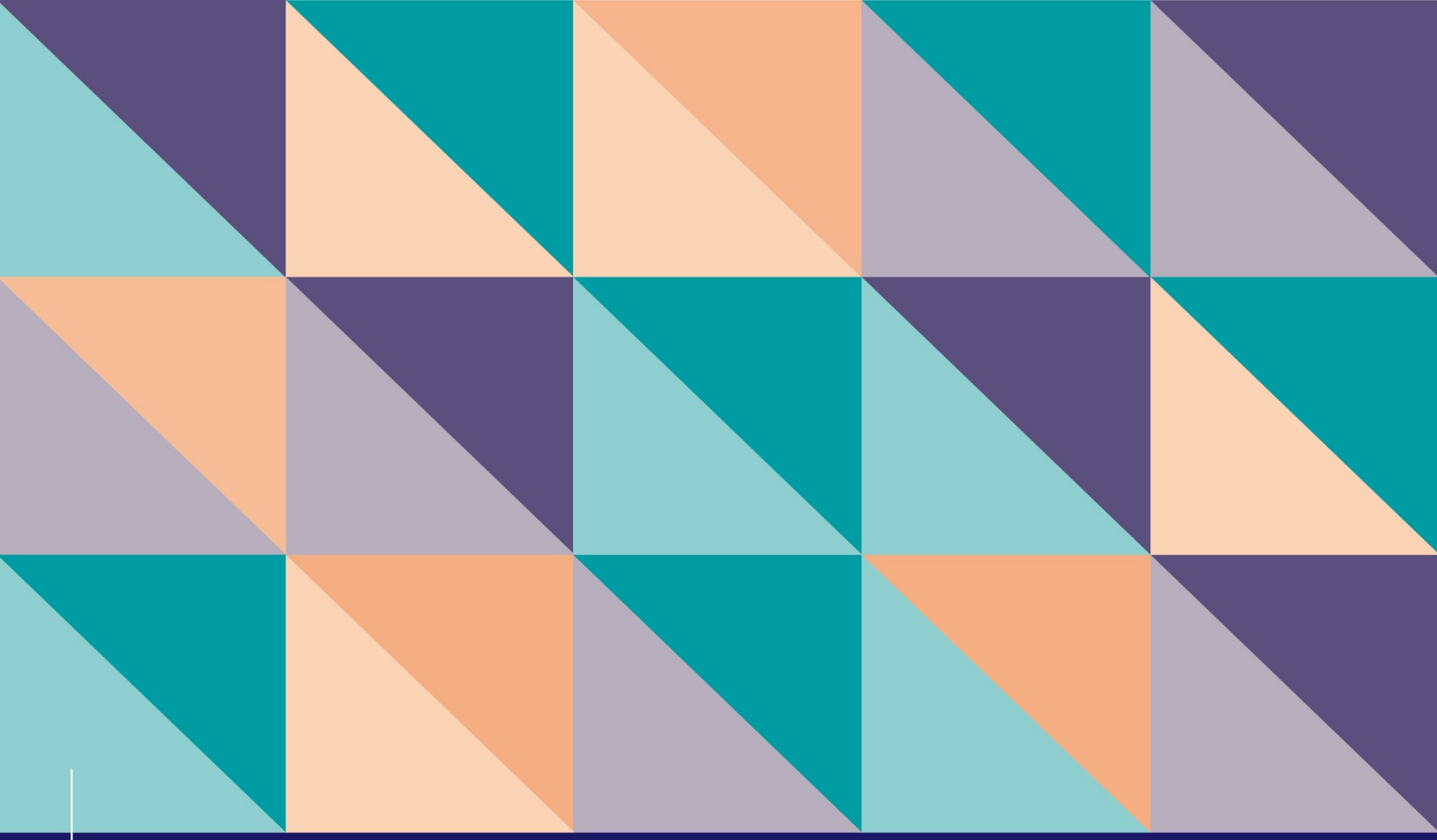

HIV Service Constraint Analysis through Data Triangulation

A Procedural Guideline

Stephen Sapirie

November 2016

MS-16-114

USAID
FROM THE AMERICAN PEOPLE

PEPFAR

MEASURE Evaluation

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CONTENTS

FIGURE

PRODUCTS OF THE PREPARATION PROCESS

PRODUCTS OF THE TEAM ANALYSIS AND PLANNING PROCESS

ABBREVIATIONS

ANC	antenatal care
ART	antiretroviral therapy
BCC	behavior change communication
CBO	community-based organization
CHW	community health worker
DATIM	Data for Accountability, Transparency, and Impact
DHO	district health officer
DREAMS	Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe
FP	family planning
FSW	female sex worker
GBV	gender-based violence
HC	health center
HCT	HIV counseling and testing
HMIS	health management information system
HP	health post
IEC	information, education, and communication
IP	implementing partner
LQAS	lot quality assurance sampling
MC	male circumcision
MH	municipal hospital
MW	midwife
NGO	nongovernmental organization
OVC	orphans and vulnerable children
PAI	performance assessment and improvement
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PI	performance improvement
PLHIV	people living with HIV
RHC	referral health center
STI	sexually transmitted infection
TB	tuberculosis
TMW	traditional midwife
TT	tetanus toxoid (vaccine)
USAID	U.S. Agency for International Development

INTRODUCTION

Purpose

This guideline describes a team-based, learn-by-doing process designed to help health districts assess constraints on HIV service delivery and to plan, conduct, and monitor strategic interventions. The steps in this process help districts:

- Analyze local data
- Identify priority subdistrict areas that are burdened by disease
- Design interventions to overcome constraints and strengthen performance

This process works best with low-profile facilitation by staff or consultants experienced in team-based learning and the use of locally available data. National health administrations, lead institutions, and collaborative projects can also adapt the process to meet national and local needs.

The goals of this process are:

- To provide a practical opportunity for district health teams (national service and implementing partner [IP] project staff) to analyze routine and periodic HIV data that are available to their service facilities and offices, in order to identify current service gaps and their underlying causes
- To inform national programs and institutions of learning that support HIV service monitoring and improvement while building health team capacity for data analysis and use
- To foster the establishment of national institutional homes for leading and supporting such data use on a continuing and expanding basis
- To help the U.S. Agency for International Development (USAID) institutionalize the use of DATIM (Data for Accountability, Transparency, and Impact) indicators for monitoring and managing HIV strategies, such as 90-90-90 and DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe[1]), and of priority services of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) at the service site and district level
- To encourage national district health services to focus on areas with highest HIV prevalence and transmission rates, especially underserved communities

Background

Using data and causal models to analyze service constraints is not new. This has been part of health service assessment and planning for many years. A process initially known as district team problem-solving, and later as service performance assessment and improvement (PAI), has been applied in Latin America, Asia, and Africa. District teams used the process to identify priority health challenges from a list of problems defined and addressed by the national health system. Teams would prioritize services for performance improvement. The PAI process would be used with up to five district teams at a time, each addressing its own priorities for five full days of analyzing problems, designing solutions, and planning interventions. Terms used in the process are

[1] PEPFAR's 90-90-90 strategy has the following goals: by 2020, 90 percent of people who are HIV-positive will be diagnosed, 90 percent of those diagnosed will be on antiretroviral therapy, and 90 percent of those being treated will be virally suppressed. DREAMS seeks to reduce HIV infections in adolescent girls and young women in 10 sub-Saharan African countries where they are at especially high risk of acquiring the virus.

defined in Appendix A. The nonprofit Management Sciences for Health has applied this process in eight countries with more than 1,000 district teams since 2001. (See Appendix B.)

USAID officials have asked MEASURE Evaluation to shorten the process and focus district team attention on HIV services. This abbreviated process will support the assembly and analysis of diverse types and sources of data in order to identify service gaps and determine their underlying causes. The procedure covers the design of interventions to address service gaps in subdistrict areas that most need assistance to reduce HIV transmission and to improve identification and management of HIV cases (as in the 90-90-90 strategy).

National and District Applications

Enclosed for background information is a list of service activities and interventions recommended by international agencies actively supporting national HIV prevention and control programs. (See Appendix C.) The list illustrates common strategies, interventions, and services applied by countries at different stages of the epidemic, along with related challenges and pitfalls identified from data and staff experiences. This list is provided as a frame of reference for the array of HIV services being employed. However, this information should not replace a summary of the national HIV programs and strategies that districts are encouraged to produce using our guideline.

National health administrations and IPs participating in this process should choose districts and service organizations—government or nongovernmental organizations (NGOs)—that are providing such HIV program services, so that they can assess and improve their services as needed. Our abbreviated district procedure is designed to impart new skills in collecting and analyzing data, identifying service gaps, and designing interventions for better performance.

PROCESS OVERVIEW

Team Learning by Doing

This process emphasizes district-level team work and hands-on learning, with low-profile support by national advisors or facilitators. Team members receive detailed procedural guidelines, including objectives, tasks, expected products, recommended forms, and examples for each step of the process. After short briefings on the procedures and expectations, each team undertakes defined tasks with minimal guidance by facilitators. The facilitators may respond to questions about procedures and forms, but may not advise the teams on choices or decisions to be made. Each step of the process involves a limited period (about half a day) for producing a defined product. Recommended forms for each product are provided to facilitate completion of each step. Teams may briefly present their products to one another for cross-fertilization of ideas, and eventually share them with a central or provincial service manager and donor project managers.

Expected Actions, Products, and Steps

Each district team participating in this process is expected to do the following tasks:

- Assemble important data from routine service reports, surveillance system reports, and surveys; then prepare useful forms for presenting and using the data. (This preliminary planning activity takes place before the three-day group process begins.)
- Identify subdistricts and communities with high HIV transmission and prevalence rates, and prioritize them for strengthened prevention, case-detection, and treatment strategies.
- Identify HIV-related services—and their characteristics such as output, coverage, quality, and client satisfaction—that would likely benefit from focused causal analysis to define constraints and underlying causes.
- Generate ideas for interventions and formulate strategies to reduce constraints and improve service performance.
- Prepare an intervention implementation plan and a framework to monitor progress and impact.

Table A outlines the steps involved before, during, and after the team analysis and planning procedure takes place. There are three steps to prepare before the group team process occurs; seven steps to be undertaken by up to five teams meeting together over a three-day period to complete the analysis and planning procedure; and six steps to be undertaken after the teams return to their offices and facilities to conduct and monitor new interventions. Each process step will be described with clear objectives (expected products), recommended materials to use, tasks to undertake, and defined formats for recording results. Examples are provided for each of the desired products, often using maternal complications and deaths as the central health problem with related services. The guidance for this process is tailored to the funders' interests; however, national process organizers and managers in each participating country are allowed to propose adjustments for national policy and context.

Table A. Main steps and products of the triangulation process for HIV service constraint analysis

Steps	Products
Pre-Process Preparation (Before Teams Meet for Group Work)	
1. Ministry or partner identifies participating districts, facilitators, and team members	• Districts are chosen to participate; their national service and IP team members are designated; all teams are briefed on the purpose and nature of the process, schedule, meeting location, and expected products • National and IP facilitators are designated and prepared for the process, through their involvement in the review and adjustment of the procedural guidelines
2. Each team assembles and prepares the required data	Each district team has completed a full set of requested data formats: • Summary of the national HIV program, strategy, and services • District service infrastructure (service facilities and their functionality) • District service human resources (government and private service staff) • District and facility responsibility areas and populations (table and map) • Recent data on the health problems addressed by the program • Data on the services recently provided within the program
3. Ministry or partner arranges venue and logistics	• Funds are mobilized for the costs of the process • An appropriate working site is found and prepared • Travel, accommodations, and meals are arranged for the facilitators and participants as necessary
Team Analysis and Planning Process (During 3-Day Learn-by-Doing Group Work)	
Brief the teams on the characteristics, schedule, and products of the process, and its follow-up	Teams understand the nature of the learning-by-doing process and the intended products and results:
1. Identify priority subdistricts with greatest disease burden.	• List of HIV high-burden areas and localities with least access to health services • District map displaying priority areas (high-burden and low-access) areas for extending and improving HIV service performance
2. Select priority HIV services for constraint analysis	• District priority HIV services • Priority HIV services chosen for constraint analysis
3. Identify important constraints affecting priority services	• Predominant constraints on priority HIV service performance

Steps	Products
4. Conduct causal analysis of constraints on service performance	• Causal diagram depicting constraints on HIV services • Constraints and underlying causes affecting priority HIV services
5. Design interventions for reducing constraints and improving service performance	• Causal diagram with proposed points of intervention • Strategic interventions • Strategy descriptions
6. Design service performance improvement implementation plan and schedule	• Performance improvement implementation plan and schedule
7. Prepare the performance improvement monitoring framework and process	• HIV Watch Framework
Post-Process Implementation (After Teams Return to Offices and Facilities)	
1. Present plans to ministry and donors	• Approval to proceed with implementation; enhanced donor support
2. Organize and launch interventions	• Detailed implementation plan and responsibilities
3. Monitor progress and assess impact	• Implementation reports and updated HIV watch indicator table
4. Adjust constraint analysis process	• Improved procedural guidelines
5. Scale up district applications	• Increasing numbers of districts participate in constraint analysis
6. Take steps toward institutionalization	• Creation of an institutional home for HIV constraint analysis

PREPARATION FOR THE TRIANGULATION PROCESS

Identifying Participating Districts, Facilitators, and District Team Members

Once a ministry of health or partner has decided to apply the HIV constraint analysis process, the following preparatory steps are undertaken:

- The ministry of health, HIV program, or IP project chooses the districts that are likely to benefit the most from constraint analysis, based on their current burden of HIV, inadequate level of HIV service performance, and/or apparent need to improve the quality and use of their routine service data. Up to five district teams are selected to participate in the process together. The relevant district health offices are visited and appropriate staff are briefed, such as district health officers (DHOs), including monitoring and evaluation and health information system staff, HIV service supervisors, and selected health facility managers. Staff from social services, community organizations, and people living with AIDS can also be involved.
- The department, office, institution, or project that is sponsoring, managing, and/or supporting the process designates three to five national and project staff from central, provincial, or district levels to serve as national facilitators for the team analysis and planning process. This works best when experienced technical advisors and new facilitators jointly review the procedural guideline and forms, and make adjustments as needed. In addition, one or two staff will be required for administrative support.

Assembling and Preparing the Required Data

As part of the pre-process planning, each district team prepares a full set of requested data from its routine records and reports, HIV program, clinic registers, surveillance, surveys, evaluations, research, and records of essential resources, such as facilities, staff, equipment, transport, drugs, lab testing, other critical supplies, and donor support received at the district and subdistrict levels. (This data preparation in advance of the three-day process is a new feature of this process which was found to be very useful and is strongly recommended.)

Some data summaries may already exist and can be used without further preparation. In other cases, data will need to be compiled in a new format. It may be necessary for facilitators to help district teams assemble and prepare the required data. We enclose examples of formats developed by previous district teams that may be helpful:

- Summary of national HIV strategy (Table B)
- Inventory of district health facilities (Table C) showing their functionality
- Inventory of health staff (Table D) and private sources of healthcare (Table E), showing staffing of public and private providers. The list of private provides should indicate whether they care for HIV patients.)
- District and facility responsibility areas (Table F) showing population and target groups by facility area.
- District and facility responsibility areas map (Figure 1)
- District HIV problem and service situation (Table G), providing data about selected health services felt important to address. (This is a first selection of priority services for attention.)

Table B. Summary of national HIV strategy

Essential Services	Target Groups	Indicators	Targets

Table B. Summary of national HIV strategy (example)*

Essential Services	Target Groups	Indicators	Targets
Information, education, and communication (IEC)/behavior change communication (BCC)	General population, women, key populations, youth, people living with HIV (PLHIV)	# IEC/BC contacts among youth, key populations, PLHIV	Youth: double FSW: increase 70%
Condom distribution	Men, youth	# condoms distributed	
Youth-friendly services	Youth	# youth having received HIV counseling and testing	
Prevention of mother-to-child transmission of HIV	Pregnant women, mothers	% pregnancies tested #/% positive #/% under medication	
Male circumcision (MC)	Men, male youth and children	# MC performed	66% 15- to 49-year-old males circumcised
HIV counseling and testing (HCT)	Pregnant women, key populations, children of HIV+ mothers	#/% pregnant women tested #/% key populations tested #/% children of HIV+ mothers tested % adults receiving HIV test last 6 mos.	98% FSW last 12 mos-96% 95% 38%
Antiretroviral therapy (ART)	HIV+, infants of HIV+ mothers	# Cases (adults, pregnant women, infants, key populations) #/% under treatment at 12, 24, 36 months	95% eligible receiving ART
PLHIV Services	AIDS cases	#/% PLHIV receiving care, support services (nutrition, opportunistic infection [OI] medicine), monitoring, home visits	95% malnourished receiving supplements 80% receiving home visits
Post-exposure Prophylaxis	Clients with risks	# Post-exposure prophylaxis clients	
Gender-based violence (GBV) services	Victims of GBV	# GBV clients served	
Human resources capacity building	Nurses, facility managers	# Health workers/facility managers receiving HIV training	
OVC Services	Families with orphans	# OVC found #/% OVC requiring care, nutrition, education, shelter	88% orphans, 96% non-orphans attend school
Drug supply: distribution	Facility managers	# stockouts of HIV test kits and drug supplies	

Community support/ participation	Community leaders, community-based organization (CBO) managers	# PLHIV cooperatives operational	
Prevention/treatment of STI	Youth, adults, Key populations	# STI cases detected #/% treated	Increase STI treatment 33%
Reproductive health/family planning (FP)	Adults of reproductive age	# PLHIV receiving FP education, services	
TB, Cryptococcus meningitis	Adults, PLHIV	# TB patients tested for HIV # PLHIV tested for TB	
Blood screening	Blood donations	% donations properly screened	100% blood screening
Prevention of transmission	Children of HIV+ mothers HIV prevalence, ages 15–49 HIV prevalence, ages 15–24 HIV prevalence, FSW	% positive % positive % positive % positive	< 2% Hold to 3% 0.5% 45%

*This is an example of one method of summarizing the national strategy.

Table C. Inventory of district health facilities

# ID	Type of Health Unit	Name	Location	Functional State			Availability of Critical Infrastructure (Available and Functioning)								
				Func-tional	Under Repair	Under Const'n	Power or Generator	Water	Tel Fixed & mob	Radios	Emerg-ency Transport	Other Vehicle	Labor-atory	Refrig-erator	Lights
	HP	Barra do Bengo		☐	☐	☐									
	HP	Vila de Paz		☐	☐	☐									
	HP	Paraíso		☐	☐	☐									
	HP	Mulenvos de Baixo		☐	☐	☐									
	HP	Cerâmica		☐	☐	☐									
	HP	Ngangula		☐	☐	☐									
	HP	Mulundo		☐	☐	☐									
	HP	Kilunda		☐	☐	☐									
	HP	Camicuto 1		☐	☐	☐									
	HP	Caop Velha		☐	☐	☐									
	HP	Baixo Kifangondo		☐	☐	☐									
	HC	Ndala Muleba		☐	☐	☐									
	HC	22 de Janairo		☐	☐	☐									

# ID	Type of Health Unit	Name	Location	Functional State			Availability of Critical Infrastructure (Available and Functioning)								
				Func-tional	Under Repair	Under Const'n	Power or Generator	Water	Tel Fixed & mob	Radios	Emerg-ency Transport	Other Vehicle	Labor -atory	Refrig-erator	Lights
	HC	Materno Infantil		☐	☐	☐									
	RHC	Cacuaco		☐	☐	☐									
	RHC	Kikolo		☐	☐	☐									
	RHC	Leprosaria		☐	☐	☐									
	MH	Cacuaco		☐	☐	☐									

Abbreviations: HP = health post, HC= health center, RHC = referral health center, and MH = municipal hospital

Table D. Inventory of health staff

# ID	Type of Health Unit	Name	Staff Type													CHW[2]
			Gen'l MD	Special. MD	Nurse Super-visor	Special. Nurse	Gen'l Nurse	Auxil'y Nurse	X-ray Tech	Lab Tech	Hlth Educ	Pharm.	Records Officer	Admin Officer	Other	
	HP	Barra do Bengo														
	HP	Vila de Paz														
	HP	Paraíso														
	HP	Mulenvos de Baixo														
	HP	Cerâmica														
	HP	Ngangula														
	HP	Mulundo														
	HP	Kilunda														
	HP	Camicuto 1														

[2] CHW = community health worker, trained and functioning within the facility responsibility area and supervised by the facility

# ID	Type of Health Unit	Name	Staff Type													CHW[3]
			Gen'l MD	Special. MD	Nurse Super-visor	Special. Nurse	Gen'l Nurse	Auxil'y Nurse	X-ray Tech	Lab Tech	Hlth Educ.	Pharm.	Records Officer	Admin Officer	Other	
	HP	Caop Velha														
	HP	Baixo Kifangondo														
	HC	Ndala Muleba														
	HC	22 de Janairo														
	HC	Materno Infantil														
	RHC	Cacuaco														
	RHC	Kikolo														
	RHC	Leprosaria														
	MH	Cacuaco														
	Totals	18														

[3] CHW = community health worker, trained and functioning within the facility responsibility area and supervised by the facility

Table E. Private sources of healthcare

SR	Village	Private Practitioner	Address	Tel No.	Type of Practitioner*	Type of Service**	HIV Care***
1	Havelian	Dr. Juma Khan Dr. Bhadar Sher Dr. Jamila Khatun Mustaq Ahmad Murad Ali	Police Station Rd. Galiat Rd. Mohala Sikandarabad Asamabad Lora Rd. Goharabad Abbotabad Rd.		Physician Physician Physician Dispenser Homeopath	Common ailments Minor surgery Minor surgery Dispensing Dispensing	Yes Yes Yes
2	Lungra	Habib Ahmad	Near Jamia Masjid		Dispenser	Dispensing	
3	Punjgran	Nasim Ali Khowaja Saeed	Main Havelian Rd "		Dispenser Hakim	Dispensing Counseling	Yes Yes
4	Banda Shaheb	Zareen Khan Pineen Khan	Main Bazar Mohala Sultanabad		Dispenser Hakim	Dispensing Counseling	
5	Sultan Pur	Dr. Zamrud Khan Ismail Suharwardy Peer Saeen	Main Havelian Rd. Village BandaPir Khan Near Ziarat Kaka Sahib		Physician Dispenser Faith Healer	Common ailments Dispensing Counseling	Yes Yes
6	Chamba	Dr. Ali Raza Dr. Sonya	Raza Clinic, Valley Rd Health Ways Clinic, Inner City		Physician Physician	Skin clinic Women's health care	 Yes
7	Leri Sydan	Salman Baba Sikandar Shah	Sahjee di Bethak Matab Shafi		Faith healer Hakim	Counseling Counseling	
8	Rojia	Dr. Javeria Khan Dr. Malik Naveed Syed Imtiaz Shujaat Hussain	Waqas Hospital, Main Rd Waqas Hospital, Main Rd Sultan pur RD Village Gojra		Physician Physician Dispenser Homeopath	Common ailments Common ailments Dispensing Dispensing	 Yes Yes

*Common types of practitioners: physician, medical technician, pharmacist, drug dispenser, faith healer, homeopath, and hakīm (a traditional practitioner)

** Common types of services: delivery attendance, common ailments, minor surgery, psychological consulting, dispensing,

*** Provides care to HIV positive and AIDS patients

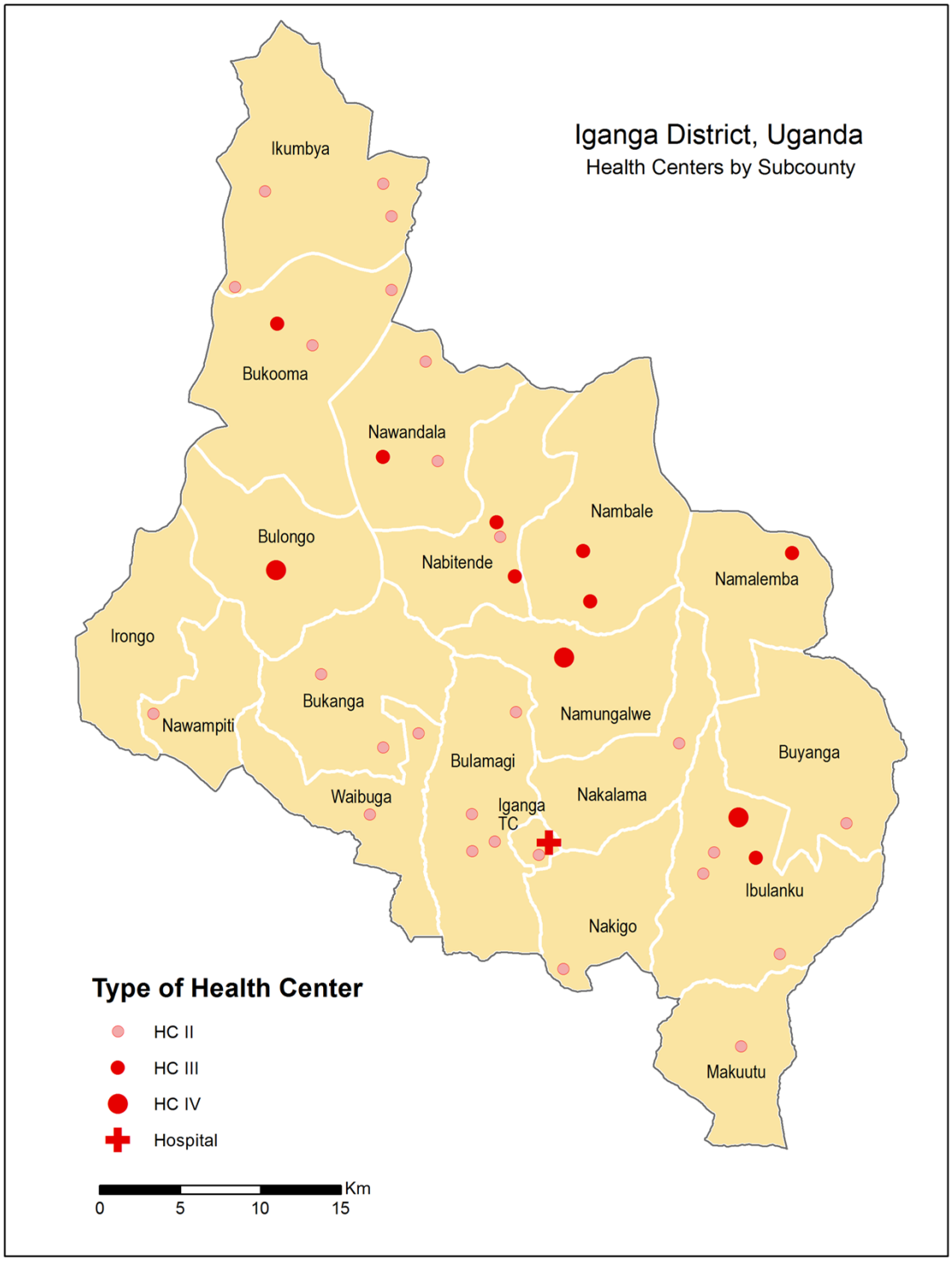
Table F. District and facility areas of responsibility (district: Iganga)

SR	Subcounty (Referral Facility)	Lower-Level Facilities	Parish or Subcounty Admin Officers & Telephone	Target Group Population Estimates								Other Sources of Care
				Total Pop'n	Babies (0–11m) (0.05)	Women 15–49 (0.22)	Men 15–54 (0.19)	Youths 15–24 (0.19)	PLHIV (0.07)	OVCs (Est)	Key at-Risk Populations (Est)	
1	Buyanga (HCIII)	HCIIs Wangobo, Nkaiza	Batwala, John 0774427945	44,700	2235	9834	8493	8493	3129	31	15	1 DS 2 TMW
2	Ibulanku (HC III)	HC IIs Banbi, Kigulu, Kasoikwe	Oketch, James	50,100	2505	11022	9519	9519	3507	35	25	1 DS 1 TP
3	Makuuutu (HC III)	HC II Nasango	Kisubi Kalikwani	27,300	1365	6006	5187	5187	1911	19		1 DS 1 CI
4	Namalemba (HC III)	HC IIs Nander, Bugoyozi, Namayemba	Wanyame, Geogrey	34,700	1735	7634	6593	6593	2429	24		2 CI 1 DS
5	Bulamagi (HC III)	HC IIs, Busowa, Kavule, Busoga	Nsubuga, Henry	53,100	2655	11682	10089	10089	3717	37	10	2 TP 2 TMW
6	Iganga Town Council (DH)	HC IIs	Wanyenya, Mariam	51,800	2590	11396	9842	9842	3626	36	5	3 DS 4 CI
7	Nabitende (HC III)	HC IIs	Haskya Asumani	30,900	1545	6798	5871	5871	2163	22		2 TMW 2 TP
8	Nakalama (HC III)	HC IIs	Nedkera Stephen	33,800	1690	7436	6422	6422	2366	24		1 TMW 1 DS
9	Nakigo (HC III)	HC IIs	Mukawaya Meddy	31,800	1590	6996	6042	6042	2226	22		2 TP 1 CI
10	Numbale (HC III)	HC IIs	Etc.	41,100	2055	9042	7809	7809	2877	29		1 TMW 2 DS
11	Namungalwe	HC IIs	Etc.	36,800	1840	8096	6992	6992	2576	26		1 CI 1 DS

SR	Subcounty (Referral Facility)	Lower-Level Facilities	Parish or Subcounty Admin Officers & Telephone	Target Group Population Estimates								Other Sources of Care
				Total Pop'n	Babies (0–11m) (0.05)	Women 15–49 (0.22)	Men 15–54 (0.19)	Youths 15–24 (0.19)	PLHIV (0.07)	OVCs (Est)	Key at-Risk Populations (Est)	
12	Nawandala	HC IIs	Etc.	30,100	1505	6622	5719	5719	2107	21		2 TP
13	Bankanga	HC IIs	Etc.	44,000	2200	9680	8360	8360	3080	31		1 TMW
14	Bukooma	HC IIs	Etc.	38,000	1900	8360	7220	7220	2660	27		2 DS 1 CI
15	Bulongo	HC IIs	Etc.	37,400	1870	8228	7106	7106	2618	26		1 DS 2 TMW
16	Ikumbya	HC IIs	Etc.	30,100	1505	6622	5719	5719	2107	21		1 CI 1 DS
	Total			**615,700**	**30,785**	**135,454**	**116,983**	**116,983**	**43,099**	**431**	**55**	**46**

PC = private clinics, VHT = village health teams, DS = drug shops, TMW = traditional midwife, TP = traditional practitioner

Figure A. District responsible area map



Source: Ugandan Bureau of Statistics (UBOS), 2010

Table G. Format for a district selection of HIV services for constraint analysis

Service	Target Groups	TG Size	Indicators	National Targets %	Current Annual Output	Current Coverage (%)	Target Achievement (%)

Table H. Example of a district selection of HIV services for constraint analysis

Service	Target Groups	TG Size	Indicators	National Targets %	Current Annual Output	Current Coverage (%)	Target Achievement (%)
IEC/BCC	• Key populations • Youth • PLHIV	55 116,983 43,099	# IEC/BCC contacts	FSW: Increased 70 Youth: Increased 100	0 10,000 21,000	0 8.5 48.8	0 50 NA
HCT	• Pregnant women • Youth • Key populations • Children of HIV+ mothers	33,750 116,983 55 10,000	#/% tests " " "	98 96 95	20,000 5,000 45 2,000	59.2 4.2 81.8 20.0	60.4 NA 76 21
ART	• HIV+ • Infants of HIV+ mothers	43,099 10,000	# known cases #/% under Rx	95	32,314 8,500	75.0 85.0	78.9
PLHIV Services	• AIDS cases • Malnourished cases	43,099 25,000	#/% receiving care and support	80 had home visits 95 malnourished had supplements	21,000 12,500	47.7 50.0	59.6 52.6
GBV Services	Victims of GBV	Est 25% women 135.454	# cases served		5	Insignificant	NA
OVC Services	HHs with OVCs	428; 200 of school age	# OVCs found #/% rec care #/% attend school	88 orphans attend school	431 305 110	55.0	 62.5
Supplies	Facility managers	48	# stock-outs of test kits, drugs	0 stock-outs	35	27.0 with no stockouts	27
Community Support	• Community leaders • CBOs	307	# PLHIV Coops		30	10.0	NA
STI Prevention, Detection & Treatment	• Youth • adults • Key populations	116,983 252,437 55	# STIs detected #/% treated	Rx increased 33	28,500 24,504	86.0	100
TB Services	• HIV+ • TB pts	43,099 19,060	#TB pts tested for HIV; # HIV pts tested for TB		25,859 16,201	60.0 85.0	NA NA

Arranging Venue and Logistics

- Funds are mobilized in advance for the costs of the process. Sources may include ministry of health capacity-building funds, district health office training funds, and donor project support. As experience is gained and decisions are made to expand the process to more districts, the activity should be funded by national health budgets at various levels of the system.
- An appropriate working site is found and prepared. Sites for conducting the multi-team process should have a comfortable room for plenary briefings and discussions, and smaller breakout rooms for teams to use as they complete session tasks. Space for the secretariat is required either within or adjacent to the plenary room. The room should be supplied with flipchart pads and easels for each team and have two projectors for displaying guidance and products. The process venue should be within one of the participating districts, preferably a training or meeting facility belonging to the district health office.
- Travel, accommodations, and meals are arranged for the facilitators and participants. Team members and facilitators may require living accommodations and meals at the venue, which adds to the participation costs. Certain travel costs may arise for participants, facilitators, and dignitaries to be invited for the opening and closing sessions.

TEAM ANALYSIS AND PLANNING PROCESS

The team analysis and planning process is designed to accommodate up to five district teams, comprising six to eight district health office staff and facility managers. The program typically covers seven steps and occurs over three full days, as illustrated in Table I.

Table I. Sample schedule for three-day process

	Day 1	Day 2	Day 3
AM	Opening: Team Briefing 1. Identify priority subdistricts with greatest disease burden	3. Identify constraints affecting priority HIV services	6. Prepare the intervention implementation plan and schedule
PM	2. Select priority HIV services and target groups for constraint analysis	4. Conduct causal analysis of constraints on service performance 5. Identify interventions for reducing constraints and improving service performance	7. Prepare the performance improvement monitoring framework and process 8. Teams assemble all products into one document

Seven Steps: Details, Examples and Forms

The following tables and figures provide details, forms, and examples for each step of the analysis and planning process.

Step 1. Identify priority subdistricts with the greatest disease burden

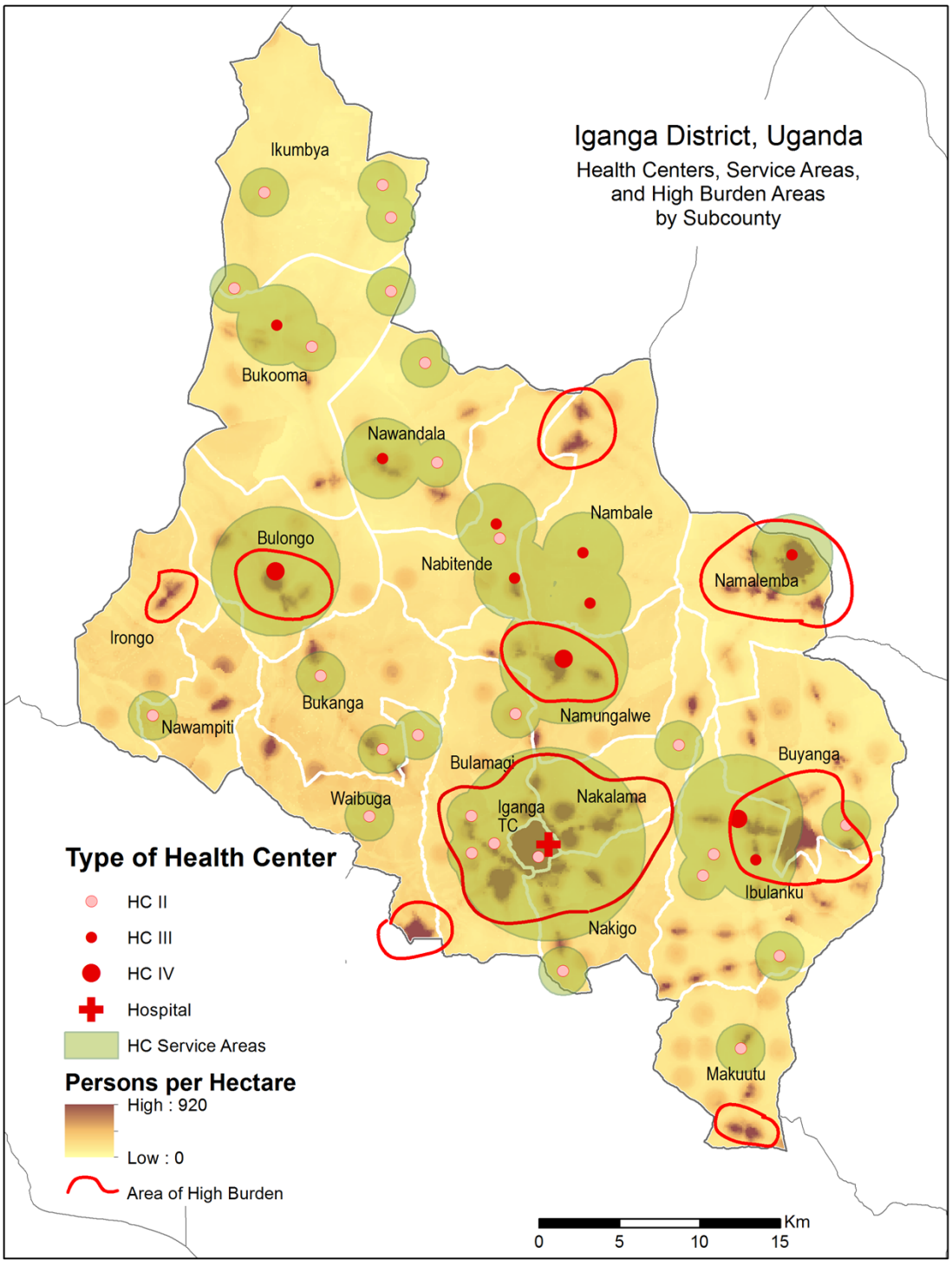
Overview	This step engages the teams in reviewing their HIV case data and list of health facilities to identify subdistricts with high HIV prevalence and/or with least access to health services, in order to focus analysis and planning attention where it is needed most.
Objective	The products of this first step are a list (Product 1.1) and geographic display (Product 1.2) of the subdistricts and towns identified as being areas of high prevalence of HIV and related health conditions, or of low access to healthcare.
Material	Selected data assembled and prepared by each district team prior to the convening of this process: 1. Service infrastructure and staffing: Tables of available facilities and staffing in the district (preparatory Tables C and D) 2. District and facility responsibility areas: Table and map of responsibility areas, total population, and target group population by facility (see examples in preparatory Table F and Figure A) 3. Current HIV service performance: level and trends by facility responsibility areas (see example in preparatory Table G)
Tasks	1. The team should begin with a review of the service points (public and private facilities) by type and location. Geographic areas with least access to healthcare should be listed and highlighted on the district map (Product 1.2). 2. The team should review the distribution of HIV and related disease cases, noting high burden subdistricts and towns in a list of priority areas (Product 1.1) and on the district map (Product 1.2). 3. The two products (illustrated below) should then be developed. This list of high-prevalence and low-access areas should receive the majority of attention for constraint analysis and intervention planning through the rest of the process.
Products	1.1. HIV high-burden areas and localities with least access to healthcare 1.2. District map showing priority areas for improving HIV services

Product 1.1. HIV high-burden areas and localities with least access to healthcare

Subdistrict Areas with Least Access to Health Services					
#	Subdistrict or Area	Population	# Facilities	Population per Facility	Distance to a Referral Facility

Subdistricts and Towns with High HIV Prevalence					
#	Subdistrict or Town	Population	# Cases	Prevalence	Nearest Service Facility

Product 1.2. Example of a district map showing priority areas for improving HIV services



Sources: Subdistrict boundaries, Uganda Bureau of Statistics (UBOS), 2010; population data, 2010 United Nations-adjusted estimates from the WorldPop gridded population project, GeoData Institute, University of Southampton—http://www.worldpop.org.uk/

Step 2. Select priority HIV services for constraint analysis

Overview	Each team selects a set of vital HIV program services in its district and then chooses the ones for which they feel they most need to identify constraints affecting performance.
Objective	At the completion of this step, each team will have identified the three or four HIV services that will become the subject of constraint analysis during this process, and subsequently will have performance improvement intervention planning and implementation.
Material	The data assembled and prepared by each district team prior to the convening of this process: 1. Summary of national HIV strategy, programs, and target group services (Table B from preparations) 2. Service infrastructure and staffing: tables of available facilities and staffing in the district (Tables C and D from preparations) 3. District and facility responsibility areas: table and map of responsibility areas, total population, and target group population, by facility (examples in Table F and Figure A) 4. List and map of high burden and least served subdistricts and towns (Product 1.1 and Product 1.2 from Step 1). 5. Selected HIV service performance level and trends (Table H of preparatory work for example)
Tasks	1. Confirm which services within the national HIV program are considered a high priority for delivery at this time within the country and district. The teams review and discuss the table of HIV program services mentioned in the introduction. Based on current service targets, and the disease and performance situation in the district (preparatory tables G and H), the team selects the services that should be a current priority for performance improvement attention, and lists up to 11 of them on the form provided in Product 2.1 (see also the completed example of this product). This is the first selection of priority services. 2. Insert data into the Product 2.1 form showing recent service indicators, target groups and size, current coverage, output, and proportion of target achievement. 3. From this list of priority HIV services, each team selects two to four services which, based on the performance data, most need attention for identifying constraints on performance. Teams list up to four priority services, subdistricts and facilities on the Product 2.2 form, with reasons for selecting them for priority constraint analysis (see also the completed example of this form). This is the second and final selection of priority services.
Products	2.1. District priority HIV services 2.2. Priority HIV services chosen for constraint analysis

Product 2.1. District priority HIV services (form)

Service	Target Group	TG Size	Indicators	National Targets	Current Annual Output	Current Coverage %	Target Achievement %

Product 2.1. District priority HIV services (example of a completed form)*

Service	Target Groups	TG Size	Indicators	National Targets %	Current Annual Output	Current Coverage %	% Target Achievement
IEC/BCC	• Key populations • Youth • PLHIV	55 116,983 43,099	# IEC/BCC contacts	FSW: Up 70 Youth: Up 100	0 10,000 21,000	0 8.5 48.8	0 50.0 NA
HCT	• Pregnant women • Youth • Key populations • Children of HIV+ mothers	33,750 116,983 55 10,000	#/% tests " " "	98 96 95	20,000 5,000 45 2,000	59.2 4.2 81.8 20.0	60.0 NA 76.0 21.0
ART	• HIV+ • infants of HIV+ mothers	43,099 10,000	# known cases #/% under treatment	95	32,314 8,500	75.0 85.0	78.9
PLHIV Services	• AIDS cases • Malnourished cases	43,099 25,000	#/% receiving care and support	80 got home visits 95 got malnourishment supplements	21,000 12,500	47.7 50.0	59.6 52.6
GBV Services	Victims of GBV	25% women 135.454	# cases served		5	Insignificant	NA
OVC Services	HHs with OVCs	428 200 school-age	# OVCs found #/% got care #/% attend school	88 orphans attend school	431 305 110	55.0	 62.5
Supplies	Facility managers	48	# stockouts of test kits, drugs	0 stockouts	35	27.0	27.0
Community Support	• Community leaders • CBOs	307	# PLHIV coops		30	10.0	NA
STI Prevention, Detection & Treatment	• Youth • Adults • Key populations	116,983 252,437 55	# STIs detected #/% treated	Treatment up 33	28,500 24,504	86.0	100.0
TB Services	• HIV+, • TB patients	43,099 19,060	#TB pts tested for HIV; # HIV pts tested for TB		25,859 16,201	60.0 85.0	NA NA

*Example drawn from Table G to prepare data during the pre-process.

Product 2.2. Priority services for constraint analysis (form)

Service	Target Group	TG Size	Indicators	Reason for Selection	Most Important	
					Subdistricts	Facilities

Product 2.2. Priority services for constraint analysis (example of a completed form)

Service	Target Group	TG Size	Indicators	Reason for Selection	Most Important	
					Subdistricts	Facilities
EC/ BCC	Key populations	55 (difficult to identify)	Size of the target group Effective HE contacts	Low level of identification of key populations; absence of any IEC/ BCC contacts with key populations, and importance of this risk group in the transmission of HIV	Ibulanka Buyanga Bulamagi Iganga Town	DH
HCT	HIV+ mothers and their infants	10,000	Number and % of HIV+ mothers counseled and their infants tested	Low coverage (20%) of HIV testing of infants and counseling of their mothers on the importance of such testing and treatment	Bankanga Makuutu Ikumbya	HC IIs
PLHIV nutrition supple-ments	Malnourished PLHIV	25,000	Number and % of malnourished PLHIV receiving nutrition food supplements	Achievement well below target	Ibulanka Iganga Town	Nakalama HC III

Step 3. Identify important constraints affecting priority HIV services

Overview	District teams examine the performance level of each service prioritized for constraint analysis in relation to the resources and population of each subdistrict, in order to identify possible constraints on performance.
Objective	At the end of the step, the teams should have a tentative list of the predominant constraints affecting each of the priority services.
Material	1. Service infrastructure and staffing: Inventory of available facilities and staffing in the district (preparatory Tables C and D) 2. District and facility responsibility areas: Table and map of responsibility areas, total population, and target group population by facility (Table F and Figure A) 3. District responsibility area map (Product 1.2) 4. HIV services most needing analysis of constraints and underlying causes (Product 2.2)
Tasks	1. The teams should begin with a discussion of what are constraints on service delivery, including terms such as obstacles, challenges, bottlenecks, barriers to describe factors that prevent services from being provided adequately. 2. Teams assemble reported data for the chosen services and calculate output and coverage rates and other performance indicators of relevance for each service (relevant column in Product 3.1). 3. Each team should then discuss resource shortages and other possible causes of inadequate service performance in the high burden areas and add these factors for each priority sub-district or area in the two relevant constraint columns (Product 3.1). 4. The last column of the form is used to list the names of subdistricts that are most affected by each constraint. If the constraints are predominant in all subdistricts, the teams can note "all areas" in that column.
Products	3.1. Constraints on priority service performance

Product 3.1. Predominant constraints on priority HIV service performance (form)

Priority Service	Target Groups	Indicators	Access Subdistricts	Major Constraints	Critical Resource Shortages	Most-Affected Subdistricts

Product 3.1. Predominant constraints on priority HIV service performance (example of a completed form)

Priority Service	Target Groups	Indicators	Indicator Performance in High-Burden/Low-Access Subdistricts	Major Constraints	Critical Resource Shortages	Most-Affected Subdistricts
Provision of IEC on HIV to MARPS	MARPS	Proportion of MARP population Receiving IEC	Less than 10%	Inadequate identification of high risk individuals Inadequate HIV IEC/BCC materials and media support Lack of contact with MARPS in the health services	Appropriate IEC/BCC materials	Ibulanku Buyanga Bulamagi
Counseling HIV+ mothers of infants	HIV+ mothers	Proportion of HIV+ mothers counseled	Less than 25%	Low coverage of HIV+ pregnant women with ANC Inadequate service facilities and maternal care providers in certain areas Poor performance of staff in counseling HIV+ women Inadequate coverage in certain areas with any kind of service	Inadequate service facilities and staff in certain areas	Ikumbya Bukooma Makuutu Buyanga Irongo
Testing infants of HIV+ mothers	Infants of HIV+ mothers	Proportion of infants of HIV+ mothers tested	Less than 20%	Lack of contact with infants of HIV+ mothers Resistance of mothers to allow their infants to be tested Frequent stock-outs of test kits	Test kits	Ikumbya Bukooma Makuutu Buyanga Irongo
Food/nutrition supplementation for malnourished PLWHA	PLWHA	Proportion of PLWHA receiving food supplements	Less than 15%	Shortage and stock-outs of nutrition supplement kits Inadequate identification of malnourished PLWHAs Inadequate procedures and staff capacity in nutrition services of PLWHAs	Trained staff	Ibulanku Buyanga Bulamagi

Step 4. Conduct a causal analysis of constraints on HIV service performance

Overview	Team members discuss the constraints and underlying causes affecting each priority HIV service. The dynamics of the service situation are presented graphically in a causal diagram (for example, see Figure 4).
Objective	By the end of Step 4, the district teams will have suggested the main causative influences inhibiting performance of important services, reducing their impact on preventing and managing HIV cases and deaths. The results are presented as a causal diagram and in a tabular format.
Material	1. Service infrastructure and staffing: tables of available facilities and staffing in the district (Tables C and D) 2. District and facility responsibility areas: table of responsibility areas, total population, and target group population by facility (Table F) 3. A district map showing responsibility and priority areas (see Product 1.2 for example) 4. A table showing HIV services that need analysis of constraints and underlying causes (Product 2.2) 5. A table showing predominant constraints affecting each priority HIV service (Product 3.1 6. Note and example causal diagram of constraints on maternal care services (Product 5.1)
Tasks	Each district team discusses its essential HIV services and the constraints that appear to affect them. The teams use a flipchart or white board on which a diagram of causal constraints is gradually developed. 1. Each team discusses the note (below) on health service constraints and the importance of focusing first on fulfilling service responsibility with existing resources, rather than on factors such as facility and staff shortages that may be beyond the team's control. The note (also below) on devising the causal diagram also is reviewed and discussed. 2. District teams are to focus on cases and deaths due to HIV as the priority health problem, or related problems such as sexually transmitted disease or tuberculosis if those services were chosen for analysis. To develop a causal constraints diagram, the team begins by placing the health problem indicators in the center of the flip chart (see yellow boxes in Figure 4 for a maternal problem and services example). 3. The selected priority services being analyzed are listed on the Product 3.1. The team records these poor performing services on the flip chart surrounding the health problem indicators. 4. Each team reviews its list of predominant constraints (see Product 3.1), and discusses, defines, and records on the flip chart the principle constraints affecting each underperforming service (these may extend beyond those a team initially listed in their form). The underlying causes and factors contributing to the constraints are also identified, defined and recorded on the flip chart. All services, constraints, and underlying causes also are written on index cards and located appropriately, to enable the lines of influence to be drawn on the flip chart. 5. After completing the causal diagram (Product 4.1), the team records the expanded list of constraints and underlying causes on the form shown in Product 4.2. Team members then discuss and determine which constraints deserve priority attention, and check (or prioritize) them on the form as indicated. 6. The priority constraints and underlying causes are reviewed to determine if they can be quantified. For example, team members could indicate the number or proportion of facilities lacking a certain capability (access to transportation), or the proportion of a target client group who lack knowledge of important information. Such indicators are entered in the appropriate column of Product 4.2. 7. If additional information is needed to understand underlying causes, team members specify that on the form in Product 4.2.
Products	4.1. Causal diagram showing constraints on maternal care services (using Product 5.1 as an example) 4.2. Constraints on service performance

Notes for Discussion

Health Service Constraints and Their Underlying Causes

When discussing low service performance, health service staff and managers may focus on causes that seem to be beyond their control, such as insufficient resources for staff, facilities, drugs, supplies, transportation, and operating budget. They also may blame the clients and communities for unhealthy behaviors or lack of knowledge.

This constraint analysis and performance improvement effort is designed to help the district teams see how they can overcome such constraints, by focusing on what they can do to achieve national standards and targets for the delivery of essential health services. District health service teams around the world have developed innovative local solutions to overcome constraints on service performance. The first step in doing so is to identify the constraints and their underlying causes.

Every health service situation is different, but they may experience common constraints. The following list of constraints on health service delivery does not serve as a checklist but rather as an example or source of ideas for district teams as they analyze their own constraints:

Difficulties in the Service

- Inadequate staff performance due to:
  - Staff shortages
  - Inadequate training, procedural guidance, and skills
  - Low motivation or poor attitude toward clients
- Inadequate facilities:
  - Inadequate number and location of facilities
  - Inadequate maintenance and poor appearance of facilities
  - Poorly equipped; equipment not maintained
  - Inadequate transportation and communications
- Inadequate budget for salaries, drugs, operating costs, and maintenance
- Frequent stockouts of essential drugs and supplies
- Inappropriate program policies, service procedures, and standards in relation to district needs and conditions

Difficulties in the Community

- Low awareness of the health problems and the means to prevent and cure them
- Low appreciation of the effectiveness of the services that the district health system can provide to prevent, detect, and manage health problems
- Family preference for alternative, less effective, or even harmful sources of care
- Difficult community access to appropriate level of services to prevent or manage health problems due to:
  - Distance
  - Costs, such as travel, fees, lost income, and poverty
  - Discrimination or rudeness by service staff
- Inadequate community participation and support for health promotion and prevention
- Inadequate reporting and communication by community volunteers and health workers

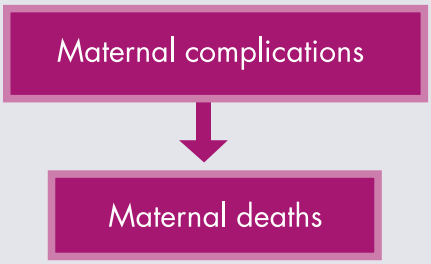
Difficulties in the Environment (Context)

- Inadequate support for health promotion and care from regional and local organizations, administrators, and politicians
- Inadequate cooperation from, and support for, related sectors of the community
- Civil unrest, security problems, and natural disasters

Notes for Discussion

Supporting Health and Service Constraint Analysis with a Causal Diagram

District teams should organize themselves into separate discussion groups with each one surrounding a flip chart on which their causal diagram can be developed. Each team should begin by writing the health problem indicators within boxes (see below) in the center of the flip-chart page (see Figure 4), In our example, the problem concerns maternal complications resulting in maternal deaths:



Each team should review the form completed from Table 2.2, discuss the health problem and the essential related services they identified. (For our example here, we would identify the services that are essential to prevent additional cases of maternal complications leading to maternal deaths.) The team discussion should result in surrounding the problem indicators shown on the flip chart with boxes containing the essential services that they have chosen as priority poorly performing services. These can be written on index cards and placed on the chart so that they surround the health problem indicators.

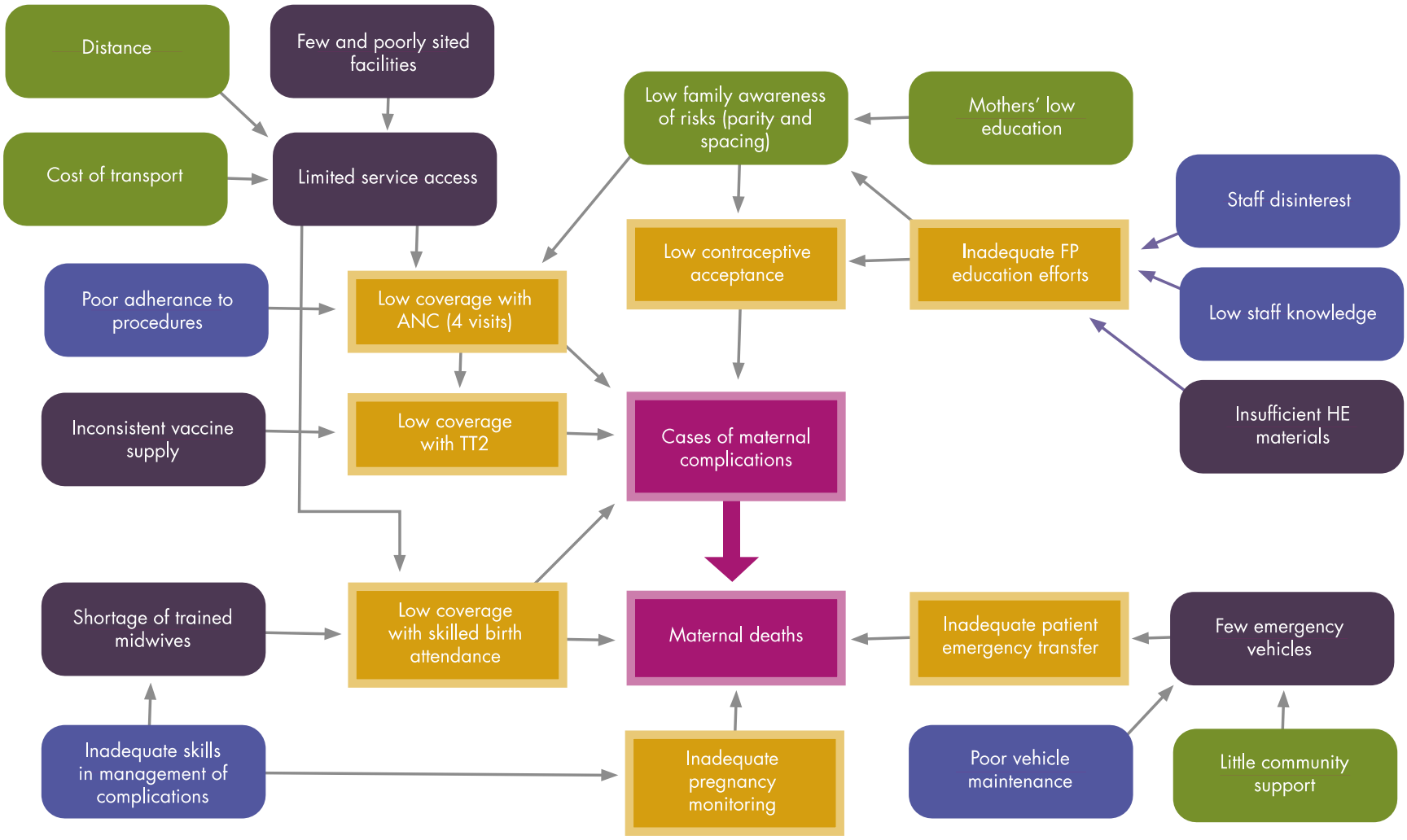
The team should discuss the main factors or "constraints" contributing to the inadequate performance of each essential service. Once a thorough discussion has been carried out, each participant should be asked to individually write down a list of factors that contribute most to impeding the satisfactory delivery of each essential service. When team members have listed their constraints individually, they should share them one at a time, in turn, with the rest of the team. When others have shared a similar constraint, it can be recorded on a card and attached to the diagram being developed on the flip chart, so that lines of influence can be drawn (as shown in Figure 4).

Next, underlying causes of constraints can be shared and posted on the flip chart in the same manner, with these cards posted in a circle outside of the initial constraints (as in Figure 4). Once all the main constraints and their underlying causes have been mentioned by the team members and are placed on the chart, the strongest lines of influence can be drawn in bold to show the most important factors contributing to the growth of the health problem and the inhibition of effective service delivery. Constraints and causes can be color-coded (as in Figure 4) to reflect categories such as resources, staff performance, and contextual factors.

This initial causal diagram should be displayed throughout the planning process, and, if possible, reproduced on a computer for presentation purposes. It can be updated as new factors are identified during the planning process. This diagram will be used later, during the generation of ideas for performance improvement interventions.

In addition to the causal problem diagram, the team will use the form provided in Table 4.2 to list and prioritize important constraints, and their causes and indicators. The indicators should be defined for measuring the constraints to make a quantitative estimate of the extent that the constraint exists across the priority subdistricts. Team members can use the form to specify the kind of information needed to confirm the underlying causes of the constraints.

Product 4.1. Causal diagram example showing constraints on maternal care services



Product 4.2. Constraints on service performance (form)

District: _____ **Priority Health Problem:** _____

Under-Performed Essential Services	Constraints on Performance	Priority Constraints	Underlying Causes	Indicators of Constraints and Causes	Additional Information Needed/Type and Level

Product 4.2. Constraints on service performance (example of a completed form)

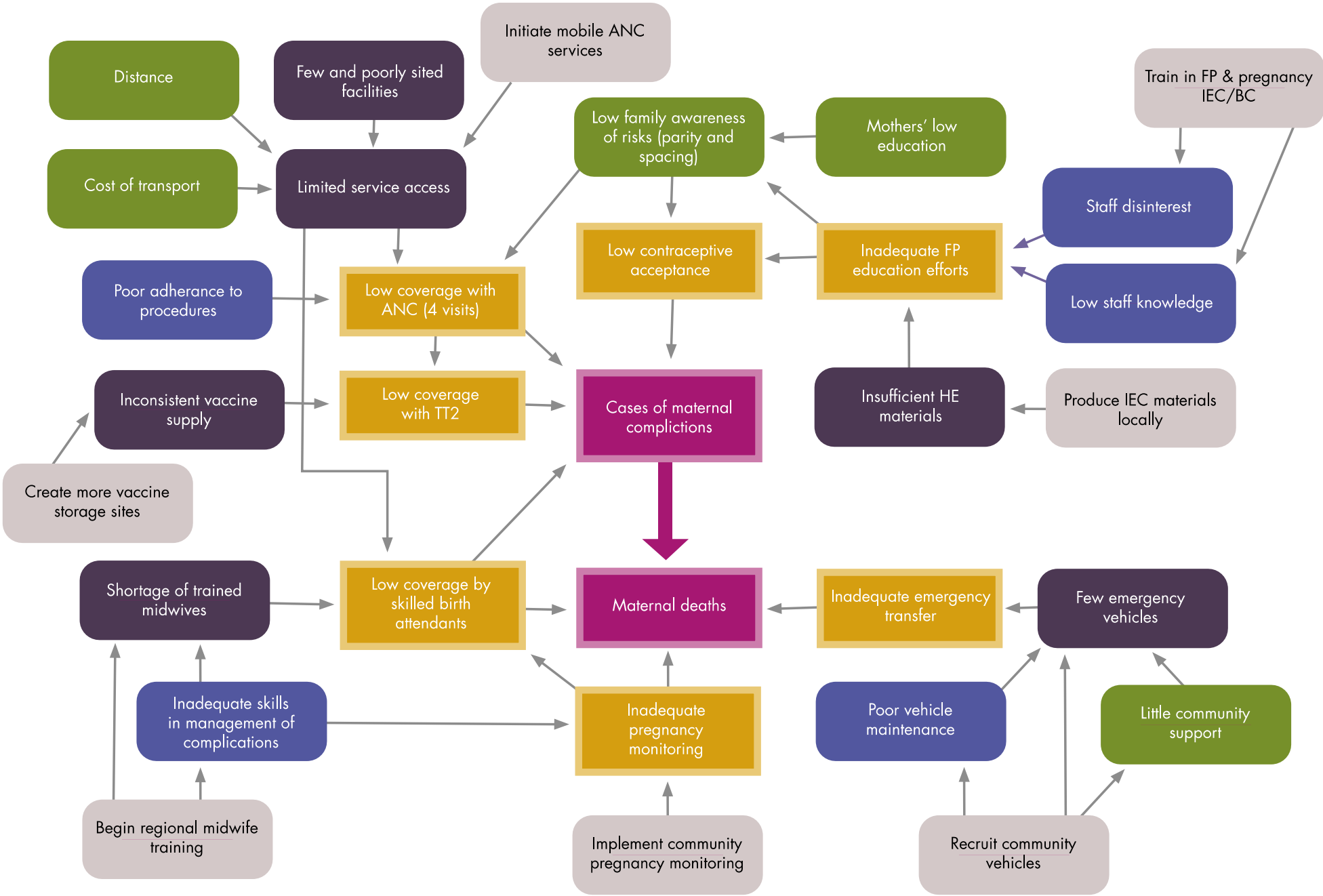
District: Iganga **Health Problem:** Maternal Complications and Deaths

Essential Services	Constraints on Performance	Priority	Underlying Causes	Indicators of Constraints and Underlying Causes	Additional Information Needed, Type/Level
Antenatal Care (ANC)	Limited service access Low awareness of risks of pregnancy and delivery	 √	Inadequate number and location of facilities Distance Cost of transportation Low education of mothers	The average size of the population in high burden facility catchment areas	Family knowledge of need for ANC
Tetanus Toxoid (TT) Vaccination	Inconsistent vaccine supply Low coverage with ANC		Inconsistent application of ANC tasks and procedures	Instances of TT vaccine stock-outs and shortfalls by facility and quarter	Causes of omission of TT during ANC
Family Planning (FP) Education	Staff disinterest Low staff knowledge Insufficient HE materials	√	Inadequate staff training	Stock-outs and shortfalls of FP HE materials per quarter	Cause of staff disinterest Availability of education materials
Contraceptive Acceptance	Low family awareness of risks of high parity and close spacing Inadequate FP education efforts	√	Mothers' low education	Contraceptive prevalence rate, by subdistrict	Level of knowledge of FP methods
Skilled Birth Attendance	Shortage of trained midwives Limited service access	√	Inadequate training in midwifery and management of delivery complications Distance Cost Few and poorly sited facilities	Proportion of deliveries attended by skilled birth attendants	Potential candidates for midwifery training Potential community support for monitoring pregnancies
Provision of Emergency Transportation	Few emergency vehicles	√	Poor maintenance of emergency vehicles Limited community support for transfer of emergency cases	Proportion of facilities without an emergency vehicle	Potential community interest in providing emergency transfers
Pregnancy Monitoring	Inadequate staff training in management of complications	√		Proportion of pregnant women whose pregnancy is being continuously monitored	Potential for communities and CHWs to assist with pregnancy monitoring

Step 5. Interventions for reducing constraints and improving service performance

Overview	Each team identifies an array of interventions that they can use to reduce constraints and improve service performance. Interventions are then grouped into strategies for ease of implementation.
Objective	At the end of this step, each team will have a list of proposed interventions and strategies for service performance improvement.
Material	1. Tables showing available facilities and staffing in the district (preparatory tables 3 and 4) 2. Information summarizing district and facility responsibility areas: table of responsibility areas, total population, and target group population by facility (preparatory Table F) 3. Map showing responsibility and priority areas (based on Product 1.2) 4. The causal constraint diagram (Product 5.1) 5. Form listing service constraints and underlying causes (Product 5.2) 6. Example of form listing strategic interventions (Product 5.2)
Tasks	1. Each team reviews the priority constraints and underlying causes identified in Product 4.2. 2. The teams discuss ideas for reducing constraints and note them on a flip chart. Ideas should focus on what the managers and staff can do to improve performance without seeking more outside resources. They also may wish to list ideas for obtaining support from their communities through local leaders, private practitioners, CBOs, NGOs, and donor projects active in the district. 3. The team records their favorite ideas on the causal diagram at the point of intervention to show where and how the constraint will be reduced and the causal chain of impact on service performance. 4. The team reviews the list of interventions and selects those that seem most feasible and likely to have significant impact. 5. The selected ideas for strategic intervention are listed with the related constraints and underlying causes on the form provided in Product 5.2. 6. It is likely that some of the proposed interventions will be of a similar nature, such as mobilizing community action, improving services procedures, and raising staff skills and job satisfaction. Such interventions can be grouped, described as strategies, and recorded on the form provided in Product 5.3 in order to provide some modest narrative description.
Products	5.1. Causal diagram with proposed points of intervention 5.2. Strategic interventions, 5.3. Service performance improvement strategies

Product 5.1. Example of a causal diagram showing interventions to reduce constraints on maternal care services



Product 5.2. Strategic interventions (form)

District _____ **Health Problem** _____

Constraint or Underlying Cause	Proposed Intervention

Product 5.2. Strategic interventions (example of a completed form)

District: Iganga **Health Problem:** Maternal complications and deaths

Constraint or Underlying Cause	Proposed Intervention
Limited access to maternal care services within the district	Initiate mobile antenatal care and family planning services in areas of low access to care
Inconsistent vaccine supply (frequent stock-outs)	Create more vaccine storage sites within the district
Shortage of trained midwives Inadequate staff skills in the management of pregnancy and delivery	Commence training (basic and refresher) of midwives within the region
Inadequate pregnancy monitoring	Promote and implement community pregnancy monitoring by CHWs and volunteers
Few emergency vehicles at health facilities Poor maintenance of emergency vehicles	Promote and recruit community-provided emergency vehicles and drivers to be on call
Lack of family planning health education materials	Begin producing and duplicating maternal health and family planning materials within the district
Low service staff interest in and knowledge about family planning education	Staff in-service training in family planning and pregnancy risk IEC/BCC

Product 5.3. Service performance improvement strategies (form)

District: _____ Health Problem: _____

Strategy	Strategy Description	Facilities and Staff Involved

Table 5.3. Service performance improvement strategies (example of a completed form)

District: Iganga **Health Problem:** Maternal Complications and Death

Strategy	Strategy Description	Facilities and Staff Involved
Training	Because of a widespread shortage of skilled birth attendants, including staff nurses and midwives, it is proposed that a regional training center for maternal health be set up and initiated in an existing school facility in the district. Curricula will be developed for both basic midwifery training and refresher courses. These courses would be held on a periodic basis using visiting faculty and experienced nurse supervisors. A special component of this maternal health program will be education skills and materials for women of child bearing age in the subjects of risks of pregnancy and childbirth, and the health benefits of family planning and birth spacing. Faculty and participants would be called on to design, produce and duplicate FP and Maternal risk education materials for use by the trainees when they return to their facility or home.	• One or more existing school facilities in or near the district with living accommodations for students and faculty • Experienced maternal care faculty for compiling relevant basic and short-course curricula • Existing maternal care faculty and nursing supervisors for periodic assignment as trainers • New and existing mid-wives would participate in the basic and refresher courses
Community Support for Maternal Health	A program of community activation for maternal health is to be created comprised of: • Provision of transportation for mobile ANC services in subdistricts with least access to fixed services • Hosting of vaccine storage sites in or near fixed facilities and mobile ANC teams • Provision of on-call emergency transportation through the designation of vehicles and drivers within distant and underserved communities. Drivers and attendants to be trained in management of postpartum hemorrhage • Community-level pregnancy monitoring and FP promotion by female CHWs and volunteers	• Vehicles and drivers designated by communities for supporting mobile ANC services and for providing emergency transportation on-call • Pharmacies and shops able to provide vaccine storage in existing refrigerators • Existing and new CHWs and volunteers to be trained in pregnancy monitoring and promotion of FP • Service staff to carry out the promotion and orientation of community involvement in these maternal health activities

Step 6. Design service performance improvement implementation plan and schedule

Overview	The district team shifts its attention to planning activities needed to implement the interventions and strategies for reducing constraints and improving service performance. The team identifies activities and products for each strategy and for monitoring the implementation of all interventions and their impact.
Objective	At the end of this step, the district team will have completed an Implementation plan and schedule.
Material	1. List of strategic interventions (Product 5.2) 2. Service performance improvement strategies (Product 5.3) 3. Definition of terms used in performance improvement planning (see below) 4. Form for service performance improvement implementation plan and schedule (Product 6.1) 5. Example of completed service performance improvement implementation plan and schedule (Product 6.1)
Tasks	1. Each district team reviews the forms, definitions and examples required to develop a performance improvement (PI) plan. It is important that the teams understand how implementation activities differ from routine services. (Time-limited development work resulting in a product, as compared to the continuing provision of services.] 2. The teams review their list of strategies and strategic interventions and enters the strategies in Product 5.2. 3. Based on the content of each strategy the team identifies the activities and products that need to be carried out and lists them for each strategy in the logical sequence in which they are to be carried out. 4. Each activity should have a defined product. The products of the activities are the indicator that the activity has been completed. 5. Each activity or set of activities should have an activity manager defined by name (not position) 6. The team will determine who within their team and the district should be assigned to work on each activity, enlarging the team as necessary to get the work done. In addition, an overall HIS "responsible officer" for the HIV performance improvement effort should be designated and entered at the top of the plan format. 7. If critical resources are required for the completion of the activity they should be listed along with the source of the resources. Most resources should be sought within the districts and its communities. 8. The time frame for each activity or set of activities should be entered in the appropriate columns. The overall period of implementation should commence immediately after the planning process is completed and be limited to 6 to 12 months.
Product	6.1 Service performance improvement implementation plan and schedule

Definition of Terms Used in Service Performance Improvement Implementation Planning

Performance improvement activities: Step-by-step actions undertaken to implement the proposed performance improvement strategy and all priority interventions. These are usually one-time development activities planned to generate a product needed to enable constraint reduction and service performance improvement (such as designing an in-service training program and training modules, and designing and setting up a system of community emergency transportation). These activities do not include routine service provision or maintenance and support activities of the health service.

Planned products: Specific outputs and results of each performance improvement activity (such as new in-service training modules, the number of staff actually trained through a one-time training effort, and the number of vehicles designated by communities to be used for emergency patient transfer and other transport purposes). Products are not services; they are the immediate result of performance improvement activities.

Responsible person: Should indicate the name of the person assigned the responsibility for managing and/or carrying out a specific activity, generally drawn from within the district HIV PI team (from the district health office, supervision areas, and facilities). The responsible person should be listed by name, not title or office. This will help ensure accountability and will enable easy identification of persons to contact for effective coordination of implementation work.

District PI implementation team: The HIV performance improvement team with additional staff members designated to manage and carry out the activities of the implementation plan; these should include all officers responsible for activities within the plan.

Performance improvement resources: Important resources that are considered critical for the completion of each PI activity (such as the cost of one-time training, and cost of new microscopes needed to enable sputum microscopy to be performed at six additional facilities). PI resources should not include those costs that are required for routine services (such as drugs, vaccines, traveling expenses of supervisors, and snacks provided during household teaching sessions). Efforts should be made to find these PI improvement resources from existing funds and from the communities, necessitating very few requests for additional development resources. Staff would only be indicated as a performance improvement resource when additional support or expertise is needed from provincial, central, or external sources in order to complete the development work.

Source of performance improvement resources: The budget line, agency or other sources (including communities) that will provide the funds or other resources needed to complete the activity, whether it is a government, private, NGO or international organization. Requirements for additional resources should be minimal. The broader budget implications of scaling up the interventions across the entire district would be defined at the time of annual planning and budgeting.

Time frame: The actual date (day or week) that the activity is planned to begin and the planned date by which the activity will be completed, at which time the product of the activity should be available. The overall implementation time frame should not exceed nine months.

Product 6.1. Service performance improvement implementation plan and schedule (form)

District _____ **Priority Health Problem:** _____

District Performance Improvement Implementation Coordinator _____

Strategy	Performance Improvement Activities	Planned Products	Responsible Person	Critical Performance Improvement Resource Requirements	Sources of Performance Improvement Resources	Time Frame	
						Start Date	End Date

Table 6.1. Service performance improvement implementation plan and schedule (example of a completed form)

District: Iganga **Priority Health Problem:** Maternal Complications and Deaths

District Performance Improvement Coordinator: Dr. Alonso, DHO

Strategy	Performance Improvement Activities	Planned Products	Responsible Person	Critical Performance Improvement Resource Requirements	Sources of Performance Improvement Resources	Time Frame	
						Start Date 2016	End Date 2016
1. Training	1.1 Locate regional MC training sites 1.2 Review/curricula for management of complications and FP 1.3 Confirm and prepare faculty 1.4 Prepare special FP/MC IEC in-service training 1.5 Initiate regional MW training program	1.1 Confirmed training sites 1.2 Curricula for MC 1.3 5 Faculty confirmed 1.4 FP/MC IEC curricula 1.5 40 MW trained in Year 1	Dr. Sabila Kaale DHO's Office	Curricula in use elsewhere Confirmed venues Experienced MW trainers	National MW training schools Dept of Education Nat'l MW schools	10 Jan	28 Feb 30 Jun
2. Community Support for Maternal Health	2.1 Identify transport for mobile ANC clinics 2.2 Identify sites for addition vaccine storage 2.3 Contact village leaders and CBOs to promote and confirm the designation of community emergency vehicles 2.4 Design and promote community level pregnancy monitoring procedures and training	2.1 5 community vehicles designated for ANC clinics 2.2 7 vaccine storage sites 2.3 21 Community emergency vehicles designated with drivers and attendants trained 2.4 Community monitoring of pregnancy initiated in 30 communities	Mr. Syda Bbumba, DO Mr. Khiddu Makubuy, Mr. Syda Bbumba, DO Mrs Agaba, CHW trainer	5 Shared transport 7 refrigerators Space for 7 refrigerators 21 emergency vehicles	Community organizations United Nations Children's Fund Private pharmacies CBOs Police	1 Feb 1 Feb 15 Feb 15 Feb 1 Feb'	1 May 31 Mar 1 Apr '16 1 May '16 31 May

Step 7. Prepare the performance improvement monitoring framework and process

Overview	In this last step of the team analysis and performance improvement planning process, each district team defines the procedures for monitoring progress and updating its performance improvement plan. This involves tracking the indicators for targeted health problems, services, and constraints, as defined in this "HIV Watch Framework" (HMF). This involves quarterly monitoring of implementation activities and products.
Objective	At the end of this step, the teams will have a modest monitoring plan and framework, including routine data requirements, review meetings, and meeting agendas. Such reviews must be owned and managed by the district health office and may be incorporated into existing district meetings.
Material	1. List of strategic interventions (Product 5.2) and list of service performance improvement strategies (Product 5.3) 2. Service performance improvement implementation plan and schedule (Product 6.1) 3. District HIV Watch Framework: the format that shows priority health problems, services, and constraints to be addressed through the PI strategy (form provided in Product 7.1) 4. Example of HIV Watch Framework (Product 7.1)
Tasks	1. With the implementation plan from Step 6 in hand, the teams discuss how to monitor implementation and review products. Team members also discuss procedures for updating the HIV Watch Framework. 2. The team schedules quarterly or monthly review meetings and notes them in its implementation plan. 3. The team drafts requirements for: • Quarterly review meeting agenda • Information to be reported at quarterly review meeting (progress, products, and challenges with the completion of implementation activities and products) • HIV Watch Framework data to be reported at quarterly review meetings • Maintaining the HMF within service facilities as well as the district health office At this point, products of all steps should be assembled into a single document
Product	7.1. HIV Watch Framework

Product 7.1. HIV Watch Framework (form)

District:_____

Orphans ……. Mothers of 0–11 Months ….. Youths 15–24 Years…….. Women 15–49 Years …….. Men 15–54 Years …….. PLHIV ……. Total Population……..

Health Problems								Priority Services for Improvement								Constraints				
Health Problem	Indicator	Data Source	2015	2016				Service	Indicator	Data Source	2015	2016				Constraint	Indicator %	Data Source	2015	June 2016
				1	2	3	4					1	2	3	4					

Product 7.1. HIV Watch Framework (example of a completed form)

District: Iganga Children 0–11 months: 5,180; women 15–49 years: 22,790; men 15–54 years: 19,682; youth 15–24 years: 19,682; OVC: 75; PLHIV: 7,251; total population: 103,591

Health Problems								Priority Services for Improvement								Constraints				
Health Problem	Indicator	Data Source	2015	2016				Service	Indicator	Data Source	2015	2016				Constraint	Indicator %	Data Source	2015	June 2016
				1	2	3	4					1	2	3	4					
Maternal Compli-cations	Cases	CHW reports	350					ANC	% Coverage with ANC	Health manage't information	45%					Low awareness of pregnancy risks	Women aware of pregnancy risks	Comm LQAS	22%	
								FP	# FP acceptors CPR	HMIS lot quality assurance sampling (LQAS)	180 5 10					Low awareness of FP benefits	Couples aware of FP benefits	Comm LQAS	35	
								Tetanus vaccin-ation	% Pregnant women with 2 TT vaccine doses	HMIS	45%					Poor adherenc e to ANC procedure	ANCs providing TT	Comm LQAS	65%	
	Deaths	Patient records	45					Delivery atten-dance	% Deliveries attended by SBA	CHWs HMIS report	25% 20%					Inadequat e # trained MWs posted in health centers	Facilities with trained MWs	District human resour-ces records	25%	
								Manage-ment of obstetric emer-gencies	# Refer/ transfers of obstetric emer-gencies	Hospital referral register	25					Inade-quate # of emer-gency vehicles	Subdistrict with emer-gency vehicle	DHO	10	

POST-PROCESS ACTION BY HIV PROGRAM AND PARTICIPATING DISTRICTS: POSSIBLE NEXT STEPS

Briefing Higher-Level Officials

District HIV service performance improvement teams may present their proposed plans to higher levels of the health system (such as central programs, provincial or district service offices, donor agencies, or projects active in the district). This will be helpful if the team faces requirements for filling critical resource gaps or if current policy or standard procedures are to be modified. However, briefing higher-level officials may not be necessary if district health officers and local IP project managers already participated in the analysis process. In these cases, district teams may begin implementing their PI strategy, at least for activities that do not require resources from outside the district.

Expediting Implementation of Proposed Interventions

District team members are expected to begin implementing proposed performance improvement interventions as quickly as possible. To do this, they may need to expand the implementation team, confirm responsible officers, and engage partner organizations and community representatives in the priority communities. They should develop a detailed implementation plan and schedule, brief all participants, convene periodic management and coordination meetings, and contact potential collaborators from outside the district regarding their commitment and availability to support the plans.

Monitoring Implementation and Assessing Impact

The implementation of new interventions requires monitoring from the start to assess the impact on service performance. Team management and coordination meetings should include status reports from all activity managers, indicating progress made and problems encountered. The implementation plan should be used to monitor implementation progress and be updated. The HIV Watch Framework should be updated at least monthly to record trends in service performance: especially counseling and testing, case confirmation, and treatment adherence. Facilitators should visit teams during the implementation period to provide support and encouragement. Challenges may include inevitable staff turnover and competing demands on staff time due to other high priority activities required by central programs or donor projects. The PI implementation team may have to revise its strategy and insert new staff for important tasks as problems arise. As the implementation progresses, the team should be able to detect changes in rates of case detection and treatment adherence due to the revised operating procedures and enhanced staff skills.

Adjusting Triangulation Service Performance Assessment and Improvement Process

Toward the end of the first set of district PI implementations, the HIV program managers should be able to determine if the experience was successful enough to apply the process in a second or third set of districts. In this case, facilitators and TA staff can use the assessment results to review the procedure steps and products in order to improve them as needed for future application. District teams often find it necessary and feasible to adjust data forms to make them easier to complete. Such revisions should be documented in the process guideline.

Scaling Up District Applications

If further applications of the PI analysis and planning process are anticipated, the sponsoring program or department should oversee future participating district teams to ensure that data assembly, preparation, and analysis are conducted properly, and plan implementation is supported adequately.

Institutionalizing the PI Process

Countries that have expanded their application of constraint analysis and PI planning have designated a central level training or research institution to oversee and support the process. An institutional "home" for PI makes it easier to review and improve procedures, recruit and train facilitators, mobilize sources, and monitor implementation and impact. This makes it possible to recognize interventions that can be shared across provinces, and to institute competitions among districts for achievement of constraint reduction and performance improvement.

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APPENDIX A. Glossary of Terms Used in the HIV Constraint Analysis Process

Client target group coefficient: The proportion of the total population that is estimated to belong to a defined age and sex group targeted for specific services. The coefficients are derived from census data and are applied at various levels of the total population (community, responsibility area, supervision area, or district) in order to estimate the size of a target group, which can then be used for estimating coverage with the targeted service.

Constraints on health services: Factors that impede the conduct and delivery of specific health services resulting in inadequate coverage, substandard care, and client dissatisfaction. Constraints can be of several types: constraints within the services include inadequate resources and staff capabilities, motivation, and performance; constraints within the communities include low awareness of health risks and service benefits, inappropriate behavior, and low opinion of available services; and constraints within the operational environment include poverty, long distance to services, difficult transportation and communications, and high cost of accessing services.

Essential public health services: Treatment and health education services considered vital and cost effective for the prevention and management of a priority health problem. Such services are designed to meet the needs of individual clients, families, and communities, in response to targets and service standards. (Training, supervision, recording, coordination meetings, and provision of supplies are not services to be listed here, but may be important support functions or development activities to be considered in the planning process.)

Focus group discussion: A structured discussion process in which a group of 8–12 persons (staff or community members) are asked to respond to questions aimed at revealing knowledge and attitudes about important issues concerning service performance gaps, health-determining practices, and care-seeking behavior. A facilitator keeps the discussion on track and a note taker records responses for subsequent analysis and conclusions.

Health facility assessment: A structured process used to assess a health facility's performance using a set of factors or service indicators. Assessments can involve direct observations of task performance, checks of supplies and equipment, data reviews and extractions, and interviews of staff and clients.

Health facility catchment area: An area of communities and population which are drawn to a given facility for receiving services. Catchment areas are often different from defined responsibility areas.

Health problem: A syndrome, disease, or condition that affects the population and can be measured in terms of the number of cases, related deaths, and other outcomes such as disability and impairment. Some precursors and risk behaviors can also be considered health problems, such as smoking, drug and alcohol abuse, and high-risk sexual behavior.

Health Watch Framework: A table used as a monitoring framework to record indicators measuring health problems, health services, and constraints on services. Data for each indicator are captured and tallied to monitor indicator levels and trends over time.

Indicators: A defined value (often the result of a proportion or ratio, sometimes expressed as absolute numbers or events), used for measuring and monitoring health problems, health service performance, resource availability, and constraints on service performance. Indicators are defined and measured at district and facility levels to be used for tracking performance and taking action to improve performance. Core indicators may be defined at the central ministry level for use in monitoring important health problems, service performance, and resource trends.

Key informant interview: An interview with facility staff and managers, project leaders, and community members to explore problems with service performance and recommendations for alleviating them.

Lot quality assurance sampling: A small sample survey often carried out at the community level to obtain estimates of defined indicators at a particular point in time. Results from a supervision area help determine whether a defined indicator target has been reached. When the results across a district's supervision areas are combined and weighted by population, it is possible to estimate the district average or service coverage with each indicator.

Objective: A term used in this process as a quantitative and time-limited expression of a desired degree of health problem reduction.

Observation: A method of rapidly investigating conditions in health facilities and communities, generally with the use of a structured checklist.

Performance improvement activities: Steps taken to implement a proposed performance improvement strategy across its various interventions. These are usually one-time development activities planned to generate a product needed to enable service performance improvement (such as designing an in-service training program and training modules, or designing and setting up a system of community emergency transportation). Such activities do not include routine service provision, maintenance or support of the health service. Development activities take place within facility responsibility areas, communities, or district development committees, and involve the support of community leaders, district civil administrators, and private practitioners.

Performance improvement intervention: A change in a procedure, staff capacity, or community involvement in order to reduce defined constraints on service and to improve service performance within a facility responsibility area, supervision area, or district.

Performance assessment and improvement team: A health district team organized to undertake the analysis of routine data in order to identify opportunities and prepare strategic interventions for improving the performance of essential health services. The district teams are usually comprised of the district health director and staff, facility managers, representatives of CBOs, NGOs, IPs, and district civil administrative offices.

Performance improvement products: Specific outputs and results of the performance improvement activities (such as in-service training modules, the number of staff trained, and the number of vehicles designated for emergency patient transfer and transport). Products are not services but rather the immediate result of developmental performance improvement activities.

Performance improvement resources: Important resources that are considered critical for the completion of each performance improvement activity (such as one-time training costs or a new microscope needed for sputum microscopy in six additional facilities). PI resources should not include items and costs that are required for routine services (drugs, vaccines, traveling expenses of supervisors, or snacks provided during household teaching sessions). Efforts should be made to find PI resources from existing funds and local sources, necessitating few requests for supplemental development resources. Staff would only be indicated as a performance improvement resource when additional support or expertise is needed from provincial, central, or external sources in order to complete the development work.

Priority areas for performance improvement: Communities, facilities, and supervision areas for which current data and experience indicate that access to selected essential services is among the lowest in the district during the last year, and requires priority attention for improvement.

Responsibility area: A defined set of communities and populations assigned to a health facility or office for essential services and monitoring health events and trends.

Responsible person: The person in this process who is assigned to manage or conduct each activity, generally drawn from within the district team (from district, supervision area, and facility levels). The responsible person should be listed by name, not title or office. This will help ensure accountability and enable identification of persons to contact for effective coordination of implementation work.

Service performance assessment and improvement (PAI): A process involving steps and products designed to facilitate district health service PAI teams to analyze data from community surveys, health facility assessments, and the health management information system, to identify health service performance problems and constraints, and to devise their own performance improvement interventions, strategies and implementation plan for dramatically improving service performance in a short period of time.

Service performance gap: The difference between full coverage of a specified target group with a specified health service or intervention, and the actual (estimated) coverage achieved in the subdistrict, as reported and possibly confirmed by recent sample surveys.

PAI facilitators: Staff from donor projects, partner organizations, ministry of health, health training and research institutions, and other collaborators who support the preparation and conduct of the PAI process.

Strategy description: The complete set of strategic interventions proposed by a district PI team to dramatically improve the performance of high-priority health services.

Strategic intervention: An intervention identified by the district team to address one or more constraints on service performance, such as health education improvement, staff training, or community involvement in monitoring or service provision. Interventions may be grouped together as PI strategies for description and planning purposes.

Supervision area: A subdistrict or contiguous set of health facilities and their combined responsibility areas defined as a management and performance monitoring unit, and used for drawing samples for community monitoring through cluster or LQAS surveys.

Syndrome: A health condition that presents signs or symptoms of disease that can be easily recognized by individuals and service staff, and used to identify cases requiring further diagnosis, management, and referral. Examples include acute flaccid paralysis, pyrexia (fever) of unknown origin, vaginal or urethral discharge, and SARS symptoms.

Target: As used in this PAI process, targets are quantitative, time-limited expressions of the amount of improvement desired for specific services (in terms of coverage, quality, and client satisfaction), and the desired reduction in quantified constraints.

Underlying causes of constraints: Factors that contribute to constraints on health and health services, and can become the subject of interventions for constraint reduction.

APPENDIX B. Major Applications of the District Service Performance Assessment and Improvement Process

Country Process Title	Project	Service Subjects	Time Period	Eventual Rollout	Special Requirements	Unique Features	Challenges	Notable Achievements	Prime
Philippines Planning local government health services and community-based MIS (Eng)	PMTAT	4 MCH services: Vac., Vit. A, FP, TT	2000–2003	470 LGU PAI-style planning efforts	Build upon and utilize pre-existing CB-MIS process	Large no. of participating LGUs; strong facilitators	Extend PMTAT success to LEAD, the follow-on project	Extensive rollout	MSH
	LEAD for Health	FP, Vit. A, HIV/AIDS, TB DOTS	2003–2006	544 Municipal & cities in 29 provinces	Government & policy development; continue CBMIS	Service NGO; provide TA to many LGUs,	Time lag between LGU enrollment and provision of TA	Extensive rollout with local NGO partners	MSH
Afghanistan Provincial health planning PHP (Engl & Afghan)	REACH	Basic package of health services BPHS	2003–2004	16 of 34 Provinces	Provincial health planning; data profiles	Resource requirements analysis; budget coefficients	Change in project priorities led to pre-mature termination	Rapid implementation with strong ministry facilitation team	MSH
Indonesia PROSPEK (Bahasa Indonesia)	M&L	Essential maternal & neonatal services	2004–2007	18 Kabupatan in five provinces	Support decentralization of essential public health functions	Obligatory PH functions; use of LQAS to identify success and gaps	Extend PROSPEK into the follow-on JSI project	Decentralization with EPHF concept, involved ministry policy unit	MSH
Timor Leste Continuous coverage/ quality improvement CCQI (Bahasa)	BASICS TAIS project	Child health - IMCI	2006–2007	Potentially 13 districts	Include facility performance review	Add responsibility area definition, staff/NGO inventory	Change in project leadership led to early termination	G/L in three languages	MSH/ BASICS
Pakistan Performance improvement planning in public health (PIP-PH) (English)	PRIDE	PHC-BPHS	2006–2010	10 subdistricts in two states affected by an earthquake	Link with DEWS; add local surveillance responsibilities	Subdistrict surveillance responsibility; HFCs, QRs; PH standards	Link with other project activities; change in project strategy & priorities	Several cycles completed; quarterly reviews sustained; Health Watch Framework institutionalized	IRC
Burundi Resolution des problèmes par l'équipe de district (French)	MCH - ESD	MC-MCH	2005–2010	5 districts in two provinces		Disease reporting; French g/l and facilitation	Apply and facilitate in French; change in project leadership	Strong ministry interest and staff support	Pathfinder
Uganda Service performance assessment & improvement (SPAI) (English)	STAR-E Regional HIV-TB project	HIV-TB plus MCH, malaria, and other PHC services	2008–2015	27 districts in four regions	Link with LQAS and HF data capture processes	LSTM partnership; national scale-up objective	Object of national institutionalization; embedded within a regional HIV-TB project	Shorter "lite" version created; cross-project IP collaboration	MSH

Angola Guião de planif'ão para Saúde- municip. (Portuguese)	SASH	MCH/FP, basic health services	2011–2015	14 municipalities and six districts in two provinces	Link w/ project activities: MRH, RMS management, HR, costing/ budgeting; data mgt.	G/L and facilitation in Portuguese	Modest facilitation team; data quantity and quality; link to evolving RMS strategic planning	Strong project director; link to strategic health planning; special data analysis for action	JHPIEGO

APPENDIX C. Globally Recommended Interventions and Common Obstacles for HIV Prevention, Treatment, and Care

Interventions	Common Obstacles
HIV counseling and testing 1. In both community and clinical settings 2. Client (VCT) initiated 3. Provider initiated (PITC) 4. Family and couple testing and counseling 5. Infant and child testing and counseling 6. Blood donor testing and counseling 7. Laboratory services for HIV diagnosis 8. Pre-test information (individual or group) 9. Post-test counselling for HIV negative persons 10. Post-test counselling for HIV positive persons 11. Linkage and enrollment in care	• Stigma and discrimination • Lack of national HIV strategic plan • Lack of community knowledge and involvement • Lack of convenient access (distance and service hours) • Inadequate CT for pregnant women during ANC • Lack of disclosure of status to family and partners • Inadequate blood testing capacity • Inadequate lab service capacity and quality • Inadequate linkage and referral of HIV-positive cases to care services due to psychological and social barriers, and economic constraints
Preventing transmission of HIV • Promoting and supporting condom use • Free distribution from variable sources and sites • Multiple sources of education and promotion • Adequate provision of lubricants • Detecting and managing (syndromic) STIs • Safe sex and risk reduction counseling • Voluntary medical male circumcision (VMMC) • Prevention among PLHIV - counseling • Targeting Most-at-risk (MARP) populations – collect strategic information on Sex workers, legal and social frameworks • IEC through peer outreach • Knowledge of HIV status • FP, treatment and care, prevention in infants, viral hepatitis, drug use, social support • Targeting MSM and transgender – same as Key populations • Young people – same as Key populations • Male circumcision • HPV vaccination for females • Prevention measures within the DREAMS Initiative in ten sub- Saharan African countries • Vulnerable populations • Displaced and migrant populations: Information and access • Prisoners and other closed settings: Access to CT and condom • Post-HIV exposure prophylaxis • Pre-exposure prophylaxis: OralPrEP for people at substantial risk • Early initiation of ART regardless of CD4 count	• Cost to client • Inadequate availability of condoms • Condom quality standards not met • Social and personal obstacles to condom use • STI management not part of HIV strategy or PHC services • Key populations not having appropriate access to STI system • Syndrome or lab diagnosis of poor quality • Effective treatment not provided at first encounter • Education and counseling not adequate or effective in preventing risk behavior • Lack of notification and treatment of sexual partners • Inadequate screening and treatment for syphilis in pregnant women • HIV testing and counseling not provided in all settings providing care for STIs. • Lack of broad community engagement in support of circumcision services • PLHIV not counseled on safe sex, or provided condoms • Sex workers and men who have sex with men criminalized and stigmatized • Sex workers not provided condoms or STI services • Needs of young people not adequately addressed by health workers, not youth friendly • Breakdown of health systems and services during national emergencies • Inadequate collaboration with and support of prison authorities in testing and treating prisoners

Interventions	Common Obstacles
Interventions for drug users who inject • Harm reduction programming • Needle and syringe programs: Access to sterile equipment • Drug dependence treatment: OST, other DD Tx, over-dose prevention • Targeted IEC for IDUs: Community-based, peer-led, behavioral interventions HCT • Condom programs • Prevention, diagnosis, and treatment of viral Hepatitis and TB • ART • Prevention and treatment of STIs	• Inadequate staff: Quantity and skills • Decision makers reluctant to implement the needle and syringe programs • People who inject drugs are often denied equitable access to prevention and treatment • Procuring and distributing opioids agonist medicines may require special procedures • Failure to recognize that injecting drug use occurs at all levels of society • Safe disposal of used equipment often cannot be assured
Prevention of mother-to-child transmission (PMTCT) • Primary prevention of HIV among women of childbearing age • Family planning counseling and contraception to prevent unintended pregnancies • ART for pregnant women to prevent infection in infants, including the Option B+ test-and-treat approach • Providing appropriate treatment, care, and support to mothers living with HIV and their children • ARV for infants at birth • ART for HIV-infected infants • Infant feeding counseling and support: Possible replacement feeding	• PMTCT not integrated with maternal, newborn, and child healthcare • HIV testing not provided to all pregnant women • Inadequate counseling on and provision of condoms • CD4 testing not undertaken with HIV-positive pregnant women, to justify starting ART • HIV-exposed infants not given ARV prophylaxis at birth • Inequity and barriers to access • Late presentation to ANC
Prevention of HIV transmission in health care settings • Blood safety • Facilities have infection control plan • Use of standard precautions • Rational and safe use of injections • Safe waste disposal management • Health of occupational healthcare workers • Occupational post-exposure prophylaxis: ARV	• Standard precautions to prevent infections not fully implemented in health facilities • Injections provided when not justified • Injection equipment not safe • Healthcare waste disposal management unsafe • Healthcare workers have not been tested; positive workers have not received
Blood safety • Defined policies and service procedures • Collect from unpaid donors, low-risk populations • Blood safety programs: Accreditation, information systems, and quality assurance	• Poor blood donor recruitment and selection • Use of unscreened blood for transfusions • Blood transfusion service not well managed and nationally coordinated • Unnecessary transfusions
Interventions to prevent illness of PLWHA • Cotrimoxazole prophylaxis • Prevent fungal infections: AFP with azoles • Vaccinations: All EPI antigens for children, without BCG for infants with HIV • Nutritional care and support: RDA of micronutrients • Provide safe water, sanitation, and hygiene • Prevent malaria: ITNs	• Absence of a policy on the administration of cotrimoxazole as prophylaxis for PLHIV against PCP pneumonia, and azoles for preventing fungal infections • EPI schedules not modified for HIV-exposed infants and children (drop BCG and advance measles to 6 months) • Failure to provide adequate nutrition, environmental support, and malaria prevention to HIV-positive patients

Interventions	Common Obstacles
Treatment and care interventions • ART for adults, adolescents, and children following new recommendations on when to initiate ART, in combination with national protocols for starting ART • Client-centered behavioral counseling and support • National strategy for preventing HIV drug resistance • Recognize treatment failure and change regimen • Treatment preparedness and adherence support • Patient monitoring • Counseling • Managing opportunistic infections and co-morbidities (36 conditions listed for treatment protocols) • Managing pneumonia • Managing diarrhea • Managing malnutrition: Access to national nutrition programs and services • Treating viral hepatitis: Prevention and treatment strategies • Managing malaria: Normal treatment for confirmed cases • Preventing and treating mental health disorders: Individual and group counseling and peer support • Sexual and reproductive health; prevention and treatment of STIs; contraceptive services; abortion and post-abortion care • Cervical and anal cancer detection and treatment • Palliative care: Pain management	• Variance from standard protocols and guidelines • Inadequate patient data recording systems • Inadequate drug supplies, or fees for drugs • Inadequate laboratory service capability • Stigma and discrimination • Treatment costs • Inadequate patient readiness to adhere • Inadequate number and skills of staff • Lack of transportation • Inconvenient facility hours • Lack of standardized patient monitoring tools • Lack of clinical protocols for opportunistic pathogens • PCP pneumonia • Missed opportunities to vaccinate • Inadequately comprehensive and integrated services • Lack of therapeutic foods for children and supplementary feeding for adults • Lack of mental health services and support • Lack of counseling skills and competencies • Lack of appropriate regimens for pain management • ART drug interactions (TB, Hepatitis C, hormonal contraception, opioids) • Inadequate access to STI diagnosis and treatment services
TB prevention, diagnosis and treatment • Collaboration and joint planning and surveillance for TB and HIV • Testing and counseling of HIV patients for TB • Case-finding, infection control, and Isoniazid for preventive therapy • Treating HIV-associated TB: four-drug initial phase	• Coordination procedure between TB and HIV programs not fully developed for testing and case management of both patient groups • Inadequate staff training to manage both conditions • Some Key populations are difficult to reach for testing (IDUs, sex workers). • PLHIV rapidly progress to serious cases when they contract TB
Lab services • All countries need a consolidated plan for providing HIV lab services including reagents, technologies, and equipment through tiered laboratory networks and point-o- care tests. • Lab procedures, strategies and protocols should be validated • National guidelines and procedures need to be updated and proficiency testing undertaken • HIV drug resistance testing should be part of the national strategy • Minimum essential list of investigations and lab tests needed for each level of the system	• National health laboratory systems are still under development; procedures are still being designed and implemented, and specimen referral and result communications are in a state of flux • Expanding lab systems have not been planned for the growing HIV/AIDS/STI/TB requirements as specified in this array of services • Funding for lab quality improvement has not been planned

Interventions	Common Obstacles
Orphans and vulnerable children Interventions that address HIV-generated children's socio-economic needs including: • Education: Reduce disparities and barriers • Psychosocial care and support: Stable, supportive environments • Household economic strengthening to reduce economic vulnerability of families • Social protection at policy and operational levels • Health and nutrition: Improve access to services • Child protection: Improve community and government child protection responses • Build capacity of the social service workforce and system • Legal protection to ensure basic legal rights and improve access to essential services and opportunities • Expand community platforms to increase access	• Inadequate social and health service capacity and resources to care for HIV-orphaned and vulnerable children. • Stigma associated with HIV/AIDS • Exposure to violence, abuse, and exploitation • Children drop out of school to work or care for family; hazardous labor • Loss of psychosocial support and community life • Inadequate child support for poverty alleviation • Inadequate foster care possibilities • Breakdown of protective social networks and support • Inefficient and unsustainable orphanages • Succession planning and adult mentors are difficult to scale up and sustain • Lack of recognition and compensation hinders sustainability of volunteers

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APPENDIX D. PEPFAR MER 2* Indicators

Program Area Group	Indicator Code	Indicator Name
Prevention	KP_PREV	Percentage of key populations reached with individual and/or small group level HIV preventive interventions that are based on evidence and/or meet the minimum standards required
Prevention	PP_PREV	Percentage of individuals from priority populations who completed a standardized HIV prevention program that is based on evidence, and meets the minimum standards required during the reporting period
Prevention	GEND_GBV	Number of people receiving post-Gender-Based Violence (GBV) clinical services minimum package
Prevention	PrEP_NEW	Number of individuals who have received antiretroviral pre-exposure prophylaxis (PrEP) to prevent HIV infection in the reporting period
Prevention	VMMC_CIRC	Number of males circumcised as part of the voluntary medical male circumcision (VMMC) for HIV prevention program within the reporting period
Prevention	OVC_SERV	Number of beneficiaries served by PEPFAR OVC programs for children and families affected by HIV/AIDS
Knowing HIV Status	HTC_TST	Number of individuals who received HIV Testing and Counseling (HTC) services for HIV and received their test results
Knowing HIV Status	PMTCT_STAT	Percentage of pregnant women with known HIV status at antenatal care (includes women who were tested for HIV status prior to ANC) received their results)
Knowing HIV Status	PMTCT_EID	Percentage of infants born to HIV-positive women who had a virologic HIV test done within 12 months of birth.
Knowing HIV Status	TB_STAT	Percentage of new and relapsed TB cases with documented HIV status
Knowing HIV Status	OVC_KNOWNSTAT	Number of orphans and vulnerable children (under 18 years old) whose HIV status is known or unknown by the OVC implementing partner
Knowing HIV Status	PMTCT_FO	Percentage of final outcomes among HIV exposed infants registered in a birth cohort
On ART	TX_NEW	Number of adults and children newly enrolled on antiretroviral therapy (ART)
On ART	TX_CURR	Number of adults and children currently receiving antiretroviral therapy (ART)
On ART	PMTCT_ART	Percentage of HIV-positive pregnant women who received ART to reduce risk for mother-to-child transmission (MTCT) during pregnancy to-child-transmission (MTCT) during pregnancy and delivery
On ART	TB_ART	Percentage of HIV positive new and relapsed on ART during TB treatment
On ART	TB_SCREENDX	Number of PLHIV who were screened for TB symptoms at the last clinical visit
Viral Suppression	TX_RET	Percentage of adults and children known to be alive and on treatment 12 months after initiation of lifelong antiretroviral therapy
Viral Suppression	TX_PVLS	Percentage of ART patients with a viral load result documented in the medical record and/or laboratory information system (LIS) within the past 12 months with a suppressed viral load (<1000 copies/ml)

Program Area Group	Indicator Code	Indicator Name
Health Systems	INVS_COMD	Resources for HIV program-related commodities planned and purchased in the last 12 months
Health Systems	Human resources for health_PRE	Number of new health workers who graduated from a pre-service training institution or program as a result of PEPFAR-supported strengthening efforts, within the reporting period, by select cadre

*Monitoring, Evaluation, and Reporting Indicators, Version 2.0

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