

The CQUIN Learning Network

The Science & Practice of Scale Up

Optimizing Human Resources in the context of DSD: An interactive Tool for HIV Clinic and Program Managers

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Presentation Outline

- Why a new HRH tool for DSD?
- Tool functions, target audience and development process.
- DSD models in the tool
- How does the tool work and what does it look like?
- Unit of measure and calculation of FTE requirements and gaps
- Applying the tool and its limitations

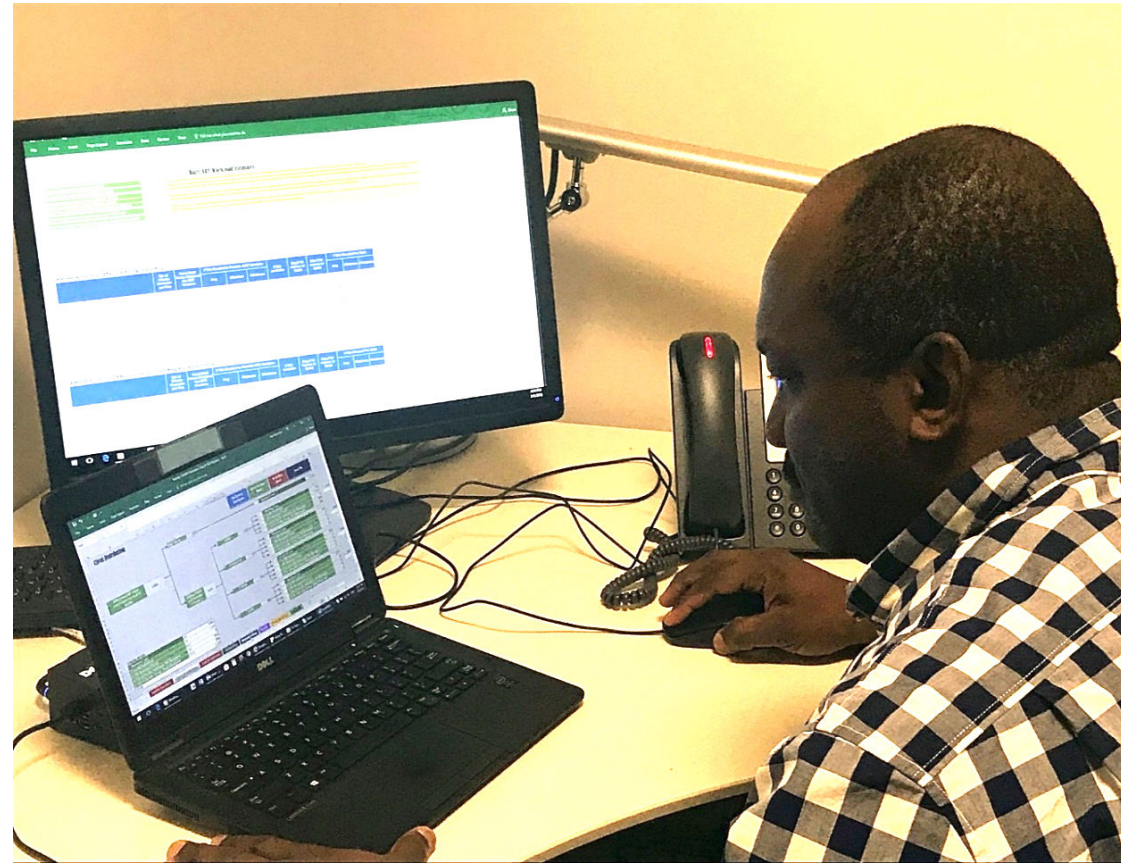
Why new HRH tool for DSD?

- Test and treat leading to a huge number of clients on ART
- DSD introducing diverse delivery models
 - Varying models per site
 - Varying client volumes per site
 - Varying client volumes per model per site
- HRH size has stagnated in many settings
 - Varying staffing norms and levels
- Need for efficient use of this limited resource
 - Hence the need for a new HRH tool to help optimize HRH

Tool Functions

The tool functions to optimize use of staff to deliver differentiated ART services

- Identify gaps/excess in current staffing
- Apply task shifting/sharing for critical ART tasks
- Redistribute ART clients to differentiated service delivery (DSD) models
- Provide evidence for decision-making: *e.g.*, staffing mix, capacity building needs and human resource requests



Target Audience

- Site-level ART clinic managers, facility in-charges
- Above-site HIV program managers, *e.g.*
 - PEPFAR country coordinators
 - USAID Mission HIV Treatment and Health Systems Strengthening staff
 - USG Implementing Partner/Global Fund Principal Recipient staff
 - National AIDS Control Program managers
 - District HIV program managers
 - Others planning resources for ART service delivery

Tool Development Process (1)

- Developed by HRH 2030 project with support from USAID
- USG agencies (including USAID/Washington, USAID/Uganda, USAID/Cameroon, CDC/Cameroon and PEPFAR) were closely consulted
- The Ministry of Health AIDS Control Program and the Uganda Differentiated Service Delivery Technical Working Group provided expert guidance via stakeholder meetings
- Prototype tool piloting in Cameroon and Uganda was done in close collaboration with the Ministries of Health
- Data for tool development were collected at 20 ‘experienced’ ART sites in Uganda; pilot testing was done at 10 sites each in both Cameroon and Uganda
 - A local firm was contracted to collect data from the 20 ‘experienced’ ART sites
- At ‘experienced’ ART sites, data collection was iterative and was done in 3 phases to incorporate learning

Tool Development Process (2)

Development involved:

- Key informant interviews (168)
- ART client interviews (329)
- focus group discussions (18);
- individual timesheet completion (130);
- ART client flow observations (395); and
- Expert panel consultations (two in-country meetings)

Continued...

Tool Development Process (3)

Development also involved:

- Observation of 1,791 discrete critical tasks along the ART service delivery continuum with > 64,000 minutes of observation time
- ART client 'contact times' with various types of service providers were used to model the benchmarks that drive the Tool
- Lessons learned from pilot exercises and demos were used to improve the prototype version of the Tool

DSD Models in the Tool

In the Tool, countries can map their specific DSD models to the ‘Global’ models

Global differentiated ART delivery model	Model as presented in Tool	Uganda Example: Ugandan model equivalent(s)
	Standard Care	Facility-based individual management (FBIM)
Health care worker-managed groups (at facility or out-of-facility)	Health care worker-managed group model	Facility-based groups (FBGs)
Client-managed groups (out-of-facility)	Out-of-facility client managed group model	Community-client led ART distribution (CCLAD)
Facility-based individual models	Facility Individual (Fast track)	Fast track drug refills (FTDR)
Out-of-facility individual models	Out-of-facility individual healthcare worker-managed model	Community drug distribution points (CDDPs)

How Does the Tool Work?

User-provided inputs

- Estimated # ART clients (stable/unstable, by sub-population group) to be served over next 12 months
- # service providers (skilled and lay) by cadre type
- Types of DSD offered




Tool outputs

- Human resource needs/gaps for DSD models implemented
- Task shifting/sharing options to decrease gaps/optimize personnel
- Visualization of DSD model/service provider arrays

What does the tool look like? (1)

- In the tool, users interact with several sheets...



Tool for Estimating Human Resources for Health Needs for Differentiated ART Service Delivery

Setup

- Select Language: English
- Site-level or above-site? Site Level
- Name of Health Facility:
- Level of Experience with DSD Not specified
- Name of User:
- Date the tool was last modified:

Tool Version 1.0 - June 2018 Update Tool

This tool is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of cooperative agreement no. AID-OAA-A-15-00046 (2015-2020) in partnership with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). The contents are the responsibility of Chemonics International and do not necessarily reflect the views of PEPFAR, USAID, or the United States Government.

For questions or suggestions please contact: info@hrh2030program.org
Mention "DSD Models Tool" in the subject line.

Instructions:

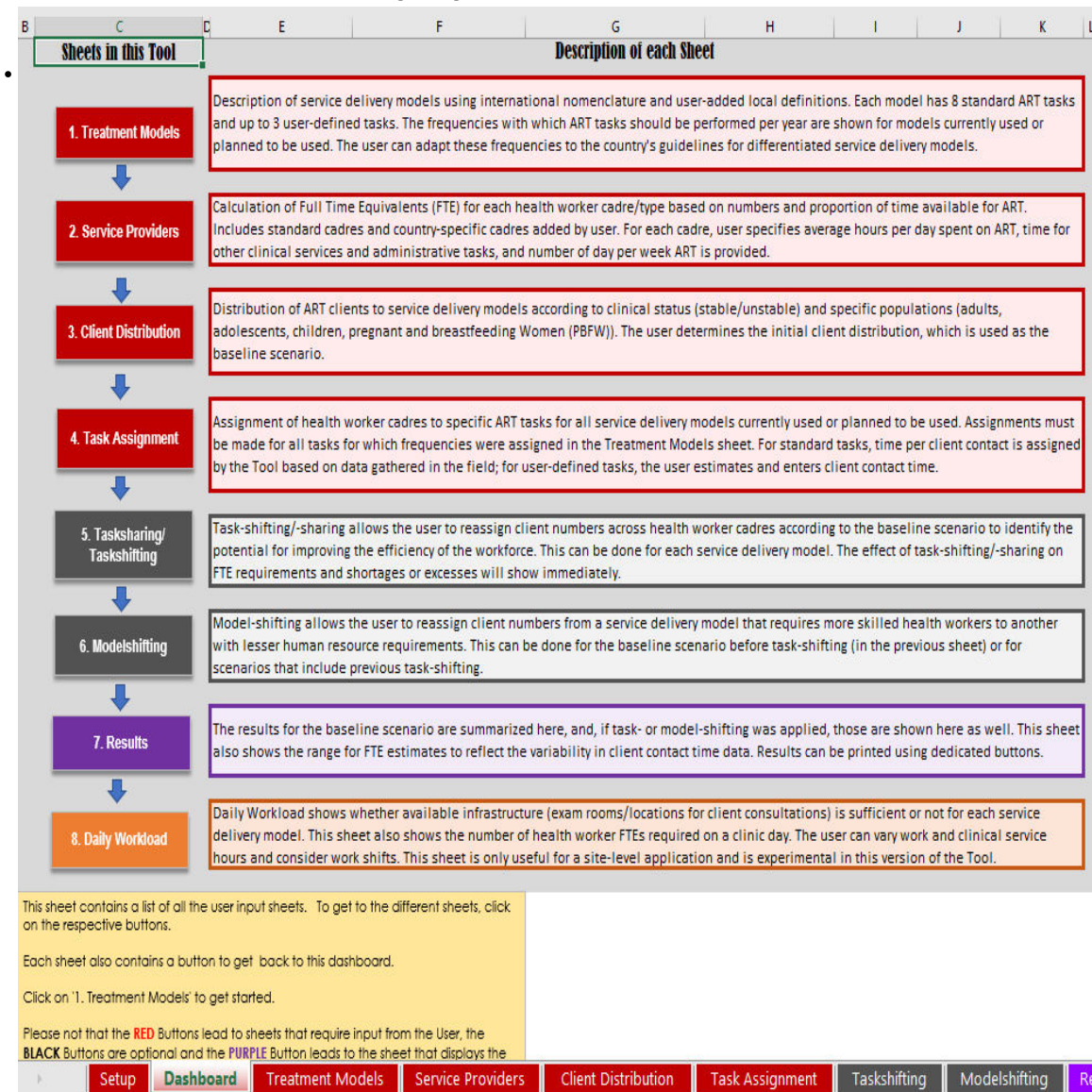
- Select the language: English or French
- Select level of application: site-level or above-site

Note: when either of the above selection is changed the **Update Tool button must be pushed** (or the selection reversed) as indicated by a **yellow/black highlight** before proceeding to any other tab. When the Update Tool button is pushed, the user will also be asked to save the tool under a new filename. The original tool remains unchanged. If the background for the Update Tool button is **GREY**, it does not need to be pushed.

- Enter the name of the health facility or above-site
- Optionally indicate the experience with DSD
- Enter the name of the user responsible for completing the tool
- Enter the date when the tool was last modified

Note: Throughout the tool, **LIGHT GREEN** cells indicate cells that allow user input. **DARK GREEN, BLUE, ORANGE,** and **WHITE** cells indicate cells that contain headings, descriptions and formulas that cannot

Setup Dashboard Treatment Models Service Providers Client Distribution Task Assignment Taskshifting Modelshifting Results Daily Workload



What does the tool look like? (2)

Then provide required inputs into several sheets...

Treatment Models						Go Back to Dashboard
	ART Model 1	ART Model 2	ART Model 3	ART Model 4	ART Model 5	
Global Model Name	Facility-based, healthcare worker managed, individual model for unstable and new clients (Standard Model)	Facility-based, health care worker managed, individual model (Fast Track)	Healthcare worker managed group model (meet in- or outside facilities)	Out-of-facility, healthcare worker-managed individual model	Out-of-facility client-managed group model	Go to Previous Sheet
ART model name in the Tool	1. Standard Care	2. Facility Individual	3. HW-Managed Group	4. Out-of-facility Individual, HW-Managed	5. Out-of-facility Group, Client-Managed	Go to Next Sheet
Facility or Out of Facility	F	F	FO	O	O	Save File
Healthcare Worker or Client-Managed	H	H	H	H	C	
Individual or Group	I	I	G	I	G	
Abbreviation	SM	FI	FOHG	OHI	OCG	
Country-Specific Model Name	Facility-based Individual Management	Fast track drug refills	Facility-based groups	Community drug distribution points	Community-client led ART delivery	
Description	Comprehensive management for ART clients who are unstable or complex or who are still new on ART and their adherence history has not yet been determined. Such ART clients are individually managed at facility level.	ART refills are separated from individual consultations. When clients have an ART refill visit, they bypass any clinical or adherence support and proceed directly to receive their medication.	Clients receive their ART refills in a group and either a professional or a lay health care staff member manages this group. The groups meet inside or outside health care facilities.	ART refills and in some cases, clinical consultations are provided to individuals outside of health facilities.	Clients receive their ART refills in a group but this group is managed and run by clients themselves. Generally, client-managed groups meet outside of health care facilities.	
Frequency of performing tasks for ART service delivery per model in a Year						
Enrollment/Registration	12	4	4	2	2	
Health Education	12	4	4	2	2	
Diagnosis	12	4	4	2	2	
Counseling/Clinical Assessment	12	1	1	2	2	
Blood Draw	2	1	1	1	1	
Adherence Counseling	12	4	4	2	2	
ART Refill	12	4	4	2	2	
Updating Records	12	4	4	2	2	
Additional tasks and the frequency they are performed under each ART model per year						
Monthly reporting	12	0				

Client Distribution		Go Back to Dashboard	Go to Previous Sheet	Go to Next Sheet	Save File
Anticipated ART client caseload for the next 12 months	10,000				
New Clients	3,000	% of total caseload	30%		
Existing (Stable and Unstable Clients)	7,000	% of total caseload	70%		
Check Total	10,000				
Adults	5,000	% of existing	71%		
Adolescents	0	% of existing	0%		
Children	1,000	% of existing	14%		
PBFW	1,000	% of existing	14%		
Check Total	7,000				
Total Number of Clients and Percent Distribution by Model					
1. Standard Care	SM	7,200	72%		
2. Facility Individual	FI	1,400	14%		
3. HW-Managed Group	FOHG	0	0%		
4. Out-of-facility Individual, HW-Managed	OHI	700	7%		
5. Out-of-facility Group, Client-Managed	OCG	700	7%		
TOTAL		10,000			

Number and Type of Service Providers Available																	Go Back to Dashboard	Go to Previous Sheet	Go to Next Sheet	Save File
Name of Health Facility:																				
Service Provider Type	Total No. of Staff available for ART	No. of Full-Time Staff (FT)	No. of Part-Time Staff (PT)	No. of Hrs/Week Spent on ART by FT Staff	No. of Hrs/Week on Other Clinical & Admin Tasks by FT staff	Hours per Week for ART + other clinical & admin. = Total	For each Part-time Staff (Column E), enter average number of hours worked per week providing ART										Average Number of Hours per Week Spent on ART (FT+PT staff)	Total Number of FTEs available incl. ART, other clinical & admin. services		
							1	2	3	4	5	6	7	8	9	10				
Standard Service Provider Type																				
Medical Doctor (MD)	1		1	30	10	30+10=40	15										15.0	0.5		
Non Physician Clinician (NPC)	1	1		30	10	30+10=40											30.0	1.0		
Pharmacy Technician or Assistant (PTA)	1	1		30	10	30+10=40											30.0	1.0		
Nurse (N)	10	5	5	30	10	30+10=40	20	20	20	20	10						24.0	8.0		
Laboratory Technician (LT)	5		5	30	10	30+10=40	10	10	10	10	10						10.0	1.7		
Community Health Worker (CHW)	2	2		20	2	20+2=22											20.0	2.0		
Facility-based Auxiliary (FBA)	10	10		20	0	20+0=20											20.0	10.0		
Peer (P)	4	4		20	0	20+0=20											20.0	4.0		
Social Service Worker (SSW)	1		1	30	10	30+10=40	20										20.0	0.7		
Counselor (C)	1	1		30	10	30+10=40											30.0	1.0		
Additional providers (Please specify up to a max of 6):																				
Data clerk	3	3		30	10	30+10=40											30.0	3.0		
Mentor mother	2	1	1	10	0	10+0=10	20										15.0	3.0		
																	-	-		
																	-	-		
																	-	-		
																	-	-		

What does the tool look like? (3)

- Then review the outputs and make adjustments as necessary...

Assignment of Critical Tasks to Specific Service Providers						
ART Model Type:	Facility	Number of Clients				
ART Model:	1. Standard Care					
Country-Specific Description:	Facility based Individual Management	7,200				
Critical Tasks for ART Service Delivery	Service Provider	Contact Time per Client (Mins)	Range (+/-1 SD)	No. of Times per Year	Hours of Staff Time Needed	Range (+/-1 SD)
Enrollment/Registration	Facility-based Auxiliary (FBA)	1.1	0.8 - 1.3	12	1,551	1,159 - 1,942
Health Education	Nurse (N)	19.3	2.9 - 35.6	12	27,748	4,190 - 51,306
Triage	Nurse (N)	1.9	0.8 - 3.0	12	2,771	1,153 - 4,390
Consultation/Clinical Assessment	Medical Doctor (MD)	6.2	3.9 - 8.4	12	8,880	5,670 - 12,090
Blood Draw	Laboratory Technician (LT)	8.3	1.8 - 14.8	2	1,991	429 - 3,552
Adherence Counseling	Mentor mother	3.0	3.0 - 3.0	12	4,320	4,320 - 4,320
ART Refill	Pharmacy Technician or Assistant (PTA)	2.9	0.4 - 5.3	12	4,114	639 - 7,589
Updating Records	Data clerk	1.0	1.0 - 1.0	12	1,440	1,440 - 1,440
Monthly reporting	Data clerk	2.0	1.0 - 3.0	12	2,880	1,440 - 4,320
Additional Tasks						

ART Model Type:	Facility	Number of Clients				
ART Model:	2. Facility Individual					
Country-Specific Description:	Fast track drug refills	1,400				
Critical Tasks for ART Service Delivery	Service Provider	Contact Time per Client (Mins)	Range (+/-1 SD)	No. of Times per Year	Hours of Staff Time Needed	Range (+/-1 SD)
Enrollment/Registration	Facility-based Auxiliary (FBA)	1.5	0.7 - 2.2	4	138	70 - 207
Health Education	Nurse (N)	17.0	11.9 - 22.1	4	1,587	1,111 - 2,063
Triage	Nurse (N)	1.0	1.0 - 1.0	4	93	93 - 93
Consultation/Clinical Assessment	Medical Doctor (MD)	4.0	0.0 - 6.4	1	93	0 - 195
Blood Draw	Laboratory Technician (LT)	3.5	2.8 - 4.2	1	82	65 - 98
Adherence Counseling	Mentor mother	2.0	2.0 - 2.0	4	187	187 - 187
ART Refill	Pharmacy Technician or Assistant (PTA)	3.6	0.0 - 8.8	4	340	0 - 820

Baseline Scenario - With Current Task Allocation

1. Standard Care

Facility based Individual Management

Total Number of Clients: 7,200

Note:

Service Provider Type	Enrollment/Registration	Health Education	Triage	Consultation/Clinical Assessment	Blood Draw	Adherence Counseling	ART Refill	Updating Records	Monthly reporting	FTE Service Providers Required	Total FTEs required for all assigned models	Total FTEs available for all assigned models
Medical Doctor (MD)	-	-	-	7,200	-	-	-	-	-	5.9	6.2	0.5 (5.7)
Non Physician Clinician (NPC)	-	-	-	-	-	-	-	-	-	-	-	1.0 1.0
Pharmacy Technician or Asst	-	-	-	-	-	-	7,200	-	-	2.7	3.0	1.0 (2.0)
Nurse (N)	-	7,200	7,200	-	-	-	-	-	-	20.3	21.7	8.0 (13.7)
Laboratory Technician (LT)	-	-	-	-	7,200	-	-	-	-	1.3	1.4	1.7 0.2
Community Health Worker (CHW)	-	-	-	-	-	-	-	-	-	-	2.0 2.0	
Facility-based Auxiliary (FBA)	7,200	-	-	-	-	-	-	-	-	1.6	1.0	10.0 0.2
Peer (P)	-	-	-	-	-	-	-	-	-	-	4.0 4.0	
Social Service Worker (SSW)	-	-	-	-	-	-	-	-	-	-	0.7 0.7	
Counselor (C)	-	-	-	-	-	-	-	-	-	-	1.0 1.0	
Data clerk	-	-	-	-	-	-	-	7,200	7,200	2.9	3.3	3.0 (0.3)
Mentor mother	-	-	-	-	-	7,200	-	-	-	8.6	9.3	3.0 (6.3)
Check Client Total	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	-	-	-
Check Percent Total	%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%

SetupDashboardTreatment ModelsService ProvidersClient DistributionTask AssignmentTaskshiftingModelshiftingResultsDaily Workload

Scenario 1 - With Tasksharing/Tasking

1. Standard Care

Facility based Individual Management

Total Number of Clients: 7,200

Note:

Service Provider Type	Enrollment/Registration	Health Education	Triage	Consultation/Clinical Assessment	Blood Draw	Adherence Counseling	ART Refill	Updating Records	Monthly reporting	FTE Service Providers Required	Total FTEs required for all assigned models	Total FTEs available for all assigned models
Medical Doctor (MD)	No. %	-	-	7,200 100%	-	-	-	-	-	5.9	6.2	-
Non Physician Clinician (NPC)	No. %	-	-	-	-	-	7,200 100%	-	-	-	-	-
Pharmacy Technician or Asst	No. %	-	-	-	-	-	-	7,200 100%	-	2.7	3.0	-
Nurse (N)	No. %	7,200 100%	7,200 100%	-	-	-	-	-	-	20.3	21.7	-
Laboratory Technician (LT)	No. %	-	-	7,200 100%	-	-	-	-	-	1.3	1.4	-
Community Health Worker (CHW)	No. %	-	-	-	-	-	-	-	-	-	-	-
Facility-based Auxiliary (FBA)	No. %	7,200 100%	-	-	-	-	-	-	-	1.6	1.0	-
Peer (P)	No. %	-	-	-	-	-	-	-	-	-	-	-
Social Service Worker (SSW)	No. %	-	-	-	-	-	-	-	-	-	-	-
Counselor (C)	No. %	-	-	-	-	-	-	7,200 100%	7,200 100%	2.9	3.3	-
Data clerk	No. %	-	-	-	-	7,200 100%	-	-	-	8.6	9.3	-
Mentor mother	No. %	-	-	-	-	-	-	-	-	-	-	-
Check Client Total	No. %	7,200 100%	7,200 100%	7,200 100%	7,200 100%	7,200 100%	7,200 100%	7,200 100%	7,200 100%	-	-	-
Check Percent Total	%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%

SetupDashboardTreatment ModelsService ProvidersClient DistributionTask AssignmentTaskshiftingModelshiftingResultsDaily Workload

Baseline Scenario Before Modelshifting

Note:

1. Standard Care

2. Facility Individual

3. HW-Managed Group

4. Out-of-Facility Individual, HW-Managed

5. Out-of-Facility Group, Client-Managed

Total Clients

New Clients	3,000	-	-	-	3,000		
Existing Clients	-	-	-	-	-		
Adults	3,000	1,000	-	500	5,000		
Adolescents	-	-	-	-	-		
Children	800	200	-	100	1,000		
PBFV	800	200	-	100	1,000		
Total	7,200	1,400	-	700	10,000		
Medical Doctor (MD)	5.92	0.06	-	0.05	6.2	0.5	(5.7)
Non Physician Clinician (NPC)	-	-	-	-	-	1.0	1.0
Pharmacy Technician or Asst	2.74	0.23	-	0.06	3.0	1.0	(2.0)
Nurse (N)	20.35	1.12	-	0.15	21.7	8.0	(13.7)
Laboratory Technician (LT)	1.33	0.05	-	0.02	1.4	1.7	0.2
Community Health Worker (CHW)	-	-	-	-	-	2.0	2.0
Facility-based Auxiliary (FBA)	1.55	0.14	-	0.03	1.0	10.0	0.2
Peer (P)	-	-	-	-	-	4.0	4.0
Social Service Worker (SSW)	-	-	-	-	-	0.7	0.7
Counselor (C)	-	-	-	-	-	1.0	1.0
Data clerk	2.88	0.23	-	0.05	3.3	3.0	(0.3)
Mentor mother	8.64	0.37	-	0.18	9.3	3.0	(6.3)

SetupDashboardTreatment ModelsService ProvidersClient DistributionTask AssignmentTaskshiftingModelshiftingResultsDaily Workload

Baseline Scenario After Modelshifting

Note:

1. Standard Care

2. Facility Individual

3. HW-Managed Group

4. Out-of-Facility Individual, HW-Managed

5. Out-of-Facility Group, Client-Managed

No. of Clients Baseline Scenario

No. of Clients After Modelshifting

New Clients	3,000	-	-	-	3,000	3,000	
Existing Clients	-	-	-	-	-	-	
Adults	3,000	1,000	-	500	5,000	5,000	
Adolescents	-	-	-	-	-	-	
Children	800	200	-	100	1,000	1,000	
PBFV	800	200	-	100	1,000	1,000	
Total	7,200	1,400	-	700	10,000	10,000	
Medical Doctor (MD)	5.92	0.06	-	0.05	6.2	6.2	0.5 (5.7)
Non Physician Clinician (NPC)	-	-	-	-	-	-	1.0 1.0
Pharmacy Technician or Asst	2.74	0.23	-	0.06	3.0	3.0	1.0 (2.0)
Nurse (N)	20.35	1.12	-	0.15	21.7	21.7	8.0 (13.7)
Laboratory Technician (LT)	1.33	0.05	-	0.02	1.4	1.4	1.7 0.2
Community Health Worker (CHW)	-	-	-	-	-	-	2.0 2.0
Facility-based Auxiliary (FBA)	1.55	0.14	-	0.03	1.0	1.0	10.0 0.2
Peer (P)	-	-	-	-	-	-	4.0 4.0
Social Service Worker (SSW)	-	-	-	-	-	-	0.7 0.7
Counselor (C)	-	-	-	-	-	-	1.0 1.0
Data clerk	2.88	0.23	-	0.05	3.3	3.3	3.0 (0.3)
Mentor mother	8.64	0.37	-	0.18	9.3	9.3	3.0 (6.3)

SetupDashboardTreatment ModelsService ProvidersClient DistributionTask AssignmentTaskshiftingModelshiftingResultsDaily Workload

Baseline: FTE Required Before and After Modelshifting

Non-Physician Clinician (NPC)

Pharmacy Technician or Asst (PTA)

Nurse (N)

Laboratory Technician (LT)

Community Health Worker (CHW)

Facility-based Auxiliary (FBA)

Peer (P)

Social Service Worker (SSW)

Counselor (C)

Data clerk

217 217

1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0

100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Total FTEs Required Baseline ScenarioTotal FTEs Required after Modelshifting

Baseline: Staff Excess or (Gap) After Modelshifting

Non-Physician Clinician (NPC)

Pharmacy Technician or Asst (PTA)

Nurse (N)

Laboratory Technician (LT)

Community Health Worker (CHW)

Facility-based Auxiliary (FBA)

Peer (P)

Social Service Worker (SSW)

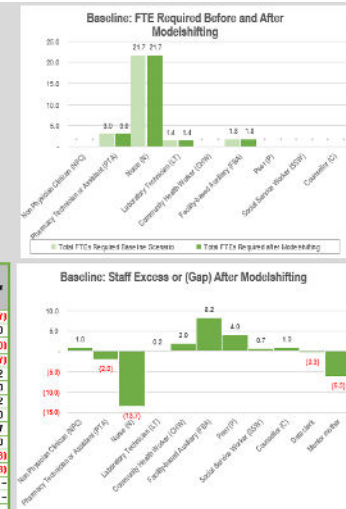
Counselor (C)

Data clerk

1.0 0.2 1.0 0.2 0.7 0.3 0.7 0.7 0.3 0.3

(5.7) (2.0) (13.7) (0.2) (2.0) (0.2) (4.0) (0.7) (1.0) (0.3)

Total FTEs Required Baseline ScenarioTotal FTEs Required after ModelshiftingTotal Existing FTEsStaff Excess or (Gap)



Unit of measure

Standard metric used in Tool is the Full-time Equivalent (FTE)

FTE = “hours worked by one employee on a full-time basis”

- Takes into account that some staff only work part-time on ART delivery
- Same measurement used for existing and required staff
- Accounts for time spent on clinical and administrative tasks
- All FTE estimates in Tool are annual



Tool guides users in determining staffing excesses or gaps based on context-specific inputs

Calculation of FTE Requirements and Gaps

$$\frac{\left(\text{Client \#} \right) \times \left(\text{Task frequency} \right) \times \left(\text{Task duration} \right)}{\left(\text{Hours available for ART per FTE} \right)} = \left(\text{Total FTEs required for ART} \right)$$

$$\left(\text{Total FTEs available for ART} \right) - \left(\text{Total FTEs required for ART} \right) = \left(\text{FTE gap/excess} \right)$$

Applying the Tool

- What is the current staffing situation?
- How can I reduce staffing gaps by task shifting/sharing?
- How can I reduce the workload on facility staff by DSD model shifting?

User's Opinion

“This Tool is going to help us a lot in task shifting. During the national DSD model training, they said we needed to carry out task shifting but we were not told how to do this....”

- *Staff at ART Clinic, Uganda*



Limitations of Tool

- Some HIV management tasks (e.g., HIV testing services) are not included as part of the critical tasks. Tool focuses on ART service delivery
- FTE estimates are only as good as the quality of data on ART critical task duration by service provider type
- Tool is not predictive/cannot recommend the optimal DSD models to use at the facility level
- No cost component is included for the various options of DSD models that can be implemented at a site

Acknowledgements

- PEPFAR
- USAID: Washington, Cameroon and Uganda Country Missions
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- Ministry of Health, Uganda
- Ministry of Public Health, Cameroon
- DSD Technical Working Group, Uganda
- EGPAF – Uganda (DELTA Project)
- Facility in-charges and staff at participating sites in Uganda and Cameroon
- ART clients who were interviewed
- HRH 2030 project
- ICAP and CQUIN