



GUIDEBOOK

Dynamic Qualitative Insights for Program Improvement



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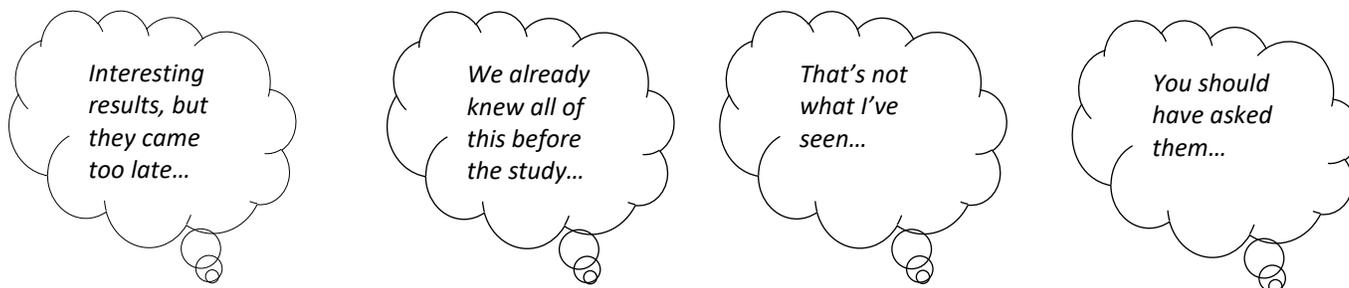
INDEX

1) INTRODUCTION	4
2) SETTING UP A DQI	7
3) FIELD OPERATIONS	14
4) DATA MANAGEMENT.....	17
5) DATA ANALYSIS.....	21
6) DATA TO ACTION AND FOLLOW UP	27

1) INTRODUCTION

Programs use monitoring data to determine progress toward achieving targets or assess the quality of implementation to course correct as necessary. Monitoring data can also be used during program implementation to test specific interventions or strategies for program improvement. While these methods can help answer *what?* (what are the trends over time in effective referrals for community health workers?) and *how?* (are electronic or paper referrals more effective?), programs are often interested in exploring *why* they observe these results. Qualitative research methodologies can be used throughout program implementation for improvement and decision-making. This implementation guide outlines Dynamic Qualitative Insights (DQI), a methodology developed by PSI to help explore questions during program implementation that require open-ended inquiry.

THE PROBLEM



Traditional qualitative research provides rich and in-depth findings, detailed descriptions, and nuanced understandings of the subject under study. However, when the objective is program improvement, these insights often go unused.

- **Results come too late.** Traditional qualitative research designs require sampling until reaching saturation, transcription and translation of data, and parallel coding of data as part of the analysis process. These methods ensure the rigor of process, but they also lengthen the turnaround time between collection and results and may only become available often the opportunities to use the data may have already passed. In the context of program improvement, the feedback loop for qualitative insights can be too time consuming to be useful.
- **Missed opportunities arise with a lack of engagement by the program team throughout design, data collection and analysis.** Program decision-makers are best poised to identify the insights that will be most useful. If not engaged throughout the research process, there is a lack of ownership of results and missed opportunities for probing or further insight on topics that would matter most to decision-making.
- **Program decision-makers sometimes question the validity of results when they are at odds with their program experience.** This occurs with a lack of engagement throughout the research process or when “light-touch” methods do not have sufficient rigor or the “paper trail” to substantiate decision-making based on findings.
- **Results don't explore questions that give actionable insights to program decision-making.** Research questions and objectives that are too broad or not articulated to respond to specific and actionable program needs produce results that are merely confirmatory or too removed from program implementation to be useful. In other cases, program staff may not have knowledge of research methods that allow them to learn throughout implementation and identify opportunities to improve program performance.

A SOLUTION: DYNAMIC QUALITATIVE INSIGHTS (DQI)

The DQI design intends to optimize qualitative research methods to better suit program improvement during program implementation. It is based on a participatory process between research and program teams to define, design, collect, analyze and interpret data for specific program needs within a short time frame. The DQI culminates in a 4-5 day workshop where participants engage in the process of turning raw data into insights for decision-making, with an end

output of an action plan. The methodology includes features that overcome the key challenges in the use of qualitative insights in design, implementation, analysis and data to action.

Example: DQI was first piloted during the second round of the GEMS process evaluation in Myanmar, Laos and Cambodia. The overall goal of the DQI was to identify the motivations of private sector network providers engaged in the program to test, treat and report malaria cases and determine barriers to quality performance.

In **study design** DQI uses a dynamic process that facilitates the refinement of research questions and objectives through programmatic engagement throughout the process. Teams examine data as it comes in and shape data collection based to produce actionable findings. Research and program teams are asked to narrow the scope of research questions to elements that are actionable based on timeline and scope, and that will produce new insights for program decision-making.

In **study implementation**, DQI engages program staff in providing feedback or in collecting data and participating in data analysis. Research teams bring to the table best practices in qualitative research data collection, while program teams frame questions with greater relevance to the program and improve probing to elements that are of greatest interest to the program. By leveraging the complementary skills and perspectives of a multidisciplinary team, there is a shared ownership of the process and use of results.

In **data analysis**, DQI incorporates faster, iterative and interpretive approaches to analyzing data. By replacing transcription, translation and traditional coding techniques with a workshop coding analysis using expanded field notes and tagged audio files, the analysis process has a shorter feedback loop. By narrowing research questions during design, the team is able to narrow the coding and analysis framework and focus on finding answers to existing questions to produce usable insights. Using a systematic coding and analysis process and retaining documentation and audio files ensures teams can go deeper or confirm findings. Including a system that tags data ensures that insights can be traced back to actual data, which engenders fidelity to the data and greater confidence in our results. Most importantly, DQI involves the program team in data analysis, an allows for triangulation and validation of research findings with program experience.

Example: Engaging the program team in data analysis is seen as a key feature of DQI. “The magic is that the program team are immersed in the findings themselves. Even if they never look at the D2A again the process of shifting their beliefs, answering their questions and being part of the discovering the findings is incredibly powerful in promoting the use of the data” –GEMS Technical Advisor

DQI incorporates **data to action** as part of implementation by engaging users of research findings into the data analysis process, building in activities to prioritize findings based on importance to the program, relevance to our scope and opportunity to enact changes. The analysis process culminates in the creating of a data to action plan, where solutions for prioritized insights are discussed, a point person for each insight is identified, and timeline for follow up is defined. The action plan is the focus and output of the DQI, which replaces the production of a traditional report that are traditionally not clearly actionable.

When should I consider a DQI?

DQI was designed to yield qualitative insights for program improvement. DQI could be a useful tool to respond to needs during the course of program implementation. This can include when:

- Program teams that have identified a narrow and immediate information need associated with program improvement
- Program monitoring data shows an unusual pattern that cannot be easily explained
- Contextual factors (e.g., changes in program focus or policy) may require shifts in elements of program implementation
- Programs are not achieving targets and there is an opportunity to explore improvement to delivery or new mechanisms for program delivery
- Programs are interested in exploring how to improve the experience of participants or ensure retention
- Programs are interested in exploring why some interventions are more successful than others at achieving targets.

Example: The overall goal of the DQI GEMS pilots was to learn more about provider motivation in a way that was immediately actionable – aimed at leveraging findings for program decision-making in the penultimate year of the GEMS program.

It is important to note that DQI is not meant to replace rigorous qualitative research that is designed to:

- Be exploratory
- Collect rich, contextual data regarding a specific research issue (e.g. “deep dive”)
- Build evidence using systematic methods
- Produce findings that are applicable beyond the program under study or shared externally
- Explore how factors, such as social norms, gender roles, poverty, and religion, influence behavior or decision making.

ABOUT THE IMPLEMENTATION GUIDE

This implementation guide captures the considerations for designing and conducting a DQI and using the results for program decision-making. Examples from three pilot DQI studies conducted as part of the Bill and Melinda Gates Foundation-funded program *Greater Mekong Subregion Elimination of Malaria through Surveillance (GEMS)* are included throughout this guide.

The Guide is divided into the following sections:

- 1) Setting up a DQI
- 2) Field operations
- 3) Data analysis

4) Data to action and follow-up

2) SETTING UP A DQI

DEFINING THE STUDY TEAM

DQI requires co-ownership of the process by program and research teams. Critical to the success of the study is the engagement of study team members from design to data use. Ideally, the study team should include a qualitative research specialist, research assistants/interviewers, program coordinators, program technical staff and program managers. It is also advisable for senior program staff to engage in the process to review the design and tools that are used in the DQI to ensure that strategic issues and future plans can be integrated to the planning process. Depending on the study scope and platform staffing, DQI teams can consist of 5 or more staff members. The program staff engaged in the DQI should:

- Be knowledgeable about the program scope and experience
- Be in a position where the results of the DQI are relevant to their scope of work
- Be in a position to make or influence program decisions based on the results
- Be diverse with regards to their perspective on the program (e.g., from different business units that are addressed by the research objectives, from field coordination and central management, or who interact in different ways with the target population.)

Example: The DQI team in Myanmar included the deputy director of research, two senior research officers, a consumer insights officer, and program staff from two business units at the HQ and field levels, including the malaria program manager, the head of program development, a business unit senior program officer, a regional head of operations, and two regional senior technical support officers. Additional management staff was brought in to the DQI to prioritize and for data to action planning.

REFINING PURPOSE AND OBJECTIVES

DQI requires teams to narrow the quantity and scope of their research questions to those most timely, actionable and important. This begins with defining the areas of inquiry (AI) associated with the purpose of the DQI. An AI is a question, problem or scenario that the team would like to explore in the DQI. As a first step, the team conducts an initial prioritization of the areas of inquiry based on how critical they are to address during that stage of program implementation. Criteria to prioritize AIs is study specific, but can include:

- AI can be answered by a DQI (i.e., a focused, qualitative study)
- AI can be answered within the timeline of the DQI
- It is the right time to explore that AI (the program can course correct based on the results, it is strategic and relevant)

If these criteria are not met, the team may consider other methods and data sources to support responding to program implementation questions.

Example: AIs for the GEMS DQI were born out of a process of identifying question that arose from analysis of the first round of the process evaluation (PE) and then further by identifying critical questions that the program team wanted to explore based on opportunities and barriers that arose after the first year of program implementation. These AIs were then prioritized during a webinar session where each rated each AI “Priority” or not a Priority” based on the above criteria.

While teams may have many AIs listed, it is critical to select only one or two to be the focus of the DQI. The DQI will not be successful at generating actionable program insights if the study scope is too wide.

Once AIs are prioritized, the DQI team must develop specific research questions and objectives within the selected AI. The research questions framing the DQI should:

- Acknowledge and document what is known already about the AI
- Capture questions that we do not currently have answers to
- Relate to program components where new information can be used to make decisions or changes
- Consider who will use the results and how they will be shared

It’s worthwhile for both the program team and the research team to invest in getting the research questions right. This process is most efficiently managed in a two to three-hour meeting with the entire DQI team. Going into the meeting, the team must have: 1) knowledge of the purpose of DQI and an understanding of the process; 2) the commitment to engage in the DQI at key moments from design to data use; and 3) a clear understanding of the AI that will be explored through the DQI. This will ensure that time can be used efficiently to focus on developing research questions.

Example: Research questions for the GEMS DQI in Cambodia, Laos and Myanmar were developed during a quarterly regional program meeting. By that point, the teams had already decided to focus on provider motivation to test, treat and report malaria as the AI. Country teams were asked to complete a worksheet that helped them articulate what they knew already regarding the motivation of their providers, how they knew this, what they wanted to learn, how they would use that learning and how they wanted to share it. Throughout the activity it became clear that the team already knew a lot about provider motivation, however, that knowledge came primarily from their own perspectives and understanding. The topic of motivation had not been explored purposefully among providers. The final two elements of the worksheet (how they would use and how they would share their learnings) were later used by the research team to help determine whether the study would require ethical review.

A sample research question worksheet is available [here](#). It's likely that teams will find many questions that they want to explore within the AI. The next step is to pare down the list of questions based on the following criteria:

- Is there another source of information that can provide answers to this question? *[if yes, cross it off the list]*
- Can the question be answered by words or numbers? *[if numbers, cross it off the list]*
- Can answers to the question produce learnings that can be applied to an ongoing program workstream within the timeframe of this study? *[if no, cross it off the list]*
- Can we clearly articulate how answers to the question can be used by the team? *[if no, cross it off the list]*
- Does the team have the mandate, authority and ability to make changes based on the answers to these questions? *[if no, cross it off the list]*
- Will answers to the question generate new knowledge or confirm what we know/suspect? *[if confirmatory, de-prioritize and only retain if there is an argument for increasing the level of evidence for this question.]*

If there are still more than 5 or 6 questions remaining after going through this process, have the team rank the questions in order of importance to the program so that no more than 5 questions remain on the list. Group objectives by the study population that they address. If multiple study populations are required, narrow the research questions to those study populations most critical to the program. At the end of the meeting the program team should nominate a point person who will be tasked with liaising with the research team during study design. This will include providing background information on the program, helping define the study population, helping define the geographic areas included in the study, and providing input to field work plans to ensure efficiency.

DESIGNING THE STUDY

Once study research questions are prioritized, the research team can start putting together the backbone for the study design. The first step is to articulate the research questions into research objectives. Research objectives are statements that capture the aims of the study and serve as a guide to the researcher throughout the study. A single research question can turn into a series of research objectives--many times the research question is broader than the objective.

As with program objectives, research objectives must also be very specific. Usually, they must contain single action verb (e.g., to determine, to explore, to identify) and relate specifically to a single component of the research question. An example of formulating research objectives from a research question from the GEMS DQI is shown below.

Research Question:

What motivates different types of providers to participate in the program?

Research Objectives:

- 1. Explore the reasons for provider enrollment in the program and continued participation in testing, treating and reporting*
 - 2. Determine whether motivations for program participation differ between Mobile Malaria Workers (MMW) and Public-Private Mix (PPM) provider types*
-

Based on those objectives the researchers will coordinate with the program point person to define:

Study population

The study population should be defined as narrowly and as specifically as possible. The DQI methodology is best suited to address a single AI, with specific research objectives, among a specific study population. Including too many study populations or strata within them increases the size of the study sample, the complexity of the research design, the study timeline, and the required time and effort from all members of the DQI team for data analysis. Broadening the scope of the study doesn't proportionally increase the quality or usefulness of the results, on the contrary, the team could end up with data that isn't sufficiently rich or specific to produce actionable results; data analysis may suffer because of the volume of data collected; or learnings may not be equally relevant or actionable to different study populations. If teams are having trouble limiting the study populations or their stratification, narrow them by stress testing each study population against the following criteria:

- Are all study populations proposed equally important to the success of program implementation?
- Are there any study populations that are particularly problematic with regards to program implementation? (e.g., with regards to meeting targets, engagement, reaching them with existing channels, etc.)
- Do we know more or have more data sources about some study populations than others?
- Are the learnings from any study populations more actionable by the program at this moment in time?
- Is there a study population that is more strategic than others? (e.g., it is a focus for the donor or government, it is a gatekeeper to the successful implementation of the study)
- Is there someone on the program team who will champion the use of learnings about that study population for program improvement?

Once you have defined one or two study populations, define the inclusion criteria for respondents based on a narrow definition of the study population. Besides the usual demographic, behavioral, geographic and other personal characteristics, consider whether you need to also establish criteria for respondents' previous engagement with the program. Depending on the study objectives, teams may want to talk with respondents who have no exposure to the program, who are actively engaged in the program, who have discontinued engagement with the program, etc.

Example: The program team in Myanmar had initially wanted to conduct the DQI with four different provider types. Through discussions and negotiations with the GEMS leadership and research team, the program team narrowed the scope of the study to include Sun Quality Health Providers and informal providers (Community Health Volunteer, itinerant drug vendors). The program-related inclusion criteria used was:

- Had participated in a training workshop imparted by PSI;*
 - Current providers that worked with PSI during 2017*
-

Geographic Scope

The geographic scope for DQI likely corresponds to areas of program implementation or future program implementation. Considerations for determining geographic scope and including different implementation contexts will be program specific. Teams can use the following checklist to help them define geographic scope:

- Are there geographic areas of program implementation that should be prioritized with regards to actions for program improvement?
- Are there geographic areas that provide different challenges to program implementation because of cultural or contextual factors?
- Are there geographic areas that are strategic or of greater emphasis to the program?

- Are all geographic areas receiving the same interventions? If not, are there certain interventions areas that the team would like to prioritize for program improvement?
- Are there geographic areas that are more accessible and may facilitate data collection because of program presence or other logistical factors?
- Are there linguistic differences between geographic areas that may present challenges during coding and analysis?

Depending on the scope of the study, it is recommended that no more than 2 or 3 distinct geographical areas be selected for inclusion.

Example: The DQI sample in Cambodia was stratified by provider type (Public-Private Mix and Mobile Malaria Workers) and malaria burden. Data was collected in Kratie and Tboung Khmum, a malaria burden reduction area and a pre-elimination area, respectively. This geographic stratification was proposed because provider motivation to participate in the GEMS program was thought to be related to the presence of malaria within that area.

Methodology

First: Choose your method

DQI uses traditional qualitative data collection techniques, such as in-depth interviews, group interviews, focus groups, journey maps, observation, etc. The data collection method will depend on the objectives of the study. Regardless of the method chosen, data collection must be audio recorded for analysis purposes.

The data collection instruments must be limited to reflect the information necessary for responding to the research objectives. The analysis framework should be developed in tandem, so that the initial codebook that will be used during analysis directly corresponds to the data that is being collected in the field. The team can later refine the codebook with additional emergent codes during analysis. The codebook is developed initially by the research team and should include a code for each concept that will be deliberately explored during analysis, key words or phrases that are associated with the code, and an example (preferably using the interview guide pre-testing data). This serves as a starting point which can later be refined and expanded during the workshop.

Example: All three countries in the GEMS process evaluation used a similar coding framework, with some variations due to slight differences in research objectives. The example below is taken from the PSI/Laos analysis framework.

Category	Code	Key words or phrases	Example
Non-material incentives	non-material	Motivations to participate in the program that are not material (community recognition, government recognition, self-improvement, not quack, contributing to malaria elimination)	I get recognition and appreciation from patients and community. I accept this is something that I should do. I think we cannot neglect health service. Though I cannot get any financial benefit, I do it because of my passion.

Second: Identify and plan your touchpoints

One of the key features of DQI is integration of the program team throughout the process of design, collection, analysis and use. A critical component is ensuring program input into the development of instruments for data collection. Besides reviewing the guides created by the research team, it is critical to ensure feedback and integration of the program team throughout the process. Integrate as many of the below options to the DQI design, as the context, timeline and budget permits.

Option 1: Piloting the study instrument

Critical to gathering rich, useful data is ensuring that we are asking the right questions. Program team members are the best poised to know what information will be useful to them to make decisions, and in recognizing what is new, as opposed to simply confirmatory information. Where possible, integrate the program team into piloting the instruments with volunteers from the study population. This can be done in a tag-team interview where the program team member can serve as a note taker, refining the study instrument, and providing suggestions to how questions and probes can be improved, while research team members conduct the data collection.

Option 2: Provide feedback on the instrument

After collecting pilot data, or shortly after starting data collection, send 3-5 program team members audio recordings and get feedback on the instrument, asking them to focus on improving questions and probes to gather information that is most useful to them, clarifying any confusion in question wording or translation, cutting questions that are not yielding information that will be useful, or adding questions that might be missing.

Example: This strategy was employed in the Myanmar DQI. Audio recordings were shared with program staff who provided critical feedback to improve the interview guides. GEMS team members were asked to provide feedback on the following points when reviewing the guides:

- The relevance of the screening criteria. The ease or difficulty with which it is applied.*
 - The depth of data collected by the questions listed on the interview guide.*
 - The quality of existing probes.*
 - Recommendations for improving them.*
 - The language used in the interview guide.*
 - Whether there are any questions that are confusing to respondents.*
 - Whether there are any terms that are misunderstood.*
 - The length of the interview.*
 - Respondent's reactions/experiences with the interview.* •*Recommendations for improving the respondent experience.*
-

Option 3: Plan for concurrent data collection and analysis

Integrate the program team into the data collection team. Train program team members in qualitative interview techniques and plan for tag team data collection within the DQI analysis workshop setting. This implies ensuring that the study population is accessible to the location where the DQI workshop will take place, that the study is narrow enough so that data collection can take place over the course of three days, and that the team is sufficiently large to execute the study. With concurrent data collection, the DQI workshop would have the following structure:



Sampling

Given the program improvement objectives of DQI, the most appropriate qualitative sampling technique is purposive sampling of: 1) the target audience for the program; 2) a “gatekeeper” or “influencer” of the program target audience; and/ or 3) a population that the program will target in the future. Purposive sampling is defined as “is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources” (Patton 2002). To select individuals to include in the study, the team must identify members of the study population who are:

- Knowledgeable enough to provide rich data (they are very familiar with the program, experienced with seeking or providing the program-related service under study or intimately familiar with the topic or context;
- Available and willing to participate;
- Able to communicate and express their experiences and opinions clearly and with sufficient detail.

Depending on the objectives of the study, purposive sampling strategies can be selected to:

- Represent study population members that meet or do not meet specified criteria (e.g., complete all components of an intervention)
- Represent the generic or typical case among the study population or represent an extreme case (e.g., super user)
- Represent study populations that can confirm or disconfirm pre-established hypotheses

Level of rigor

The rigor of any research study should be commensurate with the intent in the use of results. DQI is designed to respond to questions for program improvement during the course of implementation. The data produced is not meant to represent a broader population, provide evidence regarding a behavioral phenomenon, or contribute to the body of evidence in a health area. Results from a DQI are not meant to be shared in conferences as “research findings” or used to demonstrate the “impact” of a program.

Example: In the GEMS DQIs the teams used the Levels of Evidence framework to assess what they knew already about provider motivation and identify how data from the DQI would lead them to enrich or confirm their understanding with a higher level of evidence. In most cases, teams were moving up from having a “gut feeling” to having “some data” for decision-making. The team deemed that this level of evidence was commensurate with the decisions they needed to make. This was the case with the PSI Cambodia team. Results from the DQI showed that Mobile Malaria Workers did not feel recognized within the communities that they served. This finding was confirmation of previous program experience that had not been systematically explored or articulated. The finding served as a basis to fast track the development of signboards and business cards and justify additional funding from the program regional team.

3) FIELD OPERATIONS

QUALITATIVE RESEARCH BEST PRACTICES

As compared to “light touch” studies, DQI provides a systematic framework and integrates the structure of qualitative research into study design, data collection and data analysis. While focused and pragmatic in its approach, DQI is also meant to enable teams to substantiate their insights and the actions taken in response, with confidence in the quality and relevance of the data collected, a documented analytical process, and the ability to trace insights back to their original data source. DQI therefore integrates qualitative research best practices into the study implementation.

In addition to the guidance outlined in PSI’s [Quick-Guide for Research Data Quality: In-Field Qualitative Data Collection](#), there are some important considerations to ensure quality data collection that are particularly relevant to DQI:

- **Build in checks for the team to remain impartial.** DQI asks program study team members to use their program perspective to ensure relevance and utility of the study, but also asks them to step away from the program role during data collection and analysis to ensure that their position or “program hat” does not influence responses by study participants or does not place a value judgement on particular results (when they may present a positive or negative view of the program.) In certain circumstances, program study team members may be in a position of power or authority over the study population. Teams should take these factors in consideration when determining the options for program engagement at the design stage. If program team members are engaged in data collection, they should receive a minimum of a one-day training on qualitative data collection to ensure that they understand the research ethical principles and data quality guidelines that apply. It is also recommended that program and research team members conduct group interviews, rather than one-to-one interviews ensure that there is self-reflexivity in the process around subjectivity, biases and inclinations of each interviewer. Similar checks must be built into the data analysis and insight extraction process. Program teams must be asked to distinguish between what they know about the topic based on their previous program knowledge and what the data is telling them. The role of the researchers or others participating in the room during the workshop is to provide a check (e.g., by asking "Where does the data indicate that?") to ensure that conclusions are grounded in the data collected, and not in assumptions or lower levels of evidence. The need for impartiality extends to the data analysis process. Integrating program team members in the study process means that some individuals, particularly those who interact with the study population, may be able to identify respondents in the data. All study team members must commit to maintaining the confidentiality of the data and not take responses out of the context of data analysis for use in human resource actions or service/information provision to individuals.

Example: Myanmar was the first DQI workshop to take place. During discussion regarding insights extracted from each code it became clear that it was important to bring in a program lens to the analysis, but to also have a mechanism by which it was clear what was being added to the analysis based on experience, versus what was emerging from the data. This was done by asking program team members to specify where their insights were coming from during the analysis.

- **Follow ethical guidelines.** Although DQIs will likely not be defined as human subjects research, the study team must follow the principles and guidelines outlined in PSI’s ethical guidelines for program research and PSI’s

[Consumer Data Protection Policy](#). Other helpful resources include a 2018 [webinar](#) and [blog post](#) on ethics in HCD research. Critical among ethical principles is ensuring best practices in subject recruitment and consent and building in mechanisms to reduce risks of breaches in confidentiality.

INTERVIEWING FOR RICH DATA

Collecting rich qualitative data requires skills and practice. PSI's guidance on qualitative interviewing can be found [here](#) and summarizes tips to ensure quality data collection. These include:

- The use of open-ended questions
- Avoiding leading questions
- Probing issues in depth
- Letting the informant lead

ETHICAL CONSIDERATIONS

PSI is adopting a risk-based ethical review process, which takes into consideration the population, health area, purpose/topic under study, and methods used. Most DQI will likely be considered low risk and non-human subjects research, which means that these activities will likely not require ethical review by the PSI REB. Ethical review within the country of implementation must be determined based on local requirements. Regional Research staff can support teams in determining whether a DQI requires ethical review.

Example: The GEMS DQI team in Cambodia decided that it was necessary to submit the protocol for ethics review in country because they were interested in sharing and using the results along with those emerging from the quantitative provider study. The team reached out to the ethics committee, which responded and allowed for an expedited review process.

Regardless of the submission for ethical review, ethical principles in research must be built into the design, collection, storage, and sharing of the data collected as part of a DQI. PSI teams must ensure that the following best practices are integrated into the DQI process.

- 1) A respondent's participation must be voluntary.
- 2) All respondents must provide either verbal or written informed consent
- 3) All respondents have the right to protect access to their private information. Private information must be sought from each respondent directly, and only if absolutely necessary.
- 4) DQI teams must only collect the data that is needed and going to be used. The more identifying data collected, including identifying photo or video, the greater the risks to participants and PSI.
- 5) Teams must be aware of and protect any indirectly identifying information collected, which taken together can identify individuals.
- 6) DQI protocols must include a description of how the team plans to collect, store, protect, provide access to and destroy the data.
- 7) When asking questions that are sensitive or stigmatized, teams must develop appropriate and detailed plans to address any emotional and physical health needs raised through participation.
- 8) DQI teams must be familiar with local laws, regulations and cultural context. This is particularly important when engaging with youth and adolescents to determine if parental permission is necessary.

- 9) Ensuring ethical protections is PSI's responsibility and not that of a consultant, agency, partner or other stakeholder. Own the process. PSI's knowledge of the local context is often wide and deep. This knowledge must be applied and not deferred to a consultant/agency who may not be as well versed in the local context.

In DQI studies, teams **must not**:

- Recruit both members of a romantic couple (married, unmarried, straight, same-sex)
- Use women/girls to recruit male partners (husbands, boyfriends, paid partners) or vice versa
- Include minors without considering local laws, culture regarding parental permission. Get parental permission when necessary
- Take identifying photos unless absolutely necessary
- Ask for personal experiences with violence unless justified and absolutely necessary
- Ask for HIV status unless justified and absolutely necessary
- Ask sensitive questions without adequately training staff and developing a plan to address emotional or legal needs of participants
- Seek a referral or help for Sara without her explicit agreement
- Provide counsel or help to a participant for an issue that is beyond PSI's expertise.

AUDIO RECORDING OPTIONS

Audio recording interviews and focus groups is an important element of DQI, as audio recordings are used as the data input for analysis. Permission to audio record must be included as part of the informed consent process prior to beginning an interview. Most PSI offices have digital audio recorders that can be used for this purpose. To maintain confidentiality, interviews and audio recordings should not include the name(s) of the respondent(s) or any other directly identifying information. A respondent unique identification code should be developed and used as the label for the audio code and for subsequent data management and analysis.

Example: In the PSI Cambodia GEMS DQI all subjects were assigned a unique identification code, which was used to identify respondents throughout data collection, management, storage and analysis. The identification code was composed of an eight digit alphanumeric code consisting of: two digits to identify province, a digit to identify provider type, a digit to identify strata, and an assigned three digit random number.

DATA DOWNLOAD SHEETS

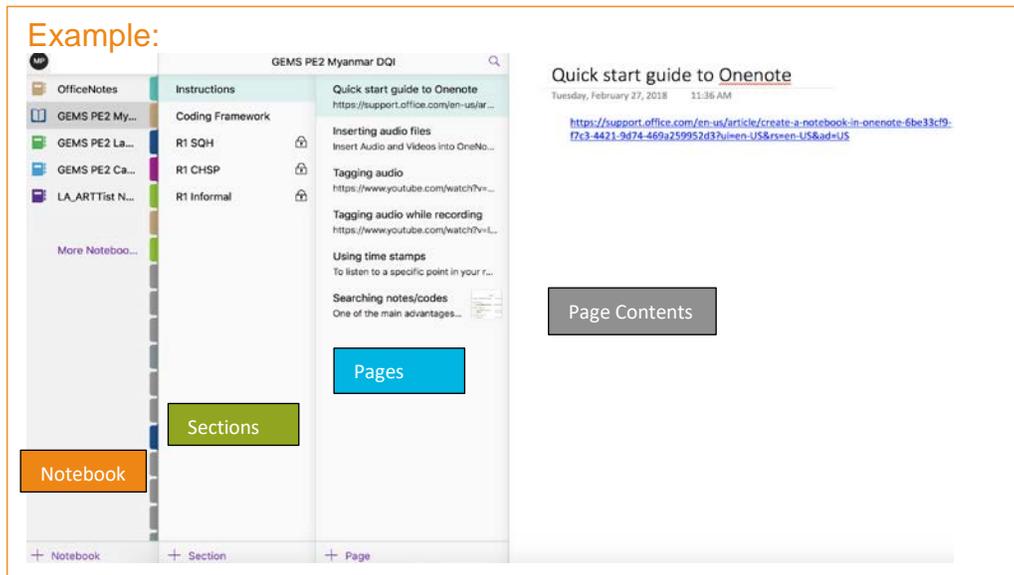
It is recommended that the team prepare a download sheet for field notes from the teams collecting the data. These sheets are meant to be completed immediately after completing an interview and collect the field team's perceptions regarding the content of interviews (information that was highlighted or emphasized by respondents), the perceived quality of interviews, and other reflections regarding interaction with respondents that may be additive to audio recordings during analysis. An example of a download sheet for the GEMS in-depth interviews can be found [here](#).

4) DATA MANAGEMENT

ONENOTE AS A RESEARCH PROJECT MANAGEMENT TOOL

Microsoft OneNote is used as the platform to organize the DQI process, store data, conduct analysis, document results and conduct follow-up.

OneNote is a digital information management software that is part of the O365 suite that allows you to collect and organize multiple data formats (notes, word/excel/ppt files, mails/messages, webpages, photos, audios) in one place. OneNote is set-up like a traditional notebook made-up of sections and pages. A OneNote Notebook can also be shared with other team members, allowing anyone with access to view, edit or contribute.



DQI uses a OneNote notebook to:

- Store all planning and logistics information (workshop agenda, study protocol, implementation plans, etc.)
- Store all study related documentation
- Store all the audio files
- Audio code interviews
- Document key findings
- Build out the data-to-action plan

Setting up a OneNote project

OneNote includes sign-in process that allows you to sync your notebooks across devices through O365. Use your PSI O365 log-in credentials to access OneNote notebooks.

1. Creating new notebook

- Click on the **File** tab to open Notebook Information view and click **New Notebook**.
- Specify storage location and name for the new notebook. Then click **Create**. Here, you can also decide on notebook color. You can also use the Notebook panel on the left-hand side of the screen to create new notebook.

2. Creating Sections and pages

- Click on the **File** tab to open Notebook Information view and click **New Section** to add new sections to your notebook. Depending on the version of the OneNote, you can either use the Notebook panel on the bottom of the screen or top of the page-tab to create new sections. The same process can be followed to add new pages to a section. You will not see SAVE option for OneNote –the program does this automatically as you make changes or exit the notebook.

Set up the sections of your DQI Notebook to correspond to your study.

Example: For the GEMS DQI we set up section that corresponded to:

- Instructions: Included a quick guide to OneNote and instructions for how to import files, tag audio, use time stamps, and use the search function in OneNote.*
- Workplan: Included files associated with the study protocol and the workplan*
- Agenda: Included the agenda for the DQI workshop and all associated power point files*
- Materials: Included a list of materials required for the workshop*
- Data Coding Framework: Included a table with all the codes used to analyze the DQI data*
- Interview data: Included all the audio files*
- Sections for each code in the coding framework where key findings were documented*
- D2A: Included the D2A table*
- Photos: Where photos from the workshop were uploaded*
- Program improvement: Captured lessons learned on DQI process and improvements for future DQIs*

3. Sharing a OneNote Notebook with the DQI team

Once the DQI Notebook has been created, it can be shared with team members, allowing them to view, edit and contribute to the DQI Notebook. In the notebook, click **File > Share > Invite People**. This will let you send the DQI team-members an email message with a link to DQI notebook. For the workshop, click **“Can Edit”**.

You can change this to “view only” after the completion of the workshop to avoid accidental deletion or change to any of the contents of the Notebook.

4. Adding content to your notebook

Your data download sheet and audio files can be imported directly into your notebook. Go to **Insert** Click **File Attachment**, choose a file that you want to attach and click **Insert**. You can also drag and drop desired files on to the OneNote page to attach the file. A copy of the file is inserted on the current page and is shown as an icon that you can open on double click. The icon is an object on the page and you can click and drag the icon to move it to a different location. Attached files are stored as a part of associated notebook. If you move notebook to another location all associated files will move along with the notebook.

Importing audio/video files

The size limit for audio/video files in OneNote is 50MB and they must be in “.wmv”, “.wma” or “.mp3” formats.

While you can attach any format to OneNote, audio/video files that are not compatible with OneNote will be inserted as object attachments. This means you will not be able to use the play back functions within OneNote. These files will open within the external application when they are double-clicked.

When you insert compatible audio/videos files - “.wmv”, “.wma” “.mp3” - into OneNote pages, a “Playback” tab within an “Audio & Video” contextual tab will appear in the Ribbon.

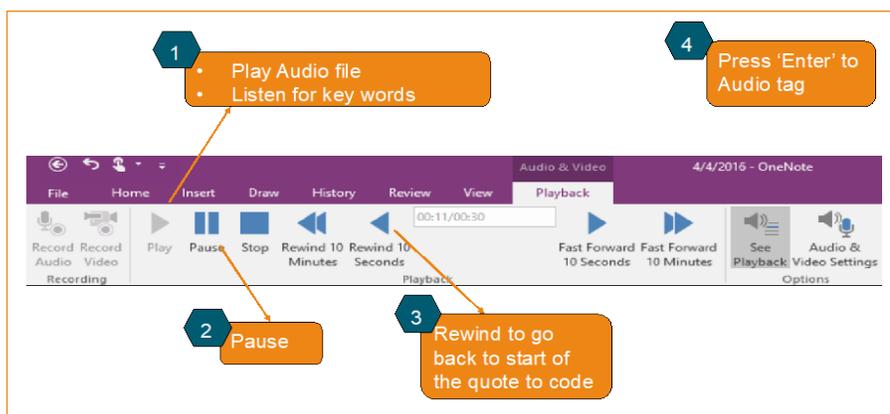
Example: In the PSI Cambodia GEMS DQI, most of the audio recording were more than 50MB. The research team worked with IT to either reduce the file size by changing files to mp3 format or split file into two files each less than 50MB

5. Audio tagging

DQI uses audio tagging rather than coding transcriptions as the mechanism for data analysis. Audio tagging is performed within the OneNote software on interview audio files that you upload as part of the Notebook. To audio tag first select the (compatible) audio file you inserted. Once the audio file is selected the “Playback” tab that appears in the Ribbon. You can then click the buttons in the “Playback” tab to play, pause, stop, fast forward or rewind the recording.

OneNote allows you to take notes when you are listening to the playback. The program also remembers the time you took those notes, thereby audio tagging the specific points within the audio file. During DQI data coding sessions, we have used these audio tags to code data. Following basic steps was used to audio tag data for DQI:

- Play back audio file and listen for key words or phrases related to the codes.
- When you identify a segment of the interview that you want to assign to a code, type the code name and press enter. This action “tags” the code name to the start of that portion of the audio recording.
- Pause the recording and record the key finding within a table with the associated code.



To listen to a specific point in your recording based on your notes, hover over the related code. A small play button will appear to the left of the code. Click the play button and the recorded audio starts. By default, the recording jumps back 5 seconds from the original time stamp you wanted to hear. One limitation is OneNote does not tag entire quote, only the start of the section of the interview corresponding to the code.

Listening to interview and audio tagging during the workshop setting can be a tedious process. Assuming rich qualitative interviews, it is advisable to have a maximum of 4 to 6 interviews per person, throughout the workshop.

Key findings tables

It is recommended that the team prepares a key findings table that captures key findings and/or key quotes along with the codes. This is especially vital in workshops where audio recording of interviews are in local language and workshop participants include both native and non-native language speakers. These findings will be used for extracting insights from the data. Example of key findings table from DQI is shown below:

Code	Key Insight
Join	Cost of living has increased; additional income helps me and family when I retired. I can also help community and they can come to services any time. I can also help people who do not have money and they can pay me later when they have money.
Stay	I love my job; it is also my duty. I also get free RDT, ACT and other materials.

6. Data security

Data coding and analysis during workshop require multi-user collaboration where study population data is shared across workshop participants. It also involves multiple users accessing and contributing to the DQI notebook. There are some important considerations to ensure data protection and security:

- Assigning individual page or section to each user. During Myanmar DQI, it was observed that two users editing the same page can lead to 'page conflict'.
- Deleting data. If one user deletes a note or file from OneNote, it is deleted for all. The history function does allow you to undo these changes, but it can be cumbersome to track changes in a large notebook.
- Raw data (audio files) may contain some identifying information and personal thoughts/perceptions of the study population. Though most DQI are likely to be low risk and not human subjects research they may still contain some personal or sensitive information. Ensuring participant's rights and confidentiality is PSI's responsibility.
- It is recommended to password protect all data sections/pages after completion of the workshop to secure data and maintain privacy.
- Unfortunately, you can't add a password to the entire Notebook. Instead, you have to do this for each notebook Section. To add a password to a section, open OneNote and locate the section you want to protect. Right-click on the section's name, then select Password Protect This Section. In addition, it is also recommended to change section access rights from 'editing' to 'read only' to ensure that no unintentional changes are made to the Notebook post-workshop. To change sharing permissions, go to **Sharing options** on right-hand corner of OneNote, you will see list of people who have access to the section. Right-click on the name to change option from "can edit" to "can view".

Troubleshooting

- Internet: The workshop involves multiple users syncing, accessing and working on a single notebook. This requires considerable bandwidth, so it is essential to ensure the workshop site has good internet connections. In addition, it is helpful to have back-up options, in case of any problems.

Example: In the Laos and Cambodia GEMS DQI, teams had purchased data cards as a back-ups to workshop meeting room's internet.

- Syncing audio files: Audio files take a significant amount of time to download and sync onto personal computers. Since audio tagging cannot be done on the web version of OneNote, all audio files need to be synced to individual participant's computer before the start of the workshop.
- Pirated or unlicensed copies of OneNote will not sync with O365. All participants should ensure they have a licensed copy of OneNote before the start of the workshop.
- Accessing OneNote created and stored in PSI's OneDrive can be challenging. PSI users can share OneNote with external user/s however they may not have editing rights and a new invitation may be required for each log-in. Contact the [PSI Global Evidence team](#) to re-configure the security settings for OneNote to ensure external users can access and edit OneNote.
- It may be necessary to have a backup plan if syncing is not functioning due to low internet connectivity, including the creation of manual time stamps.

Example: The Cambodia DQI team planned on recording the start time on the audio for each code in the key findings table, in case there were problems syncing audio files to their computers.

5) DATA ANALYSIS

PRE-WORKSHOP LOGISTICS

Prior to the workshop, there are important logistical factors that need to be taken into consideration. These include:

- Ensuring excellent internet connection at the workshop site. The use of OneNote requires that everyone is online and contributing to the OneNote notebook online throughout the week. Audio files are very heavy and require a significant amount of bandwidth.
- All DQI workshop participants should have their own laptop for use during the entire week. The OneNote desktop version should be installed on the laptops prior to beginning the workshop.

- OneNote access secured for all DQI participants. Network members who do not have access to O365 may have difficulties in securing access.

Example: In the PSI Cambodia GEMS DQI, workshop facilitators changed security settings and access for the Notebook to ensure non-O365 users could access and edit the DQI Notebook stored within PSI's OneDrive.

- All audio files should be loaded and tested on the system prior to the workshop.
- Audio files, data download sheets and OneNote tables should all use the same respondent Unique Identification Code (UIC) to ensure that the data is organized and easy to link.
- Depending on the program team engagement options and volume of data, it may be necessary for the research team to conduct a large part of the data coding and analysis prior to the week of the workshop. This must be presented as part of the content on the day of the workshops. Plan for having a maximum of two and a half days of audio coding with the team.
- It is helpful for the research team leading the DQI to have several preparatory meetings prior to the week of the workshop. These sessions should include discussions about: who must participate in the DQI, roles and responsibilities, facilitation, logistics, timing and timelines, outputs, etc.
- Invitations to workshop participants should be sent a month in advance (or more, if including team members who work in other sites/countries). The invitation should include objectives and expectations for the workshop and a commitment for participation for the entire week (for full participants) or 2 days (for leadership who will be invited to attend day 1 and day 5 sessions).
- Ensure you have the following materials for the week of the workshop:
 - Computers (laptop/desktops) with OneNote Desktop version
 - Internet connection
 - Audio recordings of the interviews
 - OneNote desktop version
 - Emails of the participants
 - Presentations
 - Projector
 - Name tags
 - Sticky Notes, 3 yellow, orange and pink
 - Printer + paper + spare ink cartridges
 - Markers - different colors
 - Flip-chart
 - Masking tape/Tape
 - Colored paper for printing quotes
 - Scissors
 - Glue

WORKSHOP PARTICIPANTS

The workshop participants should include a mix of evidence staff, program staff and leadership. The number of participants in the DQI sessions have ranged from 8 to 20, depending on the size of the team and scope of the study.

Workshop participants should include:

- program staff that became engaged from the start of the DQI design process and providing feedback to the instruments, pilot testing instruments or collecting data
- program team members who play a direct role in implementation (whether it is working with providers or conducting outreach)

- program leadership, most importantly, in the action-planning sessions at the end of the workshop. This will ensure the action plan is endorsed at the highest program level, monitored and program staff will be held accountable for implementing it by their supervisors. The absence of leadership in the DQI is disempowering to the process, as data cannot be actioned without the necessary strategic oversight and decision-making power in the process. It may only be possible for leadership to be present during some sessions, in which case, the workshop can be designed to accommodate a schedule that best leverages the presence of leaders in the room.

Example: In the Myanmar GEMS DQI the workshop schedule was conducted so that key leaders were present during the last two days of the workshop to engage in the data analysis, data to action, and internal learning sessions. To facilitate their entry into the workshop, the team had an initial session called “Where are we now?” to set the stage and to recap what was covered during the previous days of the workshop.

AGENDA

DQI workshops range from 4 to 7 days, depending on the size of the team and scope of the study. The agenda will differ significantly depending on whether data collection is integrated into the workshop or collected prior to the workshop in its entirety. In the former case, a suggested agenda is presented under [Option 3](#) in the methodology section above. In the latter case, a four-day sample agenda used for the GEMS DQI implementation in Myanmar is presented below.

Monday

8:30 – 9:00	SESSION 1: Who are we? Why are we here?	Setting the stage
9:00 – 9:45	SESSION 2: What are we here to learn?	
9:45 – 10:15	SESSION 3: Study design and field report	
10:15 – 10:30	BREAK	Training on methods and tools
10:30 – 11:30	SESSION 4: Qualitative data analysis	
11:30-12:30	SESSION 5: Introduction to Onenote	Data analysis!
12:30 – 13:30	LUNCH	
13:30 – 14:00	SESSION 6: GEMS PE2 Codes and coding framework	
14:00-15:00	SESSION 7: Practice coding activity	
15:00 – 15:15	BREAK	
15:15 – 16:30	SESSION 7 continued...	
16:30-16:45	Wrap up, next steps	

Tuesday

8:30 – 9:15	SESSION 8: Emerging findings (5 interviews), review of notable quotes	Data analysis!
9:15 – 10:00	SESSION 9: Tagging audio and collecting key findings	
10:00 – 10:15	BREAK	
10:15 – 12:00	SESSION 9 continued...	
12:00 – 13:00	LUNCH	
13:00 – 14:00	SESSION 10: Emerging findings (16 interviews), review of notable quotes	
14:00-15:00	SESSION 11: Tagging audio and collecting key findings	
15:00 – 15:15	BREAK	
15:15 – 16:30	SESSION 11 continued...	
16:30-16:45	Wrap up, next steps	

Wednesday

8:30 – 9:45	SESSION 12: Where are we now? Introduce new members of the team and review the work to date	Setting the stage
9:45 – 10:30	SESSION 13: Emerging findings (24 interviews), notable quotes	Data analysis!
10:30 – 10:45	BREAK	
10:45 – 12:30	SESSION 14: Analysis by strata	
12:30 – 13:30	LUNCH	
13:30 – 14:30	SESSION 15: Analysis by strata	
14:30 – 15:00	BREAK	
15:00 – 16:00	SESSION 16: Identifying key takeaways	
16:00 – 16:30	SESSION 17: Summary of the day	
16:30-16:45	Wrap up, next steps	

Thursday

8:30 – 9:00	SESSION 18: How are we feeling about our results? Where are we now?	Setting the stage	
9:00 – 10:30	SESSION 19: Going back to our objectives	Data analysis!	
10:30 – 10:45	BREAK	Data to action!	
10:45 – 12:00	SESSION 20: Defining an action plan		
12:00 – 13:00	LUNCH		
13:00 – 15:00	SESSION 21: Creating action plans		
15:00 – 15:30	BREAK		
15:00 – 16:00	SESSION 22: DQI		Internal learning
16:30-16:45	Wrap up, next steps		

The first day begins with several presentations that are used to set the stage for the DQI. This includes: icebreakers and introductions, communicating the context of the study and DQI, the study objectives, methodology and field report, presenting the agenda and articulating expectations for the DQI. This session is followed by a training component on qualitative data analysis and an introduction to OneNote as the platform for data coding and knowledge management throughout the DQI process.

Example: During the GEMS DQI the team used an interactive activity to teach qualitative coding: the research team chose a popular/locally relevant song and developed a few codes that corresponded to the lyrics. The workshop participants then practiced "coding" a printout of the lyrics using the codes provided.

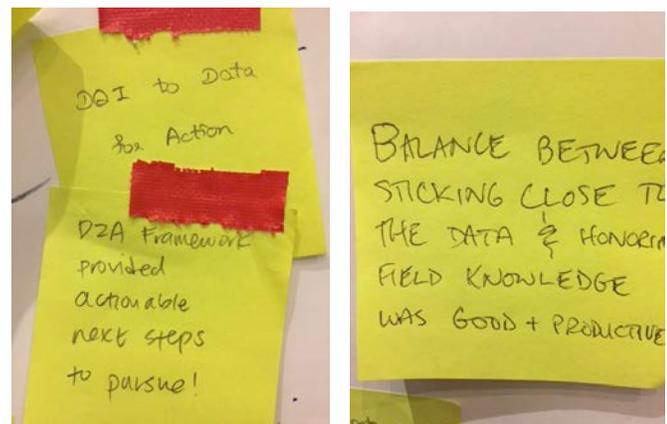
The next step is to get the team familiar with the coding framework that is going to be used for the study, including the code, the definition of the code and examples (from the data) of each type of code). The day ends with the initial audio tagging and key findings extraction activity.

The second day is primarily a continuation of audio tagging and extraction of key findings. The day finalizes with an initial discussion of key take-aways. This is the heaviest day of individual audio tagging work, and it is important to schedule check-in times with the team to reduce exhaustion among team members. At the end of the day the team should print out all key findings on colored paper with their corresponding code. The colors chosen should correspond to the strata used (in order to facilitate analysis).

The third day focuses on the analysis of the key findings extracted from each code (and by strata, if necessary). Throughout this process it may be necessary to return to the raw data using the audio tags to verify any findings that might be confusing. There are several interactive methods that can be used to engage with key findings and extract insights. Some of these are presented in the methods section below or can also be found on the PSI Evidence team's Results to Actions with Research ([RAR](#)) SharePoint site.

The final day includes sessions on mapping insights back to the objectives of the study, developing an action plan for prioritized insights and conducting an internal learning session to debrief on the DQI. This last section can be conducted in the form of a focus group where teams reflect on what they have learned in the DQI process and how to ensure continued follow up.

Example: In the Myanmar GEMS DQI the internal learning session was conducted as a focus group with DQI workshop participants and a snap activity to collect feedback. The post-its presented here include some of the comments received during this session.



METHODS

DQI involves various iterative and interpretative techniques that go beyond the usual practices to help analyze data. It draws on approaches used in human centered design to gain a deeper understanding of target population's needs, practices and how they see and interact with issues around key research questions. The following approaches were used in GEMS DQI:

Step 1: Conduct a Stratified Analysis

- Once all interviews are coded, organize and print the coded data onto color paper to differentiate the study strata. Cut out each key finding and organize them on flip charts by code and color. This creates a visual distinction for strata during analysis and helps uncover key takeaways and analyze similarities and differences between strata for each code.



- To conduct a stratified analysis, divide the team into groups and assign codes to each group for review. Each group member individually reads all the data for their code and documents key insights and similarities/differences by strata for each assigned code. If key findings are miscoded, teams can re-position them according to their correct code. If key findings are confusing, the teams can use the UIC to trace back the key finding to the original audio file to re-listen to the raw data.
- The group then reconvenes to discuss and contextualize their individual take-aways and develop a summary of their key findings. Any differences between populations or strata should be documented within the summary.
- All members of the group are then given time to review the key findings from other codes, after which the broader team convenes.
- Each group takes turns presenting a summary of their key findings by code, which are then discussed by entire team to contextualize insights and discuss implications. The summary findings from each code are documented within a OneNote tab or on a flip chart.

Example: In the Myanmar GEMS DQI participants were asked to approach the stratified analysis as follows:

Divide into small groups assigned to codes

Spend 20 minutes reading through the data

As a team, discuss and document: What are the main ideas that emerge from the data within the code? What key findings are unexpected?

As a team, discuss and document: What are the similarities that cut across provider types? What are the differences between provider types? What key findings between provider types are unexpected?

As a team, discuss and document: What are the differences between elimination category? What key findings between study locations are unexpected?

Step 2: Landing key insights

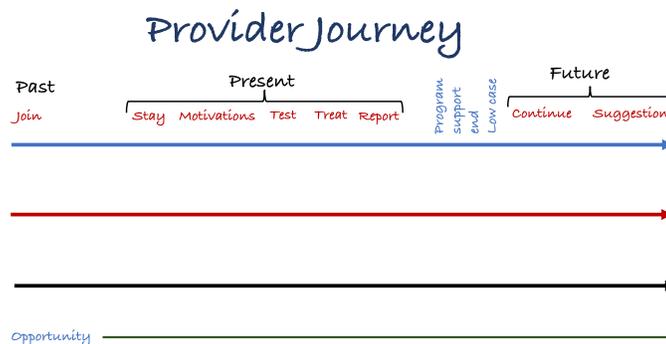
- The team is asked to review all the code summaries individually, and to choose and articulate their top three insights from the data. As a large group, a snap activity is conducted to condense and articulate these insights. Workshop facilitator/s present each insight, separating insights from observations, and then group similar insights and/or wordsmith them, where necessary.

Example: In the Myanmar GEMS DQI providers mentioned various material and non-material benefits as the reasons joining or staying in the network. Supporting government on malaria elimination or working towards malaria elimination was rarely mentioned. The insight team drew was that “Malaria elimination is not a strong motivation for engagement”.

- The facilitators set up one flipchart paper for each study objective, re-articulated as a research question. The team then identifies responses to the research question based on the landed insights (or drawing on data from within the codes, where necessary). If there is no way to respond to a particular objective, the team documents the reasons why the study data fails to respond to the study objective (e.g., data not rich enough, respondents not familiar with product, etc.).

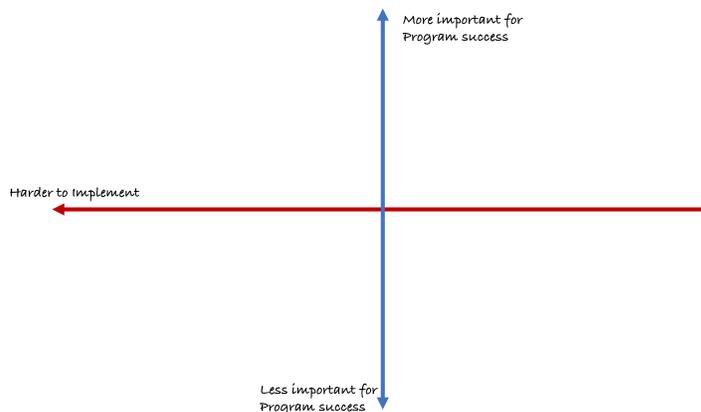
Step 3: Journey Mapping (optional)

- The GEMS study explored the providers' interaction with the program from enrollment, through participation and explored plans to continue engaging with the program. The data lent itself to the development of a journey map to understand the provider's trajectory in participation. To conduct the journey map, the team drew on specific codes to capture the “past”, “present” and “future” phases of the provider journey in relation to their motivation to join, engage and continue providing malaria services.
- The team discussed opportunities for the program and key touch points for each stage of the journey.
- Other studies can consider doing alternative activities, such as key influencer maps or day in the life activities, to help contextualize insights from coded data.



Step 4: Mapping Opportunities

- There are many insights that emerge from a DQI process, so teams must go through a process of prioritizing insights for action based on two criteria: 1) How important is it to address this insight in order to achieve program success?; and 2) How actionable is it to address within the scope/time/budget or reach of the program?
- The process begins with drawing a quadrant on a flip chart with “Importance” (ranging from “Most important” to “Least important”) along the Y axis and “actionability” (ranging from “Difficult” to “Easy”) on the X axis.
- Each insight emerging from Step 2 is plotted along the quadrant.
- The team then determines the number of insights that they will select for the next stage: data to action. Eliminate all insights that are in the “Least Important” and “Difficult to action” quadrant. All other insights should be prioritized based on where they want to invest their effort and resources depending on the insight’s importance and actionability.



TIPS

1. Don't be afraid to experiment: Not all data/insights generated during the process might be relevant. You might need to filter and prune some findings to ensure findings are relevant to program
2. Embrace ambiguity: The process uses various iterative and innovative techniques to identify opportunities for the program. This could mean re-looking at same data multiple times and keeping aside some findings that may make sense later. Trust the process.
3. Trust the data: It is sometimes important not to take interpretation too far. Having multi-disciplinary teams in the workshop means you might have other insights or observation, it is important to consider those, however it is also important to stay true to the data and key findings that emerge from the data analysis.

6) DATA TO ACTION AND FOLLOW UP

A data to action plan is the final output of the DQI and includes a description of prioritized insights, a desired state or objective, an identification of the opportunity for action, a focal point, and time-bound next steps. Given that the process of analysis and decision-making is condensed into a single week and that key team members who need to approve, execute or provide inputs to the action plan may not be in the room, the plan that emerges from the DQI needs further refinement and feasibility checks. In some cases, there might need to be a plan for resourcing a budget to implement new actions. Follow up to the action plan shortly after the DQI is a critical next step to ensure that the process leads to program improvement. This follow up can be integrated as an agenda item in regular program team meetings. The D2A can result in multiple action points that respond to different objectives, which may seem overwhelming because many actions require engagement with busy program focal points. After the DQI workshop, the team can review the D2A with fresh eyes and condense the existing actions points into a handful of new activity areas. This extra step can be built into the D2A workshop adding a half-day after completing the data-to-action framework and pulling all of the action points out of

the individual insights into one place to see where there is overlap that allows for activities to be combined. As part of this process the team must articulate a plan for further follow up.

Example: The PSI Cambodia team identified the following key insights in the DQI: 1) Providers don't know where their malaria reports go; and 2) Providers do not have visibility regarding their contributions to malaria elimination. These insights led to immediate changes in program implementation, including the development of simple provider-level reports to help facilitate the supervisor's discussions with providers regarding the cases that they have reported and how they contribute to the overall malaria burden in their district.

AUTHOR NOTE: We hope to continue to improve upon the DQI process and tools and offer this methodology as a tool for program decision-making. Please share your comments, questions, feedback and experiences in implementing DQI with us [by email](#).

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