Overview

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) community is expected to benefit from the significant strides undertaken in 2010-2011 related to WIC research. Following a July 2010 Institute of Medicine (IOM) convening titled “Planning a WIC Research Agenda”, the United States Department of Agriculture, Food and Nutrition Services division (USDA FNS) embarked on funding numerous studies suggested by the IOM. Similarly, USDA Economic Research Services (ERS) has funded a group of WIC research projects that will further enhance our understanding of the impact of WIC across multiple domains. A listing of currently funded FNS and ERS studies is included in the appendices of this document, with links to their websites for further detail.

Given the current federal fiscal landscape and competition for resource to meet nutritional needs, it is crucial for WIC to document its impact on low-income pregnant, breastfeeding, and postpartum women as well as families with young children. WIC must document its cost-effectiveness as a nutrition education and breastfeeding support program.

Recommendations

The intent of the 2012 WIC Research Needs Assessment is to highlight areas that our community feels are of high research priority due to their significant potential to provide essential information needed to impact the women, infants and children served by the program.

1. IMPROVED MATERNAL HEALTH DURING PERICONCEPTION AND INTERCONCEPTION PERIODS

It is becoming increasingly evident that nutrition during the periconception period—the time period immediately prior to conception and in the first few days and weeks following conception—can impact placental and embryonic development with critical lifelong implications. While WIC does not serve women prior to their first pregnancy, WIC serves millions of women between pregnancies. This represents an opportunity to optimize women’s nutrition and weight status prior to conception. Research is needed to examine the impact of WIC participation during an earlier pregnancy on subsequent health and nutritional status of mothers and fetal/birth outcomes. Research is also needed on how WIC might enhance its effectiveness in improving postpartum women’s health during the course of regular service delivery. Because of the short certification period for the postpartum mother, WIC focuses on the more urgent infant feeding issues. It may prove cost-effective to lengthen the postpartum certification period to improve the health of the postpartum woman prior to conception. Under current federal guidelines, if WIC funding is reduced such that all eligible participants cannot be served, non-breastfeeding postpartum mothers are the first to be moved to “waitlist” status. This has great potential to cause significant adverse impacts in the future. The postpartum mother is likely to become pregnant again and reducing services to these mothers represents not only a significant loss of nutritional support but also lessens the focus of WIC staff on the postpartum woman.
2. OVERWEIGHT / OBESITY
With WIC serving approximately half of the infants born in the United States and one-quarter of the nation’s children, preventing overweight and obesity in the WIC population would have a tremendous impact on obesity rates nationwide. Childhood obesity is linked to adult obesity; and obesity early in life accelerates the onset of obesity-related chronic health problems such as type 2 diabetes. Because it can be very difficult for obese individuals to revert back to a healthy weight, it is imperative that efforts be focused on preventing individuals, particularly young children, from becoming overweight and obese in the first place.

Multiple components of the WIC Program directly address childhood obesity and must be examined carefully. Breastfeeding, for example, has been shown to be associated with lower rates of obesity. Breastfeeding support is a key component of the WIC Program and studies are needed to explore the association between breastfeeding and childhood obesity among WIC participants. WIC also now has a food package that is consistent with current US Dietary Guidelines and includes fruits, vegetables and whole grains. The current food package also limits the purchase of whole milk to children between the ages of one and two, and requires lower fat milk for all women and children over age two. Research must be conducted to determine how the food package revisions have impacted behavioral and health outcomes, including child obesity, food purchases, diet quality, breastfeeding, infant feeding patterns, weight gain during pregnancy or weight loss after pregnancy.

3. DATA ACCESS
Governmental entities such as WIC are being asked to plan, monitor, evaluate and direct their activities using the program data available to them from their management information systems (MIS). Within the next four years, additional data streams will become available in public health from the first structured medical records systems, an expected outcome of the Patient Protection and Affordable Care Act. WIC Programs nationwide collect vast amounts of health data that could contribute to the health surveillance of the population served. In order for this to happen, significant investments need to be made in data infrastructure. With many states currently making plans to overhaul MIS systems, the time is right to consider how administrative data systems can serve a dual purpose of health surveillance of the population. Research is needed to identify and develop standardized data definitions and indicators that might enable analyses of WIC impact without the need to collect additional program information. The research and definitions will enable the WIC community to better utilize existing data to answer questions regarding our needs and effectiveness. In addition, they could enhance business functionality, by facilitating the development and implementation of an electronic state-to-state transfer system for WIC certification records.

4. WIC SERVICE DELIVERY

Electronic Benefits Transfer (EBT)
By 2020, all state WIC agencies will be required to have an EBT system in place for the purchase of WIC foods. Such systems will offer more flexibility for participants at the point of purchase (or checkout) to improve their WIC experiences at the grocery stores. Such systems will also provide state agencies with information on WIC participants’ food purchase patterns, enabling the former to analyze more precisely the cost of food packages and, more important, to target meaningful nutrition education and maintain relevant WIC Food Lists. Future studies should look at how new EBT processes directly impact WIC services for participants and how the transition to EBT impacts the participants’ consumption of WIC foods, and food package redemption rates.

Functional Ingredients
Since the WIC food package expanded in October 2009, state WIC agencies have been asked to approve a growing number of food products for purchase with WIC vouchers. During this time frame, food manufacturers have added functional ingredients to their products, often increasing the cost of these products to consumers and to the WIC Program. Some examples that are now commonly found in WIC food categories are Omega 3 fatty acids in juices, breads and cereals; added fiber in juices, bread, tortillas and cereals; and ARA and DHA in infant formula. Studies are needed at the local, regional and/or national level to document the changes in functional ingredients in foods allowable for purchase by WIC program participants, and to document the cost impact to WIC of these functional ingredients.

Value Enhanced Nutrition Assessment (VENA)
In 2005, USDA and the National WIC Association developed the VENA initiative, which aims to improve nutrition services quality by establishing standards for nutrition assessments. VENA defines for all state and local WIC agencies the process and content of a quality, comprehensive and participant-centered WIC nutrition assessment upon which eligibility, nutrition education, food package selection and referrals are based. In order to do so, VENA requires that staff demonstrate competencies in various areas related to a participant-centered nutrition assessment and that state and local policies support this practice. In 2009, all states were required to fully implement VENA by the end of the year. States across the nation have implemented VENA through different methodologies with varying levels of success. Studies are needed to determine which methodologies have the greatest impact on improving health outcomes for WIC participants.
### Appendix A: USDA FNS Currently Funded and Recently-Completed Studies

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<td><strong>Evaluation of the Birth Month Breastfeeding Changes to the WIC Food Packages (a.k.a “The WIC Birth Month Study”)</strong> Contractor: Abt Associates Expected Report Publication: January 2012</td>
<td>The WIC Birth Month Study responds to the recommendation of the Institute of Medicine to conduct a study of the impact of the changes in the WIC food packages on infant feeding in the first few months following birth. It gathers information from 16 local WIC agencies (LWAs) and the states, such as size and composition, other efforts to promote breastfeeding, and planned and actual implementation of breastfeeding options</td>
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<td><strong>WIC Breastfeeding Peer Counseling Study</strong> Contractor: Abt Associates Expected Report Publication: Phase 1 – January 2010 Phase 2 – 2015</td>
<td>The WIC Peer Counseling study has two components: an implementation study (Phase 1) and an impact study (Phase 2). Phase 1, published in spring 2010, developed a comprehensive and detailed picture of how the Loving Support peer counseling program was implemented in states and local WIC agencies throughout the country. One important finding of this first phase was that there is variation in the implementation of the Loving Support peer counseling program in local WIC agencies, particularly variation in the frequency, timing and location of in-person peer counseling offered to WIC participants pre- and post-partum. The second phase of the study will examine how specific variations in implementing peer counseling using the Loving Support model affect breastfeeding outcomes.</td>
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<td><strong>WIC Breastfeeding Policy and Practices Inventory</strong> Contractor: Mathematica Policy Research Expected Report Publication: 2013</td>
<td>This project will develop a set of data collection instruments and conduct a descriptive census of local agency breastfeeding-related policies and practices linked to breastfeeding rates. The project includes an examination of the relationship of local policies and practices to geographic variation in breastfeeding rates.</td>
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<td><strong>WIC Infant and Toddler Feeding Practices Study-2</strong> Contractor: Westat Expected Report Publication: Report on Infants – 2015 Final Report on Infants and Toddlers – 2016</td>
<td>The WIC ITFPS-2 is a national data collection regarding contemporary WIC infant and toddler feeding practices. The study is examining contemporary influences that shape a mother’s infant and toddler feeding decisions and describes the changes in feeding practices as the children develop. This study will also assess the relationship of WIC nutrition education, breastfeeding promotion, and support provided to participants to actual feeding practices.</td>
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<td><strong>University-Based Grant to Assess WIC Impacts on Periconceptional Nutrition</strong> Grantee: UCLA Expected Report Publication: 2016</td>
<td>This project supports a university-based grant series for researcher-initiated projects to demonstrate creative approaches to evaluate WIC impacts on mothers’ periconceptional nutrition, coordinate activities among researchers, and widely disseminate findings.</td>
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<td><strong>WIC-Medicaid Cost-Benefit Study</strong></td>
<td>The first FNS-sponsored WIC Medicaid Study, published in 1991, found that in 1987-88, every dollar spent on WIC services to low-income pregnant women saved $1.77 to $3.13 in Medicaid cost during the first 60 days following delivery. This study explores the feasibility of: 1) replicating this study in two states to update the findings, and 2) extending the exploration of WIC cost-benefit and cost-effectiveness for pregnant women and other categories of WIC participants. The contract includes an option to extend the study to additional states if feasible.</td>
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<td><strong>WIC Participant and Program Characteristics (PC)</strong></td>
<td>WIC PC data, available every two years from administrative records provided by State Agencies, provides information on the demographic characteristics, economic circumstances and health conditions of WIC clients, along with information on the operational characteristics of State and local WIC agencies. The PC 2012 and 2014 reports will include state data. The PC contract also provides data files on participant characteristics and food packages used by FNS for regulatory impact analysis and cost estimates.</td>
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<td><strong>WIC Food Cost Report and Market Analysis</strong></td>
<td>This project will analyze data from the 2010 WIC Participant and Program Characteristics data set, other FNS administrative data, and food cost data to prepare a report on WIC food cost by category and commodity. The report will include both the pre-rebate and post-rebate costs for the various categories of WIC foods (milk, cheese, eggs, cereal, etc.). The information is useful in understanding and forecasting the impact of food costs on WIC program costs.</td>
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<td><strong>WIC Eligibles Estimates, National and State</strong></td>
<td>This project will update the annual estimates of the number of individuals eligible for the WIC Program at the national and state level with estimates for 2009 and 2010. These estimates are used to help allocate funding in the WIC funding formula and track the national WIC coverage rate.</td>
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<td><strong>National Survey of WIC Participants II</strong></td>
<td>FNS receives extensive administrative data on the program but also surveys WIC participants about every 10 years in order to obtain in-depth, nationally representative information about clients and staff. The National Survey of WIC Participants II, Volume I, explores the characteristics and experiences of WIC participants and is based on surveys conducted largely in the last quarter of 2009. The National Survey of WIC Participants II, Volume II: State and Local Agencies, provides information on the policies, procedures, and operations at state and local WIC agencies and is based on surveys conducted largely in the last quarter of 2009. Information from this study will be used by FNS, and state and local agencies in decision-making to update services to most effectively meet participants’ needs.</td>
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| **2011 WIC Vendor Management Study**  
Contractor: Altarum Institute  
Expected Report Publication: 2013 | The purpose of this study is to examine the management of WIC retail delivery systems and determine the extent to which WIC-authorized retail grocers (WIC vendors) adhere to program rules. This study is part of a larger FNS effort to ensure WIC program integrity and to comply with the Improper Payments Information Act of 2002 (IPIA), which requires FNS to estimate and report improper payments. In addition to a description of vendor management practices of WIC State Agencies and characteristics of WIC vendors participating in the study, the study also:  
1. Estimates the frequency of vendor violations;  
2. Examines the relationship between vendor characteristics and vendor violations; and  
3. Compares national estimates from this study with previous estimates. |
| **WIC Erroneous Payments to Vendors 2005–2008**  
Contractor: ICF Macro  
Expected Report Publication: January 2012 | This project develops and applies post-stratification sampling techniques (raking) to estimate annual erroneous WIC vendor payments using current FNS TIP (the Integrity Profile) data and 2004-2005 data from the WIC Vendor Management Study. This study will develop and test a methodology to age improper payment estimates, and provide national estimates of improper payments due to WIC vendor error ($ and rate) for 2005 through 2008. |
| **WIC Vendor Management Practices Data Aging – Annual Updates**  
Contractor: ICF Macro  
Expected Report Publication: Annually (results are reported in the USDA Performance Accountability Report) | This item is the annual aging of data on WIC vendor erroneous payments for reporting in the USDA Performance and Accountability Report (PAR). It helps fulfill the requirements of the Improper Payments Accountability Act of 2002. Using a statistical procedure called “raking”, data from the bookend study of WIC vendor payments in 2004-2005 are adjusted using administrative data reported by states and maintained in the Integrity Profile (TIP) database. The TIP database includes reports of findings from the required covert compliance purchases at WIC vendors conducted on an ongoing basis by state WIC agencies. Annual aging of the data from the 2004-2005 study will be needed until results from the new study are available. |
| **National Survey of WIC Participants II - Volume III: Improper Payments**  
Contractor: ICF Macro  
Expected Report Publication: January 2012 | FNS surveys WIC participants about every 10 years in order to obtain in-depth, nationally representative information about clients and staff. The National Survey of WIC Participants II Volume III: Improper Payments Report provides information on the improper payment analysis for the FY 2009 WIC Program, focusing on certification error. The survey supports FNS’ compliance with the Improper Payments Information Act (IPIA). Information from this study will also be used by FNS, as the “bookend” study for generating annual aged estimates of WIC certification error in future years. |
### Appendix B: USDA ERS WIC Studies

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| **WIC Food Package Revisions: Impact on Food Purchases and Access to Healthy Foods**  
*Principle Investigator:* Tatiana Andreyeva, Yale University  
*Expected Completion Date:* March 2013 | This project will use supermarket scanner data to assess the impact of the recent WIC food package change on participant purchases of fruits and vegetables, whole grains, and lower-fat milk to show trends in food market factors and access to healthy foods. The study will conduct store inventories in a representative sample of food retailers 18-20 months after implementation of the revisions and compare the results to similar assessments conducted prior to implementation of the WIC food package revisions and one year after the revisions. The study will also identify store and community characteristics that modify the impact of the WIC food package revisions on access to healthy foods. |
| **Effect of New WIC Food Packages on Breastfeeding and Food Package Choices**  
*Principle Investigator:* Ted Joyce, National Bureau of Economic Research and Baruch College  
*Expected Completion Date:* September 2013 | This study will use 2007-2010 data from PedNSS in 17 states to analyze changes in breastfeeding initiation, exclusivity, duration, and choice of food package among WIC participants from before to after implementation of the new food package. The key to identification is the staggered rollout of the new food package across states. Administrative data from WIC in five states will be used to analyze changes in food package choices. |
| **The Economics of Beverage Choices Among WIC and SNAP Participants**  
*Principle Investigator:* Tatiana Andreyeva, Yale University  
*Expected Completion Date:* March 2013 | Sugar-sweetened beverages are a target for reduction in the 2010 Dietary Guidelines for Americans. Policy changes, such as the recent revisions to the WIC food packages, could shift purchasing patterns for unhealthy foods and beverages. This study will use 2009-2011 supermarket scanner data to assess beverage purchasing behavior among WIC and SNAP recipients in two northeastern states. |
| **The Effect of Food Assistance Programs on Alternative Poverty Measures**  
*Principle Investigator:* Linda Giannarelli, The Urban Institute  
*Expected Completion Date:* September 2012 | This project assesses the extent to which nutrition programs reduced poverty before, during, and after the 2007-2009 recession. Poverty is measured using current recommendations for the Supplemental Poverty Measure (SPM) from the Census Bureau. The SPM includes all key family resources, including near-cash income from the Supplemental Nutrition Assistance Program (SNAP), WIC and the National School Lunch Program. |