



Comparative Effectiveness Review Disposition of Comments Report

Title: *Maternal and Child Outcomes Associated With the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)*

Draft report available for public comment from October 5, 2021, to November 2, 2021.

Citation: Caulfield LE, Bennett WL, Gross SM, Hurley KM, Ogunwole SM, Venkataramani M, Lerman JL, Zhang A, Sharma R, Bass EB. Maternal and Child Outcomes Associated With the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Comparative Effectiveness Review No. 253. (Prepared by the Johns Hopkins University Evidence-based Practice Center under Contract No. 75Q80120D00003.) AHRQ Publication No. 22-EHC019. Rockville, MD: Agency for Healthcare Research and Quality; April 2022.
DOI: <https://doi.org/10.23970/AHRQEPCCER253>. Posted final reports are located on the Effective Health Care Program [search page](#).

Comments to Draft Report

The Effective Health Care (EHC) Program encourages the public to participate in the development of its research projects. Each draft report is posted to the EHC Program website or AHRQ website for public comment for a 3- to 4-week period. Comments can be submitted via the website, mail, or email. At the conclusion of the public comment period, authors use the commentators' comments to revise the draft report.

Comments on draft reports and the authors' responses to the comments are posted for public viewing on the website approximately 3 months after the final report is published. Comments are not edited for spelling, grammar, or other content errors. Each comment is listed with the name and affiliation of the commentator if this information is provided. Commentators are not required to provide their names or affiliations in order to submit suggestions or comments.

This document includes the responses by the authors of the report to comments that were submitted for this draft report. The responses to comments in this disposition report are those of the authors, who are responsible for its contents, and do not necessarily represent the views of the Agency for Healthcare Research and Quality.



Summary of Peer Reviewer Comments and Author Response

This research review underwent peer review before the draft report was posted for public comment on the EHC website. We received comments from four peer reviewers, four members of the technical expert panel (TEP), and the U.S. Department of Agriculture Food and Nutrition Service (FNS). The comments from peer reviewers and TEP were overall very positive and acknowledged the heterogeneity of the available data.

- One TEP member noted a missing qualitative study. The study was added.
- Reviewers suggested moving more details about the methods and literature flow figure from appendix to the report. There were some questions related to strength-of-evidence statements and ensuring they were consistent with the results throughout. Strength-of-evidence statements were reviewed to ensure consistency across outcomes.
- Reviewers suggested adding more detail about the limitation of the evidence gap/research gap to the discussion. This was done.
- The EPC team addressed comments about the formatting and subheaders/subsections that were made by the reviewers.
- The EPC team clarified text and added more details in the report where needed based on comments.
- Based on AHRQ and FNS's suggestions, we reported the findings separately by comparisons: (1) WIC participants versus WIC-eligible nonparticipants and (2) 2009 food package studies of WIC participants. We have significantly revised and reorganized the results to better synthesize the findings separately for WIC versus no WIC and 2009 food package change studies. We revised the Discussion section to emphasize the evidence from the WIC versus no WIC comparisons, incorporating the 2009 food package change evidence when available.

Public Comments and Author Response *for reports with sequential peer review and public comment*

Commentator & Affiliation	Section	Comment	Response
National Center for Health Research (NCHR)	General	<p>We endorse the systematic review of WIC, an important program that aims to safeguard the health of low-income, nutritionally at-risk pregnant and postpartum women and children under the age of 5 years old. We applaud that the review examined both qualitative and quantitative studies in an effort to get a full picture of the relationship between WIC use and various health outcomes. It is valuable that the review assesses health outcomes for mothers as well as children, ranging from gestational diabetes to infant mortality to cognitive scores for children.</p> <p>We also appreciate the discussion regarding the limitations of the report. For example, not all studies analyzed the association of WIC participation and outcomes by subgroup, such as employment or housing status. The systematic review addresses the shortcomings of current research, such as the need for more subgroup analyses, as well as more details about benefit insurance and the duration of WIC participation. We hope that future research will collect and analyze this information.</p>	Thank you for your comments.
National WIC Association (NWA)	General	Include food security as a relevant outcome. NWA recommends that food security be included as one of the outcomes related to child diet quality, as increased food security is one of the principal outcomes associated with WIC participation and is critical to children's health and development.	Food security was included as an outcome but no eligible studies reported on it. We added the finding of 0 studies to the dietary outcomes sections for women in KQ1 and children in KQ2, and further highlighted the insufficient evidence for this outcome in the discussion.
National WIC Association (NWA)	General	Define WIC Participation. WIC participation is an essential metric within WIC research, monitoring and evaluation. The term is, however, loose and needs to be defined clearly in the next iteration of the review. It was noted that studies typically measured this by self-report and the length of time was not typically determined. The WIC program defines participation as certified with food benefits in their WIC account, which is not likely the same definition inferred in this paper.	WIC participation was defined by the studies that were included. We added a footnote to explain this in Table 1. In the Limitations, we clarified that most of the studies defined WIC participation using self-report on a survey.

Source: <https://effectivehealthcare.ahrq.gov/products/outcomes-nutrition/research>

Published Online: April 19, 2022



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National WIC Association (NWA)	General	Emphasize the fair limitations impacting the level of evidence. Regarding the classification of the standards of evidence, the report notes that no RCTs explore WIC participation. While it is important to classify evidence in accordance with best practices regarding evidence hierarchies, it should also be noted that it is unethical to randomize participants to WIC. It should therefore be emphasized that 'medium' is the highest level of evidence that research related to WIC is able to achieve, not because of the lack of rigor of the studies but because participants cannot be ethically randomized to WIC. Neglecting to highlight this important detail would be a considerable oversight.	We added text about the limitations impacting the level of evidence grades to the section about Strengths and Limitations in the Discussion.
National WIC Association (NWA)	General	Define acronyms in each section. NWA further recommend defining acronyms in each section, even if defined earlier in the review, since readers may skip to this section. Namely: HEI, SOE, WLZ, RCT	Thank you, we worked to define acronyms according to a AHRQ Guidance document we need to adhere to.
National WIC Association (NWA)	Evidence Summary	The evidence summary was clear and easy to read. The health outcomes represent the key areas related to WIC participation.	Thank you



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National WIC Association (NWA)	Evidence Summary	Note in the evidence summary why only studies with a comparison group were included in the systematic review. Additional comment on this area is provided in the results section.	Because of the page limit for the Evidence Summary, we could not add much explanation about why we only included studies with a comparison group. In the methods section of the Evidence Summary, we succinctly state that we focused on comparison to WIC-eligible non-participants. We also added a sentence of the Strengths and Limitations section of the Evidence Summary to emphasize that we focused mainly on studies having a comparison group with WIC-eligible non-participants. This decision was based on the wording of the key questions and the associated PICOTS framework as was presented in the protocol. A WIC-eligible non-participant comparison group requirement enabled us to approach effectiveness within the context of observational studies. Importantly, we did include evidence from studies of WIC participants only, and these studies, largely focused on detecting changes in outcomes with the revised food package, were correctly identified as indirect evidence regarding outcomes and WIC participation.

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National WIC Association (NWA)	Evidence Summary	While the authors of the review are correct that the surveillance data does not include a comparison group, it is worthwhile to note that surveillance data indicates a decline in obesity among children enrolled in WIC from 2010 to 2018.	Yes, that is correct and it is mentioned in the discussion that this is not the pattern for US children as a whole.
National WIC Association (NWA)	Evidence Summary	On p. Vi, the TOO acronym should be defined.	We used AHRQ standard template
National WIC Association (NWA)	Abstract	On p. 4, in the structured abstract, the age-appropriate shifts from whole milk to low-fat milk format is inconsistent with the rest of the indicators mentioned in the paragraph.	We have revised the abstract for clarity on this point.
National WIC Association (NWA)	Introduction	The introduction section similarly is accurate and detailed in its description of the WIC program and current evaluations. The purpose and scope of the systematic review are clear and relevant to current WIC participation.	Thank you
National WIC Association (NWA)	Methods	The PRISMA checklist was used to critically appraise the systematic review for public comments.	Thank you
National WIC Association (NWA)	Methods	The inclusion and exclusion criteria for study selection were based on the PICOTS method which described the populations, interventions, comparisons, outcomes, timing, and setting.	Thank you
National WIC Association (NWA)	Methods	While exclusion of animal studies is appropriate, a brief statement of reasoning would be appropriate.	Animal studies were excluded by the Key Questions, and the defined target population
National WIC Association (NWA)	Methods	In addition, inclusion criteria for timing was provided but exclusion was not justified. The data extraction process was conducted appropriately with reviewers independently abstracting data and assessing risk of bias for studies.	We now justified exclusion criteria for timing.
National WIC Association (NWA)	Methods	All databases, registers, and websites were clearly listed, and search criteria adequately defined. Data items that were specifically associated with the outcomes of interest among WIC mothers and infants were clearly defined and tabulated.	Thank you
National WIC Association (NWA)	Methods	Include a brief description on the funding sources for the studies included in the final report.	We have added a funding source table to the results appendix and information to the results section (please see Appendix Table C-1).



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National WIC Association (NWA)	Methods	The data analysis and synthesis section would benefit from a clear, detailed description of handling of missing data or data conversions.	Missing data were not dropped from our database but were recorded as “not reported” in the report. Because of the heterogeneity of the studies, no data conversion was done for meta-analysis. This is mentioned in the Methods section under “Data Synthesis and Analysis.”
National WIC Association (NWA)	Methods	In addition, a sensitivity analysis would be appropriate for the process of data extraction.	We did not conduct analyses that required sensitivity analyses.
National WIC Association (NWA)	Methods	While the individual studies reported in the evidence tables included missing data, a general statement on how missing data were handled is appropriate.	Missing data were not dropped from our database, but were recorded as “nNot reported” in the report.
National WIC Association (NWA)	Methods	The strength of the body of evidence was graded using a sound, recommended AHRQ method. Overall, this systematic review is a crucial piece of evidence linking WIC participation and healthy maternal and infant outcomes.	Thank you
National WIC Association (NWA)	Results	Recommend noting that much of the evidence on WIC does not contain a comparison group, as demonstrated by the fact that the plurality of full-text abstracts excluded were due to the fact that studies did not have a comparison group. This paucity of studies is due to the difficulty of identifying comparison groups of income eligible recipients who are not currently participating in the program.	To clarify, the primary reason was no comparison group or does not address the association of WIC participation and an outcome. For example, many published studies recruit subjects through the WIC Program but are not evaluating the WIC Program or WIC participation. It is true, however, that some studies had a comparison group but did not have an income-eligible non-participant comparison group and were excluded on that basis. Despite the requirements, over 90 studies were identified for this review. We noted this limitation in the Discussion.

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National WIC Association (NWA)	Results	It is noted that there are no RCTs exploring WIC participation and health outcomes - this area merits some additional discussion. Since it would be unethical to randomize participants to receive WIC, it would be impossible to achieve a 'high' level of evidence under these standards. While we understand the need to classify evidence in accordance with best practices regarding evidence hierarchies, it should be emphasized that 'medium' is the highest level of evidence that research related to WIC is able to achieve.	We added text in the Strengths and Limitations section of the Discussion to say more about the lack of RCTs and how it is difficult to perform RCTs for public health programs like WIC. In that section, we mention that it is not unusual for public health programs to rely on evidence other than RCTs.
National WIC Association (NWA)	Discussion	Importance of the review to stakeholders: Expand on reasons why this review is important to all groups mentioned. Policy makers are called out with more details, rightfully so, but so are other groups (WIC staff, leadership, participants, etc.). How will this review be meaningful and accessible to these groups?	We are limited in the space available to expand on this important point. However, we have devoted more than 2 pages of the Discussion to the implications for clinical practice, education, research, or health policy.
National WIC Association (NWA)	Discussion	Incorporation of qualitative studies: Qualitative studies are mentioned in the intro, but these studies are not discussed at all in the subsequent sections until the Implications section on page 83. If there is relevant info from these studies, we would recommend including them in the appropriate section by topic.	We included the qualitative findings under the outcomes in the Results. We added a little more text about the qualitative studies in a few places within the Discussion chapter.
National WIC Association (NWA)	Discussion	Inclusion of studies references: In the table on p.76, instead of just noting the number of studies included in determining the strength of evidence, note the actual studies with superscripts, so readers have a quick reference and go back to the source of the information easily if they choose.	We have added references to Table 19
National WIC Association (NWA)	Discussion	Definition of high risk pregnancy: We recommend including a definition of what WIC considers to be a high-risk pregnancy – which is not precisely aligned with the medical definition. If someone has a medical high-risk pregnancy, the role of the WIC program staff would be to ensure connection to the appropriate providers. If it is a nutritional high risk, WIC staff may have more of a direct role in providing support.	Thank you for this point, we included text on this point in the discussion section
National WIC Association (NWA)	Discussion	Child Diet Quality: We recommend including include “Women” in the header on p.78, since women are also discussed in this section.	To address this point, we changed this to say Diet Quality.

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National WIC Association (NWA)	Discussion	Isolating WIC participation: In the first full paragraph, we would start this paragraph with the last sentence (“Teasing out what WIC participation alone means for this outcome is difficult.” When starting the way, it does, it de-emphasizes all of the factors that are outside of WIC’s control (paid family leave, social norms, etc.). It suggests that education and support are the only things that affect this outcome, and while they are important, we must make change across all levels of the socioecological model.	We have edited as suggested
National WIC Association (NWA)	Discussion	WIC’s funding description: The last paragraph on p. 81 states that WIC is a federal program available to all those eligible – this makes it sound like an entitlement program (e.g. SNAP), which it is not.	We revised the sentence to say “None of the evidence on the key questions resulted from RCTs because WIC is a federal program funded to make it largely available to all of those who are eligible and many people would consider it unacceptable to perform an RCT.
National WIC Association (NWA)	Discussion	NASEM recommendations: The NASEM recommendations aren’t mentioned until the very last sentence of this section. We recommend moving them earlier in the section and referencing them more throughout the discussion.	Due to the page constraints on the report, we did not have room to add more comments about the NASEM report throughout the Discussion chapter, although the report is still cited in the Discussion.
National WIC Association (NWA)	Discussion	Transition to EBT: In the discussion, there is no mention of the transition to EBT and how this may have impacted access to WIC foods and the Healthy Eating Index (HEI). It feels like an omission to not to mention this transition, even if it was not discussed in any of the studies.	We added one sentence in the Discussion to acknowledge that none of the studies examined whether the recent implementation of electronic benefit transfers made it easier to use food benefits.