



Adverse Maternal & Child Health Outcomes Associated with Maternal Weight Gain

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Today's Outline

A. AHRQ 101

B. Brief background on AHRQ's Effective Health Care program.

C. RTI-UNC Evidence-based Practice Center Systematic Review: *Adverse Maternal & Child Health Outcomes Associated with Maternal Weight Gain*





AHRQ's mission

Improve the quality, safety, efficiency and effectiveness of health care for all Americans





Agency for Healthcare Research and Quality

- We are:
 - A Scientific research agency
 - The Lead federal agency on health care quality and safety
- We are not:
 - A policy-making agency
 - A regulatory agency **





AHRQ Research: How it is Unique

- Dual focus -- Services + Systems
- Considers cost-effectiveness
- Values effectiveness over efficacy
- More patient-centered, less disease-specific
- Includes primary care and prevention





Cross Cutting Portfolios

- Comparative Effectiveness
- HIT
- Patient Safety
- Prevention/Care Management
- Value





Effective Health Care Program

A. Evidence synthesis (EPC program)

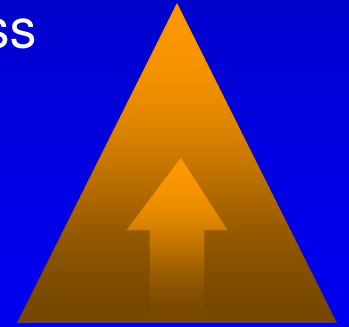
- Systematically reviewing, synthesizing, comparing existing evidence on treatment effectiveness.
- Identifying relevant knowledge gaps.

B. Evidence generation (DEcIDE, CERTs)

- Development of new scientific knowledge to address knowledge gaps.
- Accelerate practical studies.

C. Evidence communication/translation (Eisenberg Center)

- Translate evidence into improvements
- Communication of scientific information in plain language to policymakers, patients, and providers.





Evidence-based Practice Centers (EPC) Program

- n **Conduct** and disseminate state-of-the-art **systematic reviews**
 - Topics are user driven, consider the stakeholder
 - Transparent
 - Provide the evidence base for decision-making: research agenda, guideline development, quality measures, and coverage decisions

- n **Advance methodology** for systematic reviews



Systematic Review of the Research Evidence

Allows you to consider a body of evidence with...

- n Explicit methods, avoid bias
- n Distinguish intermediate from clinical outcomes
- n Systematic search for relevant studies
- n Consistent evaluation of quality of individual studies
- n Transparent reasoning, reproducible results

AIM: Distinguish what we know from what we don't

AIM: Facilitate decision making



Core Methodologic Approach for EPC Systematic Review

- n Technical Expert Panel / Public Review
- n Topic Assessment and Refinement...
- n Literature Review
- n Data Extraction
- n Assessment of Study Quality
- n Statistical / Data Analyses
- n Synthesis and Reporting
- n **Peer Review**



Topic Assessment & Refinement

Identify most important questions

- Sufficient literature to answer question?
- Is it useful to point out *lack of evidence*?
- Context and target: specialists, generalists, public, policy makers?
- Where will comprehensive and systematic review be *most* useful?
- Are there sub-populations that need separate data analysis?



Tenets for Synthesis and Reporting

- n Transparency: descriptions of decisions throughout
- n Reproduce and Update: appendices with detailed data from each study
- n Expert and Public input and review
- n Recommendations for research, further considerations
- n Does **NOT** include clinical recommendations
 - Role of Consensus Panels, Clinical Guideline Committees



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Adverse Maternal & Child Health Outcomes Associated with Maternal Weight Gain

RTI-UNC Evidence-based Practice Center



Key Questions (KQ) ***To be Addressed in the Evidence Report***

- 1. What is the evidence that either total weight gain or rate of weight gain during pregnancy is associated with:**
 - Birth outcomes?**
 - Infant health outcomes?**
 - Maternal health outcomes?**

Is there evidence to suggest that total weight gain or rate of weight gain are causal factors in infant or maternal health outcomes?

- 2. What are the confounders and effect modifiers in examining the association between maternal weight gain (overall and patterns) and birth outcomes?**

Based on the findings in KQ 1, do these confounders and effect modifiers themselves contribute to ante-partum or post-partum complications, or longer-term maternal and fetal complications, including development of adult obesity?



Key Questions (Continued)

3. What is the evidence that weight gain above or below thresholds defined in the 1990 Institute of Medicine Body Mass Index (BMI) Guidelines or weight loss in pregnancy contribute to ante-partum or post-partum complications, or longer-term maternal and fetal complications?

How do these relationships vary by socio-demographic characteristics (i.e., race and age)?

4. What are the harms or benefits of offering the same weight gain recommendations to all pregnant women, irrespective of age and body weight considerations (e.g., pregravid weight, actual body weight at a particular time point, or optimal body weight)?



Key Questions (Continued)

- 5. What are the anthropometric tools for determining adiposity and their appropriateness for the pregnancy state?**
- What are the risks and benefits of measuring adiposity for:**
 - Clinical management of weight gain during pregnancy?**
 - Evaluating the relationship of weight gain and outcomes of pregnancy?**

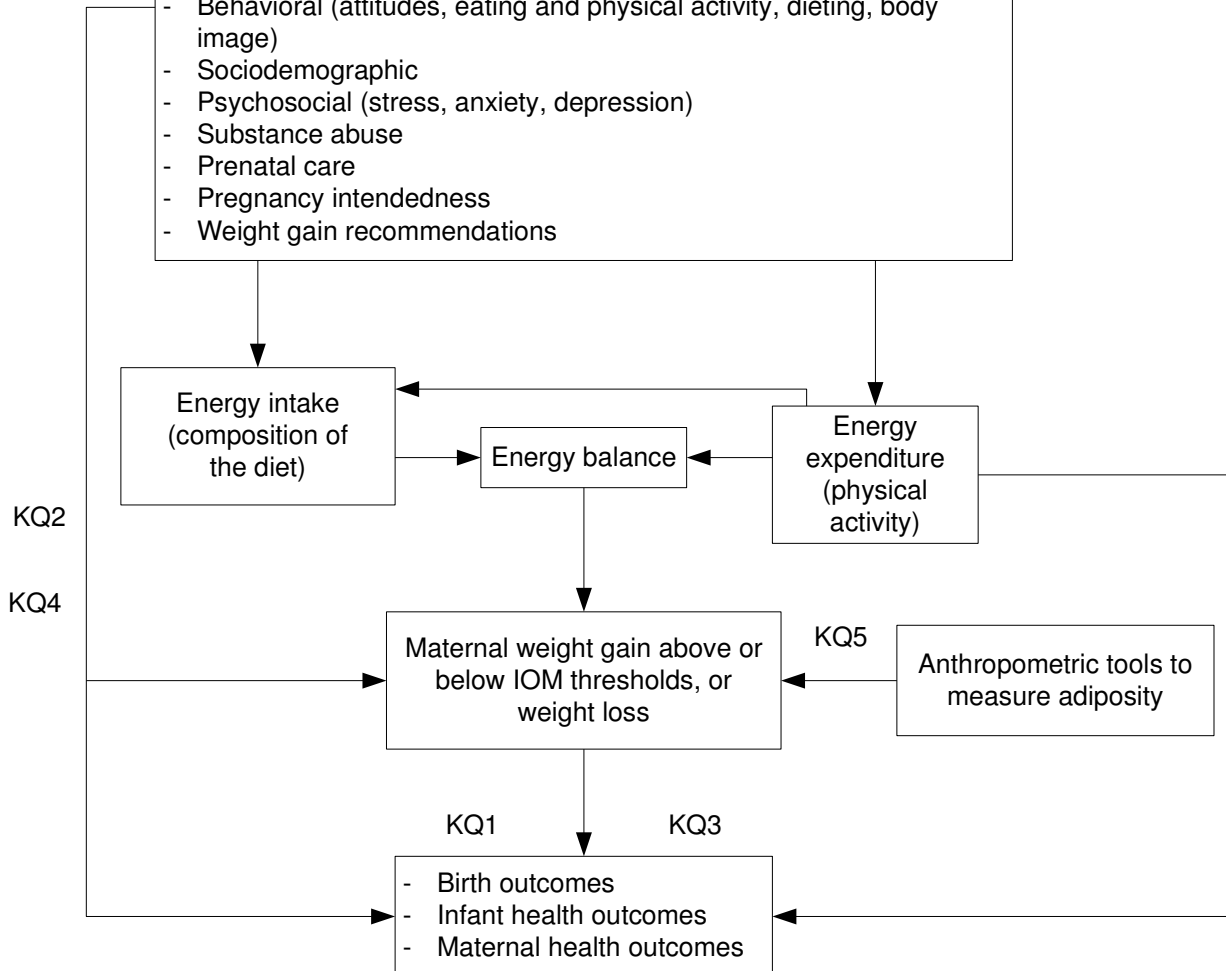
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<http://www.ahrq.gov/clinic/tp/admattp.htm>**



Analytic Framework: Outcomes of Maternal Weight Gain for Singleton Pregnancies

Confounders and Effect Modifiers

- Age
- Race
- Pregravid BMI
- Health status preexisting conditions and pregnancy complications (i.e., GDM, anemia)
- Genetic
- Behavioral (attitudes, eating and physical activity, dieting, body image)
- Sociodemographic
- Psychosocial (stress, anxiety, depression)
- Substance abuse
- Prenatal care
- Pregnancy intendedness
- Weight gain recommendations





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**Information for Better
Decisions in Health Care**

Thank you!