



AMETHIST

AMETHIST@Penn:  
Achieving Maternal  
Equity and  
Transforming  
Health through  
Implementation  
Science and  
Training

## RESOURCE

### QUALITATIVE METHODS IN MATERNAL HEALTH IMPLEMENTATION SCIENCE

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Qualitative methods, rooted in social sciences like anthropology and sociology, are essential for understanding the complex dynamics of maternal health. Qualitative research captures the depth of human experiences—making it ideal for exploring why certain interventions succeed or fail, how pregnant people experience care, and how healthcare providers deliver care.

#### 8 Key Features:

1. **Theory-Guided:** Uses data-supported theories like the Consolidated Framework for Implementation Research (CFIR) to organize and analyze the research.
2. **Scheduled Data Collection:** Gathers data at specific times (e.g., before, during, and after implementation).
3. **Mixed Methods:** Combines both qualitative (e.g., interviews) and quantitative (e.g., surveys, observational data) approaches.
4. **Problem-Focused:** Aims to solve real-world issues, like improving access to prenatal care.
5. **Equity-Driven:** Focuses on fairness, research addresses the needs of underserved populations.
6. **Involving Collaborators:** Includes input from healthcare providers, patients, and administrators.
7. **Flexible Analysis:** Uses both open-ended and structured approaches to analyze the data.
8. **Interdisciplinary:** Brings together ideas from different fields like medicine, public health, and social sciences.

## PLANNING & CONDUCTING A QUALITATIVE PROJECT

**Who (sampling):** Intentionally select participants based on specific characteristics or criteria called purposive sampling.

- Participants key in the implementation process

**When (timing):** Baseline, real-time, and post-implementation data are collected to understand processes and outcomes.

**Approach (data collection):** Data collection continues until no new themes or patterns emerge (i.e., saturation).

**How (methods):**

- **Interviews:** In-depth insights but time-consuming.
- **Focus Groups:** Efficient but may suffer from groupthink.
- **Ethnography:** Real-world data collection but requires the use of multiple data sources or theories.

**Understanding what you've heard (data analysis):**

- **Content Analysis:** Pre-select terms used to code data.
- **Phenomenological Analysis:** Focuses on individual experiences.
- **Thematic Analysis:** Uses frameworks like CFIR for coding and analysis.
- **Rapid Analysis:** Broader, condensed coding for quicker insights.

## GENERAL OVERVIEW OF RESOURCE DOCUMENT

Qualitative methods, originating from social sciences like anthropology and sociology, are well-suited for studying maternal health in implementation science because they focus on understanding human behavior and experience, exploring complex factors that influence health outcomes in ways that quantitative research cannot capture. This depth of

understanding is crucial in maternal health implementation science, where the goal is often to uncover why certain clinical interventions succeed or fail in real-world settings, how pregnant people experience care during pregnancy and childbirth, and how healthcare providers perceive and deliver that care.

Specifically, qualitative methods can:

- **Understand barriers and facilitators to uptake of the intervention**
- **Discern how effectively an intervention is adopted at each site**
- **Identify contextual elements and provider perceptions that affect implementation and sustainability**

*To better explain concepts throughout this resource document, we use one specific maternal health implementation example.*

**EXAMPLE: A doula support program for low socioeconomic status pregnant people.** For the purpose of this work, trained doulas provide continuous emotional, physical, and informational support to pregnant people throughout pregnancy, childbirth, and the postpartum period.

Core components of this intervention:

- **Doula support:** A doula meets with the pregnant woman several times before birth to offer guidance, answer questions, and help her prepare for labor.
- **Continuous presence during labor:** The doula is present during labor to provide comfort measures, advocacy, and reassurance, helping to reduce anxiety and stress.
- **Postpartum visits:** After the birth, the doula visits the mother to support breastfeeding, newborn care, and emotional recovery.

Using the doula example, this resource document orients maternal health scientists to the fundamentals of using qualitative methods in their implementation science work, including 1) key features of qualitative methods in maternal health implementation science (IS), 2) qualitative methodological and analytic considerations in maternal health IS, 3) previous trainings on qualitative methods in maternal health IS at AMETHIST and other organizations, and 4) recommended readings.



# 8 KEY FEATURES OF QUALITATIVE METHODS WITHIN MATERNAL HEALTH IMPLEMENTATION SCIENCE

## 1. Theory-Guided

Qualitative methods and analysis are often guided by established theories, implementation models, and implementation outcomes (e.g., Reach, Effectiveness, Adoption, Implementation, and Maintenance – RE-AIM).

- These Frameworks, Theories, and Models (FTMs) can inform what questions you ask, how you interpret the data collected, or both. Learn more on [page 7](#).

## 2. Time-Based Data Collection

Qualitative data collection is often time-based and can occur at specific, different phases of implementation (e.g., pre-, mid-, and post-implementation)

- When to ask your implementers and/or those receiving the intervention about implementation using qualitative methods depends on the project and how you plan to use the information!

## 3. Mixed Methods Design

Implementation science in maternal health frequently combines qualitative and quantitative methods within complex mixed methods designs.

Qualitative findings can inform quantitative measures, or vice versa.

- In the doula support program, **qualitative interviews** with both doulas and the pregnant people they serve could explore how emotional support during labor reduces anxiety and improves the birth experience.
- Interview insights can then be used to inform **quantitative measures**, such as tracking reductions in cesarean rates or postpartum depression scores among program participants. Conversely, the quantitative data could highlight areas where support seems less effective, guiding further qualitative exploration into challenges faced during postpartum care. Learn more on [page 5](#).

## 4. Practical and Targeted

Qualitative methods in maternal health implementation science are typically practical and focused on addressing specific implementation-related issues.

- For example, in the doula support program for low socioeconomic status pregnant people, **in-depth interviews** with doulas and program participants can be used to understand the **barriers to accessing doula services**, such as scheduling challenges or lack of awareness.

## 5. Equity-Based Practices

Qualitative methods in maternal health implementation science prioritize equity-based practices in all facets of the project, including sampling, study design, data collection methods, and analysis and interpretation. This approach ensures that research and implementation strategies address disparities and are sensitive to the needs of marginalized and underrepresented populations.

## 6. Engagement with Collaborators

Qualitative implementation science in maternal health often targets multiple collaborators, including clinicians, administrators, and patients, across diverse settings such as clinics and hospitals.

## 7. Flexible analysis

Some implementation work takes a structured approach, such as using CFIR as core analytic codes and then developing subcodes based on those 5 constructs (e.g., innovation characteristics, outer setting, inner setting, characteristics of individuals, and process; deductive analysis).

- In other approaches, themes and codes organically emerge from the data (i.e., inductive analysis).
- However, these approaches need not be mutually exclusive approaches.
- When using a framework-driven analytic approach, researchers should remain open to findings that may not fit into the pre-set domains or constructs.

## 8. Multidisciplinary Integration and Team-Based

Qualitative maternal health implementation science often involves a multidisciplinary approach, integrating insights from fields such as obstetrics, nursing, public health, and social sciences.

- You'll need to get a team together – you can't just do this on your own!



# METHODOLOGICAL CONSIDERATIONS OF THE USE OF QUALITATIVE METHODS IN MATERNAL HEALTH IMPLEMENTATION SCIENCE

## A. Sampling

Researchers often select participants or samples based on specific characteristics or criteria that are important to the study (i.e., purposive sampling)

- Participants often sampled based on their level of participation in the implementation process and/or role in the organization.
- Deviant sampling is a research technique where the focus is on selecting cases that are atypical or unusual in relation to the phenomenon being studied.  
In a study evaluating the effectiveness of a doula support program for low socioeconomic status pregnant people, deviant sampling could be used to select participants from sites where doula implementation went particularly well, and participants from sites where implementation was less successful.
- May sample entire population of those implementing, or those receiving the intervention.

Size is not the most important sampling issue, rather, sampling is complete when data reach *saturation*, or no new information emerges.

- Justice-oriented approaches to qualitative inquiry acknowledge that there is always more to learn and observe and we can never reach saturation.
- If you want to compare perceptions by a characteristic of a group, such as comparing healthcare workers in two different states implementing a doula program, one would need to obtain saturation in each state group

In quantitative work, choosing participants like this would be considered “biased”.

However, in qualitative work, the goal is to include those who are the most data-rich, not necessarily the whole population.

There is always more to learn and observe and we can never get to saturation. Rather, we’re trying to understand what is happening at the intersection of context, evidence-based practice, and time

## B. Timing of Data Collection

Collect “baseline” data, such as, “what is the collaborator’s current practice in relation to the target outcome?”

This data can inform the most appropriate implementation strategy for a new intervention.

Collect “real time” formative evaluations of implementation processes, such as, “What are the major facilitators and barriers to implementation?”

These data can be used to adapt and optimize your current implementation plan!

Collect “post implementation” data to understand and explain both implementation and effectiveness outcomes.

These data can inform future implementation and future research.



# METHODS

## Individual

**TYPE: Interviews**

Researchers ask participants questions to gather in-depth information about their experiences, opinions, or knowledge on a particular topic.

**RECOMMENDATION:** Use 6–8 primary questions

**PROS:** In-depth insights, flexibility, personal context

**CONS:** Time-consuming, interviewer bias, limited generalizability

## Group

**TYPE: Focus groups**

A moderator leads a discussion with a small group of participants to explore their attitudes, perceptions, and experiences about a specific topic.

**MATERNAL HEALTH CONSIDERATIONS:** Difficulty scheduling groups of clinicians at the same time; power dynamics between hospital roles such as physicians and nurses

**RECOMMENDATION:** Use 4–6 primary questions

**PROS:** Group dynamics, efficient data collection, interactive, useful for engaging stakeholders and obtaining their input on issue related to implementation

**CONS:** Dominance of voices, group think, confidentiality

**TYPE: Delphi Groups**

Involve a series of structured surveys or questionnaires sent to a panel of experts to achieve consensus on a specific issue or forecast future developments.

**MATERNAL HEALTH CONSIDERATIONS:** Ensure that the panel represents a range of perspectives, including those from underserved and marginalized communities, to capture diverse experiences and needs

**PROS:** Expert consensus, iterative feedback, anonymity, cost-effective

**CONS:** Expert selection bias, limited interaction

## Observation

**TYPE: Ethnography**

Focused on studying people and cultures through immersive observation and participation in their daily lives to understand their behaviors, beliefs, and social practices.

**RECOMMENDATION:** Requires triangulation or mixing of data sources

**PROS:** Real-time and real-world data, contextual understanding, useful for studying unplanned and unexpected changes that take place during implementation and identifying the gap between reported and actual practice

**CONS:** Observer effect, time-intensive, cost

## Visual

**TYPE: Archival or Textual**

Involves examining and interpreting visual or textual materials—such as photographs, documents, or media—to gain insights into social phenomena or historical contexts.

**PROS:** Historical insight, cost-effective, policy context, useful for understanding operationalization of a particular initiative

**CONS:** Data quality, lack of specificity, limited interaction



## Content analysis

Used to systematically analyze and interpret the content. It involves identifying patterns, themes, or trends in various forms of media or text, such as written documents, speeches, social media posts, advertisements, or visual media.

Content analysis can be qualitative (focusing on meaning, themes, and context) or quantitative (focusing on counting and measuring the occurrence of specific elements).

Frequently used with archival materials.

## Interpretive phenomenological analysis (IPA)

Broadly, the purpose of a phenomenological inquiry is to understand the experiences and perceptions of individuals related to an occurrence of interest, prioritizing participant perspectives.

The resulting outputs can be useful to develop theories that attend to a particular evidence-based intervention or IS-related process or to refine existing frameworks and models

In the doula support intervention example, IPA could be used to analyze how the intervention was implemented in different settings. Researchers might examine how well the doulas integrated into the healthcare team or how barriers and facilitators affected the delivery of doula support during labor. The researcher could ask questions like: “How did the integration of doulas into the hospital setting influence the care provided?” or “What challenges did you face in coordinating doula support with other healthcare providers?” This would provide insight into the factors that affected the implementation process, offering lessons for scaling or adapting the intervention to different contexts.

## Thematic analysis

Follows a structured process to ensure a thorough examination of the data. Themes are broad patterns of meaning that emerge from the data and are often developed through interpretation by the researcher.

May use grounded theory which includes using open coding to allow the researcher to “open up to the inquiry” by examining the data to see what concepts best fits the data, without a preconceived explanation or framework.

Steps to performing thematic analysis:

- Step 1: Get familiar with data
- Step 2: Develop a coding scheme, typically using an iterative process driven by the selected implementation science framework
- Step 3: Apply coding structure to the entire data set
- Step 4: Arrange coded data and compare patterns between and within cases
- Step 5: Mapping and interpretation
- Step 6: Selecting vivid, compelling extract examples and relating it back to the research question and literature

Constant comparison method to construct themes based on a taxonomy of codes.

- Systematically compare each piece of data with all other data to identify similarities and differences.
- The goal is to develop and refine categories or themes until they are well-defined and saturated

## Rapid analysis approach

(see video example below)

Instead of line-by-line coding, rapid analysis often involves applying broader, more condensed codes or categories to the data.

Team-based

Link to video:

[https://www.hsrdr.research.va.gov/for\\_researchers/cyber\\_seminars/archives/video\\_archive.cfm?SessionID=4044](https://www.hsrdr.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=4044)



# MAPPING THEORIES/MODELS/Frameworks AND IS OUTCOMES ONTO METHODS AND ANALYSIS

**Decision:** Are you mapping a theory/model/framework onto methods (e.g., interview guide) or are you using it to inform data analysis (e.g., coding structure)? Both?

## Pathway 1: Mapping onto Methods

### Select Theory/Model/Framework

EXAMPLE: CFIR (Consolidated Framework for Implementation Research), IS Outcomes (feasibility, acceptability)

### Select Method

EXAMPLE: Semi-structured interviews, focus groups

### Develop questions based on theory/model/framework

CFIR EXAMPLE:

*Characteristic of the Individual:* "How has your personal belief in the value of doula care influenced your participation in this support program?"

*Intervention Characteristics:* "What modifications, if any, did the doula need to make to adapt the program to your specific needs or circumstances?"

IS OUTCOMES EXAMPLE:

*Feasibility/Acceptability:* Develop interview and focus group questions such as, "How feasible was it for you to access and utilize the doula support services during your pregnancy?"

## Pathway 2: Informing Data Analysis

### Select Theory/Model/Framework

EXAMPLE: Social Ecological Model, IS outcomes (feasibility, acceptability)

### Conduct Data Collection

EXAMPLE: Focus groups, interviews

### Develop codes or themes based on theory/model/framework

SOCIAL ECOLOGICAL MODEL EXAMPLE:

Thematize barriers and facilitators into five categories: environment, societal, institutional, interpersonal, individual.

IS OUTCOMES EXAMPLE:

Thematize findings related to the doula intervention by categorizing them into feasibility and acceptability. Participants might report on the ease or difficulty of accessing doula services. Themes could emerge around availability, convenience of scheduling, or financial barriers (e.g., "The doula was available whenever I needed support, and it was easy to schedule sessions around my work." *or* "There were times when I couldn't afford transportation to meet with the doula.").

## CLOSING THE LOOP ON THE DOULA SUPPORT PROGRAM EXAMPLE

After employing qualitative methods, such as in-depth interviews and focus groups with participants and healthcare providers involved in the doula support program for low socioeconomic status pregnant people, researchers might uncover key insights into how the program was implemented and experienced. For instance, interviews with program participants might reveal that the continuous emotional and informational support from doulas eased labor anxieties and made participants feel more empowered throughout the childbirth process, highlighting acceptability of the intervention for patients. However, focus groups with doulas and medical staff might highlight challenges with successful doula implementation such as communication gaps between doulas and healthcare providers or systemic barriers that limited the doulas' involvement during critical moments of labor and postpartum care.

**Bigger Picture Impact:** These qualitative findings could inform the next steps in improving the intervention's implementation. For example, insights into communication challenges could lead to developing better strategies for integrating doulas within the clinical team, or new protocols could be designed to enhance coordination of doula-led postpartum visits. More broadly, if qualitative data show improved emotional well-being and acceptability of a doula program for birthing people, this evidence could support advocacy for scaling the doula program to other low socioeconomic status communities.



## Previous AMETHIST Workshops on Qualitative Maternal Health Implementation Science

- Rapid Qualitative Analysis Forum (October 29, 2024)
- Digging in on Qualitative Methods for Measuring Implementation Outcomes Forum (August 12, 2024)
- Mixed Methods and Qualitative Research Introductory Workshop: <https://www.youtube.com/watch?v=SjjkmQac8uA>

## Other Workshops and Videos on Qualitative Implementation Science

- Advanced Qualitative Methods hosted by the Qualitative Methods Learning Collaborative: [https://www.hsrdr.research.va.gov/for\\_researchers/cyber\\_seminars/archives/video\\_archive.cfm?SessionID=7555&Seriesid=113](https://www.hsrdr.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=7555&Seriesid=113)
- Advanced Qualitative Methods hosted by the Qualitative Methods Learning Collaborative: [https://www.hsrdr.research.va.gov/for\\_researchers/cyber\\_seminars/archives/video\\_archive.cfm?SessionID=7549&Seriesid=113](https://www.hsrdr.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=7549&Seriesid=113)
- Rapid Analysis Using the Consolidated Framework for Implementation Research (CFIR): A Methods Cyberseminar: [https://www.hsrdr.research.va.gov/for\\_researchers/cyber\\_seminars/archives/video\\_archive.cfm?SessionID=4044](https://www.hsrdr.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=4044)

## Suggested Readings on Qualitative Maternal Health Implementation Science

### Methods resources

- Guest, C., MacQueen, K.M., & Namey, E.E. (2011). *Applied Thematic Analysis*. Sage.
- Young, E., & Pelto, G.H. (2015). Evaluative ethnography for maternal and child nutrition interventions. In F. Dykes & R. Flacking (Eds.), *Ethnographic Research in Maternal and Child Health*. (1<sup>st</sup> edition). Routledge.
- Nevedal, A.L., Reardon, C.M., Opra Widerquist, M.A., Jackson, G.J., Cutrona, S.L., White, B.S., & Ramschroder, L.J. (2021). Rapid versus traditional qualitative analysis using the Consolidated Framework for Implementation Research (CFIR). *Implementation Science*, 16, 67. <https://doi.org/10.1186/s13012-021-01111-5>

### Examples of integrating implementation science (IS) frameworks and outcomes

- Lam, H., Quinn, M., Cipriano-Steffens, T., Jayaprakash, M., Koebnick, E., Randal, R., Liebovitz, D., Polite, B., & Kim, K. (2021). Identifying actionable strategies: Using Consolidated Framework for Implementation Research (CFIR)-informed interviews to evaluate the implementation of multilevel intervention to improve colorectal cancer screening. *Implementation Science Communications*, 2(57), <https://doi.org/10.1186/s43058-021-00150-9>
- Ruderman, R.S., Dahl, E.C., Williams, B.R., Davis, K., Feinglass, J.M., Grobman, W.A., Kominiarek, M.A., & Yee, L.N. (2021). Provider perspectives on barriers and facilitators to postpartum care for low-income individuals. *Women's Health Reports*, 2.1, 254-262. <https://doi.org/10.1089/whf.2021.0009>
- Boynito, W. G., Tessema, G. Y., Tmesgen, K., De Henauw, S., & Abbeddou, S. (2023). Acceptability and feasibility of video-based health education for maternal and infant health in Dirashe District, South Ethiopia: A qualitative study. *PLOS Global Public Health*, 3(6), e0000821

### Examples of qualitative research in maternal health

- Hamm, R.F., Levine, L.D., Nelson, M.N., & Bedias, R. (2021). Implementation of a calculator to predict cesarean delivery during labor induction: A qualitative evaluation of the clinician perspective. *American Journal of Obstetrics & Gynecology*, 3(3), 100321. <https://doi.org/10.1016/j.ajogmf.2021.100321>

