

Tools for Data Demand and Use in the Health Sector



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Version 2



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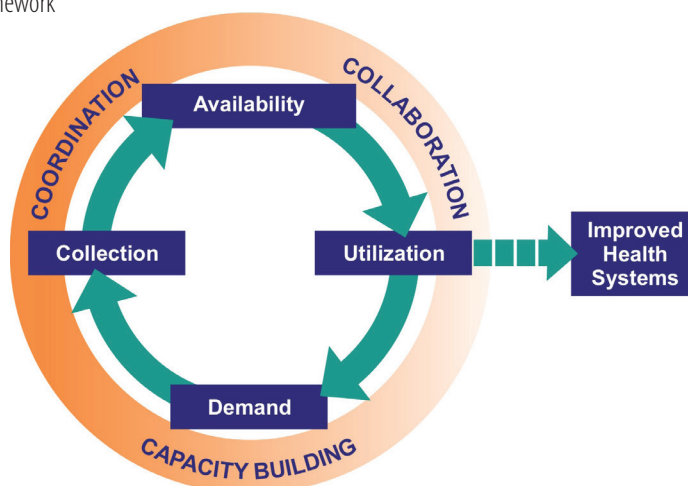
Significant human and financial resources have been invested worldwide in the improvement of health information systems. At the global level, efforts to improve monitoring and evaluation systems and other data sources have increased in response to the need to track Millennium Development Goals and respond to the performance-based release of funds from select donors. Despite these improvements, data and information is often not used by key stakeholders to effectively inform policy and programmatic decision making. As a result, many health systems fail to fully link evidence to decisions and suffer from a decreased ability to respond to priority needs at all levels of the health system.

There are many possible factors that undermine evidence-based decision making. Some factors can be traced to limited demand for information, stemming from a pervasive lack of “data ownership” where decision-makers are not aware of existing data sources or do not fully understand the underlying methodology or scope of the data set. Others relate to the low value placed on data by decision-makers because of a perception that the quality of the data is poor or the decision-maker lacks the understanding of how the information could be useful. The failure to present data to decision-makers in user-friendly, accessible formats also affects the ease of using it in the decision-making process. The factors that mitigate evidence-based decision making are many and relate to the varied types of decision-makers, how information flows to these individuals and how they make their decisions; others to the context in which information is collected; and still others to the organizational infrastructure and technical capacity of those that generate and use the data.

STRATEGIES AND TOOLS FOR DATA DEMAND AND USE IN THE HEALTH SECTOR

In Part 1 of this series, A Conceptual Framework for Data Demand and Use in the Health Sector, we provided a conceptual framework for evidence-based decision making in the public health arena (Figure 1). The Framework addressed four topics: First, we presented the cycle of data collection-analysis-availability-use and demand. Second, we presented three “determinants” of data demand and use: technical, systems and individual. Third, we discussed data demand and use in the context of program stages or decisions. Lastly, we presented a two-axis ‘data supply and information demand’ matrix intended for application at the country or program level. The purpose of this matrix is to provide insight into the strategic entry points for data demand and use interventions.

Figure 1: Conceptual Framework



Part 2 of this series, *Strategies and Tools for Data Demand and Use in the Health Sector*, provides detailed strategies and tools for taking concrete next steps in implementing data demand and use activities. Part 3 of the series, *Case Study Series in Data Demand and Use in the Health Sector*, demonstrates how strengthened demand for and use of data can improve the delivery of health services and the policies that support them.

In this document we focus on specific tools that can be applied to facilitate data use. It should be noted however, that every context is different and may require a different type of intervention or combination of interventions to facilitate data use. Oftentimes, capacity building efforts along with other strategies may need to be applied as well. The combination of capacity building, data demand and use tools and other approaches ensures that health professionals have a broader menu of interventions to choose from to improve data use in the contexts in which they work.

The tools outlined in this Tool Kit¹ include: Assessment of Constraints to Data Use, Information Use Map, Framework for Linking Data with Action, Stakeholder Engagement, and PRISM Tools. These tools can be used independently or a combination of tools may be applied, depending on need and context. The tool or complement of tools that are selected should respond to a particular context and will depend on the scope of the activity, timeline and budget available to support the efforts to improve data use. Specific questions that may aid in the selection of tools include:

- What is the context of data use nationally, regionally, at the province, district and facility levels?
 - » What constraints exist that may affect the use of data?
- Is the data use activity focused on improving the use of routine health information systems or on enhancing use of a specific type of monitoring and evaluation data set or research finding? Or, is the data use activity focused on addressing a particular question, problem, issue or set of decisions that need to be made?

¹ This Tool Kit serves as an update to the 2006 MEASURE Evaluation publication: *Data Demand and Information Use in the Health Sector: Strategies and Tools*; ms-06-16b.

- Is the data use activity focused on improving information use at the national, provincial, district, facility, or community level?
- Which stakeholders should be involved in the data use process? Who are the decision-makers? Which stakeholders will be affected (both positively and negatively) by the decisions made?
- What is the objective, budget and timeline for facilitating data demand and use?

This document begins by reviewing the Assessment of Data Use Constraints tool. We suggest first assessing the current situation of data use so that areas for capacity building and technical assistance can be identified and addressed to pave the way for enhanced, data-informed decision making.

Next, we describe the Information Use Map tool, which provides a visual picture of the information system allowing the user to identify potential challenges and opportunities to information flow. This tool uncovers barriers to data use as they relate specifically to the flow of information at the national, district or provincial levels.

The next tool addressed is the Framework for Linking Data with Action. This tool facilitates evidence-based decision making by identifying:

- decisions that must be made,
- questions that inform the decisions,
- data needed to answer the questions,
- stakeholders that need to be involved in the process, and
- date that the decisions need to be made.

This tool is useful in identifying and prioritizing decision-making needs and establishing a systematic process for regular evidence-based decision making.

The next tool covered is the Stakeholder Engagement tool. This tool applies a systematic process to engage the appropriate set of stakeholders necessary to the data gathering or data use activity. By analyzing stakeholder needs, the influences and interests of stakeholders are identified and facilitate the identification of individuals and organizations critical to the activity. The appropriate involvement of stakeholders will lead to heightened local ownership of the data collection or data use activity.

We conclude with a discussion of the Performance of Routine Information Systems Management (PRISM) tools. PRISM consists of four tools that can be applied to comprehensively assess the quality and use of routine health data.

As stated earlier, the tools presented in this document can be used independently or together. Two illustrative examples of tool pairing are found below.

1. A Ministry of Health is interested in identifying regularly occurring decisions and the data needed to inform them. The appropriate tools to apply in this context are the Stakeholder Engagement tool and the Framework for Linking Data with Action. The Stakeholder

Engagement tool is essential in analyzing which stakeholders should be involved in the decision-making process to facilitate ownership around the decisions made. The Framework for Linking Data with Action facilitates the identification of the decisions, questions, data, primary stakeholder, and due dates in the decision-making process.

2. A provincial health management team wants to improve data use at the provincial level. The appropriate tools to apply are the Assessments of Data Use Constraints tool and the Information Use Mapping tool. The Assessment of Data Use Constraints tool comprehensively and rapidly assesses the barriers to data use, while the Information Use Mapping tool uncovers barriers specific to information flow and identifies areas where data use can be improved.

Each of the tools presented in this Tool Kit can be modified and adapted to fit the needs, timeline, and budget of the context in which they are being used. There may be circumstances where a need arises to facilitate data use but the existing tools are not an exact match for the specific situation. In this case, the tools can be modified to fit the need. For example, looking back at example number two above, if a provincial health management team is interested in improving data use at the provincial level and knows that their budget to address identified barriers is limited, they may decide to focus on a subset of constraints that are more in their manageable control to affect. The team may adapt the interview guide to address barriers in only two of the three categories of potential barriers to data use.

Once the activity to facilitate data demand and use is underway, it is important, as with any intervention, to track the results of the data demand and use approach. The most important part of this review will be to determine if the expected outputs and results were achieved. The outputs of the application of a Data Demand and Use tool will normally be the creation of a report or action plan. The result of the effort to improve data demand and use will be the use of data in decision making. The review will consist of two phases. First, determining if the outputs were achieved and secondly determining if data-informed decision making improved, and if it is attributable to the data demand and use activity. For example, looking at example 1 above, data use review activities would include following-up to ascertain if (1) the Framework for Linking Data to Action had been completed, and (2) if the decisions listed in the Framework for Linking Data with Action had, in fact, been made, and the extent to which the identified data and information informed the decision. In some cases, the data demand and use activity may aim for an individual or organizational level change in the area of data and information use. Such results will be more demanding in terms of data.

In the following sections, we present five of the core Data Demand and Use tools that have been developed to help promote evidence-based decision making and to improve the performance of M&E data systems. Each section also includes examples of the tools completed and an overview of the context in which the tool was applied.

The most recent versions of the Data Demand and Use documents and tools can be accessed at the MEASURE Evaluation Web site, <http://www.measureevaluation.org>.

Assessment of Data Use Constraints

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1 PURPOSE

Data is often not used in decision-making and the barriers inhibiting data use are unknown.

In health information systems, the ultimate purpose of collecting and analyzing data is to improve programs by enabling more informed decisions—evidence-based decisions. Did the awareness campaign increase use of oral contraceptives? Have our counseling efforts increased acceptance of HIV/AIDS testing? Questions such as these must be answered with facts, rather than intuition or estimation.

Yet, in many areas of the world decision-makers do not have access to the required data, or they do not realize how data can be used to improve decisions, or the information they need does not exist or is not trusted. The practical utility of health information—how often and how effectively data is

used or not used—is determined by multiple factors that can be categorized into three general categories: the attitudes and actions of people who produce or use data, the technical aspects of data processes and tools, and the organizational context that supports (or inhibits) data processes. The Assessment of Data Use Constraints tool focuses on these categories and uncovers issues in the areas that can usually be addressed with targeted interventions.

2 DESCRIPTION

Identifies the barriers and constraints to data use, and leads to effective approaches to address them.

The Assessment of Data Use Constraints is a rapid assessment tool that serves three key purposes:

- Identifies existing barriers and constraints to data use.
- Identifies existing best practices in data use, so these practices can be applied elsewhere.
- Helps in designing and prioritizing approaches for addressing barriers and constraints.

The Assessment of Data Use Constraints can be applied at the national, sub-national or organizational level. Two sets of interviewing guides have been developed to accommodate the different needs of users when assessing barriers to data use. The first interviewing guide, **Version 1: National and Sub-national**, is a rapid assessment tool that aims to provide a broad view of constraints at the national and sub-national levels by collecting information from decision-makers on their current use of data and on their perceptions of the constraints to data use for evidence-

based decision making. For the purposes of this assessment “decision-makers” are defined as those individuals in a position to make decisions on policies or operational protocols and guidelines, on project designs and plans, and on resource allocation such as such as national and district-level policymakers and program managers.

The second interviewing guide is intended to be used among staff working at the health facility level. **Version 2: Facility** aims to provide an understanding of constraints to both generating and using data at lower levels of the health system, such as health facilities, therefore separate interviewing guides for data users (program managers, clinical staff) and data producers (data clerks and managers, M&E staff) have been developed. Version 2 also provides more focus on individual and organizational constraints than Version 1. In addition to the interviewing guides, an action plan matrix is provided to help participants with the process of identifying interventions to address the barriers and constraints that are identified in the assessment. When the assessment looks at information processes within a single organization or group of health facilities, it can be incorporated into health information and organizational capacity-building assessments at the national and sub-national levels.

The third part of this tool is a matrix that assists the user in developing a plan for overcoming the barriers to data use identified in the interviews. The **Planning Matrix** allows the user to map out an approach that can be implemented over time. For each identified barrier, the matrix requires users to identify an intervention to overcome that barrier, the steps involved in implementing the intervention, the person(s) responsible for overcoming the barriers, other stakeholders that may be affected by the implementation of the intervention or stakeholders who may be needed to advocate for the intervention, and the general timeline within which the intervention should be implemented.

Identify the barriers and constraints to data use

The assessment tools look at organizational, technical or individual constraints to answer questions about deficiencies in data use. Why are monitoring and evaluation (M&E) systems not producing all the real-world value they could? Why are findings inconsistent among different reporting entities? What prevents information sharing among decision-makers? The specific constraint areas are defined as follows:

- **Organizational constraints:** Organizational processes might not support the use of data. For instance, officials might be reluctant to use data that has not been officially sanctioned. Perhaps the release of certain sensitive information—such as figures that reveal a measles outbreak—is tightly controlled. This information can be shared only by official protocol. More often, there are simply no channels or systematic processes to share data with people who could use it.
- **Technical constraints:** The endemic shortage of computers is an obvious technical constraint, but there are other common technical issues that erode data quality. For instance, contributors could be defining health indicators differently, or using different sources for the same data element or indicator, or using different algorithms to report it.

- **Individual constraints:** Many information systems suffer from shortages of skilled people to manage, interpret, and use the data; and motivation and incentive to generate high-quality data. For example, one health information unit, despite having an M&E system for HIV/AIDS, was still not getting the data it had requested from its service sites. Where was the problem? Why were the data not properly reported?

Not all constraints can be resolved, but they can be addressed. If a constraint is an individual one—for example, data collectors do not know to use correct methods—the issue can be resolved with training. Technical constraints can be resolved with additional computing resources or data management protocols. Organizational constraints can often be resolved with changes in policy.

However, in the greater context, there are other constraints that probably cannot be easily resolved, but they can at least be addressed:

- **Economic constraints**
 - » “We wish we could gather survey data at the district level, but it would be prohibitively expensive to do so.”
 - » “Data analysis would show that more people should receive antiretroviral therapy, but funding is limited.”
- **Political constraints**
 - » “Knowledge is power, so some departments are hoarding it.”
 - » “Our division head doesn’t want authorities to know the severity of this health issue in our district, for fear of disrupting the tourist industry.”
- **Socio-cultural constraints**
 - » “Salary decisions used to be based on detailed economic surveys, but now it’s just a political debate between the workers’ union, the courts and the agency.”
 - » “The head of that program is under pressure from a multinational corporation to support its agenda.”

These types of constraints will not be resolved by the kinds of interventions that are within the scope of this tool. However, acknowledging that these circumstances exist can be very helpful for designing programs that work with or navigate around these constraints.

There are many reasons that available data is not being used for anything more than filing reports. Some of those reasons might be insurmountable, but if you know what they are, you can at least account for them. Other barriers and constraints can be resolved, and the following rapid assessment tool can help lead the way.

The tool is a rapid assessment tool

Depending on the needs of the users, the available budget and timeline, a more thorough assessment tool may be needed. In this case, consider applying the PRISM tools presented later in this document. The assessment of data use constraints tool is intended to be a rapid assessment and is not representative of all barriers that may exist in the country/region/district/organization.

Identify existing best practices in data use

Although the tool is called Assessment of Data Use Constraints, the analysis will also reveal areas where the information flow is working well, which could serve as a model for improvements in other initiatives. For example, a U.S. government team shared its data with all implementing partners in a program designed to reduce maternal-to-child transmission of HIV/AIDS. Moreover, they not only shared country-wide summaries; they disaggregated the data in a way that was meaningful to each partner. Each health facility received information specific to its locale, so staff could understand their own performance and the broader context.

Formal planning should follow-up the mapping process. The information generated by this tool should be far more than a list of barriers and constraints. It should be forward-looking and prescriptive, showing ways that these obstacles and deficiencies can be overcome. It is very easy for respondents to list things that are wrong with the system. The facilitator implementing the assessment will have to help respondents think about resources within their organizations that can be organized or leveraged for improvements. This goal explains why the tool focuses on organizational, technical and individual constraints. These are areas that can usually be addressed with targeted interventions.

Once the barriers and constraints in an information system are identified, the planning matrix can be used to address these barriers and develop M&E systems to either change what you can, or acknowledge (and work around) what you cannot change.

The Assessment of Data Use Constraints tool is adaptable

This tool can be used in a stand-alone assessment or as a component of a larger assessment—or parts of it can be extracted to serve specific purposes. For example, this tool can be incorporated into a workshop for M&E staff, to help them think more strategically about constraints to data use approaches, and to address the constraints. In addition, the questionnaires are adaptable. In fact, you should customize the questionnaire to the environment and scope of the assessment. For example, an assessment of a national survey program would focus on barriers and constraints to using a particular set of national survey data. An assessment of hospitals in a particular district would use the standard set of questions for data users and producers but may include additional questions that focus on the district health office's role in data use. Adapt the questionnaire at the outset, then conduct two or three pilot interviews, and fine-tune the questionnaire again based on those initial experiences.

3 TEMPLATES

Key Informant Interview Questionnaire: Decision-Maker Perceptions

Version 1: National and Sub-national

Interview logistics		
Date		
Time Start/End	Start:	End:
Interviewer Name		
Title of Respondent		
Number of Years in this Position		
Specialization <i>(check all that apply)</i>	<input type="checkbox"/> Population, Health and Nutrition <input type="checkbox"/> Child Survival <input type="checkbox"/> HIV/AIDS	
Level	<input type="checkbox"/> National <input type="checkbox"/> District	
Responsibilities <i>(check all that apply)</i>	<input type="checkbox"/> Policy <input type="checkbox"/> Program	
Sector <i>(check one)</i>	<input type="checkbox"/> Private <input type="checkbox"/> Public	

About this interview—and why your participation is so important
<p>In health information systems, the ultimate purpose of collecting and analyzing data is to improve programs by enabling more informed decisions based on facts. However, information is not always available to make decisions—or if it is available, it is not always used. This study is designed to find out what barriers and constraints are causing these conditions, and how to resolve them.</p> <p>Your participation is requested to provide your insights about constraints and barriers to data use. Your participation is very important to this research, but it is entirely voluntary. Your responses will be treated as confidential, and we will ensure that any statements or comments you make cannot be linked either to you as an individual or to your organization. We will be producing a report that is intended mainly to help MEASURE Evaluation staff and our collaborating organizations design effective monitoring and evaluation activities.</p> <p>Are you willing to participate? <input type="checkbox"/> Yes <input type="checkbox"/> No (stop interview)</p>

Introductory questions	
RA1	What was the last major decision related to policies or programs that you made?
RA2	What information did you use to make this decision?
RA3	How did you use information to make this decision?
RA4	Was there any information you needed but did not have in order to make this decision?
RA5	Who are the primary stakeholders in the use of information?
RA6	Whose interests are most served by health information systems?
RA7	How do health information systems meet your needs for information?

Technical constraints	
Technical constraints are related to the ability to generate high-quality data and analyses.	
RA8	Have you ever had an experience while making a policy- or program-related decision when you were concerned about the quality of the information being used?
RA9	Are there multiple sources of information or statistics for issues of importance to you, and have you experienced any problems caused by having different estimates?
RA10	I am interested in knowing about technical capacity for collecting and using information. Does your agency have the technical capacity to produce reliable information without a lot of external technical assistance?
RA11	Does your agency have the technical capacity to ensure access to and availability of reliable data?
RA12	Has there been an occasion when data quality or local technical capacity made it difficult for you to use information in making a decision?
RA13	How would you have gone about preventing this situation?

Individual constraints	
Individual constraints are related to the capacity of staff to collect, analyze and interpret the data.	
RA14	What specific challenges have you experienced among your staff when it comes to using data? Probe respondent for the following items following their response: awareness of data sources, technical skill, motivation, time and workload, lack of incentives or knowledge of the benefit to using data for policy change and program management.

Organizational constraints	
I am interested in finding out about challenges in using information that are due to how your organization functions.	
RA15	How does your organization support having the necessary information to make decisions?
RA16	How does your organization support the prioritization and use of information in decision making?
RA17	How does your organization support training of staff in skills for using information in decision making?
RA18	Can you describe the mechanism or process within your organization/agency for approving research or survey data for dissemination?
RA19	How does this process affect your ability to use information to make decisions?

RA20	What are the challenges your organization/agency experiences in sharing survey and research data?
RA21	What are the challenges you experience in sharing research and survey data across organizations and agencies?
RA22	Are there risks associated with sharing information? If so what are they? Record the response and the respondent's openness or reluctance to answering this question.

Closing thoughts	
RA23	How does the political, social and economic environment affect your use of information in decision making? Probe respondent for various influences including the following: <ul style="list-style-type: none"> • international priorities • NGO funding and donors
RA24	To what extent do these factors outweigh the importance of data itself in making decisions?
RA25	Have you experienced any other challenges in using information to make decisions?

Data Users Interview Questionnaire

Version 2: Facility

Note: Data users include staff who have decision-making responsibilities including senior managers, clinicians, laboratory and pharmacy staff, and counsellors.

Interview Logistics		
Name of facility		
Facility type <i>(check one)</i>	<input type="checkbox"/> Referral hospital <input type="checkbox"/> District Hospital <input type="checkbox"/> Health centre (hospital affiliated and other health centers) <input type="checkbox"/> Health post/dispensary <input type="checkbox"/> Other (specify):	
Ownership <i>(check one)</i>	<input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Mix	
Date of interview		
Time Start/End	Start:	End:
Name of interviewer		

Introduction
<p>In health information systems, the ultimate purpose of collecting and analyzing data is to improve programs by enabling more informed decisions based on facts. However, information is not always available to make decisions—or if it is available, it is not always used. This study is designed to find out what barriers and constraints are causing these conditions, and how to resolve them.</p> <p>Your participation is requested to provide insights about constraints and barriers to data use. Your participation is very important to this research, but it is entirely voluntary. Your responses will be treated as confidential, and we will ensure that any statements or comments you make cannot be linked either to you as an individual or to your organization. We will be producing a report that is intended mainly to help MEASURE Evaluation staff and our collaborating organizations design effective monitoring and evaluation activities.</p> <p>The interview will last about 20 minutes. I will be using a questionnaire which includes questions about the type of decisions you make, what information you use for this purpose, and barriers to information use. I will also ask questions about and some other organizational issues.</p> <p>Are you willing to participate? <input type="checkbox"/> Yes <input type="checkbox"/> No (stop interview)</p> <p>I would like to tape record this session so that I will be able to make an accurate and complete transcription of my notes. Again, this information will not be shared with anyone outside of the research team—that is MEASURE Evaluation.</p>

Respondent Background Information			
Before we start the interview, I would like to record some background information.			
BI1	What is your job title?		
BI2	How long have you been in your current position?		
BI3	Do you supervise any staff at this facility?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section 1: Information use for decision making		
I would like to begin by asking you about your job responsibilities.		
1. Do you make or influence the following:		
a. Budget preparation/allocation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Staffing decisions	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Medical supply and drug management	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Planning clinical services	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Service improvement (counseling practices, outreach, adding services)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
f. Other		
2. What type of data or information do you use for [read list]?		List response(s)
a. Budget preparation/allocation		
b. Staffing decisions		
c. Medical supply and drug management		
d. Planning clinical services		
e. Service improvement (counseling practices, outreach, adding services)		
f. Other		

3. Thinking about the two most recent decisions in which you were involved, please describe how you used data in the decision-making process. Please do not include individual patient records.
a.
b.

Section 2: Technical barriers to information use		
4. In general, do you face any challenges when trying to use facility data for decision making? Please explain.		
5. Over the past 6 months, have you encountered any of the following barriers when trying to use health data or information?		
a. Incomplete data	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Poor quality data	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Data was produced late or not at all	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Data/information was not well presented	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Other:		
If “no” to Q5a–e, skip to Q7.		
6. Have you provided feedback about these barriers to the management information systems/records management team?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a. If yes, was the feedback addressed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Do you feel you have the skills necessary to use data to make the kinds of decisions in which you are involved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Would you like training in [read list]?		
a. data collection	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. data analysis	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. data presentation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. data use (planning, quality improvement)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section 3: Organizational barriers to information use			
9. Does your facility conduct regular staff meetings?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (skip to Q12)	
10. What type of staff meetings are held?		11. How often are meetings held [read list]?	
a. Senior management	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Once a week <input type="checkbox"/> Once a month <input type="checkbox"/> Once a quarter (three months) <input type="checkbox"/> Less than every 3 months <input type="checkbox"/> Not applicable
b. Departmental/clinic	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Once a week <input type="checkbox"/> Once a month <input type="checkbox"/> Once a quarter (three months) <input type="checkbox"/> Less than every 3 months <input type="checkbox"/> Not applicable
c. All-staff	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Once a week <input type="checkbox"/> Once a month <input type="checkbox"/> Once a quarter (three months) <input type="checkbox"/> Less than every 3 months <input type="checkbox"/> Not applicable
d. Other:			
If “no” to meeting type in Q11, mark “not applicable” in Q12.			
12. Were data and information presented at the last meeting you attended?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Applicable
a. If yes, how was it used (Probe: types of decision making)?			
13. Does your facility receive feedback from management, MOH, or others about the facility's performance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
a. If yes, please describe how feedback is provided?			

Section 4: Other barriers to information use

I would like to know your opinion about how strongly you agree with certain statements. There are no right or wrong answers, only expressions of your opinion on a scale from 1 (strongly disagree) to 5 (strongly agree). You have to determine first whether you agree or disagree with the statement.

Second, decide about the intensity of agreement or disagreement. This information will remain confidential and will not be shared with anyone, except presented as an aggregated data report. Please be frank and choose your answer honestly.

At this facility, decisions are based on	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
14. Personal liking	1	2	3	4	5
15. Superiors' directives	1	2	3	4	5
16. Evidence/facts	1	2	3	4	5
17. Political interference	1	2	3	4	5
18. Cost considerations	1	2	3	4	5
In your organization, superiors					
19. Seek feedback from staff	1	2	3	4	5
20. Emphasize data quality in regular reports	1	2	3	4	5
21. Promote a culture of data use	1	2	3	4	5
22. Explain what they expect from staff	1	2	3	4	5
23. Share data with other facilities	1	2	3	4	5
In your organization, staff					
24. Are aware of their responsibilities	1	2	3	4	5
25. Are appropriately trained to use data	1	2	3	4	5
26. Rely on data for planning and monitoring set targets	1	2	3	4	5
Personal					
27. Collecting data makes me feel bored	1	2	3	4	5
28. Collecting data is meaningful to me	1	2	3	4	5
29. Collecting data gives me the feeling that it is needed for monitoring and facility performance	1	2	3	4	5
30. We've discussed a variety of different barriers to data use. Are there any that I have not mentioned that you would like to discuss?					
31. Do you have any suggestions about how to improve information use at your facility?					

Data Producers Interview Questionnaire

Version 2: Facility

Note: Data producers include staff responsible for generating routine health information, such as health information officers, data analysts, clerks and managers. It is useful to interview data producers before data users, if possible, in order to understand the context in which information is produced and used at the facility.

Interview Logistics		
Name of facility		
Facility type <i>(check one)</i>	<input type="checkbox"/> Referral hospital <input type="checkbox"/> District Hospital <input type="checkbox"/> Health centre (hospital affiliated and other health centers) <input type="checkbox"/> Health post/dispensary <input type="checkbox"/> Other (specify):	
Ownership <i>(check one)</i>	<input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Mix	
Date of interview		
Time Start/End	Start:	End:
Name of interviewer		

Introduction

In health information systems, the ultimate purpose of collecting and analyzing data is to improve programs by enabling more informed decisions based on facts. However, information is not always available to make decisions—or if it is available, it is not always used. This study is designed to find out what barriers and constraints are causing these conditions, and how to resolve them.

Your participation is requested to provide insights about constraints and barriers to data use. Your participation is very important to this research, but it is entirely voluntary. Your responses will be treated as confidential, and we will ensure that any statements or comments you make cannot be linked either to you as an individual or to your organization. We will be producing a report that is intended mainly to help MEASURE Evaluation staff and our collaborating organizations design effective monitoring and evaluation activities.

The interview will last about 20 minutes. I will be using a questionnaire which includes questions about the type of decisions you make, what information you use for this purpose, and barriers to information use. I will also ask questions about and some other organizational issues.

I would like to tape record this session so that I will be able to make an accurate and complete transcription of my notes. Again, this information will not be shared with anyone outside of the research team—that is MEASURE Evaluation.

Are you willing to participate? ☐ Yes ☐ No (stop interview)

Respondent Background Information

Before we start the interview, I would like to record some background information.

BI1	What is your job title?		
BI2	How long have you been in your current position?		
BI3	Do you supervise any staff at this facility?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section 1: Data and information flow

1. Please describe the data management team's role in the flow of information on the project? (Probe: Preparation of reports to donor/ MOH, generating HMIS reports)

2. What data do you make available to staff?	3. In what format is it reported?	4. How frequently is the data reported?
a.	a.	a.
b.	b.	b.
c.	c.	c.

Section 2: Data utilization
5. Are data and information used at this facility to inform managerial, administrative or clinical issues? If yes, please specify how it is used and by whom?
6. Does the data management team receive feedback from staff about data/reports (probe: requests for additional analyses, feedback about the information being helpful or not clear)? Please describe.

Section 3: Barriers to data use		
7. What types of barriers do you think exist to staff using data at this facility [read list]?	Check response	
a. Staff lack of data analysis and interpretation skills	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Perceived problems with completeness, quality, timeliness, and presentation of information	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Data entry backlogs	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Other:		

Section 4: Other barriers to information use

I would like to know your opinion about how strongly you agree with certain statements. There are no right or wrong answers, only expressions of your opinion on a scale from 1 (strongly disagree) to 5 (strongly agree). You have to determine first whether you agree or disagree with the statement.

Second, decide about the intensity of agreement or disagreement. This information will remain confidential and will not be shared with anyone, except presented as an aggregated data report. Please be frank and choose your answer honestly.

At this facility, decisions are based on	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
8. Personal liking	1	2	3	4	5
9. Superiors' directives	1	2	3	4	5
10. Evidence/facts	1	2	3	4	5
11. Political interference	1	2	3	4	5
12. Cost considerations	1	2	3	4	5
In your organization, superiors					
13. Seek feedback from staff	1	2	3	4	5
14. Emphasize data quality in regular reports	1	2	3	4	5
15. Promote a culture of data use	1	2	3	4	5
16. Explain what they expect from staff	1	2	3	4	5
17. Share data with other facilities	1	2	3	4	5
In your organization, staff					
18. Are aware of their responsibilities	1	2	3	4	5
19. Are appropriately trained to use data	1	2	3	4	5
20. Rely on data for planning and monitoring set targets	1	2	3	4	5
Personal					
21. Collecting data makes me feel bored	1	2	3	4	5
22. Collecting data is meaningful to me	1	2	3	4	5
23. Collecting data gives me the feeling that it is needed for monitoring and facility performance	1	2	3	4	5
24. We've discussed a variety of different barriers to data use. Are there any that I have not mentioned that you would like to discuss?					
25. Do you have any suggestions about how to improve information use at your facility?					

Respondents Log for Version 1 and 2
Decision-maker perceptions

Assessment: _____

Country: _____

Consultant: _____

Complete this form by inserting the information requested in each column. Insert a new row if you interview more than 25 individuals. For assistance or clarification, contact MEASURE Evaluation at measure@unc.edu.

Title of respondent	Level of government	Type of position (program or policy)	Specialization (PHN, HIV/AIDS, CH/N/M)	Consent Given
1				
2				
3				
4				
5				

	Title of respondent	Level of government	Type of position (program or policy)	Specialization (PHN, HIV/AIDS, CH/N/M)	Consent Given
6					
7					
8					
9					
10					
11					
12					

	Title of respondent	Level of government	Type of position (program or policy)	Specialization (PHN, HIV/AIDS, CH/N/M)	Consent Given
13					
14					
15					
16					
17					
18					
19					

	Title of respondent	Level of government	Type of position (program or policy)	Specialization (PHN, HIV/AIDS, CH/N/M)	Consent Given
20					
21					
22					
23					
24					
25					

Planning Matrix for Addressing Barriers to Using Data and in Decision Making
Versions 1 and 2

Barrier No.	Barrier	Proposed Intervention	Steps involved	Person(s) responsible	Other stakeholders	General timeline

4 USE

This tool would be used at any time efforts to improve data-informed decision making are considered, but certain circumstances would trigger this activity.

The Assessment of Data Use Constraints can prove useful at any time, but several conditions may trigger a need for an assessment and help determine which version of the tool to use.

Version 1: National and Sub-national provides a broad overview of constraints at the national and district levels and can be used in the following situations:

- **A national M&E framework is being designed.** An external agency might be developing an M&E framework for HIV/AIDS programs for a region. Knowing the existing barriers and constraints to data use, the M&E design can include plans to resolve the organizational, technical and individual issues that can be changed—and account for the political, economic and cultural conditions that cannot be changed. The PRISM tools may be more appropriate for a national assessment depending on the needs of the users.¹
- **A new data collection activity is being planned.** The Assessment of Data Use Constraints ensures that the planned research activity will address constraints to data use identified by decision-makers by improving the quality and relevance of information that is produced.
- **Existing population-based data are underutilized.** Ministry of Health officials might wish to see greater use of data resources, such as a Demographic and Health Survey or census data, by policymakers. An Assessment of Data Use Constraints can help identify why data are not being used, and what to do about it.

Version 2: Facility provides a facility-level or organizational assessment of constraints to generating and using data and can be used in the following instances:

- **A health management information system (HMIS) is being examined.** A ministry of health might work with a development partner to assess current practices to collect, analyze and synthesize information, and develop tools to be used by quality improvement teams and coaches to facilitate this knowledge management process, based on best practices and innovating to address current gaps.
- **Existing facility-level information is underutilized.** M&E specialists or other data managers might wish to see greater use of the data resources they have generated. An organizational-level Assessment of Data Use Constraints can help identify why data are not being utilized, and suggested interventions for action.

¹ Aqil A, Lippeveld T. (2009). PRISM Tools for Assessing, Monitoring, and Evaluating RHIS Performance. Chapel Hill, NC: MEASURE Evaluation.

5 AUDIENCE

Key people involved in collecting, analyzing, reporting, or using health information.

Users of the tool are those interested in overcoming barriers to data use. Program managers and other stakeholders such as consultants and technical assistance agencies:

- Use the tool to guide the process of interviewing key informants.
- Through the interview process, identify existing uses of data and constraints and barriers to data use.
- Create a report that presents the findings of the interview process.
- Use the report findings to help design improvement interventions.
- Share this report with program managers who would implement these interventions.
- Incorporate this tool into training programs for host-country M&E staff, to help them think more strategically about data use and constraints and approaches to address constraints.
- Incorporate key questions from this interview process into other formal and informal assessment methodologies.

6 FIELD APPLICATION

Assessment for design of MEASURE Evaluation program activities—Nigeria, September 2005.

A consultant from the Centre for Research, Evaluation Resources and Development conducted an assessment to support the design of MEASURE Evaluation program activities in Nigeria. The interview process included key informants at the national, state and local levels from public health agencies and non-governmental organizations (NGOs).

This analysis revealed practical and often culture-specific nuances that might not have been evident from an outsider's perspective. For example, what depth of data expertise would you expect of an individual with a Bachelor's degree? Do the people involved in data collection understand and care about the importance of their work?

The findings influenced the way MEASURE Evaluation prioritized activities. Training had been planned all along, but it now received much higher priority because the assessment showed a notable shortage of data management skills.

7 EXAMPLE APPLICATION

In an effort to improve data-informed decision making at the state-level in Nigeria, a Local Government Authority (LGA) first began with an assessment of data use constraints. The results of the assessment were used to plan and implement interventions to overcome barriers to data use.

Sample of a completed interview transcript—Decision-maker perceptions

Version 1: National and Sub-national

Interview logistics		
Date	August 30, 2005	
Time Start/End	Start: 11:36 a.m.	End: 12:22 p.m.
Interviewer Name	A. A.	
Title of Respondent	Director, Public Health Department	
Number of Years in this Position	5 years	
Specialization <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Population, Health and Nutrition <input type="checkbox"/> Child Survival <input checked="" type="checkbox"/> HIV/AIDS	
Level:	<input checked="" type="checkbox"/> National <input checked="" type="checkbox"/> State <input checked="" type="checkbox"/> Local	
Responsibilities <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Policy <input checked="" type="checkbox"/> Program	
Sector <i>(check one)</i>	<input type="checkbox"/> Private <input checked="" type="checkbox"/> Public	

About this interview—and why your participation is so important

In health information systems, the ultimate purpose of collecting and analyzing data is to improve programs by enabling more informed decisions based on facts. However, information is not always available to make decisions—or if it is available, it is not always used. This study is designed to find out what barriers and constraints are causing these conditions, and how to resolve them.

Your participation is requested, to provide your insights about constraints and barriers to data use. Your participation is very important to this research, but it is entirely voluntary. Your responses will be treated as confidential, and we will ensure that any statements or comments you make cannot be linked either to you as an individual or to your organization. We will be producing a report that is intended mainly to help MEASURE Evaluation staff and our collaborating organizations design effective monitoring and evaluation activities.

Are you willing to participate? ☒ Yes ☐ No (stop interview)

Introductory questions

RA1	What was the last major decision related to policies or programs that you made? <i>The last was the immunization program.</i>
RA2	What information did you use to make this decision? <i>We used data supplied by the LGAs to determine (1) the number of eligible children in the state, (2) the quantity of vaccine that is needed for the immunization. We generated data from the field. M&E officers at the local governments visited health facilities to collect data which was sent to us and we tried to analyze it.</i>
RA3	How did you use information to make this decision?

Introductory questions	
RA4	<p>Was there any information you needed but did not have in order to make this decision?</p> <p>The reports that came were actually sufficient to make the decision.</p>
RA5	<p>Who are the primary stakeholders in the use of information?</p> <p>The primary stakeholders are the people in the community who are affected by the decisions that we take. Others include the policymakers and our partners like WHO and UNICEF.</p>
RA6	<p>Whose interests are most served by health information systems?</p> <p>The community.</p>
RA7	<p>How do health information systems meet your needs for information?</p> <p>In the last 2–3 years, the Health and Human Services Secretariat (the equivalent of a state ministry of health) had tried to strengthen the health information system. We have been able to acquire computers, train people on the use of forms used in collecting data. There were initial complaints about the NHMIS form, that it is too voluminous with too many sections on immunization, family planning, malaria treatment, etc., and that for one person to complete this is too much.</p> <p>We have to train these workers on how to complete this form, as it is our main source of data. Most of the health workers at the local facilities have no serious educational training, so it is a problem for them to correctly use the NHMIS forms without the training. After we have embarked on capacity building in this regard, our needs for data is being met through this method.</p>

Technical constraints	
RA8	<p>Have you ever had an experience while making a policy or program related decision when you were concerned about the quality of the information used?</p> <p>Yes, those NHMIS forms were designed without input from the grassroots. Interpreting the forms correctly have been problematic for health workers who are mostly primary school or secondary school leavers. Therefore, the data that they are generating is sometimes doubtful, and that is why we embarked on training them.</p>
RA9	<p>Are there multiple sources of information or statistics for issues of importance to you, and have you experienced any problems caused by having different estimates?</p> <p>Yes, we have different sources from various LGAs, but there have not been problems caused by having different estimates.</p>
RA10	<p>I am interested in knowing about technical capacity for collecting and using information. Does your agency have the technical capacity to produce reliable information without a lot of external technical assistance?</p> <p>Not much technical capacity within the organization itself really, but we have been receiving much assistance from agencies like WHO, UNICEF, and other consultants.</p>
RA11	<p>Does your agency have the technical capacity to ensure access to and availability of reliable data?</p>
RA12	<p>Has there been an occasion when data quality or local technical capacity made it difficult for you to use information in making a decision?</p> <p>Yes, we have such cases. There was an occasion when a report was sent from an LGA and I saw an incidence of smallpox. A serious matter like that requires urgent attention because the disease was thought to have been eradicated. I summoned the HOD in charge of health in the LGA (who is a medical doctor) to go and confirm the reported case. By the time he returned to brief me, he found that the doctor actually diagnosed chickenpox, but the local officer responsible for sending data to the state headquarters recorded smallpox. Such a case can make you think twice in using data collected by certain category of staff and that again bothered me on the quality of staff collecting/recording various statistics in the health facilities. I have to warn that if anybody does not understand the handwriting of the health official who made certain diagnosis, clarification should be sought from the officer rather than assume and record just anything. We asked them to do the job for specific reasons, but they seem not to understand how important the job they are doing is.</p>

Technical constraints	
RA13	<p>How would you have gone about preventing this situation?</p> <p>Preventing this situation requires training the staff adequately. If you do not understand what the health officer had diagnosed, it is important for you to confirm rather than just record anything. It seems they do not know the importance or value attached to every piece of information they send in.</p>

Individual constraints	
Individual constraints are related to the capacity of staff to collect, analyze and interpret the data.	
RA14	<p>What specific challenges have you experienced among your staff when it comes to using data?</p> <p>I was talking about the technical ability of the DSNOs (Disease Surveillance and Notification Officers). He should be a person who can investigate disease outbreak. The main challenge has been the technical qualification of those collecting and sending data to us. A problem we are still grappling with is educating the workers on the reason why they are collecting the data. They should not be collecting the data without first knowing the reason or how vital the job is. I think I once discussed that our M&E officers has to be trained on data management. Many of our M&E officers cannot even use computers. People need to know why we are collecting data and why we must have correct data.</p>

Organizational constraints	
Challenges in using information that are due to how the organization functions.	
RA15	<p>How does your organization support having the necessary information to make decisions?</p> <p>The Public Health department is replicated in the LGAs, called the PHC departments. These units are headed by medical doctors. The Secretary of Health and Human Services always request that any recommendation that we forward should be backed by data. This is the only way to ensure that decisions on outbreaks of diseases or other health issues are based on facts.</p>
RA16	<p>How does your organization support the prioritization and use of information in decision making?</p>
RA17	<p>How does your organization support training of staff in skills for using information in decision making?</p> <p>Yearly, our budget includes funds for training and health capacity building. We regularly train our staff internally and sometimes overseas. About 2 or 3 of our staff were sent overseas for training and they have returned here to continue to work for us. We also employ staff for the area councils that are short of manpower in key areas.</p>
RA18	<p>Can you describe the mechanism or process within your organization/agency for approving research or survey data for dissemination?</p> <p>Dissemination of research data is very important, because if you collect data or do research without disseminating the result, you have done nothing. What we do is to send data for all necessary agencies and the FMH, e.g., immunization data is sent to both the FMH and the NPI. We also share information with UNICEF and WHO—both have been very strong partners working with us. There are no strict bureaucratic procedures for approving survey data, for dissemination. Apart from forwarding such data to the FMH, I also have the liberty to take immediate steps in ensuring that the data get to all necessary end users, especially if immediate action on certain issues needed to be taken for instance to curtail/prevent an outbreak of disease.</p>
RA19	<p>How does this process affect your ability to use information to make decisions?</p>
RA20	<p>What are the challenges your organization/agency experience in sharing survey and research data?</p> <p>There are really no serious challenges except where very sensitive issues are involved. In such cases, you may need the approval of the appropriate ethical committee to be able to release certain information for public consumption and sometimes you need to obtain clearance from your supervisors. But largely, there are no serious challenges.</p>

Organizational constraints	
RA21	What are the challenges you experience in sharing research and survey data across organizations and agencies?
RA22	Are there risks associated with sharing information? If so, what are they? (Paused) I would not say there are no risks. But I think the most important thing is to ensure that information that you share is not likely to cause undesirable effects, I have to be very sure of my facts and be certain before I can release any information.

Closing thoughts	
RA23	How does the political, social and economic environment affect your use of information in decision making? Have not encountered problem politically or socially. I remember however that there was a time when river blindness was a serious illness in the country because people were afraid of moving to certain parts of the country for fear of the disease. Although consultants from the University were already making progress on addressing the issue then, it was seriously politicized and hence, we cannot just go on air to release any information that we have about the disease. We have to carefully manage things. Apart from that, there is no serious issue that cannot be discussed.
RA24	To what extent do these factors outweigh the importance of data itself in making decisions?
RA25	Have you experienced any other challenges in using information to make decisions?

Sample of a completed respondent's log—Decision-maker perceptions

Assessment: LGA Assessment of Data Use Constraints

Country: Nigeria

Consultant: A.A.

Complete this form by inserting the information requested in each column. Insert a new row if you interviewed more than 25 individuals. This form must be typed and should be returned with the data analysis matrix as well as annexed in the final report. For assistance or clarification, contact MEASURE Evaluation at measure@unc.edu.

	Title of respondent	Level of government	Type of position (program or policy)	Specialization (PHN, HIV/AIDS, CH/N/M)	Consent Given
1.	Director, Gender and Social Policy Studies	(NGO)	Policy/program	PHN	Yes
2.	Programme Officer	(NGO)	Program	PHN, HIV/AIDS	Yes
3.	Programme Officer, M&E	(NGO)	Program	PHN, HIV/AIDS	Yes
4.	Director, Public Health	Local	Program	PHN, HIV/AIDS, CH/N/M	Yes
5.	Principal Records Officer, M&E	Local	Program	PHN, CH/N/M	Yes
6.	Programme Coordinator, Immunization	Local	Program	PHN, HIV/AIDS, CH/N/M	Yes
7.	Programme Manager	Local	Program	HIV/AIDS	Yes
8.	Programme Manager, IMCI	Local	Program	CH/N/M	Yes
9.	Supervisory Counsellor, Health	Local	Policy/Program	PHN, HIV/AIDS, CH/N/M	Yes
10.	Director, Development and Population Activities	National	Policy	PHN	Yes
11.	Director, M&E	National	Program	HIV/AIDS	Yes
12.	Director, Policy	National	Policy	HIV/AIDS	Yes
13.	Programme Officer, Nutrition	National	Program	PHN, CH/N/M	Yes
14.	Programme officer, M&E	National	Program	HIV/AIDS	Yes
15.	Chief Environmental Health Officer	State	Policy/program	PHN, CH/N/M	Yes

Sample of a Completed Planning Matrix for Addressing Barriers to Using Data in Decision-Making Assessment of Data Use Constraints

Proposed Intervention	Steps involved	Person(s) responsible	Other stakeholders	General timeline
1 Barrier: Lack of capacity at the facility level to produce quality and accurate data	On the job training	<ul style="list-style-type: none"> M&E Specialist Training Coordinator 	<ul style="list-style-type: none"> Chief Medical Director Chief of Party SACAs 	Oct-07
Intervention: To build capacity of relevant key players in collecting, collating, and reporting data	Continuous mentoring	<ul style="list-style-type: none"> M&E Specialist 	<ul style="list-style-type: none"> SACA focal person Program Manager 	Oct-07
2 Barrier: Lack of coordination of data from the facility level to the IP in a timely manner	Identifying focal people for data collection and collation	<ul style="list-style-type: none"> Chief Medical Director Project Coordinators/Managers 	<ul style="list-style-type: none"> Chief of Party M&E Specialist 	Oct-07
Intervention: To establish a functional data flow mechanism	Identify and provide feasible access to collated data	<ul style="list-style-type: none"> Chief Medical Director Project Coordinators/Managers Facility Staff 	<ul style="list-style-type: none"> Chief of Party M&E Specialist 	Oct-07
3 Barrier: Lack of computerized database at IP level to analyze and interpret data	Allocate resources	<ul style="list-style-type: none"> Chief of Party 	<ul style="list-style-type: none"> M&E Specialist Project Manager Private Sector 	Sep-07
Intervention: To develop a user-friendly and secure database at the IP level	Training on the use of the software	<ul style="list-style-type: none"> Database Consultants (private Sector) Training Coordinator 	<ul style="list-style-type: none"> M&E Specialist Project Manager 	Sep-07

8 GUIDELINE FOR SELECTING KEY INFORMANTS

Version 1: National and Sub-national

The interview process should include a range of informants—The guides for key informants and data users focus on decision-maker perceptions about constraints and barriers that hinder their ability to make evidence-based decisions. “Decision-makers” are defined here as individuals responsible for decisions on policies or operational protocols and guidelines, on project designs and plans, and on resource allocation. The guide for data producers focuses on health facility staff, such as data managers, who generate data for use by decision-makers.

- A typical assessment process would ideally include interviews with 20 to 25 individuals.
- Up to two-thirds of these individuals can be from the national level, but at least one-third should represent the provincial or district level.
- One-half of informants should be from the public sector, including the ministry of health and related parastatal organizations, including national population councils or national AIDS commissions. The other half should include decision-makers from the NGO sector (for example, program managers or the executive director from the national family planning NGO, and directors of mission hospitals) and from the private sector (private hospitals, industry executives from companies that provide health services to their workers).
- The list should include policymakers and program managers in the health sector or a related position in finance or planning.

This assessment focuses on public- and private-sector decision-makers. This is not intended to be a comprehensive survey; the objective is to locate individuals who can contribute informed perspectives about constraints and barriers to data use, and how to address those issues.

Using these criteria, the consultant may choose key informants to interview on an opportunistic basis. For example, to minimize travel costs, provincial and district representatives may be approached for an interview when they are in the capital city on another assignment.

Standardize the interview process within an assessment—The questionnaire will be customized to suit different assessments, but within one assessment, you should use a consistent questionnaire and standard process for guiding the interviews. Consistency of process will deliver more useful results and enable fair comparisons of perspectives among informants.

The interview process demands confidentiality and consent. The process expects a core group of people to be very open with their opinions and perceptions about potentially sensitive topics, such as deficiencies in their organization, problems with existing processes, or concerns about government policies.

The interviewer can only earn the candor of informants by securing their consent and guaranteeing anonymity. Be sure informants know that their responses will be modified to eliminate any identifying information, their titles will be made generic, such as “public health official,” and reporting on constraints will not identify particular individuals or organizations.

Encourage respondents to think proactively about possible resolutions. The interview process should not focus solely on identifying constraints, but should also encourage respondents to think positively about approaches for addressing those constraints. It is very easy for respondents to list things that are wrong with the system, but as a facilitator, you will have to help them think about resources within their organizations that can be organized or leveraged for improvements. If using the tool in a workshop setting, or if following up the interviewees with a dissemination meeting to share assessment findings, participants can develop a plan to address identified barriers and constraints with the matrix (Addressing Barriers to Using Data and Information for Decision Making).

Version 2: Facility

Using the following criteria, the consultant may choose informants on an opportunistic basis and conduct interviews at the health facility to increase informants' ability to participate.

- Determine the clinical area—malaria, HIV/AIDS, family planning, tuberculosis—of interest. If the aim is to assess HIV/AIDS clinics, for example, staff working in this clinical area should be interviewed.
- A typical assessment process should include interviews with at least five individuals from each facility.
- Include staff working in positions with a range of data production and use responsibilities, such as senior managers, clinicians, laboratory and pharmacy staff, counselors, and health information officers. Representation from each group is preferred.
- The list should include health officers and program managers if a group of facilities in a district or program are being assessed.

9 ILLUSTRATIVE REPORT OUTLINE VERSIONS 1 AND 2

Template for Assessment of Data Use Constraints final report

Cover page: Report title, date and author

An Assessment of Data Use Constraints—Decision-maker Perceptions among Key Informants in [Country] or Data Users' and Producers' Perceptions in [Country]
[Date] [Author]

Report content

- Abbreviations and acronyms used in the report
- Table of contents
- Executive summary
- Background and objectives
 - » Purpose of the study
 - » Methodology
 - Study design
 - Sampling
 - Data collection methods
 - Data analysis methods
 - Limitations and methodological difficulties

- Findings—Presentation of findings. Include quotes to support the findings.
 - » Decision making by respondents
 - Types of decisions (use examples to illustrate types of decisions)
 - Flow of information (facility-level)
 - Constraints experienced by respondents (e.g., timeliness, format)
 - Missed opportunities for using data to make decisions
 - How data is currently meeting needs of respondents
 - Examples of using data to make decisions
 - Data and donors
 - » Technical constraints
 - Technical capacity
 - Quality of data
 - Barriers: specific barriers (RHIS, survey data, research results)
 - Proposed methods to overcome these barriers
 - » Individual constraints
 - Staff and use of data
 - Staff and producing/communicating data
 - Suggestions for overcoming lack of staff use of data
 - » Organizational constraints
 - Leadership, structure, culture, roles/responsibilities, resources
 - Environment, international priorities, economic, political, social
 - » Other areas/findings that do not fit the above categories
- Discussion
 - » Interpretation of the findings
 - » Importance of the results to others thinking about the problem
- Conclusions and recommendations
 - » Implications of findings
 - » Next steps

10 IMPLEMENTATION CHECKLIST

Step 1—Perform pre-assessment planning

This step relies on communication with MEASURE Evaluation representatives (or other external consultants) in-country.

- ☐ 1.1—Identify a potential need or opportunity. Communicate with host-country counterparts to identify opportunities where an Assessment of Data Use Constraints can be beneficial. Sometimes the opportunity becomes clear when a consultant is asked to develop an M&E framework, implement a new data collection process, examine a HMIS or discover why existing datasets are not being utilized.

An assessment can also identify practical applications of new datasets as they become available. The opportunity is often brought to light by MEASURE Evaluation colleagues and

host-country counterparts. They can help determine an appropriate time to engage in this activity and help make introductions with in-country informants and stakeholders.

- ❑ 1.2—Determine the scope of the assessment. Will you be looking at data use constraints within an organization, among health facilities or at the national or sub-national level? What types of informants would be appropriate to include? See Section 8 for Guidelines on selecting key informants and other interview participants.
- ❑ 1.3—Coordinate with key development partners, including your U.S.-based and in-country colleagues, to define a preliminary plan for selecting and interviewing key informants or workshop participants, as well as an achievable timeline for performing the assessment.
- ❑ 1.4—Write an internal summary of the planned activity. This document could be as simple as an e-mail or one- or two-page proposal, which could describe:
 - The need identified in Step 1.1.
 - How you will provide technical support to address that need.
 - How this activity fits into your organization's priorities and workload.
 - The preliminary list of informants and how they will be engaged.
 - A high-level outline of process steps and timeline for project milestones.
 - Review this plan with the contributors from Step 1.3, and incorporate their feedback.
- ❑ 1.5—Get the necessary approvals from the sponsoring organization(s), according to your organization's protocol, to proceed with the assessment.

Step 2—Engage an individual to perform the assessment

The assessment could be performed by a consultant or a member of the organization being assessed. The process tends to be more effective and produce more robust results when conducted by an individual with seniority to be respected by high-ranking key informants. Ideally, the individual conducting the assessment will:

- Have intimate knowledge of the cultural and political environment.
- Know the informants and have access to them for interviews.
- Gain the confidence and candor of key informants, to solicit more meaningful responses.
- Conduct the process cost-effectively, since it may be impossible to schedule all the interviews within the short period of an external consultant's visit.

Step 3—Meet with project stakeholders and partners

The usefulness of the assessment depends partly on ensuring that the individuals designing M&E programs and other data-management activities have some sense of ownership in the process and confidence in its findings. That means good relationships and buy-in are essential and should be cultivated from the start.

Convene a core group of three to six stakeholders who have technical expertise and knowledge of the policy environment. When the assessment is being conducted to inform the design of a national M&E plan or to promote use of national- or programmatic-level data, this group might include a director of M&E for a national program, program managers from national

country government projects, and representation from implementing partners in development organizations.

In this meeting, the group will:

- *Define a preliminary list of 20 to 25 key informants.* Determine the types of people who should be interviewed or attending the workshop, and organizations or roles they should represent. List any specific individuals who should be included.
- *Adapt the questionnaire as necessary to suit the dataset, institution, or information processes being assessed.* You will later test this questionnaire with two or three pilot interviews and fine-tune it if necessary.

In cases where the purpose of the assessment is to improve a HMIS at the health facility level, the group of project stakeholders might include program managers from national country government projects, a district-level M&E officer, hospital superintendents, and representation from implementing partners in development organizations.

In this meeting, the group will:

- *Define a preliminary list of health facilities.* Determine the clinical area—malaria, HIV/AIDS, family planning, tuberculosis—of interest. If the aim is to assess HIV/AIDS clinics, for example, staff working in this clinical area should be interviewed; however, senior management and data specialists may have responsibility for more than one clinic unit.
- *Adapt the questionnaire as necessary to suit the dataset, institution, or information processes being assessed.* You will later test this questionnaire with two or three pilot interviews and fine-tune it if necessary.

Step 4—Conduct and document the interviews

- ❑ 4.1—For interviews with the key informants identified in the previous step, set up appointments and plan on 45 minutes to an hour for each interview. These interviews can take place on an opportunistic basis. For instance, if you need to interview a mix of national, district and regional-level representatives, it can be convenient to meet with them when they travel to the capital for a training program, regular meeting, or national conference.

When using the guide during a workshop to identify barriers and constraints to data use in an organization or program, divide the participants into small groups of 5–6 people and have them complete the questions on the adapted questionnaire. Following this exercise, instruct participants to complete the matrix (Assessing Barriers to Using Data and Information for Decision Making) which should include proposing interventions to address constraints identified in their questionnaires, stakeholders who should be involved in the interventions, and a developing a timeline for addressing these issues. For interviews with health facility staff, plan on 30 minutes for each interview. The consultant may choose informants on an

opportunistic basis and conduct interviews at the health facility to increase informants' ability to participate. It is useful to interview data producers before data users, if possible, to better understand the context in which information is produced and used at the facility.

- ❑ 4.2—Conduct the interviews, following the questionnaire that was adapted in Step 3. The interview should take place in a secure environment—a location where the interview will not be disturbed or overheard by outsiders.
 - *Secure the participant's consent.* The cover sheet of the questionnaire includes a checkbox for the participant to note consent. Read the introduction to the respondent, which explains the purpose and methodology of the assessment, and have the participant indicate his/her consent (the checkbox is sufficient; a signature is not necessary).
 - *Follow best practices for interviewing.* For example:
 - » Begin with question #1 in the questionnaire, but the rest of the interview does not have to rigidly follow the order of questions. You may find the conversation naturally drifting to questions out of order, and this is perfectly acceptable.
 - » Encourage open discussion, and allow the respondent to talk freely without interruption until you see a good opportunity to move on to the next question. You can leave a copy of the questionnaire behind with the respondent.
 - » Wherever possible, it is better to delve into the specific reasons there was a constraint, and provide specific examples of cases where data was not used to make a decision, and why not. If the respondent doesn't address sub-questions in the natural flow of discussion, solicit this information by using non-leading prompts, such as: "How do you mean?" ... "In what way?" ... "What other methods/ways do you know of?" ... "There is no hurry. Take a moment to think about it, and tell me all that comes to mind." These prompts solicit more detail without influencing the response. In contrast, these are examples of leading probes not to use: "Do you mean –?" ... "You do not mean that –?" ... "Are you saying that –?" ... "Is that the only thing you can think of?" Leading prompts will skew the responses to reflect the interviewer's perceptions and bias.
 - » It is not necessary for each informant to answer every sub-question. The focus should be on recording their good ideas and examples of constraints and barriers. The follow-up questions are needed only when leading to more specific examples.
 - *Record the respondent's answers.* The interviewer can audiotape the interview if desired, but this is not required, and can even inhibit open discussion. When interviewing key informants, the interviewer references the questionnaire and takes careful and detailed notes on a separate piece of paper. A verbatim transcript is not necessary, since the goal is to capture key insights. When interviewing facility level staff, the interviewer should record answers to closed-ended questions as indicated on the questionnaire.
- ❑ 4.3—Type out the notes from the interview. After the interview—preferably within two to four hours—type out the notes from the interview, sorting the notes to fit into the questionnaire format. If there were useful parts of the interview that fell outside the scope of the questionnaire format, include these notes at the bottom of the page. Responses to

the facility-level survey may be recorded in an Excel spreadsheet which allows for ease of analysis. In this case, designate one column for each question and record respondents' answers accordingly.

Step 5—Analyze and report the findings

When you have conducted and documented all the interviews, prepare a report (not to exceed 10 pages) that summarizes the findings and the interviewer's general recommendations.

This report should follow the outline provided in Section 9 of this chapter, incorporating your interpretations and conclusions. If you prefer to create the report by computer—which is both recommended and preferred—you can download a Microsoft Word template of the report format from the MEASURE Evaluation Web site, <http://www.cpc.unc.edu/measure>.

The complete report package will include the following elements

- A typed list of respondents, following the template provided in this document.
- Cover sheets from the questionnaire for each interview, showing that consent was given.
- Typed notes from each interview, in the questionnaire format or in an Excel spreadsheet.
- The final report summarizing findings, in the suggested outline/template.

The report should include a concise executive summary that can be shared with senior decision-makers. Below is a sample executive summary from a 2005 assessment.

The study is a rapid assessment of the perceptions of decision-makers on the use of data and obstacles to data use. Respondents were drawn from the health sector and included 20 federal, state and local officials who were involved in decision making or program management in three main areas, namely, (i) population, health and nutrition, (ii) child survival, and (iii) HIV/AIDS at either the national, state or local level.

The study found that many decision-makers had no clear understanding of how policies were formulated. It was also found that the organizational structures that were in place in these agencies were a constraint on efficient data management processes as it made the lower levels in the administrative hierarchy (local and state agencies) almost entirely dependent on the officers at the national level for analysis and interpretation of the information that they collected.

Most of the lower level staff were poorly trained and unable to even interpret data. The training, where provided, was often ad hoc and could not be sustained. Moreover, those who were trained do not always have the environment to put into use whatever training they might have been given due to lack of necessary facilities in their offices. The lack of technical capacity to generate and use data is thought to be an important constraint on the availability of current national data in the country and an obvious impediment to efficient policymaking. The study also highlighted poor funding and socio-cultural/political interference as factors hindering data generation, policy formulation and program implementation.

The study recommended a re-orientation of both the decision-makers and the entire staff of these agencies. The study also recommended training the decision-makers at both state and national levels on skills necessary to use information for decision making, and on the significance of good data management to efficient policymaking and program management. Finally, the government is urged to accelerate the development of the country's National Health Management Information System (NHMIS) into a credible and readily accessible databank as a way of avoiding duplication of data generation by various agencies thereby reducing cost and time spent on acquiring data for policy formulation.

In preparing the report, be sure to fully respect the confidentiality of the key informants. It is important that statements, comments, and examples not be linked, even indirectly, to specific individuals or small groups.

Step 6—Share the findings with stakeholders

Convene the core group of stakeholders who helped design the assessment activity and share the findings with them. In this meeting, the group will:

- *Define a strategy for disseminating the findings to a broader audience.* For example, you might know of a group that is initiating a new research activity; this group could receive the assessment to help improve the design of their activity or use of the data they collect.
- *Develop a list of recommendations and actions for resolving barriers and constraints using the Planning Matrix for Overcoming Barriers to Data Use.* This information will have immediate applicability, and will contribute to a broader national and international understanding of how to improve data use. Also of benefit is a list of recommendations and actions mapped against the stakeholders needed to implement the interventions and a timeline for implementation.

11 CONCLUSION

Promote better data use to benefit more programs and people; Identify and resolve the barriers and constraints to using data to improve programs with evidence-based decisions.

In complex decision-making environments, influenced by multiple internal and external pressures, it can be extremely difficult to follow best practices for data collection and use. Often, valuable data resources remain unused, when they could yield better decisions that improve the effectiveness of programs and organizations, and in turn benefit the lives and health of more people.

What are the barriers and constraints? There are many reasons that available data might be used for little more than filling reports. Sometimes the constraint is organizational; the processes and culture do not support data use. Often, the issue is technical; data quality is suspect, so people do not have confidence using that data to make decisions. Very often, the constraint is individual; a shortage of skills or incentive to create high-quality data and analysis—prerequisites for data to be useful.

In the broader perspective, there will always be political, economic and socio-cultural constraints at play. Data might be available to support evidence-based decisions, but political influence, financial realities and cultural bias intervene. Such constraints might be fixed realities, but if they are identified and acknowledged, they can at least be accounted for when planning information systems.

On the other hand, organizational, technical and individual constraints generally can be resolved—through policies, procedures, awareness, skills-building, and other interventions. This is where the Assessment of Data Use Constraints tool proves its value. It provides a systematic methodology for identifying—and resolving—the barriers and constraints that would inhibit data use.

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Framework for Linking Data with Action

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In areas of the world where the need for health services is great and resources are limited, policy and program decisions must produce the best possible outcomes. The urgency and expense associated with major health issues, such as disease mitigation, require that decisions be based on more than “gut feel” or past experience. The Framework for Linking Data with Action assists program managers and policy-makers to better understand the vital need for good data to support decision making. It also helps those that collect data, researchers and M&E specialists, visualize how their work can be applied to the program and policy context. Lastly, the Framework benefits all health stakeholders by prioritizing decisions and data-collection activities.

1 PURPOSE

Important program and policy decisions are often made based on insufficient data, even when a wealth of information is available.

The Kenyan national population agency was troubled by a stall in the fertility decline and plateau in contraceptive prevalence rate after years of success in increasing family planning.

MEASURE Evaluation helped the NCPD develop a Framework for Linking Data with Action-Template 2 that identified opportunities to use a secondary analysis of fertility data to support evidence-based decisions about contraceptive planning. The Framework helped the agency see the need for secondary analysis of the Demographic and Health Survey dataset. This analysis revealed how program modifications would deliver better results—and enabled the Division of Reproductive Health to lobby successfully for additional resources. In fact, their evidence-based advocacy was so compelling that the organization was accorded a government-funded budget line item for family planning supplies for the first time.

In areas of the world where the need is great and resources are limited, policy and program decisions must produce the best possible outcome. The urgency and expense associated with major issues such as population and disease control require more than intuition and experience. Even if the decision made by personal insight is sound, the decision-maker will find it difficult to lobby persuasively for the resources to implement it.

Both needs—the need to make optimal decisions and to have a compelling case for advocacy—call for proof with facts. Yet, fully evidence-based decision making has been rare, for any or all of the following reasons:

- In many cases, a wealth of data resources are available, due to significant increases in data-gathering through national and local surveys and routine data collection efforts, but research reports and service delivery data are sitting on a shelf and are not being used to drive evidence-based decisions.
- Existing data resources are inadequate for decision making, perhaps because research processes did not consider how data might be used later, or decision-makers do not have confidence in the data.
- Critical policy/program decisions need to be made, and awareness of available data is low or there is not enough information to support the best decisions or to advocate persuasively for the required resources.

The Framework for Linking Data with Action is a tool to resolve these mismatches. It aligns data resources with the decisions they would support, and vice versa. The tool helps program managers appreciate the need for good supporting data, helps data managers visualize how their work can be applied, and helps all stakeholders prioritize decisions and data collection activities.

2 DESCRIPTION

Supports evidence-based decision making by creating and strengthening links between data and the decision-making processes.

The Framework for Linking Data with Action is a management tool—a combination of template and process—that serves three key purposes:

- 1. Encourage greater use of information in decision making**—Identifies and documents key policy/program questions and decisions that must be made, and the information needed to answer the questions that will inform the decisions. For example, a national AIDS program has just initiated a multi-sectoral HIV/AIDS program and leaders have major decisions to make about program design, management and priority-setting. The Framework helps to prioritize decisions and link them to data that will inform future actions.
- 2. Encourage better use of existing information**—Identifies existing data and uses that information to answer questions that will support evidence-based decision making. For example, a research group mandated to evaluate the effectiveness of a national family planning program has completed the report and is now interested in ensuring that this information is used to improve programs and influence family planning policies.
- 3. Monitor the use of information in decision making**—Provides a timeline for monitoring progress in the decision-making process, and a systematic way of identifying data use by program managers, donors, and consultants. For example, a multidisciplinary advocacy network is interested in monitoring upcoming policy discussions and decisions, and preparing advocacy briefs to inform these specific discussions and decisions.

The Framework for Linking Data with Action can be used in various scenarios. To accommodate this, two versions of the Framework have been developed:

- 1. Version 1: Data**—This version should be used when a new data collection or analysis activity has been completed. The Framework ensures that recommendations generated from the research are supported by data and disseminated to the appropriate audiences. Program or policy recommendations that are developed from research results will always be more applicable if they are developed with the stakeholders that will be directly affected by the new recommendation. This group of stakeholders is frequently not involved in the conduct of research and is therefore not intimately familiar with the study results or the strengths and weaknesses of the data. It is, therefore, helpful to provide a framework to encourage that the resulting recommendations are directly linked to the study data.
- 2. Version 2: Decisions and Questions**—This version should be used when there is a specific decision to be made, or stakeholders have specific questions around program or policy issues. For instance, a district health team may be in the process of annual planning and need to make decisions about how to allocate HIV funding. To do this they will have questions about how their HIV services are functioning. By reviewing service delivery data they can monitor program success. The Framework for Linking Data with Action can help the district health team to identify their programmatic questions and the existing data sources, or the need to collect new data that can inform the answers to their questions. Answers to these questions will inform the action or decision that will need to be taken.

The Framework for Linking Data with Action is a working document that should be extended and revised as a program develops and changes. It is recommended that this tool be complemented with an Expanded Timeline. The Expanded Timeline allows users to plan out, against time, how to implement the guidance captured in the Framework. Users can specify the exact timing of steps that are outlined in the Framework and they can also add more detail to their timeline by identifying the sub-activities of the larger primary activity. The Expanded Timeline also provides a tool to manage and monitor progress in improving evidence-based decision making.

3 TEMPLATES

This section presents two blank templates of the Framework for Linking Data with Action, versions 1 and 2, and a blank template for the Expanded Timeline:

- **Version 1: Data**—Useful to researchers/data specialists and stakeholders identifying beneficial applications for existing data (specifically research findings or survey results).
- **Version 2: Decisions and Questions**—Assists decision-makers and researchers/data specialists in identifying the data requirements upon which to base their upcoming decisions and program/policy questions to inform decision-making.

Stakeholders determine which version of the template is most appropriate based on the purpose of the Framework. The next section describes the type of content to be included in each column or field and provides sample templates that were developed for specific applications. It is recommended that the Framework for Linking Data with Action be complemented with an Expanded Timeline.

- **Expanded Timeline**—Allows users to plan out, against time, how to implement the guidance captured in the Framework. Users can specify the exact timing of steps that are outlined in the Framework and they can also add more detail to their timeline by identifying sub-activities that comprise the primary activity.

Template—Version1: Data

Title: Objective: Time Period:					
Research Question	Findings	Recommendations for Action/ Decision	Decision-Maker (DM) and Other Stakeholders (OS)	Communication Channel to Reach DM & OS	Timeline

Template—Version 2: Decisions and Questions

Title: Objectives: Time Period:						
Action/Decision	Policy or Programmatic Question	Decision-Maker (DM) and Other Stakeholders (OS)	Indicator/Data Required	Data Source	Timeline (Analysis) (Decision)	Communication Channel

4 GUIDING PRINCIPLES

Issues and considerations for using this tool

1) Host country representatives must have ownership

To serve as an ongoing management tool, the Framework for Linking Data with Action must reflect the perspectives, needs, and interests of the people who will actually be using it. It is essential from the outset to secure input and buy-in from the stakeholders—the ultimate owners of this tool. If users of the tool have ownership of it they will become advocates for information use and will champion the Framework for Linking Data with Action process as an ongoing endeavor.

This process of applying and using the Framework must be collaborative and iterative in order to be successful.

- **Collaborative**—Though the Framework can be managed directly by researchers and M&E professionals, a program manager or other staff programmer can be of great assistance as a facilitator in drafting the original Framework. Convening a group meeting with key stakeholders to brainstorm the decisions/actions and data requirements next will populate the tool.
- **Iterative**—Identification of potential contributors to and reviewers of the Framework is recommended. What ensues is an iterative process that will likely involve additional modifications to the Framework. Integration of the Framework's content into the decision-making process is key to successful implementation. Content integration can be sustained by making review of the Framework a standing agenda item for decision-makers during regular meetings. Additionally, regular reminders about action items related to activities identified in the Framework can be sent to stakeholders.

2) A successful Framework for Linking Data with Action draws on multiple resources

Reference materials can be instrumental in guiding development of the Framework. Key policy and programmatic issues documented in strategic and operational plans provide a useful background and starting point for identifying and prioritizing questions and decisions which require information. Data sources then provide the supporting evidence for implementing action. Useful reference materials include, but are not limited to the following:

- Strategic plan for the targeted program or organization.
- Assessments or evaluations of a policy, plan, or program.
- M&E plan or results framework for the target program or organization.
- M&E operational plan.
- Assessments of M&E systems and/or information use.
- Specific data sources, such as Demographic and Health Surveys (DHS), Priorities for Local AIDS Control Efforts (PLACE), HIV/AIDS Service Provision Assessments (HSPA), special study or evaluation.

3) The Framework for Linking Data with Action template is flexible, adaptable and extensible

- **Flexible**—The templates presented in this document were developed from extensive experience with health care and population planning issues. However, the tool reflects best practices that are applicable to a broad realm of issues and environments. The tool is flexible enough to be modified to fit specific situations as necessary.
- **Adaptable**—Users can adapt the specifics of the templates to suit their unique needs. For example, the Indicator/Data Required column in Version 2 – Decisions and Questions can be split to include a field that specifies from where the information can be obtained.
- **Extensible**—The Framework will be a working document, one that is extended and revised as a program develops or changes.

The Framework for Linking Data with Action encourages a systematic process that links decisions and data. Within that objective, the specific appearance of the template—and the time span it addresses—can be adapted to the specific needs of the tool’s owners/users. There are two different ways to use this tool.

- **Version 1: Data**—assists M&E specialists, researchers and program managers with identifying useful applications of existing data. The following steps would commonly be implemented when using this version:
 - » Identify main research questions from existing data source.
 - » Identify key findings from analysis.
 - » Interpret findings with appropriate stakeholders.
 - » Identify recommendations for action or decision that could be influenced by these findings.
 - » Determine the decision-makers and key stakeholders necessary to make the decisions or take action.
 - » Determine the appropriate communication channel to reach the decision-maker and key stakeholders.
 - » Develop timeline to implement the recommended decisions.
 - » Complete an Expanded Timeline.
- **Version 2: Decisions and Questions**—helps decision-makers identify the data requirements for their upcoming decisions and for relevant programmatic or policy-oriented questions. The process steps for each Template of the tool will vary. Process steps will not necessarily be sequential. The following steps would commonly be implemented when using this version:
 - » Identify key decisions/actions that need to be made then list the policy or programmatic questions that need to be answered to inform the decision. Or, list policy or programmatic questions that need to be answered to make the decision (in some situations a decision cannot be identified before key programmatic or policy questions are answered).
 - » Determine key stakeholders necessary to make the decisions or take action.

- » Define the data or indicators necessary to answer the programmatic and policy questions.
- » Document the data sources containing the data or indicators.
- » Clarify next steps and timeline to utilize the needed data sources.
- » Complete an Expanded Timeline

5 USE

For best results, the Framework for Linking Data with Action would be in place when working to ensure evidence-informed decision making. The tool should be routinely updated.

Ideally, completing the Framework for Linking Data with Action is not a one-time exercise tied to one specific calendar date or decision point. For best results, the tool should be regularly referenced, monitored, and updated. Hopefully, the Framework serves as a working tool, integrated fully into annual work plans and data dissemination activities.

However, several conditions may trigger the initial creation of a Framework or an update to an existing framework, and help determine which template of the tool to use:

- A new data collection or analysis activity has been completed. The Framework for Linking Data with Action ensures that the recommendations generated from the research are supported by data and that they are disseminated to the appropriate decision-makers. (*Version 1: Data*).
- There is a specific, identified decision to be made. For instance, an external agency might be working to develop national strategic plans for HIV/AIDS programs for a region. Knowing which targeted decisions will be made to formulate these plans, this is a prime opportunity to engage stakeholders in creating a Framework for Linking Data with Action. (*Version 2: Decisions and Questions*).
- Stakeholders have questions around specific programmatic or policy issues. For instance, a district health team may not know how their new ARV program is functioning. By reviewing service delivery data they can monitor program success. The Framework can help the district health team to identify their programmatic questions and the existing data sources, or the need to collect new data that can inform the answers. (*Version 2: Decisions and Questions*).

6 AUDIENCE

Anyone involved in collecting, analyzing, reporting and using health information.

The tool can be used collaboratively by three types of stakeholders:

1. **A designated manager for the Framework**, such as technical support consultants/facilitators, who is not part of the decision-making process. Responsibilities include:
 - » providing the Framework for Linking Data with Action template;

- » establishing relationships with contributors to the framework;
 - » ensuring appropriate representation and authority on the team—individuals who will champion decisions in their areas of influence;
 - » facilitating and mentoring team members as they complete the template;
 - » providing technical assistance in obtaining and interpreting information; and
 - » monitoring the development, use, updating and results of the Framework.
2. **Country-level decision-makers**, such as program managers and other key stakeholders, whose responsibilities include:
- » participating in the creation of their unique Framework for Linking Data with Action (identify programmatic and policy relevant questions, identify actions/decisions that must be addressed);
 - » using the Framework to identify and address data gaps;
 - » incorporating the Framework into local decision-making processes; and
 - » monitoring the development, use, updating and results of the Framework.
3. **Data specialists**, such as researchers and monitoring and evaluation (M&E) specialists, whose responsibilities include:
- » contributing their individual knowledge of data resources to the Framework for Linking Data with Action;
 - » identifying ways existing quality data can be integrated into decision-making processes, creating “retrospective demand” for their data; and
 - » identifying ways to resolve data gaps, such as data cleaning, reformatting, secondary analysis or new data collection activities.

7 FIELD APPLICATIONS

Ethiopia—Early Marriage Evaluation Study

MEASURE Evaluation facilitated development of a Framework for Linking Data with Action—Template 1 to guide the use of the main study findings by policymakers and program managers to support efforts in addressing the challenges posed by child marriage for women’s reproductive health, education, and national development.

Dominica, St. Lucia and St. Vincent—National AIDS Program

MEASURE Evaluation facilitated development of a Framework for Linking Data with Action—Template 2 to guide the information systems for an expanded response to HIV/AIDS. The Framework encouraged all participants to think more strategically about data collection efforts—and, in turn, to focus research activities on getting targeted information to support program and policy decisions.

8 EXAMPLE APPLICATIONS

Version 1: Data

The 2007 Early Marriage Evaluation Study (EMES) was a regionally representative survey of female adolescents, male youth and caretakers in Amhara Region, Ethiopia. The primary purpose of the EMES was to provide policymakers and program managers with detailed information on the reach and effectiveness of early marriage prevention interventions in the region to support program efforts in addressing the challenges posed by child marriage for women's reproductive health, education, and national development.

In March 2008 a one-day dissemination workshop was held in the capital of the Amhara Regional state with representatives from USAID, Pathfinder International (PI), World Learning (WL), girls' clubs (GC), teachers groups, women's associations (WA), government agencies and non-governmental organizations (NGO). Researchers presented the main study findings to the group, held a question-and-answer session, then divided participants into four groups. A facilitator was assigned to each group and provided instructions on how to prepare the Framework for Linking Data with Action using the study research questions and key findings. The sample table contains excerpts from this exercise.

The sample Expanded Timeline corresponds to the preceding sample Framework (Ethiopia: Coverage and Effects of Child Marriage Prevention Activities). It expands on the contents of the timeline column in the Framework template. The timeline begins by listing the research questions, the accompanying research findings, and recommendations in the Framework template. For each recommendation, the timeline lists the activities that need to be carried out to fulfill the recommendation, and the relevant decision-maker and other stakeholders for each activity. It then lists the time increments (weeks, months) in the column next to other stakeholders. Finally, a practical timeline for completing each activity is included via color codes.

Example Framework—Version 1

<p>Title: Ethiopia: Coverage and Effects of Child Marriage Prevention Activities</p> <p>Objectives: To develop action plan that includes recommendations based on the key findings of the research study, relevant stakeholders and timeline for implementation</p> <p>Facilitator: MEASURE Evaluation</p> <p>Time period: January–July 2008</p>					
Research question	Key findings	Recommendations for action/decision	Decision-Maker (DM) and other stakeholders (OS)	Communication Channel (DM & OS)	Timeline
What is the level of exposure to early marriage prevention messages?	26% of females were exposed to prevention messages in the media vs. 75% exposed to non-media messages	None. The finding suggests that non-media has greater reach in disseminating messages but other findings could be used to develop more specific and actionable recommendations—see below	n/a		n/a
	Females reported hearing about early marriage prevention messages most frequently from religious leaders and peer educators	<p>Continue disseminating early marriage prevention messages through religious leaders and peer educators</p> <ul style="list-style-type: none"> School Development Agent (SDA) to provide positive feedback to religious leaders about success of message exposure WL to recruit 10 more SDAs to train religious leaders about early marriage prevention messages WA to organize and provide guidance to 5 new GCs who will provide peer education training on child marriage, harmful traditional practices, reproductive health, and life skills 	<ul style="list-style-type: none"> DM—WL OS—School Development Agents; religious leaders; local education offices DM—PI OS—Girl's Clubs in schools; Women's Association 	<ul style="list-style-type: none"> DM—study briefing sheet highlighting key recommendations OS—radio spot on study key findings, fact sheets, face-to-face meetings 	Feb–May 2008
What proportion of respondents is aware of the laws against early marriage?	About half of respondents knew that there was a legal minimum age of marriage	<ul style="list-style-type: none"> Increase awareness of the legal minimum age at marriage. SDAs should revise training material for religious leaders and peer educators to include information about the legal minimum age of marriage 	<ul style="list-style-type: none"> DM—WL, PI OS—SDAs, religious leaders; GCs; WA; Ministry of Women's Affairs 	<ul style="list-style-type: none"> DM—study briefing sheet highlighting key recommendations OS—radio spot, fact sheets 	Jan–March 2008
What community members were involved in marriage cancellation?	Police intervened to stop 4% of planned marriages of under-age girls	The police and justice departments should be trained to discuss stopping the formal engagement or marriage with girls' parents.	<ul style="list-style-type: none"> DM—Ministry of Justice OS—police; district advisory committees; AWA 	DM—study briefing sheet, face-to-face meetings	Feb–July 2008

Example Expanded Timeline—Version 1

Title: Coverage and Effects of Child Marriage Prevention Activities Objectives: To develop an action plan that includes recommendations based on the key findings of the research study, relevant stakeholders and timeline for implementation Facilitator: Addis Continental Institute of Public Health Time period: January–July 2008											
		Decision-Maker	Other Stakeholders	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08	Jul 08	Aug 08
Research question: What is the level of exposure to early marriage prevention messages?											
Finding: 26% of females were exposed to prevention messages in the media vs. 75% exposed to non-media messages											
Recommendation											
• None—the finding suggests that non-media has greater reach in disseminating messages but other findings could be used to develop more specific and actionable recommendations	n/a		n/a								
Finding: females reported hearing about early marriage prevention messages most frequently from religious leaders and peer educators											
Recommendations											
• SDAs to provide positive feedback to religious leaders about success of message exposure	World Learning		School Development Agents; religious leaders; local education offices								
• WL to recruit 10 more SDAs to train religious leaders about early marriage prevention messages	World Learning		School Development Agents; religious leaders; local education offices								
• AWA to organize and provide guidance to 5 new GCs who will provide peer education training on child marriage, harmful traditional practices, reproductive health, and life skills	Pathfinder International		Girl's Clubs in schools; Amhara Women's Association								
Research question: What proportion of respondents are aware of the laws against early marriage?											
Finding: About half of respondents knew that there was a legal minimum age of marriage											
Recommendation											
• SDAs should revise training material for religious leaders and peer educators to include information about the legal minimum age of marriage	World Learning; Pathfinder International		SDAs, religious leaders; GCs; AWA; Ministry of Women's Affairs								
Research question: What community members were involved in marriage cancellation?											
Finding: Police intervened to stop 4% of planned marriages of under-age girls											
Recommendation											
• The police and justice departments should be trained to discuss stopping the formal engagement or marriage with girls' parents	Ministry of Justice		police; district advisory committees; AWA								

Version 2: Decisions and Questions—Kenya

In 1980, Kenya had the highest fertility rate in the world—on average, every woman was giving birth to eight children. Between 1980 and 2000, the rate dropped to 4.7 children per woman. In 2003, however, the Kenya Demographic and Health Survey (KDHS) showed that the 20-year pattern of sustained fertility decline had stalled, and that a plateau in the contraceptive prevalence rate had been reached. The Ministry of Planning and National Development, which was troubled by these trends and their potential implications for economic development, began looking into the issue more closely. Information was needed to help explain the causes of the stall and to help develop strategies to reposition family planning as a cornerstone issue for national development strategies.

Following a secondary analysis of the KDHS, a stakeholders' meeting provided the opportunity to review the conclusions of the analyses and to prepare a Framework for Linking Data with Action to identify key decisions and the information necessary to support those decisions. The use of this framework tool helped the NCPD to:

- identify data required for evidence-based decision making
- create a time table for developing and implementing corrective actions; and
- monitor the progress towards developing and implementing these corrective actions.

The Sample Expanded Timeline corresponds to the preceding sample Framework: Template 2 (Kenya: Analysis of factors affecting fertility and contraceptive use) and expands on the contents of the timeline column in the Framework. It begins by listing the action or decisions and the policy or programmatic questions. For each question, the timeline lists the activities that need to be carried out to answer the question or to move forward on the action, as well as the relevant decision-maker and other stakeholders for each activity. In some cases a decision does not have a programmatic question or require specific indicators/data. The timeline then lists the time increments (weeks, months) in the column next to other stakeholders. A practical timeline for completing each activity is included via color coding.

Example Framework—Version 2 (Kenya)

<p>Title: Kenya: Analysis of factors affecting fertility and contraceptive use</p> <p>Objectives: To gather information to help explain the causes of the stalled fertility decline and to help develop strategies to reposition family planning as a cornerstone issue for national development strategies</p> <p>Facilitator: Deputy Director for Policy and Programs</p> <p>Time period: Fiscal Year 2005–2006</p>					
Action/Decision	Policy or Programmatic Question	Indicator/Data Needed	Data Source	Decision-Maker and Other Stakeholders	Timeline
Incorporate demand creation for family planning in the new Reproductive Health Policy	Are Information, Education and Communication (IEC) campaigns reaching women of reproductive age?	IEC trends from the Demographic and Health Surveys (DHS)	DHS—available online	<ul style="list-style-type: none"> Permanent Secretary, Ministry of Health Family planning non-governmental organizations (NGOs) and donor agencies 	<ul style="list-style-type: none"> Review draft Reproductive Health Policy and identify places to insert recommendations for demand creation. August–November 2005 Publish final Reproductive Health Policy in February 2006
Convene conference to review community-based distribution (CBD) strategies for Kenya	What strategies could be used to increase the contraceptive prevalence rate and reverse the stagnation in fertility decline?	<ul style="list-style-type: none"> Analysis of CBD trends from the DHS surveys Inventory of current CBD programs 	<ul style="list-style-type: none"> DHS—available online Studies on cost and benefits of CBD programs 	<ul style="list-style-type: none"> Head of the Division of Reproductive Health, Ministry of Health Family planning NGOs and development partners 	<ul style="list-style-type: none"> Prepare a concept paper for the conference. Oct 05–Jan 06 Mobilize resources and hold the conference. Feb–Oct 06

Example Expanded Timeline—Version 2 (Kenya)

Title: Kenya: Analysis of factors affecting fertility and contraceptive use																											
Objectives: To gather information to help explain the causes of the stalled fertility decline and to help develop strategies to reposition family planning as a cornerstone issue for national development strategies																											
Facilitator: Deputy Director for Policy and Programs																											
Time period: Fiscal Year 2005–2006																											
		Decision-Maker	Other Stakeholders	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05	Jan 06	Feb 06	Mar 06	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06
Action/Decision: Incorporate demand creation for family planning in the new Reproductive Health Policy				Permanent Secretary, Ministry of Health				Family planning non-governmental organizations (NGOs) and donor agencies																			
Q: How could the government generate awareness and support for corrective actions?																											
1. Analysis of IEC trends from DHS																											
• Obtain DHS data				MoH																							
• Revised IEC and Advocacy Strategy				MoH								X															
2. Revise policy																											
• Review/revise draft policy				Permanent Secretary, MoH								X				X											
• Publish final policy				Permanent Secretary, MoH												X											
Action/Decision: Convene conference to review community-based distribution (CBD) strategies for Kenya				Division of Reproductive Health, Ministry of Health				Family planning NGOs and development partners																			
Q: What strategies could be used to increase the contraceptive prevalence rate and reverse the stagnation in fertility decline?																											
1. Obtain required information																											
• Analysis of CBD trends from DHS				DRH				X																			
• Inventory of current CBD programs				DRH								X															
• Studies on CBD prog. costs/benefits				DRH												X											
2. Conference tasks																											
• Prepare concept paper				DRH, MoH												X											
• Mobilize resources				MoH																X				X			
• Convene conference				MoH																				X			

Version 2: Decisions and Questions—Nigeria

In 2009, MEASURE Evaluation convened six teams representing organizations receiving U.S. government funding and working in Nigeria in a participatory workshop with the objective of strengthening the organization's capacity to use data. During the workshop, each team began the process of developing a Framework for Linking Data with Action that reflects the decisions that the organization and its staff make or influence. One of the teams in attendance primarily supports a program providing HIV Counseling and Testing (HCT) services, and developed the Framework below to guide the project's own internal use of existing data as well as to channel the appropriate information to external audiences (i.e., Local Government Chairman).

The Sample Expanded Timeline shown below corresponds to the preceding sample Framework—Template 2 (Nigeria: Framework for Linking HIV Testing and Counseling Decisions with Project Data). This timeline begins by listing the action or decisions and the policy or programmatic questions. For each question, it lists the activities that need to be carried out to answer the question or to move forward on the action, as well as the relevant decision-maker and other stakeholders for each activity. In some cases a decision will not have a programmatic question or require specific indicators/data. It then lists the time increments (weeks, months) in the column next to other stakeholders. Finally, a practical timeline for completing each activity is shown.

Example Framework—Version 2 (Nigeria)

<p>Title: Nigeria: Framework for Linking HIV Testing and Counseling Decisions with Project Data</p> <p>Objectives: To guide the Project's use of internal data and channel the appropriate use of information to external audiences</p> <p>Facilitator: Project Monitoring and Evaluation Manager</p> <p>Time period: 2010</p>							
Decision-Makers and Stakeholders	Decision/Action	Research Question	When will decision be made?	Indicators and/or data of interest	Source of data	How will data be presented?	When is data available?
Site Staff	Request for allocation of test-kits and other supplies	How many people are tested for HIV in this facility monthly?	Weekly	# of clients tested	Client in-take form. HCT Register. Store requisition form	Frequency analysis	Daily and are compiled immediately
Local Government Chairman	Planning and Allocation of Resources	How many people access HCT services? What % of clients tested were reactive and referred? Are there sufficient numbers of facilities providing HCT services? Are current staffing levels adequate?	Monthly	# of clients tested. # of clients that received result. # of clients reactive and referred for treatment. # of staff trained in providing HCT. Ratio of facilities to population. Ratio of trained staff per site providing HCT services.	Monthly Report	Narratives and univariate analysis	Monthly
State Ministry of Health	Planning and Allocation of Resources across health/program areas	How many people access HCT services monthly? What % of clients tested were reactive and referred? What % of the estimated population in need are accessing HCT services?	Quarterly	# of clients tested. Cumulative # of clients reactive and referred for treatment across the state. Estimated number of PLWHA in state.	Biannual Report	Univariate analysis (mean, median, mode, and two-page brief with recommendations	Monthly
Project's Logistic/Store Personnel	Requisition, Planning and Allocation of Resources	Were the numbers of test-kits adequate and did they get to the site in good condition?	Weekly	# of test-kits supplied to the sites. # of wastages. # of test-kits to be procured.	Store requisition form and Bin cards	Figures and numbers and narratives	weekly
Project Program Manager	Programming, Planning and Allocation of Resources	Are sites retaining 100% of clients to the point of referral of reactive clients for treatment? Are the test kits adequate in number and quality? Are sites conducting tests according to standard operating procedure?	Monthly	# of clients tested. # of clients that received result. # of clients reactive and referred for treatment. # of test-kits supplied to the sites. # of wastages. # of test-kits to be procured.	Client in-take form, HCT Register, Store requisition form and bin cards	Univariate analysis (mean, median, mode and two page brief with recommendations	Monthly
Program Managers	Allocation of funds for consistent DQA and supervisory visits	Are these visits resulting in improvements? How many visits are required within a quarter and what are the human and financial resource requirements to conduct these visits?	April, 2010	Trend of timely and complete reporting over the past year. # of DQA/supervisory visits conducted within a quarter. Staff and funding requirements per visit.	Quarterly reports	Narrative and Financial reports	March, 2010

Example Expanded Timeline—Version 2 (Nigeria)

[illegible]

[illegible]

9 CREATING A FRAMEWORK

Desired content for each area of the template

Both templates of the Framework for Linking Data with Action are divided into columns or fields. This section describes the type of content that goes into each area of the template for both Version 1: Data and Version 2: Decisions and Questions.

Version 1: Data

This version of the Framework links specific research findings to actionable recommendations and can be used to facilitate the use of study findings.

- **Research Question**—describes the primary and secondary research questions of the study or data source being used to create the Framework. Typically the research questions are based on the objectives or aims of the study. This field might include such questions as:
 - » What programs elements are effective at improving the well-being of orphans and other vulnerable children (OVCs) and their families?
 - » What proportion of HIV-positive women enrolled in a prevention of mother-to-child treatment program completes each phase of the program?
 - » What is the level of exposure, among youth aged 14–25, to early marriage prevention messages in Amhara Region, Ethiopia?
- **Key Findings**—refers to the main results of the data analysis conducted to answer each research question. The key findings are generally identified by the research team and presented to stakeholders during a dissemination workshop or in a summary report. Once key findings are identified a group discussion should ensue to determine the programmatic relevance of the findings. Sample discussion questions include:
 - » What do you think are the main findings in this area?
 - » Are any findings surprising?
 - » What findings show positive performance? Improvement in a particular health or service delivery area? Etc.
 - » What findings show areas that need improvement?
 - » Review the recommendations contained in the summary report (if available). What are your thoughts? Are they supported by the data?
- **Recommendations for Action/Decision**—should be based on the discussion of key findings outlined above. Recommendations could include policy and advocacy decisions, interventions to improve or design programs, and actions to address program management and operations. There may be more than one recommendation for each key finding, however not all findings are necessarily actionable. Some points to consider when developing the recommendations include:
 - » *Impact*—What will be the impact on health programs both long and short-term?
 - » *Resources*—Do stakeholders have sufficient financial and human resources for implementation? Are additional resources needed?
 - » *Supporting factors*—Does the action support the overall objective of the plan? Are policy, operational or management changes needed?

- » *Acceptability*—Are the recommendations politically and culturally acceptable?
- » *Timeliness*—Can implementation be timely?

- **Decision-Makers and Other Stakeholders**—include individuals and groups that will be involved in making decisions. “Decision-maker” is the primary individual (name or title) wielding ultimate authority to make the decision or take action. “Other stakeholders” include individuals or groups involved in advocating for or implementing the decision.

Decision-makers include such stakeholders as the following:

- » Prime Minister
- » Director of donor agency
- » Director of community-based organization
- » Director of a specific branch of the MOH

Others stakeholders often include:

- » Providers
- » Beneficiaries (clients)
- » Professional associations
- » Other non-health related government agencies

- **Communication Channel**—identifies the most appropriate way to convey your messages to the primary decision-maker and other stakeholders. Stakeholder groups vary by their information use, familiarity with research terminology, and preferences for receiving information, resulting in the need to tailor research findings and recommendations for different audiences. Some communication methods and formats may be effective with multiple stakeholder groups. Despite the need to adapt research findings for each stakeholder group and present the information in a user-friendly manner, stakeholders generally prefer key messages that are concise and actionable. Making research results and recommendations available, accessible, relevant, or useful, to decision-makers increases their applicability for improving health systems. Identifying your communication channel to reach different segments of stakeholders is essential to increasing stakeholders’ research uptake.

Illustrative communication methods for different stakeholder groups include:

- » Politicians and government officials: dissemination workshops, face-to-face meetings, policy forums, policy briefs, brochures, and executive summaries, public Web sites
- » Program managers: summary reports, executive summaries, audiovisual presentations
- » Civil society, NGOs and professional associations: fact sheets, brochures and other handouts, audiovisual presentations
- » Private-sector: fact sheets, audiovisual presentations,
- » General public: magazines, newspapers, press releases, radio, television, Web-based media
- » Donors/funders: full research report, audiovisual presentation,
- » Academic researchers and international agencies/organizations: peer-reviewed article, research databases, oral and poster presentations, CD-ROM, Web sites

- **Timeline**—presents a concrete, actionable timeframe for implementing the recommendations so progress can be objectively monitored against the original plan. It is recommended that stakeholders also use the Expanded Timeline template provided to list the recommended actions/decisions, specific activities and the schedule for implementing them. A sample Expanded Timeline can be found following Template 2 of the Framework for Linking Data with Action template.

Version 2: Decisions and Questions

This version of the Framework is useful when a specific action needs to be taken or a decision made. It can also be used to respond to a specific programmatic or policy question that must be answered to inform a decision. It is helpful for program managers, clinic managers and policy makers as well as data specialists and researchers.

- **Action/Decision**—describes either an upcoming decision that needs to be made, or a decision that could potentially benefit from specific data resources. Program managers and policy makers frequently need to make a decision about what to do next, or they need to take action in order to meet the needs of the stakeholders they serve. In this column, list what you need to decide—to improve a program, develop an annual work plan, advocate for programmatic resources, etc. Policy or programmatic questions frequently need to be answered to inform a decision or action. In this column list what you need to know in order to make the decision. This field might include questions such as:
 - » What is the population in need for a particular service?
 - » What clinical areas are performing poorly?
 - » Which health units are underfunded?

It is also possible to start with this field. At times it can be challenging to identify a specific upcoming decision, but health professionals are always faced with questions about their programs. In this case the user can begin with this column and work to the right. It is possible that after the programmatic questions are answered, that an action requiring a decision will become clear.

- **Indicators/Data**—describes the quantitative or qualitative measure of program performance. This information will help answer the policy or programmatic questions you have posed. In this column define what data you need and/or what indicators are necessary to calculate an answer to programmatic and policy questions. This field will include indicators/data such as:
 - » The number of pregnant women who have been tested in the last six months.
 - » The amount of money budgeted for and spent by a hospital's health units.
 - » Cost-effectiveness data for four HIV treatment strategies in a low-resource setting.
 - » GPS coordinates for voluntary counseling and testing sites.
- **Data Source**—identifies either existing or new datasets, reports, budgets, etc., from which you will get the indicators/data listed in the previous column. This field includes the name of data source, such as a specific report, or a subset or range of data elements from a named report. If the data do not exist this should be noted as well. Proxy data can be identified

here. All information should be as specific as possible. Below are sample entries for the required information field:

- » Service statistics for ante-natal care (ANC)
- » National budget for ARV drugs
- » National Demographic and Health Survey (DHS)
- » Sentinel Surveillance Data for tuberculosis (TB)

- **Decision-Makers and Other Stakeholders**—include individuals and groups that will be involved in making and implementing the decision. “Decision-maker” is the primary individual or organization (name or title) that has ultimate authority to make the decision and oversees the implementation of activities. “Other stakeholders” include individuals or groups involved in advocating for or implementing the decision.

Decision-makers include such stakeholders as the following:

- » Prime Minister
- » Director of donor agency
- » Director of community-based organization
- » Director of a specific branch of the MOH

Others stakeholders often include:

- » Providers
- » Beneficiaries (clients)
- » Professional associations
- » Other non-health related government agencies

- **Communication Channel**—identifies the most appropriate way to convey your messages to the primary decision-maker and other stakeholders. Stakeholder groups vary by their information use, familiarity with research terminology, and preferences for receiving information, resulting in the need to tailor research findings and recommendations for different audiences. Some communication methods and formats may be effective with multiple stakeholder groups. Despite the need to adapt research findings for each stakeholder group and present the information in a user-friendly manner, stakeholders generally prefer key messages that are concise and actionable. Making research results and recommendations available, accessible, relevant, or useful, to decision-makers increases their applicability for improving health systems. Identifying your communication channel to reach different segments of stakeholders is essential to increasing stakeholders’ research uptake.
- **Timeline**—presents a concrete, actionable schedule of activities to address policy and programmatic questions, to resolve a data gap, or to integrate data into decision-making processes. The specific date for conducting the analysis that will inform decisions should be identified, as well as a date by which the decision needs to be made. It is recommended that the Expanded Timeline Template also be completed to detail the specific tasks of accessing data, conducting the analysis, convening necessary meetings, and developing communication materials. A sample Expanded Timeline can be found in Section 8: Example Applications.

- **Note**—Version 2: Decisions and Questions does not necessarily require that the user complete it from left to right (starting with the decision or action). It is possible that a programmatic question will be asked before a decision is made or action taken. In this case, the “Programmatic question” column would be filled in first followed by the data columns. The user may wish to consider the key stakeholders asking the programmatic question and the timeline within which the question requires an answer. Once the answer to the question is found the decision/action column can be filled in along with the key stakeholders needed for the decision and the timeframe within which the decision should be made and activities completed.

10 IMPLEMENTATION CHECKLIST

Seven steps for completing the Framework for Linking Data with Action.

Step 1—Identify the need

- ☐ 1.1—Identify a potential opportunity. Host country stakeholders identify opportunities for implementing a Framework for Linking Data with Action.
- ☐ 1.2—Determine how the Framework will be implemented to address this need. Will it be used to increase the use of an existing data source and link it to upcoming decisions (Version 1: Data), or will it be used to help a group or project team be strategic in identifying the information they need to support evidence-based decisions (Version 2: Decisions and Questions)? The perspective will influence certain aspects of this process, such as which stakeholders lead the agenda in the Framework for Linking Data with Action workshop and what types of actions are recommended in the Framework.

Step 2—Create an internal plan for responding to the need

- ☐ 2.1—Coordinate with key stakeholders. Contact stakeholders to determine an achievable timeline for providing support (given available resources), as well as an appropriate protocol for contacting in-country stakeholders.
- ☐ 2.2—Draft the internal action plan/proposal. This document would describe:
 - The need identified in Step 1.
 - How your organization will support the development and monitoring of the Framework for Linking Data with Action.
 - How this activity fits into the organization’s priorities and workload.
 - The preliminary list of stakeholders and how they will be engaged.
- ☐ 2.3—Review this plan with relevant stakeholders, and incorporate their feedback.
- ☐ 2.4—Obtain approval from necessary counterparts, according to your organization’s protocol, to proceed with the Framework activity.

Step 3—Engage stakeholders

Good relationships and buy-in are essential, because the success of the Framework rests on several issues that stakeholders either control or know better than anyone, such as:

- How confident are they about using given data sources to support decisions?
 - How committed are they to implementing, tracking, and updating the Framework?
 - What expertise, resources, and decision-making forums are available?
 - What behind-the-scenes factors will influence project success?
- ❑ 3.1—Identify stakeholders. The designated Framework manager can identify the best way to initiate contact and methods of inviting stakeholders to participate in developing a Framework for Linking Data with Action.
- ❑ 3.2—Determine the complete context for the Framework activity. Working with the lead stakeholder, determine the total environment in which the Framework will be used. What are the pressures, available resources and priorities? For example, the stakeholder might be under pressure from a donor agency to scale up a specific program, so there will naturally be more focus on that program.
- ❑ 3.3—Determine the role and participation level for each stakeholder. This list should include representation both from program managers and data specialists. Questions posed during the initial discussion might be:
- In addition to this list, who else needs to be involved in this process?
 - What is each person's role in this process—their current and expected participation? Some stakeholders, such as the Minister of Health, will have a vested interest in the Framework activity but will have limited involvement in its creation.
 - What resources and expertise does each stakeholder bring to the process, in terms of time available, support staff, external funding, or other resources?
 - What external projects or funding issues will also be influencing factors?

Step 4—Plan the approach for implementing the Framework

- ❑ 4.1—Determine the most appropriate forum for drafting the Framework. In most cases, this will occur as a formal workshop with all key stakeholders. In rare cases, the Framework will be drafted in one-on-one sessions with a single influential stakeholder—a very high-level person or one with sole responsibility for a decision. The results will later be disseminated for review. This option is less desirable than a group workshop, but it may be the best option when other stakeholders are unavailable or have not yet been hired.
- ❑ 4.2—Establish an agenda for the forum. If the Framework is being used to help decision-makers think strategically about their information needs, the agenda should open with lead decision-makers. For promoting greater use of existing data in the decision-making process, M&E and data specialists should present earlier.

- ❑ 4.3—Define the timeline for major milestones. When will the workshop or meetings to draft the Framework take place? When will a final draft of the Framework be available? When will there be follow up to assess decisions and verify that they have incorporated the identified information? On what schedule or under what conditions will the Framework be updated or extended?

Step 5—Facilitate the creation of the Framework for Linking Data with Action

- ❑ 5.1—Hold the forum to draft the Framework. For purposes of this action plan, the forum is assumed to be convened as a formal workshop. This will be an in-person workshop at a site convenient to the majority of attendees, held in a room that is conducive to brainstorming in small groups as well as open group work.
- ❑ 5.2—Facilitate a brainstorming session to identify priority decisions to be made, actions to be taken, or recommendations. In the past, it has proven overwhelming to expect the group to brainstorm all the decisions, data requirements, and recommendations on one large wall chart or blackboard.
 - Organize the group into sub-groups based on their strategic objectives and areas of interest. For instance, you might group all the people who are working on ART programs, or those associated with HIV/AIDS policy.
 - Have each group record their priority decisions, programmatic/policy questions or study recommendations on flip chart paper. If they are focusing on decisions, you can prompt them with open-ended questions, such as, “Which decisions do you have to make for policy? For programs? For day-to-day operations? Which decisions do you make daily? Monthly? Quarterly?” If they are focusing on questions, you can prompt with “What questions about your program do you wish you had the answer to? Is there a specific programmatic problem that providers have been reporting? For example, are providers reporting a decrease in clients? Frequent drop-outs from services?” If you are focusing on recommendations, you can prompt with “Does the recommended action support the overall objective of the plan? Are policy, operational or management changes needed?”
- ❑ 5.3—Identify the data requirements to inform these decisions. Ideally, a data specialist would give an overview presentation about existing data sources. However, there is not always time for this step. It may be necessary to solicit this information before the forum and present it in a handout, PowerPoint presentation, or summary flip chart.
- ❑ 5.4—Connect decisions with data. Where there are a manageable number of decisions and data resources, it can be useful to write a list of decisions on one half of a blackboard and a list of data resources on the other half. The group can then more readily visualize the connections between these elements. This step can take one or two hours. At this stage, it will become clear where there are gaps between the information that is needed and what is available. Does the information even exist? If it does, is it good quality? Does it need secondary analysis or interpretation? Can we access it?

- ❑ 5.5—Complete the remaining fields of the Framework for Linking Data with Action. Type up the list of decisions from the blackboard or flip chart pieces, and move on to completing the remaining fields for each decision, such as next steps and timeline. If the identified issue is an inadequacy in the data, the next steps might be to:
 - Perform data management tasks, such as aggregate data or convert formats.
 - Reconcile issues with data quality.
 - Engage an individual or group to conduct secondary analysis.
 - If the issue is to strengthen links between data and decisions, next steps might be found in the following step:
- ❑ 5.6—Prioritize the decisions and next steps. Sometimes what appears to be the highest priority decision or question during initial discussions may change as a result of this Framework exercise. For instance, the group might have prioritized a decision for which no supporting information is yet available; that decision might drop in priority until a data-collection process takes place. This step will likely require follow up with the lead stakeholder or activity lead.
- ❑ 5.7—Conduct follow-up interviews or meetings as necessary. Invariably, the first workshop will prompt ideas, questions, or issues that cannot be addressed by those who are present. There will often be a need for follow-up with other individuals. Identify other potential contributors and integrate them into the process.

Step 6—Build capacity to use the Framework for Linking Data with Action as a management tool

- ❑ 6.1—Determine a management process for ongoing use of the Framework. How will the organization manage and use the Framework from here on? How often will they reference the tool, monitor progress, update to add new items, or delete items that have been completed? You can help articulate this process and thereby ensure the continued usefulness of the Framework as a perpetual management tool and not simply a one-time exercise.
- ❑ 6.2—Promote the integration of the Framework into annual work plans. Encourage counterparts to incorporate the Framework into the strategic annual plan for their organization, and to extend and revise the document as their programs develop or change.
- ❑ 6.3—Support and mentor the program manager in using the Framework. Maintain a relationship with the program manager and provide follow-up support and mentoring as necessary to overcome any barriers or challenges. This can be informal, such as touching base with the program manager by e-mail or over the phone, or more formally by meeting in person.

Step 7—Monitor and document the results of using the Framework for Linking Data with Action

- ❑ 7.1—Is the Framework being updated?
- ❑ 7.2—How often do stakeholders refer to the Framework?

- ❑ 7.3—What evidence-based decisions have been made as a result of the Framework?
- ❑ 7.4—What documentation is available to substantiate the result? (This could be an e-mail, newspaper article, press release, budget allocation, new subcommittee, etc.)
- ❑ 7.5—What information influenced those decisions?
- ❑ 7.6—Is there a general increase in evidence-based decision making? To what degree?

There will likely be multiple factors that weigh into any decision, but we should be able to show that data resources were present in the decision-making process. It might be unrealistic to draw a direct cause-and-effect relationship between the data and the outcome, but if the framework methodology was active, we can feel confident in the fact that data resources were considered.

11 CONCLUSION

More effective, evidence-based decisions to ensure that the right information is available to support optimal policy and program decisions.

In complex decision-making environments, influenced by multiple internal and external pressures, it can be extremely difficult to follow best practices for data collection and use.

Data might be collected to satisfy the reporting requirements of a donor agency, but this information may not be fully aligned with the policy and program decisions that must be made. Or, if their input was not considered in the data planning, or if they are not confident of data quality, stakeholders might not be convinced that the information should even be used in decision making in the first place.

Valuable data resources often remain unused when they could yield better decisions that improve the effectiveness of programs and organizations, and, in turn, benefit the lives and health of countless more people.

The Framework for Linking Data with Action was developed to meet this need, to provide a systematic approach for stakeholders to leverage data—tangible evidence of real-world conditions—into more productive and optimized decision processes.

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Information Use Map

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Existing monitoring and evaluation (M&E) systems typically focus on data collection and reporting to higher levels, while little attention is paid to how the data can be used locally for program improvements. As a result, there are many missed opportunities for feedback mechanisms and the identification of specific ways in which the data can be analyzed to make mid-course corrections.

Since such large amounts of money and effort are being devoted to collecting data and reporting in health information systems, maximizing the impact of that data for real-world benefit is essential. This is where the Information Use Mapping tool is so valuable.

1 PURPOSE

Information on the delivery of health services is often hidden in shelved reports and not shared with those that can use it to improve health programs.

In Dominica, local health centers and hospitals sent information about the number of people they tested for HIV/AIDS, while labs sent test results. A statistician in the Health Information Unit aggregated the data and sent a quarterly report to the Ministry of Health, which in turn sent a quarterly report to the Caribbean Epidemiology Center (CAREC) and an annual report to the Prime Minister.

Unfortunately, local facilities never received these reports. They could not know how they compared to other facilities, or to national trends and goals. Were they on track or not?

These information gaps quickly became apparent when processes were visualized in an Information Use Map. Data were reported, but not used. Reports did not get back to the providers of source data. The mapping exercise identified ways the Health Information Unit could share its insights down the line, which would lead to mid-course improvements in pre-test counseling and greater acceptance of HIV/AIDS testing.

In Swaziland, MEASURE Evaluation helped NERCHA define data flow for national-level output indicators, identify data management challenges, and assess the M&E structures and processes that provide the necessary HIV/AIDS program data.

The Information Use Map helped participants see how data analysis was limited to compiling and summarizing data for reports to the Global Fund to Fight AIDS, Tuberculosis, and Malaria.

Facility-level information was only reported to higher levels, not processed to deliver actionable insights at the local level. Nor did the facilities receive feedback about their performance in a regional or national context.

As part of the Information Use Map exercise, participants identified ways to send higher-level reports back to the facilities to support local decision-making processes—as well as resolve local data quality and lead time issues.

2 DESCRIPTION

The Information Use Map identifies existing data reporting channels and opportunities to increase the use of information to benefit programs and people.

One of the features that makes this tool so unique and effective is its visual nature. A flowchart captures a highly conceptual process in a way that is visible, clear, and concrete. The simple process of creating an Information Use Map helps participants better understand their role in the greater health information system—and the importance of collecting data in the first place. When people can see the value, they become more committed to consistent, sustainable, high-quality data collection and to regular analysis of that data.

The Information Use Mapping tool can be developed and applied at the international, regional, national, or local level. The tool can be an ongoing guideline to assess progress toward the “expected” future vision of the map. The Information Use Map can also become a standard part of an M&E system—revisited and revised at biannual or annual intervals, or whenever a new survey or special study is being designed.

The tool was designed for rapid assessment

Information use mapping is intended to be a short-term exercise with long-term vision. The assessment and recommendation phases typically require one week or less. This is not intended to be an exhaustive assessment of every aspect of an M&E program, but rather a quick, highly visual representation of gaps and opportunities. The sooner the findings are revealed, the more relevant it will be to stakeholders—and the greater the momentum to move forward with interventions.

The mapping process can be formal or informal

The process often begins with informal information gathering with a few M&E specialists or key stakeholders. These informal sessions lead to a draft version of the map that is then shared with a small subgroup to verify the initial assessment and brainstorm initial recommendations for improvements. In other cases, the review process takes place in a formal workshop with a larger group of key stakeholders. The tool accommodates either way of working.

The Information Use Map should be used in conjunction with the Planning Matrix to ensure that opportunities identified for increasing the use of information are actualized.

Formal planning should follow up the mapping process

The Information Use Map is developed to describe the current information system and then amended to outline a future or expected information flow scenario. Once key stakeholders have developed this expected or future Information Use Map, they may need an action plan to outline how to refine the current information system and flow. The Planning Matrix that follows allows stakeholders to identify key actions to take in order to strengthen data use based on their expected Information Use Map.

Stakeholders will begin by identifying all changes required to implement the expected Information Use Map. They will then prioritize these changes and list them in the first column of the plan. For each identified change, stakeholders will discuss specific interventions and the steps involved in implementing these interventions. The Proposed Interventions and Steps Involved should be as specific as possible to ensure adequate and accurate implementation. Stakeholders are also asked to identify:

- person(s) directly responsible,
- other stakeholders involved, and
- general timeline.

This Planning Matrix will provide guidance to the stakeholders responsible for refining the information system, and will also clearly allow them to assess progress in implementing the proposed changes.

The Information Use Mapping tool is adaptable

The mapping format and process presented in this document were developed from extensive experience with healthcare and population planning issues in Africa and the Caribbean. However, the tool reflects best practices that are applicable to a broader realm of issues and environments.

The process can be tailored to suit the circumstances. For instance, the background for the baseline Information Use Map could be gathered from a series of one-on-one interviews or a group workshop with all stakeholders together.

The Information Use Map format itself is adaptable, in that each map will include stakeholders—or levels of data collection—appropriate for the scope of the exercise. Other elements, such as the columns (data collection, collation, analysis, storage, reporting, and use), or the order of stakeholders/level of data collection (facility-level to national-level) can be adapted. However, note that custom adaptations may compromise the ability to compare Information Use Maps across times and settings.

Process steps are not absolute

The Planning Matrix presented in this document allows the user to outline a logical sequence of steps to improve information flow, from intervention initiation to post-intervention review. The Planning Matrix should be considered a guiding framework, representing steps and best practices for improving information flow and use, and should not be considered a strict prescription.

3 TEMPLATES

The Information Use Map is a schematic representation of information flow across various stakeholders at different levels of the data collection system.

The following Information Use Map is designed as a flowchart to allow users to quickly and visually assess deficiencies and opportunities in the use of information. As such, the structure of the map is straightforward:

- Each row of the chart represents a level of data collection or stakeholder group, such as the local healthcare facility, ministry of health, or international donor organization.
 - » Stakeholders are labeled down the left side of the map.
- Each column of the chart represents a stage in the information lifecycle, from data collection and collation, to analysis and reporting, to applying the data, to supporting optimal decisions.

Active data processes are mapped into this framework, with lines and arrows that show reporting hierarchies and other transfers of information between stakeholders or lifecycle stages.

A Planning Matrix template is also provided to assist users in outlining a logical sequence of steps to improve information flow based on the opportunities identified in the Information Use Mapping process. The Planning Matrix should be considered a guiding work plan, representing steps and best practices for improving Information flow and use, and should not be considered a strict prescription.

Baseline and Annotated Information Use Map—Template

	Data Collection	Compilation	Storage	Analysis	Reporting	Use
Private Clinic						
NGO						
Government Facility						
District						
Regional						
National						

Planning Matrix Template—Strengthening Data Demand and Use by Addressing Problems in the Flow of Data and Information

[illegible]

4 USE

This tool is generally used to improve the flow of information, but certain circumstances would trigger this activity.

The Information Use Mapping tool can prove useful at any time, but several conditions may trigger the initial creation of an Information Use Map or the update of an existing map. Examples include:

- When developing an M&E framework for a national strategic plan.
- When planning a new component of an M&E system, such as a national survey program.
- When there is insufficient information to guide mid-course program corrections.
- When information is available, but is underutilized.
- When stakeholders could benefit from feedback.
- During regular program reviews.

5 AUDIENCE

This tool is meant for key individuals involved in collecting, analyzing, reporting, or using health information.

The tool has two principal sets of users that should together draft each version of the tool. Specific roles include:

- **Program managers** and other key stakeholders from various levels of the information system (such as national, sub-national, and facility):
 - » Identify key participants/stakeholders in the information flow.
 - » Define the baseline Information Use Map, which describes the current information flow and existing mechanisms for using that information.
 - » Validate the findings of the baseline Information Use Map, to ensure that the map accurately reflects real-world conditions.
 - » Participate in individual or group sessions to identify gaps and opportunities for improvement in this information flow.
 - » Design and prioritize the interventions (such as feedback mechanisms or training programs) for improving this information flow.
 - » Adopt the Information Use Map as an explicit component of their M&E system.
- **Data specialists**, such as M&E coordinators:
 - » Contribute their knowledge of existing data resources and processes to create a baseline Information Use Map.
 - » Identify ways to resolve any gaps in the Information Use Map, perhaps to create another version of the map that represents the desired state.
 - » Implement the feedback mechanisms or other interventions defined as part of the Information Use Mapping process.
 - » Periodically revisit the Information Use Map to gauge progress toward the desired information flow.

6 FIELD APPLICATION

National AIDS Programs in Dominica, St. Lucia, and St. Vincent—February to March 2005.

MEASURE Evaluation helped in-country stakeholders develop an Information Use Map to assess information flow for decision making among national AIDS programs in Dominica, St. Lucia, and St. Vincent between February and March 2005.

The Information Use Map showed how little use was made of HIV/AIDS data. Most of the capacity and energies of the M&E system were spent on generating reports for the Ministry of Health, the national government, regional counterparts, and international donor agencies. In general, facilities and communities did not use HIV/AIDS data to improve their own programs, nor was there sufficient capacity to do so.

In follow-up consultations, a facilitator helped stakeholders identify opportunities to use routinely collected HIV/AIDS data, as well as obtain feedback from regional and international levels. “How well are we meeting international goals?” “Do our reports meet expectations for data quality?” “How have high-performing entities achieved their successes?”

The group also created an Information Use Map that described what the information flow should look like—a powerful, visual message to use in advocating for funds from regional, national, or private-sector organizations.

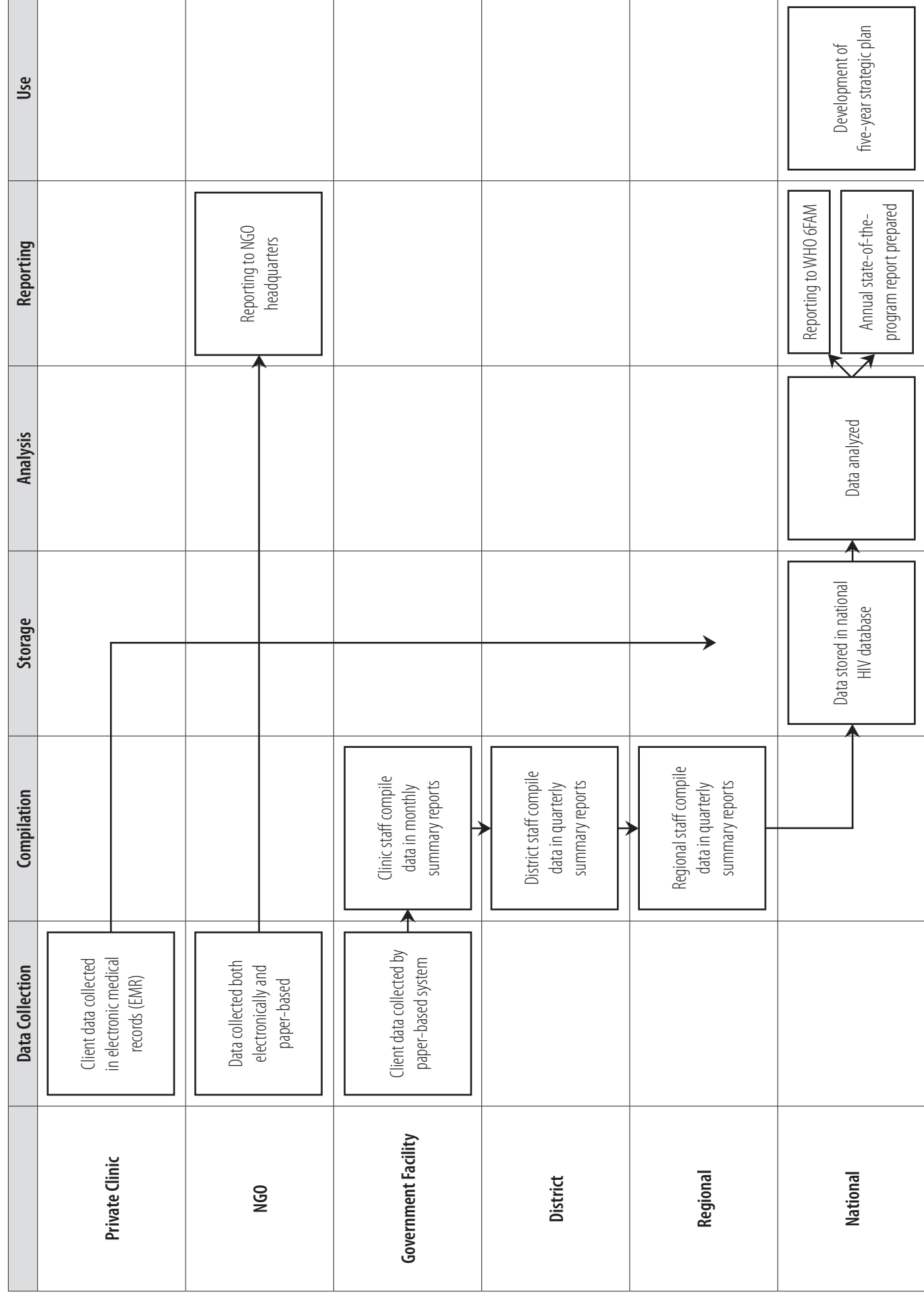
7 EXAMPLE APPLICATION

Adapted from Strategic Information Assessment in Swaziland—MEASURE Evaluation, January 2006 (*note: The Information Use Maps included here are not the actual maps produced in Swaziland*)

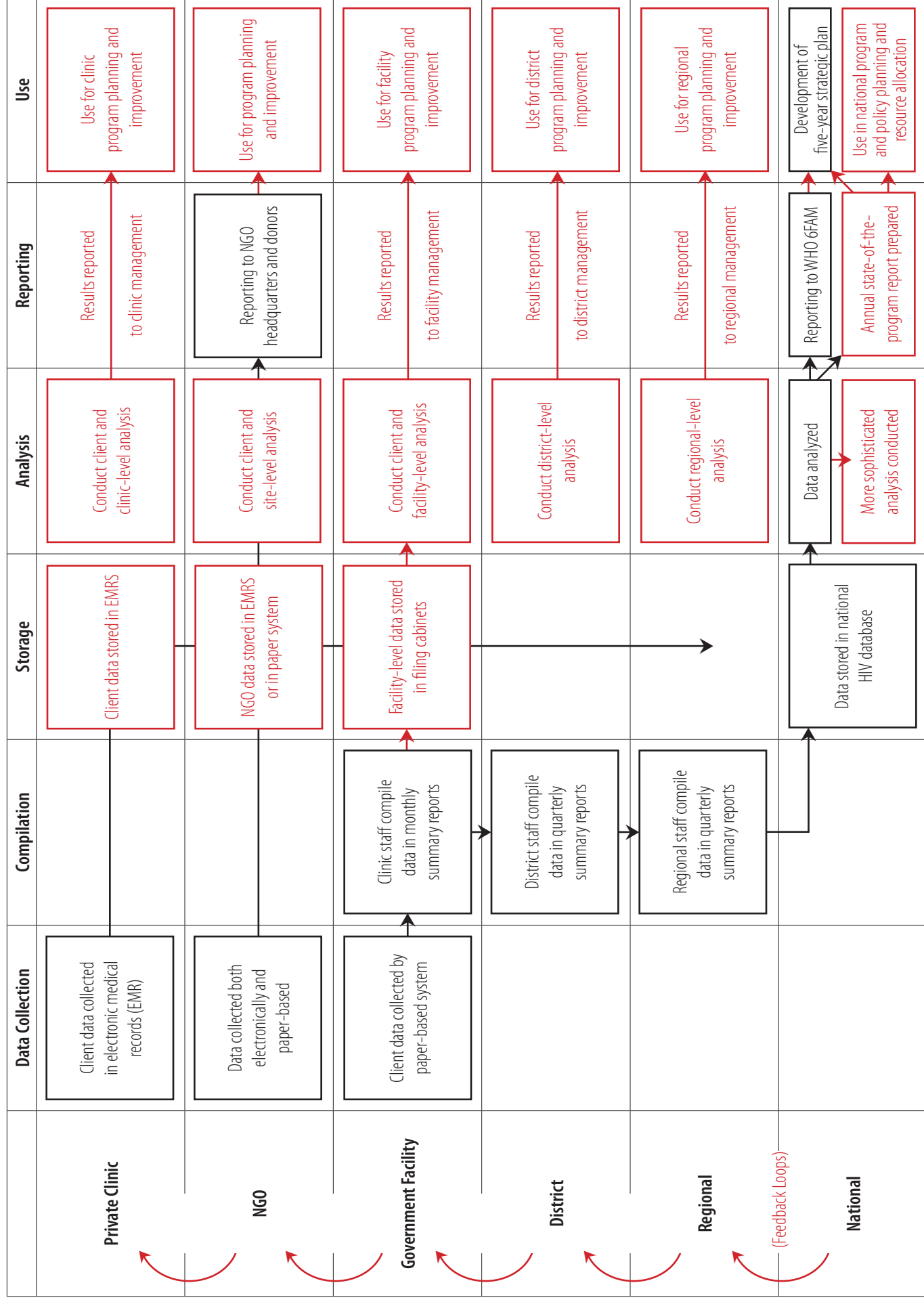
When an information flow is mapped visually, deficiencies quickly become apparent. Large, empty expanses of the chart tell the story. In the first example (A), it is clear that insights from high-level reports are not shared back with lower levels and information is only being used to file reports, not to support evidence-based decisions for program improvements. The second map (B) highlights potential improvements in the M&E system where additional data analysis can take place and feedback mechanisms can be introduced to increased data use.

The annotated Information Use Map and Planning Matrix describe a future scenario that would improve data use. This map was developed with stakeholder consensus during a workshop in which desired improvements in the M&E system were discussed. In this scenario, information transfer is now two-way, with feedback and quarterly reports being broadly shared across stakeholder groups. The map also identifies additional analyses that can be conducted to answer specific questions at different levels of the data collection system. The resulting information can be used to monitor and evaluate programs, improve programs, lobby for additional funding, influence legislation, or share information with the media and the public.

Existing Data Flow Map—Information Use Map A: National HIV/AIDS Program (May 2005)



Annotated Map that Shows Potential Improvements—Information Use Map B: National HIV/AIDS Program (May 2005)



Sample Planning Matrix—Strengthening Data Demand and Use by Addressing Problems in the Flow of Data and Information: Swaziland

Barrier or problem identified in Information Use Map	Proposed intervention	Steps involved	Person(s) responsible	Other stakeholders	General timeline
Private clinic level not using data in programmatic decision making.	Work with private level clinics to encourage them to access the national HIV database and conduct specific analyses to monitor programs.	Contact head of Physician's Professional Association to develop a partnership with the MOH.	Dr. Lala	<ul style="list-style-type: none"> Medical Association leadership Head of MOH HMIS 	July 2006
NGOs not using data in programmatic decision making.	Work with private level clinics to encourage them to access the national HIV database and conduct specific analyses to monitor programs.	Contact head of the NGO to develop a partnership with the MOH.	Dr. Pilusa	<ul style="list-style-type: none"> NGO leadership Head of MOH HMIS 	June 2006
Government facilities not using data in programmatic decision making.	Work with private level clinics to encourage them to access the national HIV database and conduct specific analyses to monitor programs.	Contact head of the NGO to develop a partnership with the MOH.	Dr. Pilusa	<ul style="list-style-type: none"> NGO leadership Head of MOH HMIS 	June 2006
District Health Management Teams (DHMTs) are not using district-level data.	<ul style="list-style-type: none"> Assist DHMTs to identify programmatic questions relevant to decision making. Provide training to DHMTs to conduct specific analysis to monitor district-level service delivery. Provide training on accessing the national HIV data base. 	Train trainers to conduct district-level data use workshops to (1) identify programmatic questions by implementing the Framework for Linking Data With Action, (2) build basics analysis and interpretation skills, and (3) navigate the national HIV database.	Dr. Sukuta	<ul style="list-style-type: none"> HMIS and M&E Directorates DHMTs MOH services department 	December 2006
Regional Health Management Teams (RHMTs) are not using district-level data.	<ul style="list-style-type: none"> Assist RHMTs to identify programmatic questions relevant to decision making. Provide training to RHMTs to conduct specific analysis to monitor regional-level service delivery. Provide training on accessing the national HIV database. 	Train trainers to conduct regional-level data use workshops to (1) identify programmatic questions by implementing the Framework for Linking Data With Action, (2) build basics analysis and interpretation skills, and (3) navigate the national HIV database.	Ms. Tembe	<ul style="list-style-type: none"> HMIS and M&E Directorates RHMTs MOH Program Divisions 	December 2006
National-level MOH is not maximizing use of data for decision making	Identify additional programmatic questions and upcoming decisions and inform them with data.	<ul style="list-style-type: none"> Host a national workshop to implement a triangulation exercise or Framework for Linking Data With Action. Use data for regular monitoring of national services and program improvement. Use data to inform advocacy needs and use in advocacy. 	Dr. Nkomo	<ul style="list-style-type: none"> HMIS and M&E Directorates NAC MOH Program Divisions 	September 2006
Information does not flow back down the information system (from National back to Facility).	Improve Information feedback at all levels of the health system.	<ul style="list-style-type: none"> Develop and distribute a health bulletin that reports on service delivery at the national, regional, and district levels. Develop reporting templates for districts and provinces to use to feedback quarterly report information to the participating facilities. Encourage quarterly data review meetings at the facility, district, and regional levels to discuss and compare progress to surrounding areas. 	Dr. Nkomo	<ul style="list-style-type: none"> HMIS and M&E Directorates NAC MOH Program Divisions RHMTs DHMTs 	February 2007

8 CREATING THE BASELINE INFORMATION USE MAP

Collecting information through a questionnaire or interactive group forum to characterize existing information flow.

1) Create a template

The Information Use Maps presented in this document were created in Microsoft Word.

To create your own map, open a blank Word document, and change the page orientation to “Landscape” using the “Page Layout” menu. Add a table (this example shows a 7x7 table) using the “Insert” menu.

2) Refine the row headings

The first step in this process is to refine the headings for the rows listed down the left side of the map. In each row the stakeholder or the data collection level is specified. Label the rows to reflect your facility type (or stakeholder type) and the columns to reflect the stages of information gathering or use in your setting. The blank and sample Information Flow Maps included in this section lists the common hierarchy of data collection from the facility service delivery level to the national coordinating level. Each country and stakeholder using the Information Flow Map will have different data collection levels and stakeholders who collect data, so it is important to refine the row headings before filling in the Information Use Map.

3) Fill in the columns

The columns represent each stage of the information life cycle (collection, collation, analysis, etc.). By defining each stage, facilitators can gather the information to create a baseline Information Use Map. This information is entered in the map columns.

Entries are placed in text boxes in each of the relevant cells, and then connected by arrows to show the flow of information. The first rendition of the map is all in black, as they are the initial entries (See Existing Data Flow Map—A).

When you add information to the initial map that shows potential improvements to the flow of information, using color helps highlight the evolution of your map (see Annotated Map that shows potential improvements—Map B). Text, text boxes, and arrows can all be manipulated to appear in different colors.

- **Collection**— Determine what data elements are collected (or need to be collected), and include this as an action item in the row for the person or group responsible for that action. To obtain this information, a facilitator might ask:
 - » What data elements are collected?
 - » How are these data elements collected?
 - » What is the format?
 - » Is it electronic or manual?
 - » Who collects the information?
 - » How often is it collected?
 - » What issues, if any, influence data quality or security?

When the answers to these questions are assembled, a description such as this is written: “A nurse records the number of clients who received pre-test counseling for HIV in a logbook and on client charts, by hand, at the end of each day.” (Note: Not every stakeholder will be involved in data collection. It is perfectly normal for the left-hand column to have entries at the lower and middle levels but not at higher levels.)

- **Collation (or Compilation)**—Discuss and capture how the collected data elements are compiled. To obtain this information, a facilitator might ask:
 - » What data elements or forms are collated?
 - » What is the format?
 - » Is it electronic or manual?
 - » Who collates the information?
 - » How often is it collated?
 - » What issues, if any, influence data quality?

When the answers to these questions are assembled, a statement that describes the collation process is written. An example of the statement would be: “The district nurse-midwife manually adds up data from the VCT logbook and writes the total into a hard copy of a VCT abstraction form on a monthly basis. This compilation, however, is not always done on time.” (Note: Not all data collection processes have matching data collation processes.)

- **Storage**—Discuss and capture how the collected and/or collated information is stored. (Note that it is possible that not all data will be stored). To obtain this information, a facilitator might ask:
 - » What collected or collated data are stored?
 - » How is this information stored?
 - » Is the storage electronic or manual?
 - » If electronic, what database format or software program is used?
 - » Who stores the information?
 - » How often is the information stored?
 - » What issues influence the quality or security of stored data?

When the answers to these questions are assembled, an active statement that describes the storage process, such as the following, is written: “The district nurse-midwife copies VCT monthly abstraction forms. The original is kept in a locked cabinet in her office, and the copy is mailed to the health information unit statistician. The data are entered biannually into Excel on a secure computer that is backed up nightly on the Ministry of Health server.”

- **Analysis**—Discuss and capture the process of analyzing collected and collated data. To obtain this information, a facilitator might ask:
 - » What collected or collated data are analyzed?
 - » How is this information analyzed?
 - » Is the analysis electronic or manual?
 - » If electronic, what software program is used for analysis?
 - » What type of analysis is conducted?

- » Who does the analysis?
- » How often is the analysis done?
- » What issues influence quality or security of analysis?

When the answers to these questions are assembled, a statement that describes the analytical processes is written: “A statistician in the health information unit analyzes data in the Excel VCT database once each quarter to determine frequencies and percentages of clients receiving the service.” (Note: Some data elements will be collected but not collated; analysis is done on the original source data. It is also possible for one set of data to be analyzed in different ways by different system participants.)

- **Reporting**—Discuss and capture the reporting process, by asking:
 - » What raw data and/or analyzed information data are reported?
 - » How is this information reported?
 - » Is the report electronic or manual?
 - » If electronic, what software and communications are used?
 - » Who prepares and distributes the report?
 - » How often are the reports prepared and distributed?
 - » What issues influence the quality or security of reports?

When the answers to these questions are assembled, a statement that describes the reporting process is written: “The National AIDS Program Coordinator prepares a National AIDS Program Annual Report for the Ministry of Health, which documents the percentage of clients who accepted an HIV test after pre-test counseling.” (Note: Be sure to differentiate between reporting and use. Often, when asked how they will use the data, respondents will say, “We’re going to use it to prepare a report.” For an Information Use Map, “using the data” means leveraging it to support a decision or activity, not just to prepare a report.)

- **Use**—The following questions are asked to discuss and capture the use of information to support a decision or activity:
 - » What data are used for practical decision making (such as advocating for funds, designing program improvements, or influencing policies)?
 - » How are data used; what decisions do they inform?
 - » What is the mechanism for facilitating the use of this data (such as quarterly department meetings and annual planning meetings)?
 - » How often does this process take place?
 - » What issues, if any, influence the quality and security of data use?

Data can be used immediately after any of the previous steps. For example, collated health facility data may be used immediately within facilities during a meeting of department heads to inform the improvement of client care or procurement of commodities. Ideally, there is some use of information for every stakeholder on the map. (Note: The information in this section can be used to create a custom questionnaire to guide interviews with key informants. Stakeholders should review and approve the questionnaire at the initial meeting.)

9 IMPLEMENTATION CHECKLIST

Seven steps for using the Information Use Mapping tool.

This checklist can be photocopied and used as a reference for the process steps. Note that Information Use Maps with a limited scope—such as within an institution—will not require all the steps. This checklist should be used as a general guideline, to ensure that a systematic approach and best practices are followed.

Step 1—Perform pre-assessment planning

- ☐ 1.1—Identify a potential need or opportunity. At times, national governments feel that their M&E systems are not delivering all the reports and value that they should. Unsure about how to resolve deficiencies with limited budgets and personnel, they recognize that improvement in data use is needed. The Information Use Map is very well suited for this task.
- ☐ 1.2—An achievable scope for the Information Map assessment needs to be selected. Information Use Mapping can be applied to a full M&E framework for a national program, or for key indicators of that program, or within one agency or facility.
- ☐ 1.3—Write up an internal summary of the planned activity. This document could be as simple as an e-mail or one- or two-page proposal, which could describe:
 - The need identified in Step 1.1.
 - How technical support to address that need will be provided.
 - The preliminary list of stakeholders and how they will be engaged.
 - An outline of process steps.
- ☐ 1.4—Obtain endorsement and approval from the activity lead to proceed.

Step 2—Define details of the activity

- ☐ 2.1—Determine the scope of the Information Use Map. What is the program area to be addressed? What is the scope of the map(s)? Will the map examine national data flow, or information flow for one facility? Will it examine all community-based data, or data flow for certain surveys, special studies or indicators? In general, the more focused the scope, the more practical and targeted the recommendations that will result.
- ☐ 2.2—Identify the key participants. A small, core group of interested individuals who will help drive this process must be identified. Their goals and objectives need to be determined, and the role of the Information Use Mapping tool needs to be clarified.
- ☐ 2.3—Adapt the Information Use Map. The standard Information Use Map lists six levels of data collection. Depending on the situation in which it is being used, the number of levels will vary. The standard Information Use Map also sets forth six stages or steps in the information lifecycle: data collection, collation, storage, analysis, reporting, and use. If an activity has a unique step to consider, the map can be adapted accordingly. It should be kept in mind that

adapting the structure will reduce the usefulness of the map for comparisons across time or across scenarios. The amount of detail required for describing each of the stages or steps should be kept to a minimum. Since the basic purpose is to identify gaps in the information flow and opportunities for improved data use, more focus should be placed on the element of data use.

Step 3—Engage stakeholders

- ❑ 3.1—Identify a limited number of stakeholders. Only a few stakeholders are needed to help create a preliminary Information Use Map. The objective is not to be as inclusive as possible, but rather to move forward efficiently to capture the existing information flows. Certain recommendations need to be made and priorities set. These priorities can be reviewed later with a broader group of stakeholders. This core group of stakeholders should include one or two representatives from each of these categories:
 - Technical specialists, such as an M&E coordinator.
 - People who are empowered at the national level to implement any planned improvements, such as a national malaria program manager.
 - Development partners, such as staff of donor agencies in the funding/reporting cycle.

To help identify the best individuals to include, conversations with in-country personnel or information from a formal stakeholder analysis are useful. These individuals could be identified as part of a prior stakeholder analysis exercise. Stakeholders should be involved in the process and have ownership in it. An Information Use Mapping activity for HIV/AIDS data in Dominica included the following stakeholder groups:

- Non-governmental organizations (NGOs);
 - District and regional health administration organizations;
 - Laboratories, pharmacies and local health centers;
 - National AIDS program;
 - Ministry of Health; and
 - Caribbean Regional Epidemiological Center (CAREC).
- ❑ 3.2—Obtain buy-in on the purpose and scope of the activity. Plan for the approach to be used, the scope of the map, the facilities, and individuals to be interviewed. The product of the activity, and what various stakeholders will get out of the activity, also need to be discussed and clarified. These issues should be clarified in initial conversations or a group meeting. It is important to obtain consensus on what the activity will achieve. Stakeholders need to understand that the tool is designed to identify opportunities for improvement; it is not itself an intervention. Diplomacy is important here. Even though an external consultant might view Information Use Mapping as a basic assessment, host-country stakeholders can perceive it as a critique of their performance or capabilities. By setting an objective tone at the outset—“This is an exercise to obtain more use from available data”—political and personal sensitivities can be minimized.

Step 4—Gather information for the baseline Information Use Map

- ☐ 4.1—Conduct a desk review of official information processes. The process should begin with a comprehensive review of plans, national policies, and guidelines—particularly an M&E framework or implementation plan, if available.
- ☐ 4.2—Conduct interviews with data reporting staff. Whereas the desk review will yield the official perspective on how data-flow processes should work, a real-world view will be obtained from M&E specialists at the institutions involved in reporting processes. Interviews with these people will confirm the degree to which the national M&E plan has been implemented, and if deficiencies exist.
- ☐ 4.3—Conduct interviews with key informants. In Step 3 (and likely through the desk review and interviews with M&E specialists), the appropriate individuals to interview were identified. This will be a small number of key informants—no more than 10 or 12—representing a few typical facilities at each level, such as a national referral hospital, district hospital, and a selection of local health centers or community-level programs. Details about how to gather the information can be seen in the “Creating the Baseline Information Use Map,” mentioned earlier in this document. Steps 4.2 and 4.3 can also be accomplished in a meeting format. (Note: The interview for Information Use Mapping does not replace a Service Provision Assessment [SPA] or other health service survey interview.) An Information Use Map does not collect information about health services that are being provided. In this step, a limited interview is conducted to help determine existing systems for analyzing or using data.
- ☐ 4.4—Create a report of findings, including the baseline Information Use Map and explanatory text as necessary.

Step 5—Conduct a validation meeting with key stakeholders and complete the Planning Matrix

- ☐ 5.1—Review the findings of the baseline Information Use Map and validate the researcher’s interpretation (or clarify any perceived discrepancies).
- ☐ 5.2—Identify opportunities for improving data use and feedback mechanisms in that flow.
- ☐ 5.3—Map the appearance of their expected Information Use Map.
- ☐ 5.4—Prioritize the activities or interventions that were recommended for improving data use and feedback mechanisms by drafting the Planning Matrix.
- ☐ 5.5—Design actionable next steps for program managers to implement those recommendations by finalizing the Planning Matrix. Tangible recommendations should be included in the matrix. The answers to the following questions do not necessarily have to be detailed or comprehensive, but there should be enough information to form a guideline and encourage forward momentum:

- What does the Information Use Map look like?
- Where are the new opportunities to use information?
- What resources are needed to make that happen?
- What barriers exist, and how can they be addressed?
- What should be done next, and how?

Step 6. Document and share the results of the validation workshop.

- ☐ 6.1—Create a final report. The final report should include the following elements:
 - The baseline Information Use Map, updated to reflect any revisions suggested during the stakeholder workshop.
 - Narrative description of gaps that were identified, such as areas where useful data were readily available but not used.
 - The projected Information Use Map, showing the anticipated information flow.
 - Narrative description of proposed activities to implement that projected view: interventions (such as capacity building on data analysis and use at different levels in the system) and feedback mechanisms (such as dissemination of reports down the levels). Refer back to the Planning Matrix when completing this section.
 - Priorities, required resources, and next steps. Refer back to the Planning Matrix when completing this section. For example, the following questions should be addressed in the final report:
 - » What exactly is a “resource” in this context? Is it money, another data analyst, a software program, an approval, or a new skill?
 - » What exactly is the feedback loop? Is it an e-mail distribution of a report, or a quarterly meeting with managers during regular site visits? Is it a matter of sending printed copies of a report to a broader audience than before?
 - » What is meant by “more analysis?” Is it a trend analysis of indicators at the district level, comparing targets with achievements at each level of the system? Is it estimating coverage levels for various services at the district and sub-district level? What indicators should be included?
 - » When recommendations are specific, the next steps can also be specific, and are more likely to take place.
- ☐ 6.2—Share this report with stakeholders, especially national program managers and donor agencies. This report can serve as a baseline and roadmap for host-country representatives as they carry out the recommendations and conduct future assessments of their M&E system.

Step 7—Monitor and document the results of using the Information Use Map.

- ☐ 7.1—Which recommendations have been implemented?
- ☐ 7.2—In what new ways are data being used to drive program success?
- ☐ 7.3—In what ways have better data processes supported training activities?

- ❑ 7.4—What has been the impact of new feedback mechanisms?
- ❑ 7.5—Does the organization use the Information Use Map as an ongoing guide?
- ❑ 7.6—What overall benefits have been seen?

Documenting this information helps enable MEASURE Evaluation to refine the tool based on an ever-expanding range of field experiences.

10 CONCLUSION

Improving data flow and utilization at all levels to ensure that data drives real advances in health and welfare, not just reports.

Data collection systems are often designed and developed with the singular goal of reporting to national governments or international donor agencies. Huge volumes of data are created, but little of it is actually used to directly benefit programs and people.

- Does our program serve all the people it is intended to serve? If not, what should we be doing differently?
- Are we making progress toward reaching the people who need HIV/AIDS voluntary counseling and testing?
- What percentage of children who experienced diarrhea have access to oral rehydration solutions? Have we adequately trained mothers to provide this care?
- Are we doing a better job providing antenatal care to pregnant women at local clinics? What could we do to reach even more women?
- What percentage of children and pregnant mothers are actually using the insecticide-treated bed nets we distributed? How can we improve this?

The extent to which program managers can answer these questions depends on where analysis takes place, who has access to the findings, and—where information is compiled at a high level—what specific channels have been created for feeding that information back to relevant service providers. The Information Use Mapping tool is invaluable for:

- Identifying missed opportunities for facilities or community organizations to analyze their own data—to identify problems with the services they are providing and suggest mid-course improvements.
- Identifying ways to provide program managers with information about their performance in a broader context.
- Ensuring that new M&E initiatives are designed to deliver real-world benefits.

By enabling people to see the long-term value of the data they are collecting, Information Use Mapping increases their commitment to quality and consistency in data collection and analysis.

ACKNOWLEDGMENTS

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Performance of Routine Information Systems Management (PRISM) Tools

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10. Conclusion

The ministry of health was concerned that district and facility staff rarely used routine data to identify performance gaps, make plans, and monitor progress. Information was available; why was it being used only to populate reports and not to drive decisions and program improvements? PRISM Tools provided a structured way for the ministry to assess the quality of data and use of information in its routine health information system. The findings were revealing. Data errors were very high, due in part to overly complex data collection forms, inaccurate transfer of data from patient records, and calculation errors. The PRISM assessment led to the design of easy-to-use forms, a refresher training course in data collection and processing for health workers, and a series of meetings and publications to share performance results and successes.

1 PURPOSE

Routine health information systems generate potentially useful data, but it is often of low quality and not trusted for decision making.

The ultimate objective of a routine health information system (RHIS) is to produce information for taking action in the health sector. “Are we doing things right?” “Are we doing the right things?” If things are being done correctly, the data should demonstrate that all activities were carried out as planned. Positive results should follow. The RHIS is an important mechanism to identify gaps in the management of the health system—and to resolve them to maintain and improve performance. With timely, complete and accurate information, managers can identify strengths and weaknesses of health system functions and services, and take appropriate action to maximize success. For issues outside of their control, they can advocate for possible solutions and policy changes.

However, the systems designed to track health data often fall short:

- Data quality may be low, so nobody has faith in it.
- Data quality may be sufficient, but there are no processes or channels in place for using the data, other than completing reports to send to district and national authorities.

- Managers and staff might not appreciate the importance of their roles in the information process, and they have little incentive to give data processes the care and attention necessary.

“The data collection forms are too complicated.” ... “I did not like mathematics, and now I have to deal with data.” ... “What is the use of collecting data when nobody uses it?” ... “Upper management is not committed to RHIS activities.” Attitudes such as these—whether they reflect reality or misperception—can undermine the effectiveness of any RHIS program.

If a routine health information system is to produce all the value it should, it must produce high-quality data—actionable insights framed on accurate facts. This information must be actively used to guide day-to-day operations, track performance, learn from past results, and improve accountability.

However, this has not been the scenario in most developing countries. RHIS systems often do not provide the information needed to improve health system performance. Why? Traditional assessments only answer part of the question, because they look narrowly at technical issues, such as data collection methods or Information Technology. Interventions then have limited impact, because the success of an RHIS framework depends on far more than technical capabilities:

- Is the organization committed to a culture of using information?
- Do the people responsible for data collection have the necessary skills?
- Do they understand and care about the importance of their work?
- Do managers support them with training, supervision and needed resources?

Issues such as these have a profound influence on RHIS success.

MEASURE Evaluation, together with John Snow, Inc., developed a conceptual framework that acknowledges the broader context in which RHIS operates. Known as Performance of Routine Information System Management (PRISM),¹ this conceptual framework broadens the analysis of routine health information systems to include three key factors for success:

- Behavioral determinants—The knowledge, skills, attitudes, values, and motivation of the people who collect and use data.
- Technical determinants—Data collection processes, systems, forms, and methods.
- Organizational/environmental determinants—Information culture, structure, resources, roles, and responsibilities of the health system and key contributors at each level.

The PRISM conceptual framework and PRISM Tools identify strengths and weaknesses in these areas, as well as correlations among areas. This assessment aids in designing and prioritizing interventions to improve RHIS performance—which in turn improves the performance of the health system.

¹ Aqil A, Lippeveld T, Hozumi D. (2009) PRISM Framework: A Paradigm Shift for Designing, Strengthening and Evaluating Routine Health Information Systems. *Health Policy and Planning*, 2009, 24(3):217-228; doi:10.1093/heapol/czp010, Oxford University Press.

2 DESCRIPTION

Support RHIS improvements by objectively measuring performance and identifying the factors that hinder performance.

The PRISM conceptual framework sets forth the premise that the success of RHIS depends on success in three interrelated areas: technical, organizational and behavioral conditions. Unlike traditional assessments, which focus primarily on technical issues, the PRISM Tools look at the determinants of RHIS performance in all three areas.

The PRISM Tools include the following four tools:

1. **RHIS Performance Diagnostic Tool**—The primary component in the toolset, this determines the overall level of RHIS performance, looking separately at quality of data and use of information, to identify weak areas. This diagnostic tool identifies strengths and weaknesses; the other three tools identify the underlying technical, organizational, and behavioral reasons for those strengths and weaknesses.
2. **RHIS Overview and Facility/Office Checklist**—This examines technical determinants such as the structure and design of existing information systems in the health sector, information flows, and interaction between different information systems. This tool is used to understand the availability and status of RHIS resources and procedures used at health offices and facilities.
3. **Organizational and Behavioral Questionnaire**—This looks at behavioral and organizational factors that affect RHIS performance. Do staff members have the necessary knowledge, skills, problem-solving ability, confidence, and motivation? Does the organization promote a culture that values information quality and use? Comparing these factors with RHIS performance identifies gaps and opportunities for improvements.
4. **RHIS Management Assessment Tool**—This is designed to rapidly take stock of the management and supportive practices of RHIS, and to aid in developing recommendations for RHIS management.

The PRISM User Guide provides step by step instructions to understand the rationale of the questions and how to use them in the field. It provides information about the uses of each tool, strengths and weaknesses, and when to use it alone or in combination with other tools. The guide instructs sampling methodology options to use in the field. The PRISM Data Entry and Analysis Tool (PRISM-DEAT) helps in entering and analysis of the PRISM data. The instructions are part of the PRISM user guide

Assess the performance of a routine health information system

PRISM Tools provide the methods to objectively measure data quality and the degree to which information is used for evidence-based decision making. For example, all health facilities in a district were submitting monthly RHIS reports to the district health office, but only 50 percent of the data in the reports were accurate when compared to patient records. Information was not used for decision making; the district office did not systematically review RHIS information.

Provide evidence on the factors that affect RHIS performance

PRISM Tools identify specific technical, behavioral, and organizational factors that affect RHIS performance. For example, in the case above, RHIS performance was hindered by complicated data collection registers and forms, lack of motivation of staff to collect data, and their lack of understanding of the utility of that data. Senior managers were not interested in using the information that was collected. A key advantage of PRISM Tools is the focus on behavioral and organizational determinants, and how these issues relate to technical determinants. The PRISM approach clarifies whether technical, behavioral, and organizational determinants have influenced performance directly or are mediated through behavioral factors. For example, the most sophisticated computer network available could still produce fallible data if management has not established a culture that fosters staff knowledge, best practices, and motivation. The PRISM assessment, therefore, provides a holistic picture of the existing information system—an informed, real-world perspective from which to design the most effective improvements.

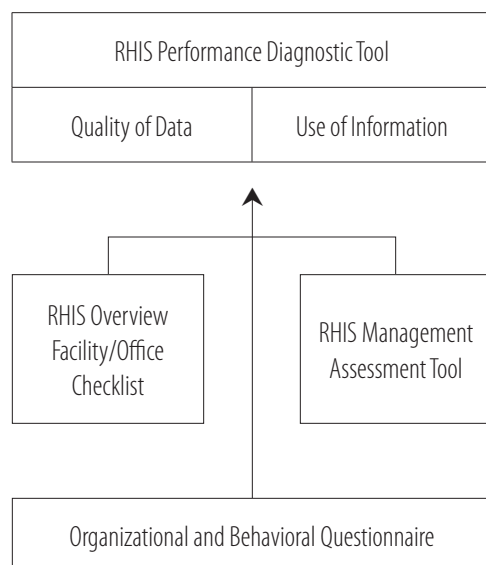
Aids in the design of interventions to improve RHIS performance

A PRISM assessment identifies which technical, behavioral, and organizational determinant(s) should be modified to improve RHIS performance. For example, one PRISM assessment led to proposals for the following interventions:

- Simplification of data collection forms.
- Refresher training in data collection and processing for health workers.
- Regular publication of a newsletter to show success stories of where information was used to improve health facility performance.
- Regular monthly staff meetings to monitor health facilities' performance against objectives using RHIS data.

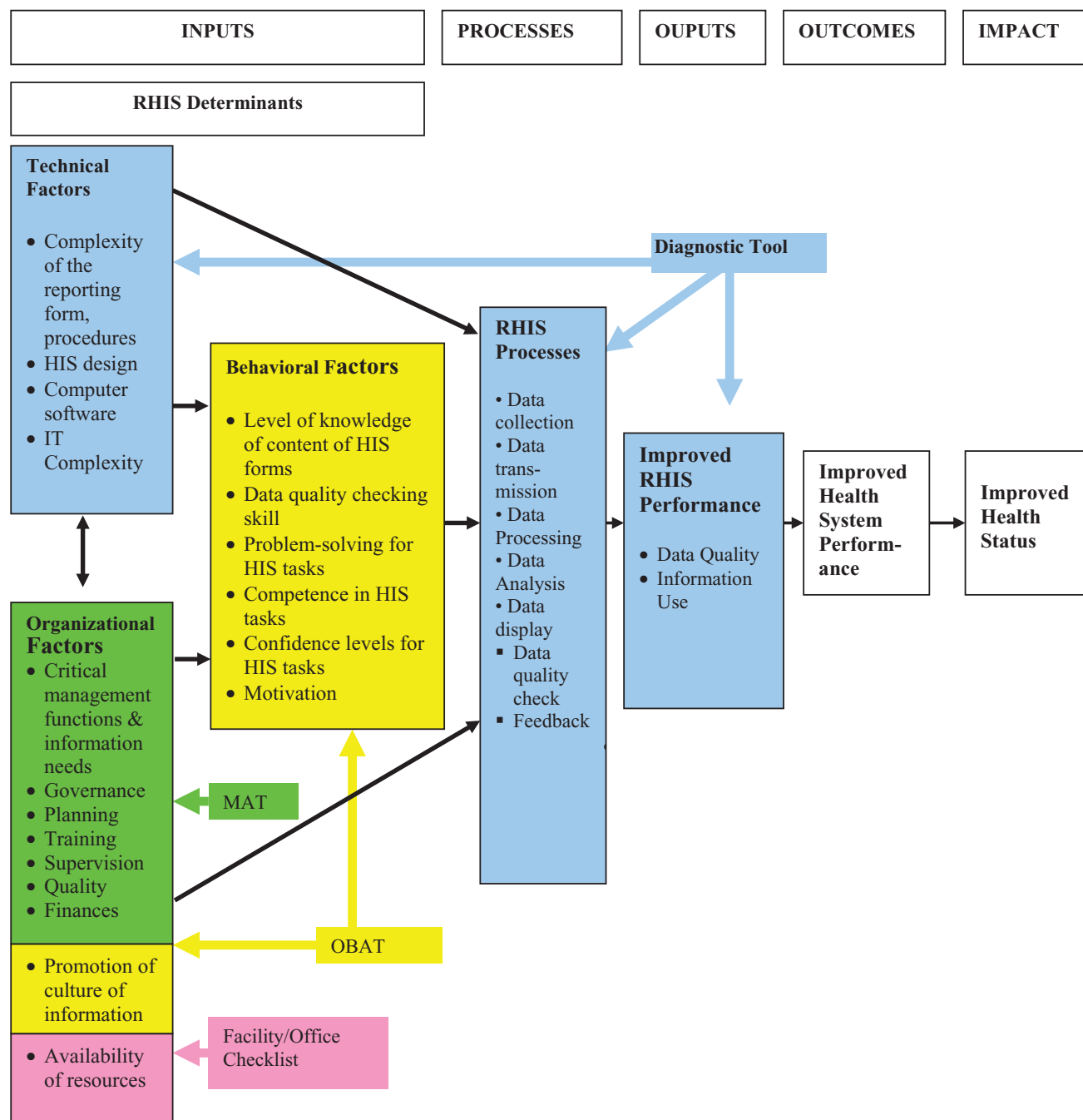
Support ongoing efforts to monitor and evaluate data quality and use

Figure 1: PRISM Tools.



PRISM Tools can be used in a supervisory capacity to continuously monitor data quality and use and to evaluate RHIS performance over time and gauge the efficacy of designed interventions to improve the information system. PRISM Tools can be adapted and applied at international, national or sub-national levels. The tools can be adapted to reflect variances in RHIS design, decision-making processes and stakeholders. The tools described in this document have been designed for a routine facility-based health information system. However, the tools can be adapted for other data sources, such as vital events registration systems, or non-routine health information systems, such as surveys. Figure 1 shows how these tools relate to one another. Collectively, these tools provide a comprehensive picture of RHIS performance and its contributing factors—technical, organizational, and behavioral.

Figure 2



3 TEMPLATES

To assess and improve the performance of a routine health information system.

Blank versions of the PRISM Tools template in Microsoft Word format—as well as the PRISM User guide, PRISM Data Entry and Analysis Tool, and RHIS course—are also available for download from the MEASURE Evaluation Web site (<http://measureevaluation.org/tools/data-demand-use>).

RHIS Performance Diagnostic Tool

Quality of Data Assessment: District Office Form

Name of the District:			Date of Assessment:		
Name of the Assessor:			Name and Title of Person Interviewed:		
Data Transmission					
DQ 1	Does the district office keep copies of RHIS monthly reports sent by health facilities?			1.Yes	0.No
DQ 2	What is the number of facilities in the district that are supposed to be reporting to (enrolled in) RHIS?				
DQ 3	What is the number of facilities in the district that are actually reporting to (enrolled in) RHIS?				
DQ 4	Count the number of monthly reports submitted by the facilities for any two months (of the surveyor's choosing)..			a.month	b.month
DQ 5	What is the deadline for the submission of the RHIS monthly report by facility?				If no deadline is set, write no and go to Q8
DQ 6	Does the district office record receipt dates of the RHIS monthly report?			1.Yes	0.No
	If DQ6 yes, check the dates of receipts for the two months (DQ7 the total number of reports received before and after the deadline should be the same as in Q4).				
		a. Month (specify)		b. Month (specify)	
DQ 7	Item	1. Before deadline	2. After deadline	3. Before deadline	4. After deadline
	Number of facilities				
DQ 8	Does the district have a record of people who receive monthly report data by a certain deadline after receiving monthly reports from the facilities?			1.Yes	0.No
DQ 9	Does the district have a record of submitting data on time to regional and/or national levels?			1.Yes	0.No
Data Accuracy					
	Manually count the number of following data items from the RHIS monthly reports for the selected two months. Compare the figures with the reports from the computer or paper database.				
DQ 10	Item	a. Month (specify)		b. Month (specify)	
		Manual count	Paper/computer	Manual count	Paper/Computer
DQ A					
DQ B					
DQ C					
Data Processing/Analysis					
DQ 11	Does a database exist to enter and process data?	0. No	1. Yes, by paper database	2. Yes, by computer database	
DQ 12	Does the database produce the following?				
DQ 12a	Calculate indicators for each facility catchment area			1.Yes	0.No
DQ 12b	Data summary report for the district			1.Yes	0.No
DQ 12c	Comparisons among facilities			1.Yes	0.No
DQ 12d	Comparisons with district/national targets			1.Yes	0.No
DQ 12e	Comparisons among types of services coverage			1.Yes	0.No
DQ 12f	Comparisons of data over time (monitoring over time)			1.Yes	0.No

DQ13	Do you think that the RHIS procedure manual is user-friendly?	1.Yes	0.No	
DQ 14	Do you think that the monthly report form is complex and difficult to follow?	0.Yes	1.No	
DQ 15	Do you find the data software to be user-friendly?	1.Yes	0.No	
DQ 16	Do you find that information technology is easy to manage?	1.Yes	0.No	
DQ 17	Do you think that information system design provides a comprehensive picture of health system performance?	1.Yes	0.No	
DQ 18	Do you think RHIS has information that is also included in other information system?	1.Yes	0.No	
DQ 19	Does the RHIS software integrate data from different information systems?	1.Yes	0.No	
DQ 20	Does the information technology (Land Area Network –LAN or wireless network) exist to provides access to information to all district managers and senior management	1.Yes partially	2.Yes completely	0.No
DQ 21				
DQ 22				
DQ 23				
DQ 24				
DQ 25				

RHIS Performance Diagnostic Tool

Use of Information District Assessment Form

		Name of Assessor:																									
District:		Name of Respondent and Title:																									
RHIS Report Production																											
DU1	Does this district office compile RHIS Data submitted by facilities?	1.Yes	0.No																								
DU2	Does the district issue any report containing RHIS information?	1.Yes	0.No	If no , go to DU4																							
DU3	<p>If yes, please list reports that contain data/information generated through the RHIS. Please indicate the frequency of these reports and the number of times the reports actually were issued during the last 12 months. Please confirm the issuance of the report by counting them and putting the number in column 3.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 55%;">1. Title of the report</td> <td style="width: 15%;">2.No. of times this report is supposed to be issued per year</td> <td style="width: 15%;">3. No. of times that report are actually issued for the last 12 months</td> <td style="width: 15%;"></td> </tr> <tr> <td>DU3a</td> <td></td> <td></td> <td></td> </tr> <tr> <td>DU3b</td> <td></td> <td></td> <td></td> </tr> <tr> <td>DU3c</td> <td></td> <td></td> <td></td> </tr> <tr> <td>DU3d</td> <td></td> <td></td> <td></td> </tr> <tr> <td>DU3e</td> <td></td> <td></td> <td></td> </tr> </table>			1. Title of the report	2.No. of times this report is supposed to be issued per year	3. No. of times that report are actually issued for the last 12 months		DU3a				DU3b				DU3c				DU3d				DU3e			
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DU3a																											
DU3b																											
DU3c																											
DU3d																											
DU3e																											
DU4	Did the district office send a feedback report using RHIS information to facilities during the last three months?	1.Yes	0.No																								
Display of Information																											
DU5	Does the district office display the following data? Please indicate the types of data displayed and whether the data are updated for the last reporting period.			If no go to DU6																							
	1.Indicator	2.Type of display (Please tick)	3. Updated																								
DU5a	Related to mother health	Table	1.Yes 0.No																								
		Graph/Chart																									
		Map																									
DU5b	Related to child health	Table	1.Yes 0.No																								
		Graph/Chart																									
		Map																									
DU5c	Facility Utilization	Table	1.Yes 0.No																								
		Graph/Chart																									
		Map																									
DU5d	Disease surveillance	Table	1.Yes 0.No																								
		Graph/Chart																									
		Map																									
DU6	Does the office have a map of the catchment area?		1.Yes 0.No																								
DU7	Does the office display a summary of demographic information such as population by target group(s)?		1.Yes 0.No																								

DU8	Is feedback quarterly, yearly or any other report on RHIS data available, which provides guidelines/recommendations for actions?	1.Yes	0.No	If no, go to DU10
DU9	If yes to DU8, what kinds of decisions are made in reports of RHIS data/information for actions? Please check types of decision based on types of analysis present in reports.			
	Types of decisions based on types of analysis			
DU9a	Appreciation and acknowledgement based on number/percentage of facilities showing performance within control limits over time (month to month comparisons)	1.Yes	0.No	
DU9b	Mobilization/shifting of resources based on comparison by facilities	1.Yes	0.No	
DU9c	Advocacy for more resources by comparing performance by areas (sub-districts, cities, villages), human resources and logistics	1.Yes	0.No	
DU9d	Development and revision of policies by comparing types of services	1.Yes	0.No	
	Discussion and decisions about use of information	1.Yes	0.No	
DU10	Does the district office have routine meetings for reviewing managerial or administrative matters?	1.Yes	0.No	
DU11	How frequently is the meeting supposed to take place? Circle appropriate answer 4. weekly 3. After every two weeks 2. monthly 1. quarterly 0. no schedule			
DU12	How many times did the meeting take place during the last three months? Circle appropriate answer 12. 12 times 11. Between 7 and 11 6. 6 times 5. either 4 or 5 3. 3 times 2. 2 times 1. 1 time 0. none			
DU13	Is an official record of management meetings maintained?	1.Yes	0.No	If no, go to DU15
DU14	If yes, please check the meeting records for the last three months to see if the following topics were discussed:			
DU14a	Management of RHIS, such as data quality, reporting, or timeliness of reporting	1.Yes, observed	0. No	
DU14b	Discussion about RHIS findings such as patient utilization, disease data, or service coverage, or medicine stock out	1.Yes, observed	0. No	
DU14c	Have they made any decisions based on the above discussions?	1.Yes, observed	0. No	
DU14d	Has any follow-up action taken place on the decisions made during the previous meetings?	1.Yes, observed	0. No	
DU14e	Are there any RHIS related issues/problems referred to regional/national level for actions?	1.Yes, observed	0. No	
	Promotion and Use of RHIS information at district/higher level			
DU15	Did district annual action plan showed decisions based on HIS information?	1.Yes	0.No	
DU16	Did records of district office of last three months show that district/senior management issued directives on use of information	1.Yes	0.No	
DU17	Did district/national RHIS office publish newsletter/report in last three months showing examples of use of information	1.Yes	0.No	

DU18	Does documentation exist showing the use information for various types of advocacy?	1.Yes	0.No	
DU19	Does the district staff meeting records show attendance of persons in charge of the facilities for discussion on RHIS performance?	1.Yes	0.No	
DU20: Please describe examples of how the district office uses RHIS information for health system management 0. No examples 1. Yes (details follows)				

DU21		
DU22		
DU23		
DU24		
DU25		

RHIS Performance Diagnostic Tool Quality of Data Assessment: Health Facility Form						
Date of Assessment:		Name of the Assessor:		Name and Title of person Interviewed:		
District		Facility		Type		
Data Recording						
FQ1	Does this facility keep copies of the RHIS monthly reports which are sent to the district office?			1.Yes	0.No	If no, go to Q5
FQ2	Count the number of RHIS monthly reports that have been kept at the facility for the last twelve months					
FQ3	Does this facility keep an outpatient register?			1.Yes	0.No	If no, go to Q5
Data Accuracy Check						
FQ4	Find the following information in the outpatient register for the selected two months. Compare the figures with the computer-generated reports.					
	Item	a. Month (specify)		b. Month (specify)		
		# from register	# from report	# from register	# from report	
4A						
4B						
4C						
4D						
FQ5	Did you receive a directive in the last three months from the senior management or the district office to:					
	5A Check the accuracy of data at least once in three months?			1.Yes, Observed	0. No	
	5B Fill the monthly report form completely			1.Yes, Observed	0. No	
	5C Submit the report by the specified deadline			1.Yes, Observed	0. No	
FQ6	During the last three months, did you receive a directive from the senior management or the district office that there will be consequences for not adhering to the following directives:					
	6A if you do not check the accuracy of data			1.Yes, Observed	0. No	
	6B If you do not fill in the monthly reporting form completely			1.Yes, Observed	0. No	
	6C If you do not submit the monthly report by the specified deadline			1.Yes, Observed	0. No	
Data Completeness						
FQ7	How many data items does the facility need to report on in the RHIS monthly report? This number does not include data items for services not provided by this health facility.					
FQ8	Count the number of data items that are supposed to be filled in by this facility but left blank without indicating "0" in the selected month's report.					
Data Transmission/Data Processing/Analysis						
FQ9	Do data processing procedures or a tally sheet exist?			1. Yes, Observed	0. No	
FQ10	Does the facility produce the following?					
FQ A	Calculate indicators facility catchment area			1. Yes, Observed	0. No	
FQ B	Comparisons with district or national targets			1. Yes, Observed	0. No	
FQ C	Comparisons among types of services coverage			1. Yes, Observed	0. No	
FQ D	Comparisons of data over time (monitoring over time)			1. Yes, Observed	0. No	
FQ11	Does a procedure manual for data collection (with definitions) exist?			1. Yes, Observed	0. No	
FQ12						
FQ13						
FQ14						
FQ15						
FQ16						

RHIS Performance Diagnostic Tool

Use of Information: Facility Assessment Form

Date:	Name of Assessor:																							
Facility Name:	Name of Respondent and Title:																							
Facility Type:	District:																							
RHIS Report Production																								
FU1	Does this facility compile RHIS Data?	1.Yes	0.No																					
FU2	Does the facility compile any report containing RHIS information?	1.Yes	0.No	If no, go to UI4																				
FU3	<p>If yes, please list reports that contain data/information generated through the RHIS. Please indicate the frequency of these reports and the number of times the reports actually were issued during the last 12 months. Please confirm the issuance of the report by counting them and putting the number in column 3.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 55%;">1. Title of the report</td> <td style="width: 15%;">2. No. of times this report is supposed to be issued per year</td> <td style="width: 15%;">3. No. of times this report actually has been issued during the last 12 months</td> <td style="width: 15%;"></td> </tr> <tr> <td>FU3a</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FU3b</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FU3c</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FU3d</td> <td></td> <td></td> <td></td> </tr> </table>			1. Title of the report	2. No. of times this report is supposed to be issued per year	3. No. of times this report actually has been issued during the last 12 months		FU3a				FU3b				FU3c				FU3d				
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FU3a																								
FU3b																								
FU3c																								
FU3d																								
FU4	During the last three month, did the facility receive any feedback report from district office on their performance?	1.Yes	0. No																					
Display of Information																								
FU5	Does the facility display the following data? Please indicate types of data displayed and whether the data have been updated for the last reporting period.			If no go to UI6																				
	1. Indicator	2. Type of display (Please tick)	3. Updated																					
FU5a	Related to maternal health	Table	1.Yes 0.No																					
		Graph/Chart																						
		Map/other																						
FU5b	Related to child health	Table	1.Yes 0.No																					
		Graph/Chart																						
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FU5c	Facility utilization	Table	1.Yes 0.No																					
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FU5d	Disease surveillance	Table	1.Yes 0.No																					
		Graph/Chart																						
		Map/other																						
FU6	Does the facility have a map of the catchment area?	1.Yes	0.No																					
FU7	Does the office display a summary of demographic information such as population by target group(s)?	1.Yes	0.No																					
FU8	Is feedback, quarterly, yearly or any other report on RHIS data available, which provides guidelines/ recommendations for actions?	1.Yes	0.No	If no go to UI10																				

FU9	If you answered yes to question DU8, what kinds of action-oriented decisions have been made in the reports (based on RHIS data)? Please check the boxes accordingly			
	Types of decisions based on types of analyses			
FU9a	Review strategy by examining service performance target and actual performance from month to month	1.Yes	0.No	
FU9b	Review facility personnel responsibilities by comparing service targets and actual performance from month to month	1.Yes	0.No	
FU9c	Mobilization/shifting of resources based on comparison by services	1.Yes	0.No	
FU9d	Advocacy for more resources by showing gaps in ability to meet targets	1.Yes	0.No	
	Discussion and Decision based on RHIS information			
FU10	Does the facility have routine meetings for reviewing managerial or administrative matters?	1.Yes	0.No	If no, go to UI15
FU11	How frequently is the meeting supposed to take place? 4. weekly 3. After every two weeks 2. monthly 1. quarterly 0. no schedule			
FU12	How many times did the meeting actually take place during the last three months? 12. 12 times 11. Between 7 and 11 6. 6 times 5. either 4 or 5 3. 3 times 2. 2 times 1. 1 time 0. none			
FU13	Is an official record of management meetings maintained?	1.Yes	0.No	If no, go to FUI15
FU14	If yes, please check the meeting records for the last three months to see if the following topics were discussed:			
FU14a	Management of RHIS, such as data quality, reporting, or timeliness of reporting	1.Yes, observed	0. No	
FU14b	Discussion on RHIS findings such as patient utilization, disease data, or service coverage, medicine stock out	1.Yes, observed	0. No	
FU14c	Have they made any decisions based on the above discussions?	1.Yes, observed	0. No	
FU14d	Has any follow-up action taken place regarding the decisions made during the previous meetings?	1.Yes, observed	0. No	
FU14e	Are there any RHIS related issues or problems that were referred to the district or regional level for actions?	1.Yes, observed	0. No	
	Promotion and Use of RHIS information by the district/higher level			
FU15	Observed facility received annual/monthly planned targets based on RHIS information	1.Yes	0.No	
FU16	Do facility records for the last three months show that district/senior management issued directives concerning the use of information	1.Yes	0.No	
FU17	Did the facility receive a district or national RHIS office newsletter or report in last three months giving examples of use of information	1.Yes	0.No	
FU18	Does documentation exist showing the use information for advocacy purposes?	1.Yes	0.No	
FU19	Did the person in charge of the facility participate in meetings at district level to discuss RHIS performance for the last three months?	1.Yes	0.No	
FU20: Please give examples of how the facility uses RHIS information for health system management 0. No examples 1. Yes (details follows)				

	Supervision by the District Health Office			
FU21	How many times did the district supervisor visit your facility during the last three months? (check the answer)	0. 1. 2 3. 4. >3		If zero, go to FU26
FU22	Did you observe a supervisor having a checklist to assess the data quality?	1.Yes	0.No	
FU23	Did the supervisor check the data quality?	1.Yes	0.No	
FU24	Did the district supervisor discuss performance of health facilities based on RHIS information when he/she visited your facility?	1.Yes	0.No	
FU25	Did the supervisor help you make a decision based on information from the RHIS?	1.Yes	0.No	
FU26	Did the supervisor send a report/feedback/note on the last two supervisory visits?	1.Yes	0.No	
FU27				
FU28				
FU29				
FU30				
FU31				

Routine Health Information System Overview

Overview of Information Systems in Health Sector

(Interview HIS Manager at district and sub-national level)

Level: ☐ National
☐ Sub-national (district, province, etc.)
Name (of district, province, etc.) _____

Respondent's Name:

Function/Title:

Institution:

Department:

Mapping existing routine information systems in health sector (OPTIONAL)

Using the sheet 1: "Information system mapping," list all routine information systems existing in the country/region/district.

This exercise will help you to understand types of health sector information that are included (or not included) by information systems. It will also help to identify duplication of information systems.

- 1) Write down specific names of the information systems.
- 2) Identify types of information covered by each system and check relevant boxes. You may also write comments in the box. For example, an information system for EPI may handle information on drug supplies but it might be limited to vaccines. You can indicate "vaccine only" in the box. Similarly, MCH specific information systems may collect information on service utilization of MCH services only.
- 3) Please describe how information from different information systems are shared. For example, between TB programs and HIV/AIDS programs.

1: Information System Mapping (OPTIONAL)

[illegible]

2. Data collection and transmission

Please list all data collection tools/forms that are used at the community/health facility level. If space is not enough, please add an additional sheet of paper.

Facility-based data collection tools: (such as patient registers)	Comments on tools. Is the form easy to use? Enough space to record data? Takes too much time?
•	
•	
•	
•	
•	
•	
Data transmission/reporting forms	Comments on forms. Is the form easy to use? Enough space to record data? Takes too much time?
•	
•	
•	
•	
•	
•	

3. Information flowchart

Using the chart provided on the next page, illustrate the flow of information from community to health facility, health facility to district level, district level to regional level, regional level to the central/national level. For each level, please indicate specific departments/job titles which should receive and process information received from a lower level.

This exercise will help you to clarify information flows in existing information systems and identify potential problems, which affect the performance of the information systems.

- 1) If some levels, e.g. community level and regional level, are not relevant to systems that you are examining, please omit them from the exercise.
- 2) Please be as specific in identifying information sources and data transmission points as possible. For example, if different types of facilities have different reporting units at district level, you will want to indicate these different paths of information.
- 3) Add more than one information system to see interactions between information systems and how complicated or simple information flows are in your health system. You can see how basic routine health information system's information flow interacts with special program information systems such as EPI, HIV/AIDS, and Malaria.
- 4) You can be creative in indicating different information flows in different colors. For example, you can indicate the data aggregation process in red and the information feedback process in blue color. Or General RHIS in green and EPI in pink, etc.

Information Flow Sheet									
Levels	Types of Information Systems								
	HMIS	EPI	TB	Malaria	HIV/AIDS	MCH	Contraceptive	Administrative system (Finance)	Community information system
Central/National Level									
Regional Level (Province)									
District Level									
Facility Level									
Community Level									

Information Flow Sheet									
Levels	Types of Information Systems								
	HMIS	EPI	TB	Malaria	HIV/AIDS	MCH	Contraceptive	Administrative system (Finance)	Community information system
Central/National Level									
Regional Level (Province)									
District Level									
Facility Level									
Community Level									

1: Information System Mapping (OPTIONAL)

Types of Information Handled by Each Systems

[illegible]

B. Organization of the health facility			
B.1. Please describe total number of persons under each category below: (Adapt according to the country situation)			
B.2. Title/ post	Number		Number
1. Medical officer		10. Health educator	
2. Comprehensive nurse registered		11. Health inspector	
3. Comprehensive nurse enrolled		12. Laboratory technician	
4. Nursing Assistance		13. Public health dental assistant	
5. Clinical officer		14. Anesthetic officer	
6. Laboratory Assistant		15. Midwife	
7. Health Assistant		16. Support staff	
8. Dispenser		17. Other (specify)	
9. Health information assistant			
B.3. Who fills in the HMIS monthly reports? <i>Specify the codes from Q B.2.</i>			
B.4. List those staff members who received any training in the recording, processing, or reporting of health information during the last two years, the number of trainings received, and the year of the latest training.			
B.4.a. Title or Post (Coding from QB.2)	B.4.b. How many trainings courses/sessions did this person received in the past three years?	B.4.c. Year of last training?	B.4.d. Subjects of last training: 1. data collection 2. data analysis 3. data display/report 4. 1&2 5. 1&3 6. 2&3 7. 1,2 & 3 8. other (specify)
1.			
2.			
3.			
4.			
5.			

BB1. Only for Staff at District or Higher level	
Staffing	
BB.1 Total number of persons working in district HMIS office including sub-districts?	
BB.2 Total number of persons working in district HMIS office excluding sub-districts?	
BB.3 Total number of district and sub-district staff in district HMIS office trained to collect, verify and analyze information?	

RHIS Management Assessment Tool

(Observation at facility and higher levels)

Questions under grey areas are not for the facility level

MAT1. Name of the Facility		MAT2. Name of the Assessor		
MAT3. Name of the District		MAT4: Date of Assessment		
MATG1	Presence of RHIS Mission displayed at prominent position(s)	0 No	1 Yes	
MATG2	Presence of management structure for dealing with RHIS related strategic and policy decisions at district and higher levels	0 No	1 Yes	
MATG3	Presence of an updated (last year) district health management organizational chart, showing functions related to RHIS/health information	0 No	1 Yes	
MATG4	Presence of distribution list and documentation of RHIS past monthly/quarterly report distribution at district or higher level	0 No	1 Yes	
MATP1	Presence of RHIS situation analysis report less than 3 year old	0 No	1 Yes	
MATP2	Presence of RHIS 5 year plan at district or higher level	0 No	1 Yes	
MATP3	Presence of RHIS targets at facility and higher level	0 No	1 Yes	
MATQ1	Presence of a copy of RHIS standards at district or higher levels	0 No	1 Yes	
MATQ2	Presence of a copy of RHIS standards at facility	0 No	1 Yes	
MATQ3	Presence of performance improvement tools (flow chart, control chart etc.) at the facility	0 No	1 Yes	
MATT1	Does facility/district have a RHIS training manual?	0 No	1 Yes	
MATT2	Presence of mechanisms for on-job RHIS training (see documentation)	0 No	1 Yes	
MATT3	Presence of schedule for planned training	0. No	1. Yes, for one year	2. Yes, 2 years or more
MATS1	Presence of RHIS supervisory checklist	0 No	1 Yes	
MATS2	Presence of schedule for RHIS supervisory visit	0 No	1 Yes	
MATS3	Presence of supervisory reports	0 No	1 Yes	
MATF1	Presence of RHIS related expense register	0 No	1 Yes	
MATF2	Presence of mechanisms for generating funds for RHIS	0 No	1 Yes	
MATF3	Presence of RHIS monthly/quarterly financial report	0 No	1 Yes	
MATF4	Presence of long term financial plan for supporting RHIS activities	0 No	1 Yes	

Organizational and Behavioural Assessment Tool

(To be filled by staff and management at all levels)

Introduction

This survey is part of the _____, to improve Management Information Systems in the health sector. The objective of this survey is to help develop interventions for improving information system and use of information. Please express your opinion honestly. Your responses will remain confidential and will not be shared with anyone, except for presented table forms. We appreciate your assistance and co-operation in completing this study.

Thank you.

IDI. Name of facility

ID2. District

DD1. Title of the person filling the questionnaire (circle answer)

(Make these categories appropriate to the host country)

1. Provincial DG
2. Provincial HMIS focal person
3. District HO
4. District HMIS focal person
5. Facility in charge
6. Other facility staff (specify) -----

DD2. Age of the person -----

DD3. Sex 1. Male 2. Female

DD4. Education

1. 10 years 2. Intermediate (11-12) 3. Bachelor (13-14) 4. Master
5. Professional diploma/degree (specify)-----
6. Other (specify) -----.

DD5. Years of employment -----

DD6. Did you receive any training in HMIS related activities in last six months? 0. No 1. Yes

We would like to know your opinion about how strongly you agree with certain activities carried out by _____. There are no right or wrong answers, but only expression of your opinion on a scale. The scale is about assessing the intensity of your belief and ranges from strongly disagree (1) to strongly agree (7). You have to determine first whether you agree or disagree with the statement. Second decide about the intensity of agreement or disagreement. If you disagree with statement then use left side of the scale and determine how much disagreement that is – strongly disagree (1), somewhat disagree (2), or disagree (3) and circle the appropriate answer. If you are not sure of the intensity of belief or think that you neither disagree nor agree then circle 4. If you agree with the statement, then use right side of the scale and determine how much agreement that is – agree (5), somewhat agree (6), or strongly agree (7) and circle the appropriate answer. Please note that you might agree or disagree with all the statements and similarly you might not have the same intensity of agreement or disagreement and thus variations are expected in expressing your agreement or disagreement. We encourage you to express those variations in your beliefs.

This information will remain confidential and would not be shared with anyone, except presented as an aggregated data report. Please be frank and choose your answer honestly.

Strongly disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

To what extent, do you agree with the following on a scale of 1-7?

In health department, decisions are based on

	Strongly Disagree	Somewhat Disagree	Disagree	Neither Disagree nor Agree	Agree	Somewhat Agree	Strongly Agree
D1. Personal liking	1	2	3	4	5	6	7
D2. Superiors' directives	1	2	3	4	5	6	7
D3. Evidence/facts	1	2	3	4	5	6	7
D4. Political interference	1	2	3	4	5	6	7
D5. Comparing data with strategic health objectives	1	2	3	4	5	6	7
D6. Health needs	1	2	3	4	5	6	7
D7. Considering costs	1	2	3	4	5	6	7

Strongly Disagree	Somewhat Disagree	Disagree	Neither Disagree nor Agree	Agree	Somewhat Agree	Strongly Agree
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In health department, superiors

S1. Seek feedback from concerned persons	1	2	3	4	5	6	7
S2. Emphasize data quality in monthly reports	1	2	3	4	5	6	7
S3. Discuss conflicts openly to resolve them	1	2	3	4	5	6	7
S4. Seek feedback from concerned community	1	2	3	4	5	6	7
S5. Use HMIS data for setting targets and monitoring	1	2	3	4	5	6	7
S6. Check data quality at the facility and higher level regularly	1	2	3	4	5	6	7
S7. Provide regular feedback to their staff through regular report based on evidence	1	2	3	4	5	6	7
S8. Report on data accuracy regularly	1	2	3	4	5	6	7

In health department, staff

P1. Are punctual	1	2	3	4	5	6	7
P2. Document their activities and keep records	1	2	3	4	5	6	7
P3. Feel committed in improving health status of the target population	1	2	3	4	5	6	7
P4. Set appropriate and doable target of their performance	1	2	3	4	5	6	7
P5. Feel guilty for not accomplishing the set target/performance	1	2	3	4	5	6	7
P6. Are rewarded for good work	1	2	3	4	5	6	7

Strongly Disagree	Somewhat Disagree	Disagree	Neither Disagree nor Agree	Agree	Somewhat Agree	Strongly Agree
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In health department, staff

P7. Use HMIS data for day to day management of the facility and district

1 2 3 4 5 6 7

P8. Display data for monitoring their set target

1 2 3 4 5 6 7

P9. Can gather data to find the root cause(s) of the problem

1 2 3 4 5 6 7

P10. Can develop appropriate criteria for selecting interventions for a given problem

1 2 3 4 5 6 7

P11. Can develop appropriate outcomes for a particular intervention

1 2 3 4 5 6 7

P12. Can evaluate whether the targets or outcomes have been achieved

1 2 3 4 5 6 7

P13. Are empowered to make decisions 1 2 3 4 5 6 7

P14. Able to say no to superiors and colleagues for demands/decisions not supported by evidence

1 2 3 4 5 6 7

P15. Are made accountable for poor performance

1 2 3 4 5 6 7

P16. Use HMIS data for community education and mobilization

1 2 3 4 5 6 7

P17. Admit mistakes for taking corrective actions

1 2 3 4 5 6 7

Personal

BC1. Collecting information which is not used for decision making discourages me

1 2 3 4 5 6 7

BC2. Collecting information makes me feel bored

1 2 3 4 5 6 7

Strongly Disagree	Somewhat Disagree	Disagree	Neither Disagree nor Agree	Agree	Somewhat Agree	Strongly Agree
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BC3. Collecting information is meaningful for me

1 2 3 4 5 6 7

BC4. Collecting information gives me the feeling that data is needed for monitoring facility performance

1 2 3 4 5 6 7

BC5. Collecting information gives me the feeling that it is forced on me

1 2 3 4 5 6 7

BC6. Collecting information is appreciated by co-workers and superiors

1 2 3 4 5 6 7

U1. Describe at least three reasons for collecting data on monthly basis on the followings:

U1A. Diseases

- 1.
- 2.
- 3.

U1B. Immunization

- 1.
- 2.
- 3.

U1C. Why is population data of the target area needed?

- 1.
- 2.
- 3.

U2. Describe at least three ways of checking data quality.

- 1.
- 2.
- 3.

Dr. Akram, EDO Health, read a recent district report which showed that the data quality was 40% and felt very disturbed by it. "I need to take actions," he said aloud. He paced back and forth thinking about his next steps to improve data quality. After some time, he calmed down and wrote his action plan. Please describe how Dr. Akram defined the problem and what major activities Dr. Akram must have included in his action plan for improving data quality.

PSa. Definition of the problem

PSb. Major activities

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

SELF-EFFICACY

This part of the questionnaire is about your perceived confidence in performing tasks related to health information systems. High confidence indicates that person could perform the task, while low confidence means room for improvement or training. We are interested in knowing how confident you feel in performing HMIS-related tasks. Please be frank and rate your confidence honestly.

Please rate your confidence in percentages that you can accomplish the HMIS activities.

Rate your confidence for each situation with a percentage from the following scale

	0	10	20	30	40	50	60	70	80	90	100
SE1. I can check data accuracy	0	10	20	30	40	50	60	70	80	90	100
SE2. I can calculate percentages/rates correctly	0	10	20	30	40	50	60	70	80	90	100
SE3. I can plot data by months or years	0	10	20	30	40	50	60	70	80	90	100
SE4. I can compute trend from bar charts	0	10	20	30	40	50	60	70	80	90	100
SE5. I can explain findings & their implications	0	10	20	30	40	50	60	70	80	90	100
SE6. I can use data for identifying gaps and setting targets	0	10	20	30	40	50	60	70	80	90	100
SE7. I can use data for making various types of decisions and providing feedback	0	10	20	30	40	50	60	70	80	90	100

We would like you to solve these problems about calculating percentages, rates and plotting and interpreting information.

C1. The estimated number of pregnant mothers is 340. Antenatal clinics have registered 170 pregnant mothers. Calculate the percentage of pregnant mothers in the district attending antenatal

C2. The full immunization coverage for 12-23 month-old children were found 60%, 50%, 30%, 40%, 40% for years 1997, 1998, 1999, 2000 and 2001 respectively.

C2a. Develop a bar chart for coverage percentages by years

C2b. Explain the findings of bar chart

C2c. Did you find a trend in the data? If yes or no, explain reason for your answer

2d. Provide at least one use of above chart findings at:

UD1. Facility level

UD2. District level

UD3. Policy Level

UD4. Community level

C3. A survey in a district found 500 children under five years old that were malnourished. The total population of children less than five years old was 5,000. What is the malnutrition rate?

C4. If the malnutrition rate in children less than two years old was 20% and the number of total children less than two years old was 10,000, then calculate number of children who are malnourished.

4 GUIDING PRINCIPLES

The PRISM Tools approach—issues and considerations for using this tool.

PRISM Tools are based on a holistic approach to health interventions. This approach acknowledges that:

- RHIS performance depends on a combination of technical, organizational, and behavioral factors.
- Each component and contributor in the system contributes to the whole system—and the whole is more than the sum of its parts.
- The causal influences of determinants in all three areas must first be understood in order to improve health system performance.

Data quality depends on human factors.

- When data collectors understand the importance of their contributions to the RHIS, they will be more committed to producing high-quality data and analysis.
- When decision-makers believe they have high-quality data at hand, they are more likely to use that data for evidence-based decisions.
- When people are empowered to make decisions and act upon them, they become champions for creating accountability and transparency through information sharing.

PRISM Tools identify issues related to these dimensions and help in designing ways to resolve them.

Health system managers and other stakeholders must have ownership

An organization can apply PRISM Tools to discover ways to address its deficiencies, but investments in RHIS reform will require buy-in and commitment from many levels of the organization. So, it is important to include a broad base of RHIS and program staff at all levels of the health system in the assessment phase—and to engage senior managers in designing interventions and incorporating the PRISM process as a regular activity.

When an organization creates a sense of ownership, RHIS initiatives become the responsibility of each of its members. Ownership ultimately leads to the sustained investments required for continuous improvement.

PRISM assessments use a collaborative and iterative process

Collaborative—program managers or other staff can adapt and use PRISM Tools to perform their own assessments. However, an external consultant (such as a MEASURE Evaluation representative) can be of great assistance as a facilitator.

Iterative—the PRISM process is iterative in two senses:

- The RHIS performance improvement process involves several stages: preparation (with stakeholder analysis), assessment/analysis, planning, action, and evaluation—and each phase involves meetings among implementers and key stakeholders.
- The PRISM process should be repeated every three, six, or 12 months to gauge the results of past interventions and start a new RHIS improvement cycle.

Triangulation and multiple data sources increase validity of the findings

PRISM Tools use various data sources and methods to collect information:

- Self-administered questionnaires
- Observations
- Reviews of documents, office records, and RHIS feedback reports
- Information technology review

For instance, the RHIS Performance Diagnostic Tool and the RHIS Overview and Facility/Office Checklist use observations and interviews, supplemented by document research. The RHIS Management Assessment Tool uses key informant interviews and group discussions. The Organizational and Behavioral Questionnaire collects data via self-administered questionnaires.

The RHIS Performance Diagnostic Tool uses triangulation to visually represent factors that have multiple components. For example, data quality depends on accuracy, timeliness, and completeness. Data handling relies on data recording, processing, and transmission. Scores on these dimensions can be triangulated, which makes it easy to grasp the relationships, where gaps exist, and where interventions could have the most impact.

PRISM Tools are flexible and adaptable

Flexible—the PRISM Tools were designed with the assumption that the organization has established a minimum set of RHIS processes, practices, and infrastructure. Since they address elements that would be common to most any RHIS, the tools are broadly applicable to diverse organizations. The tools can be used to assess both categorical and integrated information systems, in public- and private-sector RHIS frameworks.

Adaptable—users can modify the tools to match the socio-demographic characteristics of respondents in a given organization. Similarly, the content of a tool can be adapted to meet the specifics of the given situation. The collected data can be analyzed manually or entered in any data analysis program such as Excel, EpiInfo, etc.

PRISM Tools should be seen as working documents, and extended and revised as an RHIS develops or changes.

PRISM Tools encourage continuous learning and improvement

PRISM Tools identify and encourage opportunities to develop the RHIS into a system not just for reporting statistics to higher authorities, but also for monitoring the performance of health systems.

“Are we doing a good job providing health services to our target populations?” “Are we doing better than last year?” “Did our new training programs have a visible impact?” When the RHIS can answer these questions, organizations can learn from their experiences, lobby more effectively for funding and other resources, and continuously improve health systems for the benefit of more people.

5 USE

For best results, PRISM Tools should be used regularly—and whenever specific needs emerge.

Since a health information system routinely produces data at regular intervals, PRISM Tools should be used routinely as well—especially the tools designed to assess data quality, use of information, and RHIS management support. These tools can be applied quarterly, every six months, or once a year. PRISM Tools can also be used to obtain a baseline assessment of an existing RHIS framework or for evaluating the RHIS reform process.

6 AUDIENCE

People involved in the collection, analysis, and use of data in routine health information systems.

PRISM Tools are used by four principal types of users:

1. MEASURE Evaluation representatives

- establish relationships with host-country contributors
- present the PRISM Tools questionnaires
- help adapt PRISM Tools for the host-country setting
- facilitate and mentor host-country staff as they conduct the RHIS assessment using PRISM Tools
- provide technical assistance in obtaining and interpreting information and designing intervention(s)
- use the PRISM Tools to monitor progress in RHIS performance and evaluate the impact of designed interventions

2. Host-country decision-makers, such as program managers and other key stakeholders

- participate in the RHIS assessment
- use the PRISM Tools to identify and address RHIS performance gaps
- institutionalize findings of the assessment to maintain and improve RHIS performance and decision making

3. A designated RHIS program manager

- selects the stakeholders to adapt and implement the PRISM Tools
- ensures appropriate representation and authority on the team with individuals who can champion decisions in their areas of influence
- monitors the development, use, and updating of the tools

4. RHIS specialists or consultants

- contribute their knowledge in adapting the tools
- learn, use, and promote the tools
- document the experience using PRISM to assess the RHIS framework, implement improvements, monitor performance, and evaluate progress—to contribute to the greater knowledge base of best practices

7 FIELD APPLICATION

Uganda—Evaluation of the PRISM tools using 2004 and 2007 survey data

Aqil, A., Hotchkiss, D., Lippeveld, T., Mukooyo, E., Asiimwe, S. (2008); Do the PRISM Framework Tools Produce Consistent and Valid Results? A Uganda Study; Working Paper Draft; National Information Resource Center, Ministry of Health, Uganda, MEASURE Evaluation, USAID, March 14, 2008

Côte d'Ivoire, 2008—Assessment of the health information system in Côte d'Ivoire

Gnassou L, Aqil A, Moussa T, Kofi D, Paul JKD. 2008. HMIS Evaluation Report. HIS Department, Ministry of Health, Côte d'Ivoire; MEASURE Evaluation, USAID.

China, 2008—Assessment of the health information system in Yunnan and Guangxi provinces, China

Aqil, A. Lippeveld, T. Yokoyama, R. (2007) "HMIS Baseline Assessment in Yunnan Province using PRISM Tools", MEASURE Evaluation, Yunnan CDC, China, USAID; Aqil, A. Lippeveld, T. Yokoyama, R. (2007) "HMIS Baseline Assessment in Guangxi Province using PRISM Tools," MEASURE Evaluation, Guangxi CDC, China, USAID.

Pakistan, August 2002 and October–December, 2005

National HMIS Cell, Ministry of Health, Pakistan. MEASURE Evaluation carried out a health management information system (HMIS) situation analysis. This analysis enabled MEASURE Evaluation to develop a training manual for district managers on use of information. In 2006, 250 district managers in 10 districts received training using this manual.

8 EXAMPLE APPLICATION

Adapted from Strategic Information Assessment in Swaziland—MEASURE Evaluation, January 2006 (*note: The Information Use Maps included here are not the actual maps produced in Swaziland*).

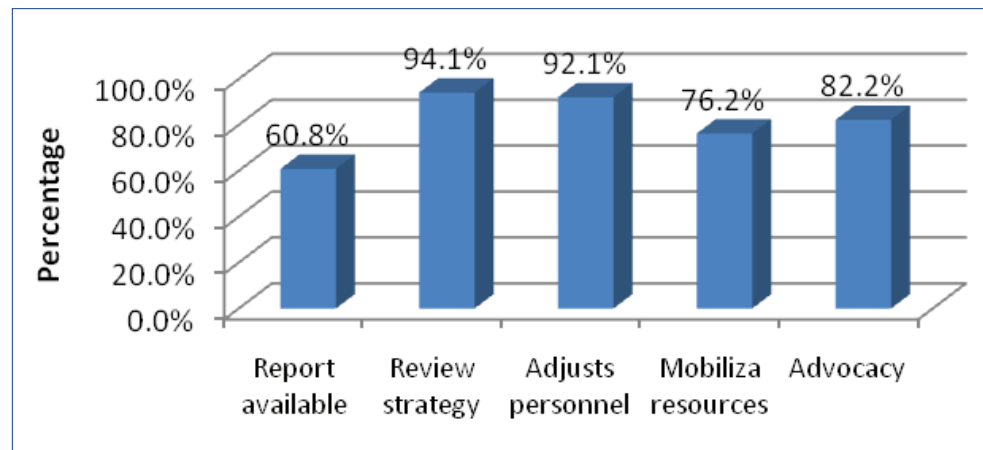
In January 2010, the State of Guanajuato, Mexico conducted the PRISM assessment. The findings from this assessment were used by the Guanajuato State health officials to identify strengths and weaknesses of the HMIS system and develop interventions for strengthening the SINAIS.

The results presented below are selected findings from the RHIS Performance Diagnostic Tool and are specific to the use of information produced from the HMIS. This excerpt is intended to illustrate how the PRISM tools assess the use of information. For the full assessment report see <http://measureevaluation.org/tools/data-demand-use>.

The use of information was assessed using two criteria. First, the availability of any kind of report (feedback, quarterly, health services, etc.) and reviewing them for use of information. Second, by observing records of facility meetings on discussions of HIS findings and decisions made based on those discussions.

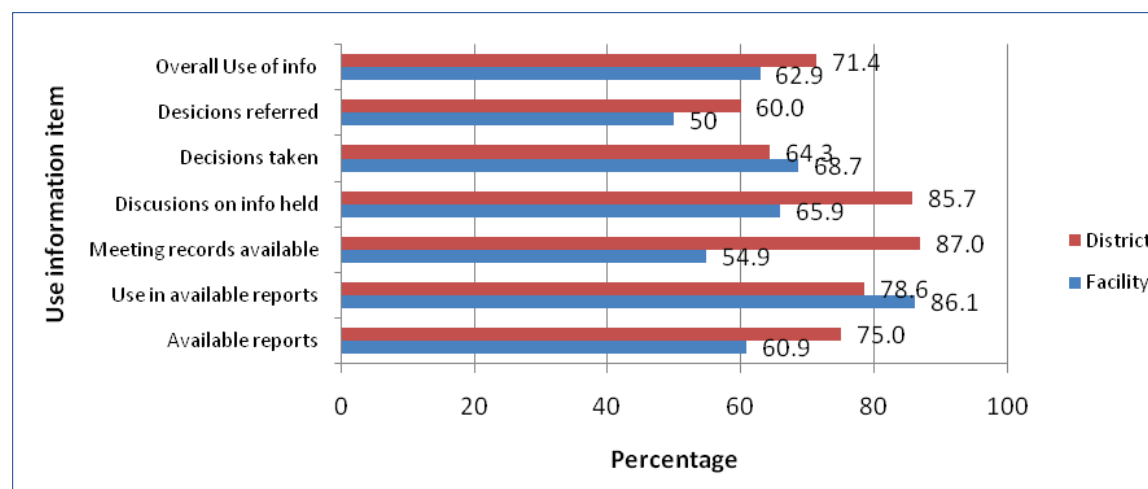
Sixty-one percent (61%) of the facilities (Figure 3) showed documentation on holding meetings. Of those facilities, 41% discussed and made decisions using HIS information, while in 27% of the facilities, decisions were referred to a higher level for action. Sixty-four percent of the facilities had reports (feedback, monthly, quarterly, others). Out of those facilities, reports showed decisions for strategy review (94%), adjust personnel (92%), advocacy (82%), and mobilizing resources (76.2%). The district level showed a better use of data than the facility level when making decisions. However, the referral to the higher level raises questions on their ability or decision power.

Figure 3: Use of information for specific decisions in available reports in facilities (n=101).



About 55% of the facilities had meeting records of the meetings held in the last three months (Figure 4). The records from those facilities showed that 66% of the facilities have discussed HIS findings and that 69% made decisions after discussion of the findings. It also showed that 50% of the facilities referred some select problems to higher levels for assistance. This could mean that they are trying to solve most problems at the local level and frequently request assistance for problems for which they have no control.

Figure 4: Percentage distribution of use of information in available reports and meetings by facility and district (n=166, n=8).



The use of information at the district level meetings was higher than found at the facility level, indicating that more information use for decision making occurs at the district level. However, referral of decisions at the higher level indicates that the decisions are of a particular nature that they need approval from a higher level or that the district does not have much decision power.

9 IMPLEMENTATION CHECKLIST

Five steps for using PRISM Tools to assess an RHIS.

This checklist can be photocopied to use as a reference for the process steps. Following this checklist will help ensure that a systematic approach and best practices have been followed.

Step 1—Identify the need

This step relies on communication with MEASURE Evaluation representatives in-country.

- ☐ 1.1—Identify a potential opportunity. Communicate with MEASURE Evaluation colleagues and host-country counterparts to be alerted to opportunities for implementing the PRISM Tools. Sometimes the opportunity becomes clear when MEASURE Evaluation is asked to provide assistance in assessing or improving an existing health information system.
- ☐ 1.2—Determine how PRISM Tools would be used for this need. Will it be used to reform RHIS, or as part of ongoing supervisory mechanisms to fine-tune day-to-day operation of an existing RHIS? This perspective will influence certain aspects of the process, such as which part of (or all of) the PRISM Tools will be used, which stakeholders should be involved, and what types of actions will be recommended.

For cases where all four PRISM Tools will be used, it is best to use them in this order:

1. RHIS Performance Diagnostic Tool
2. RHIS Overview and Facility/Office Checklist
3. Organizational and Behavioral Questionnaire
4. RHIS Management Assessment Tool

Step 2—Perform pre-assessment planning

- ☐ 2.1—Determine the organization's readiness to improve its RHIS. An RHIS improvement plan could entail small interventions in specific areas—or a major overhaul of the system. Even if the intervention is modest (small but important actions should be considered before attempting a large-scale project), the target organization must be ready to engage in the process. That means the organization will have:
 - Leaders who will champion improvements.
 - The necessary resources to move forward.
 - A strategic vision that embraces a culture of information.
 - People who can implement (and institutionalize) RHIS improvements.

- ❑ 2.2—Assemble a core team of stakeholders. A formal or informal stakeholder analysis can help in identifying the relevant stakeholders, and their level of interest and availability. Having identified these individuals, one or more teams need(s) to be organized to carry out the assessments and to design and implement interventions.
- ❑ 2.3—Identify key informants to interview. Even if good knowledge of local RHIS practices is believed to exist, it is recommended that interviews with key stakeholders in RHIS management be conducted. Stakeholder analysis will help in identifying the right people to interview. A sample of people who can offer different perspectives about the RHIS such as managers, decision-makers, and health facility staff should be selected.
- ❑ 2.4—Modify the tool(s) as appropriate for the application. The statements and questions included in the tool should be reviewed and revised to align with the RHIS setting. Some statements and stages described in the tools might not be relevant. For example, the management assessment tool assumes relatively low availability and usage of computers in health system management. If computers are prevalent in the RHIS being assessed, focus might be placed on the status of computer-related training or Internet access.

Step 3—Assess and analyze current RHIS performance

In this step, the PRISM leader or team would:

- ❑ 3.1—Use the PRISM Tools to assess the situation of RHIS performance. Detailed instructions for using each PRISM Tool, scoring and analyzing the results are found in the document, “Overview of the PRISM Tool Package,” available from MEASURE Evaluation.
- ❑ 3.2—Analyze the results and interpret the information. It can be helpful to have the RHIS improvement team complete analysis worksheets as a group, or individually, and present their scores in a group. Either way, any large differences in scoring can be reviewed and resolved.
- ❑ 3.3—Build consensus on the present situation and directions for improvement. Working with key stakeholders, the RHIS improvement process includes development of a set of recommendations to address issues, weaknesses, and problems—or build on identified strengths.
- ❑ 3.4—Document and disseminate findings. Results of the assessment and recommendations should be communicated to various stakeholders as appropriate. For example, some details of findings and recommendations might be communicated in internal meetings, only to those individuals directly involved in RHIS management. Other findings may be displayed for all staff members.

Step 4—Define a plan for reaching the desired level of RHIS performance

Given the analysis created in the previous step—and considering the overall goals of the organization—the PRISM leader/team will:

- Define strategies and activities to achieve the improvements identified in Step 3.
- Establish objectives along the way to achieve these goals.
- Assign responsibilities and timelines for each objective.
- Write and communicate an action plan.

The perspectives of RHIS managers and health service managers should be solicited in the scoring process. Their involvement will increase their sense of ownership in the results, which in turn may lead to stronger commitment to implement the recommended improvements.

Step 5—Implement the plan and monitor progress

The RHIS improvement team will coordinate activities and monitor progress throughout the planning and implementation of improvements—and will evaluate the success of the plan. PRISM Tools can be used for evaluating the interventions.

10 CONCLUSION

More effective health information systems lead to better health status for more of the population.

The ultimate goal of a routine health information system is to produce meaningful insights about the performance of the health system.

- “Has our HIV/AIDS pre-test counseling been effective in increasing the number of people willing to be tested?”
- “How does the incidence of malaria in our district compare with others? With last year?”
- “Have we reached more pregnant women with ante-natal care?”

Routine health information should provide credible answers, which will guide the most effective decisions about resources, processes and programs. However, the RHIS process often falls short. There may be a deficit in data quality, or a lack of channels to share and use good data, or little incentive to even care about data.

This is a scenario in which the PRISM Tools can prove invaluable. These four tools enable an RHIS improvement team to:

- Assess the performance of a routine health information system.
- Identify technical, behavioral and organizational determinants of RHIS performance.
- Design and prioritize interventions to improve RHIS performance.
- Monitor and evaluate data quality and use over time.

The result is a process of periodic or cyclic improvements that produce a sequence of benefits:

- Better systems produce more complete, accurate and timely data.
- Better data are trusted by decision-makers for evidence-based decisions.
- Evidence-based decisions lead to more effective health programs.
- Stronger health programs improve the health status of a population.

Furthermore, the PRISM process encourages stakeholders at all levels to think strategically and holistically about the value of each role/component of the RHIS, and to adopt a sense of ownership in improving those elements within their span of control.

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Stakeholder Engagement Tool

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1 PURPOSE

To be useful—and used—data initiatives must reflect the needs and values of relevant stakeholders.

Since such large amounts of money and effort are being devoted to collecting data from health facilities, communities and populations, maximizing the impact of that data for real-world benefit is essential. This is where the Stakeholder Engagement tool is so valuable.

Data is only valuable if it is seen as relevant and useful by prospective users. When data is seen as useful, it is more likely to be ‘owned’ by those who need it to inform decision making.

For data ownership to be built, the appropriate set of stakeholders needs to be identified and involved when proposing, designing, implementing, and reporting on research and monitoring and evaluation (M&E) initiatives.

- Who needs to use the data, and what questions are they seeking to answer?
- Who has influence and resources that can be brought to bear to aid this project?
- Who will be directly or indirectly affected by the outcome of this initiative?
- Who will support our plan? Who will oppose it? Why? How do we deal with it?
- What each of these individuals contribute to the process?

Effective stakeholder analysis answers these questions in a way that significantly improves a project’s design and outcomes.

Yet, typically, stakeholder analysis is done informally, in an ad hoc way. The rationale behind choosing and engaging stakeholders is rarely consistent, systematic, or documented. A researcher may talk to people to identify stakeholders and their roles, but the process is intuitive rather than systematic, and it rarely happens the same way twice. As a result, the following scenarios are typical:

- Only those stakeholders in agreement with the proposed plan are invited to participate.
- Stakeholders are selected only from the organization that is directly involved in the project.
- Stakeholders are invited to a preliminary briefing, but they are not included thereafter in project design.
- The process includes only the bare minimum number of stakeholders required to obtain formal approvals.
- Stakeholders included in the project may not be at the appropriate level in a community or organization to contribute to the project or make decisions.

If these conditions exist, the research of the M&E project will, in all likelihood, suffer as a result. For instance:

- Project developers may overlook important interest groups that could contribute valuable insights about the activity.
- The project will not benefit from the resources of those interest groups, such as government agencies with policy influence or media representatives who can build public awareness.
- The resulting data may be underutilized, because the people who could use it may not feel that it was developed with their interests and involvement.

For example, the national government of an African country did not support the findings of a new demographic and health survey because they had not been very involved in the process. In addition, the results conflicted with other indicators and data sources they had that cited similar information. In short, since they were not involved in the process, they did not see the value of the new data.

In another example, the clinic staff tasked with collecting data for a new M&E system did not see much purpose in what they had been tasked to do and, as a result, the data collected were of poor quality. They had not been engaged early on as stakeholders and thus had a difficult time appreciating their role in the larger context of the health information chain. As a result, staff members had little incentive to provide the energy and attention to detail that would have produced higher quality data.

In yet another example, an international donor agency undertook an ambitious stakeholder engagement strategy in preparing a national poverty reduction plan. They involved thousands of people in community focus groups. This activity sparked interest and excitement about the potential of the project. Unfortunately, there was no follow-up to inform the focus group participants about what the project had achieved. This lack of follow-up created disillusionment, and may discourage people from participating in such exercises in the future.

These are just a few examples of many that point to the same conclusion: there is a strong relationship between ownership, data quality, data relevance, and data use. People are more likely to use data in their decision making if they have been involved from the beginning, they believe the data are of high quality, and they feel the specific data address their priorities. Engaging stakeholders early and systematically in the research process enables the right questions to be asked in the right way, and, in turn, to define data activities that will generate quality information that can be used.

2 DESCRIPTION

Stakeholder engagement provides a structured way to identify and engage stakeholders to improve data initiatives.

The Stakeholder Engagement tool is a matrix framework and process for:

- **Identifying stakeholders.** The tool helps identify individuals and groups that are stakeholders in an M&E activity, either as contributors, influencers or beneficiaries.

- **Defining their roles and resources.** The tool provides a structured way to define the roles that stakeholders play in the activity, and assess the resources they could bring to bear.
- **Identifying dynamics among stakeholders.** The tool also provides a framework for assessing the interests, knowledge, positions, alliances, resources, power, and importance of various stakeholders. Who will resist the initiative? Who will support it? What are their reasons?
- **Setting the optimum stakeholder group.** The tool helps assess which stakeholders to include in the process by determining the relative priority of stakeholders. Which stakeholders have the highest priority?
- **Creating an engagement plan.** The tool helps the user to develop an engagement plan by providing examples of stakeholders engaged in pre-project briefings, project design, project execution, and follow-up activities.
- **Tracking stakeholder engagement.** Finally, the tool helps ensure that stakeholders are engaged as appropriate throughout all project phases, including the post-project follow-up that is so often overlooked.

The Stakeholder Engagement tool presented in this document was developed from extensive experience with healthcare and population planning issues in Africa, Asia, and the Caribbean. However, the tool reflects practices that are applicable to a broader realm of issues and environments. The tool is not a prescription; the varying needs of research and M&E projects require flexibility with an overlay of process consistency. Rather, the Stakeholder Engagement tool is intended to be used as a guide, and therefore provides guiding principles, suggested practices, and a matrix for recording information.

3 TEMPLATES

This section presents a blank version of the two-part Stakeholder Engagement tool. The next section describes the type of content to be included in each category and field. There are two parts to the tool:

- Part 1: Stakeholder Analysis Matrix—For project planning phases.
- Part 2: Stakeholder Engagement Plan—For project implementation and follow-up phases.

Practical considerations for using the tool

The Stakeholder Engagement tool represents a guide to asking the right questions, but there is no one way or specific protocol for gathering the necessary information. Useful information to add to the matrix and plan can surface in any encounter, not just in meetings specifically designed for this tool.

The process tends to be iterative

The process begins by asking a key informant to identify the key stakeholders. During discussions with those individuals, they will likely identify other stakeholders. Ultimately the matrix will capture the contributions, roles and engagement strategies of stakeholders and groups at different levels and with different vested interests.

The tool can be used in hardcopy or electronic form

It is generally better to print a copy of the matrix and write notes in it by hand, because typing on a computer can create a barrier to comfortable communication when working with key informants or stakeholders.

Supplementary stakeholder profiles may be helpful

The matrix is designed to allow the user to quickly and visually see that information is complete for each stakeholder group. Including additional supporting detail in a separate document can also be helpful in building a complete profile for each stakeholder group.

Stakeholder Analysis Matrix¹

Program issue: _____

Proposed activity: _____

Date: _____

Name of stakeholder organization, group, or individual National, regional, or local?	Stakeholder description Primary purpose, affiliation, funding	Potential role in the issue or activity Vested interest in the activity	Level of knowledge of the issue Specific areas of expertise	Level of commitment Support or oppose the activity, to what extent, and why?	Available resources Staff, volunteers, money, technology, information, influence	Constraints Limitations: need funds to participate, lack of personnel, political or other barriers
Government sector						
Political sector						
Commercial sector						

Name of stakeholder organization, group, or individual National, regional, or local?	Stakeholder description Primary purpose, affiliation, funding	Potential role in the issue or activity Vested interest in the activity	Level of knowledge of the issue Specific areas of expertise	Level of commitment Support or oppose the activity, to what extent, and why?	Available resources Staff, volunteers, money, technology, information, influence	Constraints Limitations: need funds to participate, lack of personnel, political or other barriers
Non-governmental sector						
Other civil society target audiences						
International donors						

¹ Adapted from Brinkerhoff, D. and B. Crosby, Managing Policy Reform: Concepts and Tools for Decision-makers in Developing and Transitioning Countries, Kumarian Press, CT, 2002 and POLICY, Networking for Policy Change: An Advocacy Training Manual, 1999.

Stakeholder Engagement Plan²

Program issue: _____

Proposed activity: _____

Date: _____

Stakeholder organization, group, or individual	Potential role in the activity	Engagement strategy How will you engage this stakeholder in the activity?	Follow-up strategy Plans for feedback or continued involvement
Government sector			
Political sector			
Commercial sector			

Stakeholder organization, group, or individual	Potential role in the activity	Engagement strategy How will you engage this stakeholder in the activity?	Follow-up strategy Plans for feedback or continued involvement
Non-governmental sector			
Other civil society target audiences			
International donors			

² Adapted from Brinkerhoff, D. and B. Crosby, Managing Policy Reform: Concepts and Tools for Decision-makers in Developing and Transitioning Countries, Kumarian Press, CT, 2002 and POLICY, Networking for Policy Change: An Advocacy Training Manual, 1999.

4 GUIDING PRINCIPLES

Issues and considerations for using this tool

Ownership fosters use

The ultimate goal of M&E efforts is to create useful information that is actually used. Promoting use rests on two key questions:

- Will analysts trust and use the data generated by surveys, studies, and M&E data collection systems?
- Will officials trust and rely on the analysis to design interventions, make management decisions, and formulate policy?

The answers to these questions are strongly connected to ownership. Experience has shown that data use is frequently linked to the extent of the ownership and commitment people have in these systems and the research findings they produce.

Stakeholder engagement improves relevance of data

Once again, given that the ultimate goal of M&E efforts is to create useful information, data specialists have to ask:

- Is the study designed to gather relevant information on relevant issues—at an appropriate level?
- Is it socially and culturally appropriate?
- Does it reflect the realities of the people it is ultimately intended to benefit?

The answers to those questions depend largely on the degree to which stakeholders with a vested interest in the outcome have been included in project design.

It is tempting to include only those people who share the vision of the data specialists and are likely to support the initiative and/or only the most limited number of people required to secure project approval. But the relevance of the data initiative and the usefulness of the results may be greatly enhanced if the process engages stakeholders of many types.

Stakeholders should represent a diversity of perspectives

The process should include a broad range of stakeholders, including, at a minimum, representation from the following three categories:

- Technical specialists, such as an M&E coordinator or co-primary investigator.
- People who are empowered at the appropriate governmental level to implement any planned improvements, such as a national-level or district-level malaria program manager.
- Development partners, such as staff of donor agencies in the funding/reporting cycle.

Stakeholders should be included from various levels—national, regional and local—as appropriate to the activity. Stakeholders who have the interest, expertise, resources, or influence to be champions for change should be considered with particular interest. Whether program or policy changes are being considered, engaging such champions can help influence a positive outcome.

Recognize the differing roles of stakeholder groups and individuals

Stakeholder contributions will vary. For example, different stakeholders may offer:

- Advocacy at high levels of government.
- Greater public awareness through the media.
- Technical inputs to the design of the activity.
- Resources that can be mobilized for implementing the activity.

For some stakeholders, the role will be that they are personally and directly affected by the issue under study. For example, in planning HIV/AIDS-related projects, several people living with HIV/AIDS should be included. Their perspectives can enhance the accuracy, appropriateness, and effectiveness of the activities and interventions.

The Stakeholder Engagement tool is designed to capture all of these potential roles in a systematic way.

Engage stakeholders throughout the project process—from design to follow up

Oftentimes, stakeholder engagement has been limited to a pre-project briefing and post-project debriefing, with the primary objective to convince stakeholders to endorse an initiative that was already formulated. Stakeholders may have also been solicited for their feedback later, but not for their active involvement in project development.

By contrast, the Stakeholder Engagement tool supports a three-stage process: identify, engage and follow up. The tool prompts users to consider stakeholder engagement not just in the design phase of the activity, but throughout all phases of the project by developing an action plan for engaging stakeholders.

Engaging stakeholders throughout the process, not just at the beginning and end, can raise awareness of the activity and facilitate the use of data and information produced by the activity.

Acknowledge the unintended effects of stakeholder engagement

The more stakeholders, the more cumbersome the engagement process. It takes time, energy and resources to expand the number of stakeholders included in an activity. It is one thing to gather a focus-group discussion of 10 representatives and another thing entirely to organize a formal stakeholder meeting of 150 high-level officials with media. The relative value of each person's involvement versus the added time and costs of expanding the number of stakeholders needs to be considered carefully at the outset.

The more stakeholders, the greater the complexities of project design

As more stakeholders are included— each with their own unique perspectives and priorities—the likelihood of finding inconsistent or competing interests may increase. Their diverse demands may require negotiation and compromise in the activity, which may or may not improve the outcome.

For example, national and ministry program managers tend to want summarized demographic and health survey data, while district officials desire data disaggregated at the district-level. Similarly, local leaders might wish to use the survey data for municipal planning, whereas national

leaders might focus on increased social services—these very well could be competing interests. Resolving differences requires negotiation and compromise, and increases the difficulty in building consensus.

A large stakeholder group might stimulate excessive expectations

As a larger number of stakeholders are engaged, there is an increased risk of creating more demand than the activity can fulfill and politicizing the issue in an unintended way. For example, when media representatives are included—and thereby the public is involved—there is a danger of raising unrealistic expectations about what the activity will achieve. If stakeholders do not see the rapid change they imagine should happen, they can become disillusioned and less willing to participate in future activities.

Transparency can add unwanted accountability

Engaging a large group of stakeholders could raise the profile of an activity in a way that stakeholders may find unproductive. For example, opening up a researcher's work to public scrutiny could invite unwanted critique of a research design that has already been reviewed and found to be fundamentally sound.

Addressing the unintended effects of stakeholder engagement:

- All objectives of the activity should be clearly defined at the beginning so the most essential stakeholders to engage can be identified. The maximum number of possible stakeholders should then be identified. The optimum number to ultimately engage will be somewhere between these two extremes, commensurate with the time and resources available.
- The level of stakeholder involvement should be appropriate to the size/scale of the intervention being proposed. More is not necessarily better.
- Anticipated outcomes must be clarified in stakeholder meetings to help minimize unrealistic expectations. Timeframes, levels of resources available, and cost-sharing implications to be met by different stakeholder groups should also be reiterated during these meetings.
- Stakeholder involvement should be limited to those who can directly influence the quality of the research or data, or have a use for the data. Those not directly benefitting from the activity should not be involved.
- The political or culturally sensitive nature of certain topics, and how stakeholders may react, need to be taken into consideration. For example, HIV/AIDS programs raise political and religious sensitivities regarding condom distribution programs, homosexuality, and intravenous drug use—topics that church representatives and public officials may be reluctant to address.

The Stakeholder Engagement tool is flexible and adaptable

This tool can be tailored for any type of setting that entails information gathering and use at the international, national, and sub-national levels. Outlined in this document is the typical sequence of steps that would be followed in implementing the Stakeholder Engagement tool. Not all steps, however, will be relevant for all cases. For example, only the up-front stakeholder analysis, as part of a data assessment, could be performed; or a stakeholder engagement plan to develop activities

for a proposal could be created. The Stakeholder Engagement Matrix provided in this tool can be incorporated into any type of M&E or research activity.

5 USE

The Stakeholder Engagement tool is useful in planning, executing, and sustaining any project related to data demand and use.

Data demand and use processes have several different points of entry. For example, a project that requires stakeholder engagement could be triggered by any of these conditions:

- Stakeholders report that they need information that does not yet exist.
- Information exists, but it is not being used as it should.
- A decision needs to be made based on data not yet located or generated.
- A data use plan, information use map, or other tool is being used.
- An M&E system must be developed or upgraded.

The project in question could be a primary research project, such as a survey, data collection effort, or program evaluation. It could also entail operations research, such as further analysis of a health service provision assessment. Finally, the activity could involve development and implementation of an M&E system component itself.

The Stakeholder Engagement tool is of great value in any of these scenarios and project types, and should be used at the earliest stage of project design, prioritization, and preparation. It is important to identify and acknowledge areas of resistance, as well as areas of potential support early in the process. Stakeholder engagement should continue in the implementation phase, in sustaining the activity, and in advocacy efforts that flow from the activity.

6 AUDIENCE

Key people involved in designing activities to collect, analyze, report, or use health information.

The Stakeholder Engagement tool has two principal sets of users, with unique roles in using the tool:

1. Program managers and directors or other high-level program officials:

- Identify key project management team members.
- Work with the project management team and other host country counterparts to complete the Stakeholder Engagement Matrix.
- Validate the findings from the stakeholder analysis.
- Endorse or oversee stakeholder engagement activities.
- Participate directly in engagement activities with stakeholders at an equivalent level, such as senior government and political officials and other organizational leaders.
- Serve as spokespersons in high-profile media engagements.

2. Program management team members, including the institute or organization that is sponsoring/coordinating the activity:

- Contribute their knowledge of stakeholders who have a vested interest in the program, activity or issue.
- Identify individuals who are not only stakeholders, but potential champions for this particular activity.
- Contribute their knowledge of the strategies that could be successful in this context, based on their experience.
- Collaboratively complete the Stakeholder Engagement Matrix.
- Implement the engagement strategies and follow-up measures as defined in the Stakeholder Engagement Matrix.
- Revisit the matrix at various project stages to ensure that stakeholder involvement is continued as appropriate throughout the project life cycle.

7 FIELD APPLICATIONS

Tanzania, 1979

A researcher with an international agency was developing a plan for an integrated rural development project. The question at hand was, “Should the project focus foremost on clean water supplies, building roads, or improving health care?” A series of village-level focus group discussions was held to determine the right priorities.

Local men were divided about the relative importance of those essential infrastructure improvements. Government agencies, if asked, would naturally advocate for the activities that aligned with their missions. But to everyone’s surprise, local women said that their top priority was preventing sexual violence. The women were routinely subjected to intimidation and assault and had taken to doing their daily chores in protective groups. That issue had not even been on the radar.

If the researcher had not included village women, the issue might not have come to light at all. The project, if designed without their unique perspective, would have taken a very different course. It might ultimately have been deemed a success while doing little to improve a critical element in the daily lives of half the local population.

Kenya, August 2004 through August 2005

Ongoing stakeholder involvement in the Analysis of Recent Trends in Fertility and Contraceptive Use, Nairobi, Kenya—Further analysis of the Kenya Demographic and Health Survey

The 2003 Kenya Demographic and Health Survey documented a stall in progress on key fertility measures and contraceptive use. Why was this trend occurring, and what should be done about it? MEASURE Evaluation worked with local counterparts to apply the Stakeholder Engagement tool to ensure broad involvement and ownership in the analysis. The team knew that if corrective actions were to be effective, a broad range of key decision-makers needed to be involved from the very beginning—not just in approving a study, but also in selecting the issues to be studied.

The process began with a one-day stakeholders meeting of more than 90 policymakers and program managers from the public sector, non-governmental organizations (NGOs), and donor organizations, hosted by the National Coordinating Agency for Population and Development (NCAPD).

There was high-level, active participation from the Ministry of Planning and National Development, the Central Bureau of Statistics, Ministry of Health headquarters, and provincial and district representatives. Representatives from sub-national agencies and the private sector, who are not often involved in the design of national evaluation efforts, were also included. This meeting assembled new and non-traditional stakeholders in the exercise. The workshop was covered by television and print media, which raised public awareness of the issue.

Following the stakeholders meeting, teams of Kenyan researchers were assigned to the six major areas of investigation identified during the meeting. Initial findings were presented at an April 2005 meeting on “repositioning family planning” organized by the NCAPD for members of parliament. At that meeting, a Parliamentary Caucus on Reproductive Health was formed and assumed leadership in the national effort.

A second stakeholders meeting was held in August 2005 to review the full results of the analysis and prepare a Data Use Calendar (another MEASURE Evaluation Data Demand and Use tool). The Data Use Calendar is being used to ensure that the analysis results are actively used to guide decisions on corrective actions to revitalize family planning and reproductive health services in Kenya.

8 EXAMPLE APPLICATIONS

Madagascar’s Ministry of Health, Family Planning, and Social Protection (MOHFPSP) was seeking strategies to improve women’s access to the popular injectable contraceptive depotmedroxyprogesteroneacetate (DMPA). In 2006, the MOHFPSP updated its National Reproductive Health and Family Planning (FP) Norms and Procedures to allow community-based workers (CBWs) to provide DMPA services. Before implementing the CBD program, the MOHFPSP partnered with international partners to conduct a pilot study to determine the safety, feasibility, and acceptability of integrating DMPA services into existing community-based distribution of family planning. In an effort to ensure that all key stakeholders were aware of the rigorous design of the pilot intervention, a thorough analysis of relevant stakeholders was conducted. A Stakeholder Engagement Plan was also created to ensure that all relevant stakeholders had a role in the scale up of this important intervention (note: the sample matrices shown are not the actual matrices created in Madagascar).

Sample Stakeholder Analysis Matrix

Program issue: CBD provision of DMPA

Proposed activity: Pilot study and intervention to test the safety, feasibility, and acceptability of integrating DMPA services into existing community-based distribution of family planning commodities

Date: July 2006

Name of stakeholder organization, group, or individual National, regional, or local?	Stakeholder description Primary purpose, affiliation, funding.	Potential role in the issue or activity Vested interest in the activity.	Level of knowledge of the issue Specific areas of expertise.	Level of commitment Support or oppose the activity, to what extent, and why?	Available resources Staff, volunteers, money, technology, information, influence.	Constraints Limitations: need funds to participate, lack of personnel, political or other barriers.
Government sector						
MOHSP National: Dr. Finar	Responsible for approving changes to the FP service delivery and service delivery guidelines.	Vested interest. Will approve the service delivery change if the evidence supports it.	FP, National FP programs.	Support study.	Highly influential. Staff to train and supervise CBD agents.	MOH staff very busy. Plan meetings 1 month in advance to avoid delays. Will need funds for training events.
MOHSP Regional: Drs. Baku, Ramannonsoa, Raharison, Andriatsiferananarivo, Rafara, Razanakoto	Responsible for implementing and assuring quality of service delivery changes in the regions.	Vested interest. Will support service delivery change with national approval.	FP, regional FP program implementation and monitoring.	Support increased access of FP.	Staff to train and supervise CBD agents.	Will need funds for training events and supervision visits.
National Commodities Storehouse: Dr. Anisoa	Responsible for ordering commodities.	Vested interest. Commodity provision.	Commodity ordering and stock assurance.	Support increased distribution of DMPA and related commodities as long as national ordering and reporting standards are maintained.	Commodities.	Will need funds or donation for additional commodities and related supplies.
Professional Associations						
Malagasy National Association of Doctors: Dr. Ranomenjanahary	National network to unite physicians to work on important public health issues.	Vested interest.	FP provision.	Highly influential with all doctors in the country. Currently DMPA provision is their responsibility. Possible they will be threatened to have lay-health providers fill their role.	Resources: limited.	If not involved early in activity, could negatively affect acceptance of study results.

Name of stakeholder organization, group, or individual National, regional, or local?	Stakeholder description Primary purpose, affiliation, funding.	Potential role in the issue or activity Vested interest in the activity.	Level of knowledge of the issue Specific areas of expertise.	Level of commitment Support or oppose the activity, to what extent, and why?	Available resources Staff, volunteers, money, technology, information, influence.	Constraints Limitations: need funds to participate, lack of personnel, political or other barriers.
Professional Associations						
Malagasy National Association of Nurses: Mme. Rafara	National network to unite physicians to work on important public health issues.	Vested interest.	FP provision.	Highly influential with all nurses in the country. Currently, DMPA provision is their responsibility. Possible they will be threatened to have lay-health providers fill their role. Could negatively affect acceptance of study results.	Resources: limited.	If not involved early in activity, could negatively affect acceptance of study results.
Non-governmental sector						
Women's Associations—Mme. Randriana.	Highly influential. Advocate for women's rights and well-being.	Vested interest. Promote study results if positive.	Medium.	Support improved access to contraception but need to be sure it is safe before supporting DMPA provision by CBD agents.	Access to media, other women's networks.	No funding, possible resistance could stop program implementation.
Other civil society target audiences						
Village leadership	Village chief has strong influence in the village. Need cooperation to implement new service.	Vested interest. Would be responsible for selecting CBD agents and promoting the available product.	Low.	Some leaders support FP provision in their communities.	Influence. CBD agents reside in villages. Access to communities where programs will be implemented.	No funding, possible resistance could stop program implementation.
International donors						
USAID—Mr. Smith	Donor. Currently contributes to national FP program.	Fund study and first wave of intervention implementation (assuming positive results).	International FP programs.	Highly support.	Funds, influence, international experience with CBD or DMPA.	None.
UNFPA—Dr. Kayota	Donor. Currently contributes to national FP program.	Provide commodities and fund first wave of intervention implementation (assuming positive results).	International FP programs.	Highly support.	Funds, commodities, influence.	None.

Sample Stakeholder Engagement Plan

Program issue: CBD Provision of DMPA

Proposed activity: Pilot study and intervention to test the safety, feasibility, and acceptability of integrating DMPA services into existing community-based distribution of family planning commodities

Date: _____

Stakeholder organization, group, or individual	Potential role in the activity	Engagement strategy How will you engage this stakeholder in the activity?	Follow-up strategy Plans for feedback or continued involvement.
Government sector			
MOHSP National: Dr. Finar.	Responsible for approving changes to the FP service delivery and service delivery guidelines.	Lead the Steering committee for the study and intervention roll out. Dr. Finar acts as co-PI for the study.	Via quarterly Steering Committee, stakeholder will stay abreast of study and intervention progress.
MOHSP Regional: Drs. Baku, Ramamonsoa, Raharison, Andriatsiferananarivo, Rafara, Razanakoto.	Responsible for implementing and assuring quality of service delivery changes in the regions.	Quarterly updates via the MOH newsletter. Presentation on activity progress at biannual regional meetings.	Via newsletter and regional meetings.
National Commodities Storehouse: Dr. Anisoa.	Responsible for ordering commodities.	Member of the Steering Committee.	Via quarterly Steering Committee, stakeholder will stay abreast of study and intervention progress.
Professional Associations			
Malagasy National Association of Doctors: Dr. Ranomenjanahary.	National network to unite physicians to work on important public health issues.	Present study rationale and existing international data on safety of CBD of DMPA at annual meeting. Visit at office to discuss activity. Member of Steering Committee.	Via quarterly Steering Committee, stakeholder will stay abreast of study and intervention progress.
Malagasy National Association of Nurses: Mme. Rafara.	National network to unite physicians to work on important public health issues.	Present study rationale and existing international data on safety of CBD of DMPA at annual meeting. Visit at office to discuss activity. Member of Steering Committee.	Via quarterly Steering Committee, stakeholder will stay abreast of study and intervention progress.
Non-governmental sector			
Women's Associations: Mme. Randriana.	Highly influential. Advocate for women's rights and well-being.	Visit at offices to discuss activity rationale and existing international data on safety of CBD of DMPA.	Via MOH newsletter.
Other civil society target audiences			
Village leadership.	Village chief has strong influence in the village. Need cooperation to implement new service.	Visit villages to discuss activity rationale and potential benefits to the community.	Via regional supervision visits from the MOH.
International donors			
USAID: Mr. Smith.	Donor. Currently contributes to national FP program.	Member of Steering Committee	Via quarterly Steering Committee, stakeholder will stay abreast of study and intervention progress.
UNFPA: Dr. Kayota.	Donor. Currently contributes to national FP program.	Member of Steering Committee.	Via quarterly Steering Committee, stakeholder will stay abreast of study and intervention progress.

9 IMPLEMENTATION CHECKLIST

Creating a Stakeholder Engagement Plan

Step 1—Identify the need

- ☐ 1.1—Identify a potential need or opportunity to better define and improve stakeholder involvement. Specific activities, such as design of a specific research study, or the launch of an advocacy campaign, may prompt the implementation of the stakeholder engagement process.
- ☐ 1.2—Determine how the stakeholder engagement process will be implemented to address this need.

Will the tools be used to identify potential stakeholders only (Stakeholder Analysis Matrix) ? Or, will a more comprehensive process be applied where stakeholder roles are also identified and elaborated, and their involvement in the activity managed over time (Stakeholder Engagement Plan)?

These decisions will influence certain aspects of this process, such as how much effort the process will require and who will be responsible for managing the process.

Step 2—Identify stakeholders

- ☐ 2.1—Coordinate with colleagues working on the activity in question. Convene them to identify the individuals, organizations, and other bodies that will be affected by implementation of the activity. Stakeholders who have the interest, expertise, resources, or influence to be champions for change should be considered with particular interest.
- ☐ 2.2—Consider not just the contributors to the activity in question but also the influencers (both positive and negative) and the beneficiaries. A broad range of stakeholders from various levels (national and sub-national) should be considered. Encourage the group to think broadly and outside of the usual counterparts. Ask: In addition to this list, who else needs to be involved in the process?
- ☐ 2.3—Identify dynamics among stakeholders. By assessing the interests, knowledge, positions, alliances, resources, power, and importance of various stakeholders you will begin to uncover how they can be engaged in your activity to improve the end outcome.

Step 3—Define potential roles for stakeholders in the activity

- ☐ 3.1—Consider how the stakeholder can influence your activity in the short and long term. Think about their immediate influence and the influence they have on other potential stakeholders. Different perspectives from a wide variety of stakeholders can enhance the accuracy, appropriateness, and effectiveness of the activities and interventions.

- ❑ 3.2—Determine the level of participation for each stakeholder. Questions posed during this discussion might be: What do we see as each person's role in this process? What is their expected participation? Some stakeholders may have a vested interest in the activity.

Step 4—Identify the resources stakeholders bring to bear

Identifying the resources stakeholders bring to your activity may help expand the scope of your activity. Consider what each stakeholder can contribute to the activity. Remember that resources are not always financial. One stakeholder may provide an entry point to high level policy-makers that would be helpful to you in the implementation of your activity. Another may allow you greater public awareness through access to media channels. Yet another may offer technical inputs into the design of your activity. It is Important to identify these resources as they can help you to refine how to meaningfully involve each stakeholder in your activity.

Step 5—Identify the level of commitment of the stakeholder

The level of stakeholder commitment will strongly affect how that stakeholder cooperates with or hinders your activity. Determine if the stakeholder will support or oppose the activity, to what extent, and why. If the stakeholder is committed to the activity the probability that they will facilitate your work is higher. Many times negative perspectives of stakeholders also influence the success of activities and interventions. Consider who may create barriers to and predict what they may be. By being aware of these potential negative influencers you can develop strategies for handling their involvement.

Step 6—Set the optimum stakeholder group

- ❑ 6.1—Review the data entered into the Stakeholder Analysis Matrix and discuss the relative priority of stakeholders to involve in the activity.

As more stakeholders are included—with their unique perspectives and priorities—the likelihood of finding inconsistent or competing interests may increase. Their diverse demands may require negotiation and compromise in the activity, which may or may not improve the outcome. The relative value of each person's involvement versus the added time and costs of expanding the number of stakeholders needs to be considered carefully at the outset and a core group of stakeholders should be identified. The core stakeholders should be engaged throughout the activity implementation, not just at the beginning and end. This can raise awareness of the activity and facilitate the use of data and information produced by the activity.

- ❑ 6.2—Consider identifying 'tiers' of stakeholders for different levels of involvement and different times in the activity.

Step 7—Create a Stakeholder Engagement Plan

- ❑ 7.1—Brainstorm the roles each stakeholder can play in the activity, and define the specifics of how you will engage the stakeholder in each sub-activity.

Start by listing the steps in your activity and discussing whether the stakeholder can contribute to this step. Consider the importance of involving stakeholders in a meaningful way. Activity engagement can build ownership of the data and information generated by the activity.

- ❑ 7.2—Describe plans for continued involvement or communication with the stakeholder, providing feedback on the results and impact of the data activity, and fully acknowledging their contributions.
- ❑ 7.3—Determine a plan for management of the stakeholder engagement process.

An individual or organization should be appointed who is tasked with reviewing the documents and convening activity leadership to review and revise the plan. Ask: How will the process be managed from here on? How often will the Engagement Plan be reviewed and revised? You can help articulate this process and thereby ensure the continued usefulness of the Stakeholder Engagement Plan as a perpetual management tool and not simply a one-time exercise.

- ❑ 7.4—The Stakeholder Engagement Plan is dynamic and flexible. It should be reviewed at various points throughout the activity and stakeholder involvement should be revised based on experiences working with them.

Step 8—Track stakeholder engagement throughout the project

During implementation of the activity, document contributions of stakeholders (both negative and positive) and their impact on how information has been used for decision making. Where possible, include external validation, such as through newspaper articles, newsletters, and memos from finance and planning officials. This effort helps create continued awareness and appreciation of the importance of collaborative efforts and the key role of stakeholder involvement in the implementation of health activities.

10 CONCLUSION

Improving the quality and use of data by building broad-based ownership and perspective into the design, execution, and application of data initiatives.

Data collection systems are often designed and developed with a singular goal. As a result, huge volumes of data are created, but little may actually be used to directly benefit programs and people.

- Does the program or intervention serve all the people it is intended to serve?
- Are we making progress toward improving health and welfare?
- If not, what should be done differently?

The extent to which program managers can answer these questions is oftentimes related to how well data initiatives have incorporated the broad perspectives of key stakeholders—from the highest levels of influence to the people directly affected by the issue under study.

This is where the Stakeholder Engagement tool can be invaluable. Using a straightforward matrix, this tool facilitates a structured process for:

- Identifying stakeholders.
- Defining their potential roles in the activity.
- Identifying the resources they can bring to bear.
- Identifying dynamics among stakeholders.
- Setting the optimum stakeholder group.
- Creating an engagement plan.
- Tracking stakeholder engagement throughout the project.

Through these steps, the tool promotes the key goals of improving the quality and use of data.

- By inviting diverse and relevant viewpoints into design processes, stakeholder engagement ensures that project design thoroughly reflects cultural, political, economic, and social realities. The data will be useful.
- By enabling individuals to gain ownership of the data activity, stakeholder engagement increases their commitment to quality in data collection and increases their trust in and use of data for subsequent analysis and decision making. The data will be used.

Ultimately, stakeholder engagement practices help ensure that new M&E initiatives are designed to deliver real-world benefits, improving the general health and welfare of a population.

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Data Demand and Use Coaching Guide

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1 PURPOSE

Health professionals often require continuous support and positive reinforcement to effectively apply data demand and use approaches to their specific context.

National efforts to strengthen health systems involve building the capacity of staff, through training, to produce quality and timely data that informs decisions about health service performance, financing, access to medical products, or strategic planning (WHO, 2007). However when health professionals return to their place of work, they face many challenges implementing their new skills such as competing priorities,

lack of motivation or initiative, or other professional stresses. Coaching has been identified as a successful approach to supporting newly trained staff as they apply their new skills in work settings. The goal of individual coaching for health professionals implementing a data demand and use (DDU) intervention is to continue to grow their problem-solving skills to achieve their objectives. The DDU coach can provide a team of health service providers the individual technical guidance to strategically adapt their DDU skills to their specific work environment and health goals. This on-going capacity building is as important as getting the job done.

2 DESCRIPTION

The coaching guide provides structure to the process of continued technical support to individuals or teams of health professionals implementing a DDU intervention. This guide is intended to be used to advance the implementation of action plans that have been developed to facilitate data use.

Coaching is the act of working with another individual to create solutions to problems and attain goals (Cooper, 2008). The goals of an effective DDU coaching session is to:

- Build a relationship with the health professional around improving data demand and use in their organization.
- Reinforce DDU skills as they apply to the needs and interests of the health professional.
- Encourage self-motivation and responsibility through positive feedback.
- DDU training workshops produced by MEASURE Evaluation involve the application of specific tools to guide individual and organizational change towards a culture of data-use.

These tools are available at www.measureevaluation.org/ddu and include:

1. *Stakeholder Engagement Plan*,
2. *Information Use Map*,

3. *Assessment of Data Use Constraints*,
4. *Seven Steps to Use Routine Information to Improve HIV/AIDS Programs, A Guide for HIV/AIDS Program Managers and Providers*,
5. *Framework for Linking Data with Action*, and
6. An in-depth assessment of the *Performance of Routine Information System Management (PRISM)*.

Health professionals use these tools to develop DDU action plans tailored to their specific needs. However improving data use within an organization can take time. People have different levels of ability and commitment. There may be unforeseen obstacles that arise. A DDU Coach can provide perspective, reinforce skills, and support the health professional as they face these new challenges to data use. This coaching guide is designed to assist ongoing capacity building of those who have attended a DDU training workshop.

3 GUIDING PRINCIPLES

This section describes the skills, activities, and qualities of an effective DDU coach.

1. Expertise in DDU: She or he has extensive knowledge of DDU terminology, concepts, and tools. The coach is able to refer health providers to specific tools and/or approaches that are appropriate to the aims of DDU action plans the health provider team developed during a DDU workshop. It is recommended that coaches review suggested interventions described in *Improving Data Use in Decision Making, An Intervention to Strengthen Health Systems* by Tara Nutley (2012). Also, it is helpful to be familiar with the additional DDU tools available through MEASURE Evaluation (<http://www.measureevaluation.org/ddu>) including the following:

- *Data Quality Audit Tool*
- *Introduction to Basic Data Analysis and Interpretation*
- *Conducting High Impact Research*
- *Building Leadership for DDU*

2. Builds Rapport: A coach takes the time to develop a relationship that is open, honest, and builds confidence to overcome challenges. At the start, health professionals may not feel comfortable revealing all of the barriers they face in their work. A coach overcomes this apprehension by starting with descriptive questions that keep the health professional talking about their experiences. The coach restates key words or phrases to show they understand the health professional's perspective. As the relationship grows, the health professional will offer greater cooperation, begin to analyze their own data use culture, and eventually recommend ways to improve data use for other health professionals.

3. Actively Listens: A coach faces the speaker and is attentive to what is being said. They use verbal and non-verbal cues to demonstrate they are listening. They do not interrupt, but wait for a pause to ask a question. An effective coach is able to feel what the speaker says, and pays attention to what is NOT said.

- 4. Keeps an Open Mind:** A coach lets the health professional focus on what is important for him or her, and asks open-ended questions that help the coach find out more about what the health professional is thinking.
- 5. Knows when to facilitate problem solving and when to offer solutions:** Most coaching involves asking questions and guiding others to develop their own solutions. However there are times when a health professional may not have access or be aware of other possibilities. If necessary, a coach can share their knowledge and experience in order to brainstorm a variety of options to overcome specific challenges. She or he can also direct health professionals to additional information sources. A coach may offer some solutions, but their ultimate goal is get health professionals at a state where they are confident to act on their own.
- 6. Feedback:** One of the primary purposes of feedback is to provide positive reinforcement to build confidence (MSH, 2005). Some tips on providing effective feedback:
- Set an appropriate time and place to talk.
 - Be specific about the behavior that you appreciated or bothered you.
 - Stick to facts rather than generalizations. (“On Monday and Tuesday afternoons you did ‘xyz’”, rather than “you always (never) do ‘abc’.”)
 - Describe the impact (positive or negative) that the behavior had on you, the team or the organization.
 - Express your feelings without blaming the other person for them.
 - Give the other person an opportunity to express his or her point of view, feelings, or difficulties.
 - Make a specific request for a different behavior when an action or behavior has a negative effect.
- 7. Obtains agreements and commitments:** In the course of the coaching, the coach needs to ask for commitments. If the person being coached says, “I plan to change the DDU policy and procedures manual” the coach might ask “When will you have it finalized?” (MSH, 2005)
- 8. Asks appropriate questions:** Good coaching questions have the following characteristics (MSH, 2005):
- They are open-ended rather than “yes/no” questions. This means that you would ask a question like “How is the project going?” rather than “Is the project going well?”
 - They are true inquiries rather than veiled demands. For example, you would ask “How do you want to handle this situation?” rather than “Don’t you think you should have done this differently?”
 - They do not start with the word “why” as in “Why did you do that?” Better questions might be “How did that happen?” or “What do you think was going on?”

In this table there is a list of questions that lead to greater learning and examples of inquiry that blocks learning:

Inquiry that Encourages Learning	Inquiry that Blocks Learning
How do you see this differently?	Don't you think...? (especially when asked in an intimidating manner)
What's your reaction to...?	Did you do that because of X, Y, and Z
What led you to that conclusion?	Do you really think you did a good job? (when the coach clearly thinks that he/she didn't)
Could you say more about that?	Why don't you just try what I'm suggesting?
What makes you...?	Why are you so defensive?
What kept you from telling me?	Why didn't you tell me?
How do you think you contributed to that?	Why did you do that?
How can you (achieve, change, etc)?	What's the matter with you?

Source: Management Sciences for Health, 2005

Inquiry is also necessary for understanding and clarification. To ensure that the coach truly understands what the other person is saying, he/she might say, "If I understood correctly, are you saying...?" "I don't understand what you are saying, could you put it another way that would help me understand?" or "My sense from what you said is that you believe that Is that correct?" (MSH, 2005)

DDU Coaching Activities

1. At the end of a workshop, establish the most effective communication method with trainees and a regular schedule for coaching sessions.
2. Assess all data management processes at the facility, state, and/or organization that will receive coaching support. Sources may include M&E reports, review of routine data systems, facility assessments, or informal discussions with a primary health provider contact. At times it is necessary to resolve challenges to the functionality of the data management process before addressing DDU action plans.
3. Review workshop content before initiating the first coaching session in order to be familiar with the health professional's knowledge of DDU tools.
4. Review team DDU action plans and any available data sources to verify whether activities are clearly linked to an existing data set, or there are plans to collect new data to inform an upcoming decision.
5. Bring supporting materials to each coaching visit such as tools and action plans completed during training workshops, notes taken during previous coaching visits, or useful data/information concerning the health sector of interest.
6. During the coaching visit, one of the first activities should be to review the team's action plan. Sample questions are provided below. The coach should help the team:

- Create an action plan that is realistic given the context;
 - Ensure activities and responsibilities are clearly stated within the action plan;
 - Ensure that there is a clear link between a review of data sources and an upcoming program or service related decision;
 - Identify a specific data set or indicator to monitor in order to track progress on their action plans.
7. Document each coaching visit in the Coaching Log and take notes using the Coaching Visit Form. Summarize your notes with the health professional before ending the session to verify the content of the discussion.
 8. Write up a brief Post-Visit Coaching Report to act as a reference for future coaching sessions and document changes in data use.
 9. Follow-up with requested feedback, supplemental materials, or additional coaching sessions.

What Makes an Effective DDU Coach?

After all necessary coaching sessions are completed; an effective coach is able to tell the story from the initial training workshop to the point at which a team of health professionals are successful in overcoming their challenges. A great coach demonstrates that the resources dedicated to this ongoing capacity building results in increased instances of data used to inform decisions, and ultimately improvements to health services. The remainder of this guide offers tools and questions to assist the coach in achieving this outcome.

4 TEMPLATES

This section presents formats for facilitating and documenting a DDU coaching session.

The first template is a Coaching Log to track the number of coaching sessions and participating health providers. The second template, the Coaching Visit Form, provides open-ended questions to help understand the data use context for the individual health provider or team. Finally, there is guidance on writing a post-visit coaching report so as to document progress towards achieving objectives identified in DDU action plans. DDU coaches are encouraged to adapt these materials to their specific context.

Coaching Log

Organization	Name of Health Professional	Position	Date of Coaching Visit	Purpose of Visit	Method of Communication
1.					
2.					
3.					
4.					
5.					
6.					

Coaching Visit Form¹

Date of Report:

Time of Coaching Session: from ____: ____ to ____: ____ (am/pm)

Name of Coach:

Name of Health Professional(s):

Contact Information for the Health Professional(s):

Coaching Purpose:

It is helpful, especially if this is a follow-up coaching session, to indicate what your intentions are for this coaching session. Examples of a coaching purpose could be to describe what you hoped to achieve in this coaching session or identify specific information you hoped to learn. It is best to keep this purpose general and brief (no more than three lines of text).

Questions and Themes	Health Professional Statements	Reflections and Interpretations
<p><i>Dialogue during a coaching session can be sporadic and subject matter is determined by the health professional(s). This table suggests some common questions or themes that may arise and can be used to organize your notes from the session into a report. These questions can also be used to initiate a dialogue. Only use those subject areas that are relevant to the coaching session.</i></p>	<p><i>This column is for direct quotes that the health professional(s) provided during the coaching session that best summarize what was discussed, new insights, or possible solutions.</i></p>	<p><i>This column is for the coach to record principle ideas expressed, interesting information, and analysis. It is what the coach thinks happened during the session and can be subjective in nature.</i></p>
<p>Data Management Process²</p> <ul style="list-style-type: none"> • What methods of data collection are used in your organization? [Examples include hand-written registers, electronic forms, face-to-face interviews, self-administered questionnaires, focus groups, observations, etc.] • How often is data reported to the organization? How often is data collected by the organization? • Who is responsible for data entry? • Who is responsible for checking errors in the data? • Who is responsible for compiling, summarizing, and/or reporting the data? • What types of reports or other information products does the organization produce? • How often are these reports or information products produced? • How are these reports or other information products disseminated? Who is the intended audience? • How does the intended audience access these reports or other information products? 		

¹ This Coaching Visit Form is designed to initiate coaching sessions. Depending on the priority activities and challenges of the health provider team, the subjects of discussion will most likely change for subsequent coaching sessions. Coaches are encouraged to adapt this Coaching Visit Form. Questions for follow-up coaching should be based on the action points developed during previous sessions.

² The *Performance of Routine Information System Management (PRISM)* tool is a useful reference for additional questions about the data collection process for routine health data collection systems. The 'Assessment of Data Use Constraints' tool is also a source for additional questions about more general technical, behavioral, and organizational constraints to regular data collection and use. These tools are available at: <http://www.measureevaluation.org/duu>

Questions and Themes	Health Professional Statements	Reflections and Interpretations
<p>Action Plan to Address Barriers to Data Use</p> <ul style="list-style-type: none"> • Can you tell me what happened when your team returned to the job site with your Action Plan to Address Barriers to Data Use? • Have any of the barriers changed? • If activities have changed, what motivated your team to make those changes? • What would you consider a success in regards to your Action Plan? • What do you think still remains to be accomplished? • What kinds of support do feel you feel your team still needs? 		
<p>Framework for Linking Data with Action</p> <ul style="list-style-type: none"> • Can you tell me what happened when your team returned to the job site with your 'Framework for Linking Data with Action'? • Which decision-makers or other stakeholders were you able to meet with to discuss programmatic changes? • How influential have the decision-makers or other stakeholders you have met been in promoting your team's goal(s)? • Have any of the activities in the 'Framework' changed? • If activities have changed, what motivated your team to make those changes? • What would you consider a success in regards to your action plan so far? • What do you think still remains to be accomplished? • What kinds of support do you feel your team still needs? 		
<p>Data Use Skills</p> <ul style="list-style-type: none"> • What has been your experience using any of the skills or tools that were reviewed on at the training workshop? (It is helpful to remind them of these skill or tools and probe for specific applications) • Are there any aspects of the skill or tools that I can help you to understand better? • Are there other skills you feel you still need? • What do you think about how your team has been able to address commitments made during the training workshop? 		
<p>Data Use Environment</p> <ul style="list-style-type: none"> • How do you think data is being used at this facility? Can you give examples? • In what ways is data being used to inform decisions about programs or health services? Can you give examples? • What do you think may be either helping or inhibiting the use of data to make decisions? • What approaches have you tried to encourage the use of information by others? • What kind of additional data would be useful for your organization's operations? • Do you or a member of your organization participate in any Technical Working Groups? If yes, what are some of the topics discussed? 		

Questions and Themes	Health Professional Statements	Reflections and Interpretations
<p>Leadership and the Data Use Environment (MSH, 2005)</p> <ul style="list-style-type: none"> • Could you please describe the challenges you are facing? (Find out in detail what the team is going through, who is involved, what political, social, environmental, or other issues are involved.) • What difference will overcoming this challenge make in achieving your planned results? (It helps to repeat a specific challenge identified by the health provider team) • What are your next steps? What do you need in order to take them? • Which members of your team commit to these steps? • When do you anticipate completing these steps? 		
<p>Data Demand and Use Results</p> <ul style="list-style-type: none"> • Does your team have any documentary evidence of changes to policies, strategic plans, operational protocols, budgets, or work plans that reflect what you have been able to achieve in your management plans? 		

A Way Forward

It is helpful to note in the Coaching Visit Form any actions and/or solutions that were generated during the coaching session. This can be used to guide the purpose of the next coaching session as well as document capacity building progress towards data use goals. It is important that the coach helps the health professional to plan actions that are within their control, are specific to their context (i.e., where, when, and with whom they want to take action), and whether they are supported with the necessary resources.

Post-Visit Coaching Report

Date of Report:

Data & Time of Coaching Session: ____ / ____ / ____ from ____: ____ to ____: ____ (am/pm)

Name of Coach:

Name of Primary Health Professional Contact:

Contact Information:

Organizations Visited:

Background on DDU Support:

A brief paragraph about when and where the DDU workshop took place, who attended from which organizations, and the topics reviewed. Describe the coaching schedule that was developed. If there were any changes to the schedule, explain why. Indicate how many coaching visits have taken place, and how many more are planned.

Coaching Purpose

A brief paragraph about what the coach aimed to discuss, review, and/or learn about during the visit.

Coaching Participants and Organizations Contacted

Include a list of organizations and representatives who attended the coaching visit other than the primary health professional contact.

Activities/Deliverables

Provide a one-sentence statement of each of the planned DDU activities that have been agreed on to date. Indicate any changes from the original DDU action plan and why.

Background on Activities/Deliverables

Describe in greater detail each activity or deliverable. Provide history, context, and any stakeholders identified as well as their intended involvement. Explain why this activity or deliverable is needed, the implementation strategy, and what kind of impact the health provider team aims to achieve.

Key Challenges

Provide a one-sentence statement of each of the challenges described by those participating in the coaching session. It is helpful to also include any challenges discussed during the DDU workshop or from other sources such as a survey or key informant interview.

Solutions and Successes

Describe any solutions and/or successes discussed during the coaching sessions.

NEXT STEPS—Team's Management Plan Moving Forward:

List the activities that the team committed to achieve by the end of the coaching visit. Include dates as appropriate. Compare these activities to the team's previous DDU action plan and/or commitments. If there were changes, provide details as to why they were necessary.

NEXT STEPS—Coaching Activities for Next Visit or Other Ongoing Support:

List any follow-up activities that the coach and/or participants purposed as helpful to the team in reaching their goals described in their DDU action plan. Provide dates of activities as appropriate. This could include data research and dissemination, review of DDU materials or tools, or facilitating contacts with key decision-makers or other experts.

NEXT STEPS—DDU Results to Investigate

It is important to identify documentary evidence of when data was successfully used to inform a decision. Highlighting these instances demonstrates to those working in the health sector the benefits of data collection, review, dissemination, and use, which generates greater demand for quality data and supports an organizational culture of data use. Also the evidence can be used to report the impact of DDU coaching activities. Examples of DDU evidence includes:

- Citations and/or references to M&E information in approved program documents such as:
 - » Policies, strategic plans, or program Request For Proposals;
 - » Advocacy or policy briefs;
 - » Budgets or finance documents;
 - » Policy maker public statements; or
 - » Recommendations from an evaluation reflected in a work plan or baseline indicator;
- Correspondence with key informants who report considering M&E findings in reaching their decision, such as meeting minutes or action items that reflect data review;
- Study, memo, or report of DDU tool use in a specific context;
- DDU operational protocols;
- Cover letter of proposals for a DDU intervention;
- New line items in a budget or proof of additional funds for DDU activities;
- Approval of funding received or an executed budget for DDU activities.

5 USE

For best results, it is usually good to start coaching sessions within a month of a DDU workshop. Also for new health professionals, it is important to keep objectives achievable with short-term timelines (~3 to 6 months) until the individual or teams become familiar with the DDU approach.

Other Activities to be added to Coaching Sessions

- A practice Data Review Meeting where the findings/answers to programmatic questions demanded by data users are presented and interpreted. This is then followed by an open discussion of possible solutions, actions to be taken, by whom, and when based on the review of data. It is good to introduce a method of documentation of the Data Review Meeting.
- Review and application of *Framework for Linking Data with Action* (<http://www.cpc.unc.edu/measure/publications/ms-11-46-b>). This management tool creates a time-bound plan for data-informed decision making that balances other job responsibilities of team members. It is used to demonstrate the link between programmatic information needs, a data source, and recommendations for program improvements. A completed Framework also provides a useful reference for additional coaching visits.
- Open discussion of challenges to data use. A more comprehensive assessment is recommended to accurately determine the barriers to data use using the *Assessment of Data Use Constraints* (<http://www.cpc.unc.edu/measure/publications/ms-11-46-a>) or *PRISM* tools (<http://www.cpc.unc.edu/measure/publications/ms-11-46-d/>). However much can be learned through an open discussion with the different teams on challenges they face. Some questions to start the discussion:
 - » Have you ever had an experience while making a policy or program-related decision when you were concerned about the quality of the information being used?
 - » Does your agency have the technical capacity to ensure access to and availability of reliable data?
 - » What specific challenges have you experienced among your staff when it comes to using data?
 - » How does your organization support having the necessary information to make decisions?

6 AUDIENCE

This tool is meant for individual health professionals or teams of health professionals who have participated in a DDU workshop or other related training event.

In cases where support is given to several organizations, it may be more efficient to facilitate a group coaching session. It is advised to keep groups small. A team of five to six individuals or two teams of between nine and twelve individuals is ideal. A team must have at least two individuals from the same organization that have clearly defined separate roles and responsibilities. It is also good to plan for a two to four day session so that each team has an opportunity for individual coaching attention. A group coaching session is most productive with organizations that have established M&E and information systems from which they can extract and analyze required data.

The most effective teams tend to consist of a data producer and a data user. Data producers acquire, analyze, and prepare data for distribution. A data producer can be an M&E Specialist, data entry clerk, a researcher, or any other profession that works with data on a routine basis. A data user makes data-informed decisions about the design, implementation, monitoring, and improvements of a health program or service. A data user can be a program manager, program director, policy maker, service provider, leader of a civil society group, or other profession who has the authority to take actions based on the interpretation of data.

The aim of a group coaching session is to work with the trainees through the process of identifying information needs and corresponding data sources to analysis, interpretation, and crafting health program solutions. A helpful tool for organizing a coaching workshop is the *Seven Steps to Use Routine Information to Improve HIV/AIDS Programs, A Guide for HIV/AIDS Program Managers and Providers* (<http://www.cpc.unc.edu/measure/publications/ms-09-38>). It provides concrete steps and illustrative examples that can be used to facilitate the use of information as part of a decision-making process. As each step is presented to the entire group, teams can apply the steps to data relevant to their organization. The coach can then provide technical assistance as needed for a specific context or programmatic need.

7 FIELD APPLICATIONS

Nigeria, August 2011 to April 2013

MEASURE Evaluation Nigeria conducted training in Lagos State in August 2011 where participants were introduced to the concepts of Data Demand and Use, and trained on three DDU tools: the *Assessment of Data Use Constraints* tool, The *Information Use Mapping* tool, and the *Framework for Linking Data to Action* tool. As part of ongoing capacity building and technical support, MEASURE Evaluation facilitated coaching sessions over the following year with the Lagos State Agency for the Control of AIDS (LSACA), State Ministry of Health (SMoH), Abidjan-Lagos Corridor Organization (ALCO), and Health Service Commission (HSC). The purpose of these coaching sessions was to review workshop content, assess status of participant commitments to action plans, provide technical advice to resolve challenges, and identify needs for further DDU support.

A significant challenge that participants were able to address was how to engage facility-level and Local Government Authorities (LGA) decision makers in the analysis, interpretation, and use of data. In collaboration with LSACA and the SMoH, the *Framework for Linking Data with Action* tool was modified and renamed the *State M&E Action Planning and Feedback* tool. The purpose was to incorporate data review and use discussions into monthly M&E meetings.

At each meeting, program findings from routine data are reviewed with corresponding investigation requirements or recommendations for improvements to service delivery documented as action points in the tool. The completed tool is then distributed to health facility managers for feedback from their staff at the health facility. At next M&E meetings, each health facility focal point presents the outcome or decision taken based on the recommendations or any further investigation conducted.

Rwanda, August 2012 to July 2013

MEASURE Evaluation conducted a Regional Forum on the Use of HIV Data for Gender-aware, District-level Programming in August 2012. The workshop was held in collaboration with Rwanda Biomedical Center's Institute of HIV/AIDS Disease Prevention and Control (RBC/IHDPC) and UNAIDS. Rwandan HIV program officers and data managers from eight districts reviewed routine HIV/AIDS-related service data and conducted a gender analysis for evidence-based action planning. During the forum, participants learned to: identify gender-related service disparities, potential causal factors for the disparity, and identify actions to address gender constraints to accessing HIV/AIDS-related health services.

MEASURE Evaluation teams continued to provide ongoing coaching support to district teams after the Regional Forum. Their aim was to identify any obstacles to implementation of actions identified during the workshop, and work with the district team to manage any challenges. A draft version of this DDU coaching guide was used to guide this process. This sample Coaching Log and Coaching Visit Form were from the first coaching visit four months after the workshop.

Coaching Log

Organization	Name of Health Professional	Sex	Position	Date of Coaching Visit	Purpose of Visit	Method of Communication
1. District AIDS Control Agency	XXX	M	Coordinator	12/12/2012	<ul style="list-style-type: none">• Update on action plan progress• Identify challenges to implementation	Face-to-face meeting at the District
2. District AIDS Control Agency	XXX	F	Technical Assistant			
3. District Gender Department	XXX	F	Gender and Family Promotion Officer			
4. District Hospital	XXX	F	Gender-based Violence Officer			

Coaching Visit Form

Date of Report: 12/12/2012

Time of Coaching Session: from 09:00 am to 11:00 am

Name of Coach: XXX

Name of Health Professional(s) : XXX District Team (see coaching log)

Contact Information for the Health Professional(s): XXX

Coaching Purpose:

District Team's Health Goal: Increase the percentage of men accessing Volunteer Counseling and Testing Centers (VCT) in the District.

District Team's Action Plan:

- Present gender analysis and purposed Gender Integration Action Plan to partners and district authorities;
- Organize follow-up planning sessions for implementation;
- Solicit resources for sports radio publicity on RADIO XXX targeting males accessing VCT services;
- Conduct 1 week VCT campaign in all community sectors focusing on men;
- Review VCT data for change in number of men accessing VCT services.

Coaching Purpose: Ensure that the Gender Integration Action Plan was integrated into the District Quarterly Work Plan and identify any challenges to implementation.

Questions and Themes	Health Professional Statements	Reflections and Interpretations
Framework for Linking Data with Action Can you tell me what happened when your team returned to the job site with your 'Gender Integrated Action Plan'?	3 out of 5 planned activities were implemented: <ul style="list-style-type: none">• In September 2012, met with partners and district authorities to present gender analysis and purposed action plan at monthly coordination meeting and district staff meeting (n=21);• In November 2012, organized a planning sessions with those responsible for sector-level social affairs and committees on gender-based violence (n=20).	The debriefing meetings were helpful in gaining interest among a variety of stakeholders
Which decision-makers or other stakeholders were you able to meet with to discuss programmatic changes?	<ul style="list-style-type: none">• Police in charge of Gender-based Violence; Role: member of technical team to develop messages;• NGO XXX; Role: member of technical team to develop messages and organize sector-level meetings;• National Women's Consul; Role: member of technical team to develop messages and organize sector-level meetings;• Director of Good Governance; Role: member of technical team to develop messages to encourage legalized marriage for greater access to health services.	

Questions and Themes	Health Professional Statements	Reflections and Interpretations
Have any of the activities in the 'Framework' changed?	<p>Additional activities were recommended during the November planning sessions:</p> <ul style="list-style-type: none"> Intensify efforts to sensitize males at community sector meetings; Sensitize nurses in other health service sectors about the availability of counseling and testing services; Educate couples to legalize their marriages to maximize health service benefits; 1 week campaign for men's access to VCT services combined with 16-day campaign for the struggle against gender-based violence. 	<ul style="list-style-type: none"> These activities are more like ongoing strategies to increase the number of men accessing VCT services. The combined campaign was a way for the team to maximize existing resources.
What would you consider a success in regards to your action plan so far?	<ul style="list-style-type: none"> Successful buy-in from all stakeholders; Budget for sports radio broadcast approved. 	
What do you think still remains to be accomplished?	<ul style="list-style-type: none"> Conduct community campaign; Seek resources from key stakeholders for sports radio publicity. 	
What kinds of support do you feel your team still needs?	<ul style="list-style-type: none"> Experiencing difficulty accessing Health Information from the on-line health information system for VCT data. Can you help us to access this information? The district lacks resources to fully implement the campaign. 	The team has demonstrated flexibility in managing resources by combining their campaign with others to save resources. DDU Specialist to look into eligibility for District Team to receive a small grant for Sport Radio publicity.
Data Use Skills Are there other skills you feel you still need?	Further training in analysis of sex disaggregated data.	The District AID Control Agency staff is trained in data collection and entry; however they made need more technical skills in basic data analysis (descriptive statistics).
Data Use Environment What do you think may be either helping or inhibiting the use of data to make decisions?	<ul style="list-style-type: none"> Recommendations from regular data reviews are not updated in the annual District performance plan. Therefore there is no guarantee of additional resources for new activities. Recommendations that are not part of the annual District performance plan require additional presentations to key stakeholders and takes time to build consensus/buy-in. 	Consider data review sessions prior to annual planning period to ensure greater resource commitments.
Data Demand and Use Results Does your team have any documentary evidence of changes to policies, strategic plans, operational protocols, budgets, or work plans that reflect what you have been able to achieve in your management plans?	<ul style="list-style-type: none"> Monthly coordination meeting minutes from September 2012; List of participants coordination meeting; Planning sessions report; List of participants of planning sessions; Number of participants (Male and Female) in campaign meetings within the 12 target sectors; Budget for Sports Radio broadcasts. 	DDU Specialist to organize evidence into a file for future reference.

A Way Forward

District Team:

- Investigate potential reach of sports radio publicity and use resulting information to advocate with the Vice Mayor of Social Affairs, Director of Hospital, and District Health Director for additional funds for activity;
- Test health message developed during planning sessions;
- Finalize health message.

DDU Specialist coach:

- Investigate potential for small grant to fund sport radio publicity component of VCT campaign;
- Prepare presentation of select materials from the MEASURE Evaluation 'Introduction to Basic Data Analysis and Interpretation' training for next coaching session;
- Discuss with RBC Biostatistics Unit about accessing District-level VCT data.

8 CONCLUSION

DDU Coaching bridges the gap between training and application of DDU skills to health programs.

Ongoing coaching support builds on the knowledge and skills acquired at a DDU workshop. This set of skills involves defining the demand for data by key decision makers and structuring the interpretation of data in ways that facilitate data use in programmatic decision making. In order to be successful, health professionals often need additional support to effectively apply their newly acquired DDU skills and align their DDU activities with the operations and priorities of their respective health organizations. The DDU coach can provide a team of health service providers the individual technical guidance to strategically adapt their DDU skills to their specific work environment and health goals.

DDU training combined with ongoing technical support through effective coaching also helps to identify specific opportunities to more fully integrate the use of data in decision making of a health organization. A structured coaching approach provides the platform for greater collaboration between those who produce data for reporting purposes, and those who could benefit from the use of that data to manage and implement health programs. DDU coaching further reinforces this culture of data use through the documentation and gathering of evidence of the impact of greater data use in decision making to improve health programs.

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