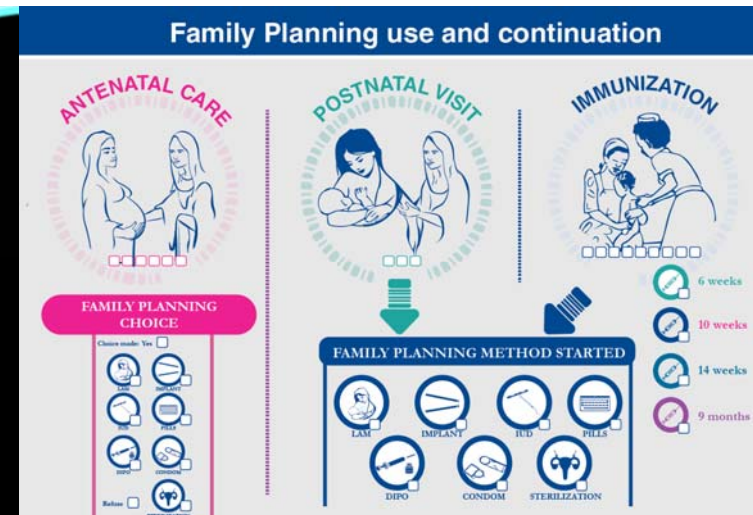# TEAM-BASED CODING OF QUALITATIVE DATA
A DEMONSTRATION & DISCUSSION

Evaluation of a family planning project

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OBJECTIVES

1

Learn **phases** for a process of group-based qualitative data coding and analysis

2

Become familiar with **examples of tools** and a qualitative software that helps with group work

3

Improve evaluators' **confidence** to lead group-based qualitative coding

WHY DO GROUP-BASED CODING?

When collecting both quantitative and qualitative data in a mixed-methods study, a lot of data becomes available at the same time – 'divide and conquer' – helps meet **short timeframes**

Allows for diverse sets of technical or methodological **expertise and perspectives** among group members. And keeps up the ENERGY!

Enhances an evaluation with different **contextual** and linguistic understandings

Builds capacity among team members in qualitative data analysis

COMPONENTS OF GROUP-BASED CODING & ANALYSIS

PLANNING   EXECUTION   INSIGHT

PHASES OF TEAM WORK

PLANNING

EXECUTION

INSIGHT

Phase 1: Planning for Group Work	Phase 2: Pre-Analysis	Phase 3: Codebook
Phase 4: Procedures	Phase 5: Coding and double coding	Phase 6: Segments and Themes ↻ Data
Phase 7: Summarizing themes ↻ Data	Phase 8: Preliminary Feedback & Dissemination ↻ Data	Phase 9: Report or manuscript writing ↻ Data

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QUICK EXERCISE WITH A NEIGHBOR

- 5 minutes
- Mention any qualitative data project you have worked on or will start to work on
- Discuss:
  - the pros and cons you think you'll find in group-based qualitative data analysis.
  - What expertise you'll need in that project

EXAMPLE - TEAM EXPERTISE

In a study of postpartum family planning (PPFP)
in Ethiopia, leaders sought out expertise in:

- **Intervention-related**
  - PPFP methods
  - PPFP program at health facility and community
- **Context-relevant**
  - Oromia region and language
  - engaging Ministry of Health, Health Extenstion Workers
- **Qualitative research-related**
  - study protocol, tools, consents & obtaining ethical approvals
  - qual research methods implementation/management
  - coding (& team-based coding) analysis, writing, data dissemination

PHASE 1: PLANNING FOR GROUP WORK

- Leader(s) should
  - consider what a group needs to meet goals over time
  - communicate the value of group work to the team
  - Lay out the process and milestones
  - Reviews budget and timeline
  - assembles the team based on expected roles and expertise
- Teams actively manages the group-based process

PHASE 2: PRE-ANALYSIS STEPS

- In this phase, the teams refines the evaluation objectives, qualitative study research questions
- Recruit and train personnel for data collection, data quality checks, transcription and translation [D D T T]
  - Tip: Follow a naming convention for all transcripts!

- Group Norms (forming, norming, storming, performing ~ Tuckman 1965)
  - *Q: What are some norms and expectations that you think are important for team of coders?*

SET UP WEEKLY GROUP CALLS

Example of notes kept on shared drive

Importance of
regular calls for discussion and presenting
to each other

Ethiopia PPFP study call – [Date]

Name, Name, Name etc

Round Robin – updates from team members

- Name 1 – xxx
- Name 2 – xxx
- Name 3 – xxx

Preparing for Workshop Agenda – for Coding and Analysis

- Logistics
- Agenda topics
- Preparation of Code Summaries
- Speakers, etc.

QUICK ASIDE ON THE FAMILY PLANNING STUDY

Qualitative study research questions:

- What is the feasibility of incorporating postpartum family planning into the **community-based activities** of the health system?

- What is the perceived utility and feasibility of the various **tracking tools for PPFP** according to health system actors?

QUICK ASIDE ON THE SAMPLE

Participant Type	Number
Zonal and District Managers	6 interviews
Health Care Providers	20 (4 interviews with providers of 5 types)
Health Extension Workers	18 interviews <=36 participants
Volunteers	6 focus group discussions <=60 participants
Total	**50 transcripts** *122 participants*

QUICK ASIDE ON MAXQDA
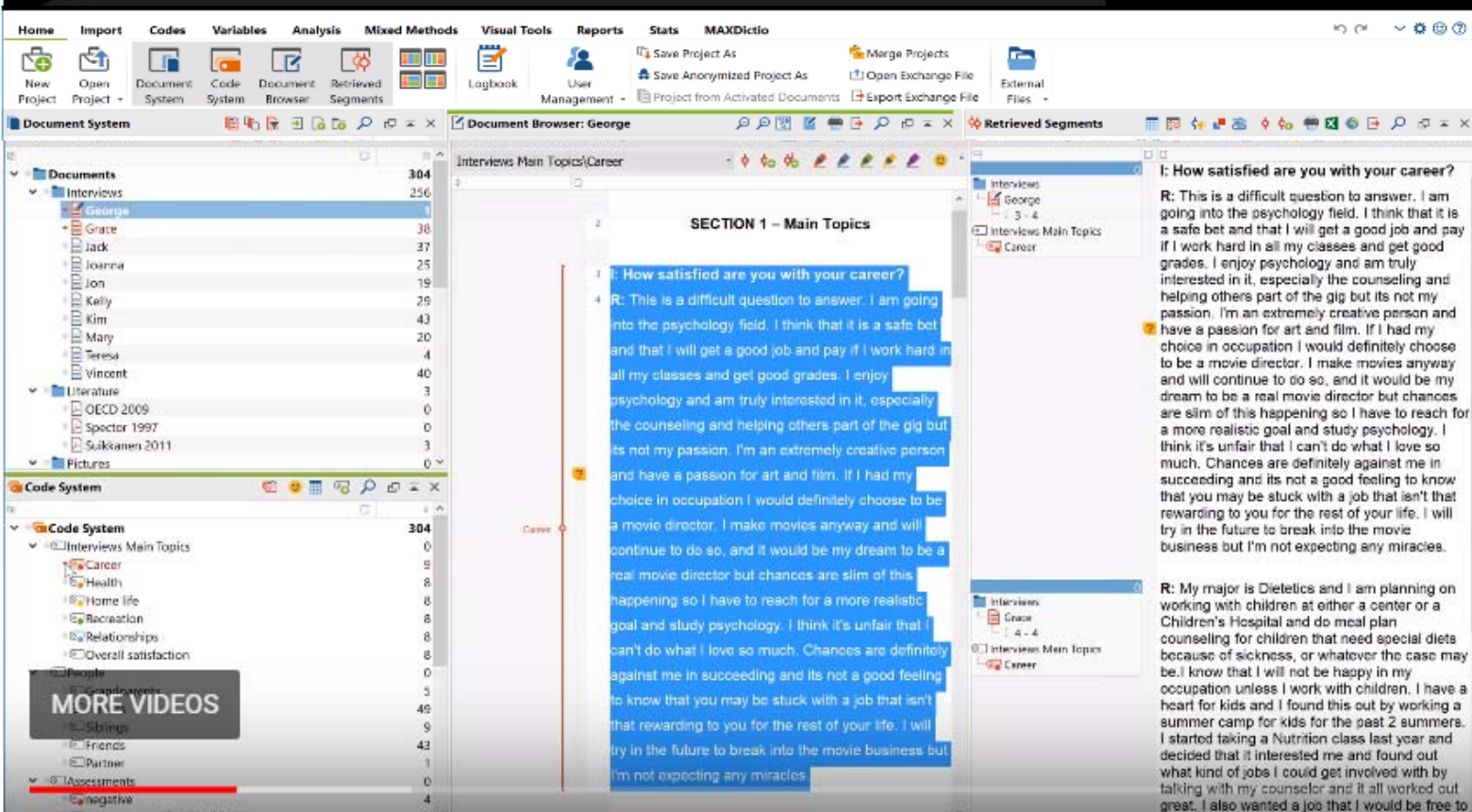
4 window interface:
1. Document repository
2. Codebook
3. Transcript you are working on
4. Retrieved Segments

https://www.maxqda.com/learn-maxqda/maxqda-2018-video-tutorials

Open source free alternative is Taguette

PHASE 3: CODEBOOK

- In this phase, the project team develops and refines a codebook

- Changes were made to codes before the workshop by group members

- At the workshop, daily discussion and team members' coding of same transcripts led to more edits

WORKSHOP PRIOR TO CODING

Objectives:

- CODING
    - Gain an understanding of the theory behind coding in qualitative research and how to apply codes to transcripts
    - Individually code transcripts in MAXQDA software and discuss, refine codebook
- AFTER CODING
    - Gain an understanding of the steps in analysis that follow coding
    - Develop team action plan towards final product
    - Make assignments such that the 50 transcripts will be double coded
- *Pre-requisite:* download MAXQDA software and watch overview video

WORKSHOP PRIOR TO CODING – AGENDA

Day 1	Day 2	Day 3	Day 4	Day 5
Learn about Coding Creating codebooks	Compare coding of transcript Code definitions Memos	One Sheet of Paper Making comparisons	Analysis and interpretation; Discuss OSOP main themes	Writing methods and results **Making assignments for 50 transcripts**

TIPS ~ SOFTWARE

- Codes – 5 Recommended features

(MacQueen 1998)

1. Code Name
2. Definition (Brief and Full)
3. Guidelines on when to use the code (inclusion)
4. Guidelines on when NOT to use the code (exclusion)
5. Examples
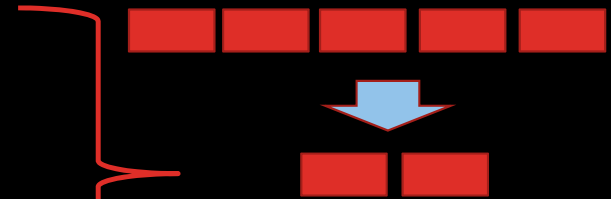
For easy upload of codebook in Excel to MAXQDA

Agree on the plan for segmenting text, such as size, allowing multiple codes

EXAMPLE – FINAL CODE

PPFP_concept\LAM_ EBF_fecund

Coders decided to combine codes after review of a few transcripts

Short definition: Postpartum family planning concept or lactational amenorrhea (LAM), exclusive breastfeeding, introduction of complementary foods, return to fecundity after birth
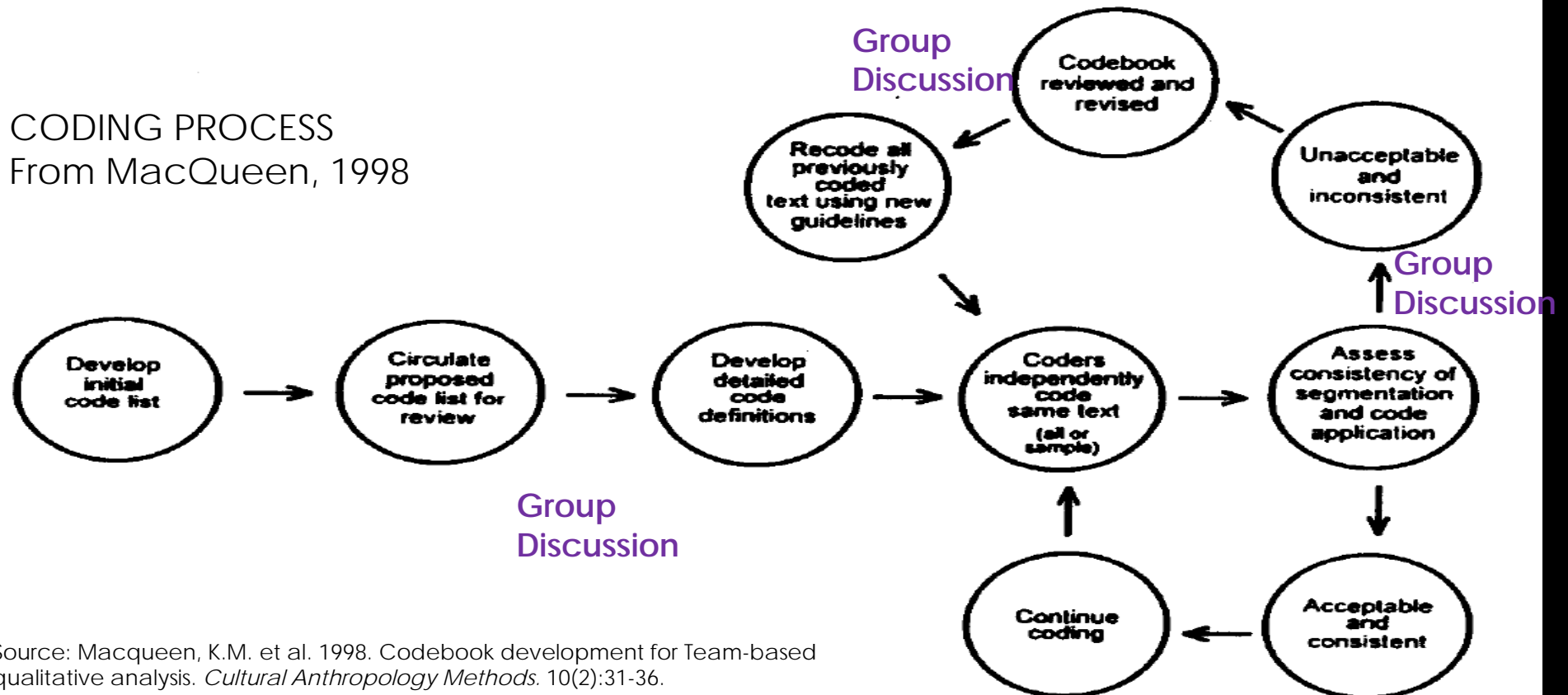
Longer definition: any mention of PPFP, advice on LAM or its criteria, exclusive breastfeeding and its effects, advice on starting solid foods in addition to breastmilk, and/or postpartum women's return to fecundity.

Example from the transcript: "If she is breastfeeding only and she did not experience a period, we teach her on the three criteria that she needs to fulfill; we advise her to take the FP after six months or she can get pregnant."

Exclusion criteria - general breastfeeding and child nutrition without mention of exclusive breastfeeding/complementary feeding (for example, "I tell women to give their children more fruits and vegetables" is not specifically related to introduction of foods in addition to breastmilk).

QUICK EXERCISE WITH A NEIGHBOR(2):
AT WHAT POINT(S) IN THE FLOW IS GROUP DISCUSSION HELPFUL?

CODING PROCESS
From MacQueen, 1998

Group Discussion

Codebook reviewed and revised

Recode all previously coded text using new guidelines

Unacceptable and inconsistent

Group Discussion

Develop initial code list → Circulate proposed code list for review → Develop detailed code definitions → Coders independently code same text (all or sample) → Assess consistency of segmentation and code application

Group Discussion

Continue coding ← Acceptable and consistent

Source: Macqueen, K.M. et al. 1998. Codebook development for Team-based qualitative analysis. *Cultural Anthropology Methods.* 10(2):31-36.

SOFTWARE - OPTIONS FOR GROUP CODING
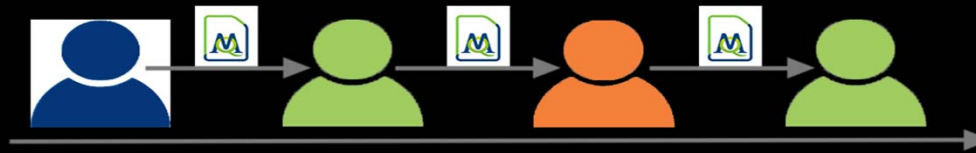
From MAXQDA website:

- Each member works on the same document, and takes turns. A team member passes the entire project from their computer to another team member for further coding or processing. Process is sequential.

- Team members work on the same document in parallel – editing the same project as separate instances on their own computer.

- We did Opton #1.

- https://www.maxqda.com/maxqda-2018-for-research-teams

SOFTWARE – TIPS ON EXPORTING

- the master project is kept on a secure shared , secure cloud-based drive

- …every member downloaded it.

- Transcripts were from one coder to the next in the pair via importing and exporting to a shared drive.
  - Once a transcript was coded, coders added their initials to the file name – which made it easy to know whether they had been coded once or twice.
  - Coders import (and after coding, export) documents (with '.rtf' extension) and teamwork codes (with '.mex' extension).

- Master Admininstrator role is to re-import transcripts with the second coder's codes into the master file in MAXQDA once the second coder's coding was completed.

PHASE 4: STANDARD OPERATING PROCEDURES (SOP)

- A Standard Operating Procedure (SOP)
  - describes the purpose and detailed tasks in a function or activity.
  - Is a reference document with instructions for people with specific roles.
  - has a date and signature of the project director.
  - can be updated, as needed, with version numbers.

EXAMPLE SOP FOR CODING (HEADINGS)

Project title, SOP # and Title, Project Director signature, version date and chronology A). Definitions of terms B). Purpose C). Scope and applicability to data D). Roles and Responsibility of Team Members	E). Procedural steps 1). Giving out/updating assignments in batches 2). Coding pairs 1st coder: Set up of files, codes, memos, file naming Teamwork: Exporting: rtf file and teamwork .mex 2nd coder: Set up (assignments, importing doc and teamwork), codes, memos, file naming, check, exporting doc and teamwork F). Batch Dates G). Prep for Weekly calls H). Translation Issues I). Record management J). Quality Assurance – spot checking	K). Analysis – One Sheet of Paper L). References M). Appendices – MAXQDA Glossary Basics of memoing, OSOP Basics

PHASE 5: CODING AND DOUBLE CODING

- In this phase, each coder in the team will go through available transcripts from start to finish and apply the agreed-upon codes from the codebook, as appropriate.

- Coders will aim to do this in a similar way (individually) to similar lengths of text.

- The process followed the standard operating procedure.

EXAMPLE OF ASSIGNMENT TRACKER

S. no	File	Coder1	Coder2		Reconciled final
28	SiteA_T3_HCP_150518_MT_FA_080618_Eph_140718	Mul	Yous	Batch 2	Completed
29	SiteA_T3_HCP_170518_HF_TG_100618_Eph_140718	Vai	Mul		Completed
30	SiteA_T3_HCP_180518_HF_TG_080618_Eph_140718	Yous	Vai		Completed
31	SiteA_T3_HCP_180518_MT_FA_090618_Eph_140718	Mul	Yous		Completed
32	SiteA_T7_PHCUD_150518_DG_FA_250618_BB_200718	Vai	Mul		Completed
33	SiteB_T4_HEW_210518_DG_FA_110618_Eph-140718	Mul	Vai	Batch 1	Completed
34	SiteB_T4_HEW_210518_HF_TG_280618_FA_250718	Dev	Yous		Completed
35	SiteB_T4_HEW_250518_MT_BB_050718_FA_200718	Yous	Dev		Completed
36	SiteB_T4_HEW_210518_MT_TK_210618_TG_060718	Vai	Mul		Completed (file name discrepancy)
37	SiteC_T4_HEW_140518_HF_1_TG_180618_FA_200718	Mul	Vai		Completed
38	Site4_T4_HEW_150518_FD_TG_140618_FA_250718	Dev	Yous		Completed

RECONCILIATION

Pairs of coders consulted the **codebook definitions** when coding.

If necessary, sequential coders **contacted each other to discuss** codes that may have been missed or used in a way that needed reconciliation.

Time was budgeted for the double coding of transcripts and reconciliation.

During weekly team calls, the **coding team** raised issues, made decisions about coding, and shared summary notes.

MEMOS

- Coders were encouraged to write memos and add them to segments of text in the software when:
  - a question arose about the text
  - a question arose about translation
  - to highlight an analytical insight – can return to these ideas later

28
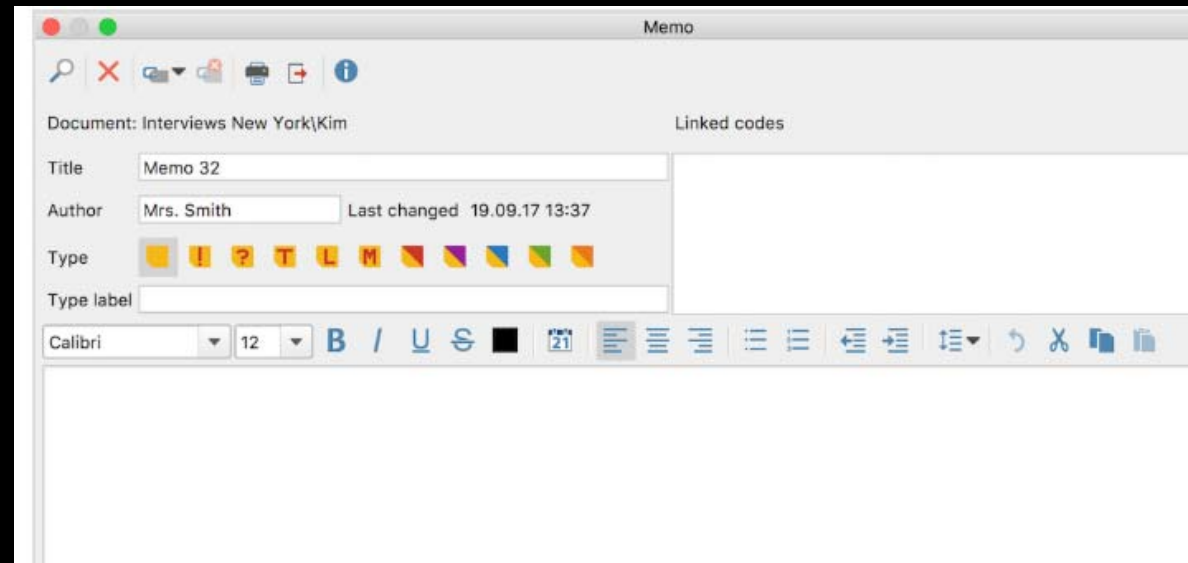
PHASE 6: SEGMENTS AND THEMES

- In this phase, analysts identify the priority codes relevant to the research questions.

- Queries are run in the software.

- All the coded segments on a priority code will be exported to a single document (can be to Excel or Word), for further processing.

EXAMPLE OF SEGMENTS EXPORT, SUMMARIES, AND OSOP (2)

Transcript Name	Segment	Summary Written by Coder
07_Interv_Village_T6_IDI_140518_FD_TK_250618_BB_240718_CODED_DM_ESB	I: Is there information contamination, between primary health care organizations where this study conducted (intervention areas) and those selected as control in you woreda? The area where the study is not implemented is control area and kebeles where the study implemented was intervention areas? Do you think there is contamination between them or information dissimination? R: Yes,...aa... inturn the topography of the area also differ. There is variation between intervention and control areas; even interms of topography, they are unrelated; nothing relate them. Therefore, these bodies were independently working what they think than contaminating with information. I: As they varies geographically, the relationship will be ... R: Yes, in dega and woyina dega, they are not such similar I: Therefore, you mean no contamination? R: They don't have	Intervention village stakeholder 07 says the topography is different between intervention and control areas. The bodies in each group may have been independently working on PPFP, more than sharing information between them.
08_Interv_Village_T6_IDI_170518_FD_TG_280618_BB_200718_CODED_ESB_DM	I: Are there activities implemented in your woreda by categorizing kebeles in to 'control' and 'intervention' groups? Is there slipover in these kebeles in the process of executing activities? Is there sharing of data/information? R: There is no sharing of information. Because as a woreda, there is no situation under which we officially gathered the community or health extension workers for sharing information. However, the community may share information as they are living together. Health extension workers may also share information when they met.	Intervention village stakeholder 08 believes that there was no formal sharing of information between intervention and control areas. There may be informal sharing among the HEWs or the community members.

OSOP – 'Contamination' (8 segments)

Sharing ideas/'Contamination' between intervention and control areas is possible, according to the woreda and zonal stakeholders

Themes

1. Sharing among the intervention and comparison areas was not done formally and there was distance between the areas.
2. Informally, actors may have shared information independently, such as by HEWs or community members. Women in comparison area may have heard about provider offering good service in intervention area, and bypassing of local facilities happens.
3. Certain comparison areas became model areas for PPFP. Husbands were accepting of PPFP. [Name of kebele [Name of district]]

PHASE 7: SUMMARIZING THEMES

- In this phase, analysts write summaries of the segments of prioritized codes, and then jot down the themes and sub-themes on one sheet of paper.

OSOP

- Coders became analysts.
- The 'one sheet of paper' (Zeibland et al, 2006) exercise asks coders to write up findings related to segments of the priority codes. We
- Made a central list of topics with nuances of each text segment, along with corresponding transcript IDs.
- Noted the common and uncommon ideas
- Grouped these issues into broader themes ('axial coding').
- Explored themes in relation to participant characteristics.
    - example: themes in intervention areas vs. control areas

PHASE 8: PRELIMINARY DISSEMINATION AND FEEDBACK

This phase involves dissemination of preliminary findings and seeking preliminary feedback from all key stakeholders.

Objectives for workhops in Ethiopia in Jan-Feb 2019:

- Convene study team in Ethiopia to update national and local stakeholders to review preliminary results internally, interpret and discuss and prepare for writing.

- Conduct a writing workshop with key stakeholders

- Conduct a preliminary dissemination event with a larger group of stakeholders to seek feedback on the recommendations.

- Key Informants were invited to the dissemination, where they participated on a panel.

PHASE 9: REPORT AND MANUSCRIPT WRITING

- In this phase, the team of analysts prepares products for dissemination and a data use.

- Opted for journal manuscript – checked with sponsor

- Specific roles of analysts and authors

- Training related to manuscript writing? USAID course https://www.globalhealthlearning.org/course/journal-manuscript-development-global-health

- Selected a journal and followed its format
  - Manuscript is available online at Gates Open Research:
  - https://doi.org/10.12688/GATESOPENRES.13071.1

CONCLUSIONS – PHASES OF TEAM WORK

PLANNING

EXECUTION

INSIGHT

Phase 1: Planning for Group Work	Phase 2: Pre-Analysis	Phase 3: Codebook
Phase 4: Procedures	Phase 5: Coding and double coding	Phase 6: Segments and Themes **Data**
Phase 7: Summarizing themes **Data**	Phase 8: Preliminary Feedback & Dissemination **Data**	Phase 9: Report or manuscript writing **Data**

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CONCLUSIONS

Group-based process enhanced the codebook and coding, analysis and reporting in a family planning project evaluation.

- Team-based coding is feasible within a structured process.

- Leaders encourage coders to have regular points to interact.

- Team retained focus on the end goal.

- Team reviews data comprehensively.

- Each phase takes time – consider group vs. individual roles.

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Family Planning use and continuation

THANK YOU.
QUESTIONS?

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