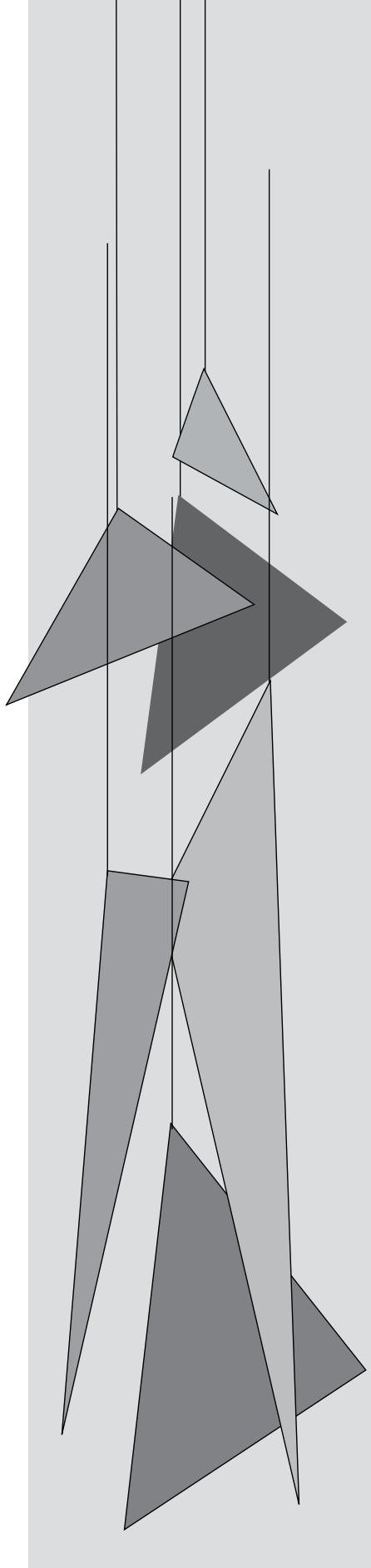# Routine Health Information System Rapid Assessment Tool

Implementation Guide

August 2018

Routine Health Information System Rapid Assessment Tool

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ACKNOWLEDGMENTS

The Routine Health Information System (RHIS) Rapid Assessment Tool builds on the approach to strengthening a country's monitoring and evaluation (M&E) system described in *Monitoring, Evaluation and Review of National Health Strategies: A Country-Led Platform for Information and Accountability*, a document produced by the World Health Organization (WHO, 2011). The tool was developed by MEASURE Evaluation, which is funded by the United States Agency for International Development (USAID), in collaboration with WHO's Information, Evidence and Research Department, with substantial input from other WHO departments and programs, health ministries, regional experts, and global and in-country partners.

David Boone led the tool's technical development, with contributions from Tariq Azim, Suzanne Cloutier, Fanor Joseph, Sergio Lins, and Stephanie Mullen—all of MEASURE Evaluation. Theo Lippeveld (John Snow, Inc., and formerly with MEASURE Evaluation) also contributed.

Technical input from WHO departments and programs contributed to the development and definition of the standards in the RHIS Rapid Assessment Tool, with specific involvement by Eduardo Celades and Kavitha Viswanathan.

Special thanks are given to the countries that tested and implemented components of the tool and provided valuable feedback: The Gambia, Malawi, Madagascar, and Myanmar.

Thanks to MEASURE Evaluation's knowledge management team for editorial and production services.

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FIGURES

ABBREVIATIONS

DQR   data quality review

HIS   health information system(s)

ICD   International Classification of Diseases

ICT   information and communication technology

IT   information technology

M&E   monitoring and evaluation

MFL   master facility list

MOH   Ministry of Health

NA   not applicable

PRISM   Performance of Routine Information System Management

RHIS   routine health information system(s)

SMoL   Start-Up Mortality List

SOP   standard operating procedure

USAID   United States Agency for International Development

VA   verbal autopsy

WHO   World Health Organization

OVERVIEW

The World Health Organization (WHO) and MEASURE Evaluation—funded by the United States Agency for International Development (USAID)— have identified and harmonized standards for data management of the routine health information system (RHIS). The standards, which are best practices, promote the production of timely, accurate data for use in program planning and monitoring and evaluation (M&E). The RHIS Rapid Assessment Tool was developed to assist health information system (HIS) managers and evaluators identify gaps and weaknesses—aspects of health facility and community information systems that do not meet the standard—with a view to strengthening the RHIS and improving the data. The RHIS Rapid Assessment Tool compares a country's RHIS to the global standards and indicates where resources should be invested to improve the system.

Concurrent with this work, WHO developed the "Survey, Count, Optimize, Review, Enable" (SCORE) for health data technical package to help member states of the United Nations strengthen their data systems and capacity to monitor progress toward the health-related Sustainable Development Goals, Universal Health Coverage, and other national and subnational health priorities and targets (WHO, 2018). The SCORE package represents the most effective interventions for strengthening country health data systems, and encourages stakeholders to invest in a select number of interventions that synergistically have the greatest impact on the quality, availability, analysis, use, and accessibility of data in countries. Based on the maturity of a country's HIS, the SCORE package provides guidance on best practice measurement methods, standards, and tools to improve the availability, quality, analysis access, and use of data. The RHIS Rapid Assessment Tool is recommended in the SCORE package for assessing and improving RHIS in the "Optimize Health Service Data" category of interventions.

The standards in the RHIS Rapid Assessment Tool were identified during expert meetings convened by MEASURE Evaluation and WHO between 2012 and 2014. In May 2012, MEASURE Evaluation hosted an International Workshop on Guidelines for Data Management Standards in Routine Health Information Systems, in Johannesburg, South Africa. RHIS experts from around the world gathered to identify standards and best practices for the RHIS, especially on data management and RHIS elements that have been recognized globally as the most problematic following the implementation of the Health Metrics Network Country Assessment Tool in more than 85 countries (Health Metrics Network, 2012). The discussions were organized around four thematic areas: (1) user's data and decision support needs; (2) data collection, processing, analysis, and dissemination of information; (3) data integration and interoperability; and (4) governance of RHIS data management.

In June 2014, WHO hosted a Technical Consultation on Monitoring Results with Health Facility Information Systems, which took place in Glion-sur-Montreux, Switzerland. The outputs of the workshop were developed into a toolkit: WHO Health Facility and Community Data Toolkit (http://www.who.int/healthinfo/facility_information_systems/en/). The toolkit uses an organizing framework for the key components of a country's health facility information system, namely: (1) governance (an overarching component); (2) data collection and management; (3) data quality and analysis; and (4) data dissemination and use. In each section of the toolkit, action steps are identified and examples of available tools and resources to support country action are provided. A checklist of essential items and attributes is provided to facilitate the monitoring of progress toward the defined standards (which is also available as a separate spreadsheet).

WHO and MEASURE Evaluation decided to harmonize the two resulting lists of standards, which became the RHIS Rapid Assessment Tool. The tool's source documents are the WHO Health Facility and Community Data Toolkit (cited and linked above) and MEASURE Evaluation's Guidelines for Data Management Standards in Routine Health Information Systems, by Arthur Heywood and David Boone (https://www.measureevaluation.org/resources/publications/ms-15-99).

APPLICATION OF THE RHIS RAPID ASSESSMENT TOOL

The tool can be applied in a range of ways depending on the needs of the RHIS at the time it is used. The primary applications of the tool are:

1. **Facilitator-guided workshop:** For a relatively rapid assessment and a general overview of the RHIS' adherence to global standards, representatives from different levels of the health system and different program areas come together in a workshop setting to discuss and come to consensus on the extent to which the RHIS adheres to the identified standards. The workshop should be facilitated by an RHIS expert who is knowledgeable about the local RHIS. Participants should be representatives of the RHIS from different levels of the health system in which the RHIS operates, for example, from health facilities, districts, regions, and the national level. The workshop should be long enough to allow sufficient time to thoroughly discuss and reach consensus on whether each standard has been reached by the local RHIS.

   Participants should be grouped by level of the health system. Each group should work together to reach consensus. The responses are aggregated and compiled automatically by the tool and are presented back to participants in the form of dashboards. If enough time and resources are available, action planning for system strengthening can be conducted during the same workshop.

2. **Sample of health facilities and subnational RHIS units:** Assessment teams (consisting of people knowledgeable about the RHIS and its strengths and weaknesses) visit a sample of health facilities and RHIS management units at the subnational level to interview key staff and complete the two Excel modules to determine the RHIS' adherence to the standards.

   This assessment approach may be appropriate because it is often difficult in a workshop setting to obtain a perspective on each level of the health system. Visits to health facilities and RHIS management units can help ensure that the data obtained reflect the reality at that health system level. Site visits can also allow for a more in-depth and precise measurement of adherence to the standards. This option is more time consuming and expensive because staff must go to the field. However, it is often worth the extra time and expense to obtain the most precise measures possible, for example, just prior to implementing RHIS reform efforts.

   Limited sampling can be effective in yielding results that are generalizable. Lot quality assurance sampling can be used on a small sample (approximately 20 sites) with a decent power to detect whether the sample achieves a minimum level of acceptable agreement, established a priori, with global standards.

   In the field, the visiting staff administer the assessment with the facility in-charge or the RHIS manager. If necessary, a program manager or data manager can be interviewed.

   Following the site visits, data from the different copies of the Data Entry Module are cut and paste in the Data Analysis and Dashboards Module.

3. **Self-assessment:** Alternatively, the assessment tool can be emailed to select RHIS stakeholders at different levels of the health system who complete it and email it back to assessment managers. The assessment managers compile the results and provide feedback to the respondents.

When to Apply the Tool

The RHIS Rapid Assessment Tool can be applied as a one-off assessment prior to RHIS reform or as a regular aspect of RHIS performance assessments (for example, as part of Performance of Routine Information System Management [PRISM][1]). The assessment provides a snapshot of RHIS adherence to global standards, many of which do not change often over time. It is therefore not necessary to administer the tool more frequently than once every two to three years (about the same frequency as performance assessments).

If administered prior to a one-time RHIS reform effort, the tool should be applied well in advance (several months) of RHIS reform planning so that the information obtained is readily available for the planning effort.

The tool should ideally be applied in conjunction with RHIS and/or health sector strategic planning so that identified gaps can be immediately addressed in the workplans and budgets resulting from the planning exercise.

Who Can Apply the Tool

The RHIS Rapid Assessment Tool does not require special skills to administer, although it is ideally administered by RHIS staff who have knowledge of the local information system. Staff such as RHIS managers, program managers, and data managers from the national or regional level are good examples of personnel who can easily use and apply the tool.

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[1] PRISM is a method and toolkit designed to assess the performance of the RHIS in terms of data quality, the use of data for decision making, and management capacity (among other issues). The PRISM toolkit can be found here: https://www.measureevaluation.org/prism

HEALTH FACILITY AND COMMUNITY INFORMATION SYSTEM STANDARDS

The standards are grouped by domain and subdomain. The standard domains and subdomains follow. The complete list of standards is provided in Appendix A.

1. **Management and Governance**
   1.1. Policies and Planning
   1.2. Management
   1.3. Human Resources

2. **Data and Decision Support Needs**
   2.1. Data Needs
   2.2. Data Standards

3. **Data Collection and Processing**
   3.1. Data Collection
   3.2. Data Reporting
   3.3. Data Quality
   3.4. Information and Communication Technology (ICT)

4. **Data Analysis, Dissemination, and Use**
   4.1. Data Analysis
   4.2. Information Dissemination
   4.3. Data Demand and Use

RAPID ASSESSMENT TOOL COMPONENTS

The RHIS Rapid Assessment Tool comprises two Microsoft Excel workbooks: (1) the Data Entry Module (available here: https://www.measureevaluation.org/resources/publications/tl-18-10c) and (2) the Data Analysis and Dashboards Module (available here: https://www.measureevaluation.org/resources/publications/tl-18-10b). Data are entered in the Data Entry Module and then transferred to the Data Analysis and Dashboards Module. There are as many completed copies of the Data Entry Module as there are respondents (or groups of respondents, in the case of the facilitator- guided workshop), whereas there is only one completed copy of the Data Analysis and Dashboards Module.

Data Entry Module

The Data Entry Module comprises a checklist of standards for health facility and community information systems, grouped by thematic domain and subdomain. This checklist can be used at any level of the health system involved in data collection, aggregation, transmission, and reporting of RHIS data: (1) national level; (2) subnational level–other (that is, region, province, etc.); (3) subnational level–district; and (4) service delivery point.

Responses and comments entered in the checklist are automatically compiled on the "raw data" tab in the worksheet, with one row for responses and one for comments. These data are cut and pasted in the Data Analysis and Dashboards Module to aggregate and view the results across respondents. The Data Entry Module also has a dashboard that depicts the results for responses entered, but only for the responses emanating from the group or respondent completing the workbook (see "dashboard tab" in the Data Entry Module).

Each item on the checklist is scored as either 0 (no answer/not applicable); 1 (not present, needs to be developed); 2 (needs a lot of strengthening); 3 (needs some strengthening); or 4 (already present, no action needed).

Data Analysis and Dashboards Module

The Analysis and Dashboards Module contains the responses for each level of the health system involved in the assessment and the cumulative results across all levels. There are standard-specific results—that is, the percentage of respondents selecting a particular response—and dashboards that display results grouped by domain and subdomain.

Results, comments, and priority actions are cut and pasted from the Data Entry Module (one line each) per completed workbook to see the results in the Analysis and Dashboards Module.

Instructions for Data Collection: Data Entry Module

Enter Respondent Information

Select the level of the health system for which you (or your group) are completing the checklist. Enter information about the respondent(s) or the respondent groups in the spaces provided at the top of the data entry worksheet (Figure 1). Select the level of the health system for which you are responding from the drop-down menu in cell G1.

Figure 1. Respondent information table

Standards for Health Facility & Community-based Information Systems		National		
Interviewee/ Group Lead:	Group Members:	Name:	Title:	Organization:
Title:	2)			
Organization:	3)			
Phone:	4)			
Email:	5)			
Date:				

Selecting Responses from the Drop-Down Menus

The standards are presented as statements. Respondents review the statements and decide the extent to which the standard applies at the health system level selected. Responses are coded according to a Likert scale, with the following values:

- 0 = No answer/Not applicable

- 1 = Not present, needs to be developed

- 2 = Needs a lot of strengthening

- 3 = Needs some strengthening

- 4 = Already present, no action needed

Figure 2. Data entry

Code	Health Facility & Community-based Information System Standard (click on text in column B for guidance on selecting responses)	Response: 0 = No answer/Not Applicable 1 = Not present, needs to be developed 2 = Needs a lot of strengthening 3 = Needs some strengthening 4 = Already present, no action needed	Comments on Standards	Possible Actions	Country Priority Actions
1. Management and Governance					
	1.1 Policies & Planning				
	Legal and regulatory				
1.1.1	There is up-to-date legislation and detailed regulations for facility-based information, including private health facilities (if no, proceed to 1.1.5)	4 = Already present, no action needed		a. Review/update legislation/ information policy.	
1.1.2	Health information legislation and regulations clearly articulate roles and responsibilities at all levels	1 = Not present, needs to be developed		a. Review/update legislation/information policy to include details on roles/levels.	
1.1.3	Health information legislation and regulations clearly identify and articulate decision-making authority	3 = Needs some strengthening		a. Review/update legislation/information policy to include details on who makes which decisions and when.	
1.1.4	Legislation or policy includes mechanisms to ensure privacy and confidentiality of personal information	4 = Already present, no action needed		a. Review/update legislation/information policy. b. Develop mechanisms to ensure privacy and confidentiality of personal information, e.g. confidentiality agreements signed by health information personnel, password protection on electronic health information.	

If the RHIS Rapid Assessment Tool is being administered in a workshop setting, different groups representing the different levels of the health system are formed, and the statements are discussed in the group. Through a consensus process, the group reaches agreement on the most appropriate response and enters the response in the copy of the Data Entry Module that contains all the responses for the group.

The "comments" field (column E) allows respondents to explain their responses and describe why a given standard is not being met or is in the process of being met. Comments are very helpful for understanding the gaps and weaknesses in the system and selecting interventions to address the gaps. The organizers of the assessment should encourage respondents to provide comments so that those preparing the action plans will completely understand the problems to be addressed.

Guidance for selecting the appropriate response is available by clicking on the text of a specific statement in column B in the Data Entry Module. For example, to obtain guidance for standard 1.1.1, click on the text in cell B13. This will launch a pop-up window that provides some guidance (Figure 3). Note: For the guidance to be available, the user must first "enable content" or "macros" when prompted by Excel on opening the file. **Please ensure that content is enabled so the full functionality of the tool is available.**

Figure 3. Click on the standard statement to see guidance on selecting an appropriate response

Possible Actions and Country Priority Actions

What should be done when a component of the local RHIS does not meet the global standard? A list of "possible actions" is provided next to each standard in column F of the Data Entry Module. Next to that, in column G, there is space to record the action steps that are considered priority by country stakeholders to remedy the weaknesses identified and improve the standard. Enter the priority country actions in the cell provided (column G). The priority actions will later be summarized in the Data Analysis and Dashboards Module.

Data Compilation: Data Analysis and Dashboards Module

Once all the Data Entry Module workbooks have been completed, the results are gathered and compiled in the Data Analysis and Dashboards Module. In the Data Entry Module, go to the "Raw Data" tab. The results data are given in row 2, comments are in row 3, and priority actions are in row 4. Select the contents of an entire row by first navigating to the cell A2 (for results) and typing "control-shift-right arrow" together. The entire contents of the row will be selected. Then press "control-c" to copy the contents of the selected cells into memory.

Switch to the Data Analysis and Dashboards Module and to the tab "Raw Data Input" (for results), or "Raw Comments Input" (for comments). Navigate to the first blank row in column A and type "control-v" together to paste the contents from memory into the appropriate row of the "Raw Data" or "Comments" tab. Repeat the same procedure for row 4 (priority actions) and paste the data in the "Raw Priority Actions" tab.

Do this for all completed Data Entry Module workbooks, selecting the next blank row for each. The data will automatically be summarized in the dashboards.

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Figure 4. Copy rows from raw data tab
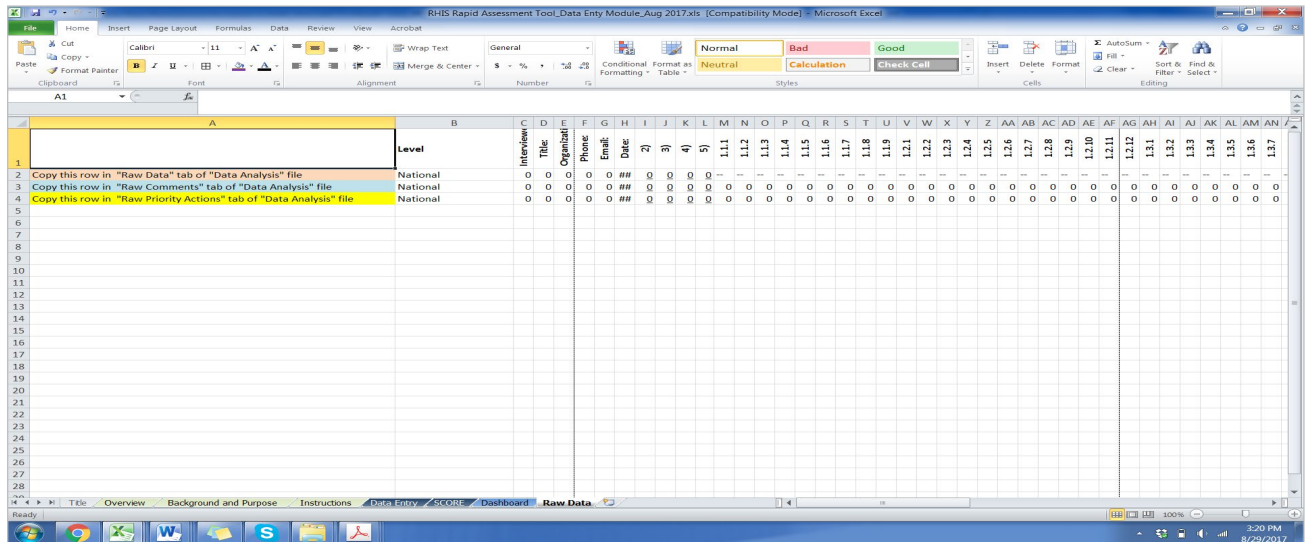
ANALYSIS OF FINDINGS

Compiled results are displayed by domain and subdomain on dashboards in the Data Analysis and Dashboards module. In addition, compiled results for each standard are displayed on the checklist specific to the level selected by the user.

Dashboards

The results are depicted in the dashboards as horizontal 100 percent bar charts that show the percentages of selected responses (for example, Figure 5). For each standard, the percentage of respondents that chose the response, for example, "3 = Needs some strengthening," is shown by the yellow area of the horizontal bar. Similarly, the percentage that chose, "4 = Already present, no action needed," is shown as the green area of the bar. In this way, the results analyst can see at a glance which response was chosen most frequently to gauge the extent to which the standard has been met by the local RHIS.

Figure 5. Dashboard of results by domain, all levels
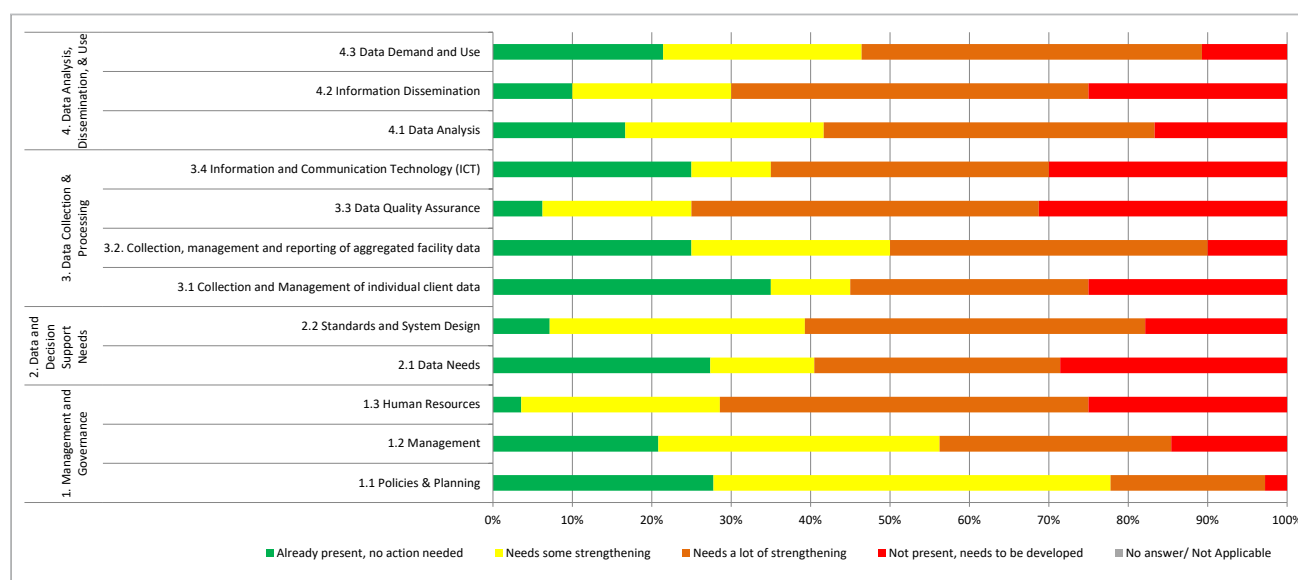
The summary findings are presented in three dashboards:

1. **Results – Overall:** depicts the distribution of responses, disaggregated by domain and subdomain, with all results together in the same chart.

2. **Results – by Level:** depicts the distribution of responses, disaggregated by level of the health system, with different charts for each domain.

3. **Results – by Domain:** depicts responses organized by domain. Each domain is then broken down into individual charts, by level of the health system.

Use the drop-down menu in cell O1 on both the "Results-by Level" and "Results-by Domain" tabs to toggle between the different levels or different domains (Figure 6).

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Figure 6. Toggle between results for different levels and domains

Toggle between results for different levels and domains by selecting from the dropdown list in cell O1
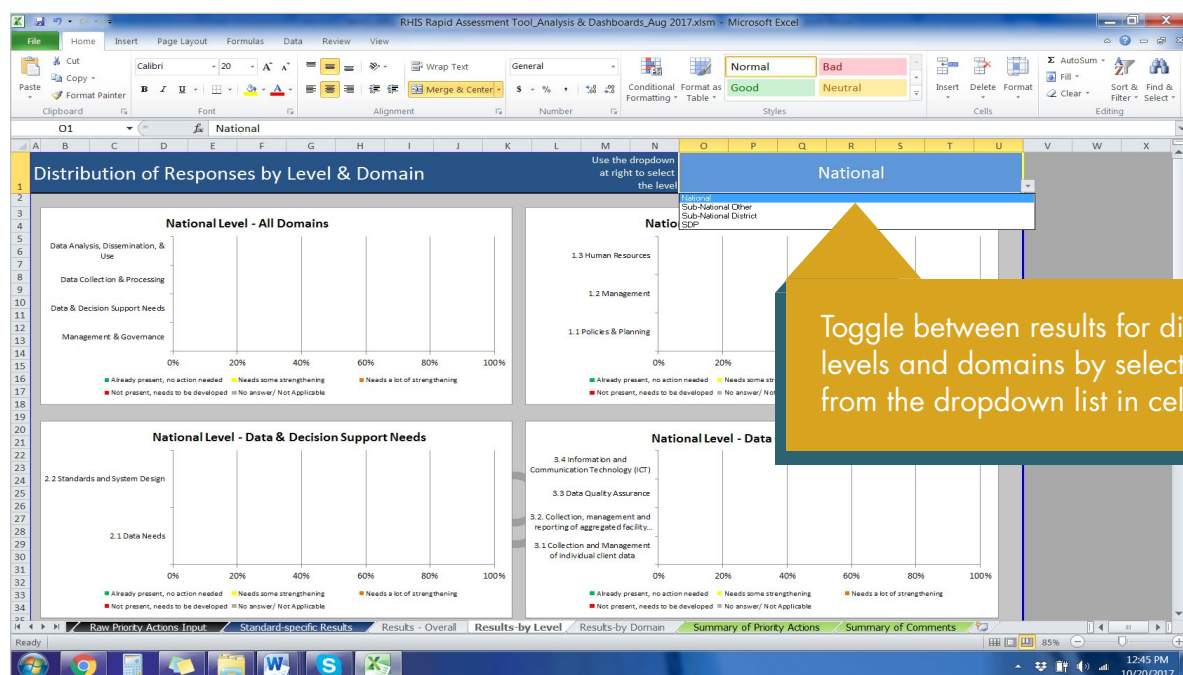
Note: For the dynamic charts to be available, the user must first "enable content" or "macros" when prompted by Excel on opening the file. Please ensure that content is enabled so the full functionality of the tool is available.

Level-Specific Summary Results for Each Standard

Results are also depicted for each individual standard, both cumulatively and by level (Figure 7). The percentages of responses for each standard are calculated across all respondents and are displayed in the columns to the right of the standard (columns C:G).

Figure 7. Level-specific summary results for each standard

You can toggle here as well to see level-specific results for individual standards (cell C1)
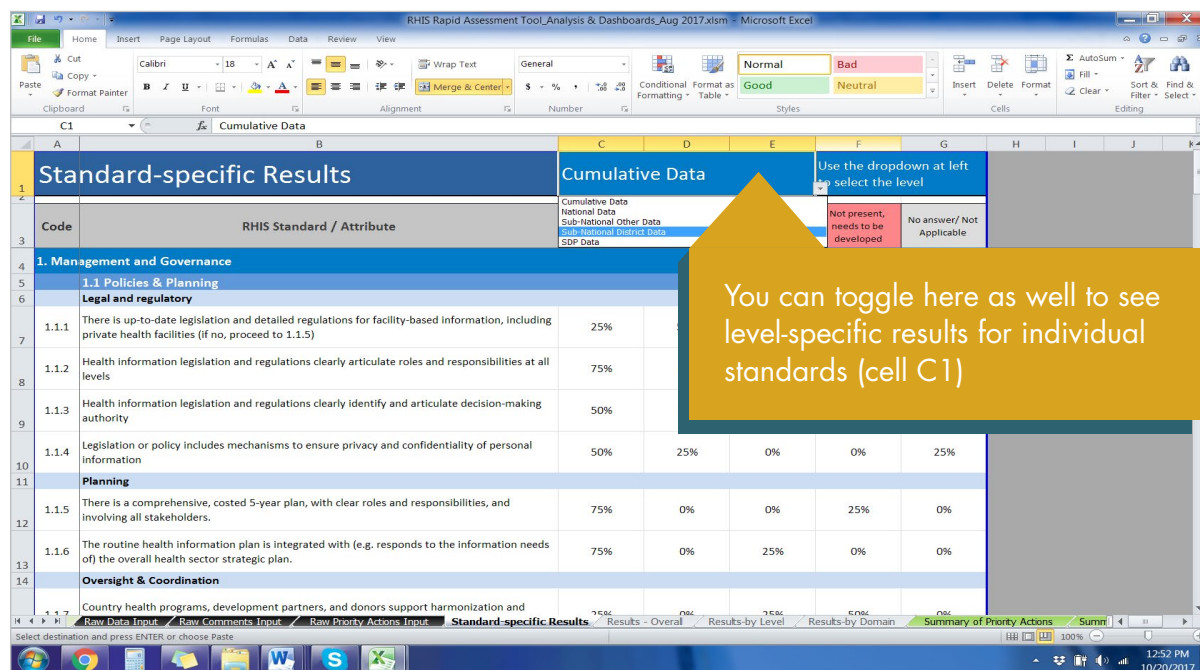
A filter can be set for a specific result to limit the findings to that specific result (Figure 8). To see only the results for a specific response (for example, "Not present, needs to be developed"), first apply the filter by selecting the cells on the "Standard-Specific Results" tab that contain the values you want to filter (for example, A3:G3). Click the filter icon: the small down arrow appearing in the bottom right corner of each cell in the range for which the filter is set. Then choose the value to which you want to limit the data. For example, to show the standards for which all the responses were in the last two categories ("Needs a lot of strengthening" and "Not present, needs to be developed"), select "0 percent" from the filters in the columns for the other two categories. You can limit the results to a specific level of the health system by selecting the level from the drop-down list in cell C1.

Figure 8. Filters for specific results

Set filters for different responses to investigate performance for different standards and levels.

INTERPRETATION OF RESULTS

Standards (and the domains and subdomains) that need to be strengthened will be evident from the red ("Not present, needs to be developed") and orange ("Needs a lot of strengthening") colored sections of the bars in the dashboards, and also by the relative percentages of responses in the Standard-specific Results tab.

For example, in Figure 9, the topmost bar, "Human Resources," shows more than 80 percent of responses colored red or orange (compared with 60% for "Management" and 30% for "Policies and Planning").

Figure 9. Identifying areas needing strengthening

Management & Governance - National Level
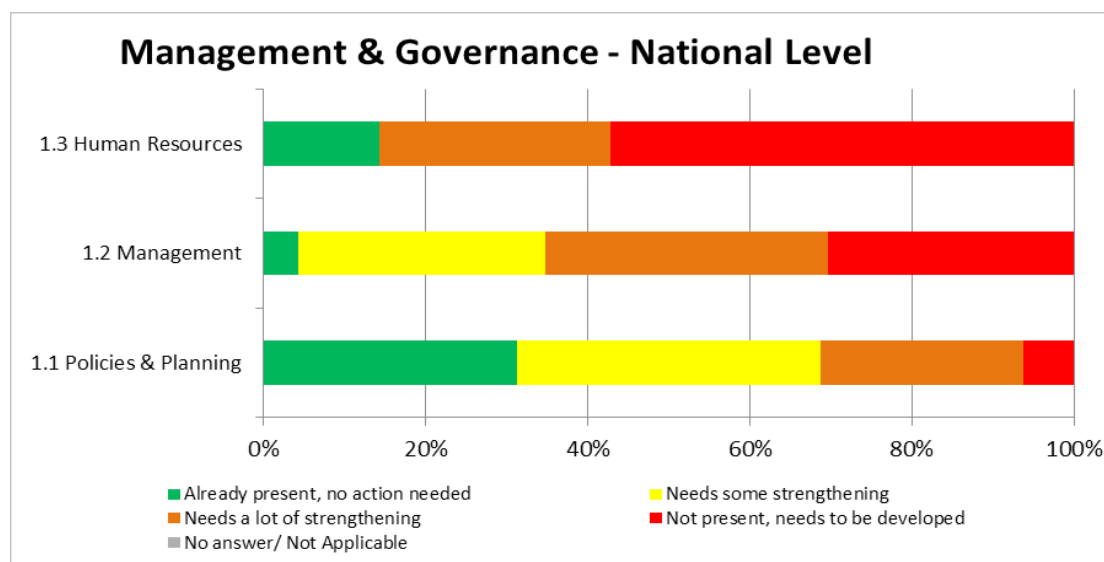
Review Comments and Priority Actions

The comments provided in the Data Entry Module, once cut and pasted in the Data Analysis and Dashboards Module, appear in the "Summary of Comments" tab (Figure 10). The comments from each completed Data Entry Module are listed (one row per respondent) with each of the individual standards. The comments can be reviewed by scrolling down the column to see what respondents had to say about each standard. It can be very helpful to know the details of why standards were scored as they were by reviewing the comments. The comments can also help point the way to identifying appropriate system strengthening measures developed during the ensuing action planning phase.

Similarly, the priority actions provided in the Data Entry Module appear in the "Summary of Priority Actions" tab of the Data Analysis and Dashboards Module. The priority actions are listed below each standard and reflect the collective wisdom of the group of respondents as to the appropriate next steps to take to address a weakness in the system. Ultimately, health sector planners will determine what can be accomplished given available resources. However, the provision of informed recommendations on action steps facilitates the process.

Figure 10. Comments on standards by respondent

	1. Management and Governance					
	1.1 Policies & Planning					
	Legal and regulatory					
Standard	**1.1.1**	**1.1.2**	**1.1.3**	**1.1.4**	**1.1.5**	**1.1.6**
Level	There is up-to-date legislation and detailed regulations for facility-based information aligned with the framework for health information including all data sources	Health information legislation and regulations clearly articulate roles and responsibilities at all levels	Health information legislation and regulations clearly identify and articulate decision-making authority	Health information legislation and regulations include mechanisms for accountability for both data users and data producers	Legislation or policy includes mechanisms to ensure privacy and confidentiality of personal information	The national authority enforces the legal/policy framework, including private facilities
National	Country has the HIS policy, HIS strategic Plan, eHealth Strategy, HSSP, NSS strategic plan ; MoH has update and approved HIS policy in 2015	Clarification and responsibilities of medical, nursing and clinical staff need to be explicitly regulated	--	Country has the SOPs in progress to oversee the accountability issue.	HIS policy is in place and security and privacy SOP is in progress to finalize the issue.	1. HIS policy is in place but need to be strengthened and engaged with private sectors using some standard procedures to enforce it
Sub-national/ Other	Zones should be involved in the implementation of the policies	--	--	Capacity of users and producers needs to be enhanced	Zones do not handle personal information	Private facilities need to be collaborative
Sub-national/ District	--	--	--	--	--	There is ad hoc (not systematic) supervision
SDP	Reinforcing awareness and use	Reinforcing awareness and use	Line of authority not clearly articulated, however, service delivery decisions come from the district level	Accountable and reports to DHMT	The practice needs to conform to what has been articulated in the legislation	Reinforce private and program; specific reporting

Action Planning for System Strengthening

The results of the rapid assessment can be used to prioritize system strengthening measures to improve the RHIS. The analysis of the findings should be immediately followed by action planning to develop strategies and interventions to address the identified gaps and by the dissemination of both the assessment findings and an action plan.

First, an analysis of the findings to identify the gaps, as described above, is conducted. The people leading the assessment (for example, RHIS managers), determine the interventions that are appropriate for the country and with the available budget. Interventions are prioritized if the budget is not sufficient to address all the gaps immediately. The name(s) of the staff, agency/agencies, and/or organization(s) responsible for implementing the intervention(s) are identified. (The intervention(s) is/are far more likely to be carried out if there is a responsible party named ahead of time.) An appropriate and realistic timeline for implementation is determined, as are the budget for the intervention(s) and a funding source(s). (Make sure that funding is available from the source and get the required approvals.) An agency (such as an RHIS technical working group) is assigned to monitor the implementation of the action plan and ensure that planned activities remain on track. The information in an action plan or workplan for system strengthening is documented and buy-in from stakeholders is obtained. The action plan/workplan is published or it is integrated in the larger RHIS strategic plan, and the workplan is disseminated to stakeholders.

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APPENDIX A. HEALTH FACILITY AND COMMUNITY INFORMATION SYSTEM STANDARDS, POSSIBLE ACTIONS, AND GUIDANCE FOR RESPONDENTS

1. MANAGEMENT AND GOVERNANCE

1.1 Policies and Planning			Possible Actions	Guidance for Respondents
Legal and Regulatory	1.1.1	There are up-to-date legislation and detailed regulations for facility-based information, including private health facilities (if no, proceed to 1.1.5)	a. Review/update legislation/ information policy.	Regulations for facility-based information should include specifications for mandatory reporting, including for the private sector. Score less than "4" if legislation exists but does not include the private sector or is not up-to-date. Score "1" if there is no legislation and regulations for facility-based information.
	1.1.2	Health information legislation and regulations clearly articulate roles and responsibilities at all levels	a. Review/update legislation/information policy to include details on roles/levels.	Score less than "4" if roles and responsibilities are not clearly articulated or if not specific to the level. Score "2" if neither.
	1.1.3	Health information legislation and regulations clearly identify and articulate decision-making authority	a. Review/update legislation/information policy to include details on who makes what decisions and when.	Score less than "4" if decision-making authority is not clearly articulated or if not specific to the level. Score "2" if neither.
	1.1.4	Legislation or policy includes mechanisms to ensure privacy and confidentiality of personal information	a. Review/update legislation/information policy. b. Develop mechanisms to ensure privacy and confidentiality of personal information, for example, confidentiality agreements signed by health information personnel, password protection on electronic health information.	Score less than "4" if there is legislation or policy to ensure privacy and confidentiality of personal information, but it is not implemented in all service areas or is only implemented in part. Score "1" if there is no legislation or policy.
Planning	1.1.5	There is a comprehensive, costed five-year plan, with clear roles and responsibilities and involving all stakeholders	a. Launch of M&E task force. b. Conduct M&E national workshop. c. Develop the M&E plan.	Score less than "4" if there is a comprehensive plan but it is not costed, or if roles and responsibilities of stakeholders are not detailed. Score "2" if neither. Score "1" if there is no plan.

1. MANAGEMENT AND GOVERNANCE

1.1 Policies and Planning			Possible Actions	Guidance for Respondents
	1.1.6	The routine health information plan is integrated with (meaning, it responds to the information needs of) the overall health sector strategic plan	a. Review the HIS plan to ensure that priority RHIS actions respond to needs expressed in the health sector strategic plan, and that there are indicators and data sources to inform the plan.	Score less than "4" if the HIS plan is not linked to or integrated (meaning, it responds to the indicators in the national health strategic plan), or if the timing of the plan does not correspond with that of the health sector strategic plan. Score "2" if neither.
Oversight and Coordination	1.1.7	Country health programs, development partners, and donors support harmonization and alignment around country facility-based information system strategies	a. Update the terms of reference of the M&E coordination committee. b. Conduct advocacy with partners/donors to build consensus around the country facility-based information system strategies. c. Institute a coordination mechanism, such as a multi-stakeholder technical working group to monitor and support harmonization and alignment.	Score less than "4" if there is evidence of fragmentation (for example, parallel information systems) in the system, or if there is no health program/donor/partner coordinating mechanism (for example, a technical working group or RHIS governance council). Score "2" if there is fragmentation and no coordinating mechanism.
	1.1.8	Governance councils or oversight committees are established to provide an independent, objective assessment of data availability and quality (for example, a technical working group for RHIS)	a. Institute an independent oversight mechanism, such as a governance council (akin to a board of directors) to monitor RHIS performance/outputs and advocate for system strengthening.	Score less than "4" if there is an oversight committee but it is not independent, or if it is not effective (that is, does not meet regularly/is not empowered). Score "2" if both. Score "1" if there is no oversight committee.
Guidelines and Policies	1.1.9	Appropriate guidance is available on data collection, reporting, analysis, dissemination, and use of data appropriate for the different levels of the health system	a. Develop level-appropriate guidance. b. Ensure the appropriate reproduction and distribution of the guidance.	Score less than "4" if there is guidance but it is incomplete, not adequately available, or not appropriate to the level. Score "1" if guidance has not been developed.

1. MANAGEMENT AND GOVERNANCE

1.2 Management			Possible Actions	Guidance for Respondents
Standard Operating Procedures	1.2.1	Standard operating procedures (SOPs) have been written that define roles and responsibilities for data compilation, reporting, data analysis, dissemination, and use	a. Review/update SOPs. b. Develop SOPs.	Written SOPs should be made available to all levels of the health facility and community information system to guide data collection, reporting, aggregation, processing, transmission, analysis, dissemination, and quality assurance of the data. Score less than "4" if SOPs exist but are incomplete (do not address the above topics), are out-of-date, or are not widely available. Score "2" if two or more deficiencies are true (incomplete, out-of-date, unavailable). Score "1" if there are no SOPs.
Leadership	1.2.2	There is a demonstrated commitment from senior management to a high-performing RHIS that is specific to different levels of the health system	a. Conduct advocacy for RHIS with senior managers to clarify the vision, goals, and objectives. b. Schedule a retreat or training event at which practical actions can be identified to help managers address the RHIS challenges.	Senior managers demonstrate commitment to a high- performing RHIS by (1) promoting rationalization (are all the indicators still needed/used?) and efficiency (only required data are collected) of data systems; (2) ensuring data quality control; (3) promoting information use; and (4) promoting the integration and unification of data systems. An example of a manager at the district level demonstrating commitment to a high-performing RHIS would be organizing nongovernmental organizations in the district to use the RHIS to report service delivery data rather than having a parallel system. Score less than "4" if there is high commitment from senior managers but not at all levels, and/or not in all service areas. Score "1" if there is not demonstrated commitment to a high-performing RHIS by senior management.
Feedback	1.2.3	Feedback is systematically provided to all subreporting units on the quality of their reporting (that is, accuracy, completeness, and timeliness)	a. Develop a standardized RHIS reporting quality feedback report and mandate its use. b. Add a check for feedback received and acted on to standard supervision checklists.	Score less than "4" if feedback is happening but it is not systematic OR it does not include information on quality. Score "2" if feedback is not systematic AND it does not include information on quality. Score "1" if feedback is not provided.

1. MANAGEMENT AND GOVERNANCE

1.2 Management			Possible Actions	Guidance for Respondents
	1.2.4	Feedback is systematically provided to all subreporting units on the use of data for decision- making	a. Develop a standardized RHIS data use feedback report and mandate its use. b. Add a check for feedback received and acted on to standard supervision checklists.	Score less than "4" if feedback is happening but it is not systematic OR does not include information on data use. Score "2" if feedback is not systematic AND it does not include information on data use. Score "1" if feedback is not provided.
Supervision	1.2.5	There are guidelines for supportive supervision for RHIS, including standardized supervision checklists	a. Develop, review/update guidelines for supportive supervision. b. Develop, review/update supervision checklists. c. Ensure the adequate availability of guidelines and checklists.	Score less than "4" if there are guidelines but they are not widely available, OR if there is not a standardized checklist. Score "2" if the guidelines are not widely available AND there is no supervision checklist. Score "1" if there are no guidelines.
	1.2.6	Findings from supportive supervision visits are reviewed and acted on to correct deficiencies in the RHIS	a. Develop a system to track supervision visits, that is, a schedule and standard output. b. Institute a system to follow up the status of corrective actions to determine completion status. c. Link the achievement of corrective actions to performance incentives.	Score less than "4" if supervision is conducted but findings are not reviewed OR are not acted on. Score "2" if findings are not reviewed AND are not acted on. Score "1" if there is no supervision.
	1.2.7	Standardized supervision reports are completed to track results and monitor trends	a. Develop and distribute a standard template for supervision reports. This could be an annex to the guidelines document.	Score less than "4" if there are supervision reports but they are not standardized, used routinely to track results, and they do not result in action being taken to rectify performance issues. Score "1" if supervision reports are not written.
	1.2.8	A schedule of regular supervisory visits is implemented	a. Develop the schedule and monitor its implementation to ensure that health facilities are being visited and staff are supervised.	Score less than "4" if there is a schedule but it is not comprehensively implemented (for whatever reason). Score "1" if there is no schedule of supervision visits.

1. MANAGEMENT AND GOVERNANCE

1.2 Management			Possible Actions	Guidance for Respondents
	1.2.9	RHIS performance (that is, data quality and use of data for decision-making) is assessed when performing supervision visits to health facilities	a. Develop, or review/update and distribute SOPs for supervision that outline the steps for data quality and data use checks.	RHIS performance is defined as the level of data quality and use of data for decision-making. Assessing data quality can be a check that information in source documents matches that which is reported in the monthly report. A data use check could be evidence that decisions were made based on the data (for example, drugs were ordered), or a display of service delivery results (for example, a chart on the wall that shows achievements vs. targets). Score less than "4" if RHIS performance is assessed but it does not include a data quality check, or it does not include data use evaluation. Score "1" if no performance assessment is conducted during routine supervision.
Assessments and Use of Assessments	1.2.10	There are regular, formal performance assessments of the facility-based information system linked to the strategic planning cycle (for example, PRISM, which measures performance in terms of levels of data quality, data use, and management capacity)	a. Plan and implement a performance assessment immediately prior to strategic planning efforts. Use the results to plan for RHIS system strengthening interventions. b. Institutionalize performance assessments at regular intervals (for example, before and at the midpoint of the strategic planning cycle) as part of the SOPs.	The appropriate timing of assessments permits action planning and budgeting of remedial measures in formal strategic planning mechanisms. The assessment results in action planning being taken (for example, SOPs, policies). Score less than "4" if there are performance assessments but they are not regular or are not linked to planning. Score "1" if RHIS performance is not assessed.
Master Facility List	1.2.11	There is a comprehensive, singular, master list of health facilities, with unique facility identifiers and service domains, and which includes the private sector and special facilities (military, etc.)	a. Develop a system of unique identifiers for health facilities. b. Conduct a service availability mapping survey to determine the distribution of health facilities in the country.	Score less than "4" if there is a master facility list (MFL) but it does not have unique identifiers or is not comprehensive and up-to-date. Score "1" if there is no MFL.

1. MANAGEMENT AND GOVERNANCE

1.2 Management			Possible Actions	Guidance for Respondents
	1.2.12	There is a formal mechanism to update and keep the MFL current (for example, a census of all facilities is conducted every five years)	a. Conduct a survey to determine the functionality, location, and attribute data of health facilities. b. District Health Management Teams can assist by monitoring changes in the facility list over time and reporting them to the national level. Regular meetings of the District Health Medical Officers also offer an opportunity to update data on health facilities.	Score less than "4" if there is a mechanism but it is not functioning as designed (that is, the list is not up-to-date). Score "1" if there is no mechanism.

1. MANAGEMENT AND GOVERNANCE

1.3 Human Resources			Possible Actions	Guidance for Respondents
Workforce Planning	1.3.1	Required staffing positions for the RHIS and their respective knowledge, skills, and competencies have been identified, specific to the level of the health system (community, facility, district, etc.)	a. Conduct business process analysis to determine what is required, where, when, and how much. Determine the number and type of staff required by level. b. Draft job descriptions and file for future use. Update as necessary.	Score less than "4" if there are job descriptions but they are not detailed or not specific to the level.
	1.3.2	There is a workforce development plan with national standards for required positions and functions. The plan establishes career paths for RHIS positions and includes professional development opportunities	a. Update or develop a workforce development plan. b. Identify and publish career development pathways and requirements.	Giving health information staff the opportunity to advance within the system will help retain quality staff. Score less than "4" if there is a plan but it is not standardized or does not include career development guidance.
	1.3.3	A workforce assessment has been carried out to map existing cadres to the required job positions and to identify gaps in positions and capacities	a. Conduct a needs assessment to identify gaps in current workforce capacity.	Score less than "4" if there has been an assessment but the assessment is more than three years old. Score "1" if no attempt has been made to identify gaps in positions and capacities.

1. MANAGEMENT AND GOVERNANCE

1.3 Human Resources			Possible Actions	Guidance for Respondents
Training and Capacity Building	1.3.4	There is a costed workforce training plan that covers both pre-service and in-service training	a. Evaluate, revise, and/or update an existing workforce training plan. b. Develop a workforce training plan for pre-service training and/or in-service training.	A training plan helps ensure that all training needs are met, while reducing redundancy and wastage. A training plan identifies who has had which training and when, and who still needs training and where. Score less than "4" if there is a training plan but it is not costed or does not cover both in-service and pre-service training. Score "1" if there is no plan.
	1.3.5	A standardized training curriculum is being implemented	a. Revise/update an existing RHIS training curriculum. b. Develop a new standard RHIS training curriculum.	Standardization of training helps ensure the quality of training delivery and content. Score less than "4" if there is a training curriculum but it is not standardized. Score "1" if there is no training curriculum for the RHIS.

1. MANAGEMENT AND GOVERNANCE

1.3 Human Resources			Possible Actions	Guidance for Respondents
	1.3.6	There is coordination of training institutions to ensure that standard health facility and community information system modules are used in training events	a. Task a RHIS working group to monitor training and ensure standard delivery of training. b. Institute a recurring meeting with institution stakeholders to review the training contents and ensure the standard delivery of the training content.	Training institutions could be universities or medical/nursing schools at which HIS techniques are taught. Institutions should coordinate to ensure that a standard content is being taught to all students in pre-service training. Score less than "4" if coordination exists but is poor, and non-standard training is delivered. Score "1" if there is no coordination.
	1.3.7	A database on training is maintained to track which cadres have received which training, when, and where to help identify the training needs of institutions and individuals by geographical subunit in the country	a. Update/revise an existing database on training. b. Develop a training database to help monitor and coordinate training.	A database will ensure up-to-date information on training and permit enhanced understanding of training needs and gaps. Score less than "4" if there is a database but it is not current. Score "1" if there is no database on training.

2. DATA AND DECISION SUPPORT NEEDS

2.1 Data Needs			Possible Actions	Guidance for Respondents
Core Indicators	2.1.1	There is national and partner agreement on a balanced and limited set of facility-based indicators with standard definitions and appropriate disaggregation (for example, age, sex, administrative area)	a. List of national core health indicators has been developed and agreed on. b. Conduct a multi-stakeholder indicator harmonization effort; get buy-in from donors and partners.	Reducing fragmentation (for example, parallel reporting) through harmonization reduces the burden on the health workforce and improves quality. Score less than "4" if there is a core minimum data set (limited set of standard indicators) but it is not adhered to by all partners and donors, it is not well defined, or it does not include the required disaggregation. Score "1" if there is no minimum data set.

2. DATA AND DECISION SUPPORT NEEDS

2.1 Data Needs			Possible Actions	Guidance for Respondents
	2.1.2	Baselines for key indicators are defined at national and subnational levels, and indicator targets are clearly articulated and feasible based on health system capacities and improvement plans	a. Revise/update baselines/targets for key indicators. b. Develop baselines/targets for key indicators.	Baseline values permit the assessment of progress toward targets. Targets should be measurable and achievable. Score less than "4" if there are baselines but no targets, or targets with no baselines. Also, if targets are not achievable or measurable. Score "1" if there are no targets and baselines.
	2.1.3	The national data and metadata dictionary is aligned with global standards and includes definitions, data sources, data collection methods, reporting frequency, dissemination methods, and data use	a. Review/update/revise the existing metadata dictionary. b. Develop a metadata dictionary.	Metadata are data about data. A metadata dictionary describes indicators and their data elements, and includes information needed to link different data sets (interoperability). Score less than "4" if there is a metadata dictionary but it does not adhere to global standards or does not include definitions, data sources, etc. Score "1" if there are no available metadata.
Facility-Based Data on Mortality and Causes of Death	2.1.4	There is an agreement on the minimum set of national mortality data to be collected by all hospitals and health facilities (at least data on deaths by sex and age should be captured)	a. Review/revise/update minimum data set. b. Define minimum data set.	Cause of death data facilitates planning to reduce mortality in the population. A minimum data set reduces the burden on RHIS workers and improves quality through standardization. Score less than "4" if mortality data are collected through the RHIS but are not standard or a minimum data set has not been defined. Score "1" if mortality data are not collected.
	2.1.5	The international form of the medical certificate of the cause of death is used in all facilities for the medical certification of death	a. Institute use of the international form for cause of death.	Standards help ensure quality. Score less than "4" if death certificates are completed in health facilities and forwarded to appropriate authorities but the form is not standardized. Score "1" if there is no cause of death reporting from health facilities.

2. DATA AND DECISION SUPPORT NEEDS

2.1 Data Needs			Possible Actions	Guidance for Respondents
	2.1.6	Certifying physicians have the knowledge and skills needed to accurately complete the international form of the medical certificate of the cause of death and are aware of the importance of correct cause-of-death certification	a. Train doctors in medical certification of causes of death (DHIS 2 module for causes of death).	Score less than "4" if providers have been trained to complete death certificates but the training is out-of-date or otherwise inadequate. Score "1" if providers do not have these skills but deaths are reported from health facilities.
	2.1.7	The International Classification of Diseases (ICD) most recent revision (or DHIS 2 Start-Up Mortality List [SMoL]) is used for coding the causes of death	a. Review/revise/update the standard for coding causes of death. b. Institute the ICD most recent revision (or DHIS 2 SMoL) for cause of death reporting.	The SMoL has been designed to be in line with the ICD version 10 (ICD-10), and informs setting public health priorities and tracking progress toward national and international targets and goals, such as the post-2015 health and development agenda. Score less than "4" if there is a standard used for coding the cause of death in health facilities, but it is not the ICD most recent version or SMoL. Score "1" if there is no standard in use for cause of death reporting for the RHIS.
	2.1.8	Statistical clerks and health information officers have the training and reference materials needed to code deaths and disabilities according to the ICD	a. Train statistical clerks and health information officers in medical certification of causes of death (DHIS module for causes of death).	Score less than "4" if statistical clerks and health information officers have been trained to complete death certificates, but the training is out-of-date or otherwise inadequate. Score "1" if statistical clerks and health information officers do not have these skills, but deaths are reported from health facilities.
	2.1.9	Systems for the automated coding of the causes of death are progressively used (for example, DHIS 2 SMoL).	a. Implement automatic coding systems (for example, Iris – a language–independent coding system used to improve the international compatibility of ICD-10 coding)	Automation in coding can ensure accurate transcription of codes used to classify the cause of death. Score less than "4" if there is automated coding but it is out-of-date. Score "1" if there is no automated system for recording codes for the cause of death.

2. DATA AND DECISION SUPPORT NEEDS

2.1 Data Needs			Possible Actions	Guidance for Respondents
	2.1.10	Use of verbal autopsy (VA) is being gradually expanded to generate nationally representative cause of death statistics	a. Implement VA for community deaths.	A VA is a method of gathering health information about a deceased individual to determine his or her cause of death. This can be used to facilitate planning to reduce mortality where more comprehensive systems for monitoring mortality are not yet in place. Score less than "4" if VA is in use but it is not widespread. Score "1" if VA is not being used and there is no other system for tracking mortality. Score not applicable (NA) if ICD coding is in use in the RHIS.
Community-Based Service Data	2.1.11	Community-based information needs are defined according to a community needs strategy	a. Review/update/revise indicators and data collection and reporting tools to align with the community needs strategy. b. Define a community needs strategy and revise indicators and data collection and reporting tools accordingly.	Community-based programming is very diverse. To keep the amount of information reported from community-based programs manageable for RHIS personnel, careful attention should be paid to ensuring that indicators and data collection and reporting tools align well with priorities expressed for community needs in the health sector strategic plan. Score less than "4" if there is a community needs strategy, but indicators and data collection and reporting tools are not well aligned. Score "1" if there is no community needs strategy.
	2.1.12	A minimum set of community-based indicators (with standard definitions, and appropriate disaggregation and frequency of collection) have been developed to monitor the implementation of community-based interventions	a. If necessary, conduct an indicator harmonization exercise to integrate parallel reporting systems. b. Review/revise/update minimum data set. c. Identify a minimum set of community-based indicators that respond to priorities expressed in the community needs strategy.	Defining a minimum set of indicators ensures the standardized output from the RHIS and reduces the burden on RHIS personnel by minimizing the volume of data collected. Score less than "4" if there is a minimum data set defined for monitoring community-based interventions but it is out-of-date or lacks standard definitions or appropriate disaggregation. Score "1" if there is no minimum set of community-based indicators.
	2.1.13	Standard data collection tools have been developed to facilitate the collection of data from community-based interventions	a. Review/revise/update data collection and reporting tools for community-based intervention reporting. b. Develop data collection tools for community-based reporting.	Score less than "4" if there are standard data collection tools for community-based programs but they are inadequate, poorly aligned with the strategy, or out-of-date. Score "1" if there are no standard data collection and reporting tools.

2. DATA AND DECISION SUPPORT NEEDS

2.1 Data Needs			Possible Actions	Guidance for Respondents
	2.1.14	Community-based interventions and data are appropriately linked to health facilities to facilitate management, oversight, and reporting	a. Review/revise/update mechanisms for linking community-based interventions to health facilities. b. Develop a mechanism to link community-based interventions to health facilities.	Facility and district health system managers need information on community-based interventions to effectively monitor the health status of their target populations, and the progress of interventions designed to improve health. Linking community-based results with health facilities enables a holistic understanding of the health status of populations in the health facility catchment areas and district. Examples of linkages are a facility code field in community-based reporting forms and a data flow model through health facilities. Score less than "4" if there are links between community-based programs and health facilities but they are not comprehensive or are out-of-date. Score "1" if there is no mechanism to link community-based programs to health facilities.
	2.1.15	Assessments are conducted to map community-based programs (public and private) to understand coverage and information gaps/opportunities at the community level	a. Review/revise/update existing community-based intervention mapping. b. Conduct a community-based intervention mapping exercise.	A mapping exercise can reveal where community-based programs are being implemented and by which organizations. Such information would also reveal gaps in coverage and capacity that could be addressed in the strategic plan. Score less than "4" if community interventions have been mapped but not recently or inadequately. Score "1" if no community intervention mapping has occurred.
Surveillance	2.1.16	List of priority diseases and syndromes with standard case definitions under current national surveillance is defined	a. Define the list of diseases and syndromes to be under surveillance. b. Prioritize diseases and conditions to be reported immediately and weekly to keep their number to a minimum.	Score less than "4" if there is a priority list of diseases but there are no standard case definitions defined or they are out-of-date. Score "1" if there is no priority list of diseases defined.
	2.1.17	Public and private healthcare facilities, laboratories, and communities contribute to routine case detection	a. Involve public and private healthcare facilities and laboratories in the public health surveillance system.	Score less than "4" if reporting for routine case detection is not universal. Score "2" if private sector facilities do not report disease surveillance data.

2. DATA AND DECISION SUPPORT NEEDS

2.1 Data Needs			Possible Actions	Guidance for Respondents
	2.1.18	The country has adequate capacity to diagnose and record cases of notifiable diseases	a. Reinforce laboratory capacities. b. Define the time frame to verify an event.	Score less than "4" if capacity to diagnose and record cases of notifiable diseases is inadequate. Score "2" if there is no list of notifiable diseases and "1" if there is no surveillance system.
	2.1.19	Completeness and timeliness of weekly surveillance reporting exceed national targets (for example, 80%)	a. Conduct a surveillance data quality assessment. b. Conduct supervision and capacity building at reporting units. c. Conduct refresher training for data managers from reporting units.	Score less than "4" if completeness and timeliness is less than the national target. Score "1" if the completeness and timeliness rate is unknown.
	2.1.20	Data are analysed on a regular basis at the different levels to detect events involving cases or deaths above expected levels for the particular time and place	a. Specify the actors in charge of performing data analysis. b. Specify the type of data analyses to be performed.	Score less than "4" if data are analysed but the analysis is inadequate or is conducted too late for an adequate response. Score "1" if no analysis of surveillance data is conducted.
	2.1.21	Alert/action thresholds have been defined for priority diseases and syndromes	a. Review/revise/update alert/action thresholds for priority diseases and syndromes. b. Define alert/action thresholds for priority diseases and syndromes.	Score less than "4" if there are thresholds in place but they are ignored or out-of-date. Score "1" if no alert or action thresholds have been established.

2. DATA AND DECISION SUPPORT NEEDS

2.2 Data Standards			Possible Actions	Guidance for Respondents
Standards & Data Architecture	2.2.1	International or national classifications are used for categorizing aggregated data (ICD, facilities, human resources, essential drugs)	a. Review/revise/update standard coding systems. b. Identify/institute standards used for categorizing aggregate data.	Standard coding systems improve data quality and interoperability between systems. Score less than "4" if standards are in place but are inadequate or out-of-date. Score "1" if no standards are used.
	2.2.2	Indicators are harmonized with donors and implementing partners	a. Conduct an indicator harmonization exercise to identify a limited set of standardized indicators. b. Conduct advocacy with donors and implementing partners to ensure buy-in and use of a harmonized set of indicators.	Score less than "4" if indicators have been harmonized but donors or implementing partners still maintain parallel systems in the country. Score "1" if there has been no attempt to harmonize indicators with donors and implementing partners.
	2.2.3	There is an integrated common data repository (for example, a data warehouse) for all facility-based data that can grow and adapt to changes and new requirements	a. Develop "enterprise architecture" for the HIS. b. Gather requirements and source funding for an integrated common data repository.	Score less than "4" if there is a data warehouse but it is not fully functional or does not meet the needs of stakeholders. Score "'1" if there is no data warehouse or plans to develop one.
	2.2.4	The facility-based information system is interoperable with other systems at all levels	a. Map information systems in use in the country to identify areas of overlap. b. Integrate and standardize indicators, and data collection and reporting tools. c. Identify and institute standard coding systems to enhance interoperability.	Score less than "4" if the information system is interoperable with some but not all other information systems in use in the health sector. Score "1" if the system is not interoperable with any system, or no attempt has been made to link different information systems.
	2.2.5	There are adequate and well documented facility-based metadata available to facilitate interoperability of electronic information systems	a. Review/update/revise the existing facility-based metadata. b. Develop a facility-based information system metadata dictionary.	Metadata are data about data. A metadata dictionary describes indicators and their data elements, and includes information needed to link different data sets (interoperability). Score less than "4" if there is a metadata dictionary but it does not adhere to global standards or does not include definitions, data sources, etc. Score "1" if there is no metadata available.

2. DATA AND DECISION SUPPORT NEEDS

2.2 Data Standards			Possible Actions	Guidance for Respondents
System Design	2.2.6	The design of the health facility and community information systems included input from end users and other key stakeholders at all levels	a. Include input from end users in HIS reform efforts.	Score less than "4" if attempts have been made to include the users' perspectives in the design of the system but users still experience difficulty in using the system. Score "1" if no end user input has been sought in the design of the information system.
	2.2.7	Data producers and users are brought together periodically to discuss ways of making routine data more relevant to policy makers and planners and to enhance the understanding of routine health statistical findings	a. Conduct a forum to solicit input from data producers and users on the appropriate outputs of the RHIS.	Score less than "4" if user input has been gathered but the system does not meet their information needs for health planning, monitoring, and evaluation. Score "1" if users have not had the opportunity to provide input to make routine data more relevant to them.

3. DATA COLLECTION AND PROCESSING

3.1 Data Collection			Possible Actions	Guidance for Respondents
Standard Forms	3.1.1	Data collection systems for client data (for example, clinical episodes) are standardized across all implementing partners and donors	a. Conduct a harmonization exercise with partners and donors to align indicators and data collection tools for client-level data. b. Review/revise/update indicators and data collection tools (paper and electronic) for client-level data.	Score less than "4" if there is a standardized system but not all donors and partners are using it. Score "1" if no attempt has been made to standardize and harmonize the collection of client-level data.
Training	3.1.2	Personnel (clinicians and other staff) have been trained in the collection of client data and how to input data in the computer database (where applicable)	a. Conduct training for RHIS personnel in the collection and reporting of client-level data. b. Review/revise/update modalities for in-service and pre-service training for RHIS personnel on the collection and reporting of client-level data.	Score less than "4" if there is standard training for health personnel in the collection and reporting of client-level data but not all personnel have been trained. Score "1" if there is no training conducted on data collection and reporting of client-level data.
Guidelines	3.1.3	Printed guidelines are available at all health facilities (and in applicable community-based programs) to assist with client-level data collection	a. Review/revise/update guidance on client-level data collection. b. Develop guidance on client-level data collection. c. Print and disseminate the guidance.	Printed guidance on data collection and reporting of client-level data helps ensure the continuity of data collection and reporting and improves data quality through standardization. Score less than "4" if guidance exists but it is out-of-date or not universally available at health facilities. Score "1" if no guidance exists.
Data Storage	3.1.4	Health data (paper or electronic) are stored appropriately and according to national policies	a. Review/revise/update protocols and policies for data archiving. b. Develop and institute protocols and policies for data archiving.	Score less than "4" if policies and protocols for data archiving exist but are not adequate or not adhered to. Score "1" if there are no policies or protocols for data archiving.
Reproduction	3.1.5	There is a schedule/plan for the update, reproduction, and distribution of data collection tools	a. Review/revise/update the schedule/plan for the update, reproduction, and distribution of data collection tools. b. Develop a plan.	Data collection tools that are out-of-date and do not reflect current health system priorities hinder data quality and the ability of managers to plan, monitor, and evaluate health programs. Score less than "4" if there is a plan or schedule but it is not adequate or not adhered to. Score "1" if there is no plan or schedule.

3. DATA COLLECTION AND PROCESSING

3.2 Data Reporting			Possible Actions	Guidance for Respondents
Data Flow	3.2.1	The data flow pattern (that is, data flow from the client encounter forms -> summary tools [for example, a register or tally sheet] -> a periodic aggregate reporting form) is clearly defined and understood by staff	a. Conduct refresher training for data collection staff to improve their understanding of indicator compilation and reporting protocols. b. Review/revise/update existing in-service and/or pre-service training methods/materials to ensure an adequate understanding of the data flow.	Many data quality problems occur during compilation and aggregation of individual client data to the periodic aggregate report. A good understanding of the process can help improve data quality. Score less than "4" if the data flow pattern is well documented and included in training, but there are still problems with data compilation/aggregation. Score "1" if there is no documentation of the process and a poor understanding among data collection staff.
Guidelines	3.2.2	There are printed guidelines available at all health facilities (and in applicable community-based programs) to assist with data compilation and reporting	a. Review/revise/update guidance on aggregate data collection. b. Develop guidance on aggregate data collection. c. Print and disseminate guidance.	Printed guidance on data collection and reporting of aggregate data helps ensure the continuity of data collection and reporting and improves data quality through standardization. Score less than "4" if guidance exists but it is out-of-date or not universally available at health facilities. Score "1" if no guidance exists.
Training	3.2.3	Relevant staff at health facilities (and in applicable community-based programs) have received training on data compilation and reporting	a. Conduct training for RHIS personnel in the collection and reporting of aggregate data. b. Review/revise/update modalities for in-service and pre-service training for RHIS personnel on the collection and reporting of aggregate data.	Score less than "4" if there is a standard training for health personnel in the collection and reporting of aggregate data but not all personnel have been trained. Score "1" if there is no training conducted on data collection and reporting of aggregate data.

3. DATA COLLECTION AND PROCESSING

3.2 Data Reporting			Possible Actions	Guidance for Respondents
Data Dis-aggregation	3.2.4	Data disaggregation by key stratifiers (age, sex, geography) are maintained during their compilation and transfer to permit equity analysis	a. Conduct a review of indicators to ensure that key stratifiers are present to respond to the needs of the strategic plan in terms of access to services by vulnerable population subgroups. b. Update indicators and data collection and reporting tools to reflect needs expressed in the strategic plan.	Data disaggregation is important to monitor health status of vulnerable population subgroups (for example, women, children). Sometimes this valuable information is lost in the summarization of health data at health facilities. Disaggregation creates more work for RHIS personnel so it should be kept to a necessary minimum. Score less than "4" if there is provision for disaggregated data in the data collection and reporting tools but it is not always used. Score "1" if the data are not disaggregated by key stratifiers in the data collection and reporting tools.
Data Transfer	3.2.5	Data transfer to the next level occurs in a timely way, making use of innovation and information technology (IT) where appropriate and available	a. Evaluate the timeliness of reporting by facility and district to identify problematic areas. b. Investigate the causes and develop a plan to improve timeliness. c. Conduct an IT feasibility study and health facility needs assessment to plan to equip health facilities and districts with tools to improve the timeliness of reporting.	Data and information are only useful if they are available in time to ensure appropriate action. Score less than "4" if tools and mechanisms are in place to promote timeliness (for example, IT) but timeliness of reporting is less than the national target. Score "1" if timeliness of reporting is not monitored.

3. DATA COLLECTION AND PROCESSING

3.3 Data Quality			Possible Actions	Guidance for Respondents
Planning	3.3.1	There is a data quality assurance plan that is shared with health programs, other government ministries, donors, and other stakeholders to guide activities aimed at improving data quality	a. Develop a multi-stakeholder plan and methodology to assess and improve data quality (for example, a data quality review [DQR]). b. Institute a multi-stakeholder technical working group at the national level to coordinate and monitor data quality activities among the government, donors, and implementing partners.	Uncoordinated data quality activities reduce the quality of information, and add a burden to the health system. Score less than "4" if there is a data quality assurance plan but it is not adhered to by health programs, donors, and implementing partners, or the plan is out-of-date. Score "1" if there is no plan.

3. DATA COLLECTION AND PROCESSING

3.3 Data Quality			Possible Actions	Guidance for Respondents
Standards	3.3.2	Routine health data quality assurance standards are defined and enforced, including completeness, timeliness, accuracy, integrity, and consistency over time	a. Review/revise/update standards for data quality. b. Define standards for data quality.	Standards for data quality help improve the quality of data being produced, and permit comparisons across programs and service providers. Score less than "4" if standards are defined but are not adequate or not adhered to. Score "1" if there are no standards defined for data quality assurance.
Roles and Responsibilities	3.3.3	Roles and responsibilities for data quality are assigned at each level, including verification of data, summarizing data quality issues, and developing and implementing improvement strategies	a. Review/revise/develop SOPs for data quality assurance specific to cadre and level of the health system.	Critical data quality tasks are more likely to be completed if assigned to a specific staff and guidance exists on how to do it. Score less than "4" if roles and responsibilities for data quality tasks are assigned to staff at different levels, but they are not formally developed in SOPs, or if they are not followed. Score "1" if roles and responsibilities are not defined and assigned to specific staff.
Training	3.3.4	Training and capacity development on data quality assurance are provided at facility, district, and national levels using standard methods	a. Conduct training for RHIS personnel in data quality assurance techniques. b. Review/revise/update modalities for in-service and pre-service training for RHIS personnel on data quality assurance techniques.	Score less than "4" if there is a standard training for health personnel in data quality assurance techniques but not all personnel have been trained. Score "1" if there is no training conducted on data quality.

3. DATA COLLECTION AND PROCESSING

3.3 Data Quality			Possible Actions	Guidance for Respondents
Assessments	3.3.5	Systematic and comprehensive assessments of facility data quality are conducted regularly in advance of health sector planning, including analysis of completeness, timeliness, accuracy, and consistency over time (for example, a DQR), which result in published reports describing data quality issues and plans to address them	a. Conduct a systematic and comprehensive assessment of health facility data quality. b. Integrate data quality assurance mechanisms in the M&E schedule of the health sector strategic plan.	A formal schedule of data quality assessments that is linked to the country health sector planning cycle will ensure that data are of good quality when needed for planning, monitoring, and evaluation. Score less than "4" if there is a system for evaluating data quality for the RHIS but it is not comprehensive or systematic. Score "1'" if there is no system to monitor data quality for the RHIS.
Data Quality Checks	3.3.6	Data management staff conduct regular checks of accuracy and completeness of data prior to submitting reports to the next level (using automated electronic checks, where appropriate)	a. Review/revise/develop SOPs for reviewing data quality prior to submission to the next level. b. Include data quality checks prior to the submission of reports in standard training curricula for RHIS data collection and reporting.	Score less than "4" if data quality checks prior to submission are conducted, but they are informal, non-standard, or not included in training. Score "1" if data quality checks are not performed prior to submission to the next level.
Links to Health Sector Planning	3.3.7	Data quality assurance is linked to the health sector planning cycle in the country so that information on data quality is available prior to the use of data for planning	a. Schedule data quality assessments/reviews to occur just prior to formal health sector planning events. b. Develop a repeating cycle of health planning that includes data quality assessment.	Data quality assessments should be conducted prior to planning so that planners understand the limitations in the data, and so that efforts can be made to improve the data prior to planning events. Score less than "4" if data quality assurance is linked to the planning cycle but information on data quality is not always available prior to planning, or if information on data quality is available only for select health programs. Score "1" if data quality assessments are not at all linked to health planning.
Collaboration	3.3.8	There is collaboration among the Ministry of Health (MOH), government agencies (for example, the national statistics office), and other national stakeholders (for example, donors, universities) on data quality assurance so that assessments are conducted with an element of independence (that is, with no conflict of interest)	a. Involve the private sector, donor, and implementing partner stakeholders in the data quality assurance planning process. b. Institute a multi-stakeholder data quality technical working group at the national level to coordinate and monitor data quality assurance activities for the RHIS.	Independence is important in data quality assurance to ensure an unbiased appraisal of data quality. Score less than "4" if there is collaboration between the government and other stakeholder groups, but it is informal, or some partners are left out. Score "1" if there is no collaboration between government and other stakeholder groups.

3. DATA COLLECTION AND PROCESSING

3.4 Information and Communication Technology (ICT)			Possible Actions	Guidance for Respondents
ICT Framework	3.4.1	There is an overall framework and plan for ICT, including equipment, its acquisition, and its use for the RHIS at all levels	a. Develop a framework for ICT. b. Revise/update an existing framework.	A framework for the use of ICT will help ensure the rational provision and use of ICT. Its uncoordinated provision and use can lead to redundancy and waste of health system resources. Score less than "4" if there is a framework but it is out-of-date or not used effectively. Score "1" if there is no framework or plan for ICT.
ICT Use	3.4.2	Electronic methods are used for data quality checking prior to data transfer	a. Integrate edit/logic checks in the electronic data collection and reporting system.	Computers can easily and rapidly check for erroneous or illogical entries in the RHIS database. Score less than "4" if edit/logic checks are in place in the RHIS data system, but they are inadequate. Score "1" if no attempt has been made to integrate automated data quality checks in the RHIS data system.

3. DATA COLLECTION AND PROCESSING

3.4 Information and Communication Technology (ICT)			Possible Actions	Guidance for Respondents
	3.4.3	Data collection uses eHealth and mHealth solutions, where appropriate, especially for remote and isolated areas	a. Conduct a feasibility study and needs assessment to determine whether eHealth or mHealth solutions are appropriate. b. Conduct an evaluation of the use of eHealth and/or mHealth solutions to advance health sectors aims.	eHealth (for example, a computer database or decision support system) and mHealth (use of mobile technology, for example, smart phones, to facilitate RHIS data collection and reporting) can enhance outputs and reduce the burden on health workers. These solutions need to be appropriate to the environment and meet a specific need, or risk causing other problems. Score less than "4" if eHealth and mHealth solutions are used in the RHIS to facilitate data collection and use, but they are problematic or not available everywhere they are needed. Score "1" if no attempt has been made to use eHealth or mHealth strategies, although the system would benefit from them. Score "NA" if eHealth or mHealth solutions are deemed inappropriate for the RHIS environment.
	3.4.4	Routine microdata are made available (that is, a subset of data from the RHIS are selected according to specific criteria) to researchers and analysts from other government agencies, donors, and the private sector (with appropriate safeguards for confidentiality, for example, stripping the dataset of identifiers)	a. Develop a framework for the production and use of RHIS microdata. b. Revise/update an existing framework.	The creation and use of RHIS microdata sets can improve knowledge of the underlying health problems addressed in the health sector strategic plan, and the interventions designed to combat them. Score less than "4" if microdata are available but there is no formal mechanism for acquiring them, or they are underused. Score "1" if microdata are not available from the RHIS.
Training	3.4.5	Personnel have received appropriate training, using a standardized training curriculum, on the use of ICT at all levels	a. Conduct training for RHIS personnel on the use of ICT appropriate for the level of the health system. b. Review/revise/update modalities for in-service and pre-service training for RHIS personnel on the use of ICT.	Score less than "4" if there is a standard training for health personnel on the use of ICT but not all personnel have been trained. Score "1" if there is no training conducted on the use of ICT.

4. DATA ANALYSIS, DISSEMINATION, AND USE

4.1 Data Analysis			Possible Actions	Guidance for Respondents
Data Analysis	4.1.1	There are collaborative mechanisms established with local research and academic institutions to conduct analytical reviews of facility data on a periodic basis	a. Recruit local research and academic institutions to conduct or assist with analytical reviews of data from health facilities. b. Invite local research and academic institutions to join multi-stakeholder technical working groups involved with facility-based data analysis.	Local research and academic institutions can help improve local capacity for data analysis and build capacity at the MOH. Wider use of facility data can help improve transparency. Score less than "4" if local research and academic institutions are involved in RHIS data analysis but their participation is ad hoc or informal. Score "1" if no outside agency (other than the MOH) is involved in data analysis.
Data Cleaning	4.1.2	General principles for data cleaning/analysis of facility data are defined (for example, as SOPs), including how to deal with incompleteness, inconsistency, implausibility, estimation of denominators, imputation of missing values, and data reconciliation across data sources	a. Formalize general principles for data cleaning of facility-based data in a data analysis guidance document and publish and distribute it. b. Conduct training on data analysis in which the general principles of data cleaning are presented. c. Add/update an analysis module to the standard curricula for RHIS in-service and pre-service training.	How data are prepared for analysis impacts their reliability and integrity. Standard methods for handling missing or erroneous values are necessary to build confidence in the data. Score less than "4" if data cleaning principles are defined but not well known or used. Score "1" if data cleaning principles have not been defined.
Performance and Progress Reports	4.1.3	Health planners and development partners use the results of the analysis of facility data to produce analytical reports on progress and performance for the health sector review	a. Prior to planning events, dedicate staff to identify and produce the necessary tables, graphs, charts, and other analytical outputs to facilitate planning. b. Conduct a planning data needs assessment during which priority decisions and the information needed to inform decisions (for example, a decision calendar) are identified.	Score less than "4" if planners have access to the routine data they require during planning, but they are not adequate (incomplete, inaccurate, untimely, etc.). Score "1" if routine data are not used during health sector planning.

4. DATA ANALYSIS, DISSEMINATION, AND USE

4.1 Data Analysis			Possible Actions	Guidance for Respondents
Analysis Tools	4.1.4	Tools used for data analysis, such as summary tables, graphs, geographic information system, pivot tables, decision support systems, etc., are appropriate for the level	a. Conduct a review of tools in use at each level, including interviews with users, to determine whether needs in information products are being met. b. Revise/update/develop tools to ensure that users can obtain the information they need when they need it.	For example, a tool to summarize data at the district level should enable planners to compare results by health facilities, although planners at the regional level may not need such detail. Score less than "4" if tools are in place to facilitate data analysis, but they are not appropriate for each level. Score "1" if there are no tools available to facilitate data analysis.
Data Sources	4.1.5	The information system uses appropriate data from a variety of sources, for example, census data, vital event registers, population surveys, to calculate key indicators	a. Conduct a review of the status and quality of available data sources, and the extent to which they are used in the facility-based information system.	Score less than "4" if the information system uses a variety of data sources, and at least one of the data sources is inadequate (incomplete, inaccurate, untimely, etc.). Score "1" if the information system does not use appropriate data from a variety of sources.
Training	4.1.6	Appropriate staff (that is, facility and community information system managers, program managers, facility in-charge, etc.) have received training in data analysis	a. Conduct training for RHIS personnel in data analysis appropriate for the level of the health system. b. Review/revise/update modalities for in-service and pre-service training for RHIS personnel in data analysis.	Score less than "4" if there is a standard training for health personnel in data analysis but not all personnel have been trained. Score "1" if there is no training conducted in data analysis.

4. DATA ANALYSIS, DISSEMINATION, AND USE

4.2 Information Dissemination			Possible Actions	Guidance for Respondents
Information Products	4.2.1	A report of health facility statistics is produced annually	a. Conduct a data analysis and report writing workshop with the MOH and other stakeholders and provide technical assistance to facilitate the production of analysed data (information) and a final report. b. Review/revise/update the contents of the annual report to ensure that the information published responds to the priorities expressed in the strategic plan.	A report of health facility statistics should include trend and comparative analysis of facility (hospital) morbidity, mortality, and cause of death data; intervention coverage and equity; health system inputs and processes (infrastructure availability and distribution; service readiness; human resources availability, distribution, and training); analyses of quality of care; analyses of data quality; and metadata descriptors. Score less than "4" if a report of health facility statistics is produced annually, but does not contain the above, or is produced too late to inform management and planning. Score "1" if a report is not produced annually.
	4.2.2	Periodic data summaries (for example, bulletins) are produced and distributed to key stakeholders describing key findings and interpretations	a. Dedicate staff and staff time to the production of a periodic bulletin. b. Develop a standard template for the bulletin (or use an example from another program or country). c. Prepare a dissemination plan that identifies the method of distribution (paper or electronic), intended recipients, and a schedule for production.	Score less than "4" if there is a periodic bulletin of summary statistics, but it is ad hoc or irregular, or its data are inadequate, incomplete, or untimely. Score "1" if there is no periodic summary of routine data from health facilities.
	4.2.3	Dashboards and summary charts are used to convey information to diverse target audiences in ways that are meaningful to policy makers, the media, and the general public	a. Conduct a review of data analysis and use for the facility-based information system to assess the adequacy of information products (for example, dashboards) used at different levels. b. Review/revise/update/create new information products appropriate to the user and the level.	Score less than "4" if there are information products available to users but they are inadequate or inappropriate for the level. Score "1" if there are no information products available to users.

4. DATA ANALYSIS, DISSEMINATION, AND USE

4.2 Information Dissemination			Possible Actions	Guidance for Respondents
Strategies	4.2.4	There is a comprehensive data dissemination strategy relevant to each level of the health system, with key products defined	a. Prepare a dissemination strategy that identifies the method of distribution (paper or electronic), intended recipients, and a schedule for production. b. Conduct a review of current dissemination practices and determine their strengths and weaknesses. Update the strategy based on key findings.	Score less than "4" if there is a data dissemination strategy but it is not relevant to each level of the health system, or is out-of-date, or otherwise inadequate. Score "1" if there is no dissemination strategy or plan.
Collaboration	4.2.5	There is collaboration and data sharing among the MOH, local institutions (for example, national statistics offices), global partners, the media, and civil society	a. Institute a data sharing protocol that outlines the process for acquiring data and information from the routine facility-based information system. b. Institute a multi-stakeholder RHIS governance council to monitor HIS performance, system needs, and the information needs of stakeholders. This council can help facilitate collaboration and data sharing.	Sharing routine facility-based data with partners and other stakeholders improves transparency and use of the data. Improved use leads to better quality and return on investment for data collection. Improved use of data also leads to a better understanding of health system performance that can lead to improved planning and more effective service delivery. Score less than "4" if there is collaboration and data sharing but it is ad hoc or informal, or the data are not shared readily. Score "1" if there is no collaboration and data sharing with stakeholders outside the MOH.

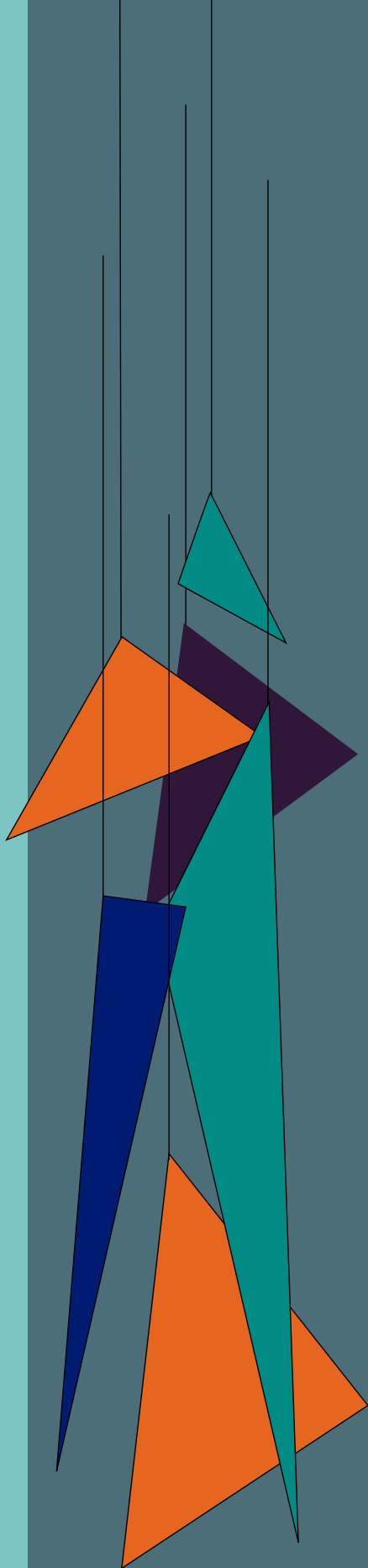## 4. DATA ANALYSIS, DISSEMINATION, AND USE

4.3 Data Demand and Use			Possible Actions	Guidance for Respondents
Information Culture	4.3.1.	A culture of information use is promoted by policy leaders and decision-makers, and is reflected in the use of facility and community-based data in planning, monitoring, and evaluation reports	a. Conduct a PRISM assessment that measures the performance of the RHIS, one aspect of which is gauging the strength of data use and an "information use culture" in the system. b. Identify data champions at different levels to promote the use of data for decision-making through peer review meetings, mentoring, and advocacy.	The most visible outcome of a successful information culture is that information is in demand, valued as an important resource, and used at all levels to improve service delivery to clients and to strengthen facility management and management of systems at that level. Score less than "4" if a culture of information use is evidenced by the use of routine data in planning, monitoring, and evaluation, but such data use is rare, atypical, ad hoc, or otherwise inadequate. Score "1" if no information use culture is apparent.
Data Demand	4.3.2	There is demand for information by donors, policy makers, planners, program managers, etc.	a. Promote the use of routine data by stakeholders by producing periodic summaries of data (for example, bulletins, statistical reports) and disseminating them widely. b. Conduct data dissemination workshops with important stakeholders to promote the results of health system performance. c. Promote health system performance findings on social media and in traditional media (newspapers and radio).	Demand for routine data helps ensure the quality and timeliness of the data, and the relevance of the information system. Score less than "4" if there is demand for information (as evidenced by data requests) but only occasionally, or only by select stakeholders. Score "1" if there is no evidence of demand for routine facility-based data.
Data Use	4.3.3	Clinical practitioners use clinical data routinely to monitor patient care and outcomes	a. Conduct an assessment (for example, PRISM) to measure the use of data for decision-making by clinical practitioners. b. Conduct a workshop to build capacity for data use at the health facility level. c. Develop peer review networks so that practitioners can learn other techniques from one another on using data to monitor patient care and outcomes. d. Conduct supportive supervision visits from the district to mentor practitioners in data use.	Score less than "4" if data are used by clinical practitioners but it is infrequent, ad hoc, or otherwise inadequate. Score "1" if clinical practitioners do not use clinical data routinely.

4. DATA ANALYSIS, DISSEMINATION, AND USE

4.3 Data Demand and Use			Possible Actions	Guidance for Respondents
	4.3.4	Facility managers use data to improve infrastructure, equipment, and human resources	a. Conduct an assessment (for example, PRISM) to measure the use of data for decision-making by facility managers. b. Conduct a workshop to build capacity in data use at the health facility level. c. Develop peer review networks. d. Conduct supportive supervision visits.	Score less than "4" if data are used by facility managers but it is infrequent, ad hoc, or otherwise inadequate. Score "1" if facility managers do not use data to improve infrastructure, equipment, and human resources.
	4.3.5	Local level decision-makers and community members use facility and community-based information to develop responsive and appropriate service delivery strategies and community-based interventions	a. Conduct an assessment (for example, PRISM) to measure the use of data for decision-making by local level decision-makers and community members. b. Conduct a workshop to build capacity in data use for local level decision-makers and community members. c. Develop peer review networks. d. Conduct supportive supervision visits from the district to mentor community leaders in data use.	Score less than "4" if data are used by local level decision-makers and community members but it is infrequent, ad hoc, or otherwise inadequate. Score "1" if local level decision-makers and community members do not use data to develop responsive and appropriate service delivery strategies and community-based interventions.
	4.3.6	Facility and community-based data are used in health sector planning (for example, health sector reviews)	a. Prior to planning events, dedicate staff to identify and produce the necessary tables, graphs, charts, and other analytical output to facilitate planning. b. Conduct a planning data needs assessment during which priority decisions and the information necessary to inform the decisions (for example, a decision calendar) are identified.	Score less than "4" if planners use routine data during health sector planning, but it is not adequate (incomplete, inaccurate, untimely, etc.). Score "1" if routine data are not used during health sector planning.

4. DATA ANALYSIS, DISSEMINATION, AND USE

4.3 Data Demand and Use			Possible Actions	Guidance for Respondents
	4.3.7	The managers of routine health information reporting at all levels have sufficient autonomy to define their own interventions and data needs (for example, instituting a local outreach effort to improve coverage and the collection of data to monitor the effectiveness of the intervention)	a. Promote the expansion of the RHIS to meet local needs by standardizing practices (develop protocols), developing and distributing guidance, and/or providing training.	Decentralization of system design can improve the responsiveness of the system to meet the needs of users at all levels. Data that are defined specifically for individual service areas need not be reported to the next level. Score less than "4" if managers of the RHIS at all levels have autonomy to define interventions and data needs but if this is limited (for example, only for certain health programs), or it is not used. Score "1" if managers have no such autonomy.