95% CI 0.86, 1.42) the odds of reporting PPD symptoms compared to those with extended breastfeeding. Models that adjusted for income had very similar results.

Conclusions: There is an association between breastfeeding and postpartum depression, with those not breastfeeding having the highest odds of postpartum depression. This association persists when

adjusting for age and race/ethnicity. It does not persist when also adding socioeconomic measures or when adding marital status, insurance type, or smoking habits. Limitations included the cross-sectional study design, which prevented determination of causality, and the small sample size, which inhibited the ability to control for all potential confounders.

Public Health Implications: This study suggests a relationship between breastfeeding duration and postpartum depression among Rhode Island mothers and highlights that part of the relationship acts through socioeconomic status, as indicated by education and income. Policy and clinic-level interventions must enable women to address their postpartum mental health needs while meeting their breastfeeding goals. Considering the significant overlap of risk factors for both PPD and suboptimal breastfeeding, it is important that vulnerable mothers are connected to care early on and throughout the perinatal period.

Exploratory Analysis of the Risk of Fatal Overdose for Mothers After Pregnancy in Philadelphia from 2014 To 2017

Author: Monica Sun

Topic: SUD

Title: Exploratory Analysis of the Risk of Fatal Overdose for Mothers After Pregnancy in Philadelphia from 2014 To 2017

Background: In Philadelphia, PA, no corner of the city remains untouched by the opioid epidemic. The number of drug-related overdoses increased significantly in Philadelphia from 628 in 2014 to 1,217 in 2017. While thousands have died from overdose, however, accidental drug poisoning deaths represent only a fraction of the negative health impacts of the drug crisis. Using the Philadelphia Department of Public Health (PDPH)'s estimate of 70,000 heroin users in Philadelphia, it reasonably can be assumed that thousands more have experienced other side-effects of opioid use including job loss, adverse health outcomes, homelessness, and incarceration. The negative impacts of the opioid epidemic also extend to pregnant women and their infants. Indeed, a recent study showed that in Philadelphia, drug-related overdose was the leading cause of death from unintentional injury during pregnancy (Mehta PK, Bachhuber MA, Hoffman R. Am J Public Health. 2016). However, few studies have specifically looked at the risk of overdose mortality among mothers after pregnancy.

Study Questions: The purpose of this study is to analyze how risk of overdose death changes over time post-delivery.

Methods: We conducted a retrospective study on all Philadelphia mothers who gave birth between 2014 and 2017. Mothers associated with Philadelphia birth records were matched to death records for the same period. For mothers that had given birth multiple times during this time frame, the most recent birth was retained and used for analysis. Impact of maternal age, race, time post-delivery and number of prenatal visits on both overdose and all-cause mortality were assessed. The number of prenatal visits was classified based on the mean/median of the dataset.

Results: A total of 94,056 infants were born in Philadelphia from 2014 to 2017. Of the 81,508 mothers who gave birth, 83 died during the study period, and of these, 33 (40%) died from drug-related overdose. While maternal race, age, and time post-delivery (measured in days) were not shown to impact risk of overall mortality or risk of overdose death among mothers who died, a low number of prenatal visits (<7) significantly increased the risk of death (2.354, $p=0.0025$). The low number of prenatal visits did not impact the risk of overdose among those who died.

Conclusions: The risk of death, specifically overdose, did not increase significantly over time post-delivery. While race and age had no significant impact on the risk of mortality, mothers with low

numbers of prenatal visits had more than twice the risk of death compared to mothers with a higher (≥ 8) number of prenatal visits.

Public Health Implications: In the midst of the opioid epidemic, and as the risk of maternal overdose continues to climb, it is critical that at-risk women are connected and retained in care both during and after pregnancy. This will ensure that they are connected with the treatment and social service resources they may need, while allowing their risk of overdose to be carefully monitored.

Trends in Overdose Deaths Among Females Aged 15-44 Years – United States, 1999-2017

Author: Dr. Karin Mack

Topic: SUD

Title: Trends in overdose deaths among females aged 15-44 years – United States, 1999-2017

Background: The drug overdose rate is rapidly increasing among females. Overdose death risk is not uniform across ages, however, and drug use varies by age group. Understanding trends in drug overdose deaths among reproductive-aged females can be informative regarding drug misuse during pregnancy. Approximately half of pregnancies are unintended and opioid use during pregnancy is associated with an increased risk of adverse pregnancy outcomes, including neonatal abstinence syndrome, preterm birth (a key driver of infant mortality), and potentially birth defects. Furthermore, there is growing evidence of the impact of drug misuse on maternal mortality estimates.

Study Questions: How have drug overdose mortality rates and drug class varied for females of reproductive age during 1999-2017?

Methods: Analyses use mortality data from the 1999–2017 National Vital Statistics System. Analyses were restricted to deaths with an underlying cause of death based on the ICD-10 codes for drug overdoses X40–X44 (unintentional), X60–X64 (suicide), X85 (homicide), and Y10–Y14 (undetermined intent). Among these deaths, the type of drug involved was based on ICD-10 codes for antidepressants (T43.0–T43.2), cocaine (T40.5), and opioids (all T40.0–T40.4 and T40.6; prescription opioids T40.2–40.3; heroin T40.1; synthetic opioids T40.4). Deaths involving more than one type of drug were counted in multiple categories.

Results: Over 124,000 females aged 15-44 years died between 1999 and 2017 of a drug overdose and the crude rate increased nearly 250% (from 5.3 to 18.3 per 100,000). The percent change between 1999 and 2017 for drug overdose death rates was greatest for the 25-29 age group (440%). The death rate increased between 1999 and 2017 for all drugs examined, overall and by age group. Notably, the death rate for synthetic opioid-related overdose deaths increased 30% in just one year (2016-2017), and more deaths involved synthetic opioids than prescription opioids in 2016 and 2017. The average age of decedents in this age group declined between 1999 and 2017 (e.g., overdose deaths mean age: 1999: 34.7; 2017: 32.5).

Conclusions: In 2017, on average, 32 women of reproductive age died each day from a drug overdose. Drug overdose deaths among women 15-44 years of age have increased substantially from 1999–2017, primarily driven by prescription opioid deaths among women aged 25-29 years. However, synthetic opioid related deaths have driven recent rate increases.

Public Health Implications: The CDC Guideline for Prescribing Opioids for Chronic Pain recommends that clinicians consider non-opioid therapy for chronic pain management and prescribe the lowest effective dose if prescription opioids are needed. Recommendations specific to women of reproductive

age include discussions of family planning and how long-term opioid use might affect current or future pregnancies. During pregnancy, universal screening for substance use via a verbal validated screening tool should be performed as an initial step in linking women to treatment. Clinicians and public health initiatives should be aware of changing patterns of problematic drug use. Ensuring access to treatment for opioid use disorder among women of reproductive age, especially before, during, and after pregnancy is important in preventing overdose deaths. This in turn may more broadly impact morbidity outcomes for infants born to mothers with opioid use disorders.

Developing a Peer Navigation Intervention to Empower and Connect Women in Opioid Medication-Assisted Treatment to Family Planning Services

Author: Dr. Deborah Rinehart

Topic: SUD

Title: Developing a Peer Navigation Intervention to Empower and Connect Women in Opioid Medication-Assisted Treatment to Family Planning Services

Background: Developing effective reproductive health interventions for women in substance abuse treatment has tremendous potential to improve the health of women and children. In the US nearly half of all pregnancies are unplanned but rates of unplanned pregnancies among women in treatment are much higher (86%). Research that describes the unique needs of this population is essential to develop interventions to reduce this disparity.

Study Questions: This study utilized formative qualitative methods to develop a peer-led navigation intervention designed to educate women on contraceptive options and improve access to family planning services.

Methods: Semi-structured qualitative interviews were conducted with women 18-55 years of age enrolled in two opioid medication-assisted treatment (OMAT) clinics in Denver, CO. Structured interview guides were developed and interviews were digitally recorded, transcribed and coded in Atlas.ti. Codes were derived a priori based on the Health Belief Model as well as inductively. The team compared and contrasted codes to identify themes related to intervention needs. Focus groups were conducted to verify and challenge interview themes and to specify intervention materials.

Results: Twenty-one women participated in the interviews, with an average age of 31 (± 6.5) and range of 20-46. Thirty-eight percent were Hispanic/Latina and 76% were White. Eighty-six percent were on Medicaid and 33% were currently using prescription contraceptives. Despite the high prevalence of prior unplanned pregnancies (76%), most participants were ambivalent and/or expressed a lack of control around their ability to prevent a pregnancy. They did not feel that they were at risk and if a pregnancy happened, it was not a huge concern. Additionally, there was a general lack of knowledge about birth control methods and many myths about the side effects, especially around long-acting reversible methods. Few participants reported receiving prior comprehensive education about sexual health and birth control methods besides condoms, and many conveyed poor or no communication within the treatment clinic about these topics. There was an overwhelming distrust of the medical system, particularly related to family planning, often as the result of feeling stigmatized by providers. Three focus groups (N=16) confirmed interview themes and were used to develop a contraceptive brochure. The developed brochure utilized the "One Key Question" to frame the information and

emphasize choice. The finalized intervention was manualized and included two sessions. Each session utilized Motivational Interviewing techniques to support women with pregnancy goal-setting, understanding available contraceptive methods and actively connecting them to services. Intervention engagement data as well as recommendations on structures and support for a peer navigator position will also be presented.

Conclusions: Our findings suggest that women in OMAT have knowledge gaps about effective contraceptive options, low risk perception for pregnancy, and high distrust of the medical system. Using a peer or someone with similar addiction experience, to help them navigate the healthcare system was greatly endorsed.

Public Health Implications: Our study suggests it is important to incorporate patient centered, trauma-informed, targeted sexual health education and navigation to healthcare services within substance use disorder treatment settings.

Impact of CALM Service Learning Group on Medical Student Perspectives on Substance Use Disorder in Pregnancy: A Pilot Year

Author: Ms. Julia Krumholz

Topic: SUD

Title: Impact of CALM Service Learning Group on Medical Student Perspectives on Substance Use Disorder in Pregnancy: A Pilot Year

Issue: Cuddling Assists in Lowering Maternal and Infant Stress (CALM) is a service learning group established in November 2016 at Boston University School of Medicine (BUSM) and Boston Medical Center (BMC) to address perinatal morbidity of Neonatal Abstinence Syndrome (NAS). CALM aims to decrease rates of pharmacologic intervention for NAS via cuddling when caregivers are unavailable. This study assesses the impact of CALM on first year medical student attitudes regarding substance use disorder (SUD) in pregnancy.

Setting: The study took place at Boston University School of Medicine (BUSM) and Boston Medical Center (BMC). The targeted populations were medical students and infants diagnosed with NAS as well as impacted families.

Project: First year medical students involved in CALM attended a one-hour orientation, two-hour cuddling shifts per month, and two lectures regarding addiction and substance use during pregnancy. They were contacted via email six months after initiation of CALM to complete an optional, anonymous survey regarding their attitudes on substance use, pregnancy and addiction. Survey results from volunteers (n=21) were compared to medical students who are not involved in CALM (n=14). Additional data was collected as part of a broader project to evaluate the effects of non-pharmacologic care on infants. Nursing staff documented cuddler presence (n=150) in the electronic health record.

Accomplishments/Results: Overall, we found that this type of service-learning group not only reduces health disparities for the population served, but also positively impacts volunteer students' attitudes towards individuals with OUD and comfort with clinical competencies. We hope that these findings encourage other medical schools to promote this type of learning with the goal of creating future physicians who are compassionate, competent, and able to navigate sensitive issues thoughtfully.

Barriers: Our study was limited by small sample size, short study duration, and bias from self-selection between volunteers and non-volunteers. In the implementation of this program, we experienced difficulties with scheduling due to variability in need. We began by scheduling medical students in early morning and evening shifts as caregivers would least likely be available at those times and adjusted shifts based on feedback. Additionally, we educated NICU staff to increase use of student volunteers.

Lessons Learned: Chi-square analysis of survey responses showed that volunteers more strongly agreed that women with OUD can be good mothers and felt less angry towards individuals with OUD than non-

volunteer students ($p < 0.05$). Volunteers were more comfortable providing compassionate care to infants with NAS, talking to their peers about substance use, and using appropriate language to ask patients about their substance use ($p < 0.05$). We implemented matched participant analysis with pre and post-surveys for subsequent year. We found that medical students participating in service learning programs promoting non-pharmacological interventions for infants diagnosed with NAS had increased comfort levels and compassion towards mothers with substance use disorders compared to their peers. Additionally, babies who were cuddled were found to have a significant reduction in both length of hospital stay and opioid treatment. Overall, this service learning program has dually benefitted the healthcare system by creating more socially conscious medical students as well as improving outcomes for infants with NAS.

Information for Replication: We hope other institutions will adopt this service learning program.

Decreasing Family Planning Caseload Analysis Among Medicaid Clients in South Carolina

Author: Dr. Linga Murthy Kotagiri

Topic: Family planning

Title: Decreasing Family Planning Caseload Analysis Among Medicaid Clients in South Carolina

Background: South Carolina's Family Planning (FP) program provides high quality, low or no-cost, reproductive health care to women, men, and teens through its 57 Department of Health and Environmental Control (DHEC) clinics located across the state. FP is a public health preventive service that assists individuals in achieving their desired number and spacing of children through the provision of affordable and voluntary services and education. The DHEC FP caseload peaked in State Fiscal Year (SFY) 14-15 but has been steadily declining since. The purpose of this study is to investigate the FP trends and possible reasons behind the decreasing DHEC FP caseload of female Medicaid clients 15-44 years of age.

Study Questions:

1. Are there any trends in 'clinic drop out' versus 'contraceptive drop out' rates?
2. Is there an unmet family planning need among women in SC?

Methods:

1. Conduct a market share analysis to compare the proportion of female Medicaid clients (aged 15-44) that received FP services from SC DHEC, FQHCs, and private providers in SFY14-15 to the market share in SFY15-16, SFY16-17, and SFY17-18.
2. Conduct a descriptive analysis of female Medicaid clients that used FP services at DHEC clinics during SFY14-15 following their FP service patterns for the next three SFYs. The types of FP services and contraceptive methods received at the initial visit will be examined, and we will investigate the future patterns of FP services. For those women who did not receive a long-acting reversible contraceptive method in SFY14-15, we can ascertain if their needs were being met by other providers in subsequent years. We will also examine the characteristics of initial DHEC clients who did not receive any FP services in subsequent years.

Results: Over the study period, the distribution of Medicaid clients seeking FP services at DHEC clinics decreased from 77% to 61% and increased from 24% to 42% for private providers. The prescribed contraceptive method decreased from 38.9% to 3.8% for implants, decreased from 30.1% to 6.9% for pills, and decreased from 18.5% to 12.1% for Depo. Additional data on the demographic characteristics of FP service patterns will be presented.

Conclusions: There was a significant drop in caseload for DHEC clinics and a significant increase for private providers among Medicaid clients seeking FP services during the study period. Significant

declines were noted for implants, pills, and Depo, but no such change was seen for IUDs as the preferred type of contraceptive use.

Public Health Implications: A better understanding of the patterns and preferences of FP services provided to SC reproductive-age women, we will be better able to determine the true FP needs for DHEC clients, allowing for better planning and allocation of resources

Utilizing Contraceptive Care Provision Measures To Understand the Quality of Health Care Delivered to Women At Risk of Unintended Pregnancy

Author: Dr. Melissa Goldin Evans

Topic: Family planning

Title: Utilizing Contraceptive Care Provision Measures To Understand the Quality of Health Care Delivered to Women At Risk of Unintended Pregnancy

Background: Women spend much of their reproductive lives trying to avoid pregnancy, yet nearly one out of every two (45%) pregnancies in the United States is unintended. Unintended pregnancies are associated with adverse health and social outcomes for the infant and mother. Use of most and moderately effective methods of contraception (sterilization, intrauterine devices, implants, the pill, injectables, patch, ring, and diaphragm) can reduce the risk of unintended pregnancies. However, contraceptive uptake varies by patient demographics and access barriers. Most of our knowledge about contraceptive use among women at risk of unintended pregnancy comes from retrospective data collected from surveys or interviews, data subject to recall and social desirability biases. Objectively examining contraceptive uptake by patient demographics could elucidate access inequalities. This study is the first to date to use claims data to investigate patient factors associated with the uptake of the most and moderately effective methods of contraception using the contraceptive care provision measures. The National Quality Forum (NQF) endorsed these measures in 2016.

Study Questions: This study sought to determine which patient characteristics were associated with uptake of the most and moderately effective contraception methods.

Methods: This retrospective repeated cross-sectional study examined contraceptive uptake among Louisiana women with Medicaid at risk of unintended pregnancy from 2013-2015. The NQF contraceptive provision measures were expanded upon by extracting additional patient information available in claims data (age, race, postpartum status, and urban/rural location). Associations between patient characteristics and contraceptives were analyzed with bivariate and logistic regression analyses.

Results: Among the 726,676 women at risk of unintended pregnancy, two-thirds did not receive contraception. Postpartum status and age had the strongest associations with contraceptive use ($F=11,587.0$ and $F=4,189.5$, respectively). Women who were postpartum in the measurement year were more than twice as likely to use contraception than non-postpartum women ($OR=2.46$). Compared to 20-24 year olds, contraceptive use was more likely among 18-19 year olds ($OR=1.60$) and less likely among 15-17, 30-34, 35-39, and 40-44 years old ($ORs \leq 1.50$) in contraceptive use between 20-24 year olds and 25-29 year olds, nor by patient race or patient location in an urban or rural parish.

Conclusions: This study demonstrated that the performance measures for contraceptive care could be used as a basis for gleaned more information about contraceptive use among certain populations.

Postpartum status had the strongest influence on contraceptive uptake. Postpartum women may be motivated to use most or moderately effective methods to prevent a rapid repeat pregnancy and may have greater access to the healthcare system during pregnancy and for 60 days postpartum. Variations in use by age may reflect access issues or different age-related reproductive goals.

Public Health Implications: These results can be used to improve the quality of health care for reproductive age women with Medicaid at risk of unintended pregnancy. Healthcare providers to women of reproductive age should use every interaction as an opportunity to discuss reproductive goals and help them achieve their goals. Policies should support routine comprehensive contraceptive counseling, and all methods of contraception should be easily accessible.

Assessing Long-Acting Reversible Contraceptive Uptake By Women At Risk Of Unintended Pregnancy Using the Contraceptive Care Provision Measures

Author: Dr. Melissa Goldin Evans

Topic: Family planning

Title: Assessing Long-Acting Reversible Contraceptive Uptake By Women At Risk Of Unintended Pregnancy Using the Contraceptive Care Provision Measures

Background: Unintended pregnancies, occurring in nearly one out of every two (45%) pregnancies in the United States, are associated with adverse health and social outcomes for the infant and the mother. The risk of unintended pregnancies is significantly reduced when women use long-acting reversible contraceptives (LARCs), namely intrauterine devices and implants. LARCs have higher user satisfaction and continuation rates than non-LARCs but may be more difficult to access than other methods. Thus, disparate rates of LARC use among contraceptive users may reflect access issues for certain women. To objectively assess LARC uptake among contraceptive users, this study is the first to date to use claims data to investigate patient and provider factors associated with LARCs using the contraceptive care provision measures. The National Quality Forum (NQF) endorsed these measures in 2016.

Study Questions: This study sought to determine which patient and provider characteristics were associated with uptake of LARCs among women at risk of unintended pregnancy that were using most or moderately effective contraceptive methods (sterilization, intrauterine devices, implants, the pill, injectables, patch, ring, and diaphragm).

Methods: This retrospective repeated cross-sectional study used the NQF contraceptive provision measures as a foundation for assessing LARC use among Medicaid-enrolled contraceptive users at risk of unintended pregnancy in Louisiana from 2013-2015. The measures were expanded upon by extracting additional patient (age, race, urban/rural residence, postpartum status) and provider (urban/rural location, specialty) information available in the Louisiana Medicaid claims data. Patient and provider characteristics associated with LARC provision among contraceptive users were analyzed with bivariate and logistic regression analyses.

Results: Among contraceptive users at risk of unintended pregnancy from 2013-2015 (n=241,983), 13% used a LARC. Adjusting for other covariates within the population using contraceptives, postpartum status (F=331.8) and provider specialty (F=289.6) had the strongest relative impacts on LARC uptake. The odds of LARC use was 50% more likely among postpartum women than non-postpartum women (OR=1.50). As expected, no specialty was more likely than OB/GYNs to provide LARCs to their contraceptive-using patients (ORs1.50).

Conclusions: Postpartum status and provider specialty strongly influenced uptake of LARC among contraceptive users. This study demonstrated that the performance measures for contraceptive care could be used as a basis for gleaning more information about LARC use in certain populations.

Public Health Implications: Healthcare policies should support equitable availability and accessibility of all methods of contraception, including LARCs, to reproductive-aged women at risk of unintended pregnancy. Using claims data to objectively understand factors associated with LARCs may help improve the quality of contraceptive care to populations at risk of unintended pregnancy.

Health Burden of Chlamydia Linked to Risk-Exposure Rather than Risk-Response among African Americans in a High Infant-Mortality Community

Author: Dr. Laura Bauler

Topic: Family planning/sex

Title: Health Burden of Chlamydia Linked to Risk-Exposure Rather than Risk-Response among African Americans in a High Infant-Mortality Community

Background: Acquisition of a sexually transmitted infection (STI) during pregnancy increases chances of a poor birth outcome (PBO) including, preterm birth, low-birth-weight or infant infection. The most common bacterial STI worldwide is Chlamydia trachomatis. Infection is largely asymptomatic and prevalence of infection is increasing. Females between the ages of 15-24 who are African American currently have the highest rates of Chlamydia. In communities with large racial birth disparities numerous variables contribute to birth outcomes, including STIs, however it is unclear if similar to the burden, risk posed by STIs also varies by race.

Study Questions: Does the increased Chlamydia prevalence in the African American population impact risk of PBO compared to Caucasian woman?

Methods: A retrospective cohort study using birth-death vital records between 2008-2014 in Kalamazoo County, Michigan was conducted. The impact of Chlamydia infection on birth-weight, a measure of PBO, was modeled using multiple linear regression, controlling for race (of Color vs. White). The full model was adjusted for demographic factors, substance abuse, and numerous health related variables.

Results: Out of 21,043 singleton births, women of Color had a rate of Chlamydia infection of 10.45% (N=496/ 4746) while the rate for White women was 3.13% (N=509/16211). Chlamydia infection increased the chances of a PBO, with an OR of 1.82, 95% CI 1.55, 2.11, compared to uninfected individuals. In the adjusted model, accounting for factors that impact infant birth weight, Chlamydia remained a significant factor, reducing weight by 50.99g, however this did not vary by race. The nature of the data, limits this analysis, minimal data regarding STIs is provided in the birth record, thus the accuracy of the information, and details about timing or treatment of infection are not available. Additionally, the information was sourced from a single county, and the data was pooled over seven years, however due to the size of the dataset we believe these limitations minimal affect the generalizability of the data.

Conclusions: This study shows that despite the higher prevalence of Chlamydia infection in the African American community, infection poses a similar risk to all women. Infants born with lower birth weight have increased risk of serious health problems, most often due to prematurity. However, a number of

additional risk factors negatively contribute to birth weight, the most significant in our community is the mother's race, followed by history of a previous PBO.

Public Health Implications: Understanding both the degree that various risk factors contribute to PBOs and the existence of local STI disparities; provides direction for the local healthcare systems and community to intervene in an impactful manner. Reducing the STI burden will improve birth outcomes for all women, while targeting disparities within the community and healthcare system will have a much bigger impact for those at risk.

Evaluation of Texas Hospital Policies for the Prevention of Congenital Syphilis, 2017

Author: Kacey Russell

Topic: Family planning/sex

Title: Evaluation of Texas Hospital Policies for the Prevention of Congenital Syphilis, 2017

Background: Congenital syphilis occurs when a pregnant woman passes syphilis to her baby during pregnancy. Congenital syphilis can cause miscarriage, stillbirth, premature birth and death immediately after birth. Penicillin can be used to treat syphilis in pregnant women and prevent passing syphilis to her baby with a success rate of 98%. Texas had reported 166 congenital syphilis cases at a rate of 41.1 per 100,000 live births in 2017, an increase of 134% since 2016. To address congenital syphilis, national recommendations for treatment and testing have been developed to aid in its prevention. Texas law (Chapter 81.090 of the Texas Health and Safety Code) requires testing for syphilis at the first prenatal visit and during the third trimester (28-32 weeks). If no record of third trimester test results are available, a syphilis test is required at delivery. Any woman who delivers a stillborn after 20 weeks' gestation should also be tested for syphilis. The purpose of this study is to evaluate policies for congenital syphilis prevention at hospitals in Texas.

Study Questions: Do hospitals in Texas have policies and/or standing delegation orders (SDOs) that address testing and treatment recommendations for the prevention of congenital syphilis? Furthermore, what are the implications of the policies in light of recent trends in congenital syphilis?

Methods: We evaluated data from the 2017 Annual Survey of Hospitals, a comprehensive, web-based survey administered by the Center for Health Statistics with the Texas Department of State Health Services. The survey included questions about prenatal care testing, labor and delivery testing, referral of infants to follow-up care, testing and treatment for infants born to women with positive syphilis testing during pregnancy and post-delivery treatment for women with positive syphilis testing at delivery.

Results: Of the 632 hospitals, 70 had outpatient prenatal clinic services and 211 had inpatient delivery services. For hospitals with outpatient prenatal care services, 69% (48/70) indicated they had policies/SDOs for screening for syphilis during the first prenatal visit and 70% (49/70) during the third trimester. Among hospitals with inpatient delivery services, 58% (123/211) reported they had policies/SDOs for screening for syphilis upon admission for delivery and 38% (80/211) if no third trimester result is available. Only 17% (36/211) reported screening for syphilis when a woman delivers a stillborn. For referrals for follow-up care for infants, 27% (56/211) reported policy/SDOs. For testing and treatment of infants born to women with a positive syphilis test during pregnancy and treatment for women post-delivery who tested positive for syphilis upon admission for delivery, 40% (84/211) and 34% (71/211) hospitals reported policy/SDOs, respectively.

Conclusions: The findings from the survey indicate there are significant gaps in hospital policy regarding congenital syphilis prevention. Specific areas for improvement include: maternal and infant testing and treatment and referrals for follow up care for infants.

Public Health Implications: The results show the need for provider education and outreach to hospitals to ensure compliance with recommendations regarding the prevention of congenital syphilis.

Evaluation of Texas Hospital Policies for Prevention of Perinatal HIV Transmission, 2017

Author: Kacey Russell

Topic: Family planning/sex

Title: Evaluation of Texas Hospital Policies for Prevention of Perinatal HIV Transmission, 2017

Background: Perinatal HIV transmission may occur during pregnancy, labor, delivery and breastfeeding. If a mother living with HIV receives antiretroviral (ARV) medication during pregnancy, labor and delivery and the infant receives ARV medication post-delivery, transmission rates may be less than 1%. Since 1999, there have been over 7,000 infants born in Texas to women living with HIV. From 2013 through 2017, there were 18 infants diagnosed with HIV in Texas. While the number of infants diagnosed with HIV seems small, they demonstrate the recurring missed opportunities in preventing perinatal transmission of HIV. To address perinatal HIV, national recommendations for treatment and testing have been developed to aid in its prevention. Texas law (Chapter 81.090 of the Texas Health and Safety Code) requires testing for HIV at the first prenatal visit and during the third trimester. If no record of third trimester test results are available, an expedited test for HIV must be conducted at delivery. The purpose of this study is to evaluate perinatal HIV prevention policies at hospitals in Texas.

Study Questions: Do hospitals in Texas have policies and/or standing delegation orders (SDOs) that address testing and treatment recommendations for the prevention of perinatal HIV transmission? Furthermore, what are the implications of the policies in light of recent trends in perinatal HIV?

Methods: We evaluated data from the 2017 Annual Survey of Hospitals, a comprehensive, web-based survey administered by the Center for Health Statistics with the Texas Department of State Health Services. The survey included questions about prenatal care testing, labor and delivery testing, antiretroviral medication administration for mothers and infants and referral of infants to follow-up care. Our target audience for the survey was hospitals that had either outpatient prenatal clinic services or inpatient delivery services.

Results: Of the 632 hospitals, 70 had outpatient prenatal clinic services and 211 had inpatient delivery services. For hospitals with outpatient prenatal care services, 73% (51/70) indicated they had policies/SDOs for screening for HIV during the first prenatal visit and 71% (50/70) during the third trimester. Among hospitals with inpatient delivery services, 53% (112/211) reported they had policies/SDO for screening for HIV upon admission for delivery and 47% (99/211) if no third trimester result is available. For ARV medication administration for women living with HIV and their infants, 37% (79/211) hospitals reported having a policy/SDO. Only 29% (61/211) indicated having a policy/SDO to provide ARV prophylaxis for infants upon discharge. For referrals for follow-up care for infants, 31% (66/211) reported policy/SDOs.

Conclusions: The findings from the survey indicate there are significant gaps in hospital policy regarding perinatal HIV prevention. Specific areas for improvement include: maternal testing, ARV medication for

mothers and infants and referrals for follow up care for infants.

Public Health Implications: The results show the need for provider education and outreach to hospitals to ensure compliance with recommendations regarding the prevention of perinatal HIV transmission.

Assessing Educational/Developmental and Parent Support Services Received by Families of Children with Spina Bifida

Author: Kristen St. John

Topic: Development

Title: Assessing Educational/Developmental and Parent Support Services Received by Families of Children with Spina Bifida

Background: The Rhode Island Birth Defects Program (RIBDP) is mandated by state law to assure children with birth defects receive appropriate and timely preventative, specialty, and other healthcare services up to the age of five. To accomplish this, the RIBDP conducts service assessments with families of children with specific birth defects up to the age of 5. Frequent analysis of service assessment data is important in determining where there are gaps in referral and receipt of services and in implementing improvements in the service assessment process.

Study Questions: Which parent support and educational/developmental services do families of children with spina bifida report being referred to and having received? Do families find these services helpful?

Methods: The analysis examines service assessment findings regarding parent support and educational/developmental services for children with spina bifida. Assessments were conducted from 2011 through 2018 via mailings and interviews with families of children at specialty clinics. Proportions were compared for each support/service. All information was self-reported.

Results: There were 54 completed service assessments for children with spina bifida, with 40 (74%) of them having more than one assessment completed. Forty-nine (91%) of the initial assessments were conducted at specialty clinics. For parent support services, the Visiting Nurses Association (VNA) and Medicaid assistance had the highest referral rates, 87% and 85% respectively. There were fewer referrals to Rhode Island Parent Information Network (RIPIN) (44%) and parent support groups (48%). Families were most likely to receive VNA services (98%) and least likely to receive parent support group services (62%). Of all families who received support services, the majority found them helpful, with Medicaid assistance having the highest satisfaction rate (92%). Families deemed eligible for developmental and educational services were referred to the Children's Neurodevelopmental Center (CNDC) at Hasbro Children's Hospital (98%), Early Intervention (96%), and Special Education (65% of children aged 3 or older). Families who received these educational/developmental services were highly satisfied. All service assessment data were self-reported by families of children with spina bifida and may be subject to recall bias. Some response bias may also be introduced from collecting service assessments via two different methods.

Conclusions: Although there were high referral rates for some parental support and developmental/educational services reported by families of children with spina bifida, there were gaps

identified in referrals for parent support groups, RIPIN, and Special Education services. Among those who were referred to supports and services, there was a high rate of satisfaction with the services received, which supports the need for referrals to these support services. The RIBDP will use the identified gaps to increase future family and provider outreach efforts surrounding available services for families of children with birth defects.

Public Health Implications: The results of this analysis will be used to educate providers about services and the importance of referring families. The RIBDP will also continue to educate families on services and supports when conducting service assessments and will bolster its website to provide more information on available resources to families of children with birth defects.

Does the MCHAT-R Detect Similar Children at Risk for Developmental-Behavioral/Mental Health Problems as Broad-Band Screens Like PEDS?

Author: Dr. Patricia Gellasch

Topic: Development

Title: Does the MCHAT-R Detect Similar Children at Risk for Developmental-Behavioral/Mental Health Problems as Broad-Band Screens Like PEDS?

Background: A recent American Academy of Pediatrics (AAP) survey revealed more than 80% of clinicians use a screen for autism spectrum disorders (ASD), with 74% using the Modified Checklist of Autism in Toddlers (MCHAT)/MCHAT-Revised (MCHAT-R). The AAP recommends administering both broad-band (e.g., Parents' Evaluation of Developmental Status [PEDS]) and narrow-band (e.g., MCHAT-R) screens focused on detecting children at-risk for mental health, behavior, and developmental disorder/delay (MBDD). Yet, use of broad-band MBDD screens is less common: only 50% of pediatricians and fewer family practice providers report use of validated, accurate broad-band screens.

Study Questions: Should narrow-band screening tools (i.e., M-CHAT) be used as a sole approach to early detection of children at-risk for mental health, behavioral, & developmental disorders/delays (MBDD)?

Methods: 197 primary care clinics using PEDS Online participated. PEDS Online is a web-based service focused on identifying MBDD in children 0 to 8 years of age via: a) two broad-band validated MBDD screens, PEDS & PEDS:Developmental Milestones (PEDS:DM); and b) a narrow-band MBDD screen focused on ASD -- either MCHAT or MCHAT-R. From the 231,789 encounters in 2014 through 2016, 16% (N = 37,608) in which children were administered both broad- and narrow-band screens were selected. Children were defined at-risk for MBDD if they received at-risk screen results on one or more broad-band screens and/or on a narrow-band ASD screen.

Results: In 197 clinics over 24 US States, 66% (N=24,992) of screening occurred in pediatric clinics and 34% (N=12,616) in family practices, which included public health/community clinics. Compared to US Census Bureau, the sample resided more in Southern and Northeast States (86% vs 55% nationally) and parents were less likely to be a high school graduate (76% vs 87% nationally). Mean age of children was 24 months (SD = 6.02). Of the 37,608 encounters, 12% (N=4572) of children were identified at-risk for MBDD. Of the 4572 with probable MBDD, broad-band screens identified 73% (N=3332/4572). The MCHAT/MCHAT-R uniquely identified 27% (N= 1240/4572). There was agreement among broad- and narrow-band measures of 22% (N=984/4572). ASD screens, if used alone, identified only 49% of those with probable MBDD (N = 2224/4572).

Conclusions: Although ASD screens contribute uniquely to early identification, such tools do not seem to adequately detect most children at-risk for MBDDs. Use of an ASD screen alone would miss about

51% of children at-risk for MBDDs. MBDD screening should embrace both broad-band and narrow-band measures to best identify children at-risk.

Public Health Implications: Public health professionals are involved in many areas of early intervention and connecting children to quality services. They are also involved in developing and supporting initiative to promote the early identification of children with MBDD. Therefore, they should be informed of the various screening tools that are available as well as how the screening tools perform in identifying children with MBDD. This presentation will help public health professionals gain knowledge of broad vs narrow band screening tools and when and how each of these measures should be used to improve the identification of children with MBDD.

Project LAUNCH (Linking Actions for Unmet Needs in Children's Health) – Building an Early Childhood System of Care

Author: Mrs. Laura Lucas

Topic: Development

Title: Project LAUNCH (Linking Actions for Unmet Needs in Children's Health) – Building an Early Childhood System of Care

Issue: Muscogee County, Georgia is a community rich in resources, but access to these resources for young children and their families is a challenge resulting in poor public health outcomes.

Setting: Muscogee County, Georgia. Children ages 0-8 and their families

Project: Project LAUNCH is a 5 year federally funded (SAMHSA - Substance Abuse and Mental Health Services Administration) grant with the goals of expanding early identification and linkage of children at-risk for social-emotional and behavioral delays by providing support to their parents and building a common infrastructure between child serving agencies at the state and local levels to create an early childhood system of care. The Georgia Department of Public Health is the lead Grantee and the Georgia Department of Behavioral Health and Developmental Disabilities serves as a partner agency. Evaluation was completed by the Georgia State University Health Policy Center.

Accomplishments/Results: Screening and assessments have increased in key areas of the system such as schools, doctor's offices, early care and education centers and other community programs which link young children to services and parents to resources. Mental/behavioral health services will be available at schools due to a grant award made possible by the partnership of the school district and local community service board that Project LAUNCH supported. Trainings in early childhood social/emotional development have been provided to the workforce and parents in the community. Project LAUNCH families created a Federation of Families Chapter in Muscogee County to educate and support parents. The LENA Start Program, supported by Project LAUNCH, began providing parents tools to support early language nutrition and healthy parent-child attachment. The Young Child Wellness Coalition, a group of community key stakeholders, are advocating and implementing change in the community to better connect and link families to services.

Barriers: The project is currently in year 5 of 5 and funding and while many aspects of the project have been sustained, there is more work to be done. Part of the sustainability of this project is to share our lessons learned with other communities for replication.

Lessons Learned: Partnerships at the local and state levels are key to building an early childhood system of care!

Information for Replication: Project LAUNCH can share specific strategies on how to engage

community members in building a young child wellness coalition through early childhood screening, assessment, integration of behavioral health screening into primary care practices, mental health consultation in schools and early childhood education centers, home visiting, and strengthening parent involvement by supporting parental leadership and community involvement.

Family Burden among Children who have Deafness or Hearing Problems (D/HP) - 2016-2017 National Survey of Children's Health

Author: Mrs. Jessica Minnaert

Topic: Development

Title: Family Burden among Children who have Deafness or Hearing Problems (D/HP) - 2016-2017 National Survey of Children's Health

Background: According to the World Health Organization, nearly 9% of all hearing loss occurs in children. This hearing loss is often accompanied by challenges that families must learn to navigate services such as healthcare because these children may have more complex needs (i.e. additional conditions) when compared to children without deafness or other hearing complications. This study examines family perspectives of impact, unmet needs, satisfaction with care services, and caring for their children with deafness or other hearing problems.

Study Questions: Do families of children with D/HP, have more trouble accessing care and services than CSHCN that do not have deafness or children that have neither D/HP or other SHCN? Does having a medical home reduce family burden for families with children that have D/HP? If families are not receiving what they need from caregivers, what can we highlight for program/policy pertaining to need for improvement? How does having co-morbid conditions and difficulties make D/HP less likely to have positive health outcomes?

Methods: We used data from 2016-2017 National Survey of Children's Health (NSCH) to compare children, aged 0-17 years, reported to have D/HP, with children that have other SHCN (excluding D/HP), and other children that do not have D/HP or SHCN. We used bivariate and multivariate analysis to examine access, unmet needs, support services, medical home, and family impact.

Results: The NSCH estimates that 934,000 children have D/HP, a prevalence of 130 per 10,000 children aged 0-17 years. Compared with other children that did not have D/HP, children with a D/HP were more likely to have care that is not family centered (26%), forgone care (16%), and unmet needs for care coordination (28%). Families of children with D/HP were also more likely to report having problems paying for the child's medical care (31%), reduced or stopped working or avoided changing jobs (26%), and spent more than 10 hours per week providing or coordinating care (20%). Adjusted logistic models confirm these findings.

Conclusions: Children with D/HP are significantly more likely to have issues regarding access to care and unmet needs, and their families have greater financial, time or employment burdens compared to other children without D/HP or other SHCN. Access to a medical home may reduce these burdens.

Public Health Implications: Results of this study could inform policy and program improvement, as well as improve health care provider understanding of family burden. Health care providers could use this information to improve parent/provider communications and allow for more parental education as it pertains to their child's special health care need(s).