Accounting for Patient Losses Through Retention Audit and Root Cause Analysis:

Lesotho's Experiences

Elizabeth Glaser Pediatric AIDS Foundation
Fighting for an AIDS-free generation

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Background

Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)–Lesotho directly provides a comprehensive package of HIV/AIDS services in eight districts while providing technical assistance to the Ministry of Health (MOH) at both the national and the district levels and to local implementing partners. EGPAF–Lesotho, as the main clinical partner of MOH, facilitated the introduction and scale-up of differentiated HIV care models, which aim to provide client-centered patient care and optimize retention of clients in care, enabling achievement of the UNAIDS 90-90-90 targets. According to the preliminary results of The Lesotho Population-based HIV Impact Assessment (LePHIA) 2020, Lesotho has achieved 90-97-92 of the targets, respectively. Differentiated approaches currently in use include multi-month antiretroviral therapy (ART) scripting and refills, community ART groups, extended clinic hours, community-based ART initiation and distribution, and integrated community outreach and community ART delivery. EGPAF also is using innovative strategies to reach priority and key populations traditionally underserved by the health system, such as children, adolescents, migrant populations, factory workers, and key populations. Based on the overall retention of 88%, the country program, together with MOH, found the need to conduct a retention audit, which will guide the program interventions to be introduced, scaled up, and strengthened.

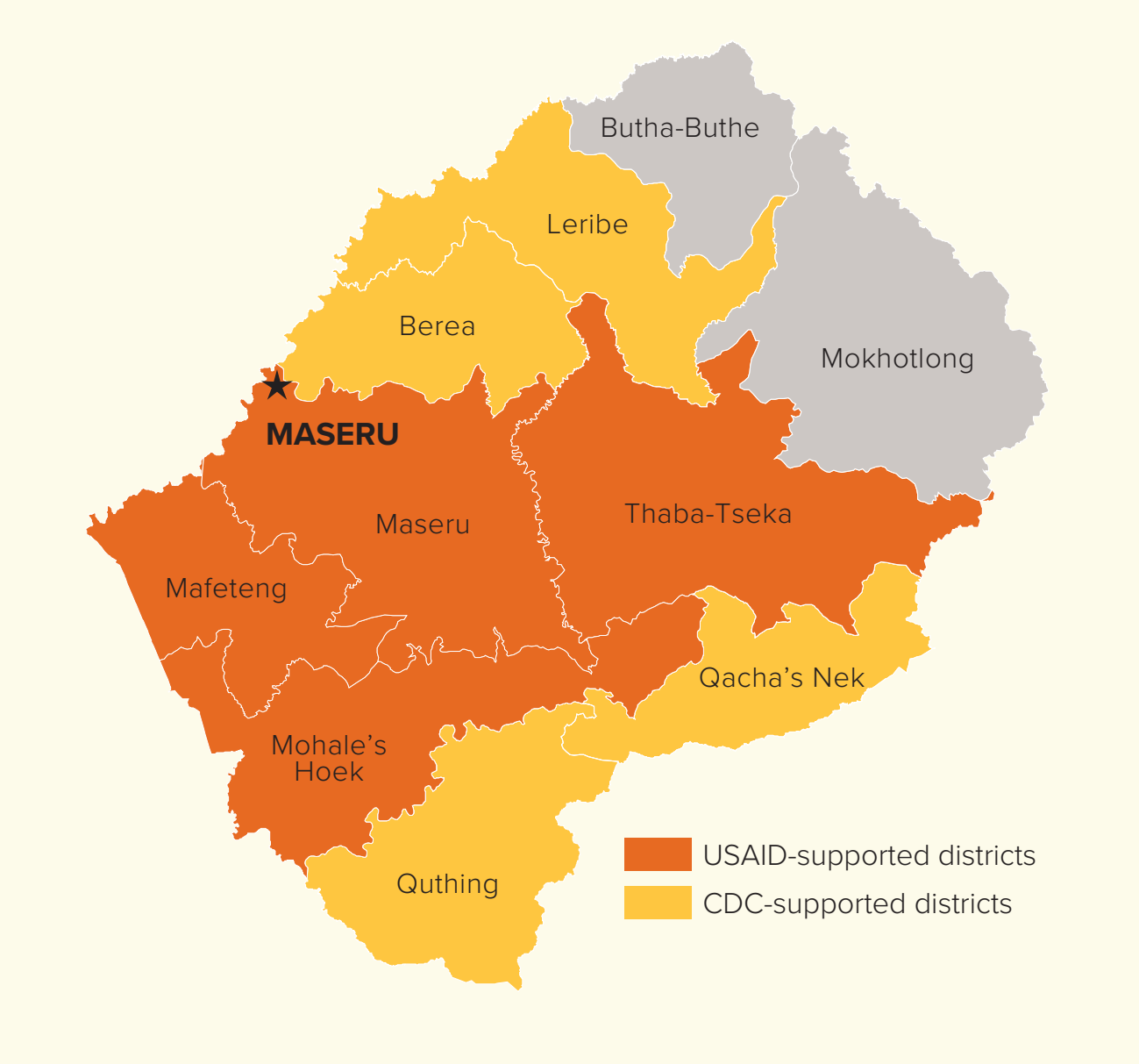

Figure 1: Map of EGPAF-support districts

Problem Statement

Despite strengthening program implementation and scaling up interventions that are aimed at optimizing care and treatment, the HIV program struggled with retention of patients and with a high number of patients' falling off the care and treatment cascade. The approximate HIV/AIDS program retention rate is 88%, and between October 2018 and June 2020, the Lesotho program recorded 33,398 patient losses in 10 U.S. President's Emergency Plan for AIDS Relief–supported districts. The patients lost between October 2018 and June 2020 couldn't be accounted for; therefore, an audit was paramount to understand the attrition.

The audit served to better explain the loss of 33,398 patients on ART and to develop interventions to prevent further client attrition and grow the treatment program. The objectives of the audit were the following:

1. Accurately identify the number of patients no longer on ART
2. Describe the sociodemographic and clinical characteristics of 33,398 ART patients identified as no longer being on ART
3. Identify patient, provider, or systems-related factors associated with the loss of patients on ART

The evaluation questions aimed to provide an understanding of whether all patients reported as losses from the program are no longer on ART and who comprises the patients exiting the treatment cohort in the past 21 months. Through this audit, EGPAF–Lesotho highlights strategies to both analyze patient losses and improve retention.

Methods

All patients who were documented as lost from treatment by the health facilities were line-listed by data collectors from EGPAF, Baylor, and MOH. Those included patients who had self-transferred, those receiving treatment elsewhere, and those who were not documented as active patients but continued to receive services at the same health facilities. The outcomes of these patients as well as their demographic and clinical characteristics were recorded using facility records. A multivariate analysis was done to determine factors associated with patient loss. Root cause analysis tools for quality improvement were used for further analysis of key findings. Pareto charts were used to prioritize factors associated with patients' loss, followed by fishbone diagrams and the Five Whys approach to analyze root causes for prioritized factors.

Photo: Eric Bond, 2017

Results

1. Multivariate analysis

The multivariate analysis determined five factors associated with patient loss: gender, duration on ART, number of tracking attempts, ART regimen, and not being on multi-month dispending (MMD).

At the start of the audit, programmatic data suggested that 33,398 patients had been lost from treatment. The audit confirmed their actual outcomes and found that, of the 33,398 patients considered lost, the following was true:

- 464 (1.4%) were still receiving treatment at their ART health facilities. This discrepancy was a result of documentation gaps in the patient records.
- 8,803 (26.4%) reported as lost from treatment or transferred to the Republic of South Africa were receiving services at other health facilities within Lesotho and were still on treatment.

A total of 9,267 (28%) patients thought to be lost from treatment were still on ART at the same or another health facility in Lesotho. Thus, the audit found that a total of 24,131 (72%) of the 33,398 patients were no longer on treatment. This number included 3,793 (11%) who died and 139 (0.4%) who refused treatment.

Table 1: Results of multi-variate analysis

Demographic Characteristic	Lost Patient		Total	Percent, Patients Lost
	Yes	No		
Sex				
Female	15,678	6,426	22,104	66%
Male	8,453	2,841	11,294	34%
Marital status				
Divorced	1,377	443	1,820	5%
Married	13,595	5,446	19,041	57%
Single	7,060	2,611	9,671	29%
Widowed	2,099	767	2,866	9%
Age at ART initiation (years)				
<10	878	304	1,182	4%
19-Oct	1,423	549	1,972	6%
20-24	3,085	1,345	4,430	13%
25-49	15,598	6,115	21,713	65%
50+	3,147	954	4,101	12%
Age at last seen date (years)				
<10	361	242	603	2%
19-Oct	660	454	1,114	3%
20-24	1,950	1,007	2,957	9%
25-49	13,137	6,077	19,214	58%
50+	8,023	1,487	9,510	28%
Duration on ART (years)				
<1	6,560	2,430	8,990	27%
1-4	7,599	3,713	11,312	34%
5-9	3,392	1,965	5,357	16%
10-16	6,580	1,159	7,739	23%

In addition, the outcomes revealed that patients not enrolled in support groups are at higher risk of being lost (97%) and that those who were not given multi months of antiretrovirals were likely to get lost. Defaulter tracking also remains paramount as patients not tracked efficiently after missing appointments are not retained in care.

Table 2: Results of enrolment in Differentiated Models of care

Outcome	Lost Patient		Total (% Lost)
	Yes	No	
Enrolled in a support group			
Yes	643	240	883 (2.7%)
No	23,390	9,027	32,417 (97%)
Missing	98	0	98 (0.3%)
Whether on MMD at last seen date			
No	13,593	6,720	20,313 (61%)
Yes	9,619	2,301	11,920 (36%)
Missing	919	246	1,165 (3%)

Photo: Eric Bond, 2017

2. Root cause analysis

The result highlighted above—that 97% of defaulters were not enrolled in support groups—was also prioritized in the Pareto chart, indicating that it is the main associated factor for patients' loss. This led to the root cause analysis that aimed to understand the causes of low enrolment in support groups and further asked why patients were not enrolled in support groups.

To determine the underlying causes of patient loss, two methods used were the Five Whys approach and a fishbone diagram. There are explanations for issues that were explored in seeking alternative answers to the "why" question, and the overall results are grouped according to common themes. These thematic explanations are displayed in the fishbone diagram, constructed by adding categories for causes including environment/ terrain, people (patients), systems and processes, and human resources and technical capacity.

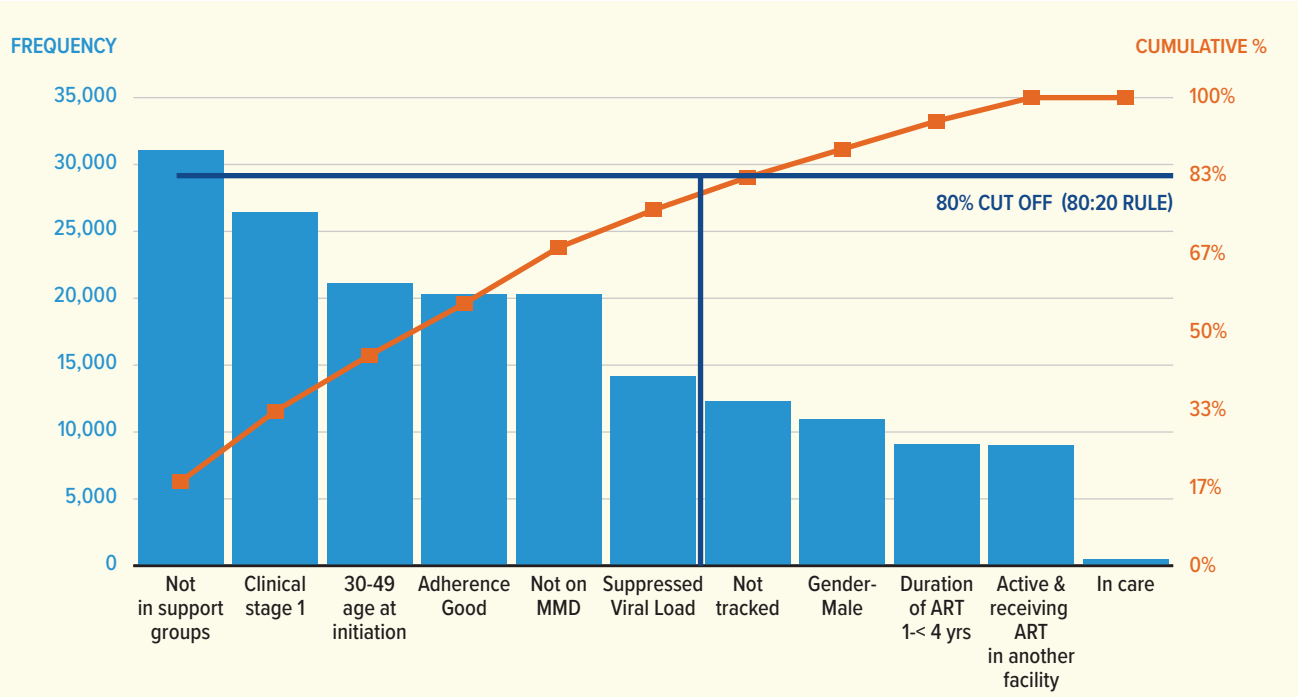

Figure 2: Pareto Analysis of the Retention Audit Findings


Photo: Eric Bond, 2017

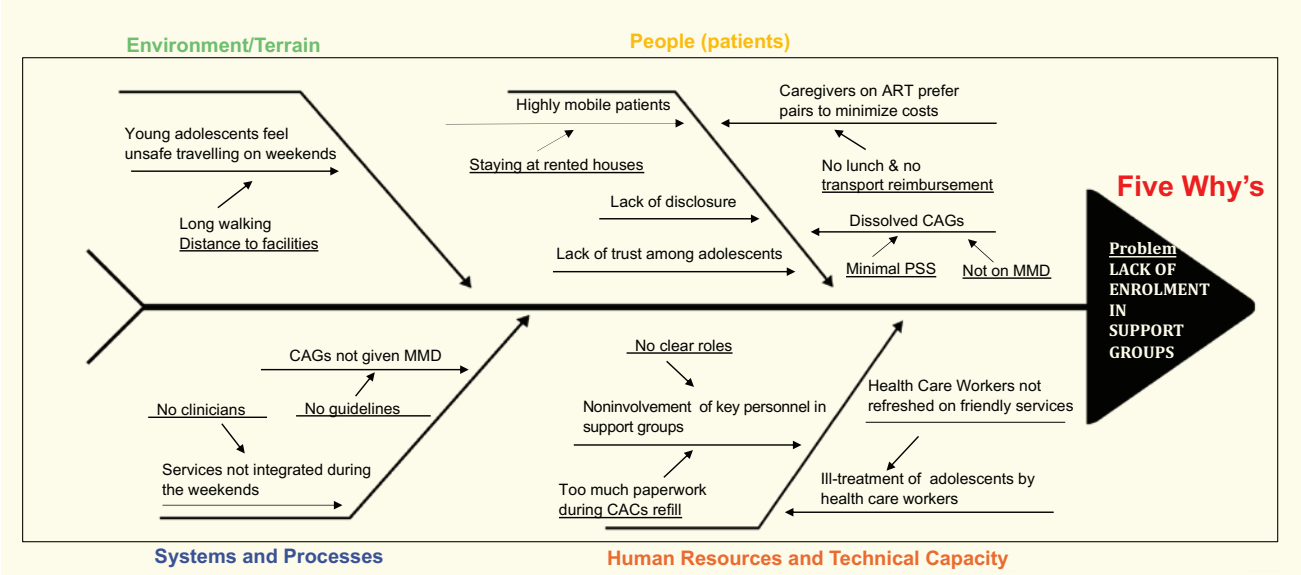

Figure 3: Root Cause Analysis for Lack of Enrolment in Support Groups (98%)

Several root causes were analyzed; they include the following:

- Community ART groups were not given multi months' dispensing, as were individual patients; hence membership dissolved.
- Providers lacked skills for providing friendly services, including care of psychosocial support groups.
- Services were not integrated (no clinicians for ART refills) on the weekends, when psychosocial support groups meet; hence, patients found it unnecessary to come to facilities for one service while other services are offered on workdays.
- There was lack of trust among adolescents due to nondisclosure of HIV status.


Photo: Eric Bond, 2017

Discussion

Based on the findings of the retention audit and the root cause analysis, the Lesotho program developed strategies to address the losses so as to retain patients in care. Those strategies will be implemented within the context of client-/family-centered care.

1. Operational considerations

- Improved documentation through timely updating of records
- Confirmation of linkages of transfer-in and transfer-out
- Strengthening of the quality of data reported
- Improved uptake on electronic patient monitoring/reporting platforms

2. Differentiated service delivery models

- Maintenance of high MMD coverage
- Peer support services
- Fast-tracking of ART refills
- Family drug pickup
- Community-based models: community ART groups, decentralized drug distribution (DDD)

3. Active patient tracing

- Prompt identification of missed appointments and rescheduling
- Active community tracing efforts of lost to follow-up patients
- Support for those who return to care (adherence and Advanced HIV Disease (AHD) screening) and use of welcome package
- Collaboration with community partners and volunteer health workers (VHWs) to ensure patients continue with treatment

4. Supportive services

- Improved counseling to address issues of disclosure
- Treatment literacy (Undetectable = Untransmissible messaging)
- Tailored services for specific populations (e.g., migrant/men-friendly services)
- Involvement of patients in their care

5. Trained health care workers (HCWs)

- Support of mental health issues of providers
- Training of HCWs on friendly services
- Strengthened teamwork at the facilities
- Development of checklist for supportive supervision and mentorship

Recommendations and Next Steps

- **Involve patients** in their care (discuss follow-up dates, maintaining client- or family-centered approach).
- **Care for the career-support mental health issues of providers**; address HCWs' attitudes especially as HCWs are under a lot of stress regarding COVID.
- **Improve uptake of electronic platforms**; support scale-up of CommCare and electronic registers.
- **Work with clinician**s to address the issue of the low number of patients who have consented to receive SMS. Share information about the benefits of CommCare.
- **Strengthen collaborations between community partners** and EGPAF to enable them to move and work as a unit.
- **Develop supportive supervision and mentorship checklists** for headquarters' visits to facilities.

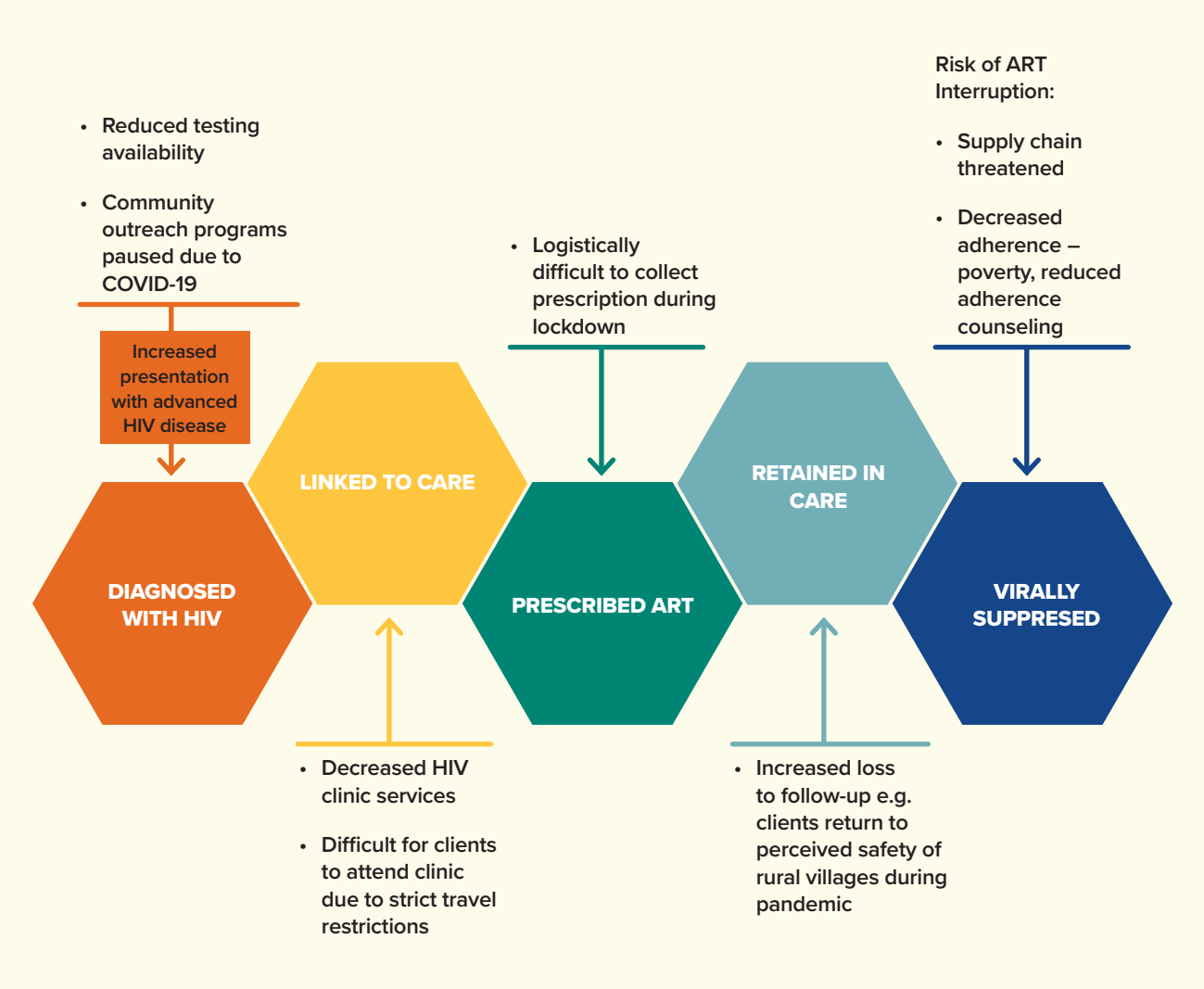

Figure 4: Gaps along Clinical Cascade

Thorough analysis:

Was this resource intensive? How intensive was this?

Response: The exercise was very resource intensive. To start, more than 33,000 files (hard copies) had to be reviewed and data pulled out. Telephone calls had to be made to confirm patient enrollment in care and to update records. Furthermore, other reporting platforms in facilities were used to triangulate and verify the data. Since the program leveraged on-site-level teams, the teams had to task shift between providing services to clients presenting at the facilities for services and participating in the exercise.

Do you recommend that other countries implement this thorough analysis?

Response: Considering the benefits of the exercise, indeed this is an exercise I would recommend in other countries as it enables programs to better understand retention and form a more targeted approach for retention rather than a blanket approach.

How can we objectively look at the interventions later on and determine whether they led to improvement? (Is the team planning to do this?)

Response: For now, Lesotho hasn't clustered the interventions to be able tell what really has worked; the exception is documentation errors because the data indicated that the development of some of the tools that the team put in place that made it easy to document have contributed to stronger retention. Lesotho is not able to structure the different interventions and talk about them individually with regard to their contributions as of yet. In addition, the interventions can be clustered such that interventions that were rolled out at a particular time can be assessed together to address their impact.

Should this be used to adapt new United States Agency for International Development (USAID) protocols to address some of the larger issues regarding retention (lack of transport to clinic, etc.)?

Response: It would be essential to adapt to new USAID protocols. However, considering the funding landscape for the future, leveraging interventions that would minimize the cost of seeking health care would be beneficial. Client- and family-centered approaches remain paramount to keeping the programs afloat. In addition, with the number of patients who are enrolled in care, there are benefits to the consideration of scaling up provision of health services in communities through outreach and use of village health posts.

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