ID: 59103126
Birth Defects and NAS, Injury-Drug Overdose - Host Site Description
The Ohio Department of Health

Assignment Location: Columbus, US-OH
                         The Ohio Department of Health
                         Bureau of Child and Family Health

Primary Mentor: Angela Allen, PhD, MPH
                         Epidemiology Investigation Supervisor
                         Ohio Department of Health

Secondary Mentor: Rachel Blayney, MPH
                         Epidemiology Investigation Supervisor
                         Ohio Department of Health

Work Environment
Hybrid

Assignment Description

The fellow will be placed within the Data and Surveillance Section of the Bureau of Child and Family Health (BCFH). The Bureau of Child and Family Health is led by Dyane Gogan Turner, bureau chief. The Bureau is divided into six sections: Data and Surveillance, the Special Supplemental Nutrition Program for Women; Infants and Children (WIC); Complex Medical Help (CMH), Ohio's program for children and young adults with special health care needs; Child and Specialty Health; Women and Family Health Services; and the Chief's Office. The WIC program improves pregnancy outcomes by providing or referring eligible women to support services necessary for full-term, pregnancies; reduces infant mortality by reducing the incidence of low birth weight (infants under 5.5 pounds are at greater risk of breathing problems, brain injuries and physical abnormalities), and provides infants and children with a healthy start in life by improving poor or inadequate diets. CMH links families of children with special health care needs to a network of quality providers and helps families obtain payment for the services their children need. The Child and Specialty Health Section houses Comprehensive Genetics Services, Early Hearing Detection & Intervention, Newborn Screening for Critical Congenital Heart Disease, Sickle Cell Services and Asthma Programs. The Women and Family Health Services section administers programs such as Adolescent Health, Reproductive Health and Wellness, Oral Health, School Nursing & Early Childhood Health. The Title V Maternal and Child Health Block Grant is a primary funding source for the programs in the bureau, but the bureau administers multiple federal grants and initiatives funded by state general revenue funds.

The BCFH Data and Surveillance Section is composed of epidemiologists, researchers, health services policy analysts and public health consultants. The section is led by an epidemiology project manager. The section administers the Youth Risk Behavior Survey/Youth Tobacco Survey, Child Fatality Review (CFR), Fetal & Infant Mortality Review (FIMR), and Birth Defects surveillance programs. The Data and Surveillance team provides scientific support and guidance to facilitate data-driven decision-making needed to inform, implement, and evaluate Title V Maternal and Child Health programs and the programs within the BCFH.

The implementation of the Part C Early Intervention (EI) Program (Help Me Grow, (HMG)), the Maternal, Infant & Early Childhood Home Visiting Program, Maternal Health Innovation and the Ohio Pregnancy Assessment Survey (OPAS) reside in the Department of Children and Youth (DCY). The Department of Children and Youth is a new state agency that re-organizes and combines programs and initiatives from across other state agencies. The DCY goals are to reduce infant mortality; reduce learning gaps by ensuring continuation of care across the spectrum of ages, stages, and services; reduce Involvement with child welfare by proactively helping provide families with the resources and support needed before a crisis within the family occurs. The fellow will be able to collaborate with DCY on projects/programs of interest.

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The primary focus for the fellowship position will be surveillance and evaluation for the Birth Defects Surveillance Program. The fellow will also work closely with the Title V MCH data and program teams, and the Bureau of Health Improvement and Wellness BHIW). During the onboarding process, the fellow will spend time with their mentors and colleagues in the BCFH to become familiar with the goals, objectives, activities, and performance measures of the birth defects surveillance program and related Title V MCH programs. Access to surveillance and vital statistics databases, data platforms, network drives and resources, and statistical and mapping software will be granted and thorough training on their use and functionality will be provided.

The day-to-day work for this position will consist of conducting analyses on a variety of related data sets and determining gaps in data reporting, conducting trend analysis of birth defects data, identifying characteristics of higher risk populations, assisting with the preparation of data reports for submission to federal partners, monitoring outcomes, and leading linkage and comparison of birth defect system data with partner groups' data for specific birth defects, health outcomes, healthcare access, social determinants of health, and other relevant information to enhance birth defects surveillance. This work will include coordinating with IT developers on projects related to multiple databases. Throughout this analytical work process, the fellow will collaborate with internal and external colleagues in various ODH bureaus, multiple state agencies, community partnerships, and participate in collaboratives and advisory council meetings. The fellow will also assist with data report development and dissemination and present findings to internal and external colleagues, and evaluation of the data to assist in determining strategies and activities to target and provide information to program services and at-risk communities.

Describe Statistical and Data Analysis Support, Such as Databases, Software, and Surveillance Systems Available to the Fellow

Throughout the BCFH, there is considerable subject matter expertise in the areas of epidemiology, evaluation, data analysis, surveillance systems, and data linkages. The fellow will collaborate with these experts routinely as they work on their assigned projects. Software licenses for SAS, Tableau, and Clear Impact will be provided, and access will be granted to the Ohio Vital Statistics database and the Maternal and Child Health Information Database System (MCHIDS), which serves as the birth defects surveillance system. Birth defects surveillance data and data from other programs and agencies with whom the fellow collaborates on their projects will be made available to the fellow on the Innovate Ohio Platform (IOP) which uses SQL programming language to access and link datasets from across Ohio's public health network.

Under the IT Governance structure, IT development staff are cross trained to provide application support and maintenance to systems throughout the department. The department's IT system architect ensures that any new development uses the best platform and approach and can be supported long term by the department. There is a state-wide IOP development team that works closely with the ODH IT development staff and the ODH Chief Data Officer, Jonathan George.

<center>Projects</center>

Surveillance Activity Title: AN EVALUATION OF REFFERRALS TO HELP ME GROW AND EARLY INTERVENTION (EI) PROGRAMS THROUGH OHIO'S STATE BIRTH DEFECTS SURVEILLANCE PROGRAM

Surveillance Activity Description:
Ohio Connections for Children with Special Needs (OCCSN) is Ohio's statewide population-based birth defects surveillance program. The OCCSN program includes activities in four major areas: surveillance of birth defects, analysis of surveillance data, referrals to early intervention services, and prevention and awareness activities.

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Collection of birth defect data is important for public health action including targeting prevention strategies and facilitating referrals to services such as Early Intervention (EI). The Ohio Revised Code 3705.30 authorizes the Director of Health to require hospitals, physicians and freestanding birthing centers to report children from birth to five years of age with certain reportable birth defects to the Ohio Department of Health (ODH). Approximately 130 hospitals, including birthing, and children's hospitals, report cases to ODH through the OCCSN data system, a part of the larger Maternal and Child Health Information Data System (MCHIDS). Neonatal Abstinence Syndrome (NAS) and Fetal Alcohol Syndrome (FAS) are both reportable conditions in Ohio, in addition to major structural anomalies recommended for birth defects surveillance by the CDC.

The ODH has passively collected reports of children 0-5 years of age with reportable birth defects from late 2007 to present, with the first full year of birth defects reporting in 2008. In 2012, ODH embarked on a project to enhance birth defects surveillance by including a follow-up component to validate the passively reported birth defects cases for certain birth defect reports. The OCCSN User Guide is updated each time a new defect is added to the case confirmation list to provide genetic counselors procedures for validating medical records with case definition criteria from the National Birth Defects Prevention Network (NBDPN) Surveillance Guidelines.

For those children with a confirmed birth defect case, the OCCSN system automatically sends an email with the child's/parents contact information to the Help Me Grow (HMG) Central Intake Coordination Site in the child's county of residence. Per Ohio Administrative Code and Part C Early Intervention (EI) federal regulations, local HMG programs are required to follow-up and communicate with all contacts received within three business days. The HMG program is explained to parents, and if they consent, a referral is made, and an early intervention service coordinator is identified to work with the child/family.

The proposed surveillance project will track referrals from the original hospital report of a birth defect to ODH BCFH, through the case confirmation review by ODH-funded genetic centers and subsequent referral process to health services through the Early Intervention (EI) program. Currently, only the birth defects reported by a hospital with a funded genetics center are reviewed for case confirmation due to limitations on the ability of Genetics Centers to review records from reporting hospitals outside of their health system. There are eight funded genetic centers in Ohio, housed at the major children's hospitals in the state. This project aims to describe the population whose birth defect reports are not reviewed for confirmation and referral and compare health outcomes and access to care for this population to those who are reviewed and referred to HMG by one of the genetic centers. BCFH will work with the Child and Specialty Health and CMH programs, local health departments and medical providers to support referral mechanisms with local public health nurses and develop additional strategies to enhance referrals and access to care.

Surveillance Activity Objectives:
- Coordinate with Part C Early Intervention (EI) within the Department of Children and Youth (DCY) to assess the level of birth defect reports, referrals, and linkages to health services by region, county type, demographics, birth defect type, and other factors.
- Identify areas where additional resources are needed to provide referrals and linkages to health services.
- Evaluate the timeliness of review for confirmation of birth defects by Genetic Centers
- Evaluation of the process of children automatically referred to early intervention from OCCSN
    - Number auto emails sent to HMG.
    - Number children referred receiving HMG services.
    - Number children w/birth defects receiving EI services.
    - Gender.
    - County type.
    - Race.
    - Ethnicity.

- - o   Primary language.
  - o   Mother's education level.
  - o   Insurance type (Medicaid/Non-Medicaid).
  - o   WIC status.
- Outcome information from EI at exit from EI.
- Dissemination activities.

Surveillance Activity Impact:
1) Improved birth defects surveillance capacity, data quality, birth defects epidemiology, and evaluation;   2) Improved birth and health outcomes; 3) Improved quality and duration of life for individuals with birth defects; 4) Increased ability to support the primary and secondary prevention of birth defects; 5) Increase capacity for the State of Ohio to provide targeted messages to various audiences about birth defects.

Surveillance System Evaluation Title: EVALUATION OF AN INNOVATIVE STATEWIDE DATA PLATFORM TO ANALYZE OHIO BIRTH DEFECTS SURVEILLANCE DATA

Surveillance System Evaluation Description:
The BCFH is currently working with ODH Office of Management Information Systems (OMIS) and Data Modernization staff on a project to apply fixes and enhancements to the birth defects surveillance system, MCHIDS. The implementation of the project proposal is in the context of the transition to the Innovate Ohio Platform (IOP) for the analysis of birth defects data. The IOP platform provides a standardized framework for housing and merging datasets from all state programs for analysis and evaluation. Alation database software is being used to create comprehensive metadata documentation for each dataset on the IOP platform. It includes descriptions for each variable in the data tables, tags for each variable to facilitate database searches, endorsements, and warnings for each variable to indicate analytical use and reliability, standard SQL code used to join key tables for analysis, and contact information for subject matter experts who can be contacted with questions about each database.

MCHIDS currently only has the ability to produce aggregate level reports and export of line level data directly from the system is not possible. The individual level data is currently housed on a SQL server that lacks user documentation for the hundreds of SQL tables needed for analysis that comprise the database. The move to the IOP and documentation of the metadata provides the opportunity to validate data in MCHIDS and detect and implement needed fixes and enhancements that improve the accuracy and timeliness of reporting and creates additional functionality to evaluate outcomes. While utilizing the IOP for analysis of the birth defects surveillance data and other state datasets, the fellow will have the opportunity to develop their skillset to include SQL coding, data system documentation, data validation, merging and analysis of large, complex datasets, and creating analysis plans and standard analysis protocols.

Surveillance System Objectives:
- Curate the data and enhance the meta data for the MCHIDS database on the IOP.
- Create SQL programs to accurately export data from the IOP and compile and validate data for the NBDPN Annual Report.
- Assist with the creation of SQL programs to link data sets from other state of Ohio programs and agencies for analysis.
- Evaluate the capacity of the system to track referrals for health services and linkage to healthcare services outcomes. Recommend system enhancements or fixes needed to improve system performance and functionality.
- Assist with creating protocols for data analysis and reporting of birth defects data using the IOP.
- Support the work of the Fellowship Surveillance Project to track referrals and linkage to services for families of babies born with birth defects.

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Surveillance System Impact:
- Improved birth defects surveillance capacity, data quality, birth defects epidemiology, and evaluation.
- Improved documentation of database variables and analysis procedures that support increased efficiencies.
- Decreased impact of staff turnover on the provision of high-quality data analysis and evaluation.

Major Project Title: UTILIZATION OF OHIO MEDICAID, VITAL STATISTICS, AND BIRTH DEFECTS DATA TO IMPROVE SERVICE DELIVERY AND INFORM HEALTH EQUITY INITIATIVES

Major Project Description:
The OCCSN program proposes to explore enhancing case ascertainment and data quality through partnership with the state's Medicaid Program to use Medicaid claims data. Data matching and comparisons will be conducted to determine gaps in data reporting and explore the feasibility of routinely matching the Medicaid dataset to conduct enhanced surveillance that will increase referrals for services.

An additional potential source of case ascertainment is Vital Statics data. Birth certificate data contains reports of a limited number of birth defects which can be matched with the OCCSN dataset to identify any unreported birth defect occurrences. Linkage of vital statistics death certificate data with OCCSN case records can evaluate cause of death listed on the death certificate to identify unreported birth defects and to identify trends for children who died of birth defects. A similar analysis is planned to use the Child Fatality Review (CFR) data to report whether the primary cause of death is birth defects.

These data sources will also be explored for use in ascertaining additional demographics, health outcomes, and social determinants of health for children with birth defects, to identify and better understand existing health disparities.

Major Project Objectives:
- Work with the Ohio Department of Medicaid (ODM), the Ohio Vital Statistics Program, and ODH Informatics and Data Management (OMIS) to explore data linkages with other state level public health data sets through Ohio's Innovate Ohio Platform (IOP).
- Evaluate whether the OCCSN reporting mechanism is collecting the expected proportion of birth defects cases and provide a detailed report of any gaps identified.
- Incorporate Social Determinants of Health (SDoH), linkage to services, and health outcome measures from various public health program datasets into the analysis of birth defects surveillance data to identify communities who are more at risk for birth defects and for poorer health outcomes related to birth defects and present findings to internal (e.g., Title V MCH Block Grant Women/Maternal Health Domain Group) and external (e.g., Ohio Collaborative to Prevent Infant Mortality (OCPIM), NBDPN) stakeholders to:
  - Determine strategies for awareness and prevention of birth defects among impacted populations.
  - Inform preconception and inter-conception birth defect prevention strategies.
  - Promote coordinated referrals and linkages to services for children and families living with birth defects.
  - Explore barriers and opportunities to improve understanding of health outcomes, educational needs, and quality of life for individuals living with birth defects.
- Explore uses of the OCCSN data linkages completed for other data reports by the Bureau of Child and Family Health (BCFH), Department of Children and Youth (DCY), Ohio Department of Medicaid (ODM), and other partners including the annual Child Fatality Review Report and the Infant Mortality Report.
- Produce a manuscript of rigor to be published in a peer reviewed journal.

Major Project Impact:
- Improved birth defects surveillance capacity, data quality, birth defects epidemiology, and evaluation.
- Improved referral process for linking children with birth defects to Early Intervention (EI) services.

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- Increased number of children who receive Early Intervention (EI) services.
- Increased evidence base for the impact of social determinants of health (SDoH) on population-based health outcomes.

Additional Project #1 Title: ANALYSIS OF TRENDS IN DRUG USE AND OVERDOSE IN WOMEN OF CHILDBEARING AGE TO INFORM PREVENTION OF NEONATAL ABSTINANCE SYNDROME (NAS) AND FETAL ALCOHOL SYNDROME (FAS)
Project #1 Type: Major Project

Project #1 Description:
Women of childbearing age are also a target population for prevention strategies, and for infant mortality reduction strategies which are most effective prior to pregnancy. Neonatal Abstinence Syndrome (NAS) and Fetal Alcohol Spectrum Disorders (FASD) are difficult to address due to the stigma and legal penalties often associated with the conditions. Innovative strategies are needed to improve outcomes for babies and mothers who have a dependency on prescribed or illicit opioids. The OCCSN staff will strengthen collaboration with Ohio's Practice and Policy Academy for Improving Outcomes for Pregnant and Postpartum Women with Opioid Use Disorders and Their Infants, Families and Caregivers work group and other state partners (e.g., DCY, DoDD, and JFS) to distribute OCCSN data for confirmed and suspected NAS cases. This work group meets monthly and is focused on the implementation of safe plans of care for mothers and their babies who have NAS. They are currently engaged in pilot studies that foster collaboration between local county child welfare organizations, JFS, Early Intervention, mental health and addiction services, and other local partners in their communities, to set up safe plans of care that provide wrap around services for mom and baby, including mental health and addiction services. The group will utilize measures across health, child welfare and substance use treatment to evaluate outcomes for the jurisdiction before and after intervention. and help identify priority target areas for improvement for women and infants identified with NAS. BCFH will also broaden our reach externally through developing relationships with staff at the Ohio Department of Medicaid (ODM) to explore Medicaid claims data related to NAS and FAS outcomes.

A member of the BCFH Data and Surveillance team serves as the FASD State Steering Committee Co-chair. The BCFH team is currently working with Ohio Mental Health and Addiction Services (MHAS) to analyze FASD rates by county in Ohio to determine where services are most needed. We will expand this analysis to include prenatal visits and type of insurance in the analysis and present the results at the Governor's Mental Health and Addiction Conference aimed at informing providers and the community about the impact of these conditions and interventions to improve outcomes. The fellow will be able to attend the FASD Steering Committee and participate in FASD-related collaborations with other state agencies and stakeholders.

The BCFH Data and Surveillance section also collaborates with the National Birth Defects Prevention Network (NBDPN, housed at CDC) Space-Time Monitoring Workgroup to share strategies and lessons learned. The fellow will work with BCFH and NBDPN to perform space-time cluster analysis of NAS and FASD incidence, prevalence, referrals, interventions, and outcomes.

The fellow will also work with a mentor in the Violence and Injury Epidemiology and Surveillance section (VIESS) within the Bureau of Health Improvement and Wellness (BHIW) to incorporate opioid drug overdose data and other relevant measures into the analysis and mapping for this project. In an effort to reduce infant mortality and conditions such as Neonatal Abstinence Syndrome (NAS), it is beneficial and insightful to observe drug trends among women of childbearing age. The analysis of mortality data is frequently used to analyze patterns and factors in substance use and drug availability, which can inform prevention initiatives and identify at-risk groups.

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The State Unintentional Drug Overdose Reporting System (SUDORS) is a component of the Centers for Disease Control and Prevention (CDC) Overdose Data to Action in States (OD2A-S) program and collects important circumstantial information surrounding drug overdose deaths by linking data from death certificates, coroner reports, and toxicology reports. These sources provide the opportunity to observe circumstances such as mental health status, drug positivity, previous overdoses, and more. Additionally, Ohio's SUDORS data is informed by Medicaid claims data and data from the Ohio Automated Prescription Reporting System (OARRS), which is Ohio's prescription drug monitoring program (PDMP). These data sources provide information about decedents' health status, mental health diagnoses, substance use treatment, opioid prescriptions recently dispensed, and other variables that are often not available from death certificates and coroner reports alone. While Medicaid and PDMP data are not required data sources to be included in the SUDORS surveillance system, they greatly increase the ability to collect circumstance data and improve data quality. This circumstantial information is essential for developing and implementing effective prevention measures to prevent overdose deaths and understand risk factors for drug use and overdose.

The fellow would access and utilize SUDORS data to identify variables such as demographics, mental health history and treatment, drug positivity, substance use treatment, opioid prescriptions dispensed, and other relevant variables to help understand trends related to drug use and overdose death among women of childbearing age. Following completion of the analysis, the fellow will create a report that communicates the methodology used for the project, results, and recommendations for identifying at-risk populations. The results will be presented to relevant stakeholders, such as the Overdose Prevention Network (OPN), a statewide action group that works to identify and implement actions for the prevention of drug misuse, abuse, and overdose.

Project #1 Objectives and Expected Deliverables:
- Perform cluster analysis of OCCSN NAS and FAS data working with internal and external partners.
- Complete an analysis of SUDORS data observing the frequency of selected variables among women of childbearing age who died due to an unintentional drug overdose death.
- Disseminate results of analysis to internal and external stakeholders.
- Translate data into action by targeting and tailoring prevention efforts to the communities with the highest morbidities and the least access to services.
- Utilization of OCCSN data to target affected populations for programs such as the Ohio Equity Institute (OEI) program targeting at risk communities for infant mortality.
- Create a report communicating analysis methodology, results, and recommendations, and present the results to relevant stakeholders.

Project #1 Impact:
- Improved birth defects surveillance capacity, data quality, birth defects epidemiology, primary and secondary prevention, and evaluation and dissemination activities.
- Increased evidence base for strategies aimed at improving outcomes for babies with NAS and their mothers.
- Increased understanding of variables surrounding drug use and overdose death among women of childbearing age in Ohio to target efforts to reduce drug use and NAS diagnoses.

Please Describe the Fellow's Anticipated Role in Preparedness and Response Efforts – Include Activities and Time Allocation (Required Competency of Fellowship)

It is estimated that the fellow will spend approximately 5% of their time working on Health Preparedness activities.

In 2020, the BCFH and the Bureau of Health Preparedness participated jointly in a national learning collaborative to strengthen emergency preparedness efforts for the MCH population. An outcome of the learning collaborative was a commitment for the two bureau teams to meet quarterly.

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Additionally, staff from the Preparedness area presented a learning session to BCFH staff and BCFH staff presented information to the Preparedness team about MCH programs. The State of Ohio utilizes an emergency communication system to alert public health stakeholders about emergency situations. During the 2022-2023 nationwide infant formula shortage situation, ODH WIC staff were trained to assist with pushing emergency messages as backups to the Preparedness staff. As the COVID pandemic winds down, plans are underway to create a toolkit of information for Ohioans with special needs to be better prepared for emergencies, that includes weather, infectious disease outbreaks, power outages, etc. BCFH staff and Preparedness staff are working jointly on the toolkit. BCFH staff also participate on a Children in Response (CIR) workgroup, convened by the Preparedness Team that includes state level employees, as well as key external stakeholders. The fellow will be able to participate in these groups as well during the fellowship period.

The fellow will be invited to participate in trainings and planning meetings with the Bureau of Health Preparedness that will include desktop exercises and other elements of Ohio's emergency preparedness plan such as school emergency planning. The fellow will also be invited to participate in exercises and discussions when there is an active response effort under guidance of the state epidemiologist. Additionally, the fellow will be invited to participate in the Epidemiology Advisory Council as a guest to learn about practices across program areas and policy development for both data and epidemiology. The State Epidemiologist and Bureau of Health Preparedness have committed to providing additional support and opportunities for the fellow's involvement in emergency preparedness.

Please Describe the Fellow's Anticipated Role in Cluster and Outbreak Investigations – Include Activities and Time Allocation (Required Competency of Fellowship)

It is estimated that the fellow will spend approximately 15% of their time working on cluster analysis activities.

The fellow will have the opportunity to assist with enhanced surveillance activities during public health emergencies. This may include cluster or outbreak investigations related to emerging diseases (e.g., COVID, Zika). There may also be an opportunity to collaborate on multi-state projects through the NBDPN, using the cluster analysis of NAS and FAS described in the Additional Project.

Another potential opportunity for the fellow to investigate a cluster is to work with the ODH Violence and Injury Epidemiology and Surveillance section (VIESS) within the Bureau of Health Improvement and Wellness (BHIW) to respond to potential spikes in drug overdose emergency department (ED) visits. As part of the Ohio Department of Health's (ODH) Syndromic Surveillance, the EpiCenter System collects data regarding suspected drug overdose ED visits and issues alerts to ODH and affected local health departments when there appears to be an unexpected spike in suspected drug overdose ED visits. The alerts are accompanied by a REDCap survey that collects information about the local response, including details about the investigation into the anomaly, how the agency responded, if additional naloxone was needed, and more. Once this survey has been completed, it is returned to ODH, and the necessary information from the response is communicated to ODH administration, relevant state agencies, and other stakeholders. The fellow would be able to observe and assist with this process, as well as any analysis or investigation completed as a result.

Please Describe the Fellow's Anticipated Role in the COVID-19 Response – Include Activities and Time Allocation

Ohio is not currently conducting active follow-up investigations for COVID-19 due to changes in CDC guidance regarding discontinuing universal case investigation and contact tracing. Cases are reported to the ODH through electronic lab reporting (ELR) and are published on the Data Ohio Portal as a data dashboard. Vaccine distribution has significantly decreased at the state level due to the vaccine commercialization.

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Please Describe Opportunities for Fellows to Work in Health Equity as well as Incorporating Diversity, Equity, and Inclusion into their Work

Ohio has a diverse population residing in urban, suburban, rural, and Appalachian communities. Demographic information is collected and reported by Ohio's birth defects system. As reported in literature, among Ohio births, the prevalence varies by race/ethnicity depending on the specific defect. Congenital anomalies are one of the leading causes of infant mortality in Ohio and account for approximately 19% of infant deaths. In Ohio, the infant mortality rate for congenital anomalies has ranged from 1.3 to 1.6 per 1,000 live births from 2009 to 2021. In 2021 the infant mortality rate for congenital anomalies for Black infants was 1.4 per 1,000 births as compared to 1.2 for White infants.

From 2012 to 2021, the overall infant mortality rate for Black infants has remained two to three times higher than that of White infants. In 2021, the infant mortality rate for prematurity for Black infants was 4.1 per 1,000 births as compared with 1.3 for White infants. The Ohio Equity Institute (OEI) in Birth Outcomes uses population data to target areas for outreach and services in the 10 counties with the largest disparities in birth outcomes. In 2021, these 10 counties accounted for 87% of Ohio's Black infant deaths and 58% of all infant deaths.

The Help Me Grow (HMG) Home Visiting Program, the Healthy Beginnings at Home Program, and Ohio Equity Institute (OEI) Initiatives that aim to reduce infant mortality have documented successes. Despite these successes, the infant mortality rate in Ohio has remained high. Governor Mike DeWine announced in December 2020 that he was establishing the Eliminating Racial Disparities in Infant Mortality Task Force. Members worked with local, state, and national leaders to identify needed changes to address Ohio's racial disparities in infant mortality. With the goal of developing a statewide shared vision and strategy for reducing infant mortality rates and eliminating racial disparities by 2030, the Task Force created actionable recommendations for interventions, performance and quality improvement, data collection, and policies. These findings will be used to advise the Governor's Office of Children's Initiatives on ways to improve Ohio's investments and strategies to address racial inequities in birth outcomes.

Recognizing that there are racial disparities in nearly every maternal and child health indicator, BCFH hired a full time Health Equity Consultant who works across the bureau to help program staff institutionalize health equity in their daily work. The Health Equity Coordinator also facilitates a monthly workgroup that works to plan and implement equity-related activities utilizing information from a wide range of BCFH and DCY programs. The goals of the workgroup are to 1) ensure BCFH embraces a culture of diversity and respect; 2) ensure the programs the bureau implements across the state address disparity issues; and 3) work to develop new and non-traditional partners in MCH work. Ohio is committed to additional analyses and investigations that address health disparities in infant mortality and birth defect prevalence and outcomes within Ohio. Ohio is also committed to integrating social determinants of health into our understanding and analyses of these disparities.

During the pandemic, ODH developed the Health Improvement Zones dashboard using the Social Vulnerability Index (SVI) created by the US Centers for Disease Control and Prevention (CDC), using the most current data available from the US Census Bureau American Community Survey five-year estimates (2014-2018). Ohio Health Improvement Zones (OHIZ) refers to the socioeconomic and demographic factors that affect the resilience of individuals and communities the ability to prevent human suffering and financial loss in a disaster. By understanding where these populations are located and what factors contribute to their levels of risk, Ohio Health Improvement Zones can aid in all phases of improving health in communities. This dashboard and the SVI data can be applied to the research and analysis involved in the proposed projects.