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Building Better Programs

A STEP-BY-STEP GUIDE TO USING KNOWLEDGE MANAGEMENT IN GLOBAL HEALTH

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The Knowledge Management Road Map is an adapted version of the widely used P Process that was developed by the Johns Hopkins Center for Communication Programs (CCP) to provide step-by-step guidance for strategic health communication. The Knowledge Management Road Map and this guide draw on more than 40 years of collaborative work between CCP and the United States Agency for International Development to share family planning and related global health knowledge around the world.

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Discover our family of resources…..

This guide is part of *The Knowledge Management Collection*, a family of resources designed for global health professionals to help them understand, use, and train others on knowledge management approaches, tools, and techniques.

The Knowledge Management Road Map

A five-step systematic process for generating, collecting, analyzing, synthesizing, and sharing knowledge, the Knowledge Management Road Map guides global health workers and professionals in applying knowledge management systematically and strategically in their programs.

The Knowledge Management Pocket Guide for Global Health Programs

The Pocket Guide provides a basic overview of the Knowledge Management Road Map and serves as quick reference on key steps for applying the Road Map to global health programs.

Building Better Programs: A Step-by-Step Guide to Using Knowledge Management in Global Health

Using the Knowledge Management Road Map as a foundational framework, this detailed guide demonstrates how to develop and implement a systematic knowledge management strategy to improve program efficiency and effectiveness.

Knowledge Management Training Package for Global Health Programs

Comprising trainer's guides, presentation slides, exercises, tools, and templates, the Knowledge Management Training Package is a comprehensive set of training materials to develop staff skills and capacity in knowledge management generally and in specific knowledge management approaches, such as share fairs and content management.

All resources are available for download at www.k4health.org

Contents

Acronyms

CCP	Johns Hopkins Center for Communication Programs
FP2020	Family Planning 2020
HIP	High-Impact Practice
IBP	Implementing Best Practices
ICMM	Improving Contraceptive Method Mix
ICT	Information and Communication Technology
IUD	Intrauterine Device
K4Health	Knowledge for Health
KM	Knowledge Management
LARCs	Long-Acting Reversible Contraceptives
PMs	Permanent Methods
PANCAP	Pan Caribbean Partnership Against HIV/AIDS
SMART	Specific, Measurable, Appropriate, Realistic, and Timely
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
WHO	World Health Organization

About This Guide

Why Use This Guide?

All global health workers and professionals—from community health workers and physicians to program managers and policy makers—need access to high-quality scientific evidence and programmatic experience to do their jobs effectively. With this knowledge, health professionals can help save and improve people's lives. Knowledge management (KM) is a multidisciplinary approach to better share and apply this critical knowledge and expertise at global and regional levels and, especially, at various levels of a country's health system. The **Knowledge Management Road Map**, developed by the Knowledge for Health (K4Health) Project at the Johns Hopkins Center for Communication Programs, is a systematic process for using KM in global health programs. This guide provides detailed guidance for how to apply the Knowledge Management Road Map.

This guide will help you to:

- Implement a systematic KM strategy to enhance the efficiency and effectiveness of your health programs

- Choose the appropriate mix of KM tools and techniques for sharing and using critical knowledge in your health programs

- Understand how to put the Knowledge Management Road Map into action through a practical program example

Who Is This Guide For?

The primary audience for the guide is global health program managers with responsibility for implementing and overseeing interventions, such as KM, to improve the efficiency and effectiveness of health programs. However, the guide may also be useful for global health professionals working across any level of the health system, such as frontline health workers, clinic providers, policy makers, or donors, who play a role in KM activities—whether they recognize those activities explicitly as KM or not.

The Knowledge Management Road Map focuses on KM as a *process*, not just a single product or activity. While there may be instances in which an organization or project decides to implement a specific KM tool or technique—such as convening a share fair, conducting usability testing on a website, or posting a member directory online—our goal in sharing this Road Map is to encourage the use of KM systematically and strategically in global health programs to promote continual knowledge sharing and application that evolves with changing conditions.

Strategic use of KM does not mean you need a large budget and unlimited resources. Even with a small budget, you can use the Knowledge Management Road Map to apply KM strategically in your global health programs. The Road Map is meant to guide you through the strategic process, starting first with assessing your health information needs and formulating a strategy for your KM activities, but you can scale the specific tasks within each step of the Road Map according to your needs and budget.

BUILDING BETTER PROGRAMS

What Is the Knowledge Management Road Map?

The Knowledge Management Road Map is a five-step systematic process for generating, collecting, analyzing, synthesizing, and sharing knowledge in global health programs.

- **Step 1: Assess Needs** to understand the extent of the health program challenge and identify how KM may help solve it

- **Step 2: Design Strategy** to plan how to improve your health program using KM interventions

- **Step 3: Create and Iterate** using new KM tools and techniques or adapting existing ones to meet your health program's needs

- **Step 4: Mobilize and Monitor** by implementing KM tools and techniques, monitoring their effects, and adapting your approaches and activities to respond to changing needs and realities

- **Step 5: Evaluate and Evolve** to explain how well you achieved your KM objectives, identify factors that contributed to or hindered your intervention's success and its impact on program outcomes, and use these findings to influence future programming

How Is This Guide Organized?

For each step of the Knowledge Management Road Map, the guide includes:

- An **overview** of the step, including its **goal**
- **Tasks** to complete within each step
- Intended **outputs** as a result of successfully completing the step
- A practical **case study** of how a particular project—in this instance, the Improving Contraceptive Method Mix (ICMM) Project in Indonesia—put the step into action

Although the guide presents each step sequentially, in practice, the steps often overlap. While some of the steps, most notably Step 4: Mobilize and Monitor and Step 5: Evaluate and Evolve, are not described until the end of the Knowledge Management Road Map, in practice, those tasks need to be discussed and planned for early in the process, during Step 2: Design Strategy.

In addition to the five key steps of the Knowledge Management Road Map, **three cross-cutting concepts of collaborating, learning, and adapting** (CLA) are woven throughout the process. The CLA Framework provides a flexible approach to support and enhance KM and ongoing learning for more effective program cycle implementation, as promoted by the Bureau for Policy, Planning, and Learning at the United States Agency for International Development (USAID).

Each CLA concept can be applied to health programs:

Collaborating involves engaging with key stakeholders to understand the local context, design health programs appropriately, and keep abreast of changes. It also involves coordinating efforts within an organization and among partners and other stakeholders to increase productivity and extend the organization's influence and impact beyond its program funding.

Learning occurs before, during, and after program implementation. When health professionals learn, they generate, capture, analyze, share, and apply information and knowledge to improve programs. Programs should pause periodically to reflect on and synthesize new learning, and then intentionally share and validate that learning with other partners, donors, and implementers.

Adapting within a health program requires application of the learning that occurs and making iterative course corrections during implementation to respond to changing needs, priorities, and realities. Such adaptations are crucial to increasing the impact of programs.

TABLE 1

How to Apply the Collaborating, Learning, and Adapting Framework in the Knowledge Management Road Map

CLA Framework	Step 1: Assess Needs	Step 2: Design Strategy	Step 3: Create and Iterate	Step 4: Mobilize and Monitor	Step 5: Evaluate and Evolve
Collaborating	Involve key stakeholders both in planning the needs assessment and as respondents to ensure you design the KM intervention appropriately.	Engage key stakeholders in designing the KM strategy to ensure inclusion and ownership.	Develop an interdisciplinary KM team within your organiza- tion and across partners to make the best use of limited resources and avoid duplicating efforts.	Coordinate with team members, partners, and other stakeholders to implement and monitor the KM intervention.	Engage key stakeholders early to decide what type of evaluation you need and later to disseminate and help interpret the evaluation findings.
Learning	Draw on existing information about KM needs, such as previous needs assessments, management reports, and program evaluations; share and reflect on current findings with stakeholders.	Apply learning from needs assessment findings to design an appropriate KM strategy that fills identified needs and gaps.	Gather, share, and use feedback from stakeholders and users to incrementally improve your KM tools and techniques.	Review monitoring data and other sources of information, such as after-action reviews and pause-and- reflect sessions, with team members and partners to uncover what is and is not working well.	Document and share emerging, promising, and best practices, as well as challenges, from your KM initiative.
Adapting	Adapt previously conducted needs assessments to meet current needs and priorities by, for example, adjusting the methodology to focus on the most feasible or useful approaches or by fine-tuning the questions asked.	Make course corrections to the KM strategy over time to respond to changing needs and priorities.	Make iterative design changes to your KM tools and techniques to ensure they meet your audience's needs.	Implement any necessary changes to keep the KM initiative on track to achieve deliverables and program outcomes, and consider whether changes are needed to your monitoring and evaluation indicators to ensure they still reflect important program components.	Use the evaluation findings to guide incremental changes to your KM initiative or to replicate or scale up the KM strategy in another health program.

These three cross-cutting concepts are presented in *Step 1: Assess Needs, Step 2: Design Strategy,* and *Step 4: Mobilize and Monitor.* However, it is important to stress that each of these concepts applies to all the steps of the Knowledge Management Road Map (see Table 1). You can find more information about the CLA Framework on the [CLA Toolkit](#).

What Is Knowledge Management?

Information and knowledge are essential assets for any organization, including health care organizations and programs. When health care providers, program managers, and policy makers use the latest evidence and experience to inform their decisions, they can provide high-quality services to their clients and patients, develop effective policies, reduce duplication of effort, and increase efficiencies. These results, in turn, ultimately support better health outcomes for people.

At the crux of this cycle is KM. Although the term "knowledge management" may be new to many health care workers and global health professionals, most, if not all, actually practice it every day without realizing it. When health care providers refer to the latest guidelines on how to treat a disease, they are using KM. When a program manager rolls out a new mobile application to facilitate communication between community health workers and their supervisors, they are all using KM. When policy makers refer to a research brief to inform an upcoming policy on task shifting contraceptive implant provision to nurses, they are using KM. What is the common thread between these activities? All these global health professionals are using KM tools and techniques to access, share, and use knowledge in their work.

Defining Knowledge Management

There are many different definitions of KM, but all share common themes. K4Health defines "knowledge management" as a **systematic process of collecting knowledge and connecting people to it so they can act effectively and efficiently.** KM has been used successfully in the business sector for decades, and increasingly within global health and development, to spark innovative thinking, improve strategic decision making, and encourage dynamic learning.

The Essential Question:

Do all health professionals have the knowledge they need to do their job properly and effectively?

If not, how can KM help solve the problem?

The 3 Ps: People, Processes, and Platforms

Most knowledge is created, captured, and shared through human interaction—making it essentially a social act. **People** must, therefore, be at the core of any KM approach, particularly since so much knowledge is in people's head and difficult to transfer to others. **Processes**, both formal and informal, help us capture and share knowledge, while technological **platforms** that are appropriate to the context can expedite knowledge storage, retrieval, and exchange. These three components form the foundation of knowledge management.

Applying Knowledge Management in Global Health Programs

Historically, KM has been applied at the organizational level to improve employee performance and facilitate innovation. Within global health and development, however, where resources are limited, actors are many, and work is geographically distributed, it is imperative to apply KM at the broader program level. This can facilitate collaboration and knowledge sharing at global, regional, national, and sub-national levels. KM is used within and across health-focused institutions and organizations to:

- Ensure that relevant health knowledge—data, research findings, best practices, programmatic guidance—flows up, down, and across the health care system, from national to district to community levels

- Nurture and engage professional networks to cultivate an environment within the health care system that promotes collaboration and learning

- Address human resource issues related to acquiring, sharing, using, and retaining organizational knowledge to improve decision making, processes, and services

RAPID **KM**

Look for "Rapid KM" boxes throughout this guide for advice on how to do KM when time or resources are limited.

Many global health practitioners already use KM every day in their work. Watch our animated video, Knowledge Management: Strengthening Health Services, Saving Lives, *to see how, and to learn how we can be more intentional and systematic in our KM practices.*

Assess Needs

Overview

The **goal of Step 1** is to understand the extent of the health program challenge and identify how KM can help solve it. Starting with a needs assessment will help you to understand the current capacity for exchanging knowledge in your health program and to identify knowledge-sharing gaps. The needs assessment can also serve as a baseline snapshot of the current situation, which you can then use as a means to compare the effects of your KM intervention later.

You may encounter obstacles to collecting formative data to inform the design of your KM intervention. For example, some stakeholders may think they already know what the problem is and how to solve it; others may object because they think there is not enough time to do a needs assessment. The goal of this step, however, is to simply encourage you to take the time to think through all the issues, barriers, and facilitating factors to using and sharing knowledge in your global health program and ensure you are not missing anything. This time will be well spent as it will help ensure the strategy and activities you put in place—and the resources you spend—are meeting a real need. Even if you have limited time or resources, you can still gather useful information quickly and easily by, for example, reviewing existing data and consulting with key stakeholders.

OUTPUT ▼

Synthesis of needs assessment findings

The **key tasks** to complete in Step 1 are to:

1.1 Identify the **health problem** that KM can help solve

1.2 Define the **audience** of your needs assessment

1.3 Decide what **key questions** you want the needs assessment to answer

1.4 Select and implement the appropriate **methods** to answer your key questions

1.5 Analyze and synthesize the needs assessment **findings**

▶ STEP 1.1

Identify the health problem that KM can help solve

Think about the health problem you are trying to solve, who is involved in solving the health problem, and what is *currently* occurring compared with what *should* be happening. Defining the problem clearly will help you to understand how KM can help address the aspects of the problem that have knowledge-sharing implications. For example, imagine your goal as a regional hub is to scale up HIV testing and initiation of antiretroviral therapy across your region. Your network members are implementing innovative interventions to reach ambitious country targets over the next five years, but you think progress can be accelerated even more if the members share their best practices and lessons learned with each other in order to replicate or adapt what is working and avoid challenges that have hindered progress. In addition to publishing success stories and lessons learned in reports, briefs, journal articles, or blog posts, a number of other KM tools and techniques, such as peer assists, knowledge cafés, storytelling, and fail fairs, can help capture, synthesize, and share that knowledge.

▶ STEP 1.2

Define the audience of your needs assessment

Defining the problem and the audience go hand in hand. It is difficult to think through a problem without simultaneously considering the audiences (or stakeholders) who have an interest in solving that problem. But before you begin, it is important to make sure you define the audience with specificity. For example, ask yourself: Are you focused on health care providers or the supervisors of those providers? At what level of the health system does your audience operate? Delve deeper and identify specific subgroups, for instance, midwives working at the clinic level, community health workers in a particular geographic region, or facility managers. Think through why you are selecting one particular audience over another: Are there specific issues about this audience that make it more important to assess their knowledge needs than other audiences? Does this audience have substantial barriers to accessing and using knowledge to inform their work? How do the potential audiences relate to national, sub-national, and local priorities for improving health programs and outcomes?

It is also important to analyze ways in which knowledge needs may vary by gender, focusing particularly on the concepts of gender parity, equity, and equality as they relate to women's and men's roles and their respective access to and exchange of knowledge. Consider gender disparities in five areas[2]:

- Education, literacy, and language skills, as well as access to technology

- Division of labor, which naturally results in different information needs and priorities

- Flow of information within an organization, which often does not include women and men equally

- Power and authority, particularly within hierarchical organizations, resulting in important consequences for access to information

- Social norms and gender roles in the broader community, which shape men's and women's work opportunities

▶ **STEP 1.3**

Decide what key questions you want the needs assessment to answer

Once you have identified the problem and the audience, you should then consider the questions that you would like the needs assessment to answer. Defining the questions helps you draft relevant objectives; ensures everyone involved in the assessment understands its purpose, focus, and scope; and helps you decide which assessment methodology to use and how to collect and analyze data. Common information needs assessment questions center around identifying the types of information that a particular audience needs, the ways in which the audience currently accesses information, and the barriers they face accessing information (see Box 1).

The **Knowledge Management for Global Health Logic Model**, developed by the Global Health Knowledge Collaborative to assist with planning and evaluating KM interventions in global health programs, provides a useful framework for focusing the scope of your needs assessment (see Figure 1). As with other logic models, the Knowledge Management

BOX 1	POTENTIAL NEEDS ASSESSMENT QUESTIONS

- What information does your audience want?

- What sources of information does your audience use?

- How does your audience store, transfer, and share information?

- What formal or informal communication systems does your audience use to exchange information?

- What are the barriers to accessing, sharing, and using health information?

- What is the role of professional networks and associations in knowledge exchange?

- Which KM tools and techniques are preferred?
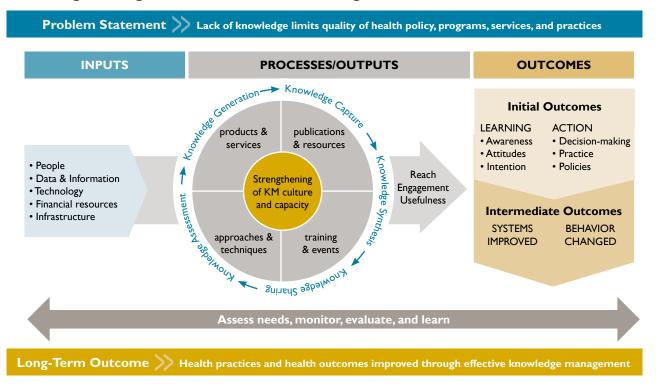
for Global Health Logic Model provides a visual depiction of the relationships between the resources, processes, outputs, and outcomes of KM interventions in global health programs. You can use this logic model to help plan your needs assessment: Start with the ultimate **outcomes** that your health program is trying to achieve, then think backward through the model to identify how efficient and effective knowledge sharing could help you to achieve that long-term outcome and what should be occurring along the way to make that happen. For example:

- Think about the KM tools and techniques—the **outputs** of the KM cycle, which range from websites and publications to training workshops and communities of practice—that people use to capture and share knowledge. As part of this needs assessment step, it is important to identify what types of KM tools and techniques are already in use, particularly since a key goal of KM is to reduce duplication of effort, and ask: How well are these tools working? Are they serving the purpose of connecting key audiences to the knowledge they need for their work? What is working well? What is not working well? What should be improved or changed to serve knowledge needs and meet broader health and development goals?

FIGURE 1

Knowledge Management for Global Health Logic Model

Source: *Guide to Monitoring and Evaluating Knowledge Management in Global Health Programs*

- Also consider the five KM **processes**—knowledge assessment, generation, capture, synthesis, and sharing—that together make up the KM cycle. Who is generating new knowledge? How is that knowledge being captured, and by whom? Is anyone sharing that knowledge? If so, with whom, how, and in what form of outputs?

- Finally, reflect on the needed inputs that make the KM cycle work. For example, what kinds of information and communication technologies (ICTs) might key audiences use or could they use to capture and share knowledge? Mobile phones? The Internet? Email?

As part of the needs assessment, also consider analyzing factors that may help or hinder knowledge sharing within your health program or organization.

One tool that can be used to help review such barriers and facilitating factors is the KM Index for Global Health, created by the K4Health Project. The KM Index uses both quantitative and qualitative data to measure the current and potential KM capacity of an organization across four domains: organizational structure, learning opportunities, internal KM culture, and external knowledge sharing for global health. The KM Index can be used as a baseline assessment, an endline measure to assess changes in KM capacity over time, and/or a monitoring tool at the organizational level to assess KM strengths, weaknesses, and opportunities for improvement.

Factors that can facilitate knowledge sharing include[3]:	Barriers to KM can be at the individual or organizational level[3]:
• Organizational culture that is non-hierarchical, values people, and encourages knowledge sharing • Organizational structures that allow time for learning, collaboration, and sharing • Leadership support and opinion leaders who advocate the use of KM along with consistent and cohesive KM promotion • KM strategy that is clear and concise • Provision of incentives for sharing knowledge, such as positive feedback, recognition at team meetings, or delegation of authority • Training in KM, including how to use related technologies	• Changes in management or other staff • Information overload or individuals' lack of competency in KM and/or associated ICTs • Organizational culture and structure that is hierarchical, lacks trust, and lacks willingness to share knowledge • Time and monetary requirements needed to develop a KM system • Lack of understanding of the value of KM, tied to lack of leadership buy-in • Lack of clarity on how to measure KM

▶ STEP 1.4
Select and implement the appropriate methods to answer your key questions

Once you have developed your key questions, conduct a desk review to uncover what is already known about the situation. For example, you can conduct a literature search or reach out to colleagues to determine if reports or publications have collected information regarding the knowledge needs of your defined audience. Seeking, collecting, and analyzing existing data and information are relatively inexpensive ways to learn about the needs of audiences (see Box 2).

BOX 2	COMMON SOURCES OF EXISTING DATA ON KNOWLEDGE

- Demographic and Health Survey data
- Service Provision Assessment data
- National census data
- Service statistics
- Literature reviews
- Evaluation reports of other relevant health programs
- Management reports
- Policy documents
- Training needs assessments
- Action plans

There may be certain gaps, however, that will require you to collect new data to better understand the current situation. Some common methods for collecting data on knowledge needs include interviews with key informants, surveys, and focus group discussions. Network Mapping (or Net-Map)—a social mapping tool that combines the visual aspects of creating a map with either an individual or group interview—is a particularly useful method for collecting data on key questions around knowledge needs and knowledge sharing. For example, Net-Map can help you understand how information on a particular topic is shared between health care workers at different levels of the health care system. More information about these methodological approaches can be found in the *K4Health Guide for Conducting Health Information Needs Assessments.*

There are varying degrees of comprehensiveness in terms of conducting needs assessments generally, and specifically for information needs assessments. If lack of time or resources is a major constraint, you can still collect useful data informally by, for example, going to a meeting attended by your key audience and asking them a few pertinent questions. You can also consider building in needs assessment activities as part of start-up activities for the KM intervention to further refine the needs during the implementation period.

For a sample needs assessment concept note and a needs assessment findings report, see the KM Training Package at www.kmtraining.org.

▶ **STEP 1.5**
Analyze and synthesize the needs assessment findings

Depending on the methods you use to conduct your needs assessment, you may draw on quantitative and/or qualitative data. Quantitative data measure phenomena in numerical form, whereas qualitative data describe phenomena through words or patterns. When the two types of data are used together, they can provide complementary information, with quantitative data typically answering "how many" and "how often" questions and qualitative data answering "why."[4]

Much of the data emerging from the needs assessment will probably be qualitative in nature. To analyze these data, you will likely make use of content analysis approaches—systematically reading the transcripts of interviews or focus group discussions and assigning labels to highlight interesting, meaningful patterns or unique themes. Qualitative analysis software, such as Dedoose, ATLAS.ti, and NVivo, may be helpful for analyzing the information, particularly for coding large bodies of textual, graphical, audio, or video data. For example, the software can reveal meanings and relationships through tools such as word clouds, word frequency tables, and mind maps. For quantitative data, Microsoft Excel is a common and easy-to-use, yet robust, tool for storing, organizing, and manipulating data, and gives you the ability to create visual charts and graphs.

RAPID **KM**

Don't let limited time or budget prevent you from strategically assessing the knowledge needs of your audience. You can still collect useful information quickly and inexpensively by, for example, reviewing existing data and consulting key members of your audience at a meeting.

For example, the Pan Caribbean Partnership Against HIV/AIDS (PANCAP), a regional partnership of governments, civil society organizations, bilateral and multilateral agencies, and donors tasked with coordinating the Caribbean region's response to the HIV epidemic, convened a few stakeholder meetings and conducted targeted key informant interviews and a rapid online survey of partners to understand the type of content that regional partners need and the methods for accessing that content. From these sources of information, PANCAP developed an informal Net-Map and a matrix of the partners, their information needs for achieving the UNAIDS 90-90-90 HIV treatment targets, and sources and frequency of information sharing. Through iterative conversations about the findings with key stakeholders, PANCAP decided to focus their KM initiative on involving National AIDS Control Program managers and civil society organizations more systematically in the partnership, with the ultimate goal of helping them to rapidly scale up the "Treat All" program. The needs assessment process took about six weeks to complete.

Once you have analyzed your data, the next step is to synthesize the findings in a suitable format, which could be as formal as a needs assessment report or, if you are working with a small group of stakeholders or if you assessed your program's needs informally, as simple as a short brief or memo.

You may be surprised to discover that your needs assessment uncovered several different KM needs and gaps of which you were previously unaware. At this point, you may wonder how you will fill all these needs given your finite resources. But don't let those fears paralyze you into doing nothing or into thinking that you have to do everything immediately. Instead, "Think Big, Start Small." In the next *Strategy Design* step, decide which needs should have the highest priority and focus on meeting those needs first while keeping in mind the bigger picture you will be working toward over time.

STEP 1 ▶ ASSESS NEEDS ▶ OUTPUTS

Synthesis of needs assessment findings—ranging from a simple brief to a formal report, depending on the scope of your needs assessment—that describes the health problem and your audience's perception of their knowledge needs as well as your understanding of the causes, facilitating factors, and possible solutions to the problem.

Learning Before, During, and After Implementation

Before starting any KM intervention, program staff should use needs assessment findings from the Assess Needs stage to understand the specific health situation and the context—the critical knowledge that informs the *Design Strategy* stage. For example, prior to the start of a new KM intervention, you can look at evaluation results from a prior KM intervention or a similar project. In addition, you can conduct a peer assist (a KM technique) to learn from other technical experts before beginning a new project or activity (see insert).

From there, learning continues as staff create, test, and refine KM tools and techniques.

During implementation, staff members should collect and analyze monitoring and evaluation data, and they can use KM approaches to reflect on progress and make midcourse corrections. An after-action review, for example, probes what went well, what did not go well, and what changes can be made the next time around (see insert).

After implementation, staff members can use program findings and lessons learned to adapt activities for the next cycle or for other KM interventions or programs. Evaluation data can show which interventions worked, and to what degree, and which interventions did not. Throughout the program cycle, staff and partners are also "learning by doing" with hands-on capacity-strengthening activities to improve KM knowledge and skills.

Using KM to Translate Family Planning Evidence Into Advocacy in Indonesia

BACKGROUND

The ICMM Project was implemented in two Indonesian provinces between October 2012 and November 2016.* The project was designed to determine the effectiveness of using evidence-based advocacy geared toward governmental and nongovernmental leaders to improve access to and use of long-acting reversible contraceptives (LARCs) and permanent methods (PMs) at the district level.

This case study uses the Knowledge Management Road Map to highlight how the ICMM Project planned for and used KM to accomplish its key objective of translating evidence into advocacy. The story of ICMM unfolds over the course of this guide as each step of the Knowledge Management Road Map is explained.

TASKS	ICMM STEPS IN ACTION
STEP 1.1 Identify the health problem that KM can help solve	In many areas of Indonesia, the contraceptive method mix is highly skewed toward short-acting methods, despite their higher rates of contraceptive discontinuation compared with long-acting methods, and couples' desires to limit births. At the same time, decentralization of health services has reduced institutional support for family planning programs at the district and village levels. District- and village-level advocacy, with a special emphasis on improving the method mix by increasing access to LARCs and PMs, was identified as an important strategy to reinvigorate family planning program efforts. But evidence about women's and couple's attitudes toward family planning and their preferences for particular methods was also needed. KM was seen as a bridge between the needed research and advocacy activities.
STEP 1.2 Define the audience of your needs assessment	Key audiences for the ICMM Project were clients, midwives (the primary providers of family planning in Indonesia), and community-level decision makers, such as mayors, religious and civil society leaders, and officials from the District Health Office.
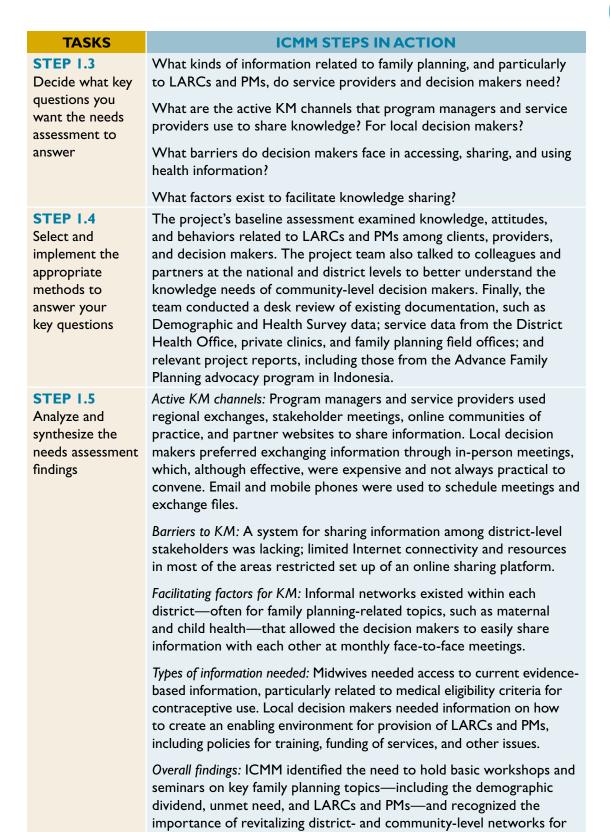
TASKS	ICMM STEPS IN ACTION
STEP 1.3 Decide what key questions you want the needs assessment to answer	What kinds of information related to family planning, and particularly to LARCs and PMs, do service providers and decision makers need? What are the active KM channels that program managers and service providers use to share knowledge? For local decision makers? What barriers do decision makers face in accessing, sharing, and using health information? What factors exist to facilitate knowledge sharing?
STEP 1.4 Select and implement the appropriate methods to answer your key questions	The project's baseline assessment examined knowledge, attitudes, and behaviors related to LARCs and PMs among clients, providers, and decision makers. The project team also talked to colleagues and partners at the national and district levels to better understand the knowledge needs of community-level decision makers. Finally, the team conducted a desk review of existing documentation, such as Demographic and Health Survey data; service data from the District Health Office, private clinics, and family planning field offices; and relevant project reports, including those from the Advance Family Planning advocacy program in Indonesia.
STEP 1.5 Analyze and synthesize the needs assessment findings	*Active KM channels:* Program managers and service providers used regional exchanges, stakeholder meetings, online communities of practice, and partner websites to share information. Local decision makers preferred exchanging information through in-person meetings, which, although effective, were expensive and not always practical to convene. Email and mobile phones were used to schedule meetings and exchange files. *Barriers to KM:* A system for sharing information among district-level stakeholders was lacking; limited Internet connectivity and resources in most of the areas restricted set up of an online sharing platform. *Facilitating factors for KM:* Informal networks existed within each district—often for family planning-related topics, such as maternal and child health—that allowed the decision makers to easily share information with each other at monthly face-to-face meetings. *Types of information needed:* Midwives needed access to current evidence-based information, particularly related to medical eligibility criteria for contraceptive use. Local decision makers needed information on how to create an enabling environment for provision of LARCs and PMs, including policies for training, funding of services, and other issues. *Overall findings:* ICMM identified the need to hold basic workshops and seminars on key family planning topics—including the demographic dividend, unmet need, and LARCs and PMs—and recognized the importance of revitalizing district- and community-level networks for information sharing.

Design Strategy

Overview

Effective KM interventions must be supported by a well-designed strategy. The **goal of Step 2** is to create the strategy for how to improve your health program with KM, using the findings and recommendations that emerged from Step 1. This strategy will provide direction for your KM activities—ensuring that specific gaps identified in your needs assessment are addressed, and that activities, milestones, and indicators are tracked. It will also help you use your resources effectively. To guarantee inclusion and ownership, the KM strategy should ideally be developed in a participatory manner with all relevant stakeholders.

Programs are understandably eager to get started with implementing activities. So why take the time to complete this step? Precisely because wasting time and money, or risking a low return on your investment, is not an option when resources are scarce. A thoughtful strategy helps ensure success of your intervention by:

- Determining how and where resources should be spent

- Facilitating decision making

- Getting the team on the same page

- Ensuring the team works on the right activities and priorities and doesn't waste time or resources on low-value initiatives

In short, your KM strategy will help ensure you stay on budget and meet your deadlines, and will help move you forward throughout implementation.

OUTPUT ▼

KM strategy

Follow these **key tasks** to develop a KM strategy

2.1 Decide on **KM objectives**

2.2 Define your **audiences**

2.3 Ground the KM intervention in a relevant **theoretical framework**

2.4 Decide on **KM tools and techniques and appropriate ICTs**

2.5 Develop a **budget and an implementation plan**

2.6 Develop a **monitoring and evaluation plan**

2.7 Bring together relevant stakeholders to **launch** the KM intervention

▶ **STEP 2.1**

Decide on KM objectives

To design your KM strategy, you first need to decide on the specific KM objectives you want to accomplish to improve your health program. Revisit the results of your needs assessment conducted in *Step 1: Assess Needs* to ensure that your KM objectives are based on actual needs. Choose three to five KM objectives, and make sure they are **SMART**:

- **S**pecific: desired outcome and audience clearly specified

- **M**easurable: achievement of the objective quantifiable and measurable

- **A**ppropriate: needs and capabilities of the audience considered

- **R**ealistic: objective able to be realistically achieved with the available resources

- **T**imely: time period for achievement of the objective explicitly stated

Your KM objectives help decide which activities to undertake to effect program outcomes. While determining your objectives, consider the challenges your needs assessment uncovered at the input, process/output, and outcome stages

of the Knowledge Management for Global Health Logic Model (see Figure 1). Then develop objectives that address the key challenges you are most likely to impact with your KM intervention. These objectives can be at different levels of the logic model, consisting of the output level or the initial, intermediate, or long-term outcome levels (see Table 2). While KM interventions could support an overall health program's long-term outcomes, KM objectives will most likely be at the process, output, or initial outcome level, and sometimes at the intermediate outcome level.

TABLE 2

Sample Objectives at Different Program Outcome Levels

Outcome Level	Description	Sample Objective
Output	KM tools and techniques resulting from the KM processes of generating, capturing, and sharing knowledge; the effect of these tools and techniques can be measured in terms of **reach**, **engagement**, or **usefulness**	**Reach:** Checklist synthesizing essential birth practices to ensure safe childbirth developed and distributed to all birth attendants in 20 project districts **Usefulness:** At least 80% of birth attendants in 20 project districts who received the checklist indicate it is useful and easy to use
Initial Outcome	Benefits to users of the KM tools and techniques, such as health professionals, related to improving their awareness, attitudes, or intentions (**learning**) and/or their decision making, practices, or policies (**action**)	**Learning:** At least 80% of birth attendants in 20 project districts who attend a training workshop that uses the checklist say they intend to incorporate the checklist into their daily work routine **Action:** More than 80% of birth attendants adhere to essential birth practices using the checklist within one year of training on use of the checklist
Intermediate Outcome	Benefits to **health systems** (improved access, coverage, quality, safety) and/or **client behaviors** as a result of achieving initial outcomes	At least 80% of the facilities in the 20 project districts score at least 20% higher on a **quality** index one year after a comprehensive quality improvement project that includes training birth attendants on use of the safe childbirth checklist
Long-Term Outcome	The ultimate health outcomes your overall program is trying to achieve, such as improvements in health conditions or in the health status of communities and individuals	Reduce facility-based maternal deaths in the 20 project districts by 2% one year after implementation of the quality improvement project that includes training birth attendants on use of the safe childbirth checklist

▶ **STEP 2.2**

Define your audiences

A critical step in developing your KM strategy is defining clearly who you want to reach—in other words, who the intended users are of the KM tools and techniques you are developing or the participants in the KM approaches you are implementing. Likely, your primary audiences will be the same or similar to the ones you defined in your needs assessment in Step 1—the health professionals who, if they had better access to knowledge, could improve their performance and ultimately the health services they provide and the health outcomes of

> **tip...**
>
> *Net-Map is a useful tool for helping to understand audiences, knowledge flows, and influence.*

their clients or patients. But you may need to broaden your target audiences, depending on the findings of your needs assessment, to also include other categories of health professionals who may be either barriers or facilitators to your primary audience from gaining or applying the knowledge they need.

If you are struggling to understand your audiences and who should be the main focus of your KM intervention, you may want to map out all relevant audiences to determine who has the most influence over the success of your proposed KM activities. Net-Map is a useful tool to help understand audiences, knowledge flows, and influence. (See the insert for more information about Net-Map.)

▶ **STEP 2.3**

Ground the KM intervention in a relevant theoretical framework

Theoretical frameworks can help ground your KM intervention and increase the likelihood of success. For example, diffusion of innovations, a theory that looks at how innovations—new ideas, products, or practices—spread within a system over time, can be used to inform KM interventions. The theory describes fives types of adopters to consider when promoting a new product or idea: innovators, early adopters, early majority, late majority, and laggards (see Table 3). Different strategies can be applied to reach each type of adopter. A common application of this theory is enlisting the help of opinion leaders—the "early adopters" who are comfortable with adopting innovations—to persuade the "early majority" to adopt the innovation. Table 3 provides a brief overview of several frameworks and theories relevant to KM. The theory or theories you choose will depend to a large extent on the particular objectives of your KM intervention.

TABLE 3

Selected Theories Relevant to KM

THEORY/FOCUS	KEY CONCEPTS	APPLICATION IN KM
Bloom's taxonomy of learning[5] *Promoting concepts, processes, and procedures in education, rather than just rote learning*	Learning centers around three domains: • Cognitive (knowledge) • Affective (attitude) • Psychomotor (skills) The level of expertise in each domain can be expressed using a multitiered scale; for example, the knowledge domain consists of six levels of expertise: knowledge, comprehension, application, analysis, synthesis, and evaluation.	Recognizing the different domains of learning can help KM activities address not only knowledge but also skills and attitudes. For example, a KM activity can help improve physicians' knowledge about LARCs as well as their skills in inserting LARCs and their attitudes about providing these methods. Identifying the level of expertise desired in each domain will also help determine specific approaches to use as well as techniques to assess effectiveness.
Diffusion of innovations[6] *How new ideas, products, and practices spread within a system over time*	There are five types of adopters to consider when promoting a new product or idea: • Innovators (want to be the first to try the innovation) • Early adopters (comfortable with adopting the innovation; tend to be opinion leaders who influence others' decisions) • Early majority (adopt new ideas before the average person; typically need to see evidence first that the innovation works) • Late majority (skeptical of change and will adopt an innovation only after the majority has tried it) • Laggards (very skeptical; hardest group to persuade)	By identifying the five types of adopters among your KM intervention's intended audience, you can then apply different strategies for reaching each segment. For example, your intervention may focus on recruiting opinion leaders to persuade the "early majority" to adopt your KM intervention.

(continued)

TABLE 3 (continued)

Selected Theories Relevant to KM

THEORY/FOCUS	KEY CONCEPTS	APPLICATION IN KM
Ideation[7] *Diffusion of new ways of thinking or new behaviors through communication and social interaction*	The likelihood of adopting a new behavior is higher when someone: • Has gained sufficient knowledge and skills about it • Has developed a positive attitude toward it • Thinks others support and practice it • Has talked to others about it • Feels good about doing it Programs can select which communication strategies to emphasize based on which factors are the strongest predictors of behavior in their given context.	When designing your KM intervention, consider which factors prevent or facilitate your audiences' adoption of the behavior you want to promote. For example, are they lacking up-to-date knowledge and could thus benefit from on-the-job training or regular workshops? Or perhaps they have the necessary knowledge but think their supervisors are unsupportive of the behavior? Having a solid understanding of these issues can help you select the most appropriate KM activities.
Stages of change[8] *Individual motivation or readiness to change behavior*	People move through five stages when adopting new behaviors: • Precontemplation (unaware of the problem) • Contemplation (aware) • Decision (intends to take action) • Action (practices the desired behavior) • Maintenance (works to sustain the behavior change) People can benefit from different interventions, matched to their stage of change, to make the desired behavior change.	Identifying your audience's current stage of behavior can help you select appropriate KM tools and techniques to move the audience from its current stage to the next, such as a job aid to help providers in the "decision" stage move to the "action" stage. Knowing your audience's current stage can also help you set realistic objectives—for instance, it is unrealistic to expect an audience who has never heard of the problem to make changes immediately.

STEP 2.4

Decide on KM tools and techniques and appropriate ICTs

KM tools and techniques can range from activities that focus on collecting knowledge—such as databases and resource centers—to connecting people to that knowledge through, for example, communities of practice, conferences, or social media. They also can focus on pushing knowledge to key audiences—through press releases and publications, for instance—to enabling audiences to pull the content they need through, for example, search features. See *Step 3: Create and Iterate* for more information about these tools and techniques. Once you have identified your objectives and audiences, you can then determine the specific KM tools and techniques that are most appropriate to meet your audiences' needs and accomplish your objectives. While it may be tempting to try to fill multiple knowledge gaps with one KM tool or technique, it is important to be realistic about how many and what kind of gaps can be filled by each type of tool or technique. You should prioritize the gaps, tackle the highest priorities, and plan to fill other gaps in the future.

At this stage, based on your goals and objectives you should also decide on what kinds of ICT support, if any, you will need depending on the specific KM tools and techniques you choose to implement. ICT is an umbrella term that refers to any communication device—such as radio, television, mobile phones, or computers—and how that device can be used to "push" or "pull" information through, for example, videoconferencing, e-learning, or text messaging. These technologies can be valuable tools in your KM toolbox, helping you with storing knowledge and with expediting retrieval and sharing of that knowledge. For example, mobile phones can be used to conduct surveys

RAPID **KM**

Your KM strategy can range in size, complexity, and comprehensiveness depending on your specific context and needs. A bulleted list under the following headings—even if documented within a project agreement or meeting minutes—can provide useful direction for your team as you implement your KM intervention:

• KM Objectives

• Audiences

• KM Tools and Techniques

• Appropriate ICTs

• Budget and Implementation Plan

• Monitoring and Evaluation Plan

To guide PANCAP's KM initiative, first described under Step 1, the project developed a table of the activities it planned to undertake and the rationale for the activities. The simple table, which is periodically updated to reflect ongoing refinements and improvements, serves as a rough strategy to guide staff and partners.

and share the data in real time through electronic dashboards; databases can be used to store and facilitate access to important documents; and web-based services can be used to host video conferences.

Rather than planning KM activities around certain ICTs, consider first the KM objective you are trying to accomplish. Then reflect on the opportunities and constraints of your setting. For example, is power readily available? Are your key users active online? Do they use a particular social media channel? With this information, think strategically about what ICTs may be able to help support your activities. These can range from low-end ICTs, such as teleconferencing, an email listserv, text messaging, or shared synced calendars, to higher-end ICTs that harness the latest digital and mobile platforms, such as multimedia messaging or interactive voice response.

> ### tip...
>
> *While technology can be a valuable tool in supporting KM, its value lies in how appropriate it is to the particular context. So remember to meet people "where they are." That may mean that the most appropriate tool is simple-feature mobile phones with text messaging rather than smartphones … or face-to-face meetings instead of webinars or online communities of practice.*

At the same time, do not underestimate the value of face-to-face interaction, which can provide a rich platform to convey both explicit and tacit knowledge, allowing participants to interpret verbal and nonverbal cues from fellow participants, interact with each other directly, and convey complex and ambiguous ideas. However, it is not always possible to meet face-to-face, as these events may entail higher cost and greater coordination to organize. Video conferencing may be an acceptable alternative, if reliable Internet connection is available, because it allows for real-time as well as asynchronous communication.

Cost, staff time, and availability are obvious drivers of the ICTs you choose, but also keep in mind that various ICTs can be combined for maximum impact. For example, a video conference with follow-up text messages, or print materials accompanied by a social media campaign or an interactive webinar, can help drive home the messages and content.

▶ **STEP 2.5**

Develop a budget and an implementation plan

Once you have defined your specific KM activities and any ICT support you might need, you can develop a budget for the KM intervention. Map the necessary resources you will need to what is currently available. For example, can existing staff take on additional KM responsibilities? If not, can new staff be hired? You may have to start small and plan for scale over time as you obtain additional resources. If your KM intervention is at a project level with a predetermined budget, rather than at a broader organizational level, you may have to adjust your KM activities—and KM objectives—based on the resources available to you. In general, plan to allocate about 10% of your overall project budget to KM to get your KM work started. Regardless of how small or large your budget is, integrating KM activities strategically into your health program— at whatever scale and scope is reasonable—will support your other health program activities and help you to reach your overall health program goals and objectives.

Typical KM activities require budgeting some level of effort (not necessarily at 100%) from the following human resource categories: monitoring and evaluation specialist, technical writer, editor, communications staff, graphic designer, ICT specialist and/or vendor, and KM project manager. One person could assume several of these roles depending on their available skill sets and the complexity of the tasks. Remember to factor in other related costs as necessary, such as printing, meeting venues, travel, and transportation.

Typical staff members with KM responsibilities

- Monitoring and evaluation specialist
- Technical writer/editor
- Communications staff
- Graphic designer
- ICT specialist and/or vendor
- Project manager

Once you have a budget with the specific activities you will conduct, you can then develop an implementation plan—this is the plan that defines who will conduct the activities and when. It is important to have an implementation plan to track your progress along the way and make necessary adjustments. The implementation plan could include such information as the start and target end dates of specific activities or tasks, the names of team members responsible for each task, and the key indicators to track the plan's progress.

As you assemble your KM team, it is important to agree to each person's roles and responsibilities. An important aspect of this planning process is to identify and communicate to the team who the final decision maker will be on different aspects of what you produce as well as who will develop and review each deliverable. If you are assembling a new team, it may be helpful for the team to draft a simple project agreement that clearly articulates who the members are, what the goal of the project is, how you will define success, and how you will divide labor and make decisions (see Table 4). This will help to set expectations from the outset and potentially avoid any conflict down the road. If your team includes external partners, be sure to gain their buy-in and encourage their active involvement and inclusion in the team and throughout the process.

Table 4
Project Agreement Components

Components	Key Questions for the Team to Answer
Members	Who is on the team?
Goal	What are we trying to accomplish?
Definition of success	How will we gauge progress and achievement of our goal?
Division of labor	What are our various roles and responsibilities?
Expectations	What do we expect of each other?
Communication	How and how often will we communicate with each other?
Decision making	What procedure will we use to make our decisions?
Accountability	How will we hold each other accountable and deal with conflict or agreement violations?
Contingencies	What might change? How will we adjust?
Revision	Under what conditions will we revisit or revise the agreement?

Adapted from Gunia.[9]

▶ **STEP 2.6**

Develop a monitoring and evaluation plan

To measure progress, identify challenges, and adapt accordingly, you will need to develop a monitoring and evaluation plan at this early stage and then plan to use it throughout implementation of your KM intervention. Your monitoring and evaluation plan can be simple or more complex depending on the resources available. Monitoring and evaluation plans typically describe:

• The aspects of the KM intervention that will be monitored

• How and how often the activities will be monitored

- Indicators to measure progress toward desired outcomes, along with data sources (*see Step 4: Mobilize and Monitor* for illustrative indicators)

- How success will be defined

- The evaluation design to assess the overall impact of the KM intervention, if applicable (*see Step 5: Evaluate and Evolve* for a more in-depth discussion of evaluation design considerations)

Common data collection methods for KM interventions in global health include web analytics, usability assessments, surveys, interviews, and focus group discussions. For a description of these methods and an analysis of strengths and weaknesses of each method, along with illustrative indicators, see the *Guide to Monitoring and Evaluating Knowledge Management in Global Health Programs*.

Your monitoring and evaluation plan will drive how often you collect and review routine monitoring data. The frequency of data collection should be informed by project management needs for that particular data point. For example, you may want to track website analytics on a monthly basis to determine if promotional efforts are increasing traffic to your website.

If you are planning to conduct an evaluation of your KM intervention to assess the overall impact, you will likely need to collect data before and after activity implementation (at a minimum) to determine changes. Your initial measurements, collected before you start the KM activities, include questions on background characteristics of the participants, exposure to the intervention, and indicators related to changes you hope to see in the target population—typically, these include changes in knowledge, attitudes, and behaviors. As you approach the end of your KM intervention, you will begin to prepare to collect data after implementation of your KM activities.

Look for examples of KM strategies and a customizable template to help you develop your own KM strategy in the KM Training Package at www.kmtraining.org.

▶ STEP 2.7
Bring together relevant stakeholders to launch the KM intervention

Once your KM strategy has been created, it is important to bring together all of your stakeholders to launch the KM intervention. At this time, you can review roles and responsibilities, the timeline, and the necessary tools, technologies, and resources that individuals will use. This will help ensure all stakeholders understand their own and each other's roles and how their activities build on and fit with each other's contributions to the overall vision.

To ensure the success of your KM strategy, consider bringing together stakeholders across all levels of the work setting. This may include managers, support staff, ICT staff, relevant partners, and anyone else with a role in the KM intervention. Participation from the leadership of your health program or organization, in particular, will help ensure that the KM work is valued, understood, and supported.

Plan for Sustainability

Make your time and resource investments count by including ideas and activities in your work that will have lasting value and impact. To ensure sustainability:

- Involve the community and other key stakeholders from the beginning so they "buy in" to the work and want to help make it successful

- Include activities and interventions in your strategy that influence ongoing behaviors, not just short-term actions

- Consider community-based as well as organizational improvements that could address root causes of problems

- Mobilize networks and groups with common interests to help support your intervention

- Connect leaders and provide training on how to develop and carry out effective policies that relate to your work

- Build the capacity of staff, partners, and communities to be able to carry on the work after the KM intervention

- Document and disseminate your strategy (or strategies) for others to use and adapt

STEP 2 ▶ DESIGN STRATEGY ➤ OUTPUTS

A KM strategy that can be used by all team members to map out their activities and refer to for direction as the KM intervention unfolds. The strategy should define the objectives, audiences, KM tools and techniques, appropriate ICTs, budget, implementation plan, and monitoring and evaluation plan needed to achieve the defined program outcome(s).

CROSS-CUTTING CONCEPT:

Collaborating

We live in a fast-paced knowledge-driven world where resources are scarce, work is dispersed across geographic boundaries, and contexts are complex and often-changing. Collaboration is needed to make the best use of limited resources and achieve maximum impact. KM tools and techniques are crucial for effective collaboration—to know how to work best with others, to avoid duplicating efforts and outdated practices, and to routinely share knowledge about what works and what does not work.

One KM technique that can help foster collaboration is a "share fair." Share fairs are participatory events—usually focused on a single topic or field—that encourage learning through the exchange of participant knowledge. They may include feature presentations, breakout sessions, and knowledge cafés that connect participants and foster meaningful discussion and opportunities for future collaboration. For more information on share fairs, see the K4Health guide How to Hold a Successful Share Fair.

STEP 2 ›› IN ACTION

Key Components of ICMM's KM Strategy

With an understanding of the knowledge needs and gaps in hand, the ICMM project manager began developing a KM strategy. She worked on the plan with the project director and the program officer, and then gathered input from partners.

Tasks	ICMM Steps in Action
STEP 2.1 Decide on KM objectives	1. By April 2013, create/revitalize district-level working groups of five to seven family planning champions in each district (30–40 total across all six project districts) that meet monthly to share knowledge and help members advocate for funding and supportive policies. For example, those that encourage midwives to obtain training on insertion of intrauterine devices (IUDs) and implants.

2. By September 2013, hold six research dissemination meetings (one per district) to explain and discuss baseline research findings and help the district working groups determine priorities in meeting contraceptive demand, particularly for LARCs and PMs, in their districts.

3. By October 2013, conduct six Net-Mapping exercises (one per district) that can be used to develop tailored advocacy work plans. |
| **STEP 2.2** Define your audiences | The primary audience for the KM activities was government authorities, including staff from the Ministry of Health, the District-Level Family Planning Board, and the Ministry of Finance. |

Tasks	ICMM Steps in Action
STEP 2.3 Ground the KM intervention in a relevant theoretical framework	Diffusion of innovations theory, with the concept of "change agents" as facilitators of innovations, was particularly relevant to the project's advocacy focus. In addition, the concept of an innovation moving throughout the social system over time supported the team's plan to involve representatives from throughout the community and to conduct activities over the course of several years.
STEP 2.4 Decide on KM tools and techniques and appropriate ICTs	*KM tools and techniques:* • Net-Mapping to understand the community actors and information flows and to help facilitate information sharing among stakeholders • Regular meetings among district working groups to facilitate knowledge sharing • Fact sheets and research briefs, tailored to the district/community level, to help decision makers understand family planning indicators and make decisions • Updates from each of the six districts, distributed via email listservs and online portals *ICTs:* Relatively low-tech, focusing on email listservs and websites
STEP 2.5 Develop a budget and an implementation plan	*Budget:* Roughly 10% of the project's budget was dedicated to KM activities. The project manager served as the KM lead, with 20% of her time allocated to the project, and other ICMM staff—including the project director, program officer, and two principal investigators—also contributed to KM activities. *Implementation plan:* The KM implementation plan for ICMM was incorporated into the overall project implementation plan, with some activities listed under advocacy (for example, Net-Mapping) and others listed under research (for example, development of research briefs).
STEP 2.6 Develop a monitoring and evaluation plan	Similarly, the KM monitoring and evaluation plan was included within the overall performance monitoring plan for ICMM. Sample monitoring indicators included the number of dissemination meetings held and the number of research briefs produced.
STEP 2.7 Bring together relevant stakeholders to launch the KM intervention	In early 2016, the ICMM Project held launch events in each project district, during which the team introduced the research, advocacy, and KM components to the district working groups. Research staff were available to answer specific questions on indicators and data use for family planning decision making while advocacy experts answered questions about next steps and planning for follow-up workshops.

Create and Iterate

Overview

The goal of Step 3 in the Knowledge Management Road Map is to develop new or tailor existing KM tools and techniques to facilitate information sharing and use to help you achieve the objectives you set forth in your KM strategy.

As with the entire Knowledge Management Road Map, this step is not done in isolation from others, but rather overlaps with other steps. For example, you may design your initial strategy in Step 2 and begin to create KM tools and techniques to realize that strategy in Step 3. But once you receive feedback about those tools and techniques, you may decide you need to adjust your strategy to account for new factors. Similarly, you may launch a beta version of your KM tool, monitor its usage as described in *Step 4: Mobilize and Monitor*, and use the monitoring data to inform the next iteration of your tool.

There is no single blueprint for creating KM tools and techniques, because each tool and technique has its own specific workflows and needs, and may require different teams to be involved. For example, the author of a print publication likely has to go through many rounds of revisions and edits before working with a graphic designer to lay it out into final format. The organizer of a knowledge café, on the other hand, has to interact with many different stakeholders as she selects a location and venue, develops the agenda, reaches out to potential presenters, and invites participants.

OUTPUT ▼

KM tools and techniques that are ready for dissemination or implementation

KEY TASKS

We have found it helpful to think through the following **key tasks** regardless of what type of KM tool or technique you are developing:

3.1 Identify your **KM team**

3.2 **Draft** the KM tools and techniques

3.3 **Test or gather feedback** about the KM tools and techniques, revise, and retest

3.4 **Finalize** the KM tools and techniques

▶ **STEP 3.1**

Identify your KM team

Identifying the people with the skill sets you need for your KM team is a critical step in the development process. Most often, an interdisciplinary set of skills is needed to give a team the range of expertise they need to do the job well, but exactly what those skills are depends on what types of KM tools and techniques you are developing. Common skill sets for KM activities include:

- Subject-matter experts who can ensure the accuracy of the content developed for your KM tools and techniques

- Writers and editors who are primarily responsible for developing the content of your KM tools and techniques

- Research assistants who provide support to writers and subject-matter experts by gathering information and data and assisting with producing initial drafts of selected content

- Communications team who help with promoting and disseminating the KM tools and techniques to the intended audience

For a sample skills matrix for KM activities, see the KM Training Package at www.kmtraining.org.

- ICT staff with the necessary technical skills to develop digital products, such as websites and mobile apps

- Graphic designers who create visuals and layouts for both print and digital products

- Librarians who assist with conducting literature reviews and organizing and structuring information

- Meeting facilitators who have skills in planning agendas, arranging logistics, and engaging participants in active discussion for various KM techniques, such as conferences, knowledge cafés, meetings, and webinars

- Project managers who can provide leadership to the team, communicate with all team members, coordinate and delegate various tasks, ensure adherence to timelines, and resolve any conflicts that might arise

Keep in mind that you do not necessarily need to have internal capacity for all these skills, even if you plan to develop a range of KM tools and techniques. Sometimes it can be more efficient and effective to outsource defined tasks, such as graphic design or web development, if you do not already have someone with those skills in-house.

STEP 3.2

Draft the KM tools and techniques

Developing KM tools and techniques that appeal to everyone is nearly impossible. Instead, refer back to the key audiences you identified in *Step 2: Design Strategy,* and focus on meeting the major needs of these most important groups. User personas or audience profiles can help when you are at this design stage. These are reliable and realistic representations of your key audience segments that writers, designers, and others can refer to throughout the design and development process. You could also use a human-centered design approach and enlist actual members of your audience in designing the initial drafts to incorporate their direct input.
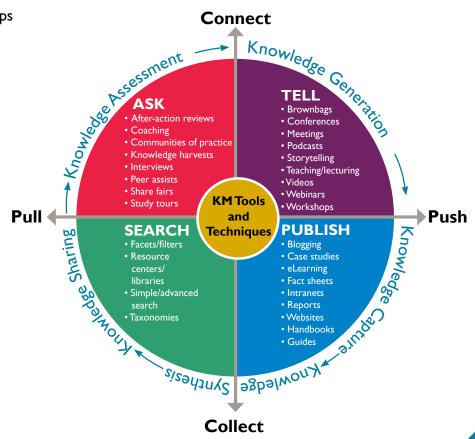
KM tools and techniques fall on both a Collect–Connect continuum and a Push–Pull continuum, illustrated in the KM Tools and Techniques Matrix (see Figure 2). Some KM tools and techniques focus on collecting information—perhaps the most obvious examples are databases and libraries—while others emphasize connecting people to that information, such as workshops and webinars. Similarly, you can think of some KM tools and techniques as pushing information to people, such as news releases and publications, while others provide people with tools so they can pull the information themselves, for example, website search tools. These two continuums create a matrix in which KM tools and techniques can be thought of in terms of the broad approaches they use in the KM cycle to generate, capture, and share knowledge:

- **Asking** approaches, such as after-action reviews, knowledge cafés, peer assists, and other types of events and meetings, can be helpful for eliciting tacit knowledge.

FIGURE 2

The KM Tools and Techniques Matrix

Source: Adapted from Barnes & Milton.[10]

- **Telling** approaches, such as conferences, webinars, and workshops, are useful for conveying knowledge to defined groups of people.

- **Publishing** approaches, such as job aids, e-learning courses, or websites, are efficient tools for sharing explicit knowledge with large groups of people.

- **Searching** approaches, including libraries, taxonomies in databases, and facets or filters on search engines, allow people to pull the information they need, when they need it.

KM tools and techniques that use Asking and Telling approaches focus more on establishing connections between people and engaging them in conversations to help facilitate knowledge exchange, which is particularly helpful in eliciting tacit knowledge—the "know how" that is in people's heads (see Box 3). As such, many, but not necessarily all, of these KM tools and techniques entail hosting participatory events or meetings to promote learning. In contrast, KM tools and techniques that use Publishing and Searching approaches work well for collecting and packaging explicit knowledge to share with others.

Taken together, these different KM approaches complement each other. Effective KM strategies will often use multiple KM tools and techniques across the two continuums. Furthermore, some specific KM tools and techniques can straddle different sides of each continuum depending on how they are used, and thus do not fit neatly within one single quadrant. For example, a share fair blends Asking and Telling approaches, providing participants with opportunities to share their experiences with each other while they learn new skills and techniques. Digital health or mHealth products are another obvious example: supervisors can use mobile devices to push information to health workers in the form of text messages, for example, while the health workers can simultaneously use that same platform to ask their supervisor for advice via a voice call or to search for needed information through a preloaded database.

It is beyond the scope of this guide to delve into detailed guidance on how to develop each specific type of KM tool or technique. On the next pages, we provide a selection of examples produced or supported by K4Health and other projects and organizations in the global health field in each of the Asking, Telling, Publishing, and Searching approaches to illustrate the breadth of options available.

ASKING APPROACHES

- **Community of Practice:** The Global Health Knowledge Collaborative is an online and face-to-face community of practice of KM professionals. Communities of practice are an excellent way to maintain sustained conversation around mutual topics of interest. To learn more, you can take an e-learning course on the uses, benefits, and challenges with building and nurturing communities of practice or join the Implementing Best Practices (IBP) Initiative to see firsthand how they operate.

- **Share Fair:** The East Africa Share Fair: Knowledge Exchange to Accelerate Progress Toward FP2020's Goal, featuring panel presentations, breakout sessions, knowledge cafés, and discussions, brought together 50 representatives from Kenya, Tanzania, Uganda, the United States, and Zambia to share ideas for future collaboration in family planning.

- **After-Action Review:** The East, Central, and Southern Africa-Health Community conducted an after-action review on the 62nd Health Ministers Conference to explore ways the annual conference could be better organized and could bring more value to stakeholders.

- **Knowledge Exchange Visits:** The USAID ASSIST Project and the Partnership for HIV-Free Survival organized knowledge exchange visits between country representatives in Kenya and Tanzania to share effective implementation strategies and practices in HIV, maternal and infant care, and nutrition support for women living with HIV and their exposed infants.

- **Peer Assist:** The East Africa Share Fair included a half-day peer assist event where selected teams shared a KM-related challenge with peers who then offered insights and helpful suggestions.

BOX 3   **TWO FORMS OF KNOWLEDGE: TACIT AND EXPLICIT**

Knowledge can be in two forms, tacit and explicit.

- Tacit knowledge is information that is in people's heads, for example, their experiences and know-how.

- Explicit knowledge is in a format that can be stored and shared with others, such as in databases or publications.

For example, a written training guide can describe the basic steps for inserting an IUD (explicit knowledge), and can even help readers visualize those steps with illustrations. But for a trainee to gain competency in IUD insertion, the trainee must practice under direct supervision to learn hands-on the actual techniques for IUD insertion, for example, how to assess—through touch and feel—whether an IUD is inserted high enough into the fundus of the uterus (tacit knowledge).

Some KM tools, particularly those that facilitate connections between people, such as knowledge cafés, peer assists, trainings, and even meetings, are better at capturing, organizing, and/or sharing tacit knowledge, whereas others work well with explicit knowledge, such as codifying guidelines in print publications. For more guidance on some of the key KM tools and techniques helpful for eliciting tacit knowledge, see the insert.

TELLING APPROACHES

- **Webinar:** The MEASURE Evaluation project regularly hosts webinars on topics related to monitoring and evaluation, health information systems, and data use. Hosting webinars and archiving the recordings is a good way to convene participants and facilitate a conversation around a specific topic.

- **Conference:** The Moving the Needle annual conference, or learning event, hosted by the USAID LEARN project, convenes USAID staff and implementing partners around practical examples of collaborating, learning, and adapting in USAID programs and operations.

- **Storytelling:** Family Planning Voices (FP Voices) is a storytelling platform pro- duced by K4Health, FP2020, and other partners to document and share stories from individuals around the world who are passionate about family planning.

- **Teaching:** Improving Global Public Health Through Knowledge Application, Continuous Learning, and Adaptation, a course offered at the Johns Hopkins Bloomberg School of Public Health, introduces participants to the evolving field of KM, organizational learning, and adaptive management in international development through real-life examples of how principles of intentional learning are leading to better development programs and can be applied to strengthen public health systems.

PUBLISHING APPROACHES

- **e-learning:** Global Health eLearning Center, a distance learning platform, provides free self-paced Internet-based courses on a wide range of global health topics.

- **Journal:** *Global Health: Science and Practice*, an open-access peer-reviewed online journal, aims to improve health practice in low- and middle-income countries by focusing on "how" global health programs are implemented.

- **Website:** The Costed Implementation Plan Resource Kit, hosted as a website, features guidance and tools to help program planners, ministry representatives, and technical assistance providers develop and execute a robust, actionable, and resourced family planning strategy.

- **Animated Video:** Family Planning: A Key to Unlocking the Sustainable Development Goals illustrates how and why family planning is vital to our ability to meet global development challenges, from reducing poverty and slowing climate change to preventing civil unrest.

- **Data Visualization:** The Demographic and Health Surveys Program includes data visualizations as part of all published country survey findings to visually illustrate key findings. See, for example, Fast Facts From the 2015-16 Tanzania DHS-MIS.

- **Guide:** *Making Content Meaningful: A Guide to Adapting Existing Global Health Content for Different Audiences* provides a framework with key steps and questions for consideration as well as activity sheets and case studies that will help users make informed decisions in the content adaptation process.

SEARCHING APPROACHES

- **Taxonomy (the classification of information):** POPLINE, an online database containing the world's most comprehensive collection of population, family planning, and related health and development literature, also publishes its thesaurus of keywords—a taxonomy with the terms defined—used to index POPLINE documents.

- **Simple and Advanced Search:** Photoshare, a leading database of public health and development photographs free for nonprofit and educational use, provides a simple search button that exists on each page of the website, as well as an advanced search option for users who want to limit their search by photo orientation, resolution, or year.

- **Search Filters:** The Maternal, Infant, and Young Child Nutrition and Family Planning Integration Toolkit includes search filters for language, year of publication, and publisher to help users find specific types of resources.

- **Database:** mHealth Evidence, a database with peer-reviewed and gray literature on mHealth from around the world, was designed to make it easier for program managers, researchers, government leaders, donors, software developers, and other key decision makers to quickly learn about current state-of-the-art and evidence-based best practices.

▶ STEP 3.3

Test or gather feedback about the KM tools and techniques, revise, and retest

Once you have drafted your KM tool or technique (for example, your website architecture or your agenda for a knowledge-sharing event), you should take some time to test it with small group of users or gather feedback from a few stakeholders, refine it based on the feedback, and then retest and review again. Gathering feedback, sharing the feedback with the KM team, and using the feedback to incrementally improve your KM tools and techniques are important steps to producing quality outputs and for maintaining credibility with your intended audience.

This iterative process is in line with the cross-cutting principle of learning before, during, and after project implementation: at this stage, learning starts during development but before launching the KM tool or holding the KM event by getting feedback on drafts from the intended audience. Iterative design, which recognizes that it is virtually impossible to design a product with no problems from the start, is particularly relevant for KM tools such as mobile apps and websites, but the concept—if not the exact method of application—can also be relevant for other KM tools and techniques, such as print publications and even knowledge cafés. For example, you can draft the schedule or agenda for the knowledge café, obtain feedback from stakeholders, revise the agenda based on feedback, and share it with the stakeholders again to ensure their input was incorporated properly.

With iterative design of websites and mobile products, changes are made in the earliest stages of development when they are easier and less expensive to implement than at later stages. For example, you can draft simple paper prototypes (hand drawings) or wireframes to test with a small sample of representative users. It is much easier and more affordable to make substantive changes to those early drafts than to make complicated coding changes to a live website.

Obtaining feedback can be as simple as informally gathering information from a small group of people through meetings or email. If more resources are available, you can turn to traditional feedback or evaluation methodologies, such as focus group discussions, surveys, or interviews. For websites and mobile products, you can conduct usability testing or card-sorting exercises. Usability testing involves asking a small number of representative users (as few as five) to complete typical tasks or find information on an interface, such as a website or mobile application, while observers watch, listen, and take notes to uncover areas on the site or application that make audiences struggle. In a card-sorting exercise, representative users organize information, such as website content, into logical categories that they then label, which can be used to build the structure of the user interface.

For more information about usability testing and card sorting, including practice exercises, see the KM Training Package at www.kmtraining.org.

Tools & Techniques
to Share Tacit Knowledge

Net-Map

WHAT
is Net-Map?
A participatory tool used by individuals or groups that combines the visual aspects of creating a map with an interview.

WHY
conduct Net-Map?
Net-Map allows us to better understand connections, knowledge flow and bottlenecks in a community, and opportunities to improve project planning, monitoring and evaluation, and strategic networking. Facilitators of Net-Map can discover information they never would have learned through a conventional interview due to the discussion and visual cues that occur during map creation. Furthermore, the group discussion among Net-Map respondents can make clear areas of agreement and tension around the given topic.

→ **HOW to conduct Net-Map:**
Make sure you develop a specific Net-Map question. Most Net-Map questions begin with "Who influences …," such as "Who influences community health workers' access to technical knowledge on HIV/AIDS?" The selection of participants with intimate knowledge of the subject and who represent a wide range of actors is also important. An ideal Net-Map group consists of 5 to 10 people: 2 facilitators (one to ask the questions and facilitate discussion, and one to take notes and record the main themes during the discussion) and 3 to 8 participants.

1. List all relevant actors on sticky notes and place them on a large sheet of paper.

2. Examine links (e.g., financial, informal, authoritative) between the different actors and draw the links with colored markers.

3. Add stackable discs (such as checker pieces) to represent the level of power and influence of the various actors in the particular area of interest.

4. Discuss the goals of the various actors by adding -/+ signs to signify the actors' influence on the topic.

5. Continue discussion and determine next steps of how to strengthen weak links and leverage strong ties with influential actors.

6. If Net-Map results are being used for research, enter the Net-Map data into computer software, such as Visualizer, to obtain quantitative data regarding centrality (a measure of connectedness) and other social network characteristics.

For more information, see the Net-Map Toolbox.

Peer Assist

WHAT

is a peer assist?
Facilitated event in which peers with relevant experience share their knowledge and experience with a person or team requesting help on a specific problem or activity.

WHY

conduct peer assists?
Peer assists allow people to learn from others' experiences and apply the lessons learned to a new task, allowing for more efficient and effective task completion. Peer assists enable knowledge transfer by helping people:

- Support collective learning, cross-linkages, and networking

- Stimulate new perspectives and new lines of inquiry

- Increase willingness to learn from one another and establish an open culture of learning

HOW to conduct peer assists:

A peer assist works well with groups of up 15 to 20 people, which include the host team (the team asking for input and assistance) and the resource team (the team sharing their knowledge and insights). As you plan your peer assist, define the specific problem for which you are seeking help; find out who else has already tackled or solved a similar problem; and select participants across an organization, rather than up through an organizational hierarchy. Strict hierarchies can hamper the free exchange of knowledge. It is important to seek out peers who can be open with each other and can challenge or offer ideas without feeling threatened. The facilitator should be someone outside the host team.

1. If the teams are new to each other, allow time in your agenda for them to get to know one another. It is important to build rapport so that the group can work openly together.

2. The host team presents the context, history, and ideas regarding the task or issue at hand—maintaining an openness and flexibility, as the resource team's suggestions may redefine the task. (It may help to send background materials to the resource team in advance.)

3. The resource team should ask questions and have a dialogue with the host team to develop a good understanding of the issues.

4. The resource team identifies options to solve the problem. The host team listens carefully, without interruptions, and the facilitator records these options.

5. The resource team presents their final feedback. The host team needs to take the recommendations from the resource team without interrupting or defending past efforts and decisions.

6. The host team acknowledges the contributions of the resource team and notes the feedback that was particularly useful.

For more information, see Conducting Peer Assists by the Asian Development Bank.

C After-Action Review

WHAT

is an after-action review?
Structured review process or debrief—usually a meeting—that allows project teams to reflect on an event or task they have just accomplished and analyze what happened and why, what worked well, and what can be done better or differently in the future.

WHY

conduct after-action reviews?
After-action reviews allow us to learn from our experience and apply the lessons learned to the next phase of the project or to accomplish the task more effectively the next time it is done. After-action reviews enable knowledge transfer by helping us:

- Capture best practices and identify lessons learned from implementation experience

- Capture multiple perspectives of what happened and why

- Encourage feedback for improved performance

HOW to conduct after-action reviews:

1. For optimal results, create and maintain an open and trusting environment so participants can speak freely. Try to set a neutral tone; the after-action review should focus on process more than people.

2. Use a discussion guide to help unearth reflections about successes, set-backs, and recommendations. Common questions include:

   - What did we set out to do?

   - What did we actually do?

   - If there were differences, what caused them?

   - What worked, and why?

   - What did not work, and why not?

   - What are some future opportunities?

3. Engage all team members in providing feedback and solutions.

4. Record key points for the team's use, focusing on actionable recommendations that will improve the process. The team can agree to share important recommendations with others in the organization, and how to share them.

For more information, see [After-Action Review: Technical Guidance](#) by USAID.

Fail Fair

WHAT

is a fail fair?

A way to ease people into conversations about failures, allowing others working on similar projects to identify and respond to challenges in the hopes of making other projects more successful.

WHY

conduct fail fairs?

Unlike either a formal or informal after-action review, information shared during a fail fair is presented in a very relaxed, fun environment. Since humor is infused throughout the event, very important lessons are communicated without the additional caveats often found in written documents. Most importantly, however, is the lack of judgment from the audience. Everyone knows you did not intentionally ignore protocols or purposefully set out to underperform.

HOW **to conduct fail fairs:**

Aim for holding the fail fair toward the end of the work day, ideally in a location outside of the office. At the very least, change up the conference room you use for the fail fair. There is no formula for success concerning the number of presenters. Typical ground rules include:

1. No names—you cannot talk about other people by name or directly name a project or organization.

2. No blame—you cannot blame others.

3. No recording, including no webcasting, no blogging, no live tweeting of identifiable information, no archiving of presentations on either an intranet or a public website.

4. You can only speak about projects you worked on.

5. Information shared during a fail fair must not be used to the detriment of any person, place, or thing—trust must be maintained.

6. Keep the presentations short—5 to 10 minutes is recommended.

7. Audience participation is required.

For more information, see How to Discuss Failure— and Not Get Fired! by the World Bank.

▶ STEP 3.4

Finalize the KM tools and techniques

For KM tools, such as publications, website, and mobile apps, once you have solved any major problems in usability or design and you feel comfortable that the tool meets your audience's key needs, it is time to go live. For other KM tools and techniques that rely on exchanging knowledge between individuals, such as participatory events and meetings, you will need to finalize the schedule or agenda and any necessary logistical arrangements, such as the meeting space.

Establishing points in time when you will update your tools and techniques can be useful from a planning and budgeting perspective. For example, we generally update e-learning courses every two years and online repositories every year. But when global technical guidance changes, we update the relevant information in our KM tools without delay. For example, our seminal handbook, _Family Planning: A Global Handbook for Providers_, is based on the _Medical Eligibility Criteria for Contraceptive Use_ from the World Health Organization (WHO).[11] When WHO updates the _Medical Eligibility Criteria_, we follow suit with corresponding updates to the Handbook.

tip...

If you get critical feedback about your initial KM tool or technique, do not worry; this is a good thing because it is easier to make changes early on in the process!

Remember the principles of iterative design: design, test, refine, retest.

Updating your process for knowledge exchange events is also important. Due to the nature of these approaches, we use learner evaluation feedback and after-action review data to update our guidance on these approaches after each approach is implemented rather than being bound by a particular time period. For example, we update our K4Health guide on _How to Hold a Successful Share Fair_ after we hold most share fair events because we gain new learning from each event. In addition, each knowledge café or community of practice varies slightly, so we share how things were adapted with our KM team so that others may learn from the most recent iteration that occurred.

An iterative process does not need to be time- and labor-intensive, but it does need to be planned for and strategically placed within your processes to ensure that your KM tools and techniques are as useful and current as possible.

STEP 3 ▶ CREATE AND ITERATE ▶ OUTPUTS

- KM tools and techniques using Asking, Telling, Publishing, and/or Searching approaches that are ready for dissemination or implementation

STEP 3 >> **IN ACTION**

ICMM Creates KM Tools and Techniques

Once ICMM developed its KM strategy and launched the project at the district level, the ICMM team started developing the KM tools and techniques that the team had planned.

TASKS	ICMM STEPS IN ACTION
STEP 3.1 Identify your KM team	Most of the KM tools and techniques produced by the ICMM Project were designed jointly between the research team, who provided the data, and the advocacy team, who provided information about which formats were most preferred by the primary audience. The ICMM project manager, serving as the KM lead, worked with the project director and the two principal investigators to synthesize and produce the materials.
STEP 3.2 Draft the KM tools and techniques	The main KM tools and techniques developed by the ICMM Project included: • Concise *fact sheets and briefs* that summarized key family planning indicators and funding for each district and messages government authorities could use to promote family planning • *Case studies*, highlighting challenges, solutions, and local partners, that were distributed to family planning stakeholders, such as district health officers and leaders of the Indonesian Midwives Association. One case study, for example, highlighted the challenges conducting advocacy in the context of the universal health coverage system in Indonesia. • Capacity-strengthening *workshops and discussion sessions*, tailored by district. For example, most districts requested information on the "demographic dividend," a key concept that can help decision makers understand family planning within the context of economic and social development.

TASKS	ICMM STEPS IN ACTION
STEP 3.2 (continued)	• A *listserv* to share practical information with each district working group • Annual *share fairs* to share advocacy lessons learned and to work through challenges • FP Voices *storytelling* interviews with 22 individuals involved in ICMM's district-level work to share lessons learned and success stories
STEP 3.3 Test or gather feedback about the KM tools and techniques, revise, and retest	Project staff worked directly with district working groups to ensure that the various KM tools and techniques met their needs. For example, program officers attended most district working group monthly meetings and shared feedback about the tools with other project staff. Based on audience feedback, the ICMM team tailored fact sheets to include more provincial- and district-level information. Also, the project had initially suggested an online project portal or discussion forum for district working groups to share lessons learned with each other but the working group members expressed a preference for in-person meetings, prompting the project to move forward with more interactive sharing mechanisms, such as share fairs.
STEP 3.4. Finalize the KM tools and techniques	After obtaining feedback, the project finalized the KM tools, including ICMM district portfolios (one for each of the six districts), case studies, and baseline research reports (tailored by district). The project revised these resources at least once a year throughout the project, or more often if new information emerged.

Mobilize and Monitor

Overview

In *Step 3: Create and Iterate,* you developed KM tools and techniques or tailored existing ones to meet audience needs and bridge knowledge gaps. Now it is time to put these into action. For example, if you developed a publication, such as a job aid, it will now be put to use in the appropriate setting. As you put these tools into action, you will also be monitoring their use, based on the monitoring and evaluation plan you developed in *Step 2: Design Strategy*, making any necessary midcourse corrections as needed to ensure you reach your KM objectives and ultimately improve your health program. Therefore, the **goal of Step 4** is to implement the KM tools and techniques you developed and to monitor and adapt them as necessary.

OUTPUT ▼

- KM tools and techniques implemented and in action
- Continuously updated monitoring tracking tool
- Adjustments to the KM intervention as indicated by monitoring

▶ **STEP 4.1**

Implement your KM intervention and keep the team updated

As you begin to implement your KM intervention, you will want to set up routine meetings and other avenues for regular and ad hoc communication with the KM team members. It is often helpful for the implementation team to have a standing meeting to update one another on progress, coordinate with team members and outside agencies, and address any issues that are affecting implementation and could result in changes to the timeline, budget, deliverables, and/or staffing needs. Routine communication also provides an opportunity to share successes and acknowledge your team's work as well as discuss overall challenges. To ensure your team gets the most out of progress updates, encourage an environment of sharing knowledge about what has and has not been working well and of asking for suggestions on how to improve processes.

From time to time, it may be helpful to structure team meetings differently— for instance, to generate new ideas or promote learning. Fail fairs, for example, can ease team members into conversation about failures in a relaxed fun environment (see the insert).

▶ **STEP 4.2**

Review progress toward KM objectives

During *Step 2: Design Strategy*, you defined the KM activities you would implement and the anticipated program outcomes for your initiative as well as the indicators you would need to measure your progress (see Table 5 for illustrative monitoring indicators by knowledge-sharing need and KM tool). As you implement your KM intervention, it is important to monitor your activities and processes to track what is occurring, compared with what you had initially planned to accomplish. Pairing this type of monitoring data—which can come from a number of sources, such as routine records, web analytics, and surveys—with other KM tools and techniques, such as after-action reviews, can help to uncover what is going well and what is not going well, and can foster discussions about what changes might be needed to keep the initiative on track to achieve program deliverables and outcomes. Reviewing routine data ensures that you and your team are learning during implementation and applying that learning to improve your work.

For a detailed description of data collection methods for monitoring KM interventions, see the *Guide for Monitoring and Evaluating Knowledge Management in Global Health Programs*

TABLE 5
Illustrative Monitoring Indicators for KM Tools and Techniques

KM Approach	Examples of KM Tools and Techniques	Illustrative Monitoring Indicators
ASK	Practices for sharing knowledge, such as after-action reviews, peer assists, twinning, study tours, knowledge cafés, and communities of practice	• Number of people who made a comment or contribution • Number of times a KM technique is replicated • Number of people who liked the peer-assist format over a traditional presentation
TELL	In-person and online workshops, seminars, meetings, forums, and conferences	• Number of participants in a workshop • Number of sessions conducted by participants in a training of trainers • Number/percentage of participants who are satisfied with the content presented in a seminar
PUBLISH	Written documents, such as policy briefs, guidelines, journal articles, manuals, job aids, and project reports as well as digital interfaces, such as websites, e-learning platforms, and mobile applications	• Number of recipients who received a copy of a publication • Number of times a publication is reprinted/reproduced/replicated by recipients • Average pageviews per website visit
SEARCH	Resource libraries, searchable databases, physical resource centers, and help desks	• Number of registered users of a help desk • Number of links to the database from other websites • Number/percentage of users who are satisfied with library services

Adapted from the *Guide for Monitoring and Evaluating Knowledge Management in Global Health Programs.*

▶ **STEP 4.3**
Adapt as necessary

Monitoring data are only valuable if they are used to inform decision making and enhance project performance. You and your staff should review monitoring data regularly to determine how to adjust activities, if needed. For example, after holding a webinar to help health program managers and technical assistance officers translate new WHO guidance on contraceptive use for women with HIV,

you might find the number of people attending the webinar was much lower than your planned target. You then decide to conduct a rapid survey of your audience to learn why there was not more interest in the webinar. From the survey responses, you may learn that the timing of the webinar was inconvenient or that people had intended on attending the webinar but forgot to sign up. Based on what you learn, you can make adjustments to future webinars to improve your reach, for example, by adjusting the timing or by sending more frequent reminders about the webinar leading up to it.

Using data intentionally to adapt projects and activities takes time and reflection. Some teams can benefit from regular meetings to purposefully reflect on new learning that is emerging from the KM initiative and activities.

RAPID **KM**

You can take simple steps to monitor your KM initiative and use that data to adapt your activities. For example, you can track use of your website through free Google Analytics software to monitor your audience's interest in and use of the information you are presenting, or you can hold quarterly stakeholder meetings to reflect on progress, plan for the upcoming quarter, and share lessons learned. After-action reviews provide a structured opportunity to reflect on an activity recently completed and to analyze what worked well and what can be done better or differently in the future.

To ensure your team's practices support using monitoring data to adapt your initiative, ask[12]:

- What are we doing to regularly reflect on our activities and initiatives and the context in which we work?

- How are we using monitoring data and other types of learning to make decisions and adjustments?

- What processes and activities are in place to encourage our team to adapt?

STEP 4 ▶ MOBILIZE AND MONITOR ▷ OUTPUTS

- KM tools and techniques (designed in *Step 3: Create and Iterate*) implemented and in action
- Continuously updated monitoring tracking tool
- Adjustments to the KM intervention as indicated by monitoring

CROSS-CUTTING CONCEPT:

Adapting

Continuously adapting to contexts and conditions is a key underpinning to project learning that takes place across the Knowledge Management Road Map. Learning and adapting are two sides of the same coin: learning from different time points in the project cycle naturally gives rise to adaptations (big and small) to ensure that scarce resources are well spent and that the resources yield the maximum impact. Such adaptations can include testing new approaches, building on what works, and eliminating what has not worked.

To adapt programs and interventions successfully, you must create an enabling environment that encourages the design of more flexible programs and minimizes obstacles to modifying programs.[13] It also requires sustained commitment with adequate time and resources to pause and reflect on learning and progress. One way to show you are serious about this is to schedule regular reflection sessions with relevant stakeholders to gather information on context changes, new project learning, and shifting priorities, and then use that knowledge to decide on necessary adaptations.

Sources of information to inform adaptation

- Monitoring data
- Evaluation findings
- Implementation lessons
- Observations

Just as all forms of knowledge—tacit and explicit, experiential and evidence-based—should be used to develop strategies, projects, and activities, all forms of knowledge should be used to adapt projects and activities. Examples of sources of information include, but are not limited to, monitoring data, evaluation findings, implementation lessons, and observations.[13]

District Stakeholders Use Knowledge to Advocate Increased Access to LARCs and PMs

After drafting the initial fact sheets and briefs and planning the first share fair, the ICMM team was ready for its key audiences to use these KM tools and techniques. The team had regular lines of communication open to ensure everyone stayed up-to-date on progress and to work through any challenges that arose.

The project also had a robust monitoring and evaluation plan in place, which included process monitoring for the project's KM components. Along the way, the project learned from implementation—through regularly collected monitoring data and reflections—and made the necessary midcourse adjustments to certain activities to make them more useful and relevant to the key audiences.

TASKS	ICMM STEPS IN ACTION
STEP 4.1 Implement your KM intervention and keep the team updated	The ICMM team held several types of meetings throughout the project with different players based in Jakarta and Baltimore. For example: • The CCP team based in Indonesia met with the Baltimore-based team weekly via Skype to discuss operational and project management issues, including project updates, budgeting, work planning, and upcoming deadlines. • Monthly Jakarta-based partner meetings were also held to review progress, share research and monitoring results, and discuss any challenges and lessons learned from the district working groups.
STEP 4.2 Review progress toward KM objectives	The team collected monitoring data every six months to assess progress of the project. Most KM indicators related to process data, such as how many fact sheets were produced, how many participants attended share fairs, and how many capacity-building workshops were held.
STEP 4.3 Adapt as necessary	Based on the information collected during regular monitoring and review of KM activities, the ICMM team decided to focus more on in-person knowledge sharing rather than online forums. After success of the project's first share fair in 2014, the project co-hosted (with the Advance Family Planning Program) annual share fair events; this model was also used at the provincial level for smaller-scale share fairs. Based on feedback about the first share fair, the ICMM team adjusted the agendas of subsequent share fairs to include more time for district work planning.

Evaluate and Evolve

Overview

The **goal of Step 5** is to assess how well you achieved your KM objectives to improve your health program, identify factors that contributed to or hindered success, and use the findings to inform and influence future programming. Evaluation, a systematic approach used to attribute changes in specific outcomes to a program or intervention, is different from the monitoring you conducted in *Step 4: Mobilize and Monitor* to track changes in the performance of your intervention.

Not all KM interventions will have the resources or the need (for example, if conducted at small scale) to conduct a formal evaluation. But if you want or need information on how much to continue investing in a KM intervention or whether to scale it up, an evaluation can help inform those decisions.

You should plan for your evaluation, including deciding on the type of evaluation design to use, during *Step 2: Design Strategy*. However, we have included all relevant information about conducting an evaluation, including the planning steps, in this section.

OUTPUT ▼

- Publications or alternative presentation format synthesizing evaluation findings
- Dissemination event or series of events
- Determination of next steps

▶ **STEP 5.1**

Decide which program outcomes to measure

As you developed your KM strategy in *Step 2*, you chose a theoretical frame-
work to guide your KM intervention and identified the objectives of your KM
intervention to improve your health program. If you developed objectives at the
program outcome level, such as to improve provider behaviors or health poli-
cies, you will need to conduct an evaluation if you want to assess whether your
intervention achieved these intended objectives. While monitoring can be used
to track changes in key outcomes over time, in order to determine whether
any of these changes can be *attributed* to your intervention, an evaluation is
needed (see Table 6).

Table 6
Key Differences Between Monitoring and Evaluation

	Monitoring	**Evaluation**
Who	Internal staff	An external evaluator, ideally
What	Track changes in program performance or in key outcomes over time	Attribute changes in specific outcomes to program activities
Why	Analyze progress against planned activities or processes	Analyze actual achievements in outcomes against planned objectives
When	Continuously	At important milestones
How	• Web analytics • Usability assessments • Surveys • In-depth interviews • Focus group discussions	• Surveys • Observation • In-depth interviews • Focus group discussions • Net-Map

The Knowledge Management for Global Health Logic Model (see Figure 1)
illustrates the difference between the *inputs, processes, and outputs* that are the
focus of your monitoring activities and the *outcomes* that are at the center of
your evaluation. The logic model defines three levels of program outcomes
that KM can influence: initial (changes in health professionals' knowledge,
attitudes, and practice), intermediate (changes in health systems and/or client
behaviors), and l*ong-term (changes in health outcomes)*. As mentioned in *Step 2:
Design Strategy*, most KM interventions focus on improving initial outcomes (for
example, improving birth attendants' knowledge of essential birth practices

and their adherence to these practices by using a checklist), and sometimes intermediate outcomes (improving quality of delivery services). It is often difficult to show impact on long-term outcomes, particularly since KM tools and techniques generally work in concert with other public health activities, such as those focused on service delivery, logistics, or training. Thus, it may be hard to tease out the specific impact of the KM tools and techniques. Although long-term outcomes are included in the logic model to demonstrate the overarching goal of KM, their inclusion should not set up the expectation that KM activities should be evaluated on the basis of these health indicators.

▶ **STEP 5.2**

Choose the evaluation design

The type of design you use for your evaluation depends on the objectives of your KM intervention and of your evaluation as well as on the resources you have available to invest in the evaluation. You should have decided on your evaluation design during *Step 2: Design Strategy*. Planning the evaluation early is necessary because, for example, if you decide to collect before (baseline) and after (endline) measures as part of your evaluation, you will need to collect the baseline measures before starting your KM activities. Taking before and after measures of key indicators, so you can see what changes over the duration of an activity or project, is an important part of having a strong evaluation design (see Table 7). This typically involves surveying or interviewing users of KM tools and techniques; those who have been exposed to knowledge are asked if they have applied it, how they have applied it, and what effect it had.

RAPID **KM**

Hiring an external evaluator will help ensure validity of the evaluation results. If your resources are limited, however, you can still conduct your own evaluation affordably to guide incremental changes to the design of your KM intervention.

For example, to assess the successes and challenges of the Nigeria Web-Based Continuing Medical Laboratory Education Program, which aimed to improve the knowledge and skills of Medical Laboratory Scientists through accredited e-learning courses, the program conducted an online survey of the scientists and in-depth interviews with their supervisors. The evaluation suggested that the project led to improvements in laboratory management, client interaction, and technical skills related to diagnostic procedures. Recommendations included expanding the topics covered under the accreditation program and diversifying the types of professional accreditation activities to include short- and long-format courses, training of trainers, and clinical presentations.

Another important element for strong evaluation designs is to have an intervention group and a comparison/control group (that is, a group that is not exposed to your KM activities). The comparison group helps you assess what would have happened in the absence of your KM intervention. If it is not possible to have a comparison group and/or to take before and after measures, there are still ways to strengthen the evaluation design. For example, you can measure the level of exposure of your participants to the KM intervention or collect data from the same participants at multiple times during the intervention.[4]

If you are interested in demonstrating impact of your KM intervention at different program outcome levels, we recommend consulting an evaluation expert from the outset to think through the best evaluation design that can meet your goals with the resources and time available. Hiring an external evaluator to conduct the evaluation will also help ensure validity of the results. Limited resources, however, should not prevent you from measuring outcomes

TABLE 7

Common Evaluation Designs for Health Programs and KM Interventions

	Type of Design	Elements of the Design	Intervention Pre-Test	Intervention Post-Test	Comparison Pre-Test	Comparison Post-Test
Strongest	Quasi-experimental*	Intervention and comparison groups with pre- and post-tests	X	X	X	X
		Intervention and comparison groups with post-test only		X		X
Weakest	Non-experimental*	Intervention group only with pre- and post-tests	X	X		
		Intervention group only with post-test only		X		

Strength of Design

* Quasi-experimental designs use intervention and comparison groups but assignment to the groups is non-random. Non-experimental designs use an intervention group only, making it the weakest evaluation design. Randomized experiments, often considered the "gold standard" in terms of rigorous design, are not included in this table because they are often not feasible in the real-world scenarios in which KM interventions would be implemented. For more information about evaluation designs, see the Measuring Success Toolkit.

in the most thorough way you can afford. You and your staff can evaluate your own work internally; such internal evaluations are adequate for informing the performance of the specific intervention and for guiding incremental changes to the design, objectives, and approaches. If the stakes are higher—for example, if the results will be used to inform national program development or if you desire an objective evaluation of a mature program—then hiring an external evaluator becomes important.

▶ **STEP 5.3**
Collect, analyze, and synthesize the evaluation data

You may use a variety of data collection approaches, such as surveys, in-depth interviews, and/or focus group discussions, to evaluate your KM intervention. Using different approaches can help answer different questions. At the same time, you can use different approaches to collect the same information—a technique called data triangulation—to help verify the accuracy of that information and add credibility to the findings.

As with your needs assessment conducted during Step 1, your evaluation will likely employ both quantitative and qualitative data. If you are conducting a simple internal evaluation to inform incremental improvements in your intervention, you can use commonly available software and simple analytical techniques to analyze and synthesize the data. A more rigorous evaluation will likely make use of more complex statistical methods—another reason why we recommend consulting an evaluation expert if you are interested in demonstrating impact of your KM intervention.

Evaluation reports that synthesize findings usually follow the same ordered structure as research reports or articles. This familiar framework helps readers know what to expect and where to find specific types of information. Sections within a typical evaluation report include:

- **Executive Summary:** a short summary (usually one to two pages) of the entire evaluation report, usually structured similarly to the main body of the report—with background, methods, findings/results, and discussion/recommendations sections

- **Background/Introduction:** a brief description of the KM intervention and the knowledge gaps it was attempting to fill as well as the rationale for conducting the evaluation

- **Methods:** a description of data collection methods employed and how the data were collected and analyzed

- **Findings/Results:** a summary of the key findings of the evaluation with subsections organized by your key questions or common themes that emerged, and tables and figures to summarize the data

- **Discussion/Recommendations:** implications of the key findings for the KM intervention and future interventions; this is the most important and interesting section of the report where you reflect on the meaning of and interpret the findings and provide recommendations for the future

▶ **STEP 5.4**
Share evaluation findings with key stakeholders

After assessing program outcomes, it is important to share the results with key stakeholders. Synthesizing your findings in an evaluation report is a common approach, but you may consider a number of other formats depending on your audience's needs and preferences.

If you are trying to reach more than one type of audience with your results, you may want to consider several types of materials/methods. For example, if you are hoping to reach both decision makers and youth, you could consider creating an advocacy brief or infographic for the decision makers and a video or social media campaign for the youth.

Dissemination meetings should be planned with key stakeholders, including those who participated in the KM intervention. During these meetings, the KM team can present results to stakeholders; disseminate study materials, such as evaluation reports and case studies; and solicit feedback to validate and better understand the results. When planning for a dissemination meeting, it is important to involve the same group of stakeholders that was involved in planning the KM intervention itself. These stakeholders can provide input and contribute to high-level planning for the dissemination meeting, such as its objectives, scope, size, and location. It is generally a good idea to start planning the dissemination meeting several months in advance. Finally, in the case of district-level work or multi-country evaluation studies, it might be advantageous to have a series of dissemination events, rather than one larger one. See Table 8 for other popular formats that can be used to share evaluation results.

TABLE 8
Common Formats for Sharing KM Evaluation Results

Formats	Benefits	Examples
Dissemination meetings with key stakeholders	Your KM team and other stakeholders can discuss, validate, and better understand the results.	Sample dissemination meeting agenda included in Appendix F of the _K4Health Guide for Conducting Health Information Needs Assessments_
Journal articles	By framing your KM intervention and results in a broader way, it is applicable to a wider audience and others in the global health field can learn from your approach, helping them to plan and evaluate their own KM activities.	Article published on the use of Facebook Groups to facilitate informal learning among medical laboratory scientists in Nigeria
Evaluation reports	You can provide documentation of the full set of evaluation results and methods for those interested in the details.	Final evaluation report of the Nigeria Web-Based Continuing Medical Laboratory Education Program
Research briefs	You can offer a succinct summary of the full evaluation report for those interested in a high-level overview, or focus on one important aspect of the findings.	Brief produced by the Malawi Knowledge for Health Project highlighting the intersection between KM and health systems strengthening
Infographics	You can capture and share quantitative survey data from your evaluation in a visually appealing way.	Infographic produced by the Global Health eLearning Center about evaluation findings of the Center's study groups
Case studies	You can convey detailed analysis about your specific KM intervention.	Case studies included in the _Knowledge Management for Health and Development Toolkit_
Videos or other visual materials	You can help put a human face to your KM work.	Documentary produced by the Bangladesh Knowledge Management Initiative's eHealth pilot project

▶ STEP 5.5

Promote use of evaluation findings in policy and practice

Once the evaluation results have been written and published, it is important to go beyond dissemination and promote actual use of the evaluation results. Research utilization strategies—that is, strategies to promote application of evidence in policies, programs, and practice to improve outcomes—can provide helpful ways to accomplish this.[14] For one, engaging stakeholders in the evaluation can increase ownership of the evaluation process, and will help with the needed support and buy-in once the time comes to put the evaluation results into practice. Through the research process, you can also identify champions—those who are particularly committed to the issue and in a position to mobilize for change—who can advocate use of research results.

These champions, along with other individuals can serve as "knowledge brokers"— those who can connect researchers and non-researchers and can help present the results in a language that all can understand. This process will also involve advocacy and communication to ensure that decisions and policies are conducive to replicating and scaling a given approach, if it is proven effective.

After disseminating your results and helping to ensure their use in policy and practice, your team can look to the future. Is there another current project that can build off of these results—to replicate or scale up the KM strategy used? Will the results be used to design a new KM intervention?

It is important to have a meeting with the entire team, including stakeholders involved in the evaluation, to discuss what comes next for the KM strategy you have been testing. If funding has expired, will the government and/or other stakeholders take on this work themselves? Where will the budget come from? These are all important questions to consider as you look to the future and ensure that the KM strategy can continue to impact the health care system and lead to quality health programs.

STEP 5 ▶ EVALUATE AND EVOLVE

OUTPUTS

- Published materials in a range of presentation formats, such as reports, journal articles, briefs, infographics, and other visual materials, to synthesize and share the evaluation findings with a range of audiences

- Dissemination event or series of events to share the evaluation findings with key stakeholders and solicit their feedback to validate and better understand the findings

- Discussion and determination of next steps to promote use of the evaluation findings in policies, other programs, and practice

STEP 5 »» **IN ACTION**

ICMM Shares Evaluation Findings and Lessons Learned

As the end of the ICMM Project was approaching, the team prepared to assess how well the project achieved its overall objective of improving access to LARCs through advocacy with decision makers, to which KM played a supporting role.

TASKS	ICMM STEPS IN ACTION
STEP 5.1 Decide which program outcomes to measure	The KM indicators included in the ICMM's evaluation related to initial outcomes: service provider and policy maker knowledge, attitudes, and practices around LARCs and PMs.
STEP 5.2 Choose the evaluation design	Quasi-experimental evaluation with intervention groups (the six ICMM Project districts) and comparison groups (each project district was matched with a non-randomly selected comparison group where no project activities were conducted) using baseline and endline quantitative surveys of currently married women of reproductive age (ages 15-49) in each of the intervention and comparison group areas.
STEP 5.3 Collect, analyze, and synthesize the evaluation data	Women in intervention districts were more likely than those in comparison districts to recall correct messages about family planning and to correctly identify that LARCs and PMs were appropriate methods for limiting births. There also appeared to be changes in provider behavior: women in intervention districts were more likely to have LARCs and PMs recommended by a family planning provider, suggesting an improvement in providers' knowledge after the ICMM intervention. Anecdotal evidence also suggested positive outcomes of the project's KM interventions. For example, district working group members reported using the research briefs to advocate improved access to LARCs and PMs by, for example, working with religious leaders to improve their knowledge about vasectomy or implementing policies that would support midwives' provision of IUDs and implants.

(continued)

STEP 5 IN ACTION (continued)

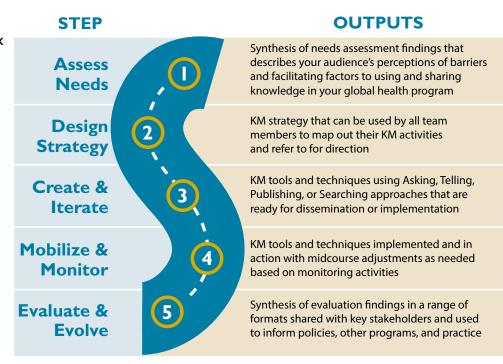| TASKS	ICMM STEPS IN ACTION
STEP 5.4 Share evaluation findings with key stakeholders	*National-level dissemination meeting:* Stakeholders involved in conducting the research and advocacy activities—such as district working groups, national-level champions and stakeholders from the Ministry of Health, National Population and Family Planning Board, and other governmental bodies—were invited to the dissemination meeting. The theme of the meeting was sustainability and how effective family planning requires a multisector approach. The participants discussed how to apply best practices from the project—such as including religious groups and youth organizations in advocacy efforts and establishing village-level working groups to ensure funding for family planning at the sub-district level—to future family planning projects in Indonesia. *Other formats:* Research briefs, a photo slideshow, a storytelling collection (online at www.fpvoices.org and in a printed booklet), case studies, and journal articles
STEP 5.5 Promote use of evaluation findings in policy and practice	To date, the evaluation results have already been used to inform other activities in Indonesia funded by the ICMM Project donors, and the government is actively scaling up the advocacy approach—including the KM elements such as share fairs—in dozens of districts throughout the country through their Kampung KB (Village Family Planning) program.

Conclusion

Now that you have explored the Knowledge Management Road Map from start to finish, we hope you can use the information included in this guide to apply KM strategically in your own health programs. Take a look at the KM Training Package at www.kmtraining.org for more tools, templates, and examples to help you put the Knowledge Management Road Map into action!

By completing the steps in the Road Map, you can help ensure your health program staff has access to the essential knowledge and experience to do their jobs effectively—first by assessing their perceptions of the barriers and facilitating factors to using and sharing knowledge. This important formative information will inform your KM strategy, which everyone can refer to for direction over time. The KM tools and techniques you develop, implement, and continually improve will facilitate sharing and use of that critical information that staff members and partners need to do their jobs effectively. Finally, an evaluation will help you identify factors that contributed to or hindered success of your KM activities, which you can use to influence future activities.

We believe KM can be a valuable tool in your toolbox to improve the efficiency and effectiveness of your programs by reducing duplication of effort, getting best practices in use, and applying lessons learned to overcome challenges. And remember, you can apply KM systematically in your programs, even in the face of resource constraints, by scaling the approaches and steps of the Knowledge Management Road Map to your needs.

STEP	OUTPUTS
Assess Needs ①	Synthesis of needs assessment findings that describes your audience's perceptions of barriers and facilitating factors to using and sharing knowledge in your global health program
Design Strategy ②	KM strategy that can be used by all team members to map out their KM activities and refer to for direction
Create & Iterate ③	KM tools and techniques using Asking, Telling, Publishing, or Searching approaches that are ready for dissemination or implementation
Mobilize & Monitor ④	KM tools and techniques implemented and in action with midcourse adjustments as needed based on monitoring activities
Evaluate & Evolve ⑤	Synthesis of evaluation findings in a range of formats shared with key stakeholders and used to inform policies, other programs, and practice

Whether you are new to KM or well-versed in the field, we would welcome the opportunity to learn from your experiences. Please send us your feedback to help us continue the learning cycle!

References

1. United States Agency for International Development (USAID). *Collaborating, Learning, and Adapting Framework and Key Concepts*. Washington, DC: USAID; 2016. https://usaidlearninglab.org/sites/default/files/resource/files/keyconcepts_twopager_8.5x11_v7_20160907.pdf

2. Kols A. *A Gender Guide to Reproductive Health Publications: Producing Gender-Sensitive Publications for Health Professionals*. Baltimore, MD: INFO Project, Johns Hopkins Center for Communication Programs; 2007. https://www.k4health.org/sites/default/files/A%20Gender%20Guide%20to%20Reproductive%20Health%20Publications.pdf

3. Kothari A, Hovanec N, Hastie R, Sibbald S. Lessons from the business sector for successful knowledge management in health care: a systematic review. *BMC Health Services Research*. 2011;11(1):173. https://dx.doi.org/10.1186%2F1472-6963-11-173

4. Carolina Population Center, University of North Carolina at Chapel Hill. *Measuring Success Toolkit: Using Data for Health Program Planning, Monitoring and Evaluation*. Baltimore, MD: Knowledge for Health Project, Johns Hopkins Center for Communication Programs. Last updated: October 8, 2015. https://www.k4health.org/toolkits/measuring-success

5. Bloom BS, Englehart MD, Furst EJ, Hill WH. *Taxonomy of Education Objectives: Handbook I: Cognitive Domain*. New York: David McKay; 1956.

6. Ohkubo S, Limaye R, Harlan S. *K4Health Theory Primer: Diffusion of Innovations*. Baltimore, MD: Johns Hopkins Center for Communication Programs; 2015. https://www.k4health.org/sites/default/files/theory-brief-final.pdf

7. Health Communication Capacity Collaborative (HC3). *Ideation: An HC3 Research Primer*. Baltimore, MD: HC3, Johns Hopkins Center for Communication Programs; 2015. http://www.healthcommcapacity.org/wp-content/uploads/2015/02/Ideation.pdf

8. Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. *American Journal of Health Promotion*. 1997;12(1):38-48. https://doi.org/10.4278/0890-1171-12.1.38

9. Gunia B. *Strategic Team Leadership*. Baltimore, MD: Johns Hopkins Carey Business School; 2016.

10. Barnes S, Milton N. *Designing a Successful KM Strategy: A Guide for Knowledge Management Professionals*. Medford, NJ: Information Today, Inc; 2015.

11. World Health Organization (WHO). *Medical Eligibility Criteria for Contraceptive Use*. 5th ed. Geneva: WHO; 2015. http://www.who.int/reproductivehealth/publications/family_planning/Ex-Summ-MEC-5/en/

12. United States Agency for International Development (USAID). *Program Cycle. ADS 201 Additional Help: Drafting Collaborating, Learning, and Adapting Plan*. Washington, DC: USAID; 2016. https://usaidlearninglab.org/sites/default/files/resource/files/drafting_a_cla_plan_cla_plan_template.pdf

13. United States Agency for International Development (USAID). *ADS Chapter 201: Program Cycle Operational Policy*. Washington, DC: USAID; 2016. https://www.usaid.gov/sites/default/files/documents/1870/201.pdf

14. FHI 360. *Eight Strategies for Research to Practice*. Research Triangle Park, NC: FHI 360; 2012. https://www.k4health.org/sites/default/files/eight-strategies-for-research-to-practice.pdf

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