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Pregnancy Risk Assessment Monitoring System and the W.K. Kellogg Foundation Joint Project to Enhance Maternal and Child Health Surveillance: Focus on Collaboration

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Abstract

Maternal and child health (MCH) surveillance data are important for understanding gaps in services and disparities in burden of disease, access to care, risk behaviors, and health outcomes. However, national and state surveillance systems are not always designed to gather sufficient data for calculating reliable estimates of the health conditions among high-risk or underrepresented population subgroups living in smaller geographic areas. The Centers for Disease Control and Prevention's Pregnancy Risk Assessment Monitoring System (PRAMS) has conducted surveillance for over 25 years in collaboration with state and city health departments. In 2012, PRAMS embarked on a multiyear collaboration with the W.K. Kellogg Foundation (WKKF) to include oversampling of minority and low-income women in selected geographic areas in four states (Louisiana, Michigan, Mississippi, and New Mexico) where the WKKF funded extensive place-based initiatives are located. The PRAMS–WKKF collaboration has broad implications for promoting meaningful collaboration between public, private, local, state, and federal organizations to address MCH data gaps on disparities, and for improving the availability of information needed for MCH programs, policy makers, and women.

Introduction

The Pregnancy Risk Assessment Monitoring System (PRAMS) of the Centers for Disease Control and Prevention (CDC) is an ongoing, population-based survey that collects data on maternal behaviors around the time of pregnancy among women who delivered a live-born infant. Approximately 2 months after delivery, the PRAMS survey in each state generates

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stratified random samples of 100–300 women from the birth registry. The selected mothers are mailed up to three questionnaires, and those who do not respond by mail are contacted by telephone.[1] PRAMS system operates in 40 states and New York City (Fig. 1) and collects indicators related to maternal and child health (MCH) (Table 1).

The W.K. Kellogg Foundation (WKKF) is a philanthropic organization with a focus on using the life-course approach to improve health of families and social development of children. The collective interests of PRAMS and WKKF intersect in terms of reducing health disparities and building evidence for programs and policies to help families. Specifically, the WKKF objectives related to MCH that overlap with PRAMS surveillance are to promote healthy pregnancies, healthy birth weight, and optimal infant feeding for the growth and well-being of infants from the very beginning.[2,3]

While the PRAMS system has previously expanded surveillance activities to include teen births in two states, Mississippi and New York, this collaboration with WKKF is much larger and the first ever between CDC-PRAMS, state PRAMS, and a private foundation. The collaboration has led to enhancements that will allow PRAMS to obtain adequate samples for the target women. We aim to share lessons learned from this unique partnership and to describe the enhancements to PRAMS surveillance that may increase the representation of data from low-income and minority populations.

Collaboration

In 2012, CDC-PRAMS and the WKKF formalized a partnership to enhance the PRAMS programs in four of the states in which WKKF was initiating place-based programming that focused on maternal and infant health: Michigan, Mississippi, Louisiana, and New Mexico. The WKKF projects in each of these states targeted specific geographic areas and populations with a focus on promoting services for pregnant women and infants and on closing the gaps between majority and minority populations. The PRAMS projects in each state are set up to oversample women from minority and low-income groups every month. In the regions of the state where WKKF programs were initiated, additional survey questions were added and surveillance methods were enhanced to ensure adequate participation and representation of the population of focus. Table 2 shows the state PRAMS enhancements such as the survey drop off by a community health worker to women in the tribal areas in New Mexico. In addition to the data collected by PRAMS surveillance systems in each state, WKKF wanted to evaluate its placed-based programs by focusing on indicators such as childbirth support for pregnant women, health care access during pregnancy, pregnant women’s perception of services received, infants’ access to a medical home, and breastfeeding support during the prenatal and postpartum periods.

Since the beginning of this multiyear collaboration, the PRAMS programs in the four states have developed outreach strategies to work with both the state health department and community organizations.

Throughout this collaboration, CDC-PRAMS oversaw the implementation of sampling design and development of the questionnaire to meet the data needs of the local partners

implementing WKKF programs and provided technical assistance to each state with new outreach methods that focused on working with state and local programs (e.g., the Special Supplemental Nutrition Program for Women, Infants, and Children and Healthy Start) serving women and infants in each state.

Both the state and federal PRAMS programs have learned a number of lessons from this effort to expand the surveillance systems and from working with local organizations. State lessons included learning to think outside the box or reaching out to others working on wider MCH programs and advocacy. PRAMS teams at the state health departments focused on data collection and building their advisory committee members who represent the MCH programs in the state health departments. The collaboration with WKKF prompted the states to expand the partnerships to other state departments (e.g., mental health and school health) and outside community-based organizations (e.g., breastfeeding coalitions and Tribal Epidemiology Centers) to better guide MCH programs and services. As a representative from one PRAMS state mentioned during a meeting, “You have to reach in to reach out.” Another lesson was to be creative in managing resources and working within the administrative systems of the health departments and nongovernmental organizations. The four states have moved toward developing formal agreements to share information and resources with their partners. They also plan to sustain collaborations—such as having representatives from one organization train representatives from other organizations and vice versa—beyond the funding timeframe.

The collaboration between CDC and WKKF has allowed CDC to improve PRAMS questionnaire flexibility and adapt new sampling methods for getting county data. It has equipped the PRAMS project to more effectively measure and evaluate new programs and systems. It has also allowed the project to assess health impact, both in terms of the process and outcome, which include surveillance enhancements and partnership building, as well as collecting important data that are representative of hard-to-reach populations. Potential benefits of expanding the sampling scheme are that PRAMS data can capture the experiences of hard-to-reach populations who typically do not participate in surveys and can contribute to program evaluations of community-based MCH programs such as those supported by WKKF.

Summary and Plans

The disparities and gaps observed in maternal health behaviors and lifetime exposures to adverse conditions need to be addressed, and efforts such as this collaboration may help provide data and evidence to examine and mitigate adverse birth outcomes.[3,4,5]

PRAMS will continue to build partnerships with the WKKF programs at the state and federal levels to promote evidence-based MCH programs and policies. In 2015, we will begin the next phase of evaluation to assess the effect of enhancements on (1) survey participation by minority and low-income women in the four states, (2) county/parish-level indicators, and (3) overall surveillance activities. The findings will provide evidence that could be used to expand and enhance surveillance systems in response to emerging needs for

data. These partnerships serve as benchmarks for collective action on behalf of mothers and infants.

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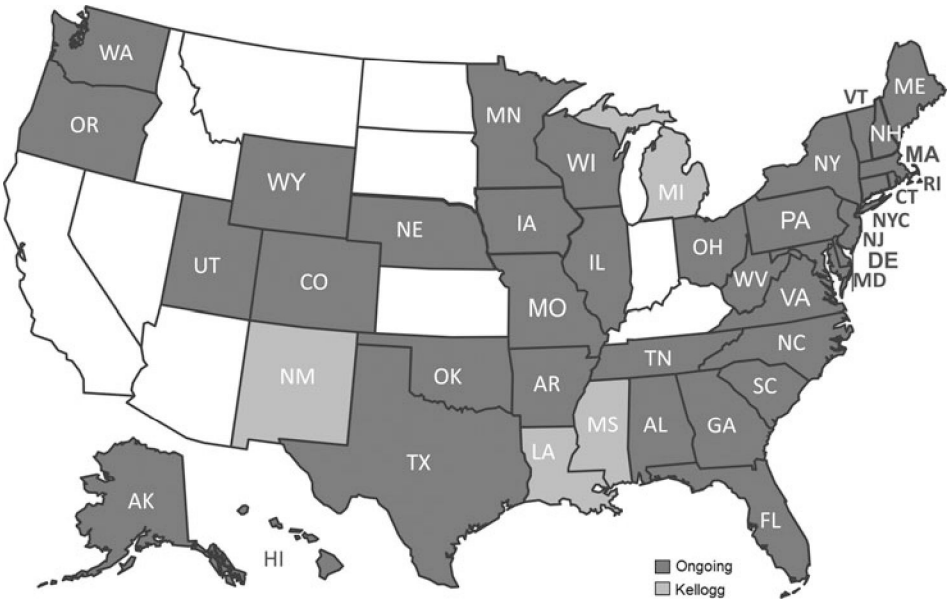

FIG. 1.

States that participate in the Pregnancy Risk Assessment Monitoring System, 2015. PRAMS represents approximately 78% of all US live births.

Table 1.

Selected Maternal and Infant Health Indicators Collected by the Pregnancy Risk Assessment Monitoring System

Maternal health
Pregnancy intention
Folic acid use
Prenatal care initiation, barriers and content
Maternal tobacco and alcohol use
Maternal weight before pregnancy
Preconception health including use of family planning methods
Prepregnancy hypertension and diabetes
Oral health
Stresses experienced during pregnancy
Social support
Physical and emotional abuse
Depression
Seasonal flu vaccination
Infant Health
Birth weight
Preterm birth
Delivery method, hospital stay, and ICU admission
Breastfeeding initiation
Breastfeeding continuation
Reasons for stopping breastfeeding
Sleep position
Smoke exposure
Screenings
Home visitation

ICU, intensive care unit.

Table 2.

Enhancements to the Pregnancy Risk Assessment Monitoring System in Collaboration with the W.K. Kellogg Foundation, 2015

	State			
Enhancements	**Louisiana**	**Michigan**	**Mississippi**	**New Mexico**
Population oversampled	African American	African American	African American	Native American and Hispanic low-income women
Geography	Orleans Parish	Calhoun, Kent, and Wayne counties	Sunflower, Coahoma, Jackson, and Hinds counties	Bernalillo, McKinley, San Juan, and Dona Ana counties
Methods	WIC clinics in Orleans Parish; questionnaires delivered to sampled women seeking WIC services	Text messages to all women sampled from Calhoun County	Partners making prompt calls to women sampled for PRAMS participation from their catchment area	Hand delivery and pickup of PRAMS questionnaires by outreach workers
Outreach	Communication with state partners and outreach with community-based organizations	Communication within the state and co-branding with partners in jointly promoting PRAMS in Michigan	Communication within health department and outreach with WKKF community grantees as well as community partners to conduct prompt calling	Partners with Tribal Epidemiology Center and integration with community coalitions, WKKF grantees
Partnerships	WIC program	WIC program	WKKF-specific advisory committee that includes a WIC, Early Head Start	WIC, New Mexico Breastfeeding Taskforce http://www.breastfeedingnewmexico.org/ AASTEC and Navajo Epidemiology Centers
Outcomes	Implemented WIC drop-off and pickup of surveys: pending evaluation	Implemented text messaging to mothers in Calhoun County: pending evaluation	Implemented prompt calls to sampled mothers to encourage participation: pending evaluation	Implemented outreach by community health workers in tribal areas: increased response rates to PRAMS surveys among Native American women from 2011 to 2012

AASTEC, Albuquerque Area Southwest Tribal Epidemiology Center; PRAMS, Pregnancy Risk Assessment Monitoring System; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children; WKKF, W.K. Kellogg Foundation.

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