



PRAMS

PREGNANCY RISK ASSESSMENT MONITORING SYSTEM

PRAMS Data to Action/Success Stories Template

This template is intended for use by PRAMS sites to describe the impact of their data collection and dissemination activities. The form aims to collect **detailed** information in a format that is conducive to creating a success story. Each section in the template is followed by a self-check, which outlines relevant criteria that should be addressed in that section.

1. DATA TO ACTION/SUCCESS STORY TITLE:

The Impact of Prenatal Stress on Breastfeeding Rates in Wyoming WIC Enrollees, 2012-2015.

2. PROBLEM OVERVIEW: BRIEFLY DESCRIBE THE PUBLIC HEALTH PROBLEM THAT WAS ADDRESSED IN THIS DATA TO ACTION EXAMPLE/SUCCESS STORY.

In the 2016 PRAMS Data-to-Action example, a partnership was described to help public health professionals better understand the Wyoming WIC population, their unique health risks, and health outcomes. Today, the partnership continues to evolve. As a team, PRAMS and WIC staff identify topics of concern for WIC participants, find evidence-based materials (white papers, peer-reviewed articles) focused on the topic of interest, and then use Wyoming PRAMS data to explore outcomes for the Wyoming WIC population. Data analysis includes descriptive and analytic epidemiology with an emphasis on identifying disparities and trends over time.

3. PRAMS DATA USED: LIST THE TOPICS AND YEARS OF PRAMS DATA THAT WERE USED

Publications and presentations created in 2017 through the PRAMS/WIC partnership are listed below.

1. Wyoming WIC Program PRAMS Special Report: Breastfeeding Initiation. (PRAMS Data 2007 through 2014).
2. Wyoming WIC Program PRAMS Special Report: Breastfeeding Duration. (PRAMS Data 2012 through 2014).
3. The Impact of Prenatal Stress on Breastfeeding Rates in Wyoming WIC Enrollees, 2012-2015. (Phase 7 data, 2012-2015). Presented at Public Health in the Rockies, October 2017, Keystone (CO) by Lisa Caldwell, MS, RD, LD, IBCLC and Lorie Wayne Chesnut DrPH, MPH.



4. PARTNERS AND PLAYERS: WHO WERE THE COLLABORATORS?

Primary collaborators are PRAMS staff (Chesnut, Spieker) with the Wyoming WIC program (Caldwell, Moran). Other collaborators include staff from the Maternal and Child Health Unit who work with programs around the state to support maternal and child health services for both WIC and non-WIC enrollees.

5. DATA TO ACTION/SUCCESS STORY NARRATIVE: WHAT HAPPENED?

In preparation for the two fact sheets on Breastfeeding Initiation and Breastfeeding Duration for the WIC population, the WIC Breastfeeding Coordinator/State Supervisor provided a series of questions to be explored through descriptive and analytic epidemiology by the PRAMS Coordinator. One of these questions was the impact of stress on WIC moms and how this might or might not influence breastfeeding behaviors.

Two factors are important to note. First, breastfeeding initiation and duration rates are significantly lower in Wyoming WIC moms as compared to non-WIC moms. Second, Wyoming WIC moms are significantly more likely to report that they experienced stress in the twelve months prior to delivery as compared to non-WIC moms.

Throughout these two analyses, one issue continued to rise to the surface: how the impact of the four categories of stress (financial, emotional, partner-related, and traumatic) had little impact on a WIC mom's breastfeeding behaviors (initiation and duration).

Conversely, while three of the four categories of stress (*financial, emotional, and partner-related*) had no influence on breastfeeding rates of initiation or duration for non-WIC moms, when non-WIC women reported *traumatic stress* during the prenatal period, their levels of breastfeeding initiation and duration declined significantly, nearing the levels of women enrolled in the WIC program.

Non-WIC moms who experienced traumatic stress were *about half* as likely to *breastfeed ever* (AOR 0.49, 95% CI 0.26-0.93), to *breastfeed until at least 4 weeks* (AOR 0.55, 95% CI 0.33-0.94), or to *breastfeed until at least 8 weeks* (AOR 0.51, 95% CI 0.32-0.79) as compared to women who were not enrolled in WIC and who did not report traumatic stress during the prenatal period.

Given that approximately half of the infants born in the United States are served by WIC, our team inferred that WIC might provide intangible benefits that help low-income women cope with complex lives that may include stress and depression. While WIC is known to provide nutritional supplementation for women and their families, other WIC services also support women and may empower them to be resilient in adverse situations. Lessons learned from WIC moms could benefit all women. The presentation was forward to the national WIC office by the Wyoming WIC team.

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6. OUTCOMES & IMPACT: HOW IS LIFE DIFFERENT AS A RESULT OF THE ACTIVITY? THIS IS THE MOST CRITICAL PIECE OF THE STORY. *SHORT-TERM AND *INTERMEDIATE OUTCOMES MUST BE DOCUMENTED.

A. *SHORT-TERM OUTCOMES: This includes early outputs of the process such as relevant publications, meetings with stakeholders and other MEASURABLE products or activities:

1. Invited presentation for **Public Health in the Rockies** (Keystone, CO), October 2017. This is the Colorado Public Health Association Conference with approximately 600 attendees from Colorado, Wyoming, Nebraska, Utah, and other contiguous states. Approximately 35 individuals attended this breakout session.
2. Publications (Breastfeeding Initiation and Breastfeeding Duration Special Reports) were shared with WIC professionals across the State of Wyoming. Our findings helped to educate WIC professionals about the women that they served, as well as how risk factors may or may not influence the decision to breastfeed.

B. *INTERMEDIATE OUTCOMES: This includes RESULTS of the short-term outcomes—what did those products or activities lead to? For example, a media campaign was launched, legislation was introduced and passed, a new program was funded, a program was changed to better address client needs, etc.

1. Invited presentation for the **Wyoming Epidemiology Workgroup** (Cheyenne, WY), February 2018. This group includes all of the epidemiologists for the State of Wyoming, including infectious/communicable disease, maternal and child health, and chronic disease.
2. Invited presentation for **Wyoming's Coffee Break Talks** in July 2018. This monthly series is open to all Public Health Department employees and is also available virtually throughout the State of Wyoming for public health nurses, WIC staff, and other health professionals working in the field.

C. LONG-TERM OUTCOMES: This includes the measurable changes in the behaviors or health outcomes of the target population. Such changes may be difficult to directly attribute to the efforts described in the intermediate impact, but efforts should be made to monitor and evaluate the activities that are implemented.

After several attendees asked about future publication of these findings, the team explored opportunities and is in the process of working toward a peer-reviewed journal article about their findings. The target journal is *Journal of Nutrition Education and Behavior* (Elsevier).

It is important to document the findings of this study in a science-based publication. Given funding changes throughout the federal government, evidence that WIC makes an important difference in the lives of the women that it serves is critical for future funding and sustainability. For this reason, a peer-reviewed publication is planned.

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7. STORY ABSTRACT: PROVIDE A SHORT 1-2 PARAGRAPH SUMMARY OF YOUR STORY AND THE OUTCOMES

Questions about the impact of stress (financial, emotional, partner-related, and traumatic) on breastfeeding initiation and duration were identified through a series of special reports created in partnership with the Wyoming WIC and Wyoming PRAMS program. These questions led to a research study comparing the impact of traumatic stress on both WIC and non-WIC moms after adjusting for a number of covariates.

Results revealed significant decreases in breastfeeding initiation and duration for non-WIC moms who had reported traumatic stress during the prenatal period. Conversely, no significant differences were identified for WIC moms who reported traumatic stress when compared to WIC moms who did not report traumatic stress during the prenatal period. This work led to an invited presentation at a regional public health conference, a number of presentations to Wyoming health professionals, and may result in a peer-reviewed publication.

Public health implications include a better understanding about Wyoming's WIC population and lessons learned that could benefit all Wyoming women.

8. CHECK IF ANY OF THE FOLLOWING ARE BEING SUBMITTED TO COMPLEMENT YOUR STORY: (CHECK ALL THAT APPLY)

- Testimonials
- Quote from Partner/Participant
- Sample of Materials Produced
- Press Release
- Promotional Materials
- Photo(s) of Project
- Video/Audio Clip
- Other (Explain:)

9. HOW WOULD YOU CATEGORIZE THE DATA TO ACTION EXAMPLE/SUCCESS STORY? (CHECK ALL THAT APPLY)

- Appropriation of funds
- Policy change
- New program started
- Existing program revised
- Increased visibility for an organization, program or issue
- Capacity building of an organization or group
- Other WIC Professional Education

10. CONTACT INFORMATION:

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11. DATE SUBMITTED: January 5, 2018

12. PRAMS Program PI: Amy Spieker, MPH
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