



JOINT  
LEARNING  
NETWORK  
For Universal Health Coverage

# Vertical Integration Diagnostic and Readiness Tool

*A Survey Instrument for Countries Working Toward  
Health System Integration*

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# ABBREVIATIONS

**CHW**  
**EMR**  
**HR**  
**JLN**  
**LMIC**  
**MIS**  
**MNCH**  
**MOH**  
**PHC**  
**NCD**  
**VI**

Community Health Worker  
Electronic Medical Records  
Human Resources  
Joint Learning Network  
Low and Middle-Income Countries  
Management Information System  
Maternal, Newborn and Child Health  
Ministry of Health  
Primary Healthcare  
Non-communicable Disease  
Vertical Integration

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This Vertical Integration Diagnostic and Readiness Tool supports efforts of the Joint Learning Network (JLN) countries as well as other low and middle-income countries (LMICs) to successfully assess and implement vertical integration policies, programs and pilots. The main objectives of this tool are to review the overall policy, regulatory and institutional environments, including enablers and constraints to vertical integration; examine the readiness of organizations to launch vertical integration initiatives; and assess vertical integration practices across different tiers of a country's healthcare system, including those utilized in pilots and small-scale initiatives.

The tool draws on the findings of a workshop held in Manila in March 2018, which was sponsored by the JLN's *Vertical Integration and New Roles for Hospitals Learning Exchange*, with financial support from the Bill & Melinda Gates Foundation. The workshop involved 13 participants from five countries: Indonesia, Malaysia, Philippines, Sudan and Vietnam. Participants were selected based on their knowledge, interest and experience in vertically integrated care. Drawing on their inputs, the tool was produced by the technical facilitation team consisting of members from Aceso Global and the Bill & Melinda Gates Foundation. The tool benefitted from an extensive peer review process by a subset of workshop participants.

The tool aims to be comprehensive, encompassing a large array of recommendations provided by the workshop participants. Initially, workshop participants posed over 600 questions for inclusion in the tool, spanning a wide range of dimensions, including policies, regulations, organizational features and front-line “nuts-and-bolts” practices. To accommodate these dimensions, the facilitation team divided the tool into three “instruments”, structured as interviews, which are applied to different sets of respondents.

**Instrument 1: National Policies, Regulations and Leadership Supporting Vertical Integration.** Respondents include policymakers, regulators, payers and planners at central and regional levels.

**Instrument 2: Vertical Integration in the Healthcare System, Organizational Environments and Front-Line Service Delivery Settings.** Respondents include program administrators, supervisors, facility managers and front-line practitioners, including physicians, nurses, community health workers and midwives.

**Instrument 3: Vertical Integration Pilots and Initiatives Involving Four Patient Transitions across Different Provider Tiers: Primary Care-Hospital; Primary Care-Specialty Care; Hospital-Home/Community; and Maternal, Newborn and Child Health (MNCH) Transitions.** Respondents include planners, implementers and front-line workers and managers involved in implementation.

Though there is overlap across the three instruments, each is aimed at a different set of respondents. As a result, each instrument approaches the same subject matter from a different angle, capturing the necessary pieces of information from the separate respondents to build an in-depth picture of the state of vertical integration within a country's health system.

This tool is not expected to be administered unabridged. Any administration of the tool must consider the country context; the questions and the structure of any instrument should be modified to fit the local context. Moreover, not all instruments need to be administered. For example, *Instrument 1* may only be applicable to countries with stated integration policies, while *Instrument 3* may be irrelevant if a country has no current vertical integration pilots or initiatives. The final tool adapted by any country may include a combination of items from all instruments.

Finally, successfully applying this tool requires clarity of objectives, good organization and strong dissemination of results. To understand the objectives, subject matter and steps needed, read the instructions section thoroughly. In doing so, acquaint yourself with the concept of vertical integration as well as the rationale for creating this tool as well as splitting it into separate instruments, visualize if and how the tool should be modified to develop a country-specific instrument, and then follow the suggested steps regarding logistics, training and administering the tool and collecting its results. Throughout this process, prepare ahead to effectively spread the lessons of this exercise to a broad audience to attain maximum impact.

The instructions are structured as follows:

- 1. Vertical Integration:** introduces the concept of vertical integration, gives the rationale for measuring vertical integration, and then introduces the areas of vertical integration that are covered in this instrument.
- 2. Background:** provides the context within which this tool was developed, introduces the JLN, participant countries, donors, and the team behind this effort.
- 3. Overview:** lists the objectives of the tool.
- 4. Structure and Methods:** introduces the three instruments, presents a modular breakdown of each, gives instructions on modifying the tool to adapt it to country context, and introduces the annexes.
- 5. Application of the Tool:** provides guidance on the practical application of the tool, including the pre-survey preparation, training, data collection and analysis, as well as guidance on the style and structure of the final report.

**6. Dissemination:** discusses the means and methods of spreading the lessons learned from applying the tool so that they can be effectively translated into policy options.

## 1. Vertical Integration

### 1.1 *What is vertical integration?*

Vertical integration is a key pillar of integrated care, an increasingly important subject in global discussions of healthcare service delivery reform. Globally, vertical integration has many definitions. For the purpose of this tool, **vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, across providers working at different tiers or settings to provide appropriate, timely and high-quality care. Provider tiers can include hospitals, primary care, diagnostic and other ambulatory units, rehabilitation and subacute facilities, and community and home settings. Providers can include physicians, nurses, community health workers, midwives and home caretakers.**<sup>1</sup>

Vertical integration is often used synonymously with the terms “integrated care” and “care integration.” However, integrated care comprises two main elements: horizontal and vertical integration. While horizontal integration links healthcare providers at the same level of care, for example linking independent primary care units, vertical integration aims to improve the linkages between providers at different levels of care within the delivery system, for example linking primary and secondary care organizations or units. For a health system, integrated care can be conceived as both a guiding principle and a means to achieving efficient and quality care. Moreover, integrated care can help to address the common set of challenges confronting many health systems today, such as population aging, a rising burden of chronic diseases, deficient maternal and newborn care, and resource constraints. While both components of integrated care are critical to a well-functioning healthcare delivery system, this tool focuses on vertical integration.

The overall objectives of vertical integration are to reduce fragmentation and poor communication between providers at different levels of care, improve quality of care and health outcomes, and reduce inefficiencies within the health system. By focusing on continuity of care through increased provider coordination across different levels of care, vertical integration ensures that the complex needs of patients are continuously tracked and attended to, which, ultimately, reduces unnecessary hospitalizations and improves quality of life for patients.

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<sup>1</sup> European Commission. *Blocks: Tools and Methodologies to Assess Integrated Care in Europe*. Luxembourg: Publications Office of the European Union, 2017.

## 1.2 *Why patient transitions?*

When examining the nuts-and-bolts features of vertically integrated care (or the lack thereof), this tool focuses on patient transitions. Arguably, a starting point for improving vertical integration entails coordinating care as patients transition across different levels of care. Examples include patients moving between primary care and hospital, between specialist and primary care, between hospital and home, and for mothers and infants, moving across multiple tiers, including midwife or community health worker, primary care units and hospitals. Patient transitions are a good entry point for launching vertical integration in a healthcare system.

These four “patient transitions” are critical to vertical integration (and quality of care) because during these transitions patients often fall into “care gaps” between providers at different levels of care, which frequently lead to patients dropping out of the healthcare system, lack of follow-up care, noncompliance with medications, repeat treatments and tests due to poor information sharing across providers, etc. Patients can thus be stranded to fend for themselves and are often unable to navigate different providers within a healthcare system, which can later result in serious complications and costly hospitalizations.

While there are many reasons for these problems, one of the main culprits is that providers tend to focus on the care provided within their institution’s walls rather than on patients’ long-term needs. As a result, no provider takes responsibility for patients as they transition to new facilities or return home. Vertical integration ensures seamless patient transitions by aligning providers at different tiers so that they are “on the same page” regarding patients’ conditions and preferred treatments. Acting as links in a chain, providers working under vertically integrated arrangements see themselves as part of virtual team regardless of their institutional affiliation, ensuring that patients’ needs are met, contributing to better outcomes and lower costs.

## 1.3 *Why measure vertical integration?*

Despite its growing relevance, few tools have been developed to measure vertical integration, particularly in the context of LMICs. This presents a challenge for countries wishing to launch vertical integration efforts. To promote vertical integration, countries must first gather evidence on the barriers and enablers to vertical integration within their health systems; they must also assess their readiness to implement vertical integration policies. These evidence-gathering and assessment efforts must be organized and directed so as to evaluate patient care and practitioner organizations within the healthcare system, and to

understand the financing mechanisms and policies affecting the system. This tool seeks to support LMIC stakeholders in undertaking this evidence-gathering and assessment process.<sup>2</sup>

The information generated from implementing this tool aims to create a picture, first of the policy and regulatory environment; second, of the environment within healthcare organizations; third, of nuts-and-bolts features of care coordination practices in the healthcare system; and fourth, of specific practices in existing vertical integration pilots or small-scale initiatives. The following section summarizes how each instrument within the tool gathers information.

#### *1.4 How this tool assesses and measures vertical integration*

Since vertical integration consists of different components, data needs to be collected from different sources. The tool is therefore comprised of three instruments tailored to different respondents to capture their respective knowledge, practice and insights on vertical integration.

*Instrument 1* is addressed to policymakers, payers and regulators and it covers system-wide policies, regulations and leadership supporting (or inhibiting) vertical integration at the national or federal level. It focuses on broad policy and institutional attributes of vertical integration at the national level.

*Instrument 2* is addressed to healthcare facilities and front-line practitioners. It seeks to understand the degree to which vertical integration has been introduced and incorporated into the delivery system as well as the supporting institutional and financial environment. In addition to assessing capacities and nuts-and bolts features of vertical integration (or the lack thereof), it also assesses organizational environments in terms of policies, leadership and support for the same. It also gathers information on four types of patient transitions from the perspective of the respondents: PHC-hospital, specialist-PHC, hospital-home, and community-PHC-hospital for MNCH.

*Instrument 3* is addressed to practitioners and implementers of vertical integration pilots and initiatives. It covers the major enablers or disablers in the broader institutional and financial environment as well as vertically integrated care practices implemented by these initiatives. Each initiative will probably cover a single type of patient transition.

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<sup>2</sup> The facilitation team consulted a large set of instruments and literature on measuring care integration in the development of this tool. See bibliography.

## 2. Background

This tool is a product of the Joint Learning Network's (JLN) *Vertical Integration and New Roles for Hospitals Learning Exchange*. The JLN convenes practitioners from member countries who then collaborate to produce tools and products that aim to address specific problems facing member countries' health systems. The overall aim of the JLN is to achieve universal health coverage. The JLN is demand-driven: topics emerge from requests from member countries. These requests lead to the formation of either a learning exchange or a collaborative in which country representatives convene with a technical team to determine the nature, content and scope of the requested tool or product, and later work jointly to produce it.

A learning exchange focusing on vertical integration emerged during a panel on the subject held on July 20, 2016, during a JLN Global Meeting in Malaysia. After the panel, several country representatives requested JLN support for initiating or improving vertical integration in their fragmented delivery systems. Responding to demand from several JLN countries, the *Vertical Integration and New Roles for Hospitals Learning Exchange* launched in April 2017, with five participating countries: Indonesia, Malaysia, Philippines, Sudan and Vietnam. During a series of virtual meetings held between July and September 2017, the countries collectively decided to produce a diagnostic and readiness tool. The Learning Exchange and tool development were technically facilitated by Aceso Global with assistance from staff of the Bill & Melinda Gates Foundation.

In March 2018, 13 representatives of these five countries met for a workshop in Manila, Philippines, to discuss the concept of vertical integration, share their experiences and establish a common base for tool development.<sup>3</sup> During the workshop, country representatives listed approximately 600 open-ended questions to potentially include in the tool, categorized along nine technical themes. In the months following the workshop, technical facilitators refined this list, developed the questions and structured the tool.<sup>4</sup> Several JLN participants served as peer reviewers and provided valuable comments on draft versions of the questions and tool.

## 3. Overview

The tool aims to examine policy, organizational and front-line readiness for vertical integration as well as to assess existing vertical integration initiatives. The tool can be used to measure relationships, communications and coordination between providers as well as outline the existing enablers and barriers to vertical integration in the broader institutional and financial

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<sup>3</sup> See page 2 for a list of JLN workshop participants/contributors.

<sup>4</sup> See page 2 for members of the facilitation team/technical editors.

environment. It can be adapted to local contexts and priorities, and tool implementers should feel free to modify its questions as they deem necessary. Specific objectives of this tool are as follows:

- Review the policy and regulatory environment and organizational and front-line readiness for supporting vertical integration.
- Assess the degree of care coordination across providers at community, primary care, specialist care and hospital levels.
- Document the progress and problems of pilots and local initiatives related to vertical integration.
- Inform policymakers on the potential enablers and barriers to vertical integration.
- Generate data and information to facilitate policy formation.
- Provide information to support the implementation of vertical integration programs by focusing on patient transitions across households/communities, primary care, specialist care and hospitals.

#### 4. Structure and Methods

To achieve these objectives, the tool is divided into three instruments. Each is targeted toward a specific group of stakeholders or respondents. Each instrument is further divided into modules. The instruments are followed by three Annexes. Annex 1 suggests indicators that can be used to evaluate and design vertical integration initiatives. Annex 2 includes example and links to complementary tools or instruments related to specific aspects of vertical integration. Annex 3 contains instructions on using the data entry software. The structure of the tool is as follows:

- **Instrument 1: National Policies, Regulations and Leadership Supporting Vertical Integration.**  
*Intended respondents:* Policymakers, regulators, payers and planners at central and regional levels.  
*Content:* The questions in this instrument cover respondents' knowledge and perceptions of system-wide policies, regulations and leadership supporting vertical integration at the national level.

Module A: National Policies, Regulations and Leadership Supporting Vertical Integration

Module B: General Questions on the Healthcare System Relevant to Vertical Integration

- **Instrument 2: Vertical Integration in the Healthcare System, Organizational Environments and Front-Line Service Delivery Settings.**  
*Intended respondents:* Program administrators, supervisors, facility managers and front-line practitioners, including physicians, nurses, community health workers and midwives working in hospitals, health centers, diagnostic units

and communities, who are part of an organization such as a regional/local health system, hospital system or network.

*Content:* The questions in this instrument cover organizational policies, leadership, and nuts-and-bolts features of vertical integration in the respondents' healthcare organization. They also assess the degree to which vertical integration has been introduced and incorporated into the delivery system as well as the institutional and financial environment. It can also be used to assess system, organizational and front-line readiness. In sum, this instrument can be applied to systems with or without formal vertical integration arrangements.

Module A: Vertical Integration and the Healthcare System

Module B: Vertical Integration and the Organizational Environment

Module C: Vertical Integration and Front-Line Service Delivery

Module C1: Primary Healthcare (PHC)-Hospital Transitions

Module C2: Primary Healthcare (PHC)-Specialist Transitions

Module C3: Hospital-Home and Community Transitions

Module C4: Community-PHC-Hospital Transitions for Maternal, Newborn and Child Health (MNCH)

- **Instrument 3: Vertical Integration Pilots and Initiatives Involving Patient Transitions Across Four Provider Tiers: Primary Care-Hospital; Specialty Care-Primary Care; Hospital-Home/Community; and Maternal, Newborn and Child Health (MNCH) Transitions.**

*Intended respondents:* Planners, implementers and front-line workers and managers involved in implementation of vertical integration pilots and initiatives.

*Content:* The questions in this instrument cover the features and practices of existing vertical integration initiatives with a focus on patient transitions. These initiatives will usually cover only one patient transition between different levels of care.

Module A: Pilots involving PHC-Hospital Patient Transitions

Module B: Pilots involving PHC-Specialist Patient Transitions

Module C: Pilots involving Hospital-Home and Community Patient Transitions

Module D: Pilots involving Community-PHC-Hospital Transitions for MNCH

- **Annex 1: Examples of Performance Measures for Vertical Integration**
- **Annex 2: Complementary Tools for Vertical Integration**
- **Annex 3: Survey Solutions Instructions**

## 4.1 Modifying the Tool

It is important to keep in mind that this tool is the product of a collaboration with participants from five countries, representing a wide range of experience with vertical integration. The tool can (and should) be modified to adapt to different country contexts. Any modifications should consider:

- *Structure:* The tool is structured to start with high-level and general items and gradually move toward more specific items. It initially assesses healthcare system policy and regulatory readiness for vertical integration at the whole system level (*Instrument 1*), it then diagnoses vertical integration at the local healthcare organization level (*Instrument 2*), and finally focuses on the nuts-and-bolts features, including enablers and constraints, of existing pilots or initiatives (*Instrument 3*).
- *Focus:* Depending on country objectives and context, a county-specific instrument can center on certain experiences or aspects of vertical integration. For example, some countries may want to assess ongoing pilots or initiatives while others may want to gauge front-line readiness for launching initiatives. Still other may be more interested in reviewing the policy and organizational contexts. Whatever the case, we recommend that countries carefully review all instruments, drawing items from each to meet their specific objectives.
- *Technical Content:* Questions can be added or rephrased as needed to address additional content areas. Certain questions may not be relevant to a country, or the content may not accurately reflect country context.
- *Language and culture:* Questions can be reworded to suit local culture, norms and vocabulary to best represent the intended objective of each question. For example, some countries may use the term “networks” to refer to vertically integrated facilities.

Further, all three instruments can be used independently. Depending on a particular country’s needs, the tool administrator can implement only the instruments they perceive as most appropriate or draw on questions across all instruments to construct a new, more context specific instrument. However, when constructing country-specific instruments, we recommend that *Instrument 2* be carefully reviewed since the technical editors consider it to be the core of the tool.

If the implementation team decides to modify the tool, it must ensure that the online version of the survey on the online data collection software, Survey Solutions, is modified as well. See Annex 3 for instructions on how to modify the tool in the online data collection software.

## 5. Application of The Tool

This tool is intended to be administered to targeted “respondents” during in-person interviews conducted by “interviewers”. Depending on the instrument, application can take 15 minutes to one hour. The following sections provide step-by-step guidance to apply the tool, analyze the findings, and disseminate results.

### 5.1 Pre-Application Preparation

Initially, we recommend that relevant partners and stakeholders be identified, briefed on the aims, and invited to join a Coordinating Group, which is responsible for overseeing and guiding instrument application, analysis of findings and dissemination of results and recommendations. These partners and stakeholders may include JLN country core group members, Ministry of Health (MOH) policymakers, regional officials, university researchers, representatives from payers or insurers, donors and private facilities and systems.

The Coordinating Group would be responsible for the following tasks:

- Selecting an implementing organization to manage the implementation of the tool.
- Together with the implementing organization, developing a timeline and detailed budget for tool development, implementation, analysis, report writing and dissemination.
- Identifying respondents.
- Introducing the survey team to respondents.
- Supervising the development of the survey report.
- Disseminating the report findings.
- Advising the implementing organization on dissemination strategies.
- Using recommendations to support any policy proposals pertaining to vertical integration.
- Informing the design and launch of vertical integration pilots.

The Coordinating Group should hold, at a minimum, the following meetings as the tool is implemented:

- One meeting to plan the implementation of the tool, select an implementing organization, identify the sample of respondents, and suggest experts who will analyze the data.
- One meeting to review the country-specific instrument
- One meeting after the tool has been implemented to review results.
- One meeting to select the dissemination manager.

- One meeting to discuss the dissemination of results, policy implications, and pilot proposals.

If necessary, the Coordinating Group can contact the technical facilitating team with questions and comments.<sup>5</sup>

### *5.2 Criteria for Selecting Respondents*

It is advised that approximately 10 to 20 respondents be selected per instrument. If possible, respondents should be selected evenly across the three levels of care, except for instrument 1, and be representative of the geographic diversity within the region. Workers in both urban and rural areas should be included.

For instrument 1, respondents should include policymakers, regulators and planners at central and regional levels.

For instrument 2, respondents should include facility managers and practitioners (physicians, nurses, community health workers, midwives) from different tiers of the delivery system: primary health care (PHC) units, hospitals, specialists and community-based workers.

For instrument 3, selected respondents should include planners, implementers, front-line workers and managers involved in the implementation of vertical integration pilots or initiatives. It is best that for each pilot respondents are drawn from different tiers of the delivery system which participate in the pilot. Respondents can also include practitioners and nurses as well as supervisors and regional officials involved in the pilot. If necessary, selected respondents for instrument 3 can also respond to instrument 2.

After they administer the survey, interviewers should also ask respondents to recommend further respondents for additional interviews; these names can be sent to the implementing organization for review and approval.

### *5.3 Criteria for Selecting the Implementing Organization*

Under the oversight of the Coordinating Group, the implementing organization is an organization or firm (or consortium of organizations) responsible for developing, testing and applying the instrument as well as analyzing the data and reporting the findings. The implementing organization will hire interviewers, plan and coordinate interviews, supervise data entry and analysis, and prepare reports for review and dissemination. The implementing organization should have experience

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<sup>5</sup> Contact information on pg. 2

conducting surveys, hiring and training interviewers and other human resources, conducting interviews, analyzing data and information, and report writing. Familiarity with vertical integration and service delivery issues would be an asset.

#### *5.4 Training Interviewers*

Ideally, interviewers should possess experience with surveys and interviews, and have the necessary communication and cultural skills to allow them to interact with respondents, some of whom may be senior managers and healthcare practitioners. However, securing experienced interviewers may be difficult. To prepare interviewers to apply the tool, it is recommended that one or more training sessions be organized for interviewers to teach them proper interviewing techniques and familiarize them with the structure and content of the tool.

It is especially important to familiarize the interviewers with the Survey Solutions platform (see section 5.6) which will be used to collect data during the interviews. Survey Solutions training material can be found in Annex 3. Demonstrations and interviewer role-playing are particularly important in preparing interviewers to use the tool in the field. Through training, interviewers will learn how to gain respondents' trust, clarify responses and efficiently record responses. The implementing organization should keep in mind that planning a training workshop can require significant time and preparation, and enough time should be budgeted in the overall implementation timeline accordingly. The individuals leading the workshop should be familiar with the Survey Solutions platform and comfortable teaching interviewers how to use the interviewer app.

Suggested components of the training workshop would include:

- **Address administrative details:** Introduce interviewers to each other. Clarify the working arrangements for the application of the tool (working hours, transportation, per diem, timeline).
- **Familiarize interviewers with vertical integration:** Explain vertical integration and its relevance in the local context.
- **Introduce the survey and discuss its purpose:** Specify the goals of the tool. Explain how the different instruments address different stakeholders and the purpose of each instrument.
- **Explain responsibilities of interviewers and the implementing organization:** Clarify how interviewers should report to the implementing organization. Outline the characteristics of a good interviewer and his/her communication responsibilities.
- **Familiarize interviewers with the tool and Survey Solutions software:** Review each question in the tool and its response pattern; focus on accompanying instructions contained within each instrument and module. Ensure

interviewers know how to log on to the Survey Solutions app and upload completed interviews. Answer specific questions from interviewers regarding any parts of the tool.

- **Practice interviewing through role-playing:** Familiarize interviewers with the process of interviewing and entering responses on their devices. Explore different possible interview scenarios through role-playing.
- **Review interview logistics:** Disclose individual assignments to interviewers. Review interview preparation and logistics.

### *5.5 Preparing for Site Visits*

Once a list of desirable respondents is compiled, the Coordinating Group and implementing organization should send an introduction letter via mail or email to organizational or system leaders requesting their participation in tool application. This letter should contain the name of the organization applying the tool, the purpose of the tool and the specific instrument being used for the interview, the name of the interviewer assigned to interview that specific respondent, identification of potential respondents (in the organization) and the estimated time needed to complete the interview (15 minutes to one hour). The letter of introduction should also request that the respondents suggest a meeting time and place within an established timeframe depending on their availability. Finally, it should state clearly that the survey will be anonymous.

Once the corresponding respondent agrees to participate and provides his/her availability, the implementing organization should follow up, introducing the interviewer and confirming the meeting time and place. On the day preceding the interview, the interviewer should call the respondent to confirm the appointment. On the day of the interview, the interviewer should bring at least two printed copies (per respondent) of the relevant instrument, his/her identification documents, a copy of the introduction letter signed by a member of the implementing organization, and the device and charger that will be used to collect responses, as well as the contact information (for follow-up clarifications) of the person to be interviewed.

### *5.6 Data Collection*

In order to save time, minimize data entry errors and facilitate analysis, it is highly recommended that data be collected during the interview using the online version of the tool through the Survey Solutions free online data collection software developed by the World Bank. Survey Solutions has a simple, intuitive design, making it possible for individuals with minimal or no technical experience to operate the software. Administrators assign interviews and review responses using the online data collection software while interviewers can conduct interviews using the Survey Solutions App on an Android smartphone or

tablet<sup>6</sup>. Data from completed surveys is then electronically transmitted to a server that hosts all survey responses. Supervisors can access this server and are able to export data to statistical software (e.g., STATA, SPSS, Excel) for analysis.

Some benefits provided by Survey Solutions include:

- It can contribute to reducing data entry and coding errors. The software makes it impossible to enter values outside a given response set. Supervisors may also view and check the collected information and review error reports produced by the software shortly after the interviewers complete an interview. Automated routing of skip patterns reduces the incidence of missing data.
- Changes in the structure and content of the questionnaire can be instantly reflected on interviewers' devices. This allows for last-minute updates or error corrections.
- The software simplifies conducting surveys containing dynamic structures in which follow-up questions are linked to answers provided by respondents to previous questions. For instance, if a respondent answers “yes” to the question, “Have formal agreements been established between health providers at different levels of care?”, further questions will automatically appear to collect details on these agreements.

The facilitation team has uploaded the Vertical Integration Diagnostic and Readiness Tool to make it accessible for implementation. However, the instruments can easily be modified to create country-specific instruments. *See Annex 3 for instructions on how to use and modify the tool in Survey Solutions.*

If they download their assignment on the Survey Solutions mobile app prior to their mission, interviewers do not require internet access while they complete their interviews. Administrators and supervisors can assign interviews to interviewers, track progress and export survey results to formats such as Excel or Stata.

Tablets are the preferred collection device but, if necessary, laptop computers can also be used, but they will require an internet connection during the interview, unlike tablets which can download assignments prior to the mission in the field. Regarding tablets, the tool only operates on Android devices, if the implementing unit does not possess these devices, they should purchase tablets for each interviewer for this survey.

**Tablet application:** Using the Survey Solutions online software and a computer, supervisors can assign respondents to interviewers, and interviewers can then carry out the survey in the field using a tablet with the Survey Solutions app.

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<sup>6</sup> Survey Solutions is only available on Android tablets. Purchase, maintenance, and/or repair costs should be included in the implementation budget.

Nevertheless, the respondent should be provided a hard copy of the instruments. To start the interview, the interviewer should introduce the tool and explain its objectives, as well as the objectives of the specific instrument being applied in that interview. The interviewer will type any qualitative or text responses on the tablet. Once the interview is completed, the interviewer should upload responses using the Survey Solutions app.

If using a laptop, the interviewer should log in to the Survey Solutions online server<sup>7</sup> using his/her credentials, click on his/her assignment and select “Start new interview”. Then the interviewer should click on the instrument to be applied and enter the respondent’s answers.

Paper application: If the implementation team chooses not to use the Survey Solutions software, it can decide to conduct interviews using paper copies of the tool. During the interview, both the interviewer and the respondent should have a hard copy of the instrument. To start the interview, the interviewer should introduce the tool and explain its objectives, as well as the objectives of the specific instrument being applied in that interview. Then, the interviewer should read each question to the respondent and record his/her responses. The respondent should not have to write down his/her responses.

Once the interview is completed, the interviewer should ensure that no pages were skipped or questions were missed, and then thank the respondent for his/her time. Any qualitative or text responses will need to be legible. If possible, the interviewer should scan the interview responses to create an electronic copy as soon as possible and deliver the hard copies to the implementing organization. The original hard copies should be kept in a safe and dry space. The implementing organization should meet with the interviewer to review the data collected and clarify eventual questions. See Annex 3 for more information on using Survey Solutions.

### *5.7 Data Entry and Processing*

In order to enable further analysis, the data collected during interviews should be first reviewed and processed through Survey Solutions. This is also the case for paper application. This work should either be done by or supervised by the implementing organization which controls the Survey Solutions assignments.

Importantly, if the implementing organization decides to modify questions in the original tool, it must ensure that both the Word/paper version as well as the Survey Solutions versions are modified accordingly. This is essential for the successful implementation of the tool.

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<sup>7</sup> See Annex 3 for detailed instructions on using Survey Solutions

To avoid errors, it is important that data entry is double-checked. Once the data entry process is concluded and interviewers have uploaded interview responses by synchronizing their app, it is advisable to perform quality checks of the database to identify any issues and discover inconsistencies before data analysis begins. Common errors that need to be adjusted include: typing mistakes and omissions.

After data is reviewed and validated by supervisors it can be exported via Survey Solutions to Stata format and later to Excel format. It can also be exported to SPSS format. For additional information on exporting collected data, please refer to Annex 3.

### *5.8 Data Analysis*

Once the data has been uploaded and reviewed, the implementing organization can analyze the results independently or draw on the assistance of experts recommended by the Coordinating Group. To make effective use of the collected data, it is recommended to present data in graphs, tables and diagrams using either Stata or Excel.

The following data exploration techniques can be used:

- **Tabulation:** Tabulate data for one question to show frequency of responses for each category and subcategory. It is good practice to show both the number of responses as well as their percentage, where possible.
- **Cross-tabulation:** Analyze the relationship between multiple variables. A cross-tabulation table provides a basic picture of the interrelation between two variables and can help find interactions between them.
- **Likert-Scale:** Many of the questions in this survey have responses set on the Likert Scale<sup>8</sup>, for example, answers ranging from very frequently to very seldomly. Responses to these questions can be tabulated by assigning sequential weights to different types of answers, then multiplying these weights with the number of answers for each question; this can produce a mean for each result.
- **Statistical significance tests:** If the sample size is large enough, statistical tests (such as the Chi Square test) can determine the strength of association between the responses of two or more questionnaire items. These can be used to measure responses to Yes/No questions as well as questions on a Likert Scale.

Data analysis should take the following issues into consideration:

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<sup>8</sup> The typical Likert scale is a 5 point ordinal scale used by respondents to rate the degree to which they agree or disagree with a statement

- **Non-responses:** It is recommended that the data analysis factor in the number and percentage of non-responses to questions. Please note that a non-response is different from “Don’t Know”.
- **Qualitative information:** For open-ended items (i.e., qualitative questions that require descriptive responses and text entries), the data analysis team may decide to quantify the text responses so they can be more objectively analyzed. Coding open-ended questions involves developing a structured format of the unstructured or qualitative responses. The structured format usually entails categorical grouping of responses. To ensure reliability, coding should be performed by at least two “judges” independently. As the judges analyzes the open-ended responses, certain patterns or tendencies may appear. They can assess the responses to determine which are significant, and then transform the text into a simplified structure. For example, for the open-ended question “Explain how the term ‘network’ is used or interpreted within your system.”, the structured response set could include:
  1. Understood as a formal network of providers which shared financial incentives and functional linkages among provider tiers
  2. Understood as a group of providers who communicate informally on a case by case basis
  3. Understood an aspirational structure of provider tiers but without functional linkages among the same
  4. Understood as a referral system
  5. Other

Finally, some qualitative or open-ended responses will not lend themselves to coding. These should be listed and categorized separately. Some can be cited in the final to enrich the quantitative findings.

### *5.9 Report Writing*

After the data has been collected, tabulated and analyzed, the next step is to write a final report based on the findings. This step is essential for the broader dissemination of the findings and their implications.

While all data should be analyzed, not all interview responses should be included in the final report. Instead, the final report should concisely present relevant findings.

Specifically, it is recommended that the final report be comprised of six sections:

- (i) *Introduction* stating the goals of the tool.
- (ii) *Methodology* explaining how the tool was administered and how respondents were chosen.
- (iii) *Results* describing the findings from the application of the tool.
- (iv) *Discussion* exploring the implications of the findings for policy as well as design and implementation of vertical integration initiatives.
- (v) *Recommendations*.
- (vi) *Conclusion*.

The style of the writing should be impersonal, objective and precise. It is expected that the implementing organization will take the lead in either writing the report, or in managing the production of the report by using consultants, experts or editors who have access to the data generated.

## 6. Dissemination

Dissemination is often overlooked during the planning phase of a study. A decision should be made early on whether the implementing organization shall be responsible for dissemination, or if another organization should be tasked with disseminating the findings. Irrespective of that choice, an appropriate budget should be allocated to accomplish said task. In some cases, the organization responsible for dissemination may not be the implementing organization, since dissemination requires communication and marketing skills, as well as the ability to simplify the findings of the survey – skills that the implementing organization may not possess.

Various formats can be used to present the findings (e.g. full report, policy brief, executive summary, journal article, presentations). The material and presentation form should be adapted to the needs of the different stakeholders, and the messages should be tailored to the target audience. Often, a lengthy and detailed final report will have less of an impact than a well written executive summary detailing the most important findings from the survey. Shorter dissemination documents may include:

- **Executive summaries** that focus on providing context and cover three to five main messages (relevant to the target audience) gathered from the application of the tool. These summaries should be short (one or two pages).
- **Policy briefs** that emphasize the challenges and possible solutions rather than the methodology and technical aspects of the tool. Policy briefs often contain: an executive summary; context and relevance of the problem; a critique of policy options; policy recommendations; and sources or references.

- **Pamphlets** that quickly summarize the main findings in a small booklet or leaflet.
- **Articles for peer-reviewed journals** that detail the methodology and results of the tool application. These can help shed light on vertical integration and engage policymakers in discussion on vertical integration. Articles would also contribute to the broader international literature on vertical integration, especially in LMICs.
- **PowerPoint presentations** that briefly provide context on vertical integration and the tool, and then summarize the main findings.

All dissemination documents should be concise, accessible and focused on convincing the target audience of the value of vertical integration, and the salience of recommendations. The publication of dissemination documents can coincide with events or conferences where the main findings can be presented to a wide-ranging audience, and next steps can be discussed.

The production of dissemination documents can have hidden costs, such as costs of translating, graphic design and printing. To account for all of the costs associated with the dissemination phase (including the time needed to produce the different documents), the implementing organization should prepare a comprehensive budget at the very start of the planning phase for the application of the tool. In addition, a timeline should be set for the production of dissemination documents as well as any associated events (e.g. conferences, meetings).

By its nature, this tool is meant to further the national conversation on vertical integration and present information on the current enablers and barriers to vertical integration within the health system. Ultimately, the findings can be used to inform policymakers on the current state or readiness of vertical integration within their countries.

# DEFINITIONS

**COMMUNITY HEALTH WORKER (CHW):** A trusted, knowledgeable front-line health person who typically comes from the community he or she serves. CHWs bridge cultural, social and linguistic barriers, expand access to coverage and care, and improve health outcomes.

**COUNTER-REFERRAL:** The process by which a provider or facility which receives a referral sends the patient back to the initiating provider or facility with information about services provided and any needed follow-up. This completes the referral loop between the two providers or facilities.

**ELECTRONIC MEDICAL RECORD (EMR):** An electronic record of an individual's health-related information that can be created, gathered, managed, and consulted by authorized clinicians and staff within one healthcare organization.

**FEEDBACK MECHANISM:** Transmission of evaluative or monitoring-based information about an action, event or process to the original or controlling source.

**GATEKEEPER:** A healthcare professional, usually a primary care physician or an extension agent (such as a nurse), who is the patient's first contact with the healthcare system and who is responsible for triaging and managing the patient's further access to the system.

**HEALTH INFORMATION SYSTEM:** All health data sources required by a country to plan and implement its national health strategy. Examples of these data sources are electronic health records for patient care, health facility data, surveillance data, census data, population surveys, vital event records, human resource records, financial data, infrastructure data, and logistics and supply data.

**INTEGRATED CARE PATHWAY(S):** Also known as coordinated care pathways, these are task-oriented care plans that detail essential steps in the care of patients with a specific clinical problem and describe the patient's expected clinical course spanning two or more provider levels (for example home care, PHC, secondary hospital, tertiary hospital).

**LEADERSHIP:** The action by an individual to reach collective goals, and empower individual autonomy and accountability, through building knowledge, respectful action, review and reflection.

**LOCAL CHAMPION:** A person who initiates the process of change in a community or an agency. He or she engages other key stakeholders, builds support, and pushes for change.

**MULTIDISCIPLINARY TEAM:** Consists of members of different disciplines involved in the same task (assessing people, setting goals and making care recommendations) and working alongside each other, but functioning independently.

**PATIENT INFORMATION:** Any information about health status, provision of healthcare or payment for healthcare that can be linked to a specific individual. This includes any part of a patient's medical record or payment history.

**PAYMENT MECHANISM:** The way money is distributed from the government, insurance company or other fund holder to a healthcare provider. Different payment systems generate different incentives for efficiency, quality and utilization of healthcare facilities, and these incentives may vary for providers, patients and/or payers.

**PROVIDER:** An individual healthcare professional, a group of professionals or an organization that delivers care services.

**PROTOCOL:** An agreed framework outlining the care that will be provided to patients in a designated area of practice; these are internal to a unit. Rather than describe how a procedure is performed, protocols specify why, where, when and by whom the care is given.

**REFERRAL:** The process in which a health worker at one level of a health system, having insufficient resources - drugs, equipment, skills - to manage a clinical condition, seeks the assistance of a better or differently resourced facility at the same or higher level to assist in, or take over the management of, a patient's case. Reasons for deciding to refer either an emergency or routine case include the need to seek expert opinion, additional or different services, admission and management, or use of diagnostic and therapeutic tools to treat a client.

**SELF-MANAGEMENT:** Self-management support is the help given to people with chronic conditions that enables them to manage their health on a day-to-day basis. Self-management support can help and inspire people to learn more about their conditions and to take an active role in their healthcare.

**TELEMEDICINE:** The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interest of advancing the health of individuals and their communities.

**VERTICAL INTEGRATION:** Vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, across providers working at different tiers or settings to provide appropriate, timely and high-quality care. Provider tiers can include hospitals, primary care, diagnostic and other ambulatory units, rehabilitation and subacute facilities, and community and home settings. Providers can include physicians, nurses, community-health workers, midwives and home caretakers.

# GENERAL INSTRUCTIONS SHEET FOR ALL INSTRUMENTS

## Getting Started

This instructions sheet is the front cover of all modules. It provides important guidance for the interviewer. For paper applications, **please print this page** and attach it to the instrument and module(s). Please read carefully and keep handy during the interview.

To supplement this sheet, each instrument is accompanied by a cover page outlining the intended respondents, objectives and contents. Each module is introduced by a separate page. Make sure to print these as they summarize the topic to be explored within each module.

## The Interview

Before you start, please make sure to thank the respondent for his or her time. Explain the purpose, scope and process of the interview. Mention that all answers will be treated strictly confidentially. The basic structure of the interview is as follows: you should introduce the topic, read the question, and record the respondent's answer in the corresponding answer section.

Every new section starts with an introductory statement in **blue** that you need to read to the respondent. Example: *"To start, I am going to read a series of topics related to policies, regulations and leadership supporting vertical integration."*

Throughout the document, you will find instructions in **red**. They specify:

1. Upfront, general instructions for completing the instrument. Example: **Read the topic and three corresponding scenarios. For each topic, circle or tick the number (1, 2, 3) that best approximates the current situation . . .**
2. Requests for more specific information. Example: **(please specify)**
3. Skipping pattern across questions. Example: **(go to 3)**
4. If multiple answer options are to be selected. Example: **(check all that apply)**

If there are no further instructions, please select only one response item. The respondent's answers should be recorded by **checking or ticking the selected answer(s)**. Where there are no answer options, the question is open-ended and requires you to fill out the text box with the answer given by the respondent. Whenever this is the case, please make sure to write down the answer as accurately and legibly as possible.

It is good practice to ask probing questions if the respondent's answer is ambiguous. Example: *"To confirm, what you mean to say is \_\_\_\_"*

## Finishing Up

Before you leave, please make sure to thank the respondent again for their participation.

# COVER SHEET FOR INTERVIEW

This cover sheet is to be used to gather information about the respondent before the start of an interview. Please copy this cover sheet and attach it to the instrument and module(s).

Interview No. \_\_\_\_\_ Location of Interview \_\_\_\_\_

Date	
Interviewer name	
Instrument administered (1, 2, or 3)	
Module(s) administered	
<b>Respondent Information</b>	
Respondent position	
Description of responsibilities	
Respondent organization	
Organization address	

**Check responses that apply below**

Facility Type		Managing Authority	
<i>National Referral Hospital</i>		<i>Government/Public</i>	
<i>District/Provincial Hospital</i>		<i>NGO/Not-for-profit</i>	
<i>Health Center/Clinic</i>		<i>Private for-profit</i>	
<i>Health Post</i>		<i>Mission/Faith-based</i>	
<i>Maternal/Child Health Clinic</i>		<i>Other (specify)</i>	
<i>Other (specify)</i>		<b>Outpatient Only</b>	
<b>Setting</b>		<i>Yes</i>	
<i>Urban</i>		<i>No</i>	
<i>Suburban</i>			
<i>Rural</i>			

# INSTRUMENT 1: NATIONAL POLICIES, REGULATIONS AND LEADERSHIP SUPPORTING VERTICAL INTEGRATION

- Respondents:** Policymakers, regulators and planners at central and regional levels.
- Objectives:** This instrument aims to gather information on policies, regulations and leadership supporting vertical integration at the national and federal level. It also focuses on respondents' specific knowledge of the content of relevant policies and regulations at the *national or federal level*.
- Contents:**
- Module 1A: Rating the Policy, Regulatory and Leadership Environment:** This module seeks to understand respondents' knowledge and perceptions of system-wide policies, regulations and leadership supporting vertical integration at the *national or federal level*.
- Module 1B: Attributes of Policies and Regulations in Support of Vertical Integration:** This module seeks to understand respondents' knowledge of the content of policies and regulations around eight policy areas that support vertical integration at the *national or federal level*, and it is to be administered only if responses to Module 1A indicate policies supporting vertical integration exist.

# Module 1A: Rating the Policy, Regulatory and Leadership Environment

This module covers respondents' knowledge and perceptions of system-wide policies, regulations and leadership supporting vertical integration at the *national or federal level*.

**INTERVIEWER INSTRUCTIONS:** This module consists of 19 different topics, highlighted in yellow and orange. Read out the topic and **first three** corresponding scenarios. For each topic, circle or tick the number (1, 2, 3) that best approximates the current situation as described by the respondent. If the respondent cannot rate the topic, mark (4), or if the respondent doesn't know, mark (5). Any relevant respondent comments can be recorded in the comments section.

"In this module, the terms 'vertical integration,' 'vertical integration of care' and 'vertically integrated care' are used interchangeably and refer to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, across providers working at different tiers or settings to provide appropriate, timely and high-quality care. Provider tiers can include hospitals, primary care, diagnostic and other ambulatory units, rehabilitation and subacute facilities, and community and home settings. Providers can include physicians, nurses, community-health workers, midwives and home caretakers."

"I am going to read a series of topics related to policies, regulations and leadership supporting vertical integration. For each topic, I will read three scenarios: numbers 1, 2 and 3. Please inform me of the scenario that best approximates the current situation."

1. Systematic evidence of need for vertically integrated care	Need for change is not recognized, and supporting evidence is unavailable (e.g., need for vertically integrated care to address NCDs, aging, MNCH, affordability, etc.)  <b>1</b>	Need for change is recognized and based mainly on micro-studies showing the need for greater vertical integration of care  <b>2</b>	Shortcomings in vertical integration of care have been fully analyzed and specific gaps identified  <b>3</b>	Not applicable/ Can't rate  <b>4</b>	Don't Know  <b>5</b>	Comments:  <b>6</b>
2. Rationale for vertically integrated care	No rationale for vertical integration of care or situation	Situation analysis has been conducted to support vertical	Situation analysis and rationale have been prepared and have provided	Not applicable/ Can't rate	Don't Know	Comments:

	analysis has been prepared to support policy formation <b>1</b>	integration of care, but has yet to contribute to policies or plans <b>2</b>	inputs into policy formation <b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
3. Vertically integrated care in national health policies	Policies and plans do not exist <b>1</b>	Reflected in policy statements, but not a priority and no resources allocated <b>2</b>	Is a major policy component and priority; plans exist, resources are assigned and specific officials are accountable <b>3</b>	Not applicable/ Can't rate <b>4</b>	Don't Know <b>5</b>	Comments: <b>6</b>
4. Planning	There are no official planned projects for vertical integration <b>1</b>	There is at least one vertical integration initiative planned, but no resources have been allocated <b>2</b>	There is at least one vertical integration initiative being implemented and monitored <b>3</b>	Not applicable/ Can't rate <b>4</b>	Don't Know <b>5</b>	Comments: <b>6</b>
5. Policies to support network formation	Network policies exist in name only or are prescriptive in nature (e.g., specify normative interactions among provider levels) <b>1</b>	Network policies exist supporting the formation of organized networks <b>2</b>	Policies supporting the formation of organized networks and effective vertical integration exist and they are applied in practice <b>3</b>	Not applicable/ Can't rate <b>4</b>	Don't Know <b>5</b>	Comments: <b>6</b>



	integrated care; little interest		integrated care, making sure it is part of national strategies, goals and policies			
	1	2	3	4	5	6
10. Health insurer policy support for vertically integrated care	No active support; little interest	Recognition of the need for vertically integrated care, but not actively promoting or paying for vertical integration	Proactively seeking ways to support and finance vertical integration	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6
11. Human resource policies and capacity building in support of vertically integrated care	No specific policies or programs related to HR formation, capacity building and training for vertically integrated care	Specific policies or programs are under development, but have not been implemented	Standardized training programs are being implemented	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6
12. Financial resources supporting integrated care	No budget or additional funding has been allocated for vertically integrated care projects or pilots	Resources have been allocated, but mainly for pilots	Resources are allocated to support vertically integrated care initiatives in the system	Not applicable/ Can't rate	Don't Know	Comments:

	1	2	3	4	5	6
13. Incentives/ payment systems to support vertically integrated care	No payer (insurer, government) has developed a provider payment mechanism explicitly supporting care integration or motivating cross-provider collaboration	Payers are developing provider payment mechanisms to support vertical integration, but none have been implemented	Payers (insurer, government) use payment mechanisms to incentivize providers to collaborate and coordinate care across different units or levels (e.g., hospitals, primary care)	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6
14. National data and measurement policies supporting vertically integrated care	Vertically integrated care data is not collected, or indicators are not constructed on a systematic basis	Some data/measures have been identified and extracted from current data systems for specific initiatives; data analysis is rare	Monitoring systems with indicators exist, are regularly analyzed, and feedback is provided	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6
15. Support for vertical integration pilots or initiatives	Policymakers and leaders are generally unaware	Policymakers and leaders are interested in lessons learned	Policymakers and leaders actively support and	Not applicable/ Can't rate	Don't Know	Comments:

	of initiatives if they exist	from pilots and initiatives	monitor pilots and initiatives			
	1	2	3	4	5	6
16. Referral policies	Normative referral policies exist for patient care transitions (such as PHC-hospital or PHC-specialist), but are irregularly applied, or no policies governing referrals exist	Normative referral policies exist for patient care transitions (such as PHC-hospital or PHC-specialist) and are regularly applied, but not systematically monitored or reviewed	Referral policies are regularly applied, monitored, reviewed and actions are taken to improve care delivery	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6
17. Knowledge of constraints to integrated care	No awareness of constraints to integrated care	Awareness of constraints, but no systematic approach in place to address them	Plans and solutions are in place and used to address constraints	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6
18. National quality guidelines for vertically integrated care or patient care transitions	None exist	Evidence-based guidelines are under development	Evidence-based guidelines have been developed and are applied in practice	Not applicable/ Can't rate	Don't Know	Comments:
	1	2	3	4	5	6

19. Regulations to support vertical integration among providers	None exist  <b>1</b>	Exist, but are limited to specific services, such as pharmacies and diagnostic units  <b>2</b>	Exist and govern cross-provider collaboration system-wide  <b>3</b>	Not applicable/ Can't rate  <b>4</b>	Don't Know  <b>5</b>	Comments:  <b>6</b>
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**Continue to Module 1B only if respondent acknowledges the existence of policies supporting vertical integration by selecting either response [2] or [3] for Question 3.**  
**If response [1], [4] or [5] is selected for Question 3, meaning no policy exists or the respondent does not know, then no further action is needed regarding Instrument 1.**

# Module 1B: Attributes of Policies and Regulations in Support of Vertical Integration

This module covers respondents' knowledge of the specific content of policies and regulations of vertical integration at the *national or federal level*. It is divided into eight policy areas. This module contains a checklist of policy attributes related to vertical integration.

**INTERVIEWER INSTRUCTIONS:** This module covers eight policy areas. Please introduce the policy area and then read the statements written in blue. For each statement, circle or tick the number (1) if the respondent agrees with the statement or (2) if the respondent does not agree. If the respondent says incomplete or partial, mark (3); if the respondent doesn't know, mark (4). Please record only **one answer** for each statement.

"In this module, the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably and refer to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, across providers working at different tiers or settings to provide appropriate, timely and high-quality care. Provider tiers can include hospitals, primary care, diagnostic and other ambulatory units, rehabilitation and subacute facilities, and community and home settings. Providers can include physicians, nurses, community-health workers, midwives and home caretakers."

"From your responses to the previous module, I understand that policies supporting vertical integration do exist. This module covers your knowledge of the content of policies and regulations involving vertical integration at the *national or federal level*. It is divided into eight policy areas. I will make a number of general statements about the possible content of the policies. If the policies address the stated item, please say 'yes'; if it does not, please say 'no'. If you think that the policies incompletely or partially cover the item, please say 'incomplete' or 'partial'. If you are unsure or don't know, please say 'don't know.'"

<b>Area 1: Core Technical Content</b>	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don't know (4)</b>
<b>"I am going to read some general statements on the technical content of policies related to vertical integration of care in your healthcare system."</b>				
1. The policy contains a vision statement on integrated care with the following components:				
a. Rationale.	1	2	3	4
b. Objectives.	1	2	3	4
c. Definitions.	1	2	3	4
d. Specification of strategic directions (e.g., care continuity, population health, prevention, chronic care).	1	2	3	4
2. The policy adopts a "whole system approach" incorporating not only vertical integration of healthcare services, but also other sectors such as social services.	1	2	3	4

3. The policy articulates at least <u>two</u> of the tenants of a vertical integration model to be implemented (e.g., team-based care, patient enrolment, gatekeeping, use of care plans, use of care coordinators, integrated care protocols, home-based care, patient self-management).	1	2	3	4
4. The policy allows for flexibility and innovation in developing organizational forms to support vertical integration (e.g., networks, provider associations, other organizations).	1	2	3	4
5. The policy promotes evidence-based practices and quality of care.	1	2	3	4
<b>Area 2: Stewardship or Oversight</b> <b>“I am going to read some statements on policies related to oversight or stewardship of vertically integrated care in your healthcare system.”</b>	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don’t know (4)</b>
6. The policy creates governance mechanisms to oversee the design, implementation, monitoring and scale-up of the policy.	1	2	3	4
7. The policy aligns the legal and regulatory environments to support integrated care.	1	2	3	4
8. The policy empowers a regulatory body to issue regulations related to vertical integration.	1	2	3	4
9. The policy specifies accountability mechanisms for providers/healthcare organizations (e.g., contracting, care coordination agreements, performance measures).	1	2	3	4
<b>Area 3: Financing and Incentives</b> <b>“I am going to read some statements on policies related to financing and incentives in support of vertical integration of care in your healthcare system.”</b>	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don’t know (4)</b>
10. The policy specifies resources for supporting the design and sustainable implementation of the policy.	1	2	3	4
11. The policy allows for flexibility in developing funding and provider payment arrangements that incentivize integrated care (e.g., capitation, bundled payment, pay-for-performance, shared revenue, etc.).	1	2	3	4

<b>Area 4: Digital Health</b>				
<b>"I am going to read some statements on policies related to digital health in support of vertical integration of care in your healthcare system."</b>				
	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don't know (4)</b>
12. The policy outlines a digital health vision in support of vertical integration with the following components:				
a. Use of electronic health information systems and standard electronic health records.	1	2	3	4
b. Public reporting of outcomes at the level of healthcare organizations.	1	2	3	4
c. Sharing of patient records across providers.	1	2	3	4
13. The policy specifies resources for supporting the implementation of the digital health vision, including resources for necessary infrastructure investments and training.	1	2	3	4
<b>Area 5: Human Resources</b>				
<b>"I am going to read some statements on policies related to human resources in support of vertical integration of care in your healthcare system."</b>				
	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don't know (4)</b>
14. The policy incorporates future workforce planning, including the following components:				
a. Provider training and continuous education regarding new delivery models (e.g., team-based care, patient-centered communication, etc.).	1	2	3	4
b. Provider training to expand the roles of lower-level healthcare providers (e.g., general practitioners, nurse practitioners, community health workers).	1	2	3	4
c. Recruitment and training for new roles and functions (e.g., care coordinator, case manager).	1	2	3	4
15. If necessary, the policy adapts existing legislation to allow for expanded roles of lower-level healthcare providers and for the creation of new roles and functions.	1	2	3	4
16. The policy specifies resources for supporting future workforce planning.	1	2	3	4
<b>Area 6: Planning and Implementation</b>				
<b>"I am going to read some statements on policies related to planning and implementation of vertical integration of care in your healthcare system."</b>				
	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don't know (4)</b>

17. The policy establishes timeframes and phases for testing and adopting integrated care policies and responding to lessons from implementation.	1	2	3	4
18. The policy allows for planning activities (e.g., needs and readiness assessments, investment planning, priority setting).	1	2	3	4
19. The policy promotes an implementation strategy which can include the use of demonstration projects (pilots).	1	2	3	4
20. The policy allows for tailored (local) approaches to implementation and design (e.g., of payment and delivery models to foster vertical integration).	1	2	3	4
21. The policy fosters the creation of integrated care design and implementation teams.	1	2	3	4
<b>Area 7: Monitoring and Evaluation</b> <b>“I am going to read some statements on policies related to monitoring and evaluation of vertically integrated care in your healthcare system.”</b>	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don’t know (4)</b>
22. The policy builds in timely evaluation over the long-term to:				
a. Assess lessons learned.	1	2	3	4
b. Provide evidence of impact.	1	2	3	4
c. Inform policy decisions.	1	2	3	4
23. The policy lists a limited set of potential performance measures relevant to integrated care delivery.	1	2	3	4
24. The policy promotes movement towards systematic and standardized approaches to monitoring performance and accountability.	1	2	3	4
<b>Area 8: Dissemination and Scale-Up</b> <b>“I am going to read some statements on policies related to dissemination and scale-up of vertically integrated care in your healthcare system.”</b>	<b>Yes (1)</b>	<b>No (2)</b>	<b>Incomplete/ Partial (3)</b>	<b>Don’t know (4)</b>
25. The policy supports the development of a strategic communication plan.	1	2	3	4
26. The policy establishes strategies for the dissemination of lessons learned and local innovations.	1	2	3	4

# INSTRUMENT 2: VERTICAL INTEGRATION IN THE HEALTHCARE SYSTEM, ORGANIZATIONAL ENVIRONMENTS AND FRONT-LINE SERVICE DELIVERY SETTINGS

- Respondents:** Facility managers and practitioners (physicians, nurses, community health workers, midwives).
- Objectives:** This instrument aims to gather information on components (“what”) and practice (“how”) of vertical integration in the broader health system and organizational environments as well as front-line service delivery settings. It can also be used to assess system, organizational and front-line readiness for vertical integration initiatives. This instrument consists of three modules.
- Contents:**
- Module 2A: Vertical Integration and the Healthcare System.** This module seeks to understand the degree to which vertical integration has been incorporated into the broader delivery system and institutional and financial environments.
- Module 2B: Vertical Integration and the Organizational Environment.** This module rates the specific organizational environment in terms of policies, leadership and overall support for vertical integration. Organizations are “collective actors” that organize and provide healthcare. These can include hospitals, primary care units, hospital systems, medical organizations or group practices, home health agencies and diagnostic units. Ideally, these units would be part of a regional healthcare system, a network or a hospital system rather than stand-alone facilities. It can also include solo practitioners if they have an affiliation with an organization.
- Module 2C: Vertical Integration and Front-line Service Delivery.** This module centers on the nuts-and-bolts features of vertical integration as applied to four patient transitions:
- 2C-1: Primary Healthcare (PHC)-Hospital Transitions
  - 2C-2: Primary Healthcare (PHC)-Specialist Transitions
  - 2C-3: Hospital-Home and Community Transitions
  - 2C-4: Community-PHC-Hospital Transitions for Maternal, Newborn and Child Health (MNCH)
- It is important to note that all transitions relate to care for chronic conditions except for module 2C-4 on MNCH.**

# Module 2A: Vertical Integration and the Healthcare System

This module is divided into specific theme areas within the **healthcare system relevant to vertical integration**. The questions are related to the broader delivery system and not just the immediate organization (e.g., hospital, health center) where the respondent works.

**INTERVIEWER INSTRUCTIONS:** This module is divided into 12 thematic areas. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions, follow the instructions in red.

"In this module, the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably and refer to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, across providers working at different tiers or settings to provide appropriate, timely and high-quality care. Provider tiers can include hospitals, primary care, diagnostic and other ambulatory units, rehabilitation and subacute facilities, and community and home settings. Providers can include physicians, nurses, community-health workers, midwives and home caretakers."

"This module seeks to understand the degree to which vertical integration has been introduced to and incorporated into the broader delivery system and institutional and financial environments. The questions are categorized by a number of thematic areas."

## Area 1: Policies

"First, I am going ask you some questions on policies in support of vertical integration in your healthcare system."

- |  |   |
|--|---|
| 1. Are there health system policies that support vertical integration?   | <input type="checkbox"/> Yes (go to 2)<br><input type="checkbox"/> No (go to 3)<br><input type="checkbox"/> Don't know (go to 3)  |
| 2. To the best of your knowledge, does the vertical integration policy have the following attributes:<br>a. Rationale<br>b. Objectives<br>c. Strategic directions<br>d. Specifies financial resources for supporting vertical integration<br>e. Creates governance mechanisms to oversee design, implementation and monitoring of vertical integration initiatives | a. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know<br>b. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know<br>c. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know<br>d. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know<br>e. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know |

<p>f. Establishes timeframes or phases for implementation</p> <p>g. Allows for tailored (local) approaches to design and implementation</p> <p>h. Lists a set of performance measures</p> <p>i. Builds in timely evaluation</p>	<p>f. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p> <p>g. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p> <p>h. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p> <p>i. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
<p><b>Area 2: Laws and Regulations</b></p> <p>"I am now going ask you some questions on laws and regulations in support of vertical integration in your healthcare system."</p>	
<p>3. Are there laws/regulations that support vertical integration?</p>	<p><input type="checkbox"/> Yes (go to 4)</p> <p><input type="checkbox"/> No (go to 5)</p> <p><input type="checkbox"/> Don't know (go to 5)</p>
<p>4. Explain which laws/regulations are supportive of vertical integration and how they support vertical integration efforts.</p>	
<p>5. Are there laws/regulations which may be a barrier to vertical integration?</p>	<p><input type="checkbox"/> Yes (go to 6)</p> <p><input type="checkbox"/> No (go to 8)</p> <p><input type="checkbox"/> Don't know (go to 8)</p>
<p>6. Explain which laws/regulations may be barriers to vertical integration and how they may impede vertical integration efforts.</p>	
<p>7. Explain how you think these laws/regulations are a barrier or challenge to sharing patient information across providers.</p>	
<p><b>Area 3: System Structure</b></p> <p>"I am going ask you some questions on system structure in your healthcare system."</p>	
<p>8. From a <u>patient perspective</u>, what are the main barriers to care for people served by your healthcare system? (rank the answer options from 1 to 5, with 1 being the biggest barrier)</p>	<p><input type="checkbox"/> Financial barriers</p> <p><input type="checkbox"/> Must travel long distances</p> <p><input type="checkbox"/> Must zigzag across providers to resolve illness episode (no continuity of care/difficulty navigating the delivery system)</p> <p><input type="checkbox"/> Weak primary healthcare</p> <p><input type="checkbox"/> Overcrowded hospitals</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Other (please specify) _____</p>

	<input type="checkbox"/> Don't know
<p>9. From a <u>provider perspective</u>, what are the main barriers to integration and care collaboration across provider levels?  (rank the answer options from 1 to 5, with 1 being the biggest barrier)</p>	<input type="checkbox"/> Lack of incentives <input type="checkbox"/> Negative incentives or disincentives <input type="checkbox"/> No means of communication <input type="checkbox"/> Lack of knowledge on the “what” and “how” of vertical integration <input type="checkbox"/> Weak interpersonal relationships/conflicts/power dynamics <input type="checkbox"/> Unclear operating guidance <input type="checkbox"/> Too busy <input type="checkbox"/> Weak primary healthcare <input type="checkbox"/> Uncooperative hospitals <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
<p>10. Is the term “network” used in policy pronouncements or when referring to the healthcare delivery system (by system leaders)?</p>	<input type="checkbox"/> Yes (go to 11) <input type="checkbox"/> No (go to 12) <input type="checkbox"/> Don't know (go to 12)
<p>11. Explain how the term “network” is used or interpreted within your system.</p>	
<p>12. Is there any form of contracting/formal agreement model (such as between hospitals and primary care units; Ministry of Health and hospitals; insurers and hospital/PHC centers) to support vertical integration across provider levels?</p>	<input type="checkbox"/> Yes (go to 13) <input type="checkbox"/> No (go to 14) <input type="checkbox"/> Don't know (go to 14)
<p>13. What is specified in the terms of the contract or formal agreement?  (Check all that apply)</p>	<input type="checkbox"/> Cost sharing/payments <input type="checkbox"/> Use of guidelines and pathways for patient treatment <input type="checkbox"/> Roles and clinical responsibilities of each provider level <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
<p><b>Area 4: Human Resources</b>  “I am going ask you some questions on human resources in support of vertical integration in your healthcare system.”</p>	

<p>14. Has the healthcare system taken actions to address workforce issues in order to support vertical integration efforts?</p>	<p><input type="checkbox"/> Yes (go to 15)  <input type="checkbox"/> No (go to 16)  <input type="checkbox"/> Don't know (go to 16)</p>
<p>15. What actions has the healthcare system taken to address workforce issues in order to support vertical integration efforts?          (Check all that apply)</p>	<p><input type="checkbox"/> Addressing adequate staffing/capacity  <input type="checkbox"/> Developing staffing capabilities/competencies  <input type="checkbox"/> Assigning/reassigning/rotating staff across facilities  <input type="checkbox"/> Surveying staff satisfaction  <input type="checkbox"/> Revising functions/roles/job descriptions  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>16. Has the healthcare system taken actions to address staff performance/competency standards in support of vertical integration efforts?</p>	<p><input type="checkbox"/> Yes (go to 17)  <input type="checkbox"/> No (go to 18)  <input type="checkbox"/> Don't know (go to 18)</p>
<p>17. What actions has the healthcare system taken to address staff performance/competency standards in support of vertical integration efforts?          (Check all that apply)</p>	<p><input type="checkbox"/> Defining performance standards/competencies  <input type="checkbox"/> Monitoring staff performance  <input type="checkbox"/> Fostering professional development  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>18. Has the healthcare system provided training to staff on teamwork and collaboration across facilities?</p>	<p><input type="checkbox"/> Yes (go to 19)  <input type="checkbox"/> No (go to 21)  <input type="checkbox"/> Don't know (go to 21)</p>
<p>19. How often is the training provided?</p>	<p><input type="checkbox"/> Only once  <input type="checkbox"/> Irregularly  <input type="checkbox"/> Regularly (please specify how often) _____  <input type="checkbox"/> Don't know</p>
<p>20. What topics are covered in the training?          (Check all that apply)</p>	<p><input type="checkbox"/> Concepts of performance improvement, tools and techniques (workflow/process steps mapping, system redesign, measurement, etc.).  <input type="checkbox"/> Defining and clarifying roles, functions and clinical responsibilities  <input type="checkbox"/> Teamwork, team building and collaboration  <input type="checkbox"/> Other (please specify) _____</p>

21. Are there specific staff assigned to support, oversee or implement vertical integration efforts?

- Yes (e.g., care coordinator, navigator, care manager)
- No
- Don't know

## Area 5: Information Sharing

"I am going to ask you some questions about information sharing in your healthcare system."

22. Can complete and accurate documentation of patient care be retrieved at any time from any location by qualified or designated providers in the system?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
23. Are different providers (e.g., primary care, diagnostic units, hospitals) able to share information?	<input type="checkbox"/> Yes (go to 24) <input type="checkbox"/> No (go to 26) <input type="checkbox"/> Don't know (go to 26)
24. How is patient care information shared <u>across providers</u> (PHC centers, hospitals, community health workers)?	<input type="checkbox"/> Information shared by paper-based system or fax (go to 25) <input type="checkbox"/> Information shared via management information system (MIS) (go to 25) <input type="checkbox"/> Information shared via electronic medical records (go to 26) <input type="checkbox"/> Don't know (go to 26)
25. Explain how patient care information is shared across providers (if paper-based, fax-based or MIS-based).	
26. To what extent do providers across all tiers receive updated information (on a regular basis) on patient outcomes related to specific conditions (maternal, newborn, non-communicable diseases)?	<input type="checkbox"/> Very frequently (go to 27) <input type="checkbox"/> Frequently (go to 27) <input type="checkbox"/> Occasionally (go to 27) <input type="checkbox"/> Seldomly (go to 28) <input type="checkbox"/> Very seldomly (go to 28) <input type="checkbox"/> Don't know (go to 28)
27. To what extent is the information used as a basis for learning and improvement to better integrate care across providers or improve quality?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
28. How is patient care information shared <u>with patients and families</u> ? (Check all that apply)	<input type="checkbox"/> Information rarely shared, or provided orally (go to 30) <input type="checkbox"/> Information shared by paper-based system (go to 29) <input type="checkbox"/> Information shared via web portal (go to 29) <input type="checkbox"/> Information shared via MIS (go to 29) <input type="checkbox"/> Other (please explain) _____ (go to 29) <input type="checkbox"/> Don't know (go to 30)

<p>29. Explain what clinical, health promotion or care management information is available to patients/families.</p>	
<p>30. Does the healthcare system have electronic medical records (EMRs)?</p>	<p>___ Yes, system wide (go to 31)          ___ Yes, but only in a limited number of facilities (go to 31)          ___ No (go to 35)          ___ Don't know (go to 35)</p>
<p>31. What components are included in the EMRs?          (Check all that apply)</p>	<p>___ Outpatient consultations          ___ Home visits          ___ Diagnostic test results          ___ Medications/prescriptions          ___ Care plans          ___ Progress notes          ___ Problem list          ___ 'Gaps in Care' checklist          ___ Disease conditions          ___ Scheduled appointments          ___ Responsible providers (care coordinators)          ___ Hospital admission/discharge          ___ All medical records          ___ Other (please explain) _____          ___ Other (please explain) _____          ___ Don't know</p>
<p>32. Which providers have access to EMRs?          (Check all that apply)</p>	<p>___ Primary healthcare units          ___ Secondary hospitals          ___ Tertiary hospitals          ___ Other (please explain) _____          ___ Other (please explain) _____          ___ Don't know</p>
<p>33. Which staff have access to EMRs?          (Check all that apply)</p>	<p>___ All professional staff          ___ Physicians          ___ Nurses          ___ Diagnostic technicians          ___ Other (please specify) _____</p>

	<input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
34. Do patients have access to their EMRs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
<b>Area 6: Financing and Payment</b>	
"I am going ask you some questions on financing and payment supporting vertical integration in your healthcare system."	
35. Is there any financial allocation to support or incentivize referrals or patient transfers across provider levels?	<input type="checkbox"/> Yes (go to 36) <input type="checkbox"/> No (go to 37) <input type="checkbox"/> Don't know (go to 37)
36. Explain the financial allocation or incentive.	
<b>Area 7: Patient Flows and Referral Systems</b>	
"I am going ask you some questions on patient flows among facilities in your healthcare system."	
37. Is there a single point of entry (gatekeeper) into your system?	<input type="checkbox"/> Yes (go to 38) <input type="checkbox"/> No (go to 40) <input type="checkbox"/> Don't know (go to 40)
38. What is the point of entry?	<input type="checkbox"/> Primary care unit <input type="checkbox"/> Urgent care unit <input type="checkbox"/> Emergency department <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
39. To what extent is the single point of entry actually used by patients?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly

	<input type="checkbox"/> Don't know
40. Do patients need a referral from primary care to access hospital care?	<input type="checkbox"/> Yes (go to 41) <input type="checkbox"/> No (go to 47) <input type="checkbox"/> Don't know (go to 47)
41. Do referrals facilitate access to hospital-based care?	<input type="checkbox"/> Yes (go to 42) <input type="checkbox"/> No (go to 43) <input type="checkbox"/> Don't know (go to 43)
42. Explain how a referral facilitates access to hospital-based care.	
43. Are patients usually given a counter-referral upon being discharged from the hospital?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
44. Is there a formal feedback mechanism in which providers receiving patients can consult with providers referring the patients?	<input type="checkbox"/> Yes (go to 45) <input type="checkbox"/> No (go to 46) <input type="checkbox"/> Don't know (go to 46)
45. Explain the feedback mechanism.	
46. How would you rate the functionality of the referral system?	<input type="checkbox"/> High (works well and regularly) <input type="checkbox"/> Medium (works but irregularly) <input type="checkbox"/> Low (it is mostly dysfunctional) <input type="checkbox"/> Don't know
<b>Area 8: Digital Health (in Support of Vertical Integration).</b>	
<b>"I am going ask you some questions on digital health in your healthcare system."</b>	
47. Is telemedicine used in patient management between different facilities?	<input type="checkbox"/> Yes (go to 48) <input type="checkbox"/> No (go to 50) <input type="checkbox"/> Don't know (go to 50)

<p>48. How common is the use of telemedicine between different facilities?</p>	<p><input type="checkbox"/> Only a handful of facilities use telemedicine  <input type="checkbox"/> About half of facilities use telemedicine  <input type="checkbox"/> Nearly all facilities use telemedicine  <input type="checkbox"/> Don't know</p>
<p>49. What is telemedicine used for?          (Check all that apply)</p>	<p><input type="checkbox"/> Provider-to-provider (individual) training or assistance  <input type="checkbox"/> E-consultations (with patients)  <input type="checkbox"/> Group training sessions  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>50. What patient mhealth technologies are in use in your system?          (Check all that apply)</p>	<p><input type="checkbox"/> E-access to records  <input type="checkbox"/> E-reminders  <input type="checkbox"/> Mobile health apps (please specify) _____  <input type="checkbox"/> Secure messaging  <input type="checkbox"/> Telephone care  <input type="checkbox"/> E-appointments  <input type="checkbox"/> Call centers  <input type="checkbox"/> E-diagnostics and self-monitoring tools  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>51. What mhealth technologies for providers are in use in your system?          (Check all that apply)</p>	<p><input type="checkbox"/> E-tablets for community health workers  <input type="checkbox"/> E-guidelines for community health workers  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____</p>
<p><b>Area 9: Clinical Care and Vertical Integration</b>          "I am going ask you some questions on clinical care related to vertical integration in your healthcare system."</p>	
<p>52. How would you rate the level of trust and respect between primary care providers (physicians, nurses, midwives, health workers, etc.) and hospital-based providers (specialists, technicians, nurse specialists, etc.)?</p>	<p><input type="checkbox"/> High  <input type="checkbox"/> Neither high nor low  <input type="checkbox"/> Low  <input type="checkbox"/> Don't know</p>
<p>53. To what extent is interdisciplinary and cross-facility teamwork (between primary healthcare,</p>	<p><input type="checkbox"/> Significant (go to 54)  <input type="checkbox"/> Some (go to 54)</p>

hospitals and other providers) promoted by the system?	<input type="checkbox"/> None or little (go to 56) <input type="checkbox"/> Don't know (go to 56)
54. Explain how teamwork is promoted.	
55. Who are typically the members of the interdisciplinary team? (Check all that apply)	<input type="checkbox"/> Physician (general practitioner/family doctor) <input type="checkbox"/> Specialist <input type="checkbox"/> Nurse <input type="checkbox"/> Nurse practitioner <input type="checkbox"/> Medical assistant <input type="checkbox"/> Midwife <input type="checkbox"/> Community health worker <input type="checkbox"/> Nutritionist <input type="checkbox"/> Public health professional <input type="checkbox"/> Social worker <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
56. Do guidelines, pathways or standardized protocols for treatment and management of chronic illnesses exist?	<input type="checkbox"/> Yes (go to 57) <input type="checkbox"/> No (go to 60) <input type="checkbox"/> Don't know (go to 60)
57. To what extent are they actually used?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
58. Do these guidelines, pathways or protocols specify active coordination, as well as roles and	<input type="checkbox"/> Yes (go to 59) <input type="checkbox"/> No (go to 60)

responsibilities of providers working at different tiers (PHC centers, hospitals, etc.)?	<input type="checkbox"/> Don't know (go to 60)
59. For which diseases or conditions is active coordination specified? (Check all that apply)	<input type="checkbox"/> Diabetes <input type="checkbox"/> Hypertension <input type="checkbox"/> Cancer <input type="checkbox"/> Asthma <input type="checkbox"/> Depression <input type="checkbox"/> High-risk mothers <input type="checkbox"/> High-risk neonates <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Don't know
60. Does your system mandate risk screening for chronic and high-risk conditions in elderly/vulnerable patients?	<input type="checkbox"/> Yes (go to 61) <input type="checkbox"/> No (go to 62) <input type="checkbox"/> Don't know (go to 62)
61. Which conditions are screened? (Check all that apply)	<input type="checkbox"/> Diabetes <input type="checkbox"/> Hypertension <input type="checkbox"/> Cancer <input type="checkbox"/> Asthma <input type="checkbox"/> Depression <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Don't know
62. Does your system possess outreach programs (i.e., proactive contact) for the elderly or vulnerable in the community or home?	<input type="checkbox"/> Yes (go to 63) <input type="checkbox"/> No (go to 66) <input type="checkbox"/> Don't know (go to 66)
63. What are the key strategies used in these programs? (Check all that apply)	<input type="checkbox"/> Patient education/self-management support <input type="checkbox"/> Care pathways/guidelines spanning all providers <input type="checkbox"/> Targeting of at-risk patients <input type="checkbox"/> Home visit after hospital discharge

	<input type="checkbox"/> Telephone call after hospital discharge <input type="checkbox"/> Case management by nurses or community health workers, including home visits <input type="checkbox"/> Medication management <input type="checkbox"/> Partnerships with social services <input type="checkbox"/> mhealth apps or telephone case management <input type="checkbox"/> Admission and discharge planning <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
64. To what extent are these programs effectively implemented?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
65. What are the main barriers to developing or expanding such programs?	
66. Describe the flow of patients for emergency maternal care that typically occurs in your immediate health system.	
67. How are physicians, medical assistants and community health workers linked to support maternal and newborn child health (MNCH)?	
<b>Area 10: Patient/Family/Community Engagement (Key Concepts for Patient-Centered Interactions)</b> <i>"I am going ask you some questions on patient, family and community engagement in your healthcare system."</i>	
68. To what extent does your system provide support to patients to self-manage their chronic conditions?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly

	<input type="checkbox"/> Don't know
69. To what extent does your system provide support to women and families to self-manage MNCH conditions?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
70. To what extent does your system provide support to family members and other informal caregivers?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
71. How does your system formally provide information and support to patients to self-manage their chronic condition(s)?	<input type="checkbox"/> Patient self-monitoring tools <input type="checkbox"/> Self-management educational classes or support programs <input type="checkbox"/> Telephone counseling and helplines <input type="checkbox"/> Self-management guidelines included in patients' individual care plans <input type="checkbox"/> Effective communication through teach-back methods (patient repeats instructions) <input type="checkbox"/> Health literacy coaching <input type="checkbox"/> Web portals with information <input type="checkbox"/> Written post-discharge instructions <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Don't know
72. Does your system promote any community-based programs to support self-management of chronic conditions? (Check all that apply)	<input type="checkbox"/> Diabetes club <input type="checkbox"/> Hypertension club <input type="checkbox"/> Exercise club <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Don't know

<p>73. In general, how reliably are preventive care and health promotion services delivered throughout your system?</p>	<p> <input type="checkbox"/> Very frequently  <input type="checkbox"/> Frequently  <input type="checkbox"/> Occasionally  <input type="checkbox"/> Seldomly  <input type="checkbox"/> Very seldomly  <input type="checkbox"/> Don't know         </p>
<p><b>Area 11: Quality and Performance Measurement (related to Vertical Integration).</b>          "I am going ask you some questions on quality and performance measurement related to vertical integration in your healthcare system."</p>	
<p>74. Does the system monitor indicators related to care integration?</p>	<p> <input type="checkbox"/> Yes (go to 75)  <input type="checkbox"/> No (go to 78)  <input type="checkbox"/> Don't know (go to 78)         </p>
<p>75. Please list the indicators used to monitor vertical integration.</p>	
<p>76. Is performance regularly tracked for these indicators?</p>	<p> <input type="checkbox"/> Yes  <input type="checkbox"/> No  <input type="checkbox"/> Don't know         </p>
<p>77. Does your system monitor care processes related to care integration?          (Check all that apply)</p>	<p> <input type="checkbox"/> Care planning  <input type="checkbox"/> Tracking referrals  <input type="checkbox"/> Diagnostic test tracking  <input type="checkbox"/> Admission and discharge planning  <input type="checkbox"/> Appointment tracking  <input type="checkbox"/> Use of transition "checklists"  <input type="checkbox"/> Use of care plans  <input type="checkbox"/> Existence of care coordinators  <input type="checkbox"/> Teamwork         </p>

	<input type="checkbox"/> Case management <input type="checkbox"/> Medication management <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Don't know
78. Does your system have a general set of quality indicators that are monitored regularly?	<input type="checkbox"/> Yes (go to 79) <input type="checkbox"/> No (go to 83) <input type="checkbox"/> Don't know (go to 83)
79. Do they include indicators of structure, process and outcomes? (Check all that apply)	<input type="checkbox"/> Structure <input type="checkbox"/> Process <input type="checkbox"/> Outcome <input type="checkbox"/> All of the above <input type="checkbox"/> None <input type="checkbox"/> Don't know
80. Is performance regularly tracked for these indicators?	<input type="checkbox"/> Yes (go to 81) <input type="checkbox"/> No (go to 83) <input type="checkbox"/> Don't know (go to 83)
81. Does your system regularly track patient experience or satisfaction indicators related to vertical integration/patient transitions?	<input type="checkbox"/> Yes (go to 82) <input type="checkbox"/> No (go to 83) <input type="checkbox"/> Don't know (go to 83)
82. How are they tracked? (Check all that apply)	<input type="checkbox"/> Patient exit survey <input type="checkbox"/> Telephone survey <input type="checkbox"/> Focus groups/interviews <input type="checkbox"/> Communication assessment tools <input type="checkbox"/> Patient complaint system <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
83. How is feedback from patients given to providers?	
<b>Area 12: Vertical Integration Pilots and Initiatives</b> "I am going ask you some questions on vertical integration pilots and initiatives in your healthcare system."	

<p>84. Are you aware of any pilots, projects or initiatives in your healthcare system to improve patient care transitions? (Check all that apply)</p>	<p><input type="checkbox"/> Hospital – PHC transitions (go to 85)  <input type="checkbox"/> PHC – Specialists transitions (go to 85)  <input type="checkbox"/> Hospital – Home transitions (go to 85)  <input type="checkbox"/> MNCH – Community-PHC-Hospital transitions (go to 85)  <input type="checkbox"/> Don't know (go to Module 2B (p. 61) - no need to respond to following questions in this module)</p>
<p>85. Were these pilots or projects officially sanctioned or were they merely promoted by “local champions”?</p>	<p><input type="checkbox"/> Officially sanctioned by Ministry of Health (MOH)/regional authorities  <input type="checkbox"/> Promoted locally  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>86. Describe the objective of one of these initiatives.</p>	
<p>87. Who was the principal enabler or leader of this initiative? (write the position of the enabler)</p>	
<p>88. Was there evidence of strong commitment for this initiative from any of the following? (Check all that apply)</p>	<p><input type="checkbox"/> Healthcare system leadership (MOH)  <input type="checkbox"/> Regional leadership  <input type="checkbox"/> Politicians  <input type="checkbox"/> Local community leaders  <input type="checkbox"/> Religious leaders  <input type="checkbox"/> Clinical champions  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>89. Is there any evidence of strategies/communications used to engage these stakeholders?</p>	

<p>90. What was the payment mechanism to incentivize this initiative?</p>	<p>Please describe: _____</p> <p><input type="checkbox"/> None  <input type="checkbox"/> Don't know</p>
<p>91. Did this initiative involve the signing of formal agreements among participating providers?</p>	<p><input type="checkbox"/> Yes  <input type="checkbox"/> No  <input type="checkbox"/> Don't know</p>
<p>92. Has this initiative been evaluated or assessed?</p>	<p><input type="checkbox"/> Yes  <input type="checkbox"/> No  <input type="checkbox"/> Don't know</p>



<b>vertically integrated care</b>	supportive of vertically integrated care  <b>1</b>	inconsistent or unpredictable  <b>2</b>	recognition, guidance, information and resources in support of vertically integrated care  <b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>3. Organizational goals for vertically integrated care</b>	None; do not exist  <b>1</b>	Nominal; broadly part of organizational goals, but there is little follow-up  <b>2</b>	Care integration is part and parcel of organization's mission, vision and goals  <b>3</b>	Not applicable/ Can't rate  <b>4</b>	Don't Know  <b>5</b>	Comments:  <b>6</b>
<b>4. Organizational strategy for vertically integrated care</b>	None; does not exist  <b>1</b>	Strategy exists, but is not applied in practice  <b>2</b>	Care integration strategy proactively used in meeting organizational goals  <b>3</b>	Not applicable/ Can't rate  <b>4</b>	Don't Know  <b>5</b>	Comments:  <b>6</b>

<b>5. Human resources</b>	<p>No human resources are assigned to support or monitor vertical integration</p> <p style="text-align: center;"><b>1</b></p>	<p>Positions have been created, but remain vacant or partially filled</p> <p style="text-align: center;"><b>2</b></p>	<p>Care coordinators and other staff are in place (or built into other positions) to support and monitor vertical integration, including helping patients navigate transitions</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>
<b>6. Financial resources</b>	<p>No resources are dedicated to improving vertical integration (with other providers)</p> <p style="text-align: center;"><b>1</b></p>	<p>Resources have been budgeted, but not allocated</p> <p style="text-align: center;"><b>2</b></p>	<p>Resources are allocated to support vertical integration initiatives in the organization</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>
<b>7. Incentive and payment systems</b>	<p>No incentives or payment systems exist to support vertically integrated care</p> <p style="text-align: center;"><b>1</b></p>	<p>The organization is developing mechanisms to reward providers to vertically integrate care</p> <p style="text-align: center;"><b>2</b></p>	<p>Payments are used to incentivize providers in the organization to vertically integrate care</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>

<p><b>8. Administrative support and supervision for vertically integrated care</b></p>	<p>No administrative support and supervision for vertically integrated care exists</p> <p><b>1</b></p>	<p>Vertical integration is supported by a manager who provides some technical assistance</p> <p><b>2</b></p>	<p>Vertical integration management unit exists and is responsible for vertical integration, and provides support and technical assistance on a regular basis</p> <p><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p><b>4</b></p>	<p>Don't Know</p> <p><b>5</b></p>	<p>Comments:</p> <p><b>6</b></p>
<p><b>9. Data systems and indicators that support vertically integrated care</b></p>	<p>Data on patients and information about care they receive elsewhere (e.g. at other facilities) are not available</p> <p><b>1</b></p>	<p>Data on patients and care they receive elsewhere are available, but need to be tracked down; essential information is sometimes missing</p> <p><b>2</b></p>	<p>Data on patients and care they receive elsewhere are easily available and essential information is usually complete</p> <p><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p><b>4</b></p>	<p>Don't Know</p> <p><b>5</b></p>	<p>Comments:</p> <p><b>6</b></p>

<b>10. Measurement and feedback</b>	<p>Indicators of vertical integration of care have not been developed</p> <p style="text-align: center;"><b>1</b></p>	<p>Indicators of vertical integration of care have been developed, but are not used for monitoring or feedback purposes</p> <p style="text-align: center;"><b>2</b></p>	<p>Indicators of vertical integration of care are used for monitoring and feedback purposes</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>
<b>11. Interaction among professional staff <u>within</u> your facility</b>	<p>Most professionals work independently and with little collaboration or teamwork regarding patient care, except for administrative issues</p> <p style="text-align: center;"><b>1</b></p>	<p>The care approach is interdisciplinary, but team members are often unable to work together effectively</p> <p style="text-align: center;"><b>2</b></p>	<p>Care is provided by well-functioning interdisciplinary teams characterized by strong and regular collaboration</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>

<b>12. Interaction with professional staff in other facilities or locations belonging to your organization or healthcare system</b>	<p>Little interaction beyond communication about administrative matters and referrals</p> <p style="text-align: center;"><b>1</b></p>	<p>Cross-provider interdisciplinary teams exist, but are not always able to work together effectively</p> <p style="text-align: center;"><b>2</b></p>	<p>Teams collaborate closely to make sure that patients receive timely and adequate treatment in all provider settings</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>
<b>13. Community and home outreach (e.g., home visits)</b>	<p>No community or home outreach program exists</p> <p style="text-align: center;"><b>1</b></p>	<p>Some outreach performed on an as needed basis, but not part of a defined program</p> <p style="text-align: center;"><b>2</b></p>	<p>The organization is connected to or employs community outreach workers who serve as the "eyes and ears" of the health system at the community level</p> <p style="text-align: center;"><b>3</b></p>	<p>Not applicable/ Can't rate</p> <p style="text-align: center;"><b>4</b></p>	<p>Don't Know</p> <p style="text-align: center;"><b>5</b></p>	<p>Comments:</p> <p style="text-align: center;"><b>6</b></p>

# Module 2C: Vertical Integration and Front-Line Service Delivery

## Module 2C-1: PHC-Hospital Transitions

This is the first of four modules (2C-1 to 2C-4) that center on nuts-and-bolts features of patient care transitions with or without formal vertical integration arrangements. This module focuses **on patient care transitions between primary healthcare (PHC) units and hospitals in the respondent's organization and healthcare system.**

**INTERVIEWER INSTRUCTIONS:** This module consists of 23 questions. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions, follow the instructions in red.

"I am going to read you some questions related to the systematic integration of care for patients transitioning between primary care units and hospitals. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between primary care providers and hospitals to provide appropriate, timely and high-quality care. Primary care providers can consist of primary care units as well as midwives and community health workers. Please note that the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably."

1. Has the healthcare organization or system <b>formally</b> identified vertical integration between PHC and hospitals as a priority or goal?	<input type="checkbox"/> Yes (go to 2) <input type="checkbox"/> No (go to 3) <input type="checkbox"/> Don't know (go to 3)
2. How is vertical integration between PHC centers and hospitals manifested as an organizational or system priority? (Check all that apply)	<input type="checkbox"/> Discussed in healthcare organization leadership/management meetings <input type="checkbox"/> Goals are included in healthcare organization's strategic plan <input type="checkbox"/> Relevant groups have been formally chartered/tasked <input type="checkbox"/> Initiatives or pilots are underway <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
3. Are there healthcare organization or system operational guidelines that outline expectations and steps for the integration of care between PHC centers and hospitals?	<input type="checkbox"/> Yes (go to 4) <input type="checkbox"/> No (go to 5) <input type="checkbox"/> Don't know (go to 5)
4. What is mandated or specified by the operational guidelines? (Check all that apply)	<input type="checkbox"/> Hospital notification to PHC centers of patient admission <input type="checkbox"/> Hospital notification to PHC centers of patient discharge <input type="checkbox"/> Hospital provides patient clinical and administrative information to PHC centers upon discharge

	<input type="checkbox"/> PHC centers share patient clinical information when patient is referred to a hospital <input type="checkbox"/> PHC centers provide follow-up care after discharge <input type="checkbox"/> An identified person on each side of the transition is accountable and responsible for assuring smooth hand-offs <input type="checkbox"/> Provider roles/functions are clearly defined <input type="checkbox"/> The terms of formal care coordination agreements <input type="checkbox"/> Scheduling of regular reviews of compliance with process <input type="checkbox"/> Scheduling of regular reviews of innovations in the quality of the care offered by different providers <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
<p>5. How often do hospitals work with PHC providers to integrate or coordinate patient care?</p>	<input type="checkbox"/> Very frequently (go to 6) <input type="checkbox"/> Frequently (go to 6) <input type="checkbox"/> Occasionally (go to 6) <input type="checkbox"/> Seldomly (go to 7) <input type="checkbox"/> Very seldomly (go to 7) <input type="checkbox"/> Don't know (go to 7)
<p>6. Explain how PHC centers and hospitals work together.</p>	
<p>7. Are there standardized protocols, guidelines or care pathways in place to support vertical integration between hospital and PHC centers?</p>	<input type="checkbox"/> Yes (go to 8) <input type="checkbox"/> No (go to 13) <input type="checkbox"/> Don't know (go to 13)
<p>8. Are the clinical modules of the protocols, guidelines or care pathways evidence-based? (Check all that apply)</p>	<input type="checkbox"/> Yes, and developed by: (check all that apply) <input type="checkbox"/> Ministry of Health <input type="checkbox"/> Medical/nursing schools <input type="checkbox"/> Medical/nursing professional groups/organizations <input type="checkbox"/> Private groups (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> No <input type="checkbox"/> Don't know

<p>9. How often are these protocols, guidelines or care pathways used by hospitals?</p>	<p><input type="checkbox"/> Very frequently  <input type="checkbox"/> Frequently  <input type="checkbox"/> Occasionally  <input type="checkbox"/> Seldomly  <input type="checkbox"/> Very seldomly  <input type="checkbox"/> Don't know</p>
<p>10. How often are the protocols, guidelines or care pathways used by PHC center?</p>	<p><input type="checkbox"/> Very frequently  <input type="checkbox"/> Frequently  <input type="checkbox"/> Occasionally  <input type="checkbox"/> Seldomly  <input type="checkbox"/> Very seldomly  <input type="checkbox"/> Don't know</p>
<p>11. Has staff expressed any concerns or complaints regarding the protocols, guidelines or care pathways?</p>	<p><input type="checkbox"/> Yes (go to 12)  <input type="checkbox"/> No (go to 13)  <input type="checkbox"/> Don't know (go to 13)</p>
<p>12. What concerns did the staff express? (Check all that apply)</p>	<p><input type="checkbox"/> Concerns regarding lack of time for hospital – PHC care coordination activities  <input type="checkbox"/> Concerns regarding team composition (not the right type of staff)  <input type="checkbox"/> Concerns regarding the adequate number of staff  <input type="checkbox"/> Concerns regarding training  <input type="checkbox"/> Concerns regarding monitoring of hospital – PHC care coordination  <input type="checkbox"/> Other (please specify) _____</p>
<p>13. Has a standardized discharge tool or form been developed to share required clinical and administrative patient information between hospitals and PHC centers after patient discharge?</p>	<p><input type="checkbox"/> Yes  <input type="checkbox"/> No  <input type="checkbox"/> Don't Know</p>
<p>14. How often do PHC centers follow up with the patient post hospital discharge?</p>	<p><input type="checkbox"/> Very frequently (go to 15)  <input type="checkbox"/> Frequently (go to 15)  <input type="checkbox"/> Occasionally (go to 15)  <input type="checkbox"/> Seldomly (go to 16)  <input type="checkbox"/> Very seldomly (go to 16)  <input type="checkbox"/> Don't know (go to 16)</p>
<p>15. How do PHC centers follow up with the patient post-discharge?</p>	<p><input type="checkbox"/> Phone call  <input type="checkbox"/> Text/SMS message</p>

<p>(Check all that apply)</p>	<p><input type="checkbox"/> E-mail  <input type="checkbox"/> Postal mail  <input type="checkbox"/> Face to face visit in the office  <input type="checkbox"/> Face to face visit in patient's home  <input type="checkbox"/> App/software (please specify) _____  <input type="checkbox"/> Paper-based tool  <input type="checkbox"/> Other (please specify) _____</p>
<p>16. How often does the hospital follow up with the patient post-discharge?</p>	<p><input type="checkbox"/> Very frequently (go to 17)  <input type="checkbox"/> Frequently (go to 17)  <input type="checkbox"/> Occasionally (go to 17)  <input type="checkbox"/> Seldomly (go to 18)  <input type="checkbox"/> Very seldomly (go to 18)  <input type="checkbox"/> Don't know (go to 18)</p>
<p>17. How does the hospital follow up with the patient post-discharge?          (Check all that apply)</p>	<p><input type="checkbox"/> Phone call  <input type="checkbox"/> Text/SMS message  <input type="checkbox"/> E-mail  <input type="checkbox"/> Postal mail  <input type="checkbox"/> Face to face visit in the office  <input type="checkbox"/> Face to face visit in patient's home  <input type="checkbox"/> App/software (please specify) _____  <input type="checkbox"/> Paper-based tool  <input type="checkbox"/> Other (please specify) _____</p>
<p>18. How often do PHC centers and hospitals ensure continuity of care for patients post-discharge?</p>	<p><input type="checkbox"/> Very frequently (go to 19)  <input type="checkbox"/> Frequently (go to 19)  <input type="checkbox"/> Occasionally (go to 19)  <input type="checkbox"/> Seldomly (go to 20)  <input type="checkbox"/> Very seldomly (go to 20)  <input type="checkbox"/> Don't know (go to 20)</p>
<p>19. How do PHC centers and hospitals ensure continuity of care post-discharge?          (Check all that apply)</p>	<p><input type="checkbox"/> Designated staff member assigned as responsible point person for patient care on both sides of the care transition  <input type="checkbox"/> Designated staff member responsible for scheduling follow-up, post-discharge patient appointments  <input type="checkbox"/> Designated staff member ensures patient attends all appointments</p>

	<input type="checkbox"/> Designated staff member checks that test results are delivered to PHC and/or hospital <input type="checkbox"/> Designated staff member ensures patient is taking medications <input type="checkbox"/> Designated staff member directs patients to appropriate services in healthcare organization/system and community (such as specialist consultations, monitoring consultations, tests, procedures, etc.) <input type="checkbox"/> Hospital staff who provided direct patient care during hospitalization are available by mobile phone to consult with PHC centers' staff in order to clarify clinical questions <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
20. How often do PHC centers receive feedback from hospitals after referring patients to hospitals?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
21. How often do hospitals receive feedback from PHC centers after downward referrals or counter-referrals to PHC centers after hospital discharge?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
22. Are there regular meetings between hospitals and PHC centers to discuss patient transitions between PHC centers and hospitals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
23. How are patients made aware of vertical integration of care between PHC centers and hospitals? (Check all that apply)	<input type="checkbox"/> Patients are <u>not</u> made aware of vertical integration of care <input type="checkbox"/> Patients are made aware through conversations with providers <input type="checkbox"/> Patients are given a phone number they can call if they have any questions about their care <input type="checkbox"/> Patients are given a brochure <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know

## Module 2C-2: Primary Healthcare (PHC)-Specialist Transitions

This is the second of four modules (2C-1 to 2C-4) that center on nuts-and-bolts features of patient care transitions with or without formal vertical integration arrangements. This module focuses on **patient care transitions between primary healthcare (PHC) units or providers and specialty units or specialists in the respondent’s healthcare organization or system**. A secondary focus is non-communicable diseases (NCDs).

**INTERVIEWER INSTRUCTIONS:** This module consists of 23 questions. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent’s answer. For all other questions, follow the instructions in red.

“I am going to read you some questions related to the systematic integration of care for patients transitioning between primary care providers and specialty units or specialists. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication, and learning, between primary care providers and specialists to provide appropriate, timely and high-quality care. Primary care providers can consist of primary care units as well as midwives and community health workers. Please note that the terms ‘vertical integration’, ‘vertical integration of care’ and ‘vertically integrated care’ are used interchangeably.”

<p>1. Has the healthcare organization <b>formally</b> identified vertical integration of care between PHC providers and specialists as a priority or goal?</p>	<p><input type="checkbox"/> Yes (go to 2)  <input type="checkbox"/> No (go to 3)  <input type="checkbox"/> Don’t know (go to 3)</p>
<p>2. How is vertical integration between PHC providers and specialists manifested as an organizational or system priority?          (Check all that apply)</p>	<p><input type="checkbox"/> Discussed in healthcare organization leadership or management meetings  <input type="checkbox"/> Goals are included in healthcare organization’s strategic plan  <input type="checkbox"/> Relevant groups have been formally chartered or tasked  <input type="checkbox"/> Initiatives or pilots are underway  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____</p>
<p>3. Does the healthcare organization or system have operational guidelines that outline expectations and steps for vertical integration of care between PHC providers and specialists?</p>	<p><input type="checkbox"/> Yes (go to 4)  <input type="checkbox"/> No (go to 5)  <input type="checkbox"/> Don’t know (go to 5)</p>
<p>4. What is mandated or specified by the operational guidelines?</p>	<p><input type="checkbox"/> PHC centers share patient clinical information when patient is referred to specialist</p>

<p>(Check all that apply)</p>	<p><input type="checkbox"/> An identified person on each side of the transition is accountable and responsible for assuring smooth hand-offs</p> <p><input type="checkbox"/> Provider roles/functions are clearly defined</p> <p><input type="checkbox"/> Terms of formal care coordination agreements</p> <p><input type="checkbox"/> Scheduling of regular reviews of compliance with process</p> <p><input type="checkbox"/> Scheduling of regular reviews of the quality of the care offered by different providers</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Other (please specify) _____</p>
<p>5. How often do PHC centers and specialists work together to vertically integrate patient care?</p>	<p><input type="checkbox"/> Very frequently (go to 6)</p> <p><input type="checkbox"/> Frequently (go to 6)</p> <p><input type="checkbox"/> Occasionally (go to 6)</p> <p><input type="checkbox"/> Seldomly (go to 7)</p> <p><input type="checkbox"/> Very seldomly (go to 7)</p> <p><input type="checkbox"/> Don't know (go to 7)</p>
<p>6. Please explain how PHC centers and specialists work together.</p>	
<p>7. Are there standard protocols, guidelines or care pathways in place to support vertical integration of care between PHC providers and specialists?</p>	<p><input type="checkbox"/> Yes (go to 8)</p> <p><input type="checkbox"/> No (go to 13)</p> <p><input type="checkbox"/> Don't know (go to 13)</p>
<p>8. Do the standard protocols, guidelines or care pathways define the roles and responsibilities of each provider?</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>9. Are the clinical aspects of the protocols, guidelines or care pathways evidence-based? (Check all that apply)</p>	<p><input type="checkbox"/> Yes, and developed by: (check all that apply)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Ministry of Health</p> <p style="padding-left: 20px;"><input type="checkbox"/> Medical/nursing schools</p> <p style="padding-left: 20px;"><input type="checkbox"/> Medical/Nursing Professional Groups/ or Organizations</p> <p style="padding-left: 20px;"><input type="checkbox"/> Private groups (please specify) _____</p> <p style="padding-left: 20px;"><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>

10. How often are these protocols, guidelines or care pathways used by specialists?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
11. How often are these protocols, guidelines or care pathways used by PHC providers?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
12. What areas or diseases do these standardized protocols, guidelines or care pathways cover? (Check all that apply)	<input type="checkbox"/> Diabetes <input type="checkbox"/> Hypertension <input type="checkbox"/> Cancer <input type="checkbox"/> Asthma <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Don't know
13. Is compliance with non-communicable disease (NCD) clinical practice guidelines monitored?	<input type="checkbox"/> Yes (go to 14) <input type="checkbox"/> No (go to 15) <input type="checkbox"/> Don't know (go to 15)
14. If yes, please explain how compliance with NCD clinical practice guidelines is monitored.	
15. Has a standardized tool (manual or electronic) been developed to share required clinical and administrative patient information between primary care providers and specialists?	<input type="checkbox"/> Yes (go to 16) <input type="checkbox"/> No (go to 17) <input type="checkbox"/> Don't know (go to 17)
16. Describe how information is shared between primary care providers and specialists.	

17. Is there a registry of NCD patients in PHC centers' catchment areas?	<input type="checkbox"/> Yes (go to 19) <input type="checkbox"/> No (go to 18)
18. If there is no registry, how are NCD patients tracked?	<input type="checkbox"/> Not tracked through any mechanism (go to 20) <input type="checkbox"/> Disease database (go to 20) <input type="checkbox"/> Formal referral (go to 20) <input type="checkbox"/> Patient self-referral (go to 20) <input type="checkbox"/> Medical claims information (go to 20) <input type="checkbox"/> Public health data (go to 20) <input type="checkbox"/> Other (please explain) _____ (go to 20)
19. Can this registry be accessed by specialists and PHC providers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
20. Have staff received specific training on care integration or coordination between specialists and PHC centers?	<input type="checkbox"/> Yes (go to 21) <input type="checkbox"/> No (go to 22) <input type="checkbox"/> Don't know (go to 22)
21. Which staff received specific training on vertical integration between primary care providers and specialists? (Check all that apply)	<input type="checkbox"/> All specialists and PHC centers' staff <input type="checkbox"/> Leadership at PHC centers <input type="checkbox"/> Specialists <input type="checkbox"/> Doctors and physicians at PHC centers <input type="checkbox"/> Nurses and support staff at PHC centers <input type="checkbox"/> Other (please describe) _____ <input type="checkbox"/> Other (please describe) _____
22. Are patients made aware of vertical integration efforts between PHC centers and specialists?	<input type="checkbox"/> Yes (go to 23) <input type="checkbox"/> No (go to Module 2C (next page) - no need to respond to following questions in this module) <input type="checkbox"/> Don't know (go to Module 2C (next page) - no need to respond to following questions in this module)
23. How are patients made aware of vertical integration efforts between PHC centers and specialists? (Check all that apply)	<input type="checkbox"/> Pamphlets/brochures <input type="checkbox"/> Written instructions <input type="checkbox"/> Face to face discussions <input type="checkbox"/> Telephone discussions <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____

### Module 2C-3: Hospital-Home and Community Patient Transitions

This is the third of four modules (2C-1 to 2C-4) that center on nuts-and-bolts features of patient care transitions with or without formal vertical integration arrangements. This module focuses on patient care transitions **between hospitals and home- and community-based care in the respondent’s healthcare organization or system.**

**INTERVIEWER INSTRUCTIONS:** This module consists of 26 questions. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent’s answer. For all other questions, follow the instructions in red.

“I am going to read you some questions related to the systematic integration of care for patients transitioning between hospitals and community- or home-based care. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between hospitals and homes/communities to provide appropriate, timely and high-quality care. Home or community providers can consist of community health workers, community rehabilitation units and nursing homes/ home-based caretakers, usually for the elderly. Please note that the terms ‘vertical integration’, ‘vertical integration of care’ and ‘vertically integrated care’ are used interchangeably.”

<p>1. Has the healthcare organization <b>formally</b> identified vertical integration of care between the hospital and home/community as a priority or goal?</p>	<p><input type="checkbox"/> Yes (go to 2)  <input type="checkbox"/> No (go to 3)  <input type="checkbox"/> Don’t Know (go to 3)</p>
<p>2. How is vertical integration between hospital and home/community manifested as an organizational or system priority?          (Check all that apply)</p>	<p><input type="checkbox"/> Discussed in healthcare organization leadership or management meetings  <input type="checkbox"/> Goals are included in healthcare organization's strategic plan  <input type="checkbox"/> Relevant groups have been formally chartered or tasked  <input type="checkbox"/> Vertical integration efforts are underway  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____</p>
<p>3. Are there healthcare organization or system operational guidelines that outline expectations and steps for vertical integration of care for hospital-home/community transitions?</p>	<p><input type="checkbox"/> Yes (go to 4)  <input type="checkbox"/> No (go to 5)  <input type="checkbox"/> Don’t know (go to 5)</p>

<p>4. What is mandated or specified by operational guidelines for hospital-home/community transition? (Check all that apply)</p>	<p><input type="checkbox"/> Outline the steps involved in the care processes</p> <p><input type="checkbox"/> Define referral protocols and co-management arrangements</p> <p><input type="checkbox"/> Specify who is accountable for each part of the care process</p> <p><input type="checkbox"/> Specify content of patient transition record and expectations regarding frequency/timeliness of bidirectional information flow</p> <p><input type="checkbox"/> Include considerations for patient/family preferences, ensure reasons for referral, subsequent diagnostic treatment plan and each provider's responsibilities</p> <p><input type="checkbox"/> Include a mechanism for regular review of care coordination agreement terms</p> <p><input type="checkbox"/> Schedule regular reviews of compliance with process</p> <p><input type="checkbox"/> Schedule regular reviews of innovations in the quality of the care offered by different providers</p> <p><input type="checkbox"/> None of the above</p> <p><input type="checkbox"/> Don't know</p>
<p>5. How often do hospitals work with community-based providers, including primary care providers, to vertically integrate home care?</p>	<p><input type="checkbox"/> Very frequently (go to 6)</p> <p><input type="checkbox"/> Frequently (go to 6)</p> <p><input type="checkbox"/> Occasionally (go to 6)</p> <p><input type="checkbox"/> Seldomly (go to 7)</p> <p><input type="checkbox"/> Very seldomly (go to 7)</p> <p><input type="checkbox"/> Don't know (go to 7)</p>
<p>6. Explain how hospitals, PHC units and community providers work together to vertically integrate home or community-based care.</p>	
<p>7. Are there regular meetings between home agencies or community health workers and hospital leadership to discuss the care transition from hospital to home/community?</p>	<p><input type="checkbox"/> Yes (go to 8)</p> <p><input type="checkbox"/> No (go to 9)</p> <p><input type="checkbox"/> Don't know (go to 9)</p>
<p>8. How often do these meetings occur?</p>	<p><input type="checkbox"/> Weekly</p> <p><input type="checkbox"/> Monthly</p> <p><input type="checkbox"/> Quarterly</p> <p><input type="checkbox"/> Twice a year</p> <p><input type="checkbox"/> Yearly</p> <p><input type="checkbox"/> Other (please specify) _____</p>

<p>9. Have hospitals participated in enhanced programming or training for community health workers or home caretakers?</p>	<p><input type="checkbox"/> Yes (go to 10)  <input type="checkbox"/> No (go to 11)  <input type="checkbox"/> Don't know (go to 11)</p>
<p>10. How have hospitals participated in enhanced programming or training for community health workers?          (Check all that apply)</p>	<p><input type="checkbox"/> Joint education/training programs  <input type="checkbox"/> Working groups for system improvement  <input type="checkbox"/> Meetings  <input type="checkbox"/> Care coordination/service agreements  <input type="checkbox"/> Other (please specify) _____</p>
<p>11. Have hospitals considered plans for working with community hospitals or intermediate care organizations on early discharge (e.g., skilled nursing facilities, rehabilitation facilities, etc.) to reduce overcrowding in the hospital?</p>	<p><input type="checkbox"/> Yes (go to 12)  <input type="checkbox"/> No (go to 13)  <input type="checkbox"/> Don't know (go to 13)</p>
<p>12. Explain how hospitals have considered plans for working with community hospitals or intermediate care organizations.</p>	
<p>13. Have hospitals explored options to avoid unnecessary admissions such as hospital-at-home programs, risk stratification, nurse outreach, etc.?</p>	<p><input type="checkbox"/> Yes (go to 14)  <input type="checkbox"/> No (go to 15)  <input type="checkbox"/> Don't know (go to 15)</p>
<p>14. Explain how hospitals have explored options to avoid unnecessary admissions.</p>	
<p>15. Have hospitals explored options to shift chronic disease management services to improve patient access in their own communities through outreach, use of community health workers, etc.?</p>	<p><input type="checkbox"/> Yes (go to 16)  <input type="checkbox"/> No (go to 17)  <input type="checkbox"/> Don't know (go to 17)</p>
<p>16. Explain how hospitals have explored options to shift chronic disease management services.</p>	

<p>17. Are there standardized protocols, guidelines or care pathways in place to support vertical integration with community or home-based providers?</p>	<p><input type="checkbox"/> Yes (go to 18)  <input type="checkbox"/> No (go to 22)  <input type="checkbox"/> Don't know (go to 22)</p>
<p>18. Are the clinical components of these standardized protocols, guidelines or care pathways evidence based?</p>	<p><input type="checkbox"/> Yes (go to 19)  <input type="checkbox"/> No (go to 20)  <input type="checkbox"/> Don't know (go to 20)</p>
<p>19. Who develops standardized protocols, guidelines or care pathways?          (Check all that apply)</p>	<p><input type="checkbox"/> Ministry of Health  <input type="checkbox"/> Medical/nursing schools  <input type="checkbox"/> Medical/nursing professional groups/organizations  <input type="checkbox"/> Private groups (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>20. How often are these protocols, guidelines or care pathways used by hospitals?</p>	<p><input type="checkbox"/> Very frequently  <input type="checkbox"/> Frequently  <input type="checkbox"/> Occasionally  <input type="checkbox"/> Seldomly  <input type="checkbox"/> Very seldomly  <input type="checkbox"/> Don't know</p>
<p>21. How often are these protocols, guidelines or care pathways used by home agencies or community-based providers?</p>	<p><input type="checkbox"/> Very frequently  <input type="checkbox"/> Frequently  <input type="checkbox"/> Occasionally  <input type="checkbox"/> Seldomly  <input type="checkbox"/> Very seldomly  <input type="checkbox"/> Don't know</p>
<p>22. Has a standardized discharge tool been developed to share required clinical and administrative patient information between hospital and home/community after patient discharge?</p>	<p><input type="checkbox"/> Yes (go to 23)  <input type="checkbox"/> No (go to 24)  <input type="checkbox"/> Don't know (go to 24)</p>
<p>23. What are some of the mechanisms used to improve the hospital-home/community transition?          (Check all that apply)</p>	<p><input type="checkbox"/> Training of PHC centers staff to increase capacity of PHC centers to provide services, especially relating to home care  <input type="checkbox"/> Telemedicine  <input type="checkbox"/> Mobile apps (please specify) _____</p>

	<input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None
24. Did staff receive specific training on vertical integration between hospitals and home/community care?	<input type="checkbox"/> Yes (go to 25) <input type="checkbox"/> No (go to 26) <input type="checkbox"/> Don't know (go to 26)
25. Which staff received specific training on vertical integration? (Check all that apply)	<input type="checkbox"/> Leadership at PHC centers <input type="checkbox"/> Doctors at PHC centers <input type="checkbox"/> Nurses and support staff at PHC centers <input type="checkbox"/> Leadership at home/community providers <input type="checkbox"/> Doctors at home/community providers <input type="checkbox"/> Nurses and support staff at home/community providers <input type="checkbox"/> Leadership at hospital <input type="checkbox"/> Doctors at hospital <input type="checkbox"/> Nurses and support staff at hospital <input type="checkbox"/> Other (please describe) _____ <input type="checkbox"/> Other (please describe) _____
26. How are patients made aware of vertical integration efforts between hospitals and home/community? (Check all that apply)	<input type="checkbox"/> Pamphlets/brochures <input type="checkbox"/> Written instructions <input type="checkbox"/> Face to face discussions <input type="checkbox"/> Telephone discussions <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Patients are not made aware of coordination efforts <input type="checkbox"/> Don't know

## Module 2C-4: Maternal, Newborn and Child Transitions

This is the fourth and final module that center on nuts-and-bolts features of patient care transitions with or without formal vertical integration arrangements. **This module focuses on patient care transitions for maternal, newborn and child health (MNCH) across a range of providers (community-based, PHC and hospitals).**

**INTERVIEWER INSTRUCTIONS:** This module consists of 47 questions. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions follow the instructions in red.

"I am going to read you some questions related to the vertical integration of care for mothers, newborns and children across multiple tiers of the system. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between hospitals, primary care units, community health workers (CHWs) and midwives to provide appropriate, timely, and high-quality care. Please note that the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably."

### National Guidelines, Norms and Criteria related to Maternal, Newborn and Child Health (MNCH)

"I am going ask you some questions about national guidelines, norms and criteria related to vertically integrated care for maternal, newborn and child health."

- |   |  |
|---|--|
| 1. Are there national policies or guidelines vertically integrating general maternal, newborn and child healthcare across providers (community-based workers and midwives, PHC, hospitals)?<br>(Check all that apply)                         | <input type="checkbox"/> Maternal healthcare<br><input type="checkbox"/> Newborn healthcare<br><input type="checkbox"/> Child healthcare<br><input type="checkbox"/> All of the above<br><input type="checkbox"/> None of the above<br><input type="checkbox"/> Don't know |
| 2. Are there national policies or guidelines for vertically integrating <b>high-risk, emergency</b> maternal, newborn and child healthcare across providers (community-based workers and midwives, PHC, hospitals)?<br>(Check all that apply) | <input type="checkbox"/> Maternal healthcare<br><input type="checkbox"/> Newborn healthcare<br><input type="checkbox"/> Child healthcare<br><input type="checkbox"/> All of the above<br><input type="checkbox"/> None of the above<br><input type="checkbox"/> Don't know |
| 3. Do guidelines or standardized criteria exist for emergency referrals of high-risk maternity cases?   | <input type="checkbox"/> Yes (go to 4)<br><input type="checkbox"/> No (go to 5)<br><input type="checkbox"/> Don't know (go to 5)   |

4. To what extent are these guidelines or criteria applied in practice?	<input type="checkbox"/> Very frequently and on a regular basis <input type="checkbox"/> Frequently but not on a regular basis <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very Seldomly <input type="checkbox"/> Don't know
5. Do guidelines or criteria exist for emergency referrals of high-risk neonatal cases?	<input type="checkbox"/> Yes (go to 6) <input type="checkbox"/> No (go to 7) <input type="checkbox"/> Don't know (go to 7)
6. To what extent are these guidelines or criteria applied in practice?	<input type="checkbox"/> Very frequently and on a regular basis <input type="checkbox"/> Frequently but not on a regular basis <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very Seldomly <input type="checkbox"/> Don't know
7. Do clinical guidelines detail the roles and responsibilities of all workers involved in maternal and neonatal care (CHWs, midwives, PHC center staff, hospital staff)?	<input type="checkbox"/> Yes (go to 8) <input type="checkbox"/> No (go to 9) <input type="checkbox"/> Don't know (go to 9)
8. To what extent are these clinical guidelines followed in practice?	<input type="checkbox"/> Very frequently and a regular basis <input type="checkbox"/> Frequently but not on regular basis <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very Seldomly <input type="checkbox"/> Don't know

**Main Mechanisms to foster Coordination and Collaboration for MNCH across Providers**

“I am going ask you some questions about the mechanisms that foster coordination for MNCH across providers.”

<p>9. How is care harmonized or coordinated between hospital (birthing, newborn care), ambulatory (PHC) and community (CHWs, midwives) settings for antenatal, postnatal and neonatal care? (Check all that apply)</p>	<p><input type="checkbox"/> Regularly scheduled meetings for all MNCH staff across providers (CHWs, PHC, hospitals) to share knowledge and information (go to 10)</p> <p><input type="checkbox"/> Formal learning or improvement collaboratives for all MNCH staff across providers (CHWs, PHC, hospitals) which meet regularly to share knowledge and information (go to 10)</p> <p><input type="checkbox"/> Joint presentation and discussion of MNCH outcomes in the catchment area (e.g. post-partum hemorrhage, case fatality rates, contraceptive uptake, immunization rates, etc.) (go to 10)</p> <p><input type="checkbox"/> Joint team-based training (hospital, PHC, CHWs together) (go to 10)</p> <p><input type="checkbox"/> Rotation of hospital staff to PHC centers (go to 12)</p> <p><input type="checkbox"/> Other (please specify) _____ (go to 12)</p> <p><input type="checkbox"/> Other (please specify) _____ (go to 12)</p> <p><input type="checkbox"/> None (go to 12)</p> <p><input type="checkbox"/> Don't know (go to 12)</p>
<p>10. What are the objectives of these meetings, trainings or collaboratives? (Check all that apply)</p>	<p><input type="checkbox"/> Share knowledge and information</p> <p><input type="checkbox"/> Review outcome data (perinatal and maternal deaths)</p> <p><input type="checkbox"/> Review of near misses</p> <p><input type="checkbox"/> Feedback and troubleshooting</p> <p><input type="checkbox"/> Conduct root cause analysis</p> <p><input type="checkbox"/> Joint problem solving</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Don't know</p>
<p>11. How often do they meet?</p>	<p><input type="checkbox"/> Very frequently</p> <p><input type="checkbox"/> Frequently</p> <p><input type="checkbox"/> Occasionally</p> <p><input type="checkbox"/> Seldomly</p> <p><input type="checkbox"/> Very seldomly</p> <p><input type="checkbox"/> Don't know</p>
<p>12. How is care harmonized or coordinated between hospital (birthing, newborn care), ambulatory (PHC) and community (CHWs, midwives) settings</p>	<p><input type="checkbox"/> Electronic, mhealth or web-based system to route high-risk referral requests (go to 13)</p>

<p>for antenatal, postnatal and neonatal <b>care using digital health technologies?</b></p> <p>(Check all that apply)</p>	<p><input type="checkbox"/> Hotline service or 24/7 emergency center for midwives, CHWs, PHC staff (go to 13)</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> None (go to 14)</p> <p><input type="checkbox"/> Don't know (go to 14)</p>
<p>13. Please list the mhealth or web-based technologies used to route referral requests or facilitate communication and collaboration among hospitals, PHC centers and CHWs for high-risk maternal and neonatal cases.</p>	
<p>14. Have emergency referral pathways for <u>high-risk maternal cases</u> been mapped?</p>	<p><input type="checkbox"/> Yes (go to 15)</p> <p><input type="checkbox"/> No (go to 17)</p> <p><input type="checkbox"/> Don't know (go to 17)</p>
<p>15. How often are the referral maps followed in practice?</p>	<p><input type="checkbox"/> Very frequently</p> <p><input type="checkbox"/> Frequently</p> <p><input type="checkbox"/> Occasionally</p> <p><input type="checkbox"/> Seldomly</p> <p><input type="checkbox"/> Very seldomly</p> <p><input type="checkbox"/> Don't know</p>
<p>16. What are the impediments to following the referral maps for high-risk maternal cases?</p>	
<p>17. Have emergency referral pathways for <u>high-risk neonatal cases</u> been mapped?</p>	<p><input type="checkbox"/> Yes (go to 18)</p> <p><input type="checkbox"/> No (go to 20)</p> <p><input type="checkbox"/> Don't know (go to 20)</p>
<p>18. Are the referral maps followed in practice?</p>	<p><input type="checkbox"/> Very frequently</p> <p><input type="checkbox"/> Frequently</p> <p><input type="checkbox"/> Occasionally</p> <p><input type="checkbox"/> Seldomly</p> <p><input type="checkbox"/> Very seldomly</p> <p><input type="checkbox"/> Don't know</p>

19. What are the impediments to following the referral maps for high-risk neonatal cases?	
20. Is there a common patient record system that allows continuity of care during pregnancy, births and postpartum?	<input type="checkbox"/> Yes (go to 21) <input type="checkbox"/> No (go to 23) <input type="checkbox"/> Don't know (go to 23)
21. How are the records accessed by physicians, nurses and others working in PHC centers?	
22. How are records accessed by midwives and community health workers?	
23. Is there a registry of maternal and neonatal cases in PHC centers' catchment areas?	<input type="checkbox"/> Yes (go to 25) <input type="checkbox"/> No (go to 24) <input type="checkbox"/> Don't know (go to 24)
24. If there is no registry, how are high-risk patients tracked? (Check all that apply)	<input type="checkbox"/> Not tracked through any mechanism <input type="checkbox"/> Disease database <input type="checkbox"/> Formal referral <input type="checkbox"/> Patient self-referral <input type="checkbox"/> Medical claims information <input type="checkbox"/> Public health data <input type="checkbox"/> Other (please explain) _____ <input type="checkbox"/> Don't know
25. Is there any recognition, incentives, awards program, etc. given to staff who help save a mother and/or child's life?	<input type="checkbox"/> Yes (go to 26) <input type="checkbox"/> No (go to 27) <input type="checkbox"/> Don't know (go to 27)
26. Explain the recognition, incentives or awards.	
27. How often are CHWs, midwives, PHC staff and hospital staff supervised to ensure that guidelines, agreements or pathways are followed?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally

- Seldomly
- Very seldomly
- Don't know

### Interactions or Relations among Hospitals, PHC centers, CHWs and Midwives

“Next, I would like to know more about the relations between hospitals, PHC centers, CHWs, and midwives.”

28. Is care coordination for MNCH among hospitals, PHC centers, CHWs and midwives considered a priority in your catchment network or area?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
29. Are there written agreements on coordination of care for MNCH among hospitals, PHC centers, CHWs and midwives in your network or catchment area?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
30. To what extent do hospital and PHC staff have regular and bidirectional contact to coordinate high-risk <u>maternal cases</u> ?	<input type="checkbox"/> Very frequently (go to 31) <input type="checkbox"/> Frequently (go to 31) <input type="checkbox"/> Occasionally (go to 31) <input type="checkbox"/> Seldomly (go to 32) <input type="checkbox"/> Very seldomly (go to 32) <input type="checkbox"/> Never (go to 32) <input type="checkbox"/> Don't know (go to 32)
31. How is the contact usually achieved?	
32. What are the challenges to bidirectional communication for high-risk maternal cases?	
33. To what extent do hospital and PHC staff have regular and bidirectional contact to coordinate high-risk <u>neonatal cases</u> ?	<input type="checkbox"/> Very frequently (go to 34) <input type="checkbox"/> Frequently (go to 34) <input type="checkbox"/> Seldomly (go to 35) <input type="checkbox"/> Very seldomly (go to 35) <input type="checkbox"/> Never (go to 35) <input type="checkbox"/> Don't know (go to 35)
34. How is the contact usually achieved?	

35. What are the challenges to bidirectional communication for high-risk neonatal cases?	
36. In practice, can community-based CHWs or midwives call and contact MNCH staff in PHC centers and hospitals or other facilities to trouble shoot or receive timely advice on a particular case?	<input type="checkbox"/> Yes (go to 37) <input type="checkbox"/> No (go to 38) <input type="checkbox"/> Don't know (go to 38)
37. How does this contact usually occur?	
38. In practice, do PHC staff contact MNCH staff in hospitals or other facilities to trouble shoot on a particular case?	<input type="checkbox"/> Yes (go to 39) <input type="checkbox"/> No (go to 40) <input type="checkbox"/> Don't know (go to 40)
39. How does this contact usually occur?	
40. How often do CHWs, midwives or PHC center staff to accompany MNCH emergency cases to the hospital?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
41. Have MNCH hospital staff ever visited their counterparts in PHC centers and community health workers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
42. How often do PHC staff (physicians, nurses and others working in PHC units) receive feedback from hospitals on maternal and neonatal <u>referrals</u> ?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know

43. How often do CHWs receive feedback from hospitals on maternal and neonatal <u>referrals</u> ?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
44. How often do PHC staff (physicians, nurses and others working in PHC units) receive feedback from hospitals on maternal and neonatal <u>outcomes</u> ?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
45. How often do CHWs receive feedback from hospitals on maternal and neonatal <u>outcomes</u> ?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
46. How often do hospitals provide PHC staff, midwives or CHWs with discharge information and care instructions for maternal and neonatal cases?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
47. How often do hospitals provide information to PHC staff (physicians, nurses and others working in PHC units) on the availability of emergency room beds for high-risk maternal cases?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know

# INSTRUMENT 3: PILOTS AND INITIATIVES FOCUSING ON FOUR PATIENT TRANSITIONS

- Respondents:** Planners, implementers, front-line workers and managers involved in the implementation of vertical integration pilots or initiatives. It is best that for each pilot respondents are drawn from different tiers of the delivery system which participate in the pilot: primary healthcare (PHC) units, hospitals, specialists and community-based workers. Respondents can also include supervisors and regional officials involved in the pilot. **In most cases, respondents will only complete one module**, i.e. the one that pertains to their area of work or expertise.
- Objectives:** This instrument focuses on specific pilots or initiatives that involve vertical integration. They can involve ongoing (preferable) or past initiatives. The instrument aims to secure basic information on features and practices of vertical integration, the degree of support in the broader financial and institutional environment and lessons learned. Each module centers on one of the four patient transitions examined in Instrument 2, Modules C1-C4.
- Contents:**
- Module 3A:** Pilots and Initiatives Involving Patient Transitions between Primary Healthcare (PHC) and Hospitals
  - Module 3B:** Pilots and Initiatives Involving Patient Transitions between Primary Healthcare (PHC) and Specialty Units or Specialists
  - Module 3C:** Pilots and Initiatives Involving Patient Transitions between Hospitals and Homes and Communities
  - Module 3D:** Pilots and Initiatives Involving Maternal, Newborn and Child Health (MNCH) Patient Transitions across Multiple Provider Tiers (Hospitals – Primary Healthcare – Community Health Workers – Midwives)

# Module 3A: Pilots and Initiatives Involving Patient Transitions between Primary Healthcare (PHC) and Hospitals

This is the first of four modules (3A-3D) that focus on specific pilots or initiatives that involve vertical integration. This module focuses **on patient care transitions between primary healthcare (PHC) units and hospitals in the pilot or initiative.**

**INTERVIEWER INSTRUCTIONS:** This module contains 43 questions across seven thematic areas. They are all related to vertical integration pilots that integrate care between primary healthcare (PHC) and hospitals. If the respondent is not aware of an existing or past initiative focused on this specific transition, please skip this module and go to module 3B. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions, follow the instructions in red. Some questions are open-ended, and responses should be written as accurately and legibly as possible.

"I am going to ask you questions on vertical integration pilots or initiatives integrating care between PHC and hospitals. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between primary care providers and hospitals to provide appropriate, timely and high-quality care. Primary care providers can consist of primary care units as well as midwives and community health workers. Also, please note that the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably."

1. Identify any vertical integration pilots or initiatives that have been implemented involving vertical integration of care between two levels of care: hospitals and primary healthcare. They can be ongoing or past initiatives.

(Ongoing 1) \_\_\_\_\_  
(Ongoing 2) \_\_\_\_\_  
(Past 1) \_\_\_\_\_  
(Past 2) \_\_\_\_\_

2. Select one initiative, preferably ongoing, from the previous response with which you are most familiar.

**All remaining questions in this module should refer to this initiative only. It is preferable to select an ongoing initiative in which the respondent is participating in implementation.**

Initiative Name: \_\_\_\_\_

Years of operation: \_\_\_\_\_

Location: \_\_\_\_\_

## Area 1: Overview of the Pilot or Initiative

"I am first going to ask you some general questions on the origin, financing, management and impact of \_\_\_\_\_ [name of pilot/initiative]."

3. What was the original rationale for designing and launching the pilot or initiative?

4. What are the intended goals of the pilot or initiative?	1. _____ 2. _____ 3. _____
5. How is the pilot or initiative financed?	<input type="checkbox"/> No special financing allocated <input type="checkbox"/> Special budget allocation from a government entity <input type="checkbox"/> Special budget allocation from the healthcare organization <input type="checkbox"/> Donor grant or project <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
6. Was any incentive, financial or non-financial, introduced to support vertical integration in this pilot or initiative?	<input type="checkbox"/> Yes (go to 7) <input type="checkbox"/> No (go to 8) <input type="checkbox"/> Don't know (go to 8)
7. Explain what the incentive was, who received it and what service or activity it targeted.	
8. What evidence is there of impact of the initiative? (Check all that apply)	<input type="checkbox"/> No evidence: too soon to tell or evaluation has yet to be conducted <input type="checkbox"/> Evidence of patient outcome impact <input type="checkbox"/> Evidence of utilization impact <input type="checkbox"/> Evidence of patient satisfaction impact <input type="checkbox"/> Evidence of (reduced) costs <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
9. How would you rate leadership support for this initiative in your organization or system?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Very low <input type="checkbox"/> Don't know
10. Define the aspects of leadership support for this initiative or pilot. (Check all that apply)	<input type="checkbox"/> Regular meetings to report progress, achievements, challenges, barriers <input type="checkbox"/> Financial support <input type="checkbox"/> Marketing <input type="checkbox"/> Support of policy or guideline development

	<input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None
11. Is there a governance or management unit responsible for overseeing, guiding and monitoring the design and implementation of the pilot or initiative?	<input type="checkbox"/> Yes: Name _____ (go to 12) <input type="checkbox"/> No (go to 13) <input type="checkbox"/> Don't know (go to 13)
12. How would you rate support for this initiative provided by the governance or management unit in terms of providing operational guidance and monitoring?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Very low <input type="checkbox"/> Don't know
<b>Area 2: Vertical Integration Features, including Processes, Mechanisms and Roles</b> <i>"I am now going to ask you some questions on the vertical integration features of the initiative, including processes, mechanisms and roles in support of vertical integration."</i>	
13. Based on your experience, what are the main changes to the processes of care and communication between PHC centers and hospitals introduced by the pilot or initiative which are different from processes in non-pilot facilities?	1. _____ 2. _____ 3. _____ 4. _____ 5. _____
14. Does the initiative or pilot use a formal care coordination agreement between PHC units and hospitals?	<input type="checkbox"/> Yes (go to 15) <input type="checkbox"/> No (go to 16) <input type="checkbox"/> Don't know (go to 16)
15. Describe the elements of the formal care coordination agreement for this effort. (Check all that apply)	<input type="checkbox"/> Specify referrals and communication pathways <input type="checkbox"/> Include considerations for patient/family preferences, <input type="checkbox"/> Ensure reasons for referral, subsequent diagnostic treatment plan and each party's responsibilities <input type="checkbox"/> Include specific points of contact for PHC personnel <input type="checkbox"/> Clarify who will notify the patient about test results and clinical follow up as needed

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure processes and/or workflows between the hospital and PHC are mapped (process steps, time requirements, etc. are outlined and described)</li> <li><input type="checkbox"/> Define referral protocols and co-management arrangements</li> <li><input type="checkbox"/> Specify who is accountable for which part of the care process</li> <li><input type="checkbox"/> Specify content of patient transition record and expectations regarding frequency/timeliness of bidirectional information flow</li> <li><input type="checkbox"/> Specify handling of secondary referrals (when a provider requires another provider opinion)</li> <li><input type="checkbox"/> Include considerations for patient/family preferences, ensure reasons for referral, subsequent diagnostic treatment plan and each party's responsibilities</li> <li><input type="checkbox"/> Clarify who will notify the patient about test results and clinical follow up needed</li> <li><input type="checkbox"/> Include a mechanism for regular review of care coordination agreement terms</li> <li><input type="checkbox"/> Schedule regular reviews of compliance with agreements</li> <li><input type="checkbox"/> Schedule regular reviews of the quality of the care offered by different providers</li> <li><input type="checkbox"/> None of the above</li> <li><input type="checkbox"/> Other (please specify) _____</li> </ul>
<p>16. Does this pilot involve the establishment of formal multidisciplinary teams consisting of staff from both PHC centers and hospital?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Yes (go to 17)</li> <li><input type="checkbox"/> No (go to 18)</li> <li><input type="checkbox"/> Don't know (go to 18)</li> </ul>
<p>17. List the members of the multidisciplinary teams.</p>	<p>Hospital-based members</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>PHC center-based members</p> <p>_____</p> <p>_____</p> <p>_____</p>

	<p>Community-based members</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Other (specify) _____</p> <p>_____</p> <p>_____</p>
<p>18. Have specific roles and responsibilities been assigned to hospital and PHC centers in this initiative?</p>	<p><input type="checkbox"/> Yes (go to 19)</p> <p><input type="checkbox"/> No (go to 20)</p> <p><input type="checkbox"/> Don't know (go to 20)</p>
<p>19. Describe specific roles/functions associated with this pilot or initiative. (Check all that apply)</p>	<p><input type="checkbox"/> Staff member in hospital or PHC center is assigned as responsible point person for patient care after discharge</p> <p><input type="checkbox"/> Staff member in hospital or PHC center is responsible for scheduling follow up patient appointments</p> <p><input type="checkbox"/> Staff member in hospital or PHC center ensures patient attends post-discharge consultation</p> <p><input type="checkbox"/> Staff member in hospital or PHC center ensures test results are delivered to different providers</p> <p><input type="checkbox"/> Staff member in hospital or PHC center ensures patient is taking medications</p> <p><input type="checkbox"/> Staff member in hospital or PHC center directs patients to appropriate services within the healthcare system and community</p> <p><input type="checkbox"/> Don't know</p>
<p>20. Who is involved in the efforts to improve quality of care related to PHC-hospital care integration? (Check all that apply)</p>	<p><input type="checkbox"/> Multidisciplinary clinical team members from hospital</p> <p><input type="checkbox"/> Multidisciplinary clinical team members from PHC centers</p> <p><input type="checkbox"/> Healthcare organization leaders</p> <p><input type="checkbox"/> Healthcare organization administrators</p> <p><input type="checkbox"/> Quality/performance improvement staff/leaders</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Other (please specify) _____</p>

### Area 3: Communications and Relationships between Hospitals and Primary Healthcare (PHC) Units

"I am now going to ask some questions about the nature of communications and relationships between hospitals and PHC units."

21. Are there regular meetings among PHC staff and hospital staff participating in this initiative or pilot?	<input type="checkbox"/> Yes (go to 22) <input type="checkbox"/> No (go to 24) <input type="checkbox"/> Don't know (go to 24)
22. How often do these meetings occur?	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Twice a year <input type="checkbox"/> Yearly <input type="checkbox"/> Other (please specify) _____
23. What is the content of these meetings? (Check all that apply)	<input type="checkbox"/> Agreeing on key interventions to be implemented/expanded/modified within the catchment area/district for a set amount of time <input type="checkbox"/> Learning from each other on how to implement these interventions (e.g., vertical learning, peer/horizontal learning, task-shifting, etc.) <input type="checkbox"/> Monitoring the interventions and their impact, and sharing and discussing this information in a two-way dialogue among health staff and health workers <input type="checkbox"/> Discuss recent supervision results in combination with participatory learning sessions <input type="checkbox"/> Comparing results to national level data and national targets <input type="checkbox"/> Identifying gaps and jointly trouble shooting <input type="checkbox"/> Means to identify and collaborate to manage high-risk patients <input type="checkbox"/> Establishing direct/specific methods/avenues of communication between PHC and hospital <input type="checkbox"/> Other (please specify) _____
24. Does this initiative involve rotating hospital-based physicians and nurses to PHC centers to support hospital-PHC integration?	<input type="checkbox"/> Yes, both physicians and nurses (go to 25) <input type="checkbox"/> Physicians only (go to 25) <input type="checkbox"/> Nurses only (go to 25) <input type="checkbox"/> No to both (go to 26) <input type="checkbox"/> Don't know (go to 26) <input type="checkbox"/> Other personnel (please specify) _____ (go to 25)

25. Explain how they are encouraged to rotate.	
26. Does this initiative involve rotating PHC centers' physicians and nurses to hospitals to support hospital-PHC integration?	<input type="checkbox"/> Yes, both physicians and nurses (go to 27) <input type="checkbox"/> Physicians only (go to 27) <input type="checkbox"/> Nurses only (go to 27) <input type="checkbox"/> No to both (go to 28) <input type="checkbox"/> Don't know (go to 28) <input type="checkbox"/> Other personnel (please specify) _____ (go to 27)
27. Explain how they are encouraged to rotate.	
28. Do PHC centers and hospitals work together to vertically integrate patient care prior to admission and post-discharge?	<input type="checkbox"/> Yes, both pre-admission and post-discharge <input type="checkbox"/> Pre-admission only <input type="checkbox"/> Post-discharge only <input type="checkbox"/> No to both <input type="checkbox"/> Don't know
29. How often do PHC centers receive feedback from hospitals on upward referral of high-risk chronic cases?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
30. How often do hospitals receive feedback from PHC centers on downward referral of high-risk chronic cases?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
31. How do PHC centers and hospitals communicate regarding managing high-risk chronic cases? (Check all that apply)	<input type="checkbox"/> No regular communication mechanism <input type="checkbox"/> Paper referral note <input type="checkbox"/> Electronic referral note

- Special text message (SMS) platform
- Dedicated hotline or 24-hour call center
- E-mail
- App/software (please specify) \_\_\_\_\_
- Fax
- Other (please specify) \_\_\_\_\_

**Area 4: Performance Monitoring and Feedback**

“Next I’m going to ask questions on performance monitoring and feedback related to this initiative.”

32. Have you or your unit (hospital, PHC) received feedback on the performance of your organization in the pilot or initiative?

- Yes (go to 33)
- No (go to 34)
- Don’t know (go to 34)

33. Please explain how feedback on performance is used to improve care?  
(Check all that apply)

- Feedback not used to improve care
- Regular team meetings to review and act upon performance findings
- Regular meetings with leadership to review and act upon performance findings
- Other (please specify) \_\_\_\_\_
- Other (please specify) \_\_\_\_\_

34. Have specific performance indicators been identified to measure PHC-hospital transitions?

- Yes (go to 35)
- No (go to 37)
- Don’t know (go to 37)

35. What performance indicators are used to measure PHC-hospital transitions?  
(Check all that apply)

- % of hospitals who have regular contact with staff at PHC services
- % of hospitals who meet staff from the PHC units during training, supportive supervision, or professional meetings
- % of hospitals who know personally or can call someone from PHC unit
- % of PHC providers who often or always receive feedback on outcomes on referral cases
- % of community providers who often or always receive feedback on outcomes on referral cases
- % of hospital who often or always receive feedback on outcomes on referral cases
- % of hospitals who often or always send feedback or outcomes on referral cases

	<input type="checkbox"/> % of hospital staff who meet with PHC and community-based staff on the maternal/newborn health team together as one team, at deliveries or regularly <input type="checkbox"/> % readmissions to hospital within 30 days of discharge <input type="checkbox"/> % patients with visits to emergency department within 30 days discharge <input type="checkbox"/> % patients discharged that were formally referred to home or community providers <input type="checkbox"/> % patients with a care plan for follow up post-discharge <input type="checkbox"/> % discharge plans, records or checklists shared with home and community providers for discharged patients <input type="checkbox"/> % PHC patients with NCDs displaying optimal clinical indices (diabetes, hypertension, breast cancer screening, etc.) <input type="checkbox"/> Number of days post-discharge until PHC center follow up visit <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
<p>36. Please explain how the performance indicators and data are used to improve care?          (Check all that apply)</p>	<input type="checkbox"/> Performance is communicated to the coordination team <input type="checkbox"/> Performance is communicated to the system and organization leadership <input type="checkbox"/> Data are used in performance improvement efforts <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
<p><b>Area 5: Capacity Building</b>          "Next I turn to a couple of questions on capacity building or training."</p>	
<p>37. Did PHC center and hospital staff receive specific training on vertical integration of care between hospitals and PHC?</p>	<input type="checkbox"/> Yes (go to 38) <input type="checkbox"/> No (go to 39) <input type="checkbox"/> Don't know (go to 39)
<p>38. Which staff received specific training in support of vertical integration?          (Check all that apply)</p>	<input type="checkbox"/> All staff in hospital and PHC centers <input type="checkbox"/> Leadership at hospital <input type="checkbox"/> Leadership at PHC centers <input type="checkbox"/> Doctors and nurses at hospital <input type="checkbox"/> Doctors and nurses at PHC centers <input type="checkbox"/> Technical and support staff at hospital <input type="checkbox"/> Technical and support staff at PHC centers <input type="checkbox"/> Other (please describe) _____



**Area 6: Provider-patient Communication**

“I now will ask a couple of questions on provider-patient communication related to vertically integrated care.”

39. How are patients made aware of vertically integrated care between PHC and hospitals in this pilot or initiative?

- Patients are not made aware of vertically integrated care
- Patients are made aware through conversations with providers
- Patients are given a phone number they can call if they have any questions on their care
- Patients are given a brochure
- Patients are informed by a care navigator or coordinator
- Other (please specify) \_\_\_\_\_
- Don't know

40. How do PHC units and hospitals communicate with patients regarding managing chronic conditions such as diabetes and hypertension?  
(Check all that apply)

- No communication except during face to face visit at providers' unit
- Text/SMS message
- E-mail
- Postal mail
- Face to face visit in patient's home
- App/software (please specify) \_\_\_\_\_
- Paper-based tool
- Other (please specify) \_\_\_\_\_

**Area 7: Overall Assessment and Lessons Learned**

“The final set of questions are open-ended and aim to get a sense of your overall assessment and of the lessons learned from the initiative.”

41. Based on your experience with this initiative, what have been facilitators to vertically integrated care between PHC and hospitals?

Blank space for answer to question 41.

42. Based on your experience with this initiative, what have been barriers to vertically integrated care between PHC and hospitals?

Blank space for answer to question 42.

43. Based on your experience with this initiative, what are main lessons learned for improving future initiatives or scaling of this initiative?

# Module 3B: Pilots and Initiatives Involving Patient Transitions between Primary Healthcare (PHC) and Specialty Units or Specialists

This is the second of four modules (3A-3D) that focus on specific pilots or initiatives that involve vertical integration. This module focuses on **patient care transitions between primary healthcare (PHC) units and specialty units or specialists in the pilot or initiative**. A secondary focus is non-communicable diseases (NCDs).

**INTERVIEWER INSTRUCTIONS:** This module contains 44 questions across seven thematic areas. They are all related to vertical integration pilots that integrate care between primary healthcare (PHC) units or providers and specialty units or specialists. If the respondent is not aware of an existing or past initiative focused on this specific transition, please skip this module and go to module 3C. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions, follow the instructions in red. Some questions are open-ended, and responses should be written as accurately and legibly as possible.

"I am going to ask you questions on pilots and initiatives integrating care between PHC providers and specialists. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between specialists and primary care providers to provide appropriate, timely and high-quality care. Primary care providers can consist of physicians, nurses and others working in primary care units as well as midwives and community health workers. Also, please note that the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably."

1. Please identify any vertical integration pilots or initiatives that have been implemented involving vertical integration of care between two levels of care: specialists and primary healthcare (PHC). They can be ongoing or past initiatives.

(Ongoing 1) \_\_\_\_\_  
(Ongoing 2) \_\_\_\_\_  
(Past 1) \_\_\_\_\_  
(Past 2) \_\_\_\_\_

2. Select one initiative, preferably ongoing, from the previous response with which you are most familiar.

***All remaining questions in this module should refer to this initiative only. It is preferable to select an ongoing initiative in which the respondent is participating in implementation.***

Initiative Name: \_\_\_\_\_

Years of operation: \_\_\_\_\_

Location: \_\_\_\_\_

**Area 1: Overview of the Pilot or Initiative**

"I am first going to ask you some general questions on the origin, financing, management and impact of \_\_\_\_\_ [name of pilot/initiative]."

3. What was the original rationale for designing and launching this pilot or initiative?	
4. What are the intended goals of the pilot or initiative?	1. _____ 2. _____ 3. _____
5. How is the pilot or initiative financed?	<input type="checkbox"/> No special financing allocated <input type="checkbox"/> Special budget allocation from a government entity <input type="checkbox"/> Special budget allocation from the healthcare organization <input type="checkbox"/> Donor grant or project <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
6. Was any incentive, financial or non-financial, introduced to support vertical integration in this pilot or initiative?	<input type="checkbox"/> Yes (go to 7) <input type="checkbox"/> No (go to 8) <input type="checkbox"/> Don't know (go to 8)
7. Explain what the incentive was, who received it and what service or activity it targeted.	
8. What evidence is there of impact of the initiative? (Check all that apply)	<input type="checkbox"/> No evidence: too soon to tell or evaluation has yet to be conducted <input type="checkbox"/> Evidence of patient outcome impact <input type="checkbox"/> Evidence of utilization impact <input type="checkbox"/> Evidence of patient satisfaction impact <input type="checkbox"/> Evidence of (reduced) costs <input type="checkbox"/> Other (please specify) _____
9. How would you rate leadership support for this initiative in your organization or system?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low

	<input type="checkbox"/> Very low <input type="checkbox"/> Don't know
10. Define the aspects of leadership support for this effort. <i>(Check all that apply)</i>	<input type="checkbox"/> Regular meetings to report progress, achievements, challenges, and barriers <input type="checkbox"/> Financial support <input type="checkbox"/> Marketing <input type="checkbox"/> Support of policy or guideline development <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> None
11. Is there a governance or management unit responsible for overseeing, guiding and monitoring design and implementation of the pilot or initiative?	<input type="checkbox"/> Yes (insert name) _____ <i>(go to 12)</i> <input type="checkbox"/> No <i>(go to 13)</i> <input type="checkbox"/> Don't know <i>(go to 13)</i>
12. How would you rate support for this initiative provided by the governance or management unit in terms of providing operational guidance and monitoring?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Very low <input type="checkbox"/> Don't know
<b>Area 2: Vertical Integration Features: Processes, Mechanisms and Roles</b> <i>"I am now going to ask you some questions on the vertical integration features of the initiative, including processes, mechanisms and roles in support of vertical integration."</i>	
13. Based on your experience, what are the main changes to the processes of care and communication between PHC centers and specialists introduced by the pilot or initiative which are different from processes in non-pilot facilities?	1. _____ 2. _____ 3. _____ 4. _____ 5. _____
14. Does the initiative or pilot use a formal care integration or coordination agreement between PHC units and specialists?	<input type="checkbox"/> Yes <i>(go to 15)</i> <input type="checkbox"/> No <i>(go to 16)</i> <input type="checkbox"/> Don't know <i>(go to 16)</i>

<p>15. Describe the elements of the formal care integration or coordination agreement for this effort. (Check all that apply)</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Specify referrals and communication pathways</li> <li><input type="checkbox"/> Include considerations for patient/family preferences,</li> <li><input type="checkbox"/> Ensure reasons for referral, subsequent diagnostic treatment plan and each party's responsibilities</li> <li><input type="checkbox"/> Include specific points of contact for PHC personnel</li> <li><input type="checkbox"/> Clarify who will notify the patient about test results and clinical follow up as needed</li> <li><input type="checkbox"/> Ensure processes and/or workflows between the specialists and PHC are mapped (process steps, time requirements, etc. are outlined and described)</li> <li><input type="checkbox"/> Define referral protocols and co-management arrangements</li> <li><input type="checkbox"/> Specify who is accountable for which part of the care process</li> <li><input type="checkbox"/> Specify content of patient transition record and expectations regarding frequency/timeliness of bidirectional information flow</li> <li><input type="checkbox"/> Specify handling of secondary referrals (when a provider requires another provider opinion)</li> <li><input type="checkbox"/> Include a mechanism for regular review of the terms of the Care Coordination Agreement</li> <li><input type="checkbox"/> Schedule regular reviews of compliance with agreements</li> <li><input type="checkbox"/> Schedule regular reviews of the quality of the care offered by different providers</li> <li><input type="checkbox"/> Other (please specify) _____</li> </ul>
<p>16. Does the initiative use multi-disciplinary teams to address specific NCDs?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Yes (go to 17)</li> <li><input type="checkbox"/> No (go to 18)</li> <li><input type="checkbox"/> Don't know (go to 18)</li> </ul>
<p>17. What professions are part of the multi-disciplinary team? (Check all that apply)</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Physician</li> <li><input type="checkbox"/> Nurse</li> <li><input type="checkbox"/> Care coordinator</li> <li><input type="checkbox"/> Medical assistant</li> <li><input type="checkbox"/> Pharmacist</li> <li><input type="checkbox"/> Social worker</li> <li><input type="checkbox"/> Dietician</li> <li><input type="checkbox"/> Behavioral health specialist</li> <li><input type="checkbox"/> Other (please specify) _____</li> </ul>

<p>18. Have specific roles and responsibilities been assigned to specialists and PHC in this initiative?</p>	<p><input type="checkbox"/> Yes (go to 19)  <input type="checkbox"/> No (go to 20)  <input type="checkbox"/> Don't know (go to 20)</p>
<p>19. Please describe specific roles and responsibilities associated with this vertical integration effort.          (Check all that apply)</p>	<p><input type="checkbox"/> Staff member in PHC directs patients to appropriate services within the healthcare system and community  <input type="checkbox"/> Staff member in PHC is responsible for scheduling follow-up patient appointments  <input type="checkbox"/> Staff member in PHC ensures patient attends specialist consultations  <input type="checkbox"/> Staff member in PHC ensures patient is taking medications  <input type="checkbox"/> Staff member in specialist unit ensures patient attends follow-up consultations with PHC providers  <input type="checkbox"/> Staff member in specialist unit ensures communication with PHC providers to coordinate care  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p>20. Who is involved in the efforts to improve care in general, and PHC-specialist care integration specifically?          (Check all that apply)</p>	<p><input type="checkbox"/> Multidisciplinary clinical team members from PHC  <input type="checkbox"/> Multidisciplinary clinical team members from specialist  <input type="checkbox"/> Healthcare organization or system leaders  <input type="checkbox"/> Healthcare organization or system administrators  <input type="checkbox"/> Quality or performance improvement staff and leaders  <input type="checkbox"/> Other (please specify) _____</p>
<p><b>Area 3: Communications and Relationships between Specialists and PHC Units</b>          "I am now going to ask some questions about the nature of communications and relationships between specialists and primary healthcare units."</p>	
<p>21. Are there regular meetings among PHC staff and specialists participating in this initiative or pilot?</p>	<p><input type="checkbox"/> Yes (go to 22)  <input type="checkbox"/> No (go to 24)  <input type="checkbox"/> Don't know (go to 24)</p>
<p>22. How often do these meetings occur?</p>	<p><input type="checkbox"/> Weekly  <input type="checkbox"/> Monthly  <input type="checkbox"/> Quarterly  <input type="checkbox"/> Twice a year  <input type="checkbox"/> Yearly  <input type="checkbox"/> Other (please specify) _____</p>

<p>23. What does the content of these meetings include? (Check all that apply)</p>	<p><input type="checkbox"/> Agreeing on key interventions to be implemented, expanded or modified within the catchment area or district for a set amount of time</p> <p><input type="checkbox"/> Learning from each other on how to implement these interventions (e.g., vertical learning, peer or horizontal learning, task-shifting, etc.)</p> <p><input type="checkbox"/> Monitoring the interventions and their impact, and discussing this information in a two-way dialogue among health staff and health workers</p> <p><input type="checkbox"/> Discuss recent supervision results in combination with participatory learning sessions</p> <p><input type="checkbox"/> Comparing results to national level data and national targets</p> <p><input type="checkbox"/> Identifying gaps and jointly trouble shooting</p> <p><input type="checkbox"/> Means to identify and collaborate to manage high-risk patients</p> <p><input type="checkbox"/> Establishing direct, specific methods or avenues of communication between primary care and specialist</p> <p><input type="checkbox"/> Other (please specify) _____</p>
<p>24. Does this initiative involve rotating specialists to PHC centers to support specialist-PHC integration?</p>	<p><input type="checkbox"/> Yes (go to 25)</p> <p><input type="checkbox"/> No (go to 27)</p> <p><input type="checkbox"/> Don't know (go to 27)</p>
<p>25. Explain how they are encouraged to rotate.</p>	
<p>26. How often does the specialist rotate?</p>	<p><input type="checkbox"/> Weekly</p> <p><input type="checkbox"/> Bi-weekly</p> <p><input type="checkbox"/> Monthly</p> <p><input type="checkbox"/> Irregular</p> <p><input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Don't know</p>
<p>27. How often do PHC centers receive feedback from specialists on upward referral of high-risk chronic cases?</p>	<p><input type="checkbox"/> Very frequently</p> <p><input type="checkbox"/> Frequently</p> <p><input type="checkbox"/> Occasionally</p> <p><input type="checkbox"/> Seldomly</p> <p><input type="checkbox"/> Very seldomly</p> <p><input type="checkbox"/> Don't know</p>

<p>28. How often do specialists receive feedback from PHC centers on downward referral of high-risk chronic cases?</p>	<p><input type="checkbox"/> Very frequently  <input type="checkbox"/> Frequently  <input type="checkbox"/> Occasionally  <input type="checkbox"/> Seldomly  <input type="checkbox"/> Very seldomly  <input type="checkbox"/> Don't know</p>
<p>29. How do PHC centers and specialists communicate regarding managing high-risk chronic cases?          (Check all that apply)</p>	<p><input type="checkbox"/> No regular communication mechanism  <input type="checkbox"/> Paper referral note  <input type="checkbox"/> Electronic referral note  <input type="checkbox"/> Special text message (SMS) platform  <input type="checkbox"/> Dedicated hotline or 24-hour call center  <input type="checkbox"/> E-mail  <input type="checkbox"/> App/software (please specify) _____  <input type="checkbox"/> Fax  <input type="checkbox"/> Other (please specify) _____</p>
<p><b>Area 4: Performance Monitoring and Feedback</b>          "I'm now going to ask questions on performance monitoring and feedback related to this initiative."</p>	
<p>30. Have you or your unit (specialist, PHC center) received feedback on the performance of your organization in the pilot or initiative?</p>	<p><input type="checkbox"/> Yes (go to 31)  <input type="checkbox"/> No (go to 32)  <input type="checkbox"/> Don't know (go to 32)</p>
<p>31. How is feedback on performance used to improve care?          (Check all that apply)</p>	<p><input type="checkbox"/> Feedback not used to improve care  <input type="checkbox"/> Regular team meetings to review and act upon performance findings  <input type="checkbox"/> Regular meetings with leadership to review and act upon performance findings  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____</p>
<p>32. Have specific performance indicators been identified for the PHC-specialist coordination?</p>	<p><input type="checkbox"/> Yes (go to 33)  <input type="checkbox"/> No (go to 35)  <input type="checkbox"/> Don't know (go to 35)</p>
<p>33. What performance indicators are used to measure vertical integration performance?          (Check all that apply)</p>	<p><input type="checkbox"/> % of PHC staff who have regular contact with specialists at another facility (hospital or polyclinic)  <input type="checkbox"/> % of specialists who have regular contact with PHC staff at another facility</p>

	<input type="checkbox"/> % of specialists who meet PHC staff for supportive supervision or professional meetings <input type="checkbox"/> % of PHC staff who meet specialists during training, supportive supervision or professional meetings <input type="checkbox"/> % of PHC staff who know personally or can call specialists at another facility <input type="checkbox"/> % of specialists who know personally or can call PHC staff at another facility <input type="checkbox"/> % of PHC provider staff who report regular or occasional discussions with specialists on treatment protocols <input type="checkbox"/> % of specialists who report regular or occasional discussions with staff at PHC facilities on treatment protocols <input type="checkbox"/> % of specialists who often or always receive feedback on outcomes of referral cases from PHC staff <input type="checkbox"/> % of PHC staff who often or always receive feedback on outcomes of referral cases from specialists <input type="checkbox"/> % of specialists who often or always send feedback on outcomes to PHC staff <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
<p>34. Explain how the performance indicators and data are used to improve care? (Check all that apply)</p>	<input type="checkbox"/> Performance is communicated to the coordination team <input type="checkbox"/> Performance is communicated to the system and organization leadership <input type="checkbox"/> Data are used in performance improvement efforts <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
<p>35. Are there regular meetings among community health workers and specialists participating in this initiative or pilot?</p>	<input type="checkbox"/> Yes (go to 36) <input type="checkbox"/> No (go to 38) <input type="checkbox"/> Don't know (go to 38)
<p>36. How often do these meetings occur?</p>	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Twice a year <input type="checkbox"/> Yearly <input type="checkbox"/> Other (please specify) _____
<p>37. What does the content of these meetings include? (Check all that apply)</p>	<input type="checkbox"/> Agreeing on key interventions to be implemented/expanded/modified within the catchment area/district for a set amount of time

- Learning from each other on how to implement these interventions (e.g., vertical learning, peer/horizontal learning, task-shifting, etc.)
- Monitoring the interventions and their impact, and discussing this information in a two-way dialogue among health staff and health workers
- Discuss recent supervision results in combination with participatory learning sessions
- Comparing results to national level data and national targets
- Identifying gaps and jointly trouble shooting
- Means to identify and collaborate to manage high-risk patients
- Establishing direct/specific methods/avenues of communication between PHC and specialists
- Other (please specify) \_\_\_\_\_

**Area 5: Capacity Building**

“I turn to a couple of questions on capacity building or training.”

38. Did PHC and specialist staff receive specific training on vertical integration between specialists and PHC?

- Yes (go to 39)
- No (go to 40)
- Don't know (go to 40)

39. Which staff received specific training in support of vertical integration?  
(Check all that apply)

- All staff in PHC centers and specialists
- Leadership at specialist unit
- Leadership at PHC centers
- Doctors and nurses at specialist unit
- Doctors and nurses at PHC center
- Technical and support staff at specialist unit
- Technical and support staff at PHC center
- Other (please specify) \_\_\_\_\_

**Area 6: Provider-Patient Communication**

“I now will ask a couple of questions on provider-patient communication related to vertically integrated care.”

40. How are patients made aware of vertically integrated care between PHC and specialists in this pilot or initiative?  
(Check all that apply)

- Patients are not made aware of vertically integrated care
- Patients are made aware through conversations with providers
- Patients are given a phone number they can call if they have any questions on their care
- Patients are given a brochure
- Patients are informed by a care navigator or coordinator
- Other (please specify) \_\_\_\_\_

	<input type="checkbox"/> Don't know
41. How do PHC units and specialists communicate with patients regarding managing chronic conditions such as diabetes and hypertension? <i>(Check all that apply)</i>	<input type="checkbox"/> No communication except during face to face visit at providers' unit <input type="checkbox"/> Text/SMS message <input type="checkbox"/> E-mail <input type="checkbox"/> Postal mail <input type="checkbox"/> Face to face visit in patient's home <input type="checkbox"/> App/software <i>(please specify)</i> _____ <input type="checkbox"/> Paper-based tool <input type="checkbox"/> Other <i>(please specify)</i> _____
<b>Area 7: Overall Assessment and Lessons Learned</b> <i>"The final set of questions are open-ended and aim to get a sense of your overall assessment and of the lessons learned from the initiative."</i>	
42. Based on your experience with this initiative, what have been <u>facilitators</u> to vertically integrated care between PHC and specialists?	
43. Based on your experience with this initiative, what have been <u>barriers</u> to vertically integrated care between PHC and specialists?	
44. Based on your experience with this initiative, what are <u>main lessons learned</u> for improving future initiatives or scaling of this initiative?	

# Module 3C: Pilots and Initiatives Involving Patient Transitions Between Hospitals and Homes and Communities

This is the third of four modules (3A-3D) that focus on specific pilots or initiatives that involve vertical integration. This module focuses on patient care transitions **between hospitals and home- and community-based care in the pilot or initiative.**

**INTERVIEWER INSTRUCTIONS:** This module contains 35 questions across seven thematic areas. They are all related to vertical integration pilots or initiatives that integrate care between hospitals and home/community. If the respondent is not aware of an existing or past initiative focused on this specific transition, please skip this module and go to module 3D. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions, follow the instructions in red. Some questions are open-ended, and responses should be written as accurately and legibly as possible.

"I am going to ask you questions on vertical integration pilots integrating care between hospitals and homes/communities. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between hospitals and homes and communities to provide appropriate, timely and high-quality care. Home or community providers can consist of community health workers, community rehabilitation units, and nursing homes/home-based caretakers, usually for the elderly. Also, please note that the terms 'vertical integration', 'vertical integration of care' and 'vertically integrated care' are used interchangeably."

1. Identify any vertical integration pilots or initiatives that have been implemented involving vertical integration of care between two levels of care: hospital and home/community. They can be ongoing or past initiatives.	(Ongoing 1) _____ (Ongoing 2) _____ (Past 1) _____ (Past 2) _____
2. Select one initiative, preferably ongoing, from the previous response with which you are most familiar. <b><i>All remaining questions in this module should refer to this initiative only. It is preferable to select an ongoing initiative in which the respondent is participating in implementation.</i></b>	Initiative Name: _____ Years of operation: _____ Location: _____

**Area 1: Overview of the Pilot or Initiative**

"I am first going to ask you some general questions on the origin, financing, management and impact of \_\_\_\_\_ [name of pilot/initiative]."

3. What was the original rationale for designing and launching this pilot or initiative?	
4. What are the intended goals of the pilot or initiative?	1. _____ 2. _____ 3. _____
5. How is the pilot or initiative financed?	<input type="checkbox"/> No special financing allocated <input type="checkbox"/> Special budget allocation from a government entity <input type="checkbox"/> Special budget allocation from the healthcare organization <input type="checkbox"/> Donor grant or project <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
6. Was any incentive, financial or non-financial, introduced to support vertical integration in this pilot or initiative?	<input type="checkbox"/> Yes (go to 7) <input type="checkbox"/> No (go to 8) <input type="checkbox"/> Don't know (go to 8)
7. Explain what the incentive was, who received it and what service or activity it targeted.	
8. What evidence is there of impact of the initiative? (Check all that apply)	<input type="checkbox"/> No evidence: too soon to tell or evaluation has yet to be conducted <input type="checkbox"/> Evidence of patient outcome impact <input type="checkbox"/> Evidence of utilization impact <input type="checkbox"/> Evidence of patient satisfaction impact <input type="checkbox"/> Evidence of (reduced) costs <input type="checkbox"/> Other (please specify) _____
9. How would you rate leadership support for this initiative in your organization or system?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Very low

	<input type="checkbox"/> Don't know
10. Please define the aspects of leadership support for this effort. <b>(Check all that apply)</b>	<input type="checkbox"/> Regular meetings to report progress, achievements, challenges, barriers <input type="checkbox"/> Financial support <input type="checkbox"/> Marketing <input type="checkbox"/> Support of policy or guideline development <input type="checkbox"/> Other (please specify) _____
11. Is there a governance or management unit responsible for overseeing, guiding and monitoring design and implementation of the pilot or initiative?	<input type="checkbox"/> Yes: Name _____ <b>(go to 12)</b> <input type="checkbox"/> No <b>(go to 13)</b> <input type="checkbox"/> Don't know <b>(go to 13)</b>
12. How would you rate support for this initiative provided by the governance or management unit in terms of providing operational guidance and monitoring?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Very low <input type="checkbox"/> Don't know
<b>Area 2: Vertical Integration Features, including Processes, Mechanisms and Roles</b> <b>"I am now going to ask you some questions on the vertical integration features of the initiative, including processes, mechanisms and roles in support of vertical integration."</b>	
13. Based on your experience, what are the main changes to the processes of care and communication between hospitals and home/community care introduced by the pilot or initiative which are different from processes in non-pilot facilities?	
14. Does the initiative or pilot use a formal care integration or coordination agreement to coordinate hospital - home/community transitions?	<input type="checkbox"/> Yes <b>(go to 15)</b> <input type="checkbox"/> No <b>(go to 16)</b> <input type="checkbox"/> Don't know <b>(go to 16)</b>
15. Describe the elements of the formal care integration or coordination agreement for this effort. <b>(Check all that apply)</b>	<input type="checkbox"/> No agreement used <input type="checkbox"/> Specify referrals and communication pathways <input type="checkbox"/> Include considerations for patient/family preferences,

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure reasons for referral, subsequent diagnostic treatment plan and each party's responsibilities</li> <li><input type="checkbox"/> Include specific points of contact for home/community care personnel</li> <li><input type="checkbox"/> Clarify who will notify the patient about test results and clinical follow up as needed</li> <li><input type="checkbox"/> Ensure processes and/or workflows between the hospital and home/community care are mapped (process steps, time requirements, etc. are outlined and described)</li> <li><input type="checkbox"/> Define referral protocols and co-management arrangements</li> <li><input type="checkbox"/> Specify who is accountable for which part of the care process</li> <li><input type="checkbox"/> Specify content of patient transition record and expectations regarding frequency/timeliness of bidirectional information flow</li> <li><input type="checkbox"/> Specify handling of secondary referrals (when a provider requires another provider opinion)</li> <li><input type="checkbox"/> Include a mechanism for regular review of care coordination agreement terms</li> <li><input type="checkbox"/> Schedule regular reviews of compliance with agreements</li> <li><input type="checkbox"/> Schedule regular reviews of the quality of the care offered by different providers</li> <li><input type="checkbox"/> None of the above</li> <li><input type="checkbox"/> Other (please specify) _____</li> <li><input type="checkbox"/> Don't know</li> </ul>
<p>16. Does this pilot involve the establishment of formal multidisciplinary teams consisting of staff from both hospital and home/community care providers?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Yes (go to 17)</li> <li><input type="checkbox"/> No (go to 18)</li> <li><input type="checkbox"/> Don't know (go to 18)</li> </ul>
<p>17. List the members of the multidisciplinary team.</p>	<p>Hospital-based members</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Home/community care-based members</p> <p>_____</p> <p>_____</p> <p>_____</p>

<p>18. Have specific roles and responsibilities been assigned to hospital and home/community staff in this initiative?</p>	<p><input type="checkbox"/> Yes (go to 19)  <input type="checkbox"/> No (go to 20)  <input type="checkbox"/> Don't know (go to 20)</p>
<p>19. Describe specific roles/functions associated with this vertical integration effort.          (Check all that apply)</p>	<p>Staff member in <u>hospital</u></p> <p><input type="checkbox"/> is assigned as responsible point person for patient care after discharge  <input type="checkbox"/> is responsible for scheduling follow up patient appointments  <input type="checkbox"/> ensures patient attends post-discharge consultation  <input type="checkbox"/> ensures test results are delivered to different providers  <input type="checkbox"/> ensures patient is taking medications  <input type="checkbox"/> directs patients to appropriate services within the healthcare system and community  <input type="checkbox"/> Other (please specify) _____</p> <p>Staff member in <u>home/community care</u></p> <p><input type="checkbox"/> is assigned as responsible point person for patient care after discharge  <input type="checkbox"/> is responsible for scheduling follow up patient appointments  <input type="checkbox"/> ensures patient attends post-discharge consultation  <input type="checkbox"/> ensures test results are delivered to different providers  <input type="checkbox"/> ensures patient is taking medications  <input type="checkbox"/> directs patients to appropriate services within the healthcare system and community  <input type="checkbox"/> Other (please specify) _____</p> <p><input type="checkbox"/> Don't know</p>
<p>20. Who is involved in the efforts to improve care and hospital - home/community coordination?          (Check all that apply)</p>	<p><input type="checkbox"/> Multidisciplinary clinical team members from hospital  <input type="checkbox"/> Multidisciplinary clinical team members from community  <input type="checkbox"/> Healthcare organization leaders  <input type="checkbox"/> Healthcare organization administrators  <input type="checkbox"/> Quality/performance improvement staff/leaders  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know</p>
<p><b>Area 3: Communications and Relationships between Hospitals and Home/Community Care</b>          "I am now going to ask some questions about the nature of communications and relationships between hospitals and home/community care."</p>	

21. Are there regular meetings among key stakeholders for the vertical integration effort?	<input type="checkbox"/> Yes (go to 22) <input type="checkbox"/> No (go to 24) <input type="checkbox"/> Don't know (go to 24)
22. How often do these meetings occur?	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Twice a year <input type="checkbox"/> Yearly <input type="checkbox"/> Other (please specify) _____
23. What does the content of these meetings include? (Check all that apply)	<input type="checkbox"/> Agreeing on key interventions to be implemented/expanded/modified within the catchment area/district for a set amount of time <input type="checkbox"/> Learning from each other on how to implement these interventions (e.g., vertical learning, peer/horizontal learning, task-shifting, etc.) <input type="checkbox"/> Monitoring the interventions and their impact, and sharing and discussing this information in a two-way dialogue among health staff and health workers <input type="checkbox"/> Discuss recent supervision results in combination with participatory learning sessions <input type="checkbox"/> Comparing results to national level data, and national targets <input type="checkbox"/> Identifying gaps and jointly trouble shooting <input type="checkbox"/> Means to identify and collaborate to manage high-risk patients <input type="checkbox"/> Establishing direct/specific methods/avenues of communication between hospital and community/home providers <input type="checkbox"/> Other (please specify) _____
<b>Area 4: Performance Monitoring and Feedback</b> "Now I'm going to ask questions on performance monitoring and feedback related to this initiative."	
24. Have you or your unit (hospital, home/community care) received feedback on the performance of your organization in the pilot or initiative?	<input type="checkbox"/> Yes (go to 25) <input type="checkbox"/> No (go to 26) <input type="checkbox"/> Don't know (go to 26)
25. Please explain how feedback on performance is used to improve care? (Check all that apply)	<input type="checkbox"/> Feedback not used to improve care <input type="checkbox"/> Regular team meetings to review and act upon performance findings <input type="checkbox"/> Regular meetings with leadership to review and act upon performance findings

	<input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
26. Have specific performance indicators been identified to measure hospital to home/community transitions?	<input type="checkbox"/> Yes (go to 27) <input type="checkbox"/> No (go to 29) <input type="checkbox"/> Don't know (go to 29)
27. What performance indicators are used to measure vertical integration performance? (Check all that apply)	<input type="checkbox"/> % of hospital provider staff who have regular contact with staff at home/community services <input type="checkbox"/> % of hospital provider staff who meet staff from the other home/community providers during training, supportive supervision or professional meetings <input type="checkbox"/> % of hospital provider staff who know personally or can call someone from the home/community provider <input type="checkbox"/> % of hospitals who report regular or occasional discussions with staff from home/community providers treatment protocols for MNCH emergencies <input type="checkbox"/> % of home/community providers who often or always receive feedback on outcomes on referral cases from hospitals <input type="checkbox"/> % of hospitals who often or always send feedback on outcomes on referral cases to home/community providers <input type="checkbox"/> % readmissions to hospital within 30 days of discharge <input type="checkbox"/> % patients with visits to emergency department within 30 days discharge <input type="checkbox"/> % patients discharged that were formally referred to home/community providers <input type="checkbox"/> % patients with a care plan for follow up post-discharge <input type="checkbox"/> % discharge plans/records/checklists shared with home/community providers for discharged patients <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
28. Explain how the performance indicators and data are used to improve care. (Check all that apply)	<input type="checkbox"/> Performance is communicated to the coordination team <input type="checkbox"/> Performance is communicated to the system and organization leadership <input type="checkbox"/> Data are used in performance improvement efforts <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know

### Area 5: Capacity Building

“Next I turn to a couple of questions on capacity building or training.”

- |  |   |
|--|---|
| 29. Did home/community and hospital staff receive specific training on vertical integration between hospitals and home/community care? | <input type="checkbox"/> Yes (go to 30)<br><input type="checkbox"/> No (go to 31)<br><input type="checkbox"/> Don't know (go to 31)   |
| 30. Which staff received specific training in support of vertical integration?<br>(Check all that apply)                               | <input type="checkbox"/> Hospital staff<br><input type="checkbox"/> Community health workers<br><input type="checkbox"/> Staff at community rehabilitation centers<br><input type="checkbox"/> Home caretakers<br><input type="checkbox"/> Staff at home care agencies<br><input type="checkbox"/> Other (please specify) _____<br><input type="checkbox"/> Other (please specify) _____<br><input type="checkbox"/> Other (please specify) _____ |

### Area 6: Provider-Patient Communication

“I now will ask a couple of questions on provider-patient communication related to vertically integrated care.”

- |  |   |
|--|---|
| 31. How are patients made aware of vertically integrated care between hospitals and home/community care in this pilot or initiative?   | <input type="checkbox"/> Patients are not made aware of vertically integrated care<br><input type="checkbox"/> Patients are made aware through conversations with providers<br><input type="checkbox"/> Patients are given a phone number they can call if they have any questions on their care<br><input type="checkbox"/> Patients are given a brochure<br><input type="checkbox"/> Patients are informed by a care navigator or coordinator<br><input type="checkbox"/> Other (please specify) _____<br><input type="checkbox"/> Don't know |
| 32. How do hospitals and home/community providers communicate with patients regarding managing chronic conditions such as diabetes and hypertension?<br>(Check all that apply) | <input type="checkbox"/> No communication except during face to face visit at providers' unit<br><input type="checkbox"/> Text/SMS message<br><input type="checkbox"/> E-mail<br><input type="checkbox"/> Postal mail<br><input type="checkbox"/> Face to face visit in patient's home<br><input type="checkbox"/> App/software (please specify) _____<br><input type="checkbox"/> Paper-based tool<br><input type="checkbox"/> Other (please specify) _____  |

**Area 7: Overall Assessment and Lessons Learned**

“The final set of questions are open-ended and aim to get a sense of your overall assessment and of the lessons learned from the initiative.”

33. Based on your experience with this initiative, what have been facilitators to vertically integrated care between hospitals and home/community?

34. Based on your experience with this initiative, what have been barriers to vertically integrated care between hospitals and home/community?

35. Based on your experience with this initiative, what are main lessons learned for improving future initiatives or scaling of this initiative?

# Module 3D: Pilots and Initiatives Involving Maternal, Newborn and Child Health (MNCH) Patient Transitions across Multiple Provider Tiers (Hospitals-Primary Care – Community Health Workers-Midwives)

This is the fourth and final module that focus on specific pilots or initiatives that involve vertical integration. **This module focuses on patient care transitions for Maternal, Newborn and Child Health (MNCH) across a range of providers (community-based, PHC and hospitals).**

**INTERVIEWER INSTRUCTIONS:** This module contains 43 questions across seven thematic areas. They are all related to vertical integration pilots that focus on maternal, newborn and child health (MNCH). If the respondent is not aware of an existing or past initiative focused on this specific transition, you can end the interview. Please read the introductory sentence and the corresponding questions to the respondent. If there are no further instructions, simply select the respondent's answer. For all other questions, follow the instructions in red. Some questions are open-ended, and responses should be written as accurately and legibly as possible.

“I am going to ask you some questions related to pilots or initiatives to vertically integrate care for mothers and newborns across multiple tiers of the system. In this module, vertical integration refers to the ways and means in which care is deliberately and systematically coordinated, including communication and learning, between hospitals, primary care units, community health workers and midwives to provide appropriate, timely, and high-quality care. Please note that the terms ‘vertical integration’, ‘vertical integration of care’ and ‘vertically integrated care’ are used interchangeably.”

1. List the pilots or initiatives that have been implemented involving vertical integration of care between provider tiers, hospitals, primary healthcare, community health workers or midwives, with a focus on MNCH.

(Ongoing 1) \_\_\_\_\_

(Ongoing 2) \_\_\_\_\_

(Past 1) \_\_\_\_\_

(Past 2) \_\_\_\_\_

2. Select one initiative, preferably ongoing, from the previous response with which you are most familiar.

Initiative Name: \_\_\_\_\_

Years of operation: \_\_\_\_\_

Location: \_\_\_\_\_

***All remaining questions in this module should refer to this initiative only. It is preferable to select an ongoing initiative in which the respondent is participating in implementation.***

### Area 1: Overview of the Pilot or Initiative

"I am first going to ask you some general questions on the origin, financing, management and impact of \_\_\_\_\_ [name of pilot/initiative]."

3. What was the original rationale for designing and launching this pilot or initiative?	
4. What are the intended goals of the pilot or initiative?	1. _____ 2. _____ 3. _____
5. How is the pilot or initiative financed?	<input type="checkbox"/> No special financing allocated <input type="checkbox"/> Special budget allocation from a government entity <input type="checkbox"/> Special budget allocation from the healthcare organization <input type="checkbox"/> Donor grant or project <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
6. Was any incentive, financial or non-financial, introduced to support vertical integration in this pilot or initiative?	<input type="checkbox"/> Yes (go to 7) <input type="checkbox"/> No (go to 8) <input type="checkbox"/> Don't know (go to 8)
7. Explain what the incentive was, who received it and what service or activity it targeted.	
8. What evidence is there of impact of the initiative? (Check all that apply)	<input type="checkbox"/> No evidence: too soon to tell or evaluation has yet to be conducted <input type="checkbox"/> Evidence of patient outcome impact <input type="checkbox"/> Evidence of utilization impact <input type="checkbox"/> Evidence of patient satisfaction impact <input type="checkbox"/> Evidence of (reduced) costs <input type="checkbox"/> Other (please specify) _____
9. How would you rate leadership support for this initiative in your organization or system?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate

	<input type="checkbox"/> Low <input type="checkbox"/> Very low <input type="checkbox"/> Don't know
10. Define the aspects of leadership support for this initiative or pilot. <i>(Check all that apply)</i>	<input type="checkbox"/> Regular meetings to report progress, achievements, challenges, barriers <input type="checkbox"/> Financial support <input type="checkbox"/> Marketing <input type="checkbox"/> Support of policy or guideline development <input type="checkbox"/> Other <i>(please specify)</i> _____
11. Is there a governance or management unit responsible for overseeing, guiding and monitoring the design and implementation of the pilot or initiative?	<input type="checkbox"/> Yes: Name: _____ <i>(go to 12)</i> <input type="checkbox"/> No <i>(go to 13)</i> <input type="checkbox"/> Don't know <i>(go to 13)</i>
12. How would you rate support for this initiative provided by the governance or management unit in terms of providing operational guidance and monitoring?	<input type="checkbox"/> Very high <input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <input type="checkbox"/> Very low <input type="checkbox"/> Don't know
<b>Area 2: Vertical Integration Features: Processes, Mechanisms and Roles</b> <i>"I am now going to ask you some questions on the vertical integration features of the initiative, including processes, mechanisms and roles in support of vertical integration."</i>	
13. Based on your experience, what are the main changes to the processes of care and communication between provider tiers (CHWs, midwives, PHC centers and hospitals) introduced by the pilot or initiative which are different from processes in non-pilot facilities?	1. _____ 2. _____ 3. _____ 4. _____ 5. _____
14. Does the initiative or pilot use a formal care integration or coordination agreement between any provider tier (CHW, midwives, PHC, or hospitals) to define roles and responsibilities?	<input type="checkbox"/> Yes <i>(go to 15)</i> <input type="checkbox"/> No <i>(go to 16)</i> <input type="checkbox"/> Don't know <i>(go to 16)</i>

<p>15. Describe the elements of the formal care integration or coordination agreement for this effort. (Check all that apply)</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Specify referrals and communication pathways</li> <li><input type="checkbox"/> Include specific points of contact for PHC personnel</li> <li><input type="checkbox"/> Clarify who will notify the patient about test results and clinical follow up as needed</li> <li><input type="checkbox"/> Ensure processes and/or workflows across provider tiers are mapped (process steps, time requirements, etc. are outlined and described)</li> <li><input type="checkbox"/> Define referral protocols and co-management arrangements</li> <li><input type="checkbox"/> Specify who is accountable for which part of the care process</li> <li><input type="checkbox"/> Specify content of patient transition record and expectations regarding frequency/timeliness of bidirectional information flow</li> <li><input type="checkbox"/> Include considerations for patient/family preferences</li> <li><input type="checkbox"/> Ensure reasons for referral, subsequent diagnostic treatment plan and each party's responsibilities</li> <li><input type="checkbox"/> Include a mechanism for regular review of care coordination agreement terms</li> <li><input type="checkbox"/> Schedule regular reviews of compliance with agreements</li> <li><input type="checkbox"/> Schedule regular reviews of the quality of the care offered by different providers</li> <li><input type="checkbox"/> Other (please specify) _____</li> <li><input type="checkbox"/> Other (please specify) _____</li> <li><input type="checkbox"/> None of the above</li> <li><input type="checkbox"/> Don't know</li> </ul>
<p>16. Does this pilot involve the establishment of a formal multidisciplinary team consisting of staff from different provider tiers and community settings?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Yes (go to 17)</li> <li><input type="checkbox"/> No (go to 18)</li> <li><input type="checkbox"/> Don't know (go to 18)</li> </ul>
<p>17. List the members of the multidisciplinary team.</p>	<p>Hospital-based members</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>PHC-based members</p> <p>_____</p> <p>_____</p>

	<hr/> <p>Community-based team members</p> <hr/> <hr/> <hr/>
<p>18. Have specific roles and responsibilities been assigned to participating MNCH providers or team members in this initiative?</p>	<p> <input type="checkbox"/> Yes (go to 19)  <input type="checkbox"/> No (go to 20)  <input type="checkbox"/> Don't know (go to 20) </p>
<p>19. Please describe specific roles/functions associated with this pilot or initiative. (Check all that apply)</p>	<p> <input type="checkbox"/> Staff member in hospital, PHC or community setting is assigned as responsible point person for patient care after discharge  <input type="checkbox"/> Staff member in hospital, PHC or community setting is responsible for scheduling follow up patient appointments  <input type="checkbox"/> Staff member in hospital, PHC or community setting ensures patient attends post-discharge consultation  <input type="checkbox"/> Staff member in hospital, PHC or community setting ensures test results are delivered to different providers  <input type="checkbox"/> Staff member in hospital, PHC or community setting ensures patient is taking medications  <input type="checkbox"/> Staff member in hospital, PHC or community setting directs patients to appropriate services within the healthcare system and community  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don't know </p>
<p>20. Who is involved in the efforts to improve quality of care integration of MNCH services or activities across provider tiers? (Check all that apply)</p>	<p> <input type="checkbox"/> Multidisciplinary clinical team members from all provider tiers (hospital, PHC, CHWs, midwives)  <input type="checkbox"/> Team members from hospital  <input type="checkbox"/> Team members from PHC centers  <input type="checkbox"/> Community health workers  <input type="checkbox"/> Midwives  <input type="checkbox"/> Healthcare organization's leaders/managers  <input type="checkbox"/> Quality/performance improvement staff/leaders  <input type="checkbox"/> Other (please specify) _____ </p>

### Area 3: Communication and Relationships across Provider Tiers (Hospital, PHC, CHWs, Midwives)

"I am now going to ask some questions about the nature of communications and relationships across provider tiers such as hospitals, primary care, community health workers and midwives."

21. Are there regular meetings among the team members participating in this initiative or pilot?	<input type="checkbox"/> Yes (go to 22) <input type="checkbox"/> No (go to 24) <input type="checkbox"/> Don't know (go to 24)
22. How often do these meetings occur?	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Twice a year <input type="checkbox"/> Yearly <input type="checkbox"/> Other (please specify) _____
23. What is the content of these meetings? (Check all that apply)	<input type="checkbox"/> Agreeing on key interventions to be implemented/expanded/modified within the catchment area/district for a set amount of time <input type="checkbox"/> Learning from each other on how to implement these interventions (e.g., vertical learning, peer/horizontal learning, task-shifting, etc.) <input type="checkbox"/> Monitoring the interventions and their impact, and sharing and discussing this information in a two-way dialogue among health staff and health workers <input type="checkbox"/> Discuss recent supervision results in combination with participatory learning sessions <input type="checkbox"/> Comparing results to national level data and national targets <input type="checkbox"/> Identifying gaps and jointly trouble shooting <input type="checkbox"/> Identifying and managing high-risk MNCH patients <input type="checkbox"/> Establishing direct/specific methods/avenues of communication between community health/primary care and hospital <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
24. Does this initiative involve rotating clinical personnel from hospitals to PHC centers and	<input type="checkbox"/> Yes, both physicians and nurses (go to 25) <input type="checkbox"/> Yes, physicians only (go to 25) <input type="checkbox"/> Yes, nurses only (go to 25)

community settings for mentoring, coaching and supervisory purposes?	<input type="checkbox"/> No to both physicians and nurses (go to 26) <input type="checkbox"/> Don't know (go to 26)
25. Explain how they are encouraged to rotate.	
26. Does this initiative involve rotating health workers from community settings to PHC centers or hospitals for mentoring, coaching and supervisory purposes?	<input type="checkbox"/> Yes, both midwives and community health workers (go to 27) <input type="checkbox"/> Yes, midwives only (go to 27) <input type="checkbox"/> Yes, community health workers only (go to 27) <input type="checkbox"/> No to both midwives and community health workers (go to 28) <input type="checkbox"/> Don't know (go to 28)
27. Explain how they are encouraged to rotate.	
28. Do provider tiers (hospitals, PHC centers, CHWs and midwives) work together to coordinate patient care prior to admission and post-discharge?	<input type="checkbox"/> Yes, both pre-admission and post-discharge <input type="checkbox"/> Pre-admission only <input type="checkbox"/> Post-discharge only <input type="checkbox"/> No to both <input type="checkbox"/> Don't know
29. To what extent do PHC centers, CHWs and midwives receive feedback from hospitals on upward referral of high-risk MNCH cases?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know
30. To what extent do hospitals receive feedback from PHC centers, CHWs and midwives on downward referral of high-risk MNCH cases?	<input type="checkbox"/> Very frequently <input type="checkbox"/> Frequently <input type="checkbox"/> Occasionally <input type="checkbox"/> Seldomly <input type="checkbox"/> Very seldomly <input type="checkbox"/> Don't know

<p>31. How do community-based providers communicate with hospitals or PHC centers regarding managing high-risk or emergency MNCH cases? (Check all that apply)</p>	<p><input type="checkbox"/> No special communication mechanism  <input type="checkbox"/> Special text message (SMS) platform  <input type="checkbox"/> Dedicated hotline or 24-hour call center  <input type="checkbox"/> E-mail  <input type="checkbox"/> App/software (please specify) _____  <input type="checkbox"/> Fax  <input type="checkbox"/> Other (please specify) _____</p>
<p><b>Area 4: Performance Monitoring and Feedback</b>          “I’m now going to ask questions on performance monitoring and feedback related to this initiative.”</p>	
<p>32. Have you or your unit (hospital, PHC) received feedback on the performance of your organization in the pilot or initiative?</p>	<p><input type="checkbox"/> Yes (go to 33)  <input type="checkbox"/> No (go to 34)  <input type="checkbox"/> Don’t know (go to 34)</p>
<p>33. Explain how feedback on performance is used to improve care.</p>	<p><input type="checkbox"/> Feedback not used to improve care  <input type="checkbox"/> Regular team meetings to review and act upon performance findings  <input type="checkbox"/> Regular meetings with leadership to review and act upon performance findings  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Other (please specify) _____  <input type="checkbox"/> Don’t know</p>
<p>34. Have specific performance indicators been identified to measure MNCH patient transitions?</p>	<p><input type="checkbox"/> Yes (go to 35)  <input type="checkbox"/> No (go to 37)  <input type="checkbox"/> Don’t know (go to 37)</p>
<p>35. What performance indicators are used to measure MNCH transitions? (Check all that apply)</p>	<p><b>Process indicators</b>  <input type="checkbox"/> % of hospital provider staff who have regular contact with MNCH staff from PHC and community settings  <input type="checkbox"/> % of hospital provider staff who meet MNCH staff from PHC and community settings during training, supportive supervision or professional meetings  <input type="checkbox"/> % of hospital provider staff who know personally or can call someone from MNCH staff from PHC and community settings  <input type="checkbox"/> % of PHC and community providers who often or always receive feedback on outcomes on (upward) referral cases  <input type="checkbox"/> % of hospitals who often or always send feedback on outcomes on (downward) referral cases</p>

- \_\_\_ % of PHC facilities who often or always receive feedback on MNCH outcomes from hospitals
- \_\_\_ % of hospitals who often or always send feedback on MNCH outcomes to PHC and community providers
- \_\_\_ % of PHC and community providers who often or always send feedback on MNCH outcomes to hospitals
- \_\_\_ % of hospital staff who meet with staff on the MNCH team at PHC and community tiers as one team, at deliveries or regularly
- \_\_\_ % patients discharged that were formally referred to CHWs, midwives or PHC units
- \_\_\_ % high-risk MNCH patients with a care plan for follow up post-discharge
- \_\_\_ % discharge plans/records/checklists shared by hospitals/PHC centers with CHWs and midwives for discharged patients
- \_\_\_ % MNCH patients within optimal clinical indices (diabetes, hypertension, breast cancer screening, etc.)
- \_\_\_ Number of days post-discharge until follow up visit
- \_\_\_ Number of high-risk patients identified and appropriately managed
- \_\_\_ Number of emergency cases referred according to protocol
- \_\_\_ Proportion of patients receiving care that adheres to evidenced-based guidelines
- \_\_\_ Other (please specify) \_\_\_\_\_
- \_\_\_ Other (please specify) \_\_\_\_\_
- \_\_\_ Other (please specify) \_\_\_\_\_

**Outcome/output measures**

- \_\_\_ Neonatal mortality rate
- \_\_\_ Maternal mortality rate
- \_\_\_ % of facility-based deliveries
- \_\_\_ % of post-partum hemorrhage
- \_\_\_ % patients receiving tetanus vaccination
- \_\_\_ % pregnant patients prescribed iron supplements
- \_\_\_ Number of bed days post-partum
- \_\_\_ Incidence of eclampsia
- \_\_\_ Other (please specify) \_\_\_\_\_
- \_\_\_ Other (please specify) \_\_\_\_\_

	<input type="checkbox"/> Other (please specify) _____
36. How are performance indicators and data used to improve care? (Check all that apply)	<input type="checkbox"/> Not used to improve care <input type="checkbox"/> Performance is communicated to the coordination team <input type="checkbox"/> Performance is communicated to the system and organization leadership <input type="checkbox"/> Data are used in performance improvement efforts <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Don't know
<b>Area 5: Capacity Building</b> "I turn to a couple of questions on capacity building or training."	
37. Did staff participating in this initiative receive specific training on vertical integration in support of MNCH?	<input type="checkbox"/> Yes (go to 38) <input type="checkbox"/> No (go to 39) <input type="checkbox"/> Don't know (go to 39)
38. Which staff received specific training on vertical integration in support of MNCH? (Check all that apply)	<input type="checkbox"/> All staff in hospital and PHC centers and at community level <input type="checkbox"/> Leadership at hospital <input type="checkbox"/> Leadership at PHC centers <input type="checkbox"/> Leadership of MNCH programs <input type="checkbox"/> Doctors and physicians at hospital <input type="checkbox"/> Doctors and physicians at PHC centers <input type="checkbox"/> Nurses and support staff at hospitals <input type="checkbox"/> Nurses and support staff at PHC centers <input type="checkbox"/> Community health workers <input type="checkbox"/> Midwives <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> Other (please specify) _____
<b>Area 6: Provider-Patient Communication</b> "I now will ask a couple of questions on provider- patient communication related to vertically integrated care."	
39. How are patients made aware of care integration among provider tiers for MNCH and in this pilot or initiative? (Check all that apply)	<input type="checkbox"/> Patients are not made aware of care coordination <input type="checkbox"/> Patients are made aware through conversations with providers <input type="checkbox"/> Patients are given a phone number they can call if they have any questions on their care <input type="checkbox"/> Patients are given a brochure <input type="checkbox"/> Other (please specify) _____

	<input type="checkbox"/> Don't know
40. How do providers and patients communicate with each other regarding managing high-risk or emergency MNCH cases? <i>(Check all that apply)</i>	<input type="checkbox"/> No communication except during face to face visit at providers' unit <input type="checkbox"/> Text/SMS messaging <input type="checkbox"/> Hot line or 24-hour call center <input type="checkbox"/> E-mail <input type="checkbox"/> Face to face visit in patient's home <input type="checkbox"/> App/software <i>(please specify)</i> _____ <input type="checkbox"/> Paper-based tool <input type="checkbox"/> Other <i>(please specify)</i> _____
<b>Area 7: Overall Assessment and Lessons Learned</b> <i>"The final set of questions are open-ended and aim to get a sense of your overall assessment and of the lessons learned from the initiative."</i>	
41. Based on your experience with this initiative, what have been <u>facilitators</u> to vertically integrated care for MNCH?	
42. Based on your experience with this initiative, what have been <u>barriers</u> to vertically integrated care for MNCH?	
43. Based on your experience with this initiative, what are <u>main lessons learned</u> for improving future initiatives or scaling of this initiative?	

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# ANNEX 1: EXAMPLES OF PERFORMANCE MEASURES FOR VERTICAL INTEGRATION

We must measure the impact of healthcare innovations to know if they will lead to improvements. *Annex 1* provides examples of indicators used globally to measure the processes and impacts of vertical integration with a focus on chronic conditions and MNCH.<sup>1</sup>

This annex draws heavily on two resources. The first is *Building Blocks: Tools and Methods to Assess Integrated Care in Europe* authored by the Expert Group on Health Systems Performance Assessment and published in 2017.<sup>2</sup> This report includes extensive examples of integrated care metrics used by 17 European countries. It also includes a core set of indicators published by the World Health Organization in 2015. The second resource is the Care Coordination Measures Database, created by the U.S. Agency for Healthcare Research and Quality. The database includes tools and reference links.<sup>3</sup> A variety of other resources are also referenced in this annex, including documents from the National Quality Forum of the USA, the New Zealand Health Improvement and Innovation Resource Center, and the Canadian Institute for Health Information.

Vertically integrated care targets specific areas or gaps for integration, so that fragmentation is reduced in care delivery and in structural and policy domains. Comprehensive evaluation of vertical integration requires the assessment of two principle domains of care delivery: the enabling environment for integration (e.g., health systems, structures, programs and policies) and the degree of integration of patient care. It is critical that any evaluation include assessment of both components.<sup>4</sup>

In addition to the objectives of a health system (e.g., improving health outcomes, enhancing patient care experience and reducing cost), performance measurements must also reflect the complexity of integrated care systems, which operate at different tiers of service delivery: micro- (patient care), meso- (organizational context) and macro- (financing and policy context) levels.”<sup>5</sup> Furthermore, an understanding of local context and needs is essential to be able to successfully design and implement integrated care systems. No single approach will apply to every system in every environment, and a country’s measures for integrated care should be tailored to context specific goals, values and needs.

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<sup>1</sup> Links to reference materials offering more detailed information on performance indicators and methodologies are provided.

<sup>2</sup> *Blocks*

<sup>3</sup> Agency for Healthcare Research and Quality. US Department of Health and Human Service. *Care Coordination Measures Database*. <https://primarycaremeasures.ahrq.gov/care-coordination/>

<sup>4</sup> *Blocks*, pg. 2

<sup>5</sup> *Blocks*, pg. 4

Drawing on global experience, measures are categorized into six performance domains, defined in brief below:

- 1. System-level measures of community well-being and population health:** Measures of mortality associated with chronic diseases and other conditions can give us an idea about the effectiveness of medical care. Comparing deaths due to complications of chronic diseases to a benchmark can offer a window into the effectiveness of existing care processes for particular conditions.
- 2. Service proxies for population health outcomes:** Avoidable hospitalizations for selected health conditions, including those for ambulatory-sensitive conditions, can offer perspective into the effectiveness of ambulatory care and coordination between ambulatory and in-patient facilities in the management of these conditions. Understanding the factors that result in unplanned hospital re-admissions can offer insight into gaps in discharge planning and integration with ambulatory providers. Measures of ambulatory-sensitive conditions offer information about the effectiveness of ambulatory care systems.
- 3. Personal health outcomes:** Surveys that are intended to assess the patient's view of quality of life, ability to function independently, and self-manage chronic health conditions can be used to track improvements in care coordination and care integration over time. Including the patient perspective is an essential component of the assessment of the effectiveness of person-centered care models and systems.
- 4. Organizational processes and system characteristics:** Surveys and monitoring of the structure and function of care integration processes in an ambulatory setting and during transitions of care provide insight into the effectiveness of service coordination. These are structural and process measures that are in common use in many integrated delivery systems.
- 5. User and caregiver characteristics:** Another measure is patient experience. This metric involves surveying the patient's view of the quality of communication with care providers.
- 6. Maternal, Newborn & Child Health Indicators:** These are measures that can be used to evaluate care integration as it relates to maternal, newborn and child healthcare integration.

## Performance Measures for Vertical Integration

Summary	
<b>Domain 1: System-level measures of community well-being and population health</b>	
Measure	Amenable mortality
<b>Domain 2: Service proxies for population health outcomes</b>	
Measure	Potentially avoidable hospitalizations
<b>Domain 3: Personal health outcomes</b>	
Measure 1	Quality of life and independent living
Measure 2	Self-management
<b>Domain 4: Organizational process and system characteristics</b>	
Measure 1	Care-transitions
Measure 2	Emergencies
Measure 3	Care coordination and planning
<b>Domain 5: User and care experience</b>	
Measure	Self-management
<b>Domain 6: Maternal, newborn, and child health (MNCH) indicators</b>	
Measure 1	Coordination and communication
Measure 2	Care coordination and delivery referrals
Measure 3	Integrated care
Measure 4	Protocol management
Measure 5	Data
Measure 6	Vertically integrated PHC units

## Domain 1: System-level measures of community well-being and population health

	Example(s) of potential indicators	What question are you asking?	Measurement method
<b>Measure: Amenable mortality</b>	Mortality rates for selected chronic diseases, amenable to medical care	<p>What are the mortality rates of key chronic diseases, which might have been amenable to medical care, in the selected country/region under study?</p> <p>These are measures of the effectiveness of care provided to patients with chronic conditions.</p>	<p><u>Numerator</u>: number of deaths due to diabetes mellitus, ischemic heart disease, and stroke</p> <p><u>Denominator</u>: population <math>\leq</math> 75 years</p>
<b>References by indicator</b>	<p><b>Amenable mortality:</b>                      New Zealand Health Improvement and Innovation Resource Center: <a href="https://www.hiirc.org.nz/page/42610/draft-integrated-performance-and-incentive/?jsessionid=A411A36B4E0C96F6F3673B7A5A4C1179?contentType=251&amp;tab=7380&amp;section=35484">https://www.hiirc.org.nz/page/42610/draft-integrated-performance-and-incentive/?jsessionid=A411A36B4E0C96F6F3673B7A5A4C1179?contentType=251&amp;tab=7380&amp;section=35484</a></p>		

## Domain 2: Service proxies for population health outcomes

Example(s) of potential indicators	What question are you asking?	Measurement method
<b>Measure: Potentially avoidable hospitalizations</b>	<p>Hospitalization rates for selected health conditions, amenable to medical care</p> <p>What is the rate at which patients with key conditions are hospitalized in the selected country/region?</p> <p>By measuring these rates and comparing them to benchmarks, potentially avoidable hospitalization rates can be identified. These are measures of the effectiveness of care provided to patients with acute and chronic conditions and include important metrics of maternity and pediatric care.</p>	<p>AHRQ Prevention Quality Indicators (PQIs)</p> <ul style="list-style-type: none"> <li>• PQI 1 – Diabetes Short-Term Complications Admission Rate</li> <li>• PQI 2 – Perforated Appendix Admission Rate</li> <li>• PQI 3 – Diabetes Long-Term Complications Admission Rate</li> <li>• PQI 5 – Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate</li> <li>• PQI 8 – Heart Failure Admission Rate</li> <li>• PQI 9 – Low Birth Weight Rate</li> <li>• PQI 10 – Dehydration Admission Rate</li> <li>• PQI 12 – Urinary Tract Infection Admission Rate</li> <li>• PQI 14 – Uncontrolled Diabetes Admission Rate</li> <li>• PQI 15 – Asthma in Younger Adults Admission Rate</li> <li>• PQI 16 – Lower-Extremity Amputation among Patients with Diabetes Rate</li> </ul>
	<p>Hospital re-admission rates</p> <p>What is the rate at which patients make an unplanned return to the hospital within 30 days of discharge?</p> <p>This is an indicator of the effectiveness of discharge planning and of integrations between the hospital and community providers</p>	<p><u>Numerator</u>: number of unplanned all-cause 30-day readmissions.</p> <ul style="list-style-type: none"> <li>- Readmission defined as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission. All readmissions are counted as outcomes (except those that are considered planned).</li> </ul> <p><u>Denominator</u>: total number of patients discharged within last 30 days</p> <p>This claims-based measure can be used in either of two patient cohorts: (1) admissions to acute care facilities for patients aged 65 years or older or (2) admissions to acute care facilities for patients aged 18 years or older. The measure has been validated in both age groups.</p>

<p>Hospital admission rates for ambulatory care-sensitive conditions</p>	<p>What is the rate of hospitalization for patients with acute or chronic conditions that are amenable to management in an ambulatory care setting?</p> <p>This is a measure of the effectiveness of care provided in ambulatory care settings.</p>	<p><u>Numerator</u>: number of acute care hospitalizations for ambulatory care-sensitive conditions (ACSCs), defined as admission to an acute care hospital with one of the following as most responsible diagnosis:</p> <ul style="list-style-type: none"> <li>-Grand mal status and other epileptic convulsions</li> <li>-Chronic obstructive pulmonary disease</li> <li>-Asthma</li> <li>-Heart failure and pulmonary edema</li> <li>-Hypertension</li> <li>-Angina</li> <li>-Diabetes</li> </ul> <p><u>Denominator</u>: mid-year population age 75 and younger, per 100,000 (age adjusted)</p>
<p>References by indicator</p>	<p><b>Amenable hospitalization rates:</b></p>	
	<p><i>The US Agency for Healthcare Research and Quality:</i> <a href="http://www.qualityindicators.ahrq.gov/Modules/list_ahrq_qi.aspx">http://www.qualityindicators.ahrq.gov/Modules/list_ahrq_qi.aspx</a></p>	
	<p><i>Technical specifications on measurement of indicators and composites:</i></p>	
	<p><a href="https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V43/Composite_User_Technical_Specification_PQI_4.3.pdf">https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V43/Composite_User_Technical_Specification_PQI_4.3.pdf</a></p>	
<p><b>Hospital re-admission rates:</b></p>		
<p><i>National Quality Forum - All Cause Readmissions:</i> <a href="http://www.qualityforum.org/Publications/2012/07/Patient_Outcomes_All-Cause_Readmissions_Expedited_Review_2011.aspx">http://www.qualityforum.org/Publications/2012/07/Patient_Outcomes_All-Cause_Readmissions_Expedited_Review_2011.aspx</a></p>		
<p><b>Hospital admission rates for ambulatory care-sensitive conditions:</b></p>		
<p><i>Canadian Institute for Health Information:</i> <a href="https://www.cihi.ca/en/phc_policy_acsc_en.pdf">https://www.cihi.ca/en/phc_policy_acsc_en.pdf</a></p>		

### Domain 3: Personal health outcomes

	Example(s) of potential indicators	What question are you asking?	Measurement method
<b>Measure 1: Quality of life and independent living</b>	Patient self-reports on health, limitations in physical function and functional disabilities.	<p>How does the population of vulnerable elderly condition perceive their current quality of life and their ability to function independently?</p> <p>This is a proxy for measuring the quality of life and functional independence from the perspective of the patient. Provides an understanding of potential gaps in service delivery and assists with planning</p>	<p><u>Vulnerable Elders Survey (VES-13):</u></p> <p>VES-13 is used in community-dwelling populations to identify older persons at risk for health deterioration. It is a 13-question patient self-reported survey</p> <p>Example indicator in survey: In general, compared to other people your age, would you say that your health is: Poor, Fair, Good, Very Good, or Excellent?</p>
<b>Measure 2: Self-management</b>	Patient self-reported confidence in managing most of their health concerns.	<p>How can high-risk patients be identified to help reduce cost burden and improve patient outcomes?</p> <p>This metric helps identify high-risk patients, identifies services that those patients might require, and assesses the patient's confidence that the needed care will be available. It identifies remediable needs for each patient and directs the delivery of patient risk for subsequent costly care.</p>	<p><u>What Matters Index</u></p> <p>In contrast to complex computer-generated risk models, the <i>What Matters Index</i> is brief and patient self-reported.</p> <p>Example question: How confident are you that you can manage and control most of your health problems? Not very confident or somewhat confident (scored as 1); Very confident (scored as 0)</p>
<b>References by indicator</b>	<p><b>Vulnerable Elders Survey (Measure 1):</b></p> <p><i>RAND:</i>                      Measure Instrument: <a href="https://www.rand.org/content/dam/rand/www/external/health/projects/acove/docs/acove ves13.pdf">https://www.rand.org/content/dam/rand/www/external/health/projects/acove/docs/acove ves13.pdf</a>                      Scoring and Using Instrument: <a href="https://www.rand.org/health/projects/acove/survey.html#scoring">https://www.rand.org/health/projects/acove/survey.html#scoring</a>                      Article Source: <a href="https://www.rand.org/health/projects/acove/survey.html">https://www.rand.org/health/projects/acove/survey.html</a></p> <p><b>What Matters Index (Measure 2):</b></p> <p><i>What Matters Index:</i> <a href="https://doi.org/10.1371/journal.pone.0192475">https://doi.org/10.1371/journal.pone.0192475</a>                      Instrument: <a href="http://journals.plos.org/plosone/article/figure?id=10.1371/journal.pone.0192475.t001">http://journals.plos.org/plosone/article/figure?id=10.1371/journal.pone.0192475.t001</a>                      Article Source: <a href="http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0192475&amp;type=printable">http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0192475&amp;type=printable</a></p>		

## Domain 4: Organizational process and system characteristics

	Example(s) of potential indicators	What question are you asking?	Measurement method
<b>Measure 1: Care-transitions</b>	Activities of primary care office-based personnel that contributed to the development and/or implementation of a plan of care for a patient or family.	<p>What is the efficiency and effectiveness of care-coordination activities to improve care for patients?</p> <p>This metric evaluates the process of care coordination during care-transitions. Such coordination is an essential component of vertical integration. Gaps in care transition process management are identified at the individual and system level.</p>	<p>Care Coordination Measurement Tool (CCMT): This is a written form placed at office workstations and filled out by healthcare providers/staff at the time of care-transition</p> <ul style="list-style-type: none"> <li>- CCMT collects information (activities, resource-use, outcomes, time) on care coordination encounters to determine the cost of care coordination and related outcomes.</li> </ul>
<b>Measure 2: Emergencies</b>	<p>Frequency of communication between primary care and emergency departments.</p> <p>Speed of response to requests between primary care and emergency departments.</p>	<p>Are there structures in place for coordination of patient care between different tiers in the case of an emergency department (ED) visit?</p> <p>ED-home transitions are fraught with risk for complications and inadequate follow-up. This measure evaluates a system's ability to support patients during this vulnerable period.</p>	<p><u>Safe Transitions Best Practice Measures for Community Physician Offices</u> is a written form that measures communication between primary care and emergency departments, follow-up visits, and phone calls.</p>
<b>Measure 3: Care coordination and planning</b>	Number of follow-up visits after a missed prescription or appointment.	<p>How fragmented is the delivery of care for an individual patient?</p> <p>These metrics are commonly used in integrated delivery systems to evaluate the care provided to patients after an acute hospitalization. The major objectives are to</p>	<p><u>Coleman Measures of Care Coordination</u> Measures coordination of care post-hospital discharge, especially after missed appointments and prescriptions.</p>

	Information transfer to patient, patient and caregiver preparation, self-management support, and empowerment to assert preferences	avoid unnecessary readmissions and to offer appropriate follow-up care.	<u>Coleman Care Transitions Survey (CTM-3 or CTM-15)</u> This patient self-reported survey is administered at the point of discharge
<b>References by indicator</b>	<b>Development of patient care activity (Measure 1):</b>		
	<i>AHRQ:</i>		
	Measure Profile: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_5.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_5.pdf</a>		
	Measure Instrument: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_5.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_5.pdf</a>		
	PubMed Abstract: <a href="https://www.ncbi.nlm.nih.gov/pubmed/15121921">https://www.ncbi.nlm.nih.gov/pubmed/15121921</a>		
	<b>Safe Transitions Best Practice Measures for Community Physician Offices (Measure 2):</b>		
Measure Instrument: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_78.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_78.pdf</a>			
<b>Coleman Measures of Care Coordination (Measure 3):</b>			
Measure Profile: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_3.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_3.pdf</a>			
Measure Instrument: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_3.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_3.pdf</a>			
PubMed Abstract: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480400/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480400/</a>			
<b>Coleman Care Transitions Survey (Measure 3):</b>			
<i>CTM-3:</i>			
Measure Profile: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_9a.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_9a.pdf</a>			
Measure Instrument: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_9a.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_9a.pdf</a>			
PubMed Abstract: <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480381/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480381/</a>			
<i>CTM-15:</i>			
Measure Profile: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_9b.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_9b.pdf</a>			
Measure Instrument: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_9b.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_9b.pdf</a>			
PubMed Abstract: <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480381/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480381/</a>			

## Domain 5: User and caregiver experience

	Example(s) of potential indicators	What question are you asking?	Measurement method
<b>Measure: Self- management</b>	Patients' experience in receiving support for self-managing health	<p>How does the healthcare team support patient self-management of chronic illness?</p> <p>This measure evaluates the experience of patients through information on self-care. It is a measure of communication between providers and patients.</p>	<p><u>5As Patient Survey</u> 10-question patient/family self-survey</p> <p>Example indicator: My healthcare team helped me make a plan that I can use every day to take care of my health problems.</p>
<b>References by indicator</b>	<p><b>5As Patient Survey:</b>                      5A's Patient Survey: <a href="https://doi.org/10.1093/heapro/dal017">https://doi.org/10.1093/heapro/dal017</a>                      Measure Profile: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_67.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/profiles/CC_Profile_67.pdf</a>                      Measure Instrument: <a href="https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_67.pdf">https://primarycaremeasures.ahrq.gov/care-coordination/downloads/ccatlas/instruments/CC_Instrument_67.pdf</a>                      PubMed Abstract: <a href="https://www.ncbi.nlm.nih.gov/pubmed/16751630">https://www.ncbi.nlm.nih.gov/pubmed/16751630</a></p>		

## Domain 6: Maternal, Newborn and Child Health Indicators (MNCH)

	Example(s) of potential indicators	What question are you asking?	Measurement method
<b>Measure 1: Coordination and communication</b>	Regular contact between MNCH staff employed at different levels of care	Do MNCH staff at the PHC unit interact with the hospital MNCH team during patient referrals?	<u>Numerator</u> : number of MNCH referral cases where PHC directly communicated clinical information to referral clinic/hospital  <u>Denominator</u> : total number of MNCH referrals
	The percent of hospital staff who meet with MNCH staff as one team (during deliveries or regularly)	Within the healthcare facility (PHC unit/hospital), is there a multi-disciplinary team dedicated to MNCH?	<u>Numerator</u> : number of hospitals within catchment area who have dedicated MNCH teams  <u>Denominator</u> : total number of healthcare facilities within the catchment area
	Percentage of hospital/PHC unit staff who know/can call someone on a MNCH team at another facility	Do MNCH staff communicate with MNCH staff at other health facilities?	<u>Numerator</u> : number of MNCH staff members who have contact with other MNCH staff members at different health facilities within the past month  <u>Denominator</u> : number of MNCH staff members interrogated
<b>Measure 2: Care coordination during referrals</b>	Percentage of PHC units and staff who often or always receive feedback and/or outcomes on referral cases  Percentage of hospitals and staff who often or always send feedback and/or outcomes on referral cases	How do staff members at different levels of care coordinate during MNCH referral cases?	<u>Numerator</u> : number of MNCH staff members who have contact with other MNCH staff at different levels of care/different facilities at least once a week  <u>Denominator</u> : number of MNCH staff members interrogated
<b>Measure 3: Integrated care</b>	Cross-facility training sessions	Are MNCH workers at different levels of care trained together?	<u>Numerator</u> : members of MNCH staff who meet MNCH staff from other facilities during training, supportive supervision or other professional meetings  <u>Denominator</u> : total number of MNCH staff members interrogated

Measure 4: Protocol management	Use of co-produced MNCH emergency protocols	Do MNCH staff members at different facilities discuss emergency MNCH protocols?	<p><u>Numerator</u>: number of MNCH staff who report regular or occasional discussions with staff at other facilities on treatment protocols for MNCH emergencies</p> <p><u>Denominator</u>: total number of MNCH staff interrogated</p>
Measure 5: Data	Feedback reports on data communicated between MNCH staff at different facilities	Do MNCH staff members at different levels of care receive feedback on data or reports submitted?	<p><u>Numerator</u>: number of MNCH staff members who received feedback on latest data or report</p> <p><u>Denominator</u>: number of MNCH staff interrogated</p>
Measure 6: Vertically integrated PHC units	PHC units within a catchment area has links with secondary or tertiary healthcare units (including hospitals)	Does the PHC unit have formalized links with secondary or tertiary healthcare units for MNCH cases?	<p><u>Numerator</u>: number of clinics that have formal links with secondary or tertiary healthcare units</p> <p><u>Denominator</u>: number of MNCH staff interrogated</p>
References by indicator	<b>Contact between MNCH staff at different levels (Measure 1):</b>		
	Source: <a href="https://cdn2sph.harvard.edu/wp-content/uploads/sites/32/2014/10/Maternal-Newborn-Child-Continuum_PopRefBureau_Rep_2006.pdf">https://cdn2sph.harvard.edu/wp-content/uploads/sites/32/2014/10/Maternal-Newborn-Child-Continuum_PopRefBureau_Rep_2006.pdf</a>		
	<b>Hospital staff and MNCH staff meetings (Measure 1):</b>		
	Source: <a href="https://cdn2sph.harvard.edu/wp-content/uploads/sites/32/2014/10/Maternal-Newborn-Child-Continuum_PopRefBureau_Rep_2006.pdf">https://cdn2sph.harvard.edu/wp-content/uploads/sites/32/2014/10/Maternal-Newborn-Child-Continuum_PopRefBureau_Rep_2006.pdf</a>		
	<b>Hospital/PHC unit staff relationships with MNCH staff at other facilities (Measure 1):</b>		
<i>Quality indicators for integrated care:</i>			
Kröger E, Tourigny A, Morin D, et al. "Selecting process quality indicators for the integrated care of vulnerable older adults affected by cognitive impairment or dementia." BMC Health Services Research. 2007;7:195. doi:10.1186/1472-6963-7-195.			
<b>Referral feedback (Measure 2):</b>			
<i>Quality indicators for integrated care:</i>			
Kröger E, Tourigny A, Morin D, et al. "Selecting process quality indicators for the integrated care of vulnerable older adults affected by cognitive impairment or dementia." BMC Health Services Research. 2007;7:195. doi:10.1186/1472-6963-7-195.			
<b>Cross-facility training sessions (Measure 3):</b>			

*Source:* UNICEF & WHO “Tracking Progress towards Universal Coverage for Reproductive, Newborn and Child Health: The 2017 Report.” Washington, DC., 2017. License: CC BY-NC-SA 3.0 IGO.

**Co-produced protocols (Measure 4):**

*Source:* UNICEF & WHO “Tracking Progress towards Universal Coverage for Reproductive, Newborn and Child Health: The 2017 Report.” Washington, DC., 2017. License: CC BY-NC-SA 3.0 IGO.

**Feedback reports (Measure 5):**

*Source:* UNICEF & WHO “Tracking Progress towards Universal Coverage for Reproductive, Newborn and Child Health: The 2017 Report.” Washington, DC., 2017. License: CC BY-NC-SA 3.0 IGO.

**PHC unit links to secondary/tertiary healthcare facilities (Measure 6):**

*Source:* UNICEF & WHO “Tracking Progress towards Universal Coverage for Reproductive, Newborn and Child Health: The 2017 Report.” Washington, DC., 2017. License: CC BY-NC-SA 3.0 IGO.

# ANNEX 2: COMPLEMENTARY TOOLS FOR VERTICAL INTEGRATION

The following are three additional vertical integration tools that can be used in conjunction with the Vertical Integration Diagnostic and Readiness Tool.

## S.M.A.R.T. Discharge journal

The S.M.A.R.T. Discharge journal was developed to improve communication between patients and caregivers during the hospital stay and after the patient discharge. Its objective is to reduce re-hospitalizations and engage patients in their care. *Be Smart, Leave S.M.A.R.T.* is a worksheet given to the patient at hospital admission which consists of 5 guidelines: Signs, Medications, Appointments, Results and Talk. A registered nurse and physician will discuss and write down any signs (“S”) or symptoms that the patient should be alert for. They will also cover any medications (“M”) that the patient is prescribed. The physician will encourage the patient to ask any questions related to the medication to ensure there is no misunderstanding. Any future appointments (“A”) will be discussed with the patient and recorded in the worksheet. The physician or nurse will discuss any pending test results (“R”) that may not be available at the time of discharge. Lastly, both the patient and provider will be reminded and encouraged to talk (“T”) to ensure that the patient leaves the hospital ready and confident. When the patient is about to be discharged, he or she will go through the “SMART Stop”, which will assure that all of the information in the S.M.A.R.T. journal is accurate and comprehensible before taking the journal home.

Link: <http://www.ihl.org/resources/Pages/Tools/SMARTDischargeProtocol.aspx>

## Taking Care of Myself: A Guide for When I Leave the Hospital

This tool was developed to help patients keep track of their tasks and responsibilities post-hospital discharge. This guide provides the patient with a medication and appointment schedule that can be filled out with a physician or a nurse prior to discharge. Hospital staff should encourage the patient to write down any questions or concerns that may come up while at home in the dedicated section of the guide and instruct the patient to bring the guide to their future consultations to address these questions and concerns. The patients are encouraged to share this guide with family, friends and anyone who is willing to help take care of them to ensure that the

The screenshot shows the top portion of the 'Be Smart, Leave S.M.A.R.T.' worksheet. It includes a header with the title and a space for the patient's name. Below the header are five main sections, each with a corresponding icon and a set of lines for notes: 'Signs I should look for and who I should call when I leave:', 'Medication notes:', 'Appointments I will go to:' (with sub-sections for 'Appointments already scheduled' and 'Appointments I need to schedule'), 'Results for follow-up:', and 'Talk with me more about at least three things:'. At the bottom, there is a footer with the contact information: 'Call askAMMC at 443-481-4000 for urgent health questions after you leave the hospital.'

The screenshot shows a form titled 'When are my next appointments?'. It contains a table for recording appointment details:

Day	Date
Time	
Doctor's name	Specialty
Address	
Reason for appointment	
Doctor's phone number	

Below the table is a section titled 'Questions for my appointment'. It asks the patient to check any of the boxes below and write notes to remember what to discuss with their doctor. The questions are:

- I have questions about:
- My medicines \_\_\_\_\_
- My test results \_\_\_\_\_
- My pain \_\_\_\_\_
- Feeling stressed \_\_\_\_\_
- Other questions or concerns \_\_\_\_\_

patient follows the medication and appointment schedule. This guide should be used across different levels of care. The tool is patient focused, centralizing appointments, medications and patient concerns in one booklet.

Link: <http://www.ahrq.gov/patients-consumers/diagnosis-treatment/hospitals-clinics/goinghome/index.html>

## ACP Specialty Outpatient Referral Request Checklist

The ACP Specialty Outpatient Referral Request is a checklist designed to help outpatient providers ensure that all vital information is sent to the provider the patient is being referred to, facilitating care coordination. The information covered in the checklist includes:

Patient information: Patient name, demographics, contact information, referring doctor and insurance status.

Referral information: specific clinical question to be addressed, level of urgency, pending test results.

Patient's medical data set: current problem list, updated list of medications.

Care coordination information: request that the referring provider be informed when the referral patient is received and treated.

The checklist attempts to minimize room for error and improve communication between providers. This information should be included with all referrals, it can be communicated through any of several means including a paper-based referral form, a detailed clinical note from last appointment or a template within the Electronic Medical Record.

Link:

[https://www.acponline.org/system/files/documents/clinical\\_information/high\\_value\\_care/clinician\\_resources/hvcc\\_toolkit/hvcc\\_project/generic-referral-to-subspecialist-practice.pdf](https://www.acponline.org/system/files/documents/clinical_information/high_value_care/clinician_resources/hvcc_toolkit/hvcc_project/generic-referral-to-subspecialist-practice.pdf)

## Specialty Out-Patient Referral Request Checklist

*(This information, which is recommended to be included with all referrals, can be communicated through any of several means including a paper-based referral form, detailed clinical note from last appointment or a template within the Electronic Medical Record)*

### 1. Patient demographics and scheduling information

- a. Patient name, demographics, and contact information (including surrogate if appropriate)
- b. Considerations that may require special arrangements by the consultant such as severe vision or hearing loss, non-English language preference, cognitive deficits, cultural factors, preference regarding who to include in treatment planning etc.
- c. Insurance company name/type of coverage
- d. Referring provider name and contact information (including method for direct contact for urgent issues)
- e. Indicate that patient (or surrogate) understands and agrees with the purpose of the referral.
- f. If a face-to-face appointment is requested, indicate whether: (Choose one)  
 the patient will call to schedule an appointment  
 the specialty practice should contact the patient

# ANNEX 3: SURVEY SOLUTIONS INSTRUCTIONS

**Survey Solutions** is a free online data collection software developed by the World Bank, which can be used to digitally implement the JLN Vertical Integration Diagnostic and Readiness Tool<sup>1</sup>. This software provides a cost-effective solution to the organization and collection of complex survey data to enable data analysis and ensure quality. Survey Solutions is also easily modifiable, making the software particularly well-suited to be used with the JLN tool.

Some benefits provided by Survey Solutions include:

- It reduces the number of coding errors. The software makes it impossible to enter values outside a given range. Supervisors may also view and check the collected information as soon as the interviewers finish the interviews, together with possible error reports. Automated routing reduces the incidence of missing data.
- Changes in the structure of the questionnaire can be instantly reflected on the interviewers' devices. This allows for last-minute updates or corrections.
- The software simplifies conducting surveys with dynamic structures, where the questions to be asked will vary depending on the answers given by the respondent. For instance, if a respondent answers “yes” to the question “Have formal agreements been established between health providers at different levels of care?”, further questions will automatically appear to collect details on these agreements.

Survey Solutions has a simple, intuitive design, making it possible for individuals with minimal or no technical experience to operate the software. Administrators assign interviews and review responses using the online data collection software while interviewers can conduct interviews using the Survey Solutions App on an Android tablet<sup>2</sup>. Data from completed surveys is then electronically transmitted to a server that hosts all survey responses. Supervisors can access this server and are able to export data to statistical software (e.g., STATA, SPSS, Excel) for analysis.

The following five steps must be taken to implement Survey Solutions (described in detail below):

- 1. Gaining access and modifying the JLN Vertical Integration Diagnostic and Readiness Tool**
- 2. Creating a server to host all survey responses**
- 3. Determining team roles and designating assignments for each team member**

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<sup>1</sup> The tool has already been uploaded to the platform

<sup>2</sup> Survey Solutions is only available on Android tablets. Purchase, maintenance, and/or repair costs should be included in the implementation budget.

4. Conducting interviews and uploading them to the server
5. Exporting the data from Survey Solutions to Stata, SPSS and Excel

### Step 1: Gaining access and modifying the JLN Vertical Integration Diagnostic and Readiness Tool

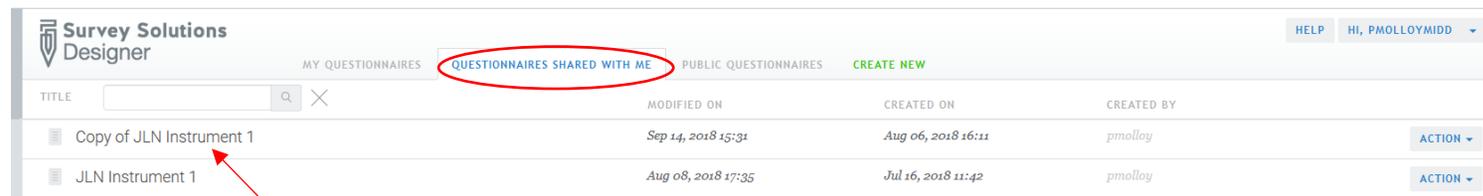
First, the implementation team must create a Designer account at the website address below:

<https://designer.mysurvey.solutions/account/login>

The Survey Solutions Designer account will allow the implementation team to make modifications to the tool, including adapting it to country/regional context, removing selected sections, and deleting questions.

During the account creation process, the administrator will be prompted to associate an email address with the account. Once the account is created, send an email to [jln.vi@acesoglobal.org](mailto:jln.vi@acesoglobal.org) to request access to the online version of the JLN tool (confirmation may take up to two workdays). Access can only be granted to existing designer accounts. Once access has been granted, log in to the Designer account and click on the Designer Solutions logo at the top left of the page. Then, select “Questionnaires shared with me” and click on the name of the tool; this will give the implementation team access to the tool (see screenshot 1 below). Once the tool is selected, select the questions or instrument to be modified and modify either the question or the set of responses. You can also delete questions or instruments by right clicking on the questions/instrument to be deleted. The modifications will be automatically saved.

Screenshot 1: Modifying the Tool using the Survey Solutions Designer platform



**Note:** If the implementation team decides to delete questions, please examine both the preceding and the succeeding questions to ensure that they are consistent. Furthermore, please be aware of skip patterns. Skip patterns involve questions that depend on responses to preceding questions. For example, a “yes” response to the question “Are you aware of any vertical integration initiatives?” indicates that the subsequent question(s) should be asked by the interviewer; conversely, a “no” response would mean the subsequent question(s) are no longer relevant, and the interviewer should skip ahead to a designated question. If a question enabling a skip pattern is deleted, follow-up questions should be deleted as well.

### *Translating the Tool*

The Survey Solutions platform allows the implementation team to translate the content of the questions without losing the structure of the tool.

To translate the tool, the administrator should log in to his/her Designer account and select the survey he/she wishes to translate. Once the survey is selected, the administrator should click on the translation icon in the menu on the left. Then he/she should click on “Get template for Excel” and download the file. The translator can then translate all of the survey content in this Excel file and then upload it back into Survey Solutions by clicking on the translation icon on the left side of the Designer account survey webpage and selecting “upload”.

Once the tool modification is finalized, the implementation team can move to Step 2.

### **Step 2: Creating a server to host all survey responses**

The server allows the implementation team to collect and store all survey responses as well as create different roles for its team (supervisors and interviewers). It is a requirement for the data collection phase.

The administrator should request a new server by following these steps:

- i. *Navigate to the self-service server portal.* Go to the self-service server portal (link: <https://mysurvey.solutions>). Scroll to the bottom of the page and select “Request a new server.”

Reminder:

**Designer account:** allows user to modify the survey and the questions

**HQ account:** does not allow user to modify the survey, allows user to make assignments and review interviews from team members.

Note: These are two separate accounts with separate user names and passwords.

- ii. *Log in using Designer account username and password.*
- iii. *Create a new server request.* From the Create Request menu, select “New server request”.
- iv. *Complete the server request form.* Please provide all requested information as accurately as possible. When asked about data hosting, select “World Bank Cloud”. Contact the support team if you have any questions regarding the survey request form.

The administrator will receive an email within 48 hours confirming the creation of the server. The email will also include login information for his/her account (referred to henceforth as HQ (headquarters) account).

### **Step 3: Determining team roles and designating assignments for each team member**

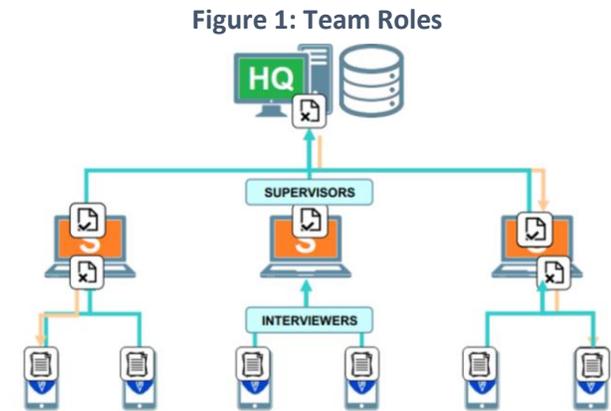
There are three roles (shown in Figure 1) within the My Survey Solutions tool:

- i. Administrator/Headquarters (HQ):
  - a. Builds a team by inviting individuals to be supervisors or interviewers
  - b. Can assign interviews to supervisors and interviewers
  - c. Can review and approve the data collected
  - d. Can export the data collected
- ii. Supervisor:
  - a. Supervises a team of interviewers
  - b. Can assign interviews to his/her team of interviewers
  - c. Can review interviews conducted by interviewers he/she is responsible for, and accept or reject interviews
- iii. Interviewer:
  - a. Uses the Survey Solutions app instead of the server website
  - b. Is responsible for conducting interviews
  - c. Must send data collected after every interview to his/her supervisor by synchronizing the app

## Assigning Supervisor and Interviewer Roles

To assign supervisor and interviewer roles, the administrator must log in to his/her HQ account on the server website<sup>3</sup> using the username and password provided via email by the Survey Solutions team when the server was created.

Once logged in, the administrator should upload the survey he/she wishes to implement. (Note: it is assumed that at this point the survey is final, and no further modifications will be made). To do this, the administrator must go to “Survey Setup” in the menu, select “Questionnaire”, and then select “Import Questionnaire” at the top left of the page (see screenshot 2 below). Next, the administrator will be re-directed to log in to his/her Designer account (reminder: the HQ account and Designer accounts are different accounts with different login information). After logging in to the Designer account, the administrator should select the final version of the survey<sup>4</sup>. If the survey is modified after this point, the administrator will have to upload the latest version of the survey by repeating the process detailed above.



### Screenshot 2: How to import the questionnaire to the HQ account

Survey Setup **IMPORT QUESTIONNAIRE**

Click Import Questionnaire button to load a questionnaire from Designer  
Click on a questionnaire from the list to create interview assignments

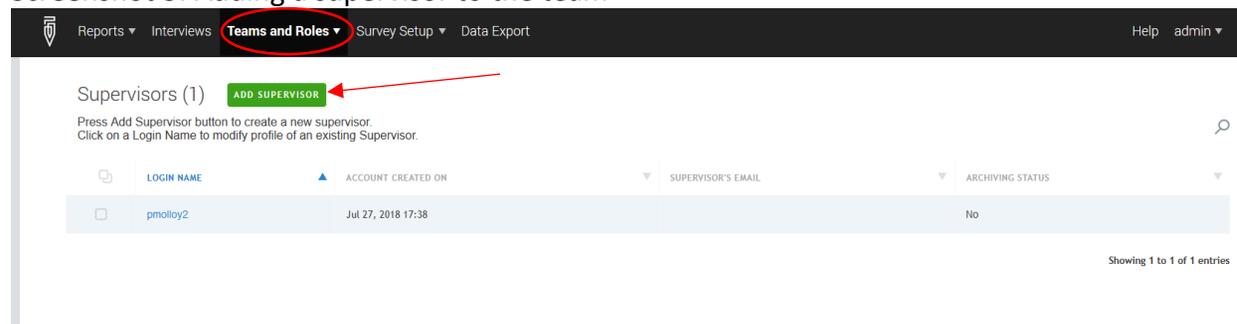
QUESTIONNAIRE	VERSION	IMPORTED ON	MODIFIED ON	CREATED ON
JLN Instrument 1	5	Aug 09, 2018 16:24	Aug 02, 2018 14:57	Jul 16, 2018 11:42
JLN Instrument 1 bis	1	Aug 06, 2018 17:30	Aug 02, 2018 14:57	Aug 06, 2018 17:11
JLN Instrument 1	4	Aug 02, 2018 14:58	Aug 02, 2018 14:57	Jul 16, 2018 11:42
JLN Instrument 1	3	Aug 02, 2018 14:34	Aug 02, 2018 14:31	Jul 16, 2018 11:42
JLN Instrument 1	2	Aug 02, 2018 11:09	Aug 02, 2018 11:07	Jul 16, 2018 11:42

<sup>3</sup> <https://XXXXX.mysurvey.solutions>; XXXXXX corresponding to the name chosen during the server request. This web address can also be found in the server confirmation email sent by Survey Solutions after the creation of the server.

<sup>4</sup> Modifications can only be made in the Designer account and NOT the HQ account. Subsequent modifications to the survey made in the Designer account will not be reflected in the survey previously uploaded to the HQ account. In other words, any modifications made to the survey in the Designer account after uploading a version in the HQ account will require a new upload in order that said modifications are reflected in the HQ account.

After importing the questionnaire, the administrator will be able to add supervisors and interviewers to the team. The administrator must add a supervisor before adding any interviewers. To do this within the HQ account, select “Team and Roles”, followed by “Supervisors”, then click on “Add Supervisor”. The administrator will be required to create a username and a password for each supervisor and, if the information is available, fill-in additional contact details. Then, the administrator must send each supervisor an email with their individual login credentials and the server address<sup>5</sup> (<https://XXXX.mysurvey.solutions>); supervisors will not receive an automatic email notification when they are added. To log in, supervisors should enter the server address into their internet browser and then log in using the username and password set by the administrator.

### Screenshot 3: Adding a supervisor to the team



Repeat this process for interviewers, with the additional step of assigning a supervisor to each interviewer. Along with login information, the administrator should send interviewers a link to download the interviewer app for Android, which can be found here: <https://demo.mysurvey.solutions/Download> or by typing in the server address <https://XXXX.mysurvey.solutions> in the browser of an Android device.

Interviewers should download the app and login to their account on the Android device they plan to use for interviews, preferably an Android tablet. To login, in addition to the username and password provided by the administrator, interviewers should also enter the address of the server (<https://XXXX.mysurvey.solutions>) in the “synchronization endpoint” field. Once the

<sup>5</sup> <https://XXXXX.mysurvey.solutions>; XXXXXX corresponding to the name chosen during the server request. This web address can also be found in the server confirmation email.

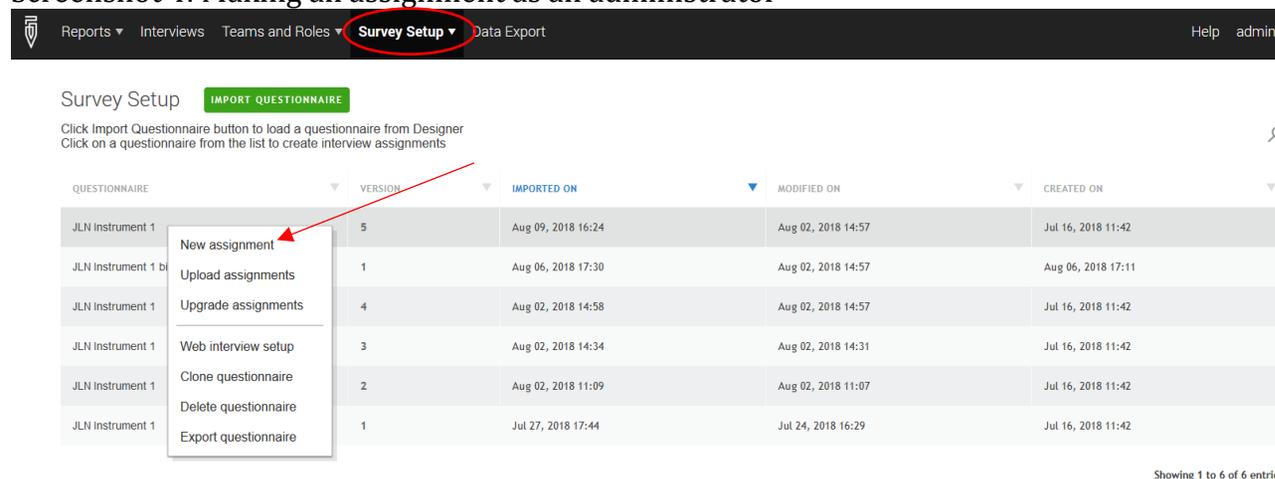
team members have been registered and they have received their login information from the administrator, the administrator can begin making assignments to different team members.

### Creating Assignments

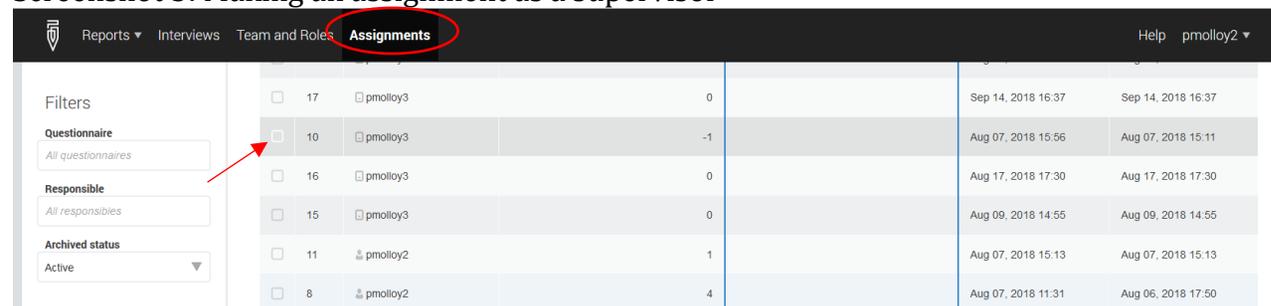
The administrator is able to assign interviews to specific interviewers. He/she can also allow a supervisor to assign interviews to different members of his/her team. It is recommended that the administrator assign surveys to the supervisor and allow the supervisor to redistribute assignments among his/her team, as supervisors will have more information on their team members' availability.

To create assignments on the server website, the administrator should click on "Survey Setup", followed by "Questionnaire". Then, the administrator should select the questionnaire they wish to assign to a team member. Next, the administrator should click on "New assignment" and select the individual that will perform this task and the number of interviews to be performed. Once the administrator assigns interviews to a supervisor, the supervisor can redistribute the assignments among his/her team by logging in to the server website, clicking on "Assignments", checking the box to the left of the assignment and clicking on assign.

### Screenshot 4: Making an assignment as an administrator



Screenshot 5: Making an assignment as a supervisor



### Tasks and compatible devices

Task	Team member responsible	Android tablet (interviewer app)	Android smartphone (interviewer app)	Laptop computer
Modify the tool	Administrator	✗	✗	✓
Make assignments to interviewers	Administrator, Supervisors	✗	✗	✓
Conduct the interviews with no internet connection	Interviewers	✓	✓	✗
Conduct the interviews with an internet connection	Interviewers	✓	✓	✓
Review interviews	Administrator, Supervisors	✗	✗	✓
Export data from interviews	Administrator	✗	✗	✓

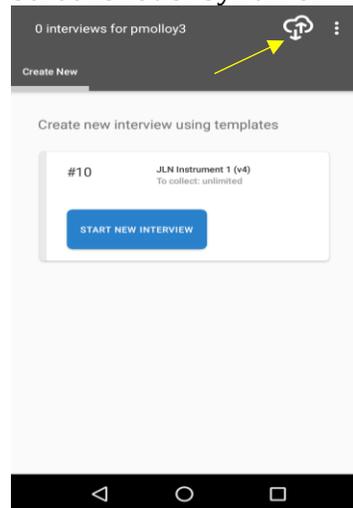
#### Step 4: Conducting interviews and uploading them to the server

The data entry software can be used to conduct interviews with or without connection to the internet. In any case, the interviewer will not be able to conduct the interview if he/she has not been assigned an interview by the supervisor or administrator (see step 3). If using an Android device, the interviewers must download the Survey Solutions app prior to the interviews. To log in, in addition to the username and password provided by the administrator, interviewers should also enter the address of the server (<https://XXXX.mysurveysolutions>) in the synchronization endpoint field.

With an internet connection on the site of the interview: the interviewer can conduct the interview using either an Android device or a laptop. If using an Android device, the interviewer must synchronize their app on the Android device *before* they conduct any interviews. To synchronize the app, interviewers must login to the interviewer app using the credentials sent by the administrator while they are connected to the internet and select the cloud at the top right of the screen.

To start the interview, after synchronizing, interviewers must login to the app and select “Start new interview”. Then, they must enter the responses provided by the interview respondent. Interview respondents should also be provided with a paper copy of the specific instruments from the JLN tool that are being applied. Once the interview is over, the interviewer must synchronize the app to upload survey responses by selecting the cloud at the top right of the screen on the Survey Solutions app.

Screenshot 5: Synchronizing on the Survey Solutions Interviewer app



If using a laptop, the interviewer should log in to the server website<sup>6</sup> using his/her credentials, click on his/her assignment and select “Start new interview”. Then the interviewer should click on the instrument to be applied and enter the respondent’s answers. Data will be automatically uploaded once the interviewer finalizes the interview.

Without an internet connection on the site of the interview: Once interviews have been assigned, interviewers must synchronize their app on the Android device *before* they conduct any interviews and while they have internet access. To synchronize the app, interviewers must login to the interviewer app while they are connected to the internet and select the cloud at the top right of the screen. After receiving the assignment and synchronizing their app, interviewers no longer require an internet connection; they can go to the field and conduct their assignment(s).

To start the interview, interviewers must login to the app and select “Start new interview”. Then, they must enter the responses provided by the interview respondent. Interview respondents should also be provided with a paper copy of the specific instruments from the JLN tool that are being applied. Once a set of interviews are over (for example at the end of the day), the interviewer must synchronize the app to upload survey responses as soon as he/she has internet access. Once the survey data is synchronized and uploaded, both supervisors and administrators will be able to review survey responses.

### **Step 5: Exporting the data from Survey Solutions to Stata, SPSS and Excel**

Once the interviews are completed and survey responses are uploaded to the servers, the data collected can be exported for analysis. Prior to exporting the data, the administrator must approve the interviews. To do this, after logging in to the server website, the administrator should click on “Report”, followed by “Surveys”. Next, he/she must click on the number corresponding to the assignment in the “completed” column and the “approved by supervisor” column. Then, the administrator can open the interview, review it and approve it. Only interviews that are approved by the administrator will be exported, as he/she is the only person allowed to export survey results.<sup>7</sup>

In order to export the collected data, once the administrator has approved the interviews, the administrator should log in to the server website, select “Export Data” in the menu at the top of the page, and select the desired version of the questionnaire

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<sup>6</sup> <https://XXXXXX.mysurvey.solutions>; **XXXXXX** corresponding to the name chosen during the server request

<sup>7</sup> In addition to the administrator, supervisors can also approve interviews made by their group of interviewers by completing the steps above within their account; however, this is not a necessary requirement.

in the menu on the left and the format in which the data will be exported. To download to Excel format, the data must first be downloaded in either Stata or SPSS format, opened in Stata or SPSS, and then exported in Excel format.

**Additional Resources:**

Designer instructions: <http://siteresources.worldbank.org/INTCOMPTOOLS/Resources/8213623-1380598436379/designer.pdf>

HQ instructions: <http://siteresources.worldbank.org/INTCOMPTOOLS/Resources/8213623-1380598436379/headquarter.pdf>

Supervisor instructions: [http://siteresources.worldbank.org/INTCOMPTOOLS/Resources/8213623-1380598436379/Supervisor\\_manual.pdf](http://siteresources.worldbank.org/INTCOMPTOOLS/Resources/8213623-1380598436379/Supervisor_manual.pdf)

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