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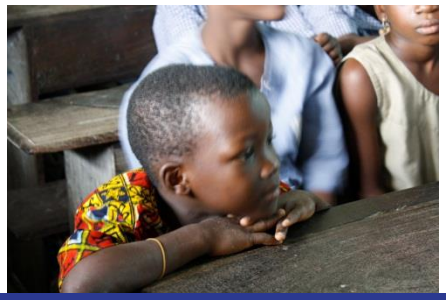

CASE STUDY: IMPROVING CARE THROUGH PATIENT-CENTERED CLINICAL PHARMACY SERVICES (SIAPS/ETHIOPIA)

August 2017
This publication was produced for review by the United States Agency for International Development.
It was prepared by Hannah Arem and Abigail Conrad for the Health Finance and Governance Project.

The Health Finance and Governance Project
USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. Led by Abt Associates, the project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The five-year, $209 million global project is intended to increase the use of both primary and priority health services, including HIV/AIDS, tuberculosis, malaria, and reproductive health services. Designed to fundamentally strengthen health systems, HFG supports countries as they navigate the economic transitions needed to achieve universal health care.

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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ACRONYMS

CFIR	Consolidated Framework for Implementation Research
DTP	Drug therapy problems
EHRIG	Ethiopian Hospital Reform Implementation Guidelines
FMOH	Federal Ministry of Health
GOE	Government of Ethiopia
HFG	Health Finance and Governance Project
HSS	Health system strengthening
IRB	Internal Review Board
MSH	Management Sciences for Health
PFSA	Pharmaceutical Fund and Supply Agency
REP	Replicating Effective Programs
RHB	Regional Health Bureaus
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SPS	Strengthening Pharmaceutical Systems
TAG	Technical Advisory Group
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

USAID's Health Finance and Governance project (HFG) contributes to USAID's assistance to countries to deliver key health services and builds the evidence base around health systems strengthening (HSS). Under HFG's research portfolio, a series of retrospective, qualitative case studies were undertaken to understand the dynamics of successful HSS interventions by focusing on how HSS projects were implemented. This report presents the results for one of the five cases: the Improving Care through Patient-Centered Clinical Pharmacy Services (Clinical Pharmacy) activity.

The Clinical Pharmacy activity in Ethiopia was implemented from 2012 to 2016 and had a budget of $428,299. Clinical Pharmacy was part of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) project in Ethiopia.[1] SIAPS, led by Management Sciences for Health (MSH), implemented the activity with local partners including Jimma University, Mekele University, and the Pharmaceutical Fund and Supply Agency. The activity was implemented in 65 hospitals in the regions of Amhara, Tigray, Oromia, Harari, Afar, and Benishangul Gumuz; the Southern Nations, Nationalities, and Peoples' Region (SNNPR); and the city administrations of Addis Ababa and Dire Dawa.

Clinical Pharmacy's objective was to promote patient-centered pharmaceutical services in support of the SIAPS Intermediate Result 5 to improve pharmaceutical services to achieve better health outcomes. SIAPS Ethiopia took a pharmaceutical systems strengthening approach following the project's systems strengthening approach. Specifically, Clinical Pharmacy was intended to address improper medication use in clinical wards and chronic care units, and shortages of properly trained staff. While the activity aimed to provide a holistic approach to building clinical pharmacy capacity, the main approach to the project was a one month in-service training program. Clinical Pharmacy trained over 200 pharmacists, and as a result of the activity, 53 of 65 hospitals implemented clinical pharmacy services.

The broader context set the stage for this project. Namely, there were larger national initiatives that supported the clinical pharmacy program. These included recognition by Ethiopia schools of pharmacy to better train for patient-focused services (2008); Ethiopian Hospital Reform Implementation Guidelines (EHRIG) in 2010 included pharmacy chapter (national support); and groundwork laid by Strengthening Pharmaceutical Systems (SPS) program. The activity had broad stakeholder commitment, in part due to the consensus around the problem and the need for improved training.

We identified several factors that supported the intervention's implementation and success. SIAPS implemented the Clinical Pharmacy activity in a very conductive policy environment and had joint support from the USAID mission and Government of Ethiopia Federal Ministry of Health. SIAPS was well positioned to implement the program because they had experts in the field of pharmacy, as well as partners well versed in relevant fields, including supply chain, drug therapeutic committees, and rational use of medicines. A key strength of the program was that it developed an implementation plan for

[1] The broader SIAPS program was implemented in over 20 countries, including in Ethiopia, from 2011 to 2016 and aimed to improve the pharmaceutical systems and services in the countries they worked in. The prime implementer was Management Sciences for Health (MSH) and the four core partners were Accreditation Council for Pharmacy Education, Harvard University, Logistics Management Institute, and University of Washington. USAID centrally funded SIAPS for a total of $197.9 million as a Cooperative Agreement.

existing guidelines. The implementation model was to build staff and organizational capacity and skills. Without this implementation plan, few hospitals would have had the capability or resources to reach the goals outlined in the EHRIG pharmacy chapter. Respondents cited the Standardized Operating Procedures as a key factor in contributing to success and adherence of the guidelines.

Lessons learned emerged around challenges that the activity faced and from the factors that contributed to success. Two challenges—limited monitoring data and continued shortage of human resources—constrained implementation and support for the intervention, and threaten sustainability of the intervention outcomes. Key factors of success that provide lessons learned for other projects are to develop interventions in direct support of government policies and initiatives that require support to be implemented or adopted. Further, Ethiopian stakeholders played a key role in the activity and maintained strong ownership for the activity during implementation and have plans to continue that ownership.

1. INTRODUCTION

USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. The project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. HFG's research portfolio enhances the ability of USAID to assist countries in delivering priority health services while simultaneously contributing to the global pool of knowledge on health systems strengthening (HSS).[2]

Under this research portfolio, the "Understanding the Dynamics of Successful Health System Strengthening Interventions" study seeks to bring into better balance our focus on "what works" in HSS with "how HSS works" to improve the performance of future HSS efforts. Our aim is to examine the dynamics of HSS project implementation, not to examine the cases as models for HSS interventions. We are pursuing this goal by initially conducting a set of six qualitative, retrospective case studies of successful USAID-supported HSS interventions and then producing a cross-case analysis to draw common patterns across cases.

The aim of this study to address four key questions:

1. How were a range of successful HSS interventions implemented in different countries?
2. What factors facilitated and constrained the successful implementation and documented outcomes of the interventions?
3. What were important factors about implementation that emerged across the different cases?
4. What are the implications of this study for future of implementing HSS interventions?

We chose six cases to examine a small sample of successful HSS initiatives in different places under different conditions and with different features in an attempt to tease out some of the policy setting, adoption, and implementation factors and processes that matter. While we remain attentive to the range of complex factors that affect success, we seek to distinguish those factors that decision-makers and implementers can control or influence. In so doing, we hope to develop and provide recommendations for adapting and sustaining HSS reforms in low-income countries.

This report presents one of the five case studies – on the Improving Care through Patient-Centered Clinical Pharmacy Services activity, which is part of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program in Ethiopia. In Section 2, we describe the study methods. In Section 3, we present the contours of the context in which the intervention was implemented, basic information on

[2] As defined by the World Health Organization, we define HSS interventions as those that implement "changes in policy and practice in a country's health system" and improve "one or more of the functions of the health system and that leads to better health through improvements in access, coverage, quality, or efficiency" (WHO 2011: 9). HSS interventions are horizontal approaches that can address the root causes of health system constraints and impact multiple issues, rather than vertical service- or disease-specific interventions like health system support programs (Travis et al. 2004: 903).

the intervention, how it was designed, and its outcomes. In Section 4, we describe implementation process for the intervention, including implement groundwork, key features of implementation process, and how the intervention was sustained and disseminated. Finally, in Section 5, we present our synthesis of the primary factors that influenced the intervention's implementation and contributed to its success.

2. METHODS

The study, comprised of five case studies and cross-case analysis, was conducted in several phases, each of which is briefly described in turn. For a more detailed explanation of our case selection process and methods, please see the study design (Conrad et al. 2016).

2.1 Study design and implementation

In the first phase of the study (October 2015-March 2016), we finalized the design and began implementation, which involved engaging USAID and selecting the case studies.

2.1.1 Study design

The aim of this study was to address four key questions:

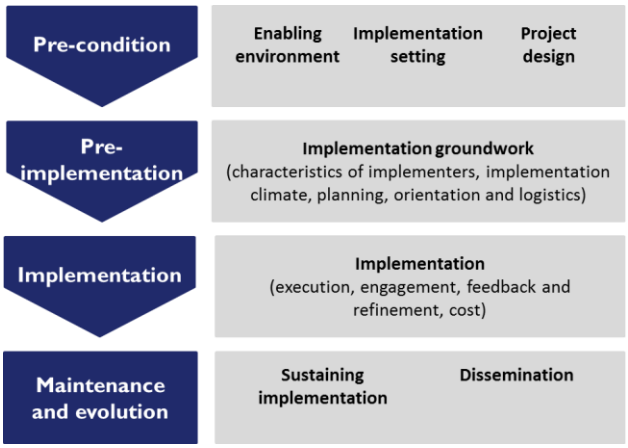
1. How were a range of successful HSS interventions implemented in different countries?
2. What factors facilitated and constrained the successful implementation and documented outcomes of the interventions?
3. What were important factors about implementation that emerged across the different cases?
4. What are the implications of this study for future of implementing HSS interventions?

To answer these questions, we designed a protocol to conduct retrospective, qualitative case studies. We used an implementation framework to guide the case studies. Our primary aim for applying the implementation framework was to determine which factors influence implementation that we needed to collect data on and consider during analysis. We combined two implementation frameworks to apply in this study – the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al. 2009) and the Replicating Effective Programs (REP) framework (Kilbourne et al. 2007). Both CFIR and REP are based on implementation theories and empirical evidence of what affects the successful implementation of health interventions. We used CFIR to more broadly frame the intervention and we used REP as a framework that focuses on project implementation process. Figure 1outlines the combined framework.

As we assessed each implementation domain and factor, we also explored:

1. Decision-making processes associated with design and adoption of the intervention;
2. How the intervention was implemented, including how potential challenges or obstacles were addressed;
3. Expected and unexpected outcomes of the intervention, both positive and negative;

Figure 1 Outline of combined implementation framework



and

4. Prospects for sustainability of the intervention, such as the degree to which the project activities have been institutionalized in the country.

Before we finalized the design, the team submitted the study design and data collection instruments to Abt's Internal Review Board (IRB) and JHSPH's IRB for review. Abt's and JHSPH's IRB exempted the study from review.

2.1.2 Study implementation

To ensure that the case studies were of practical relevance, we set up a Technical Advisory Group (TAG) composed of experts and representatives from inside and outside USAID Bureau of Global Health to consult with on the study and provide expertise.

This case was selected for study from USAID's 2014 Global Call for Health System Strengthening Cases using a defined set of criteria and a systematic review and sampling process that we developed. The case was purposively selected from the available pool and the case is not representative or necessarily the most successful HSS project implemented in the region. Our objective in the case selection was to purposively select 6 cases from the 143 cases submitted to *USAID's 2014 Global Call for Health System Strengthening Cases* that are successful, robust examples of health system strengthening interventions.

The reviewers engaged in a multi-stage sampling process consisting of four sequential selection rounds that excluded cases that did not meet the specified criteria in each round using the identified available data and the predetermined review method. The 4 selection rounds were as follows:

1. **Round 1:** Reviewers considered only those interventions that were fully implemented before the start of the selection process.
2. **Round 2:** Reviewers accepted the submitter's self-reported definition of health systems strengthening, labeled the intervention "provisional," and sought a determination of an "effective" intervention.
3. **Round 3:** Reviewers applied criteria to determine whether a provisional, effective health system strengthening intervention could be confirmed as health system strengthening.
4. **Round 4:** Reviewers applied criteria to determine whether a confirmed, effective health system strengthening intervention was robust.

Figure 2 Clinical Pharmacy HSS Criteria

Round	Criteria	Inclusion criteria	How met criteria
1 (implementation period)	Implementation completed	Submission states implementation period was completed by 10/2015	2014
2 (impact and evidence)	Effective intervention	One of 13 identified types of interventions referenced	Accountability and engagement interventions; Health worker training to improve service delivery; Pharmaceutical systems strengthening initiatives; Service integration
	Health systems outcome	One of 4 health systems outcomes referenced	Improved service provision/quality

Round	Criteria	Inclusion criteria	How met criteria
	Health impact	Health impact referenced	Reduced morbidity and mortality
	Both health system outcome and health impact	At least one health system outcome and health impact referenced	Yes
	Verification of health impact and health system outcome achieved	One type of documentation is referenced for at least one health impact or health system outcome	Project M&E data
3 (HSS)	Multiple primary disease targets	At least 2 diseases targeted referenced	All
4 (robust HSS)	Multiple health system functions and sub-systems targeted	At least 2 HSS WHO building blocks targeted and at least 2 sub-systems functions targeted	*Building blocks*: Pharmacy, Human resources for health *Sub-systems*: Human resources for health, Service delivery, Governance, Pharmacy
	Verification that intervention was successful HSS intervention	Intervention had health system outcome, health impact and targeted multiple diseases and health system functions	Yes
	Category D for HSS intervention type	Based on typology of HSS we developed, case addresses at least 2 health system functions and at least 3 sub-systems	Yes
	Category E for HSS intervention type (not inclusive of D)	Based on typology of HSS we developed, case addresses at least 2 health system functions and at least 4 sub-systems	Yes

2.2 Data collection and analysis

In the second phase, we conducted the case study research. We divided the case studies among our team members so that no team members conducted research on a project that their organization implemented. The case teams collected both primary and secondary data on retrospective (features 1-3 above) and prospective (feature 4 above) data that are described in more detail below. As applicable, we collected primary and/or secondary data on each implementation factor and domain.

For primary data collection, we conducted individual interviews with key informants who possessed in-depth knowledge of the history and workings of the HSS intervention. We followed a common semi-structured interview guide for the interviews, but adjusted the questions posed as applicable for the respondent and their role in the project (see Annex B for the interview guide). We documented each interview through verbatim notes. We interviewed 8 key informants for this case study on Clinical Pharmacy Services in Ethiopia. Informants included representatives of USAID's implementing partners who sponsored the intervention, relevant Ministry of Health officials, and USAID mission staff with knowledge of the intervention, as appropriate.

The research team imported the interview notes into NVivo 11, qualitative data analysis software package, for coding and analysis. Analysts applied a single codebook developed prior to beginning the

coding process and refined by coding a small sample of interview notes from several cases. The codes were informed by *a priori* concepts based on the domains and factors from the combined CFIR and REP implementation frameworks. To accommodate unexpected or context-bound themes and concepts emerging from the data, the codebook included a 'family' for each case to allow for inductive coding as needed for each specific country or intervention. We applied this common codebook for the purposes of reliability, quality control, and comparison across interview respondents and eventually across case and country contexts.

Once coding was complete, the analysts conducted iterative, exploratory analysis in NVivo using text analysis techniques (e.g., repetition, similarities and differences, word frequency, word co-occurrence, semantic network analysis, etc.) to explore themes, patterns, outliers, and trends, and conflicts between and among data sources.

We reviewed secondary data capture different features of the intervention and contextualize the intervention. We conducted document review of the relevant published and unpublished documents about the intervention that we were able to obtain. To review the documentation on each case, we filled out a common document abstraction template (in an Excel spreadsheet) to systematically review the documents and synthesize salient data. Abstraction categories reflected domains from our combined CFIR and REP frameworks. We also conducted a focused literature review to identify the key contextual factors (e.g. socio-cultural, political, economic, etc.) relevant to the case and existing evidence about barriers to and success of health system strengthening and reform in the country. We used the literature and document reviews to build on and verify the interview data where possible and applicable (bearing in mind that written documentation represents the official record). We analyzed the findings from the literature and document reviews in conjunction with analysis of the primary data. We uploaded the document abstraction forms in NVivo for coding and analysis with the interview data.

The research team ensured the reliability and validity (both external and internal) of our qualitative research in a several ways. We revised our semi-structured interview guide and record review forms based initial use. We used experienced researchers and held team meetings to ensure that all team members had a consistent and thorough understanding of the research goals and intent behind each question and probe. We further used consistent data documentation procedures and structured, systematic analysis techniques using qualitative analysis software (e.g., NVivo) to ensure reliability, quality control, and cross case comparisons. Further, we triangulated primary qualitative data with secondary data to improve the validity of findings from primary data. Finally, we conducted member checking by asking a key informant, the project's Chief of Party, to review and comment on the case narratives regarding coherence and validity. We also had a TAG member review each case narrative to provide further expert review. We then finalized the case narratives based on this feedback.

2.3 Cross-case analysis

In the third phase of the study, we analyzed this and the other five descriptive case study narratives from Phase 2 to help generate explanations for successful HSS interventions. The cross-narrative analysis of Phase 3 sought to build or strengthen the evidence base for the "how" and "why" of what works in HSS by determining which implementation domains and factors from the implementation framework influenced the success of the interventions. We looked for common and divergent factors that were present or absent across cases and contexts, and we tried to determine the relationships between the implementation factors and domains based on our findings. As an exploratory study, we hope these findings can provide some comment on the factors that may be associated with successful HSS implementation and inform future studies of HSS interventions.

3. FINDINGS

The report describes the implementation experience of the Improving Care through Patient-Centered Clinical Pharmacy Services activity, which was part of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) project in Ethiopia.

In this Section, first we outline the relevant features of the context within which the intervention was implemented, including key features of the political system, and health system. Second, we first describe the basic features of the intervention, including its primary goals, activities, design, and timeline. Third, we outline the main outcomes and impacts of the project. Fourth, we describe the implementation process, beginning with the implementation groundwork, implementation itself, and then how the project was sustained and disseminated.

3.1 Pre-conditions

3.1.1 Problem definition

The broader multi-country SIAPS program was designed to address the problem of insufficient availability of quality pharmaceutical products and effective pharmaceutical services required to improve health outcomes. In Ethiopia, the SIAPS project sought to modernize what project reports characterized as an outdated pharmaceutical management system.

As part of that effort, the Clinical Pharmacy activity, implemented from 2012 to 2016, was intended to address improper medication use in clinical wards, chronic care units and shortages of properly trained staff. SIAPS documents and staff referenced hospital assessments that found numerous drug therapy problems in hospitals, including adverse drug reactions, inadequate or excessive dosage, and noncompliance. Pharmacist training was product-oriented approach rather than a patient-oriented, which contributed to these issues. Respondents reported that the problem was identified as an issue of concern by practicing pharmacists, the Government of Ethiopia (GOE), implementing partners, and Ethiopian schools of pharmacy. Project documents also reference several studies and hospital assessments that document pharmaceutical care and drug therapy problems in Ethiopia. Surveys in the early 2000s showed widespread use of antibiotics, which raised concern about antibiotic use above the optimum level recommended by WHO. Findings also showed insufficient labeling practices, and confusion among patients on how to take prescribed drugs. One of the main reasons for these problems was the lack of appropriately trained pharmacists to provide the services.

3.1.2 Enabling environment

A report by the Center for Strategic and International Studies broadly characterizes Ethiopia as a strategic development partner that provides clear leadership, unlike many host country governments,

despite its authoritarian governance (Downie 2016).[3] The health care system specifically is one of the sectors that the government has worked to improve.

The health care system has undergone significant shifts since the Ethiopian People's Revolutionary Democratic Front took power in 1991, including expansion of primary health care delivery and decentralization at the regional level although the central level remained responsible for policymaking and budgets. Ethiopia's health status indicators have improved and life expectancy has increased since these changes were implemented, however significant health system constraints remain, including limited health infrastructure, insufficient human resources for health, and low health spending relative to GDP (Wamai 2009). Current government health efforts focus on improving the quality of health services and reaching underserved populations. These efforts are guided by the national Health Sector Transformation Plan (2015/16 to 2019/20) (Downie 2016).

As part of the national Health Sector Transformation Plan, the GOE sought to address clinical pharmacy problems through the Hospital Reform agenda. The Ethiopian Hospital Reform Implementation Guidelines (EHRIG) developed and published in May 2010 by the Federal Ministry of Health (FMoH), outlines a set of standards, grouped into thirteen chapters, that hospitals are required to meet in healthcare service delivery. EHRIG was designed to guide hospital managers and health providers in steering the consistent implementation of reforms in health services at hospitals throughout the country. Chapter 4 (Pharmacy Chapter) of the new guidelines was dedicated to pharmacy services, which highlights clinical pharmacy as one of the 12 key pharmacy standards, creating a framework of policy support. Contributors to these guidelines included the FMOH and the Ethiopian Pharmaceutical Association, a non-governmental pharmacy organization in Ethiopia. This EHRIG process was supported by the Clinton Health Access Initiative. MSH was tasked to draft the pharmacy chapter which was later enriched through a multi-partner effort with SCMS, DELIVER, Pharmaceuticals Fund and Supply Agency (PFSA), the Food, Medicines, and Health Care Administration and Control Authority, Universities, professional associations and other stakeholders, to compile a document that would comprehensively address pharmacy services including clinical pharmacy concerns from multiple perspectives. This chapter was finally reviewed by all stakeholders and partners in a national workshop, until the feedback was incorporated and it was delivered to the GOE.

Since 2010, public hospitals in Ethiopia have been implementing the clinical pharmacy guidelines (Sarkar 2016: 926). As such, the Clinical Pharmacy activity design and interventions were closely tied to identified government policies and agreed upon national reforms. One respondent explained that there was not policy support for patient-oriented clinical pharmacy services, where pharmacists are directly involved in patient care, before the 2010 guideline that included clinical pharmacy as a component. After that point, the respondent said that it was easy to get regional facilities onboard and became easier to adopt and implement clinical pharmacy services after the publication of the document (Ethiopia 04 – Implementer).

Improvements to pharmacy education also took place in the 2000s. In response to surveys that documented drug therapy problems in the early 2000s, schools of pharmacy in Ethiopia revised their curriculum to be more patient focused in 2008. The overarching goals were to improve treatment outcomes and patient safety by reducing medication therapy problems and improving quality of pharmacy services.

[3] The US government is Ethiopia's largest bilateral donor, with more than $641 million health funding between 2013 and 2015 (Downie 2016).

3.1.3 Implementation setting

The primary feature about the implementation setting raised by respondents was about the pharmacy workforce. One is the challenge that there is a shortage of pharmacy staff in hospitals and the turnover is high. Another is that motivation and commitment is low among some pharmacists, in part due to limited public awareness about the profession, long working hours, and the level of salary and benefits. An assessment of the Clinical Pharmacy activity found that 62% of the pharmacists interviewed were dissatisfied with their job, often due to a lack of supportive supervision, unattractive incentive packages, ambiguous job roles and responsibilities, and lack of support from hospital management (PFSA and SIAPS 2016:20).

Several respondents characterized public hospitals as being receptive to the Clinical Pharmacy activity because the hospital reform guidelines provided a government mandate for the activity. Therefore, one respondent said that health bureaus had to pay attention (Ethiopia 03 – Implementer). However, despite the clear mandate, there was limited awareness about clinical pharmacy services in some hospitals where trainees worked.

3.1.4 Project features and design

The broader SIAPS program was implemented in over 20 countries from 2011 to 2016.[4] The program built on USAID's Rational Pharmaceutical Management Program in the 1990s and the Strengthening Pharmaceutical Systems program in 2007-2012. SIAPS aimed to improve the pharmaceutical systems and services in the countries they worked in. The prime implementer was Management Sciences for Health (MSH) and the four core partners were Accreditation Council for Pharmacy Education, Harvard University, Logistics Management Institute, and University of Washington. USAID centrally funded SIAPS for a total of $197.9 million as a Cooperative Agreement.

In Ethiopia, the focus of SIAPS "is to enhance pharmaceutical services through patient centered solutions while continuing to support essential supply chain functions at the interface between medicines and patients" according to an annual report (SIAPS 2015:149). SIAPS works in all regions of Ethiopia in partnership with a number of stakeholders, including the Federal Ministry of Health (FMOH), the Food, Medicines, and Health Care Administration and Control Authority, the PFSA, regional health bureaus, public health facilities, universities, and professional associations (SIAPS 2015:149). From 2012 to 2015, the SIAPS Ethiopia project funding totaled $12.7 million with funds from Family Planning/Reproductive Health, Maternal, Child and Neonatal Health, the President's Emergency Plan for AIDS Relief, and the President's Malaria Initiative (SIAPS 2015:148). SIAPS Ethiopia had one of the largest country budgets in the

Activity Profile

Title: Improving Care through Patient-Centered Clinical Pharmacy Services activity

Period: 2012-2016

Funding: USAID

Budget: $428,299

Prime contractor: Management Sciences for Health

Local implementers: Jimma University, Mekele University, PFSA

Focus: Clinical pharmacy services

[4] SIAPS was implemented in Angola, Bangladesh, Burundi, Cameroon, Central Asia, Democratic Republic of the Congo, Dominican Republic, Ethiopia, Guinea, Haiti, LAC Amazon, Lesotho, Mali, Mozambique, Namibia, Niger, Philippines, Regional Development for Asia, South Africa, South Sudan, Swaziland, and Ukraine, in addition to regional programs in Latin and Central America, Asia, and West Africa.

program, following South Africa and the Democratic Republic of the Congo.

The Improving Care through Patient-Centered Clinical Pharmacy Services (Clinical Pharmacy) activity in Ethiopia was implemented from 2012 to 2016 and had a budget of $428,299 (see). SIAPS implemented the activity with local partners including Jimma University, Mekele University, and the Pharmaceutical Fund and Supply Agency. The activity was implemented in 65 hospitals in the regions of Amhara, Tigray, Oromia, Harari, Afar, and Benishangul Gumuz; the Southern Nations, Nationalities, and Peoples' Region (SNNPR); and the city administrations of Addis Ababa and Dire Dawa.

Figure 3 Activity timeline

Year	Event
2011	SIAPS project start
2012	Clinical Pharmacy activity start
2012-2014	Clinical Pharmacy in-service training
2014-2016	Clinical Pharmacy technical assistance and dissemination
2016	SIAPS program end

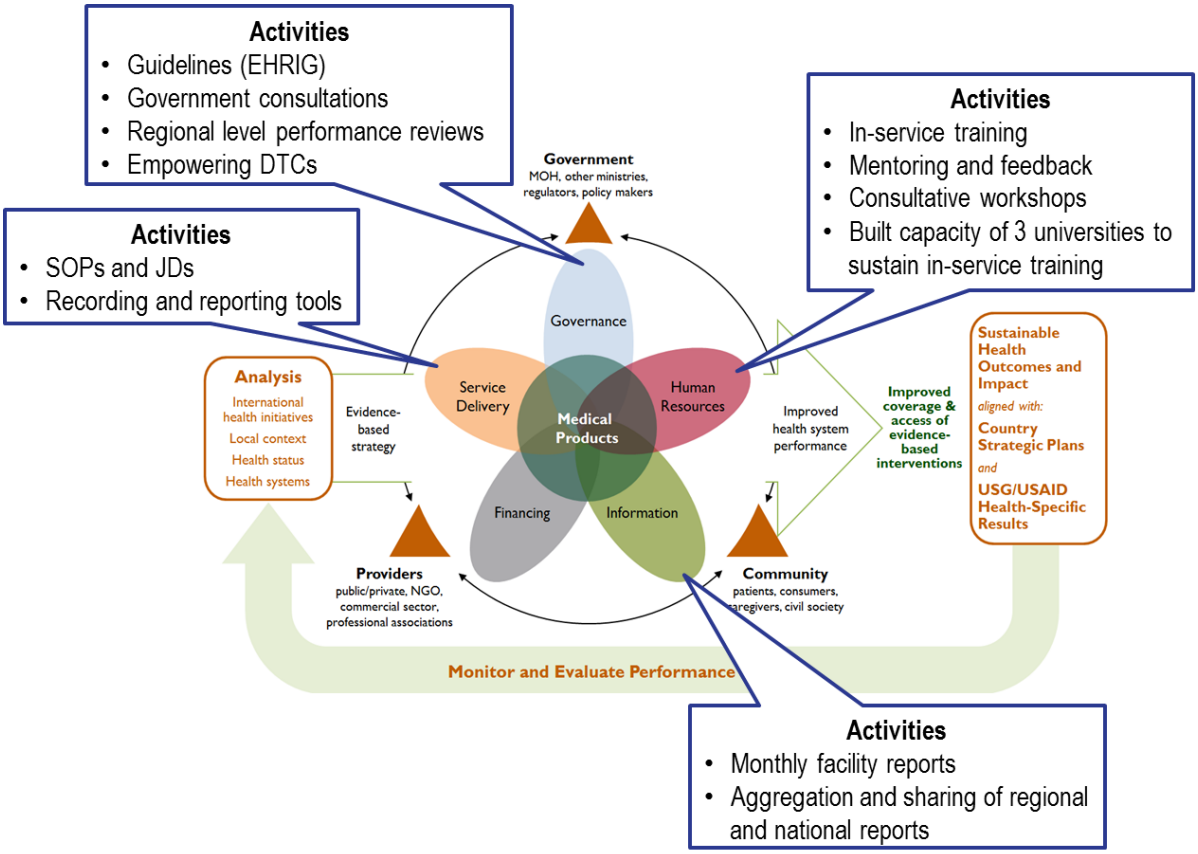
The Clinical Pharmacy activity resulted in 53 of 65 hospitals initiating clinical pharmacy services. SIAPS reported that the activity contributed to a shift in clinical pharmacy services, which contributed to "triggered improvements in the recognition and resolution of drug-therapy problems, documentation of patient medication profiles, medication adherence, and reporting of adverse drug reactions" (SIAPS 2015:72). According to project documentation collected from 26 hospitals between August 2012 and May 2014, "pharmacists identified 2,904 drug therapy problems" and intervened in "83% of these cases." For patients that experienced medication errors, these "pharmacist interventions resulted in improved treatment outcomes in 91% of cases" (SIAPS 2014:71). More recent data collected by SIAPS from 43 hospitals (PFSA and SIAPS 2016) indicates that clinical pharmacy interventions were being documented in 36 (87.8%) hospitals. Document reviews showed that a total of 8,257 drug therapy problems (DTPs) were identified since initiation of the service in August 2012. Pharmacists were able to intervene on 87% of the 8,257 DTPs with an 88% acceptance rate of their recommendations by the Multidisciplinary Team.

The Clinical Pharmacy activity objective was to promote patient-centered pharmaceutical services in support of the SIAPS Intermediate Result 5 to improve pharmaceutical services to achieve better health outcomes. SIAPS and SIAPS Ethiopia took a pharmaceutical systems strengthening approach following the systems strengthening approach outlined in the RFA for the program. The RFA states that the

> "SIAPS guiding framework and result areas reflect a comprehensive set of dynamic relationships among five health systems building blocks (governance, human resources, information, financing, and service delivery), with a Medical Products Building Block overlay to provide technical content and identify substantive areas of concern" (USAID n.d.:1).

As shown in Figure 4, SIAPS followed the framework outlined in the RFA in designing their approach to pharmaceutical systems strengthening. The SIAPS framework recognized the interactions among the governance, human resources, information, financing, and service delivery building blocks and the medical products building block. It also placed these building blocks as operating within stakeholder interactions between providers, communities, and the government.

Figure 4 Clinical Pharmacy activities mapped onto SIAPS framework for pharmaceutical systems strengthening



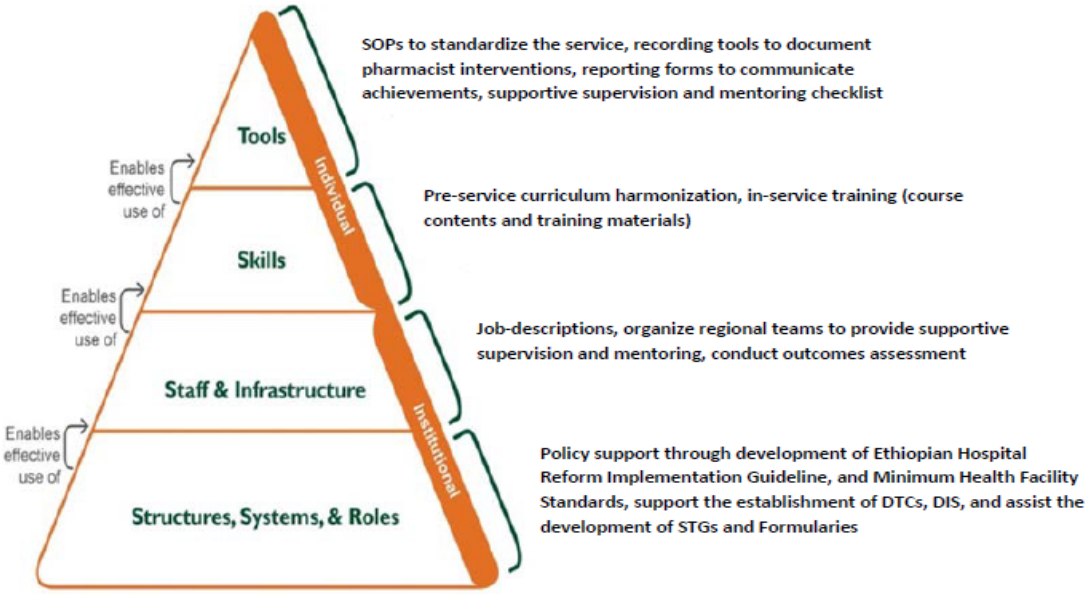
The Clinical Pharmacy activity was an Ethiopian specific activity, rather than a common one implemented across SIAPS countries. The Clinical Pharmacy activity contributes to the service delivery and human resources building blocks. As stated in Section 3.1.2, the pharmacy chapter of the Ethiopian Hospital Reform Implementation Guidelines provided the foundation for the Clinical Pharmacy activity. MSH contributed to the FMOH's development of the pharmacy chapter under the USAID Strengthening Pharmaceutical Systems project, in partnership with the Clinton Health Access Initiative. The EHRIG states that clinical pharmacy services are patient-oriented services developed to promote the rational use of medicines, and more specifically, to maximize therapeutic benefits (optimize treatment outcomes), minimize risk, reduce cost, and support patient choice and decisions, thereby ensuring the safe, effective, and economic use of medicine treatment in individual patients.

To design the Clinical Pharmacy activity, SIAPS worked with the Pharmaceutical Fund and Supply Agency, and schools of pharmacy from four Ethiopian universities. SIAPS sought "to create consensus and advocate for a more patient-centered approach for the provision of pharmaceutical services" (SIAPS 2015:72). One respondent described the activity approach as having a classical clinical pharmacy design that was a multi-layered and multi-pronged capacity building model (Ethiopia05). SIAPS's approach to capacity building in clinical pharmacy was multi-layered, systems change approach. As shown in Figure 5, the activity aimed to incorporate a comprehensive set of activities by addressing multiple components of the pharmacy system:

- Structures, systems, and roles by contributing to hospital guidelines and pharmaceutical structures like Drug and Therapeutics Committees
- Staff and infrastructure by revising job descriptions for pharmacists, providing supportive supervision, and conducting outcome assessments
- Skills by providing in-service training that was in line with pre-service curriculum
- Tools by creating and strengthening SOPs, recording tools and reporting forms, and supportive supervision and mentoring checklist

Figure 5 SIAPS approach for building capacity for clinical pharmacy in Ethiopia

Source: Geremew, Elias, et al. 2014.



3.2 Pre-implementation

3.2.1 Implementation groundwork

The implementation climate was relatively receptive to this activity, including readiness for implementation and relative priority of the intervention among stakeholders and hospitals. Because FMOH enforced implementation of EHRIG, of which SIAPS supported the Pharmacy Chapter; there was a clear mandate for the activity within public hospitals. Further, SPS and its follow-on SIAPS Program were active players in the advocacy and technical support for curriculum revision through the Ethiopian Pharmaceutical Association. The training program and consultative meetings raised the awareness of the FMOH, the Regional Health Bureaus (RHBs), and the hospitals' management of the importance of clinical pharmacy services to improving the quality of patient care. That awareness encouraged them to emphasize and support the implementation of the clinical pharmacy initiatives and helped build the groundwork for the Clinical Pharmacy activity.

3.3 Implementation

While the activity aimed to provide a holistic approach to building clinical pharmacy capacity, the main approach to the project was a one month in-service training program. MSH began by designing a one-month curriculum, developing training manuals, and selecting a local institution to host the training. The curriculum and training manuals were developed by a consultant with strong involvement of School of Pharmacy at Jimma University. Jimma University was selected to host the training on the basis of its experience in successfully running a clinical pharmacy postgraduate program. SIAPS also helped organization of a national workshop to review undergraduate curriculum based on pharmacy education given in other countries.

In the first round, the program initially trained 21 pharmacists from 21 hospitals, building to 200 pharmacists trained in eight rounds. The program used predetermined criteria to select public hospitals and trainees within those hospitals, including commitment to initiating clinical pharmacy service, agreements to retain the trained staff for at least a year, pharmacy operation standards in the hospital, and pharmacy background of the trainees. The program entailed a one week intensive course to update the participants on the basics of pharmaco-therapeutics as patient-focused clinical pharmacy services (didactic portion), and then during the remaining three weeks there were intensive, applied rounds (bedside attachment) in patient wards (clinical portion).

Those 200 pharmacists came from 66 federal, university, and regional hospitals selected from the regions of Amhara, Tigray, Oromia, Harari, Afar, and Benishangul-Gumuz; the SNNPR; and the city administrations of Addis Ababa and Dire Dawa. In addition to the training at Jimma University, two rounds of in-service training were conducted at the University of Gondar and Mekelle University with strong support from SIAPS and Jimma University. After completing their training, the pharmacists were expected to initiate the service immediately on their return to their respective health facilities. To facilitate implementation of the service, consultative meetings were organized on the last day of most of the programs in the presence of officials from the RHBs, hospitals, and the PFSA to build consensus on and to discuss implementation issues. Over time there seemed to be less resistance from host institutions.

Once back in the hospital, newly trained pharmacists were expected to go on rounds with medical doctors and to monitor appropriateness of medicine prescribing, handling and administration. The trainees received post in-service training follow-up and supportive supervision, which included onsite support, supportive supervision and mentoring checklist, and recording and reporting tools. They were told to first focus on clinical wards with high volumes of medicines circulation and those at risk of medication errors such as intensive care units or surgical wards. For the first few weeks trainees were instructed to critically observe and take/ask questions during the first few weeks rather than responding to everything at once until they got adequate exposure and build enough confidence into the new role.

SIAPS implemented other components beyond the in-service training. Early on, SIAPS recognized that there was not sufficient documentation and that they could not show results. So SIAPS responded to this identified need and designed templates for recording/capturing patient profiles and recommendations from practicing pharmacists that could be aggregated for reporting. In addition, SIAPS, in collaboration with FMOH and regional health bureaus (RHBs) provided intensive technical assistance to all hospitals.

During implementation, some of the trained pharmacists were readily accepted by other hospital staff. For example, some physicians asked them, "'Why are you here?'" Newly trained pharmacists were able to describe their contribution and defend the need for their role in the hospital. Some medical professionals initially saw the pharmacists as competitors rather than a complimentary resource to providing appropriate patient care. Still, to address the problem of pushback from clinicians, SIAPS staff

worked with hospital CEOs and medical staff to describe the need for and role of pharmacists to generate support for the intervention among hospital leadership. SIAPS involved various stakeholders including RHBs, CEOs and clinical staff of hospitals, while PFSA reached out on the government side to create buy-in for the clinical pharmacy program. On the last day of training, stakeholders and students prepared a workplan together to ensure support from their home institution. When pharmacists returned to their institutions, they first provided an awareness training to home-based staff to explain their new roles. Respondents thought that this process worked well to re-introduce staff into their new roles in the home institutions.

There seemed to be some variation on frequency of contact. One facility-based pharmacist said that they were supported in daily tasks and had weekly phone contact because the technical advisor lives nearby and it is easy to communicate with him. This individual had contact with the central level on a monthly basis via email (Ethiopia 07).

Respondents cited rapid turnover as a challenge, and continued staff shortages. A respondent suggested that the enthusiasm may have worn off for this project and that there should be incentives such as higher salary or other benefits to draw people to clinical pharmacy practice and enable them to work longer hours or on the weekend (Ethiopia 05).

One of the challenges described was how to gather continued support for this clinical pharmacy reform over time. Although the program successes were qualitatively documented, there is not research on clinical outcomes attributable to the clinical pharmacy program that can be shown to policy makers to convince them of the importance of this program. Respondents thought that researchers could contribute by creating a document for national reporting or auditing that can measure cost saving and impacts on patient care. Also, if pharmacists are to work on a 24 hour schedule or national holidays or weekends they will have to justify extra pay, which is easier when there is supporting policy, which one respondent explained (Ethiopia 06 – Implementer).

The national assessment of the program, published in February 2016, suggested that nationally the drug therapeutic committees have grown stronger. Provision of information services at hospitals also improved. Provision of education about drugs to patients has improved, and patients better understand how to store medicines, not to share medicines, and how to use medicines safely for specific populations. As presented in section 3.1.4 above, the program documented improved patient care, health outcomes, recognizing, detecting and preventing medication errors (PFSA and SIAPS 2016).

Program results suggest fewer adverse events, and improved patient safety, satisfaction and trust, although this was not all measured by SIAPS. Respondents reported that these outcomes were assumed. The activity also lead to a substantial change in service provision as pharmaceutical services are now provided in wards in addition to the conventional services provided at dispensaries in the majority of hospitals that received the intervention.

3.4 Maintenance and evolution

3.4.1 Sustaining implementation

The active training phase for pharmacists on patient centered clinical pharmacy services took place from 2012 to 2014. To sustain the activity, there was ongoing support for the trained pharmacists as of June 2016 when this research was conducted. MSH/SIAPS still provided this technical support, while government and universities shouldered operation costs of employing the pharmacists. Even during active implementation SIAPS instituted a tiered system whereby they might act as support or supervision, but did not actually run the training after they had trained an expert. The PFSA helped to

select and invite hospitals and trainees to participate and coordinated the activity at the central and regional levels.

Challenges remain that may limit the extent and knowledge of the activity impact. While new pharmacists coming out of school should have a more patient-centered rather than product-centered training given the reformed curriculum, inadequate clinical training is still a problem (PFSA and SIAPS 2016). In addition, there is not a standardized reporting system so it is difficult to determine how clinical pharmacy is functioning in practice.

SIAPS has been sharing best practices from one hospital to another through regional technical advisors and experience sharing events. One respondent said that these advisors note when a practice has worked well in one place and share those lessons (Ethiopia 03 – Implementer). However, SIAPS staff emphasized that now it is in the PFSA's hands to monitor and continue the activity. PFSA was actively involved in the assessment of existing sites and in tracking progress. Although some respondents suggested that PFSA is generally more focused on the supply side and delivering drugs and other supplies to health facilities, and that it is regional health bureaus that have the mandate and power to make clinical pharmacy part of hospital inpatient programs.

At the same time, some participants felt that the universities still focus on theory, rather than practical knowledge in the pre-service training. Although the undergraduate curriculum has been reformed in clinical pharmacy, an assessment in 2015 suggested that further curriculum reform may be necessary, and that pharmacists do not graduate sufficiently confident to make decisions with patients in clinical settings. One suggestion was for a fellowship or residency program for pharmacists similar to what medical professionals have as training.

Respondent 03 thought that "whoever is capable" should continue to support clinical pharmacy. Interviewees suggested that continued documentation is key to tracking successes or challenges of a project, and that SIAPS could play a role in this. They also saw mentoring as a necessary component to ensure continued success.

Looking forward, respondents hoped that this intervention would be introduced to all hospitals in Ethiopia, building from the 66 hospitals targeted by the program, because they are struggling to meet human resource demands and have recognized a need to train more pharmacists and improve ratios of pharmacists to patients. One respondent explained that the high-level documents in support of clinical pharmacy provide institutionalized support for the activity (Ethiopia 05), because clinical pharmacy was included in national regulatory standards. The 2015-2020 country agenda is to improve quality and equity, delivering for all citizens from different regions. The clinical pharmacy component of the strategy is being updated to incorporate new interventions and developments. Strategic plans for the next five years are to expand the activity to the existing 311 hospitals and to grow as the hospital target numbers grown (goal of 800 hospitals in next five years). There will also be a need to train and introduce drug and therapeutic committees and clinical pharmacy services in the hospitals (Ethiopia 02 – FMOH).

Several respondents reported that continued support and reporting would help new hospitals incorporate clinical pharmacy. Respondents thought that technical support from SIAPS/USAID would make it easier for new hospitals to incorporate new practices for clinical pharmacy. They said that some programs at present are more functional than other programs, which indicates the need for continued support to address shortcomings. Respondents also thought that better reporting should be systematic even though it would be resource intensive. One suggested that an automated system to collect information would be very beneficial and contribute towards continuity of care (Ethiopia 08 – USAID). Although, according to one respondent it is not clear what kind of support pharmacists may need going forward in terms of training or other resources. The respondent also cited a need for measuring the contribution of clinical pharmacy towards bigger targets such as maternal health, organizing facility-based

drug information services such as pharmaco-vigilance, since at present that occurs at national but not regional levels (Ethiopia 08 – USAID).

3.4.2 Dissemination

SIAPS and PFSA conducted several dissemination activities during the activity:

- SIAPS reviewed reports and facilitated a brown bag discussion within MSH, which was presented from Ethiopia but broadcast to MSH headquarters in DC.
- SIAPS also held an in-person, week-long summit in June 2015 in Arlington with many country representatives to discuss achievements, success stories, and intermediate stories to review, encourage, and support the overall SIAPS project. Clinical pharmacy was one component of this meeting.
- SIAPS made presentations at two international workshops in September and October 2015 – 1st Global Conference on Patient Centered Care: Training and Delivery of Universal Healthcare in Nairobi, Kenya, and the 2015 ACCP Global Conference on Clinical Pharmacy in San Francisco, USA.
- PFSA and USAID's SIAPS program published a standard operating procedures manual in January 2015 in an effort to disseminate the tools for the clinical pharmacy intervention and to collect appropriate data for assessing the program.
- In February 2016, the PFSA published a report summarizing project successes, challenges, and areas for improvement. The report showcased the national-level results.
- MSH had a global meeting where there was interest from SIAPS/South Africa in the Clinical Pharmacy project. However, this has not advanced to the implementation stage.

A representative from MSH indicated that information is being gathered on the number of hospitals that are starting clinical pharmacy programs on their own initiatives, without support from USAID/SIAPS by taking lessons from SIAPS supported sites indicating the potential for scalability and sustainability of the intervention.

4. DISCUSSION AND SYNTHESIS

In this section, we discuss our results and synthesize the key factors that led to the successful implementation of the project and lessons learned.

4.1 Synthesis

From interviews and project documents, we identified several factors that supported the intervention's implementation and success. One is that SIAPS implemented the Clinical Pharmacy activity in a very conductive policy environment. A key strength of the program was that it developed an implementation plan for existing guidelines. The implementation model was to build staff and organizational capacity and skills. Without this implementation plan, few hospitals would have had the capability or resources to reach the goals outlined in the EHRIG pharmacy chapter. Respondents cited the Standardized Operating Procedures as a key factor in contributing to success and adherence of the guidelines.

In terms of implementation, SIAPS was well positioned to implement the program because they had experts in the field of pharmacy, as well as partners well versed in relevant fields, including supply chain, drug therapeutic committees, and rational use of medicines. Factors that contributed to success included the joint support from the USAID mission, GOE FMOH, and the technical and political feasibility. Respondents cited a committed team of implementers with good experiences, but also the need to continue education and training new students. Further, as one respondent said, the "beauty" of this activity was that the country has a strong sense of ownership, and the SIAPS steered activities but allowed locals to become the front-runners or drivers of the clinical pharmacy program. Many projects advocate for this type of shared responsibility, but few programs do this well (Ethiopia 05). While the achievement of this ownership may be in part due to the fact that the Ethiopian government is often a strong development partner (Downie 2016), it facilitated implementation.

4.2 Lessons learned

Lessons learned emerged around challenges that the activity faced and from the factors that contributed to success. Two challenges—limited monitoring data and continued shortage of HRH—constrained implementation and support for the intervention, and threatened sustainability of the intervention outcomes. Key factors of success that provide lessons learned for other projects is to develop interventions in direct support of government policies and initiatives that require support to be implemented or adopted. Further, Ethiopian stakeholders played a key role in the activity and maintained strong ownership for the activity during implementation and have plans to continue that ownership.

4.3 Conclusion

The Clinical Pharmacy activity was implemented as part of SIAPS's broader pharmaceutical systems strengthening program in Ethiopia. While the activity on its own is not a health systems strengthening invention, it is as part of the broader program. The problem targeted by the activity was documented by multiple assessments. The activity built on previous USAID-funded interventions and had a clear

government mandate and policy support. The activity intervention and the roles and responsibilities of implementers were well-defined. Some challenges were faced from staff within the targeted hospitals and due to broader challenges facing the pharmacy workforce. Our case study findings are limited because we focused on the Clinical Pharmacy activity and did not learn much about how it fit into or contributed to the broader SIAPS program, and how the implementation and actor dynamics in the broader program influenced the implementation of the Clinical Pharmacy component.

ANNEX A: COMBINED IMPLEMENTATION FRAMEWORK

Phase	Domain	Factor	Description	Unit of analysis
I Pre-condition	Enabling environment	Wider environment	Economic, political, social, and health system context within which intervention[5] is implemented	National/regional context
		External policies and incentives	Strategies to spread intervention – policy, regulations (not directly implemented by project but (pre)existing) Policies that constrained implementation Other donor led initiatives that complement intervention	National/regional context
	Implementation setting	Characteristics of organization	Structural characteristics of organization such as social architecture, age, maturity, and size of organization Culture of organization such as norms, values, basic assumptions of organization	Change target/larger host organization[6] (identify for each case; e.g. MOH)
		Implementation climate	Climate within organization, including relative priority of project, readiness for implementation, learning climate, and policies, procedures, and reward systems that inhibit or facilitate implementation	Change target/larger host organization (identify for each case; e.g. MOH)
	Project design	Intervention source	Stakeholder perception if intervention internally or externally developed	As applicable for each case (e.g. MOH, local partners, change target)
		Identification of effective intervention	Process for deciding intervention approach and activities Stakeholder perception of quality and validity of evidence that intervention will have desired effects Perceived relative advantage and complexity/perceived difficulty of intervention	As applicable for each case (e.g. MOH, local partners, change target)

[5] The total package of activities that is implemented by the project.
[6] Institution within which activities are being implemented; may be MOH or other local organization (will focus on larger organization like MOH rather than individual hospitals); depending on the case this organization may be more or less involved in the actual implementation.

		Adaptability	Degree to which intervention was adapted to local needs, including degree to which beneficiaries' needs were understood and design was adapted to meet their needs	Project implementers[7] (e.g. prime + subs)
		Draft package	Perceived quality of how intervention is presented	As applicable for each case (e.g. MOH, local partners, change target)
2 Pre-implementation	Implementation groundwork	Structural characteristics of implementing organization	Structural characteristics of implementing organization such as social architecture, age, maturity, and size of organization; culture of organization such as norms, values, basic assumptions of organization	Project implementers (e.g. prime + subs)
		Implementation climate	Climate within project including relative priority of project, readiness for implementation, learning climate, and policies, procedures, and reward systems that inhibit or facilitate implementation	Project implementers (e.g. prime + subs)
		Planning	Degree to which intervention is planned in advanced, quality of methods; refinement of draft package based on pilot testing, stakeholder feedback	Project activities
		Orientation and logistics	Quality of initial planning and execution of the project, including needs assessment, pilot testing, leadership engagement	Project activities[8]
3 Implementation	Implementation	Executing	Fidelity of implementation	Project activities
		Engaging	How the project attracted and involved appropriate individuals throughout project: opinion leaders, formally-appointed internal implementation leaders, champions, external change agents	Project activities
		Feedback and refinement	Qualitative and quantitative feedback about progress and quality of implementation Refinement of activities based on feedback	Project activities

[7] Prime contractor and sub-contractors (may include local subs) who implement the project. This does not include the change target organization.
[8] Specific activities directly implemented by the project implementers. These may or may not align with other activities in the change target organizations. These individual activities make up the intervention as a whole.

		Cost	Costs of total intervention - planned and actual	Intervention
4 Maintenance and evolution	Sustaining implementation	Organizational, financial changes	Changes made to sustain the intervention	Project implementers (e.g. prime + subs); Project activities
		Re-customize delivery as need arises	Adapting the intervention delivery as circumstances change	Project implementers (e.g. prime + subs)
	Dissemination	National dissemination	Preparing refined package, training, and TA program for national dissemination; was project nationally disseminated	Project implementers (e.g. prime + subs); Change target

ANNEX B: KEY INFORMANT INTERVIEW GUIDE

Instructions

First complete informed consent to conduct interview and ask permission to record.

Ask as many of the primary questions as is feasible given the time constraints and as are appropriate for the respondent given their role in the project. Ask probe questions as applicable. Prioritize the most important questions if you do not have sufficient time to ask all applicable questions.

Respondent's role

1. Can you tell me about your involvement with [PROJECT]?
    a. When were you involved with [PROJECT]?
2. Who were you working for during that time? (e.g. Implementing partner (specify); USAID Mission; USAID HQ; government counterpart; other—specify)
    a. What was your position or title with [PROJECT]?
    b. Did you change organizations or positions during your time on [PROJECT]?

Pre-condition

3. What problem(s) was the [PROJECT] trying to solve?
    a. Who felt this was an issue of concern? (e.g. MOH, US Mission, other stakeholders?)
    b. Why did they see it as a concern?

        PROBE: What evidence was this based on?

    c. Was there a country/government initiative or reform targeting this issue that the [PROJECT] was intended to support? Please describe briefly.
4. How did USAID decide to fund a project to address this problem? Who was involved in the decision?
    a. What evidence was used to understand the issue?

        PROBE: Evidence used by respondent or respondent's organization, other partners, local stakeholders, USG?

    b. What approaches or activities did USAID specify in the RFA/RFP? (*Skip if can answer from documentation*)

        PROBE: Did other stakeholders contribute to what was specified in the RFA/RFP?

    c. How did USAID decide what to include in the RFA/RFP? Did other stakeholders contribute?

5. How was this [PROJECT] selected to address [ISSUE]?
    a. Who was involved in the selection?
6. Can you briefly describe the [PROJECT's] approach and activities?
    a. Which do you think were the most important activities?
7. During the work planning process, how were the specific activities used in [PROJECT] selected?
    a. Who contributed to these decisions?

        PROBE: Prime or subcontractors, US Mission, MOH, hospitals, [PROJECT] participants, beneficiaries

    b. What other information influenced the selection of the [PROJECT] interventions? (e.g. government priorities, new USAID/USG initiative, existing policies/regulations, new financing, etc.)
    c. Were other interventions considered but not selected?
    d. How much consensus was there between stakeholders about the design of the interventions?
8. How were the intervention sites identified? (e.g. hospital, school of nursing, etc.)
    a. Who contributed to these decisions?
9. How were the activities designed to be appropriate for the local health system context?
    a. How were planned activities piloted?
    b. How were planned activities adapted to existing conditions during the [PROJECT]?

Pre-implementation

10. Were there any individuals or organizations who provided strong support for the [PROJECT]?
    a. How did they promote [PROJECT] implementation?

        PROBE: Did they promote implementation at individual sites or for particular activities?

    b. What are the reasons they supported the [PROJECT]? (e.g. specific to [PROJECT] or supportive to larger country initiative?)
11. Were there any individuals or organizations who delayed or impeded implementation of [PROJECT]?
    a. How did they impede [PROJECT] implementation?
    b. What are the main reasons they impeded it?
12. Can you tell me about the dynamics of the individuals and organizations working on [PROJECT]?
    a. How did these evolve over time?

Implementation

13. How were [PROJECT] activities implemented?

a. Were all the activities implemented in all of the project sites? (*Skip if can answer from documentation*)

b. Were activities implemented in phases? (*If yes*) What were the phases? (*Skip if can answer from documentation*)

c. Did the [PROJECT] activities change over time? (*If yes*) Why? (*Skip if can answer from documentation*)

d. Were changes documented? (*If yes*) How? (*Skip if can answer from documentation*)

e. How did contextual factors affect implementation? (e.g. social, economic, political, technological, etc.)

14. Was there consensus among different partners and stakeholders about how the [PROJECT] was implemented?

15. Where did the resources for [PROJECT] implementation come from? (e.g. [PROJECT]/[PARTNER], USG, government, others) (*Skip if can answer from documentation*)

    a. Was there enough funding and other resources to support [PROJECT] implementation?

        PROBE: financial, technical, human, technological.

    b. (*If there was a shortage of resources*) How was the shortage addressed?

16. What challenges were faced during day-to-day [PROJECT] implementation?

    a. Were there any issues with policies or regulations?

    b. How did [PROJECT] address these challenges?

17. How were [PROJECT] activities monitored and/or evaluated? (*Skip if can answer from documentation*)

    a. Who was responsible for monitoring implementation progress? Was this part of standard implementing practices?

    b. Was an evaluation conducted? By whom? Who requested it? Who paid for it?

    c. How were findings from M&E incorporated into implementation?

    d. What was the response to M&E findings?

18. What dissemination activities were undertaken during [PROJECT]? (e.g. small-scale meetings at [PROJECT] sites, national workshops presenting findings, feedback sessions to USG, etc.) (*Skip if can answer from documentation*)

    a. How was feedback disseminated throughout [PROJECT]? (e.g. [PROJECT] participants, end-of-the-line beneficiaries and policymakers)

Maintenance and evolution

19. What was done during [PROJECT] to support continuation of activities after [PROJECT] ended?

    a. What role did [PARTNER] or others have in helping to sustain the activities?

b. What role did others play in sustaining the activities? (e.g. US Mission, MOH, intervention sites, communities)

20. What is the current status of activities included in [PROJECT]?

    a. Who has taken responsibility for sustaining the interventions? (e.g. financial, organizational, technical responsibility)

    b. What are the long-term prospects of the interventions?

    c. What, if any, are the plans to scale-up/expand the interventions from [PROJECT]? (e.g. same country, other settings)

Reflections

21. What do you think were the impacts of [PROJECT]? (e.g. changes in health status, improved service delivery, increased quality of services.)

22. Were there any consequences from [PROJECT] that were unintended or unexpected?

23. What were some challenges to the overall implementation of [PROJECT]?

    a. How could have these been addressed during the implementation period?

    b. Do these challenges remain an issue today? Why?

24. What were the key factors that led to the success of [PROJECT]?

25. What are some lessons learned from implementing this intervention that you would take forward on other projects of this nature?

26. Is there anything else we have not discussed that you would like to share about the implementation of [PROJECT]?

27. Do you have any questions for us?

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BOLD THINKERS DRIVING
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