

### **Authors**

**Matthew Landry, PhD, RDN** | Postdoctoral Fellow, Stanford Prevention Research Center, School of Medicine, Stanford University, Palo Alto, CA

**Kim Phan** | Harvard College, Harvard University, Cambridge, MA

**Jared McGuirt, PhD, MPH** | Assistant Professor, Department of Nutrition, University of North Carolina Greensboro, Greensboro, NC

**Alek Ostrander** | School of Public Health, University of Michigan, Ann Arbor, MI

**Lilian Ademu, MS** | College of Liberal Arts and Sciences, University of North Carolina Charlotte, Charlotte, NC

**Mia Seibold** | Center for Research in Education and Social Policy, College of Education and Human Development, University of Delaware, Newark, DE

**Kathleen McCallops, MS** | Center for Research in Education and Social Policy, College of Education and Human Development, University of Delaware, Newark, DE

**Tara Tracy, BS** | Center for Research in Education and Social Policy, College of Education and Human Development, University of Delaware, Newark, DE

**Sheila Fleischhacker, PhD, JD, RDN** | Adjunct Professor of Law, Georgetown University Law Center, Washington, DC

**McKenna Halverson, MS** | Center for Research in Education and Social Policy, College of Education and Human Development, University of Delaware, Newark, DE

**Allison Karpyn, PhD** | Co-Director, Center for Research Education and Social Policy and Associate Professor, Human Development and Family Sciences, University of Delaware, Newark, DE

# Introduction

WIC, or the Special Supplemental Nutrition Program for Women, Infants, and Children, helps to meet the nutrition needs of pregnant, postpartum, and breastfeeding women, and their children under the age of five, who live on low incomes by providing monthly benefits that are used to purchase healthy foods. The retail vendors who provide these foods operate under a policy framework that may result in reduced access to WIC-approved foods by WIC participants.

Accordingly and in 2019, a subgroup of the HER NOPREN WIC Learning Collaborative and liaisons from the National WIC Association convened to develop a protocol for describing and comparing vendor criteria and policies across WIC administrative agencies. The WIC Learning Collaborative is a joint effort of the Healthy Eating Research (HER), a national program of the Robert Wood Johnson Foundation, and the Nutrition and Obesity Policy and Research Network (NOPREN)—a multi-disciplinary research network supported by the United States Centers for Disease Control and Prevention. This brief provides the results of an analysis of WIC vendor selection and authorization criteria, and operations and management policies established by the 89 administrative agencies in the United States. Full details and findings are reported elsewhere (Landry et al., 2021).

# WIC Background

The United States Department of Agriculture (USDA) Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a public health nutrition assistance program focused on reducing infant mortality and improving the health of women who are pregnant, postpartum and/or breastfeeding; infants; and children up to age five (Dunn et al., 2020). Participants are eligible for WIC if they are determined to be at nutritional risk by a health professional and garner an income at or below 185% of the U.S. Poverty Income Guidelines (Center on Budget and Policy Priorities, 2017). The WIC program provides supplemental food and beverages (called a nutrition prescription or the WIC food package) as well as nutrition education, breastfeeding support, and referrals for healthcare and social services. In 2019, the average number of women, infants, and children receiving WIC benefits each month was approximately 6.4 million, with an average monthly food cost of \$40.90 per person. WIC benefit usage is associated with improvements in infant and child health outcomes (Sonchak, 2016; Black et al., 2014; Bitler & Currie, 2005; Fingar et al., 2017; Soneji & Beltran-Sanchez, 2019), nutrition intake and diet-related outcomes (Tester, Leung, & Crawford, 2016; Jun et al., 2016) and access to health care (Buescher et al., 2003; Bersak & Sonchak, 2018). Significant revisions to WIC program guidelines were made in 2009 which required vendors (e.g., supermarkets and other retail stores) to increase the availability of healthy food and beverage options such as whole grain breads, low-fat milks, and brown rice, along with the introduction of a Cash Value Benefit to enable the purchase of fruits and vegetables, for purchase by WIC participants. In compliance with this change, WIC vendors were required to maintain minimum stocks and variety of such products, although specific guidelines vary by administrative agency.

# Why Look at WIC Vendor Criteria?

The public health literature emphasizes the importance of creating equity in built environments as a framework for building health where we live, work, study, and play (Walker, Keane, & Burke, 2010). The food environment is one such component and has been tied to disparities in diet (Kaiser, Dionne, & Carr, 2019; Adam & Jensen, 2016). Residents in particularly high-risk, under-resourced communities can travel considerable distances to reach full-service grocery stores (Ver Ploeg et al., 2015) which raises important questions about WIC retail guidelines and their scope of influence as a policy driver of the food access landscape. According to USDA's Economic Research Service, the availability of WIC foods also increases access to healthy foods for all community members, not only WIC participants (Oliveira et al., 2015). To date there is no research that describes variation in WIC vendor criteria and retailer guidelines across administrative agencies, nor any single database that houses such information. We sought to understand vendor guidelines across all 89 administrative agencies. Additionally, we aimed to examine the nature and frequency of variations in policies across geographic units. In documenting these differences, findings could inform federal, state, and local efforts aimed at increasing WIC participant access to vendors offering WIC, including whether established criteria create a barrier to WIC vendor entry and/or operation.

### **WIC Vendors**

WIC operates through 89 administrative agencies—50 U.S. states and the District of Columbia (DC), 33 Indian Tribal Organizations, and five U.S. territories (Dunn et al., 2020; U.S. Department of Agriculture Food and Nutrition Service, 2021). Within Federal guidelines, these administrative agencies develop their own vendor criteria to ensure that stores selling WIC products follow state protocols for cleanliness, stock, WIC signage, days and hours of operation, and other assessments of food access and availability to the population.

# Methodology

Information was sourced from WIC department online vendor materials in the 50 states and DC (hereafter referred to as states); the five U.S. territories (i.e., American Samoa, Guam, Northern Mariana Islands [Commonwealth of], Puerto Rico, and U.S. Virgin Islands); and 33 Indian Tribal Organizations (ITOs). Pre-determined variables of interest were identified in vendor materials and recorded in a shared matrix. Direct quotes and categorical descriptors were used to organize the data and identify common themes. Ultimately all state and DC WIC vendor selection and authorization criteria (n = 51) were located and tabulated. Partial to complete information was available for some ITOs and U.S. Territories (ITOs, n = 13; Territories, n = 3). A small number of ITOs (n = 2) were defined as 'direct distribution,' meaning that the ITO provides WIC-approved foods directly to participants without using a vendor in a retail setting. Proof of Supplemental Nutrition Assistance Program (SNAP) retailer status was identified for one additional territory/ITO increasing sample size for only this variable to (n = 19). No information was available for the remaining ITOs (n = 18) or U.S. Territories (n = 2).

# **Key Operational Definitions**

In order to ensure consistency in the data, definitions of all 16 assessed variables were established. Below are examples of both vendor selection and authorization criteria and of vendor management and operations policies:

Vendor Selection and Authorization Criteria are those criteria that relate to how potential WIC vendors are selected and assessed prior to and during their time as an authorized vendor.

**WIC volume sales requirement**: The minimum dollar amount of WIC sales, during a specific time period, as evidence of a WIC vendor's foundation in selling required WIC food items.

**WIC-only stores**: Defined as vendors that derive more than 50% of their annual revenue from WIC sales.

**Full-service grocery stores**: May include the term "full-service," or more general descriptions of "grocery stores" or "retail grocer." A full-service grocery store must meet stocking requirements of specific food groups.

Vendor Management and Operations Policies guide how vendors are selected in their area and how administrative agencies manage the vendors in the state.

**Limiting criteria parameters**: These parameters (e.g., distances between WIC stores) help to establish allowable WIC vendor locations to create adequate access points for WIC foods that also can be adequately overseen by administrative agencies.

**Peer Group System criteria**: These systems categorize vendors in similar groups (e.g., based on geographic parameters) for cost containment purposes.

**Shelf labels/tags/talkers**: These store labels show WIC identifying information (e.g., WIC-approved food, logo, administrative agency name) and are defined and allowed by administrative agencies to create clear messaging regarding WIC-allowed foods.

# Results

Consistent with the Federal regulation, all states (98.0%, n = 50; unspecified: 2.0%, n = 1) required vendors to show roof of their status as SNAP retailers, as did the vast majority of territories and ITOs (84.2%, n = 16).

A majority of administrative agencies required that stores be open for eight hours per day (states: 39.2%, n = 20; territories/ITOs: 61.1%, n = 11); similar results were found for the number of days per week stores needed to be open (states: 68.6%, n = 35; territories/ITOs: 66.7%, n =12). A majority of states specified that WIC vendors must have at least one register (68.6%, n = 35), but in many states and most of the territories/ITOs, no requirement was specified. Square footage was a requirement that was often not mentioned in vendor materials for either states (80.4%, n = 41) or the territories/ITOs (88.9%, n =16). Notably, three states (5.9%) require a minimum store footage range of 9,000–10,000 square feet, while another seven states (13.7%) permit a minimum store square footage of 1,000–3,000 square feet.

Slightly more than half of the states (52.9%, n = 27) allow a range of stores while almost all remaining states (39.2%,

n=20) and half of the territories/ITOs (50.0%, n=9) allow only full-service stores. A majority of states (74.5%, n=38) prohibit WIC-only stores, while the territories/ITOs were almost evenly split regarding prohibition vs. allowance of WIC-only stores (38.9%, n=7 vs 44.4%, n=8). Around three-quarters (72.5%, n=37) of the states allow pharmacies to sell WIC-approved food items, including infant formula. Most territories and ITOs (61.1%, n=11) did not have a specified requirement regarding pharmacies; where criteria are set, they are split between allowing and not allowing pharmacies.

A majority of states (82.4%, n = 42) did not specify that WIC vendors must be established stores (i.e., in business for at least one year). Six states (11.8%) did establish this requirement, while territories and ITOs most commonly had no requirement (50.0%, n = 9) or did not specify (27.8%, n = 5) the time WIC vendors needed to be established. Just over half of states (54.9%, n = 28) specified that WIC vendors must maintain a clean or orderly store whereas 23 (45.1%) states had no such specified requirement. WIC vendors in most territories and ITOs (66.7%, n = 12) specify a clean or orderly store requirement.

The requirement that a store be in good standing had little variation with a majority of states (72.5%, n = 37) and territories/ITOs (77.8%, n = 14) having clear criteria that must be in "good standing" or in compliance with current permitting regulations. Slightly more than half of states (51.1%, n = 26) require its WIC retailers to hold a grocery class permit. The practice is less common in territories and ITOs, since almost half (44.4%, n = 8) did not issue this type of guidance. Almost three-quarters or more of states (70.6%, n = 36) and territories/ITOs (83.3%, n = 15) do not require WIC vendors to meet minimum volume sales requirements.

A key area of interest while conducting this research was the allowance of shelf tags, often called shelf-talkers, to label WIC products. Over three-quarters (76.5%, n = 39) of the states allow WIC food items to be labeled as WIC-approved products on shelves in stores. In contrast, approximately two-thirds of the states (68.7%, n = 35) establish more specific criteria for these labels, often encompassing specific parameters such as label content or size. Most territories and ITOs (61.1%, n = 11) permit the use of shelf talkers or shelf tags to label all WIC-approved products, but almost three-quarters (72.2%, n = 13) do not specify label criteria.

Most of the states (72.5%, n = 37) and territories/ITOs (83.3%, n = 15) did not specify whether WIC vendors were

allowed to group WIC products together in the store, while 10 states (19.6%) specifically prohibited this practice in comparison to the four states (7.9%) and one territory/ ITO (5.6%) that permit the practice. Over half of states had no specified limiting criteria (58.8%, n=30) while nearly one-fifth (19.6%, n=10) required vendors to be assigned based on population density and number of registers. The remainder of states established limiting criteria based on vendor to participant ratios, peer group, prices of WIC goods, and distance between approved vendors. Territories and ITOs most often used population density as limiting criteria (44.4%, n=8), while the remainder used distance from the nearest approved vendor (22.2%, n=4) or had no specified limiting criteria (22.2%, n=4).

For 11 of the 16 WIC vendor criteria that were studied, geographic and quantitative variation was also examined, in addition to assessment of individual criteria as reported above. Figure 1 shows where this variation exists in the states while Table 1 shows which states require the most and least numbers of criteria. It is notable that these criteria counts represent raw numbers, so further study is needed to show which of these criteria are more important than others, and therefore, which may create potential barriers to entry for WIC vendors.

Figure 1: Total Number of Vendor Selection and Authorization Criteria Adopted by State Agency-Authorized WIC Vendors, 2018–2020.

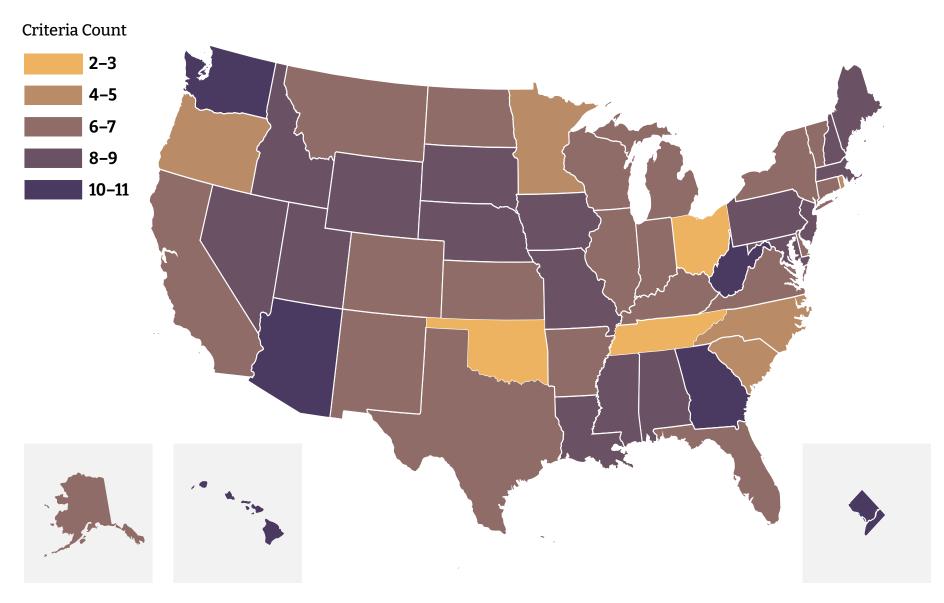


Table 1: State-by-State Numbers of WIC Vendor Selection and Authorization Criteria Adopted by State Agencies, 2018–2020¹

# of Vendor Selection & Authorization Criteria	State	# o Aı
2	Oklahoma	
3	Ohio	
	Tennessee	
4	North Carolina	
	South Carolina	
5	Maryland	
	Minnesota	
	Oregon	
	Rhode Island	
6	Arkansas	
	Colorado	
	Indiana	
	Kentucky	
	New Mexico	
	North Dakota	
	Virginia	
	Alaska	
	California	
	Connecticut	
	Florida	
	Illinois	
7	Kansas	
	Michigan	
	Montana	
	New York	
	Texas	

# of Vendor Selection & Authorization Criteria	State
7	Vermont
	Wisconsin
	Delaware
	lowa
	Louisiana
	Maine
	Massachusetts
8	Mississippi
8	Missouri
	Nevada
	New Hampshire
	Pennsylvania
	South Dakota
	Wyoming
	Alabama
	Idaho
9	Nebraska
	New Jersey
	Utah
	Arizona
	Georgia
10	Hawaii
	Washington
	West Virginia
11	Washington, DC



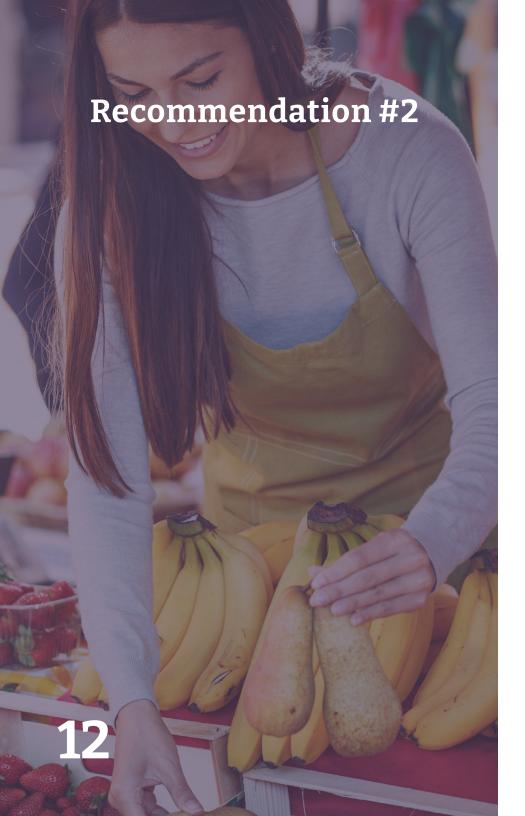
# Conclusion

This study is the first to compile and examine a database of WIC vendor selection and authorization criteria, and operations and management policies established by the 89 administrative agencies in the United States. Our results demonstrate that vendor selection and authorization criteria vary across WIC agencies without any consistent pattern. These findings are important because limiting the landscape of WIC vendors may have substantial impacts on communities and may result in reduced access to WIC-approved foods by WIC participants.

# Establish a common location for vendor criteria.

Findings reflect the complexity of obtaining and examining WIC vendor criteria, particularly for territories and ITOs where vendor guidelines were often not available. After many attempts, no vendor criteria could be obtained for 20 of the 38 territories or ITOs. Such efforts suggest that a central and searchable system to maintain state information is needed, or at minimum, should be housed either on a central website or in a consistent location on administrative agencies' websites.





Convene WIC leadership across administrative agencies to review variations, their rationale, and implications thereof.

Our research lends new insight into a policy mechanism that may unintentionally limit the quality of the food environment in low- and moderate-income areas. The characteristics of stores used in 20%–40% of states to determine eligibility, such as minimum square footage, number of registers, or full-service status, vary without any consistent pattern. More stringent requirements may create access barriers for WIC participants who live in lower income neighborhoods.

Revisit in-store marketing requirements among the 25% of states that do not require such labeling.

Healthy food marketing approaches are well established as viable mechanisms to increase their consumption (Karpyn et al., 2020). Sales of single and combined products are shown to increase when these approaches align with the "4 Ps" of marketing (product, price, promotion and placement). Twenty-five percent of states prohibit labeling, raising questions regarding the rationale for doing so.





# Examine opportunities to review WIC labeling requirements to ensure they are aligned with best practices.

There has been considerable study of shelf tagging and in-store marketing practices over the past decade (Adam & Jensen, 2016; Laska & Pelletier, 2016; Chandon et al., 2009; Tal et al., 2015). Efforts should be undertaken to ensure that current shelf-tagging guidance is aligned with best practices in the field.

### References

Adam, A., & Jensen, J.D. (2016). What is the effectiveness of obesity related interventions at retail grocery stores and supermarkets?—A systematic review. *BMC Public Health*, *16*, 1247.

Bersak, T., & Sonchak, L. (2018). The impact of WIC on infant immunizations and health care utilization. *Health Services Research*, *53*, 2952–69.

Bitler M.P., & Currie J. (2005). Does WIC work? The effects of WIC on pregnancy and birth outcomes. *Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management, 24*(1), 73–91.

Black M.M., Cutts D.B., Frank D.A., Geppert J., Skalicky A., Levenson S., Casey P.H., Berkowitz C., Zaldivar N., & Cook J.T. (2004). Special supplemental nutrition program for women, infants, and children participation and infants' growth and health: A multisite surveillance study. *Pediatrics*, *114*(1), 169–76.

Buescher, P.A., Horton, S.J., Devaney, B.L., Roholt, S.J., Lenihan, A.J, Whitmire, J.T., & Kotch, J.B. (2003). *Child participation in WIC: Medicaid costs and use of health care services. American Journal of Public Health*, 93(1), 145–50.

Center on Budget and Policy Priorities. (2017). *Policy basics: Special supplemental nutrition program for women, infants, and children*. Center on Budget and Policy Priorities.

Chandon, P., Hutchinson, J.W., Bradlow, E.T., & Young, S.H. (2009). Does in-store marketing work? Effects of the number and position of shelf facings on brand attention and evaluation at the point of

purchase. *Journal of Marketing, 73*(6),1–17. https://doi.org/10.1509/jmkg.73.6.1

Dunn C., Kennedy E., Bleich S., & Fleischhacker S. (2020). *Strengthening WIC's impact during and after the COVID-19 Pandemic*. Healthy Eating Research.

Fingar K.R., Lob S.H., Dove M.S., Gradziel P., & Curtis M.P. (2017). Reassessing the association between WIC and birth outcomes using a fetuses-at-risk approach. *Maternal Child and Health Journal*, *21*(4), 825–35.

Jun S., Catellier D.J., Eldridge A.L., Dwyer J.T., Eicher-Miller H.A., & Bailey R.L. (2018). Usual nutrient intakes from the diets of US children by WIC participation and income: Findings from the Feeding Infants and Toddlers Study (FITS) 2016. *Journal of Nutrition*, *148*(suppl\_3), 1567S–74S.

Kaiser M.L., Dionne, J., & Carr, J.K. (2019). Predictors of diet-related health outcomes in food-secure and food-insecure communities. *Social Work in Public Health*, 1–16. https://doi.org/10.1080/19371918.20 19.1575313

Karpyn, A., McCallops, K., Wolgast, H., & Glanz, K. (2020). Improving consumption and purchases of healthier foods in retail environments: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(20). https://doi.org/10.3390/ijerph17207524

Landry, M.J., Phan K., McGuirt J.T., Ostrander A., Ademu L., Seibold M., McCallops K., Tracy T., Fleischhacker S.E., & Karpyn A. (2021). USDA special supplemental nutrition program for Women, Infants and

Children (WIC) vendor criteria: An examination of U.S. Administrative Agency variations. *International Journal of Environmental Research and Public Health*, 18(7), 3545.

Laska, M., & Pelletier, J.E. (2016). *Minimum stocking levels and marketing strategies of healthful foods for small retail food stores*. Healthy Eating Research, Robert Wood Johnson Foundation.

Oliveira, V., & Frazao, E., (2015, April 6). *Painting a more complete picture of WIC: How WIC impacts nonparticipants*. Amber Waves: U.S. Department of Agriculture, Economic Research Service. Retrieved on September 30, 2021, from https://www.ers.usda.gov/amber-waves/2015/april/painting-a-more-complete-picture-of-wichow-wic-impacts-nonparticipants/

Sonchak L. (2016). The impact of WIC on birth outcomes: New evidence from South Carolina. *Maternal and Child Health Journal*, *20*(7), 1518–25.

Soneji S., & Beltrán-Sánchez, H. (2019). Association of special supplemental nutrition program for women, infants, and children with preterm birth and infant mortality. *JAMA Network Open, 2*(12), e1916722–e.

Tal, A., Musicus, A., & Wansink, B. (2015). Eyes in the aisles: Why is Cap'n Crunch looking down at my child? *Environment and Behavior*, 47(7), 715–33.

Tester J.M., Leung C.W., & Crawford P.B. (2016). Revised WIC food package and children's diet quality. *Pediatrics*, 137(5).

U.S. Department of Agriculture Food and Nutrition Service. (2013, October 10). *About WIC*. Retrieved February 10, 2021, from https://www.fns.usda.gov/wic/about-wic

Ver Ploeg, M., Mancino, L., Todd, J., Clay, D., & Scharadin, B. (2015). Where do Americans usually shop for food and how do they travel to get there? Initial findings from the National Household Food Acquisition and Purchase Survey, ElB-138. U.S. Department of Agriculture, Economic Research Service.

Walker R.E., Keane, C.R., & Burke J.G. (2010). Disparities and access to healthy food in the United States: A review of food deserts literature. *Health Place*, *16*(5), 876–84. https://doi.org/10.1016/j.health-place.2010.04.013

### **Funding**

This research was funded and supported by Healthy Eating Research (HER), a national program of the Robert Wood Johnson Foundation. The authors of this publication are members of the HER NOPREN WIC Learning Collaborative, jointly supported by HER and the Nutrition and Obesity Policy Research and Evaluation Network (NOPREN). NOPREN is supported by Cooperative Agreement No. 5U48DP00498-05 from the Centers for Disease Control and Prevention Division of Nutrition, Physical Activity, and Obesity. Allison Karpyn, Matthew J. Landry, and Alek Ostrander were supported by a NOPREN student stipend. The findings in this report are solely the responsibility of the authors and do not necessarily represent the official views of the HER, NOPREN, RWJF, or CDC.

### **Acknowledgments**

The work reflected in this brief greatly benefited from the efforts of a number of researchers and professionals, in the form of research guidance, resource sharing, and/or critical reviews. We are grateful to the HER NOPREN WIC Learning Collaborative, particularly then-current Co-Chair, Elizabeth Racine, for her support of this project, ranging from helping secure project support including research assistants, helping refine coding protocols, and fostering connections with key Collaborative members. We are also indebted to the time and thoughts provided by the following HER NOPREN WIC Learning Collaborative members and other external reviewers: Melissa Akers, Alice Ammerman, Betsy Anderson Steeves, Heidi Blanck, Lyndi Buckingham-Schutt, Brian Dittmeier, Caroline Dunn, Elisabet Eppes, Dianne Harris, Christina Kasprzak, Lucia Leone, Laura Lessard, Ruth Morgan, Angela Odoms-Young, and Eva Wong.

