

TITLE: Organizational Readiness for Knowledge Translation and WIC Retention

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BACKGROUND AND METHODOLOGY: The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) program prescribes monthly food packages to program participants. In 2004, US Department of Agriculture Food and Nutrition Services (USDA-FNS) charged an Institute of Medicine (IOM) committee to review contents and nutritional impact of the supplemental food packages offered by WIC. Based on IOM's evidence-informed recommendations, WIC state agencies were tasked with implementing major regulation changes to WIC food packages by October 2009. This study proposes that the lengthy process USDA-FNS, IOM, and WIC state agencies undertook to make and implement the 2009 WIC regulation changes should be viewed as a successful case of Knowledge Translation. Knowledge Translation refers to action plans that promote evidence use in decision-making. The 2009 WIC regulation change process successfully bridged the gap between "what is known" in nutrition science and "what is currently done" in building WIC food packages. This study analyzes Knowledge Translation at the organizational level by focusing on organizational readiness for change, because being ready for change is potentially one of the most important factors that promote an organization's participation in Knowledge Translation. This study hypothesizes that WIC state agencies who have a sufficient level of readiness to achieve large-scale organizational changes can be more successful in implementing the 2009 evidence-informed changes; and WIC state agencies' more successful implementation can lead to improved WIC program outcomes, particularly participant retention. This study conducted retrospective semi structured interviews with key informant from WIC state agencies. A semi structured interview guide coupled with a short questionnaire were developed based on prior research of organizational readiness for knowledge translation. The interview questions were reviewed and modified by study advisors and research community members including those who work for similar government assistance programs. During the interviewee recruitment process, several WIC state agency directors asked to review the interview questions before considering participating. Many of them kindly provided valuable feedback on how to improve the interview questions. All interviews were conducted over the phone. All interviews were taped with the participants' consent. Tufts University Research Ethics Board approved the study design, including all short questionnaire questions and interview questions. After all interviews were completed, two research assistants assisted the interviewer through the transcription, coding, analysis, and synthesis of data. The research team completed two rounds of coding, completing initial coding, focused coding, and axial coding processes. After second round of coding was finished, the research team reviewed the focused and axial codes to identify how organizational readiness for knowledge translation factors could relate to barriers to participant retention. A list of barriers to retention was compiled from reviewing state WIC retention studies and/or projects from recent years

FINDINGS: Key informants from 7 WIC state agencies (WA, CA, AZ, AR, VT, ME, MA) shared the steps they undertook in order to implement the 2009 WIC regulation changes, and discussed the roles WIC state agencies played in helping to align WIC food packages with the 2005 Dietary Guidelines for Americans and current infant feeding practice guidelines of the American Academy of Pediatrics. 1-2 representatives from each participating WIC state agency completed the phone interview, making a total of 12 interviewees. One of the research assistants double coded 20% of the interview transcripts. An inter coder matrix was constructed, and percentage agreement was calculated and found to be 81%. The interview transcripts highlighted two main groups of axial codes: 1) axial codes that described key components of the state-level

regulation implementation process; and 2) axial codes that revealed the key constructs of organizational readiness for knowledge translation in WIC program. The first set of axial codes showed that all WIC state agencies had to undergo a complex change process in order to implement the 2009 WIC regulation changes. The main tasks of this change process included: 1) building food packages that met the interim rules; 2) preparing all stakeholders for the upcoming changes; 3) making necessary organizational level changes in order to implement the new food packages; and 4) communicating with FNS Regional Offices and coordinating with neighboring states. This study emphasizes that the complex process WIC state agencies undertake to implement regulation change should not be simply categorized as “implementation”, but rather be considered as a state-level Knowledge Translation process. However, it is important to note that decisions made by WIC state agencies regarding how to appraise, synthesize, and adapt knowledge (a.k.a. change) are constrained by the Knowledge Translation decisions made by IOM expert committee and USDA-FNS. WIC state agencies operate within a confined space of decision-making. The second set of axial codes showed that for a WIC state agency to be ready for knowledge translation, or implementing evidence-informed regulation changes, it should assess its level of readiness in terms of: 1) innovation readiness; 2) personal readiness; and 3) institutional readiness. Innovation readiness refers to the fit between a WIC regulation change and existing WIC program processes (process fit) and the fit between a regulation change and operational features of existing WIC program practices and food manufacturing practices (operational fit). Organizational Readiness for Knowledge Translation factors are found to be related to commonly reported barriers to retention. A good example of a regulation change with low degree of innovation readiness leading to implementation barriers and barriers to retention is 16 oz. loaf whole wheat bread. After 2009, states were required to provide 16 oz. loaf whole wheat bread, when in fact bread loaves were not manufactured in this size. WIC state agencies overcame this implementation barrier by working closely with bread manufacturers to change their production practices. However, many vendors were only able to ensure that 1-2 loaves of this specially-made-for-WIC bread were stocked on their shelves at all times, consequently making it difficult for some WIC participants, especially those living in rural areas, to redeem their benefits. Policy-makers and researchers could use the Organizational Readiness for Knowledge Translation constructs discovered in this study, as evaluation measures for future WIC regulation changes. Decision-makers can use the axial codes discovered in this study to 1) understand the knowledge translation process of implementing evidence-informed regulation changes; 2) identify factors that could influence states’ ability to be prepared for implementing changes; and 3) gauge “practicality” of proposed federal rules. They can also use the axial codes to guide the development of “tools and strategies needed to assist state agencies, local agencies, and vendors to inform participants about and support them to make the best use of the expanded options of the revised food packages.” Such tools and strategies are recommended by the 2017 WIC food package review report and will be key to implementing the upcoming round of WIC regulation changes.

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