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Partnership for HIV Free Survival (PHFS) Indicators Data Validation Exercise

Introduction

The Partnership for HIV-Free Survival (PHFS) is an initiative created by the United States Agency for International Development (USAID) and the World Health Organization (WHO) to accelerate implementation of prevention of mother-to-child transmission (PMTCT) of HIV in six sub-Saharan African countries, including Uganda [1]. Its broad goals are achieve universal breastfeeding and optimal nutrition for mother-infant pairs and ensure all breastfed infants receive protection through anti-retroviral therapy.

Uganda's PHFS activities began in April 2013 in 22 demonstration sites in six districts. Quality improvement (QI) teams were either formed or reconstituted from those existing for previous improvement activities. They were supported through monthly visits from USAID ASSIST improvement advisors to identify gaps in care, prioritize areas for improvement, develop and test change ideas to address the gaps, and implement these changes. To further facilitate the sharing and spreading of change ideas, peer-to-peer learning sessions were organized quarterly so that teams could meet to share their work. Teams initially focused on three key areas: data quality, the retention of mothers and their babies in care, and assuring that mother and baby pairs who came to the clinic received the critical package of services.

The process of improving the quality of services provided in HIV clinics depends on data to determine whether or not process changes are leading to the desired outcomes in terms of changes in the indicators of care chosen for the activity. It is therefore important for improvement teams, coaches, and others involved in the activities to have the confidence that the data are an accurate representation of the quality of the services provided. Data validation is also one of the mandates of the USAID ASSIST Project. This evaluation examined the validity of data collected by the improvement teams from the PHFS demonstration facilities. It sought to address the question of what level of knowledge of the indicators do the front-line staff involved in PHFS health care improvement activities have. We also sought to determine if there was a difference in the level of knowledge among different cadres or different districts. We also report on what activities were conducted by the USAID ASSIST Uganda team in terms of technical assistance to address the deficits.

Methods

Quality improvement "coaches" are experts in improvement methods who work for the USAID ASSIST Project to provide technical assistance and guidance to quality improvement team members in the PHFS demonstration facilities. For this validation activity, the coaches visited facilities in which they had not worked previously as the coach or in any other capacity, to collect data to validate how the facility

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improvement team collected, understood, and used improvement data. They administered the data validity questionnaire to each member of the improvement team individually in a place where their responses could not be overheard by other facility staff. Responses were recorded immediately in the forms provided. The name, facility, and cadre of all of the health workers were also recorded.

Four health workers were interviewed about the indicator, “Percentage of HIV-positive pregnant women initiated on ART.” Two health workers were asked about the indicator “Percentage HIV-exposed infants tested for HIV at 6 weeks (1st PCR)”, and two were asked about “Percentage of exposed infants reporting to be adhering to recommended infant and young child feeding (IYCF) practices.”

The PHFS intervention was conducted 22 facilities in Uganda. Data from a total of 18 facilities were analyzed in this activity because three facilities did not have data ready for analysis. The coaches asked each of the participants the following questions in regard to each indicator:

1. What is the numerator for the indicator? *(ask respondent and tick [√] appropriately)*
2. Where do you get these data? *(if more than one source list all as mentioned)*
3. What is the denominator for the indicator? *(ask respondent and tick [√] appropriately)*
4. Where do you get these data? *(if more than one source list all as mentioned)*
5. How frequently is this data collected for improvement work? _____
6. Who is responsible for compiling the data for improvement work? _____
7. Do you use data from all clients for reporting on improvement activities? *(Please tick √)*
8. In the past 3 months, has anyone on QI team checked for accuracy of the data? Yes ___ No ___
 - a. If yes, how was this done and what were the findings. _____
9. In the last 3 months, have you received feedback about the indicator data from the coaches?

Results

This data validation exercise was conducted for a total of 144 improvement team members in 18 facilities in the five districts involved in the PHFS improvement activities in Uganda supported by the USAID ASSIST Project. The exercise found that 63% of the improvement team members in the facilities are members of the nursing staff, including registered nurses, enrolled nurses, midwives, and others. Clinical officers comprised 10% of the total, as did data officers. The “Other staff” category included stores assistants, a dispensary secretary, and a Vector Control Officer (Table 1).

Table 1: Health facility staff participants in validation questionnaire

Facility ID number	Facility type	District	Clinical officers	Nursing staff	Data officers	Laboratory staff	Other staff	Total
1	HC III	Namutumba	2	4	0	2	0	8
2	HC III	Namutumba	0	8	0	0	0	8
3	HC III	Tororo	2	2	0	2	0	6
4	HC III	Kisoro	0	10	0	0	0	10
5	HC III	Namutumba	2	4	0	0	2	8
6	HC III	Ntungamo	3	6	2	0	0	11
7	HC IV	Jinja	1	5	0	0	0	6
8	HC IV	Kisoro	3	6	0	0	0	9

Facility ID number	Facility type	District	Clinical officers	Nursing staff	Data officers	Laboratory staff	Other staff	Total
9	HC IV	Jinja	0	2	0	0	2	4
10	HC IV	Ntungamo	1	4	1	0	2	8
11	HC IV	Jinja	0	5	0	0	0	5
12	HC IV	Tororo	0	4	2	0	2	8
13	HC IV	Tororo	1	2	0	2	3	8
14	HC IV	Ntungamo	0	4	1	2	3	10
15	HC IV	Kisoro	0	4	6	0	0	10
16	Hospital	Ntungamo	0	6	1	1	0	8
17	Hospital	Kisoro	0	9	0	0	0	9
18	Hospital	Tororo	0	6	2	0	0	8
Total			15	91	15	9	14	144

Among cadres of health workers, 83 of the 144 (58%) were able to correctly identify both the numerators and denominators for the indicators. There was no statistically significant difference among the cadres in terms of performance (Table 2).

Table 2: Identification of indicator components among improvement team members

Cadre	Correct numerator			Correct denominator		
	#	%	p-value	#	%	p-value
Nursing	72	79	0.211	56	61	0.718
Clinical officers	12	80	0.682	11	73	0.286
Data officer	10	67	0.393	5	53	0.555
Laboratory staff	6	67	0.518	7	78	0.285
Other staff	9	64	0.415	8	57	0.155

Comparing the performance in correctly identifying numerators and denominators by district, there was a significant difference among the five, with Namutumba and Jinja districts outperforming the other three (Table 3).

Table 3: Identification of indicator components among the five districts

District	Correct numerator			Correct denominator		
	#	%	p-value	#	%	p-value
Ntungamo	19	56	0.003	12	35	0.001
Kisoro	26	68	0.226	13	34	<0.001
Namutumba	24	100	0.002	23	96	0.004
Jinja	15	100	0.020	15	100	0.001
Tororo	25	83	0.278	23	77	0.041

Discussion

Approximately one third of improvement team members were not able to correctly identify the numerators and/or denominators for the improvement indicators used as measures of the quality of maternal and neonatal HIV care, treatment, counseling, and testing. This validation exercise did not specifically examine the accuracy of the indicator data collected by improvement teams of the participating facilities. Given that the coaches and the QI team leaders did have accurate knowledge of the numerators and denominators for the indicators, it is likely that the accuracy of data was not necessarily compromised to the degree suggested by these results. However, it does shed light on the need for all members of the QI team to know the basic parameters of an indicator.

Reports from South Africa and Kenya noted that data accuracy in PMTCT work from registers was low in those settings [2, 3], and so it was not unexpected that some deficits would be seen in the Uganda PHFS program activities. Accurately reporting data on patient cards and in registers and analyzing these data was an important part of the initial improvement orientation by the USAID ASSIST coaches with the improvement teams in these facilities. Because there are no baseline data on knowledge of indicator information, we do not know whether these results represent an improvement or not; however, the coaches believe this to be the case.

Following these results, specific emphasis was placed by USAID ASSIST coaches on improving the knowledge of improvement indicators in the two districts that had the lowest scores. An additional expert in improvement methods and coaching was sent to provide technical assistance during the learning session and the coaching visits that occurred after the results of this validation exercise were known. Written information was distributed to health care workers, and discussions were undertaken during the coaching visits to reinforce basic facts about the indicators, how they are to be collected, and the importance of the accuracy of indicator data to drive the process of improvement. Routine monitoring of the knowledge of the indicators and the practice of their collection has since been built into the work of the improvement teams.

References

1. US Agency for International Development / Food and Nutrition Technical Assistance III, Partnership for HIV-Free Survival Launch meeting, Pretoria, South Africa, March 11, 2013. 2015, FHI360: Pretoria, South Africa.
2. Ferguson L, et al. Prevention of mother-to-child transmission of HIV: assessing the accuracy of routinely collected data on maternal antiretroviral prophylaxis coverage in Kenya. *Sex Transm Infect*, 2012. 88(2): p. 120-4.
3. Mate KS, et al. Challenges for routine health system data management in a large public programme to prevent mother-to-child HIV transmission in South Africa. *PLoS One*, 2009. 4(5): p. e5483.

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