Healthqual

UCSF

UCSF Institute for Global Health Sciences

ART4ALL QUALITY IMPROVEMENT COLLABORATIVE

FINAL REPORT

APRIL 1, 2019

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List of acronyms

ART	Antiretroviral therapy
ARV	Antiretroviral
DBS	Dry blood spot
DHE	District health executive
DMO	District medical officer
DNO	District nursing officer
FHS	Family health services
HRSA	Health and research services administrator
IQR	Interquartile range
LTFU	Lost to follow up
MOHCC	Ministry of Health and Child Care

OSDM	Operational and Service Delivery Manual
PEPFAR	President's Emergency Fund for AIDS Relief
PLHIV	People living with HIV
QI	Quality improvement
QIC	Quality improvement collaborative
QICIP	Quality Improvement Capacity for Impact Project
SMS	Short message service
UNAIDS	United Nations
VL	Viral load
WHO	World Health Organisation

EXECUTIVE SUMMARY

Background

In 2016, the Zimbabwe Ministry of Health and Child Care (MoHCC) released updated National Consolidated ART Guidelines in alignment with 2015 WHO recommendations, calling for elimination of clinical and immunological eligibility criteria for initiation of ART among people living with HIV (PLHIV) ("Treat All"), and the scale-up of routine viral load monitoring. While the introduction of Treat All guidelines at selected districts in 2016 led to initial increases in the number of pre-ART PLHIV presenting to care for ART initiation, these increases were short-lived, pointing to uneven uptake of guidelines and a pressing need to identify and improve gaps in treatment initiation.

Ensuring that all PLHIV in Zimbabwe are promptly initiated on ART and routinely monitored in accordance with national treatment guidelines is critical to achieving UNAIDS' 90-90-90 targets, and reducing HIV-related morbidity and mortality among PLHIV in Zimbabwe. With funding through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), as part of the Health Resources and Services Administration's (HRSAs) Quality Improvement Capacity for Impact Project (QICIP), UCSF-HEALTHQUAL partnered with the Zimbabwe MoHCC to implement ART4ALL, a quality improvement collaborative (QIC) with the aim of improving same-day ART initiation, early engagement, and viral load monitoring and suppression among PLHIV in Zimbabwe.

Key Findings

ART4ALL Collaborative

The ART4ALL Collaborative was launched in January 2017 in 27 high-burden sites across Chitungwiza, Epworth, and Harare, Zimbabwe. In total, ART4ALL sites provide ART services to >100,000 PLHIV—an estimated 1/7 of all PLHIV receiving ART in Zimbabwe's public sector. Key outcomes of ART4ALL included:

- **A total of 26,655 patients were new-to-care across all 27 sites, of which 18,775 (70%) were initiated on ART on the same day of diagnosis.**
- **A total of 1,379 patients were previously-in-care and ART-naïve, of which 1,224 (89%) were initiated on ART on the same day they were brought back to care.** These are patients who were diagnosed to be HIV positive and were not initiated on treatment at the time of the launch of the Collaborative.
- **The proportion of newly diagnosed patients who were initiated on ART on the same day of diagnosis per month increased from 54% in February 2017 (n = 1441) to 77% in August 2018** (n = **1407).** Although notable variation in same-day initiation rates for new-to-care patients was observed at baseline, the median rate increased from 52% in February 2017 (IQR 37%-76%) to 79% in August 2018 (IQR 67-96%). The change noted in the IQR represents a narrowing of the variation in scores, complementing the improvement in mean scores.
- The proportion of new to care patients who were not initiated on ART within the calendar month of diagnosis ranged from 13% to 20% across the 3 regions. Loss to follow up, investigation and management of opportunistic infections, missed opportunities, transfer out and deaths accounted for 33%, 31%, 26%, 9% and 1%, respectively, of the patients that were not initiated on ART within the calendar month of diagnosis.

- Appointments of newly initiated patients were tracked to ensure that patients were retained in care. A three-day window was enforced around the scheduled dates, beyond which patients would be considered to have missed an appointment.
- The percentage of patients who missed any scheduled appointments within the first 3 months of ART decreased by 8%, from a baseline of 28% in March 2017 (n = 1397) to 21% in August 2018 (n = 1902) (range 17-39%).
- The percentage of patients who missed their 6-month appointment decreased by 14%, from a baseline of 30% in March 2017 (n = 397) to 16% in July 2018 (548).
- Harare region had the highest number of patients initiated on ART with scheduled appointments. The proportion of patients who missed scheduled appointments in Harare decreased by 15% from a baseline of 33% in March 2017 to 18% in August 2018 and is notable given the high regional burden.
- **Newly initiated patients who received a viral load test at 6 months post initiation more than doubled, from 16% in September 2017 (n = 1616) to 40% in August 2018 (n = 828)**.
- Facility team progress scores were documented monthly by quality improvement coaches to assess each site's progress implementing quality improvement activities in relation to their performance data and improvement on the measures. From January 2017 to August 2018, most sites showed steady progress implementing quality improvement activities and demonstrated modest to significant improvement in related measures.
- Facilities tested and implemented numerous changes that contributed to improvements across the 3 main focus areas of ART initiation, reduction in missed appointments and viral load monitoring. These are codified in a formal change package for dissemination.

The proportion of patients receiving their viral load results within a month of viral load testing improved slightly from 12% in August 2017 to 16% in August 2018. The long turn-around time for VL results was attributed to in-lab processes and performance issues that were beyond the control of the facility teams. **Over 90% of patients who received their viral load test results were virally suppressed.**

Key changes implemented to ensure early ART initiation, early retention in care and viral load uptake and suppression rates include, identifying and bringing back to care previously-in-care patients, compressing counselling sessions, streamlining the processes before ART initiation, integrating services, expanding access to services, engaging expert patients and staff to escort patients between service areas, leveraging prompts and reminders for care at the point of service and delivering services through differentiated care models, such as community ART refill groups (CARGs), family ART group and fast refills.

A number of system-level policy issues were identified through the Collaborative that hindered optimal site-level performance and were addressed by the Collaborative leadership team within the Ministry of Health. These issues involved the areas of human resources, physical infrastructure, laboratory turnaround time, data systems and communication.

The ART4ALL Collaborative was successful in harnessing QI activities to facilitate rapid implementation of the Treat All guidelines and demonstrating the feasibility of same day initiation of ART in Zimbabwe, suggesting that it is replicable in other resource constrained settings.

Key Recommendations:

1. Geographic expansion/scale-up of successful changes should be implemented to accelerate improvement toward achievement of national goals and UNAIDS' 95-95-95 targets. Further, sustainability of current and future gains will require coordination through the MoHCC with implementing partners to ensure maximum coverage and capacitation of additional QI coaches to support this endeavor.
2. To improve continued gaps in **viral load monitoring**, changes should focus on inconsistent service and maintenance of equipment, closing gaps in supply chain management for reagents and other consumables, better use of lab management information systems, and modifications to the lab sample transportation system. Additional resources will be needed to achieve adequate laboratory capacity and overall performance across the VL cascade.
3. Data systems. Continued capacity building support for use of existing data systems is crucial to ensure that facility teams can continue to extract, analyze and use data for improvement post-Collaborative. This includes continued use/adoption of data tools designed specifically for the Collaborative to ensure continued routine site-level access to real time data where it did not exist before. In addition, the systems should be augmented to track patients who are in care but are accessing services from one site to another.
4. With the end of the Collaborative, it is imperative to ensure continued support to site-level teams for the elevation of system issues to the appropriate above-site units so that issues can be addressed in a timely fashion. While the Collaborative introduced structures for routine communication and strategies to address challenges through the Collaborative leadership structure, platforms for bi-directional communication are needed for this momentum to be sustained post-Collaborative.

Viral load monitoring, data management systems, and issues pertaining to national policies and procedures are areas for continued attention.

Following the final harvest session in August 2018, site teams have been working to sustain reliable processes for same day initiation of eligible patients and continue to refine processes that reduce time to ART initiation. Many changes that were tested to improve same-day initiation have been adopted, including compressed counselling sessions, contacting patients previously in care patients and re-engaging them in care, and integration of services. All sites continue to test changes to reduce missed appointments by redesigning their processes and harmonizing appointments on improving viral load monitoring by increasing access. Sites continue to engage people living with HIV as expert patients to support engagement in care, provide care counselling and support, as well as defaulter tracking.

INTRODUCTION

The ART4ALL Collaborative was led by the Zimbabwe Ministry of Health and Child Care (MoHCC) with technical support from UCSF-HEALTHQUAL, CDC-Zimbabwe, EGPAF and OPHID, and funded through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) as part of HRSA's Quality Improvement Capacity for Impact Project (QICIP). Design of the ART4ALL Collaborative, following the adoption of the "Treat All" guidelines by the MoHCC, began in September 2016 by defining the structure, measures, timeline, and participating sites (*see Figure 2-4*).

A Quality Improvement Collaborative is a formal model that accelerates improvement through rapid cycles of testing changes to improve care in a specific area of focus (Figure 2). A small set of measures (Table 1) is used for monthly reporting to provide real-time data for monitoring the effect of the tested changes. Peer learning occurs over a series of Learning Sessions in which teams from participating sites, stakeholders, QI coaches and content experts convene to share experiences and generate ideas.

Between Learning Sessions, short implementation periods, or Action Periods allow participants to rapidly test new change ideas, measure the effects of those changes and determine whether a change is subsequently adapted, adopted or abandoned. Each participating site is supported by an improvement coach who assesses needs and conducts focused technical assistance to ensure sites are progressing towards goals during the Action Periods.

Improvement coaches offer specific expertise and guidance throughout the Collaborative to bridge implementation gaps that emerge between Learning Sessions. In addition to helping sites navigate changes, coaches play an essential role in identifying, addressing and elevating systems issues that may prevent site teams from making effective changes.

Figure 1. *Implementation timeline for the ART4All Collaborative activities*

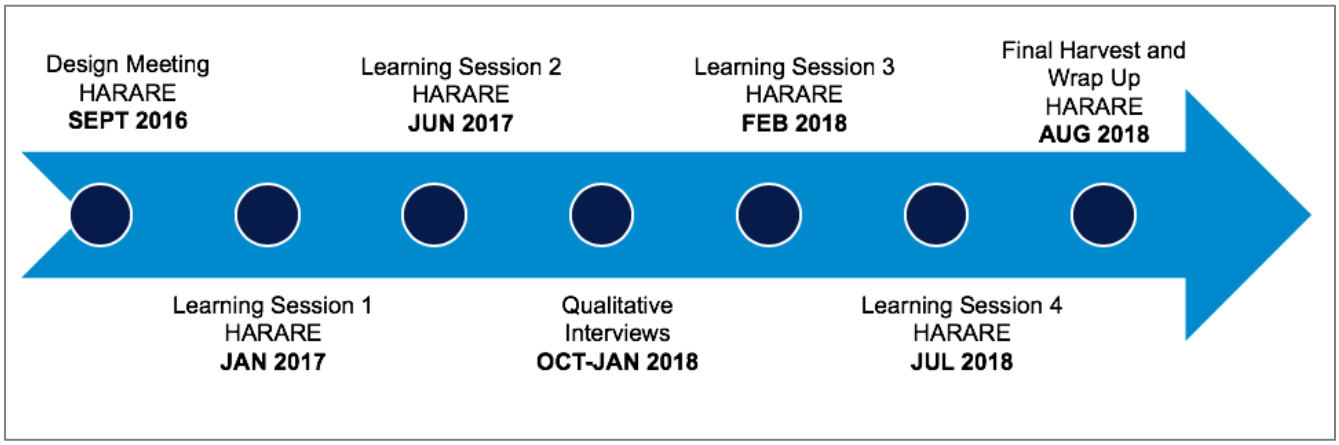


Figure 2. *HEALTHQUAL/ART4ALL QIC Structure*

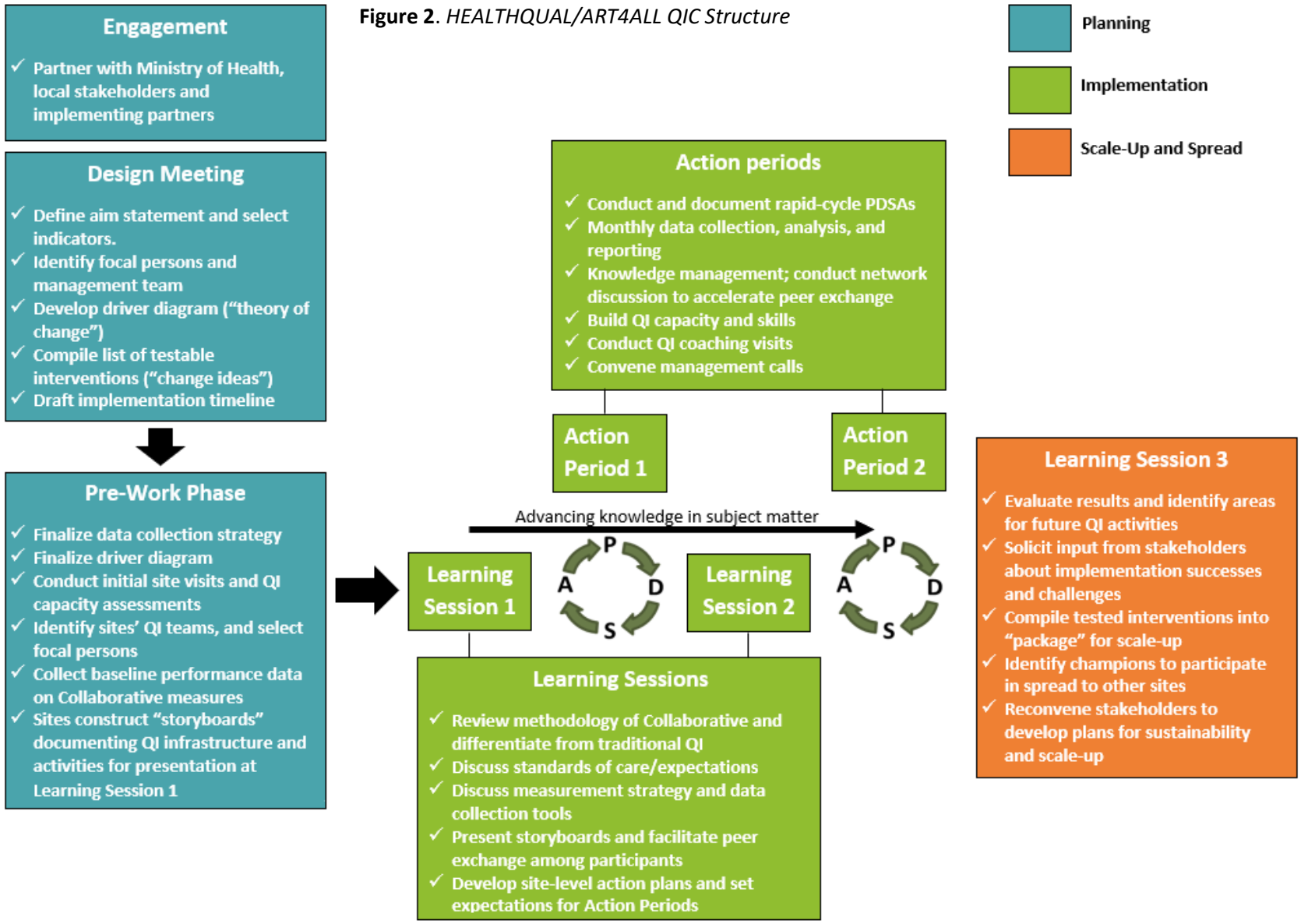
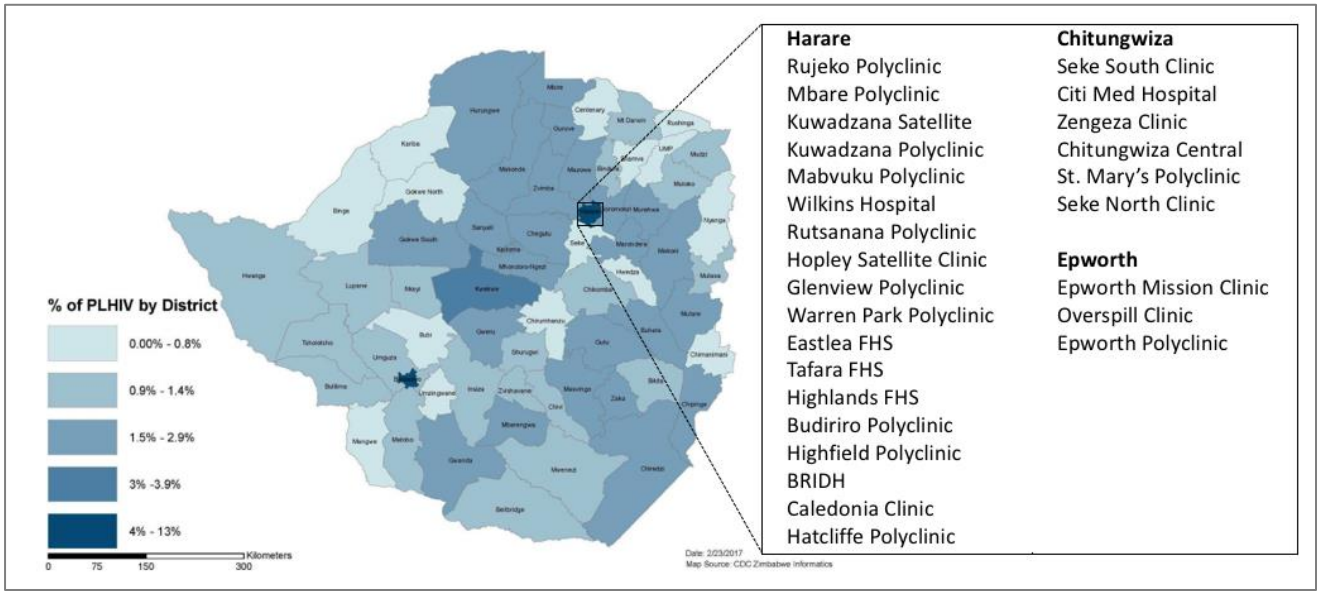


***Figure 3**. ART4All Collaborative participating sites and location*



Key activities

Design Meeting

The Design Meeting for the ART4All Collaborative was convened in Harare, Zimbabwe in September 2016 with the broad objective of planning for and operationalizing the Collaborative. Participants were drawn from the relevant departments in the Ministry of Health and Child Care, funding, technical and implementing partners and the local authorities for Harare, Chitungwiza and Epworth regions. Participants were introduced to quality improvement concepts, the structure of quality improvement collaboratives (QICs) and the proposed implementation approach. The key outputs of the Design Meeting (Appendix A) included the terms of reference for the Collaborative, driver diagram (Appendix H) and initial draft change package, final list of Collaborative indicators, list of participating sites and the tools required to support implementation.

***Table 1.** Performance indicators for the ART4All Collaborative*

1. Proportion of new-to-care HIV+ patients initiated on the same day of diagnosis[1].
2. Proportion of previously-in-care patients initiated on the same day brought back to care[1].
3. Missed appointments[2] (3 months) – Proportion of newly initiated ART patients (<=3months) who missed their scheduled monthly clinical visits.
4. Missed appointments[2] (6 months) – Proportion of newly initiated ART patients who missed their scheduled 6-month clinical visit.
5. Viral load monitoring[3] – Proportion of patients who received a viral load test 6 months post initiation.
6. Viral load results turn-around time – Proportion of patients who received a viral load test 6 months post initiation and received results within a month
7. Viral load suppression[3] – Proportion of patients who had a suppressed viral load (<1000 RNA copies/mL).

[1] Indicator is measured on a monthly basis.
[2] Visit schedule is based on MoHCC guidelines.
[3] Eligibility for viral load monitoring based on MoHCC guidelines.

Pre-work

The pre-work period included the initial engagement of the 27 participating sites. Site teams were oriented on the terms of reference and requested to sign letters of commitment to participate in the Collaborative. Baseline assessments were conducted, focusing on performance on the core indicators and site QI capacity. The sites were supported to establish QI committees, develop QI plans with site specific aim statements, and prepare for the first Learning Session.

Image 1. *National quality improvement team conducting baseline line assessment at Seke South Clinic*

Learning Sessions

A total of 4 Learning Sessions were conducted during the Collaborative. The Learning Sessions served as a platform for peer learning and exchange. Storyboards, PowerPoint presentations, panel discussions and team exercises provided technical and collaborative updates, facilitated the sharing of change ideas, emphasized key improvement concepts and illustrated implementation plans for subsequent Action Periods (see Appendix A). Content reflected examples of successful interventions and represented input from all stakeholders. Sites excelling in various components of the Collaborative, such as testing changes, peer learning, improvements in progress scores and storyboards presentations, were selected and recognised through certificates and trophies. Of note, PLHIV were invited to participate in the Learning Sessions and helped to realize site-level QI work by serving as expert patients supporting counselling, patient navigation tracking defaulters.

Panel discussions and participant-driven breakout sessions were used to explore specific themes, such as viral load monitoring and differentiated service delivery models. Panellists included managers from the relevant departments in the MOHCC, representatives of PLHIV, coaches and QI team members.

While the first learning sessions were facilitated by experts and focused largely on ART initiation, QI concepts, and measurement, subsequent Learning Sessions (2, 3 and 4) allowed facility teams to engage in peer exchange through storyboards and facilitated activities, as well as deliver presentations based on their work and advancing knowledge, focused on same day ART initiation, reduction of missed appointments and viral load monitoring, respectively. In response to data

challenges experienced during the first Action Period, breakaway sessions targeting data systems were conducted with the data and facility managers during LS2. Similarly, LS3 included a session facilitated by the lab team focusing on the different stages of viral load testing. Furthermore, separate sessions were held with the coaches during the 2nd and the 4th Learning Sessions to review progress and plan interventions to address specific gaps. Participation and engagement of key stakeholders, such as implementing partners, and departments such as M & E, lab and pharmacy services, improved as the Learning Sessions progressed (Appendices B, C, D).

Action Periods

Learning sessions were followed by Action Periods of 4-6 months in duration. During Action Periods, sites conducted rapid tests of change to improve site-level processes and systems. Key changes implemented to ensure early ART initiation, early retention in care and viral load uptake and suppression rates included: identifying and bringing back to care previously-in-care patients, compressing counselling sessions, streamlining the processes before ART initiation, integrating services, expanding access to services, engaging expert patients and staff to escort patients between service areas, leveraging prompts and reminders for care at the point of service and delivering services through differentiated care models. Data was collected, analysed and reported on a monthly basis to track progress on the Collaborative indicators. Peer learning and exchange was facilitated through a WhatsApp group in which all participating sites and coaches were represented. Sites were also supported by coaches through monthly site coaching visits and using SMS, voice calls or WhatsApp. Each Action Period culminated in the preparation for the following Learning Session.

Importantly, Action Periods represent sites' opportunity to introduce/test changes that required various levels of adaptation in processes to ensure successful adoption across varying clinic contexts. This element of Collaborative implementation represents integration of a critical workflow component to achieve success.

Image 2. *Tafara FHS team after recognition for consistent improvement in same day ART initiation*

RESULTS

The quantitative and qualitative results from the ART4ALL Collaborative are presented mainly as run charts and 'I' control charts along with a brief description of changes implemented over time. The following section includes 'I' control charts to display trends and shifts in performance over time. Individual monthly values are displayed against an average control line representing the mean performance of the first six months. The upper and lower limit values represent +/- 3 standard deviations from the mean. Same day initiation is measured for both previously-in-care and new to care patients.

***Table 2**. Definitions of client types*

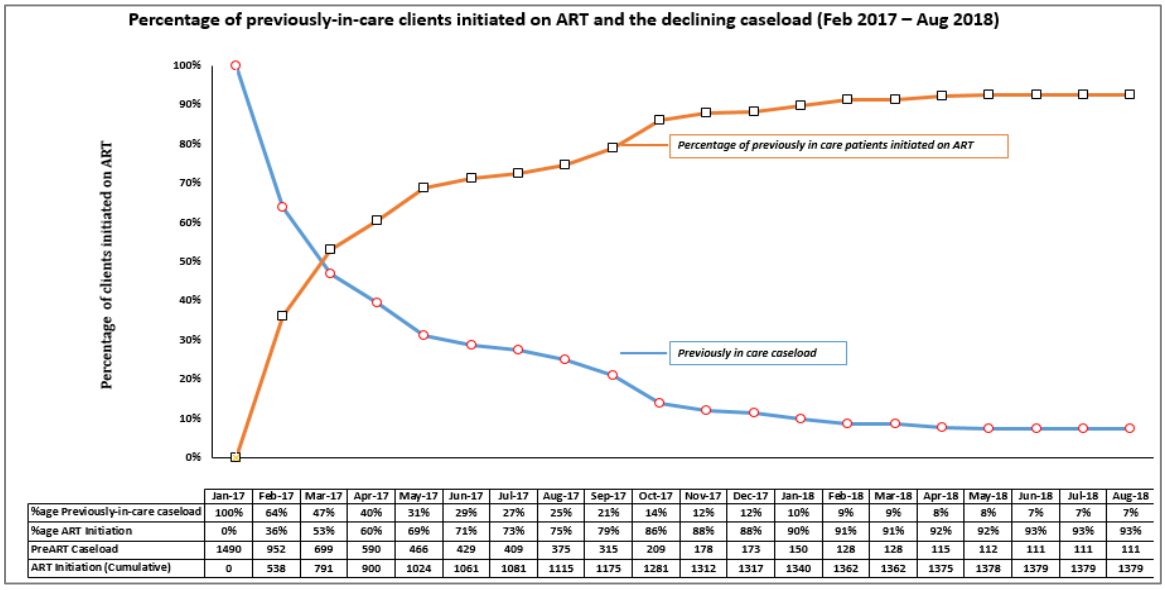
Client population	Same day initiation definition
Previously-in-care	Patients who were diagnosed to be HIV positive and were yet to be initiated on ART at the time of launching the ART4ALL Collaborative. Same day initiation refers to initiation of ART on the same day the client is brought back to care.
New to care	Patients who were newly diagnosed to be HIV positive at the participating sites after the launch of the Collaborative. Same day initiation refers to initiation on the same day that the client was diagnosed to be HIV positive.

Same day initiation for previously-in-care patients

During the first Action Period teams focused on bringing back ART-naïve, previously-in-care patients for ART initiation. This led to a rapid decline in the previously-in-care caseload and a related rapid increase in ART initiation. By the sixth month of implementation of the Collaborative, 74% of the identified previously in care clients had been successfully brought back and initiated on ART. A total of 23 of the 27 facilities had cleared their previously-in-care caseload by the end of March 2018.

Overall, 92% (1,379) of the previously-in-care patients were initiated on treatment with 89% (1,227) of those initiated having been initiated on the same day that they were brought back to care. This improvement may be attributed to site-level changes aimed at identifying and bringing back previously-in-care patients and processes to streamline preparation and initiation of ART.

***Figure 4**. Percentage of previously-in-care patients initiated on ART and the declining caseload*



	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
%age Previously-in-care caseload	100%	64%	47%	40%	31%	29%	27%	25%	21%	14%	12%	12%	10%	9%	9%	8%	8%	7%	7%	7%
%age ART Initiation	0%	36%	53%	60%	69%	71%	73%	75%	79%	86%	88%	88%	90%	91%	91%	92%	92%	93%	93%	93%
PreART Caseload	1490	952	699	590	466	429	409	375	315	209	178	173	150	128	128	115	112	111	111	111
ART Initiation (Cumulative)	0	538	791	900	1024	1061	1081	1115	1175	1281	1312	1317	1340	1362	1362	1375	1378	1379	1379	1379

Same day initiation for new to care patients

From February 2017 to August 2018, a total of 26,655 patients were new-to-care across the 27 Collaborative sites. The monthly aggregate proportion of new-to-care patients who were initiated on ART on the same day of diagnosis progressively increased from 54% in February 2017 to 77% in August 2018. Overall, 70% (18,775/ 26,655) of new-to-care patients were initiated on ART on the same day of diagnosis (Figure 6).

Although notable variation in same-day initiation rates for new-to-care patients was observed at baseline, the median rate increased from 52% in February 2017 (IQR 37%-76%) to 79% in August 2018 (IQR 67-96%) (Figure 5). The change noted in the IQR represents a narrowing of the variation in scores, complementing the improvement in mean scores.

Figure 5. *Proportion of new-to-care patients initiated on ART on the same day – February 2017, September 2017 and August 2018*

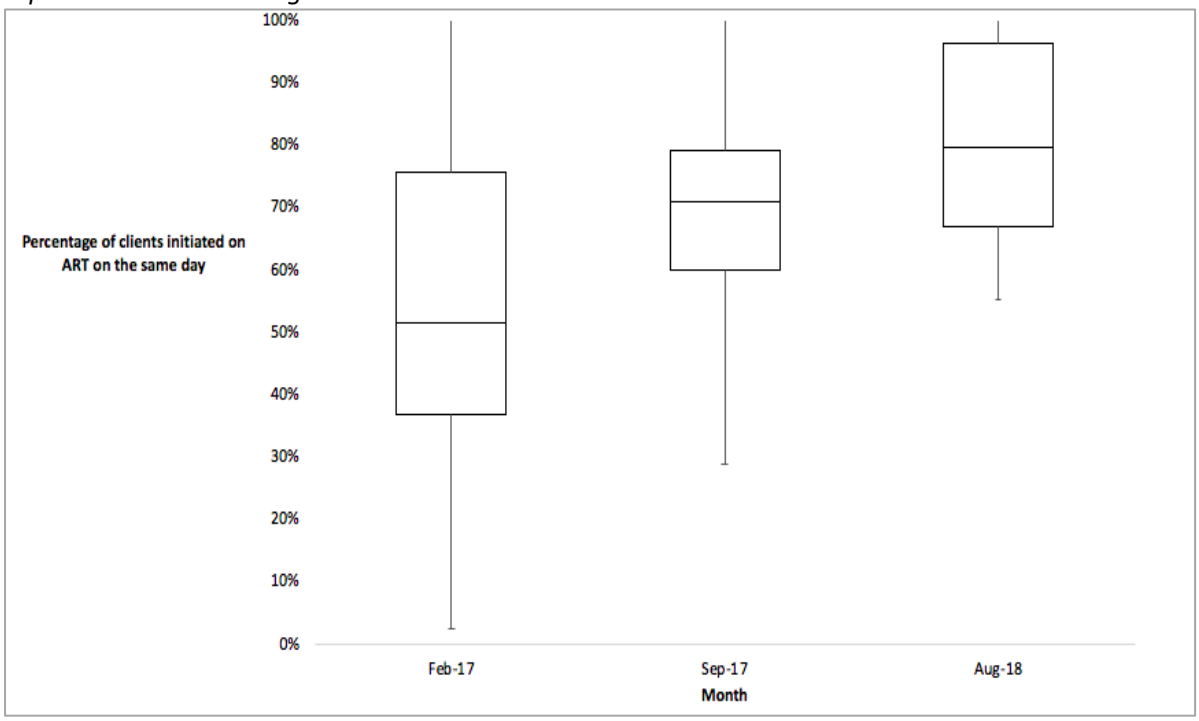


Figure 6. Aggregated rate for same day initiation of new-to-care patients

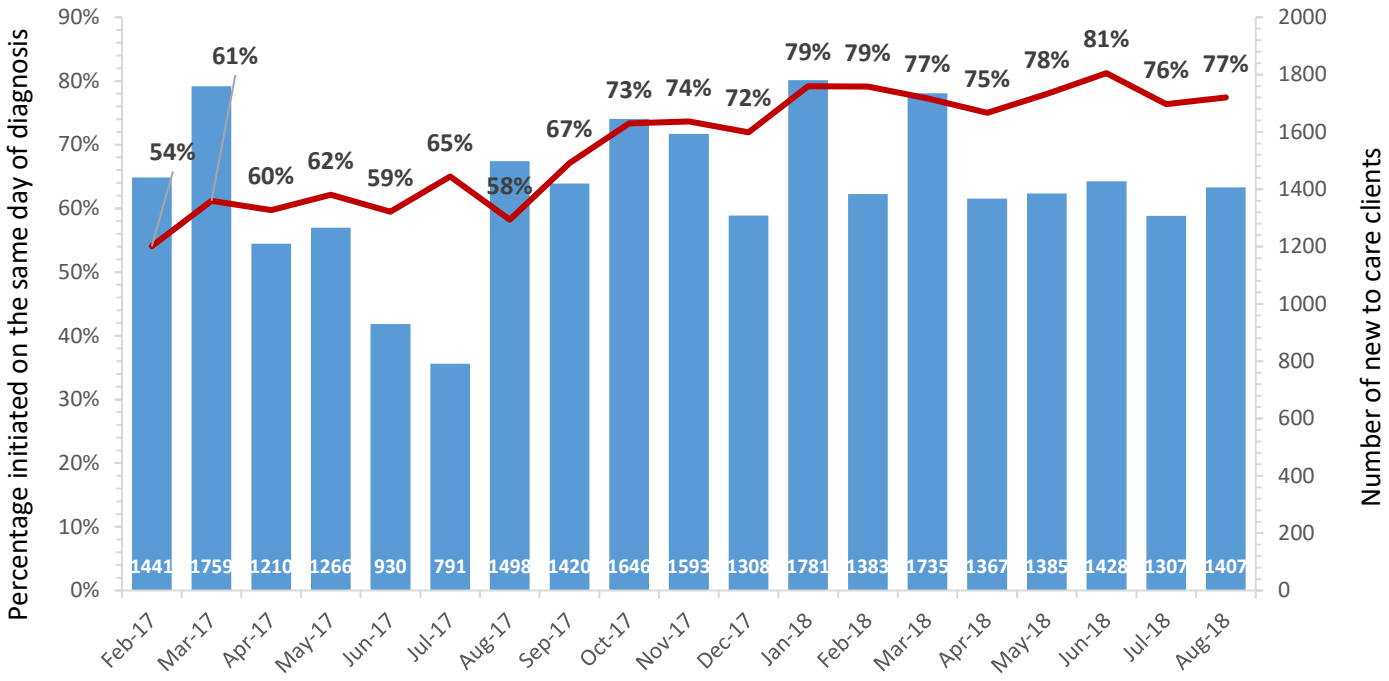
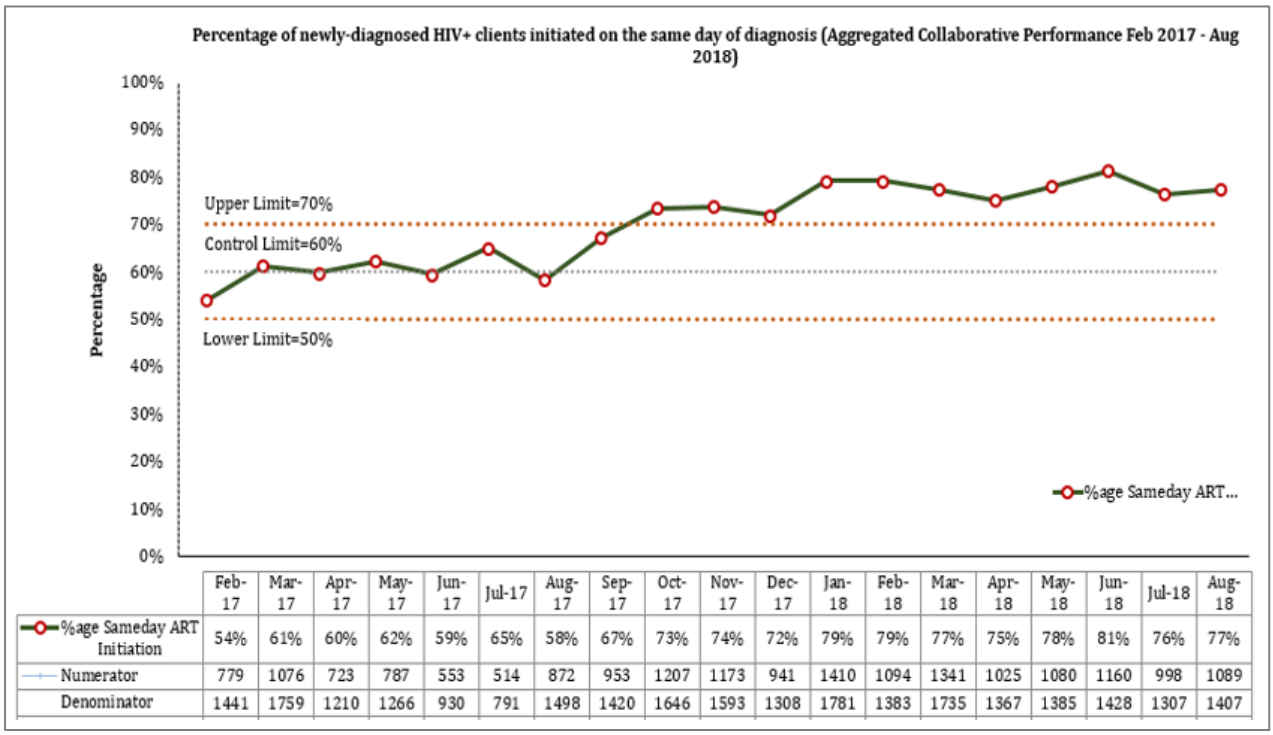


Figure 7 illustrates runs above the control limit beginning in September 2017 with steady improvement in performance for same day ART initiation among new to care clients through August 2018. The population includes **ALL** patients who were newly diagnosed to be HIV positive regardless of medical or social eligibility for same day initiation.

Figure 7. *Percentage of new to care HIV+ patients initiated on the same day of diagnosis*



	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
%age Sameday ART Initiation	54%	61%	60%	62%	59%	65%	58%	67%	73%	74%	72%	79%	79%	77%	75%	78%	81%	76%	77%
Numerator	779	1076	723	787	553	514	872	953	1207	1173	941	1410	1094	1341	1025	1080	1160	998	1089
Denominator	1441	1759	1210	1266	930	791	1498	1420	1646	1593	1308	1781	1383	1735	1367	1385	1428	1307	1407

A decline in performance was observed across all regions in August 2017. The biggest impact was seen in Epworth (Seke) region, which was attributed to providers not being ready to initiate patients on the same day of diagnosis as they were insisting on reviewing lab results for all patients before ART initiation, as guided by partners (Figure 10). To address this issue, QI coaches engaged the Ministry of Health and the Seke District Health Executive (DHE) in August 2017 to reaffirm the national policy of same-day initiation.

***Figure 8**. Same day initiation rate for new to care patients in Chitungwiza*

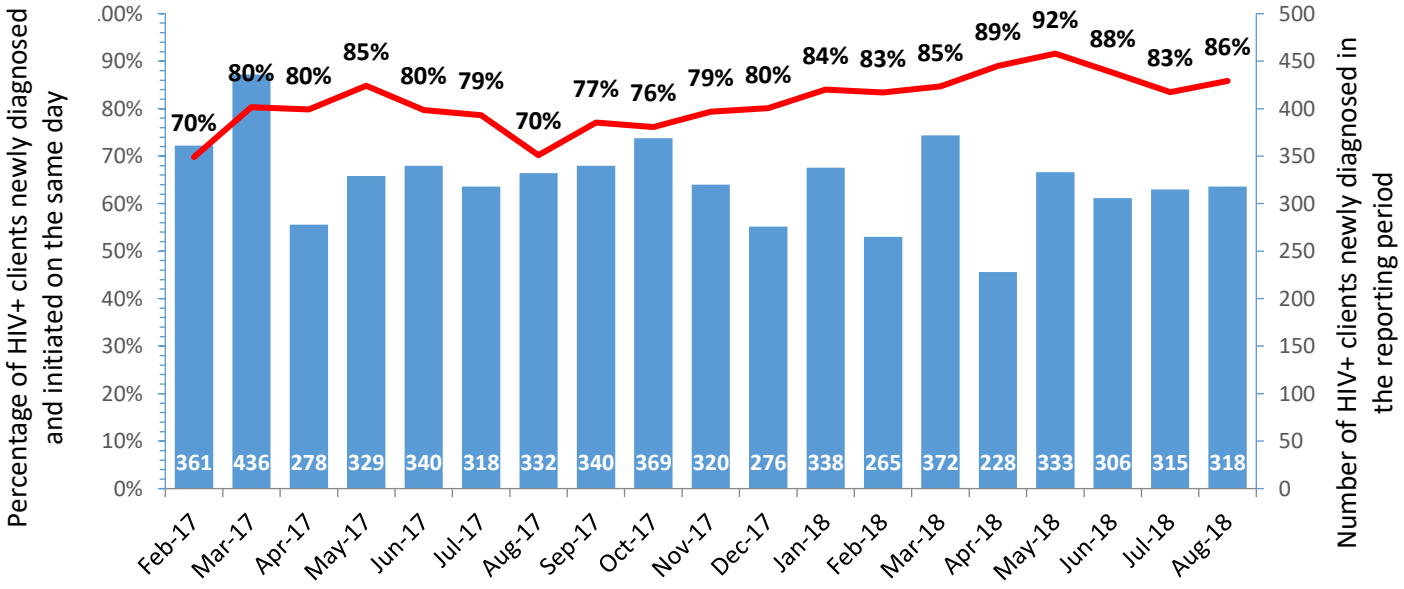


***Figure 9**. Same day initiation rate for new-to-care patients in Harare*

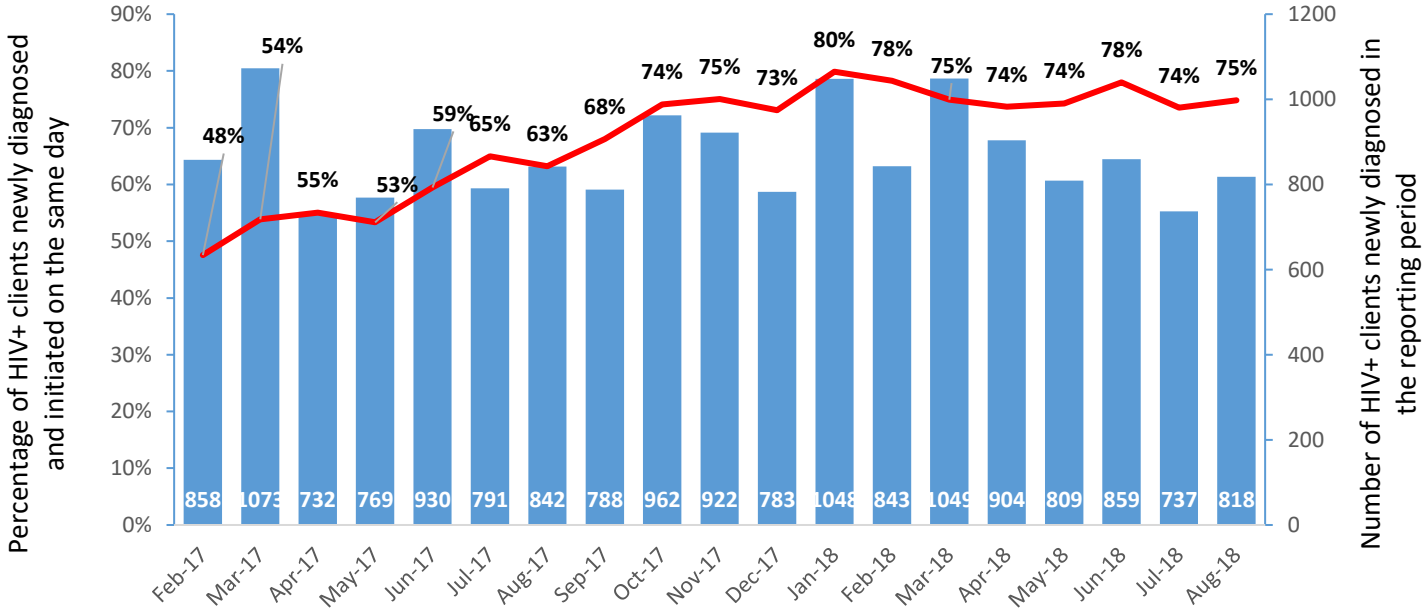
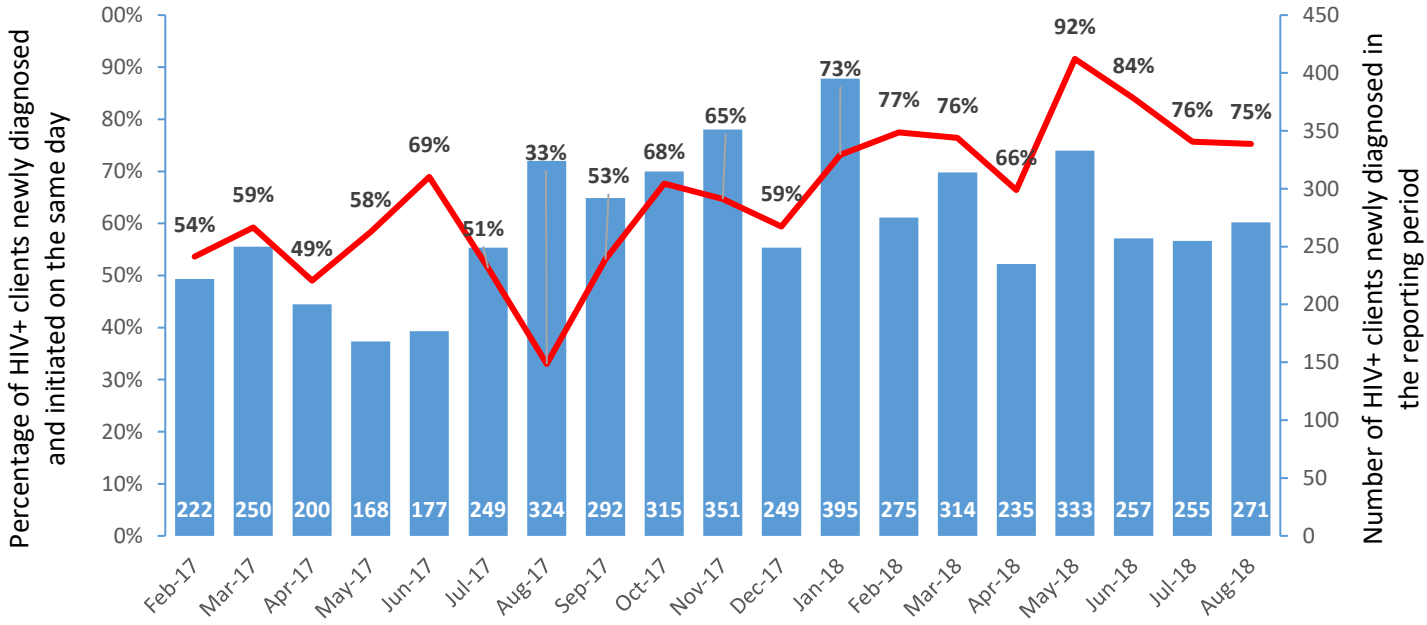
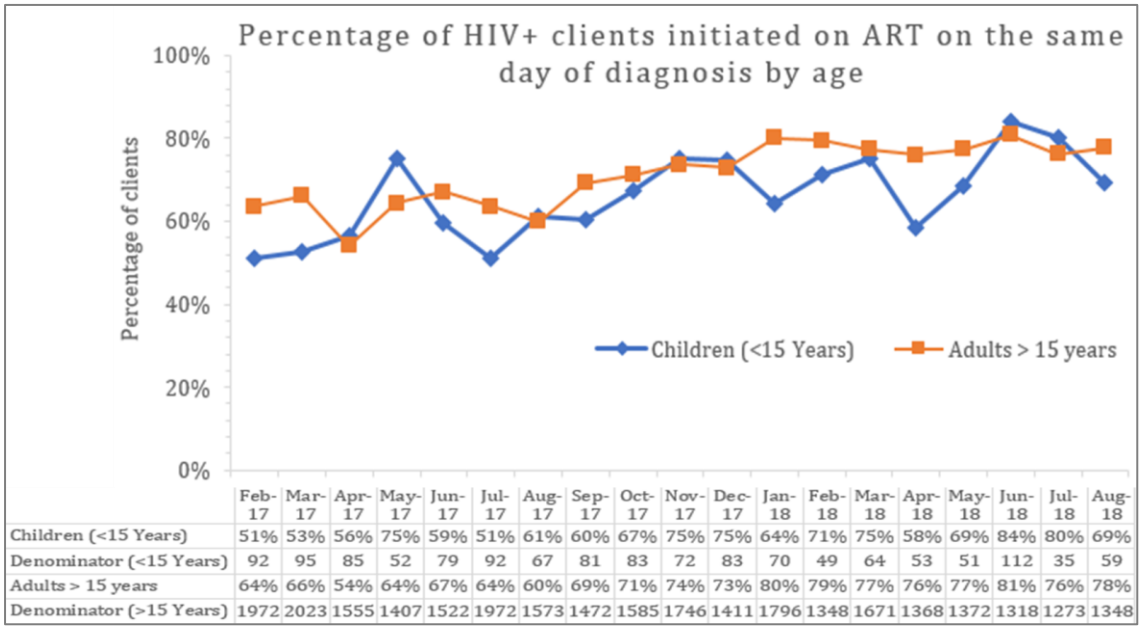


***Figure 10**. Same day initiation rate for new-to-care patients in Epworth*



Age disaggregation. Among new to care patients, 96% (n=25,588) were adults above 15 years of age. Between At baseline in February 2017 the same day ART initiation rate for adults was 64% and ended at 78% in August 2018 with values ranging from 64% to 81% (June 2018) during the Collaborative. Same day initiation for children was 51% at baseline in February 2017 and ended at 69% in August 2018 with values ranging from 51% to 84% (June 2018) during the Collaborative 2018 (Figure 11).

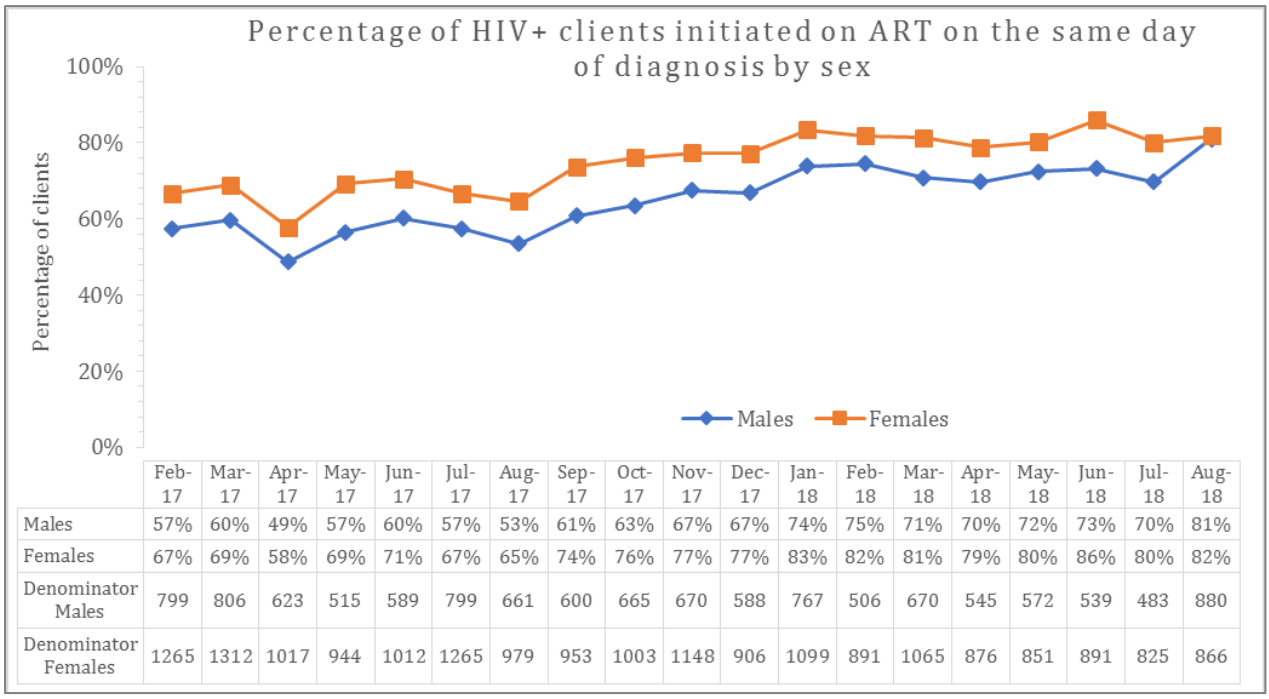
***Figure 11**. Same day initiation rate for new to care patients by age*



	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Children (<15 Years)	51%	53%	56%	75%	59%	51%	61%	60%	67%	75%	75%	64%	71%	75%	58%	69%	84%	80%	69%
Denominator (<15 Years)	92	95	85	52	79	92	67	81	83	72	83	70	49	64	53	51	112	35	59
Adults > 15 years	64%	66%	54%	64%	67%	64%	60%	69%	71%	74%	73%	80%	79%	77%	76%	77%	81%	76%	78%
Denominator (>15 Years)	1972	2023	1555	1407	1522	1972	1573	1472	1585	1746	1411	1796	1348	1671	1368	1372	1318	1273	1348

Sex Disaggregation. Of the new-to-care patients, 61% (19,168) were women, and proportionately more women were initiated on treatment on the same day than men. Further analysis beyond the scope of this initiative is needed to assess the extent to which Option B+ contributes to this observation (Figure 12).

Figure 12. *Same day initiation rate for new-to-care patients by sex*



	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Males	57%	60%	49%	57%	60%	57%	53%	61%	63%	67%	67%	74%	75%	71%	70%	72%	73%	70%	81%
Females	67%	69%	58%	69%	71%	67%	65%	74%	76%	77%	77%	83%	82%	81%	79%	80%	86%	80%	82%
Denominator Males	799	806	623	515	589	799	661	600	665	670	588	767	506	670	545	572	539	483	880
Denominator Females	1265	1312	1017	944	1012	1265	979	953	1003	1148	906	1099	891	1065	876	851	891	825	866

The number of patients on ART at the Collaborative sites as of December 2017 and site-level run charts are shown below (Figures 13-16). *High volume sites are defined as sites with more than 5000 patients on ART, medium volume sites have 1000-4999 patients on ART and low volume sites have less than 1000 patients on ART.

***Figure 13**. Disaggregation of facilities by volume of patients*

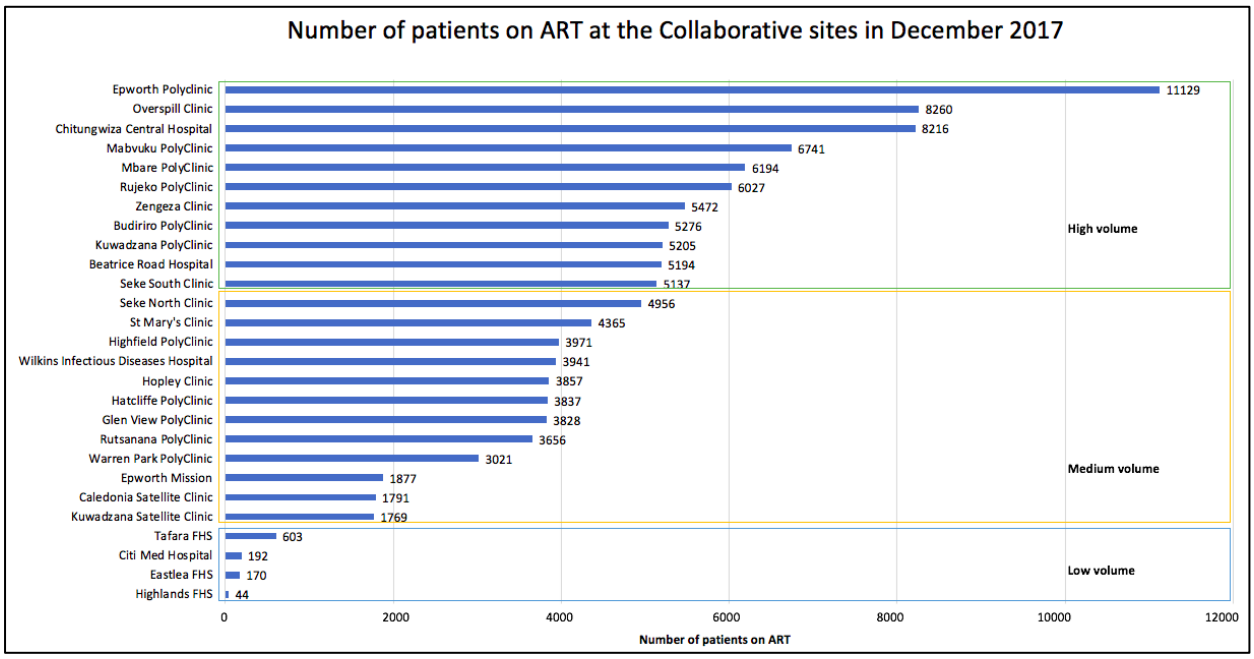
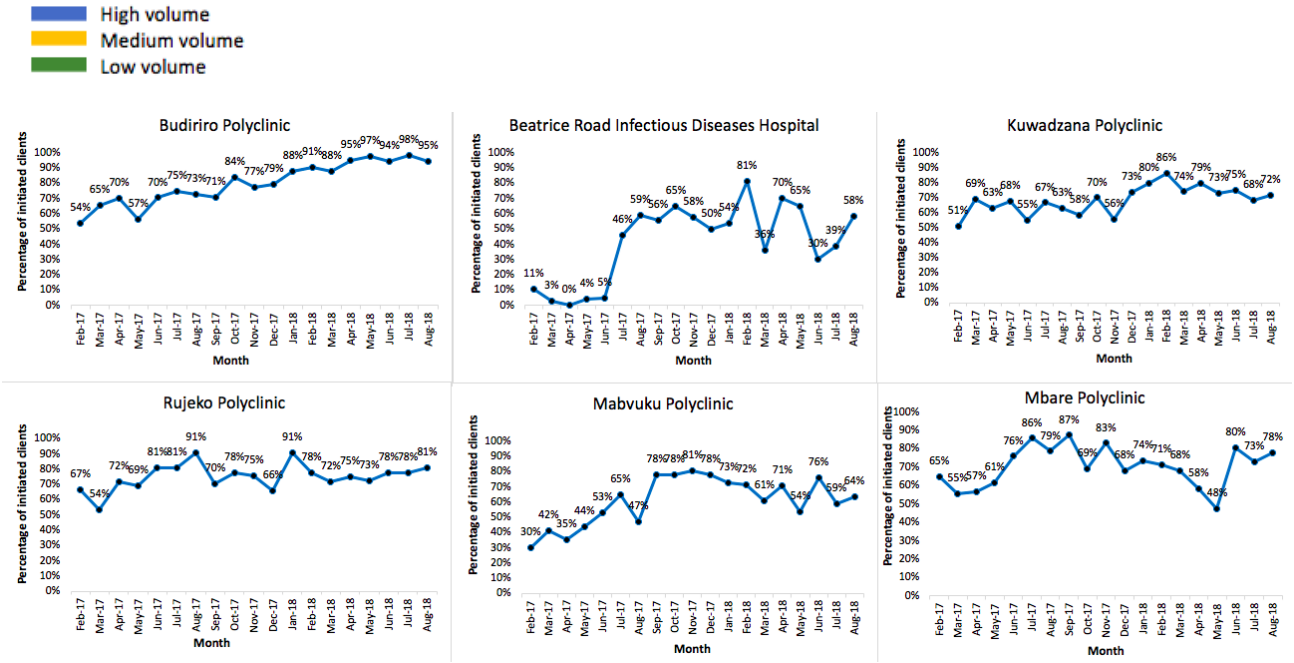
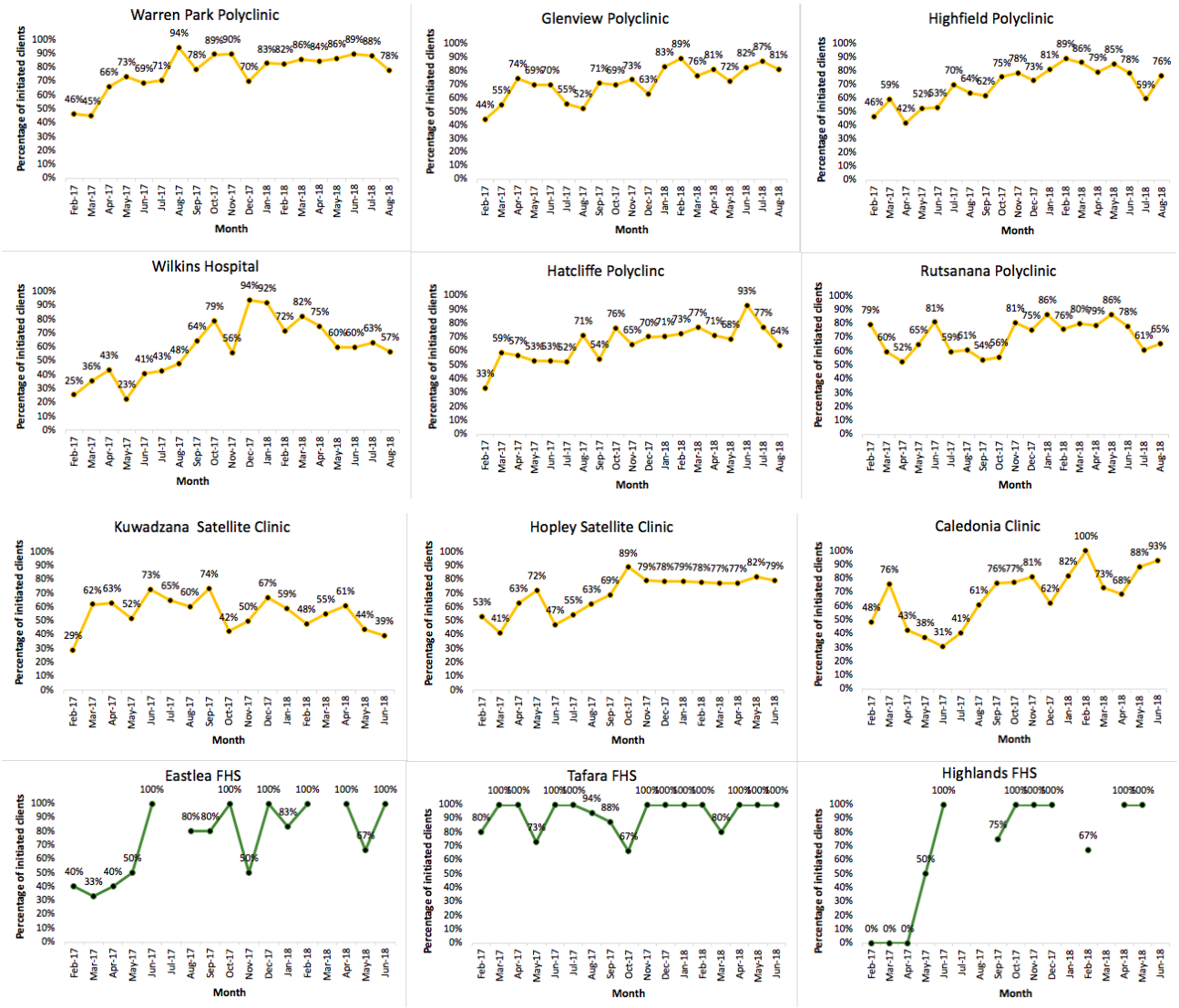


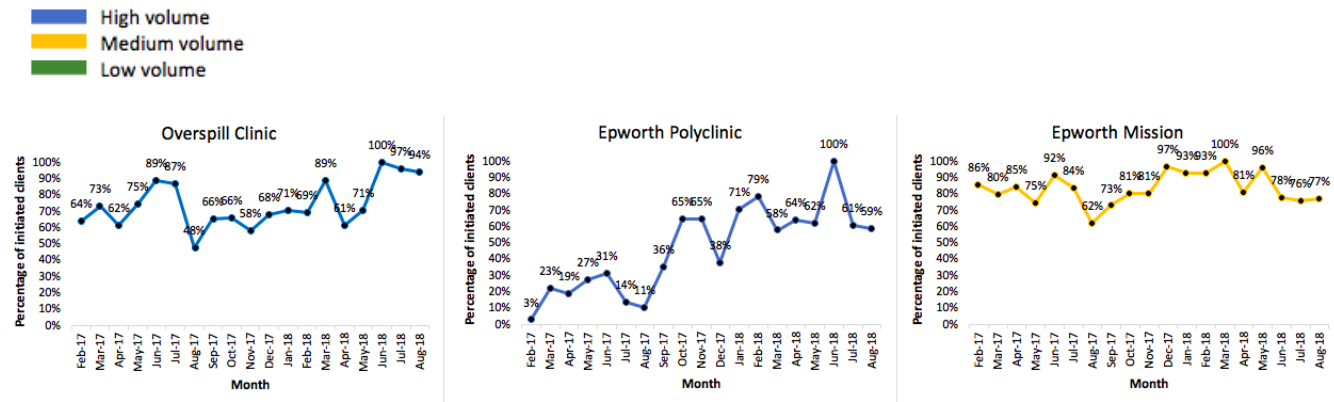
Figure 14. *Same day initiation rate for new-to-care patients by site - February 2017 - August 2018, Harare*





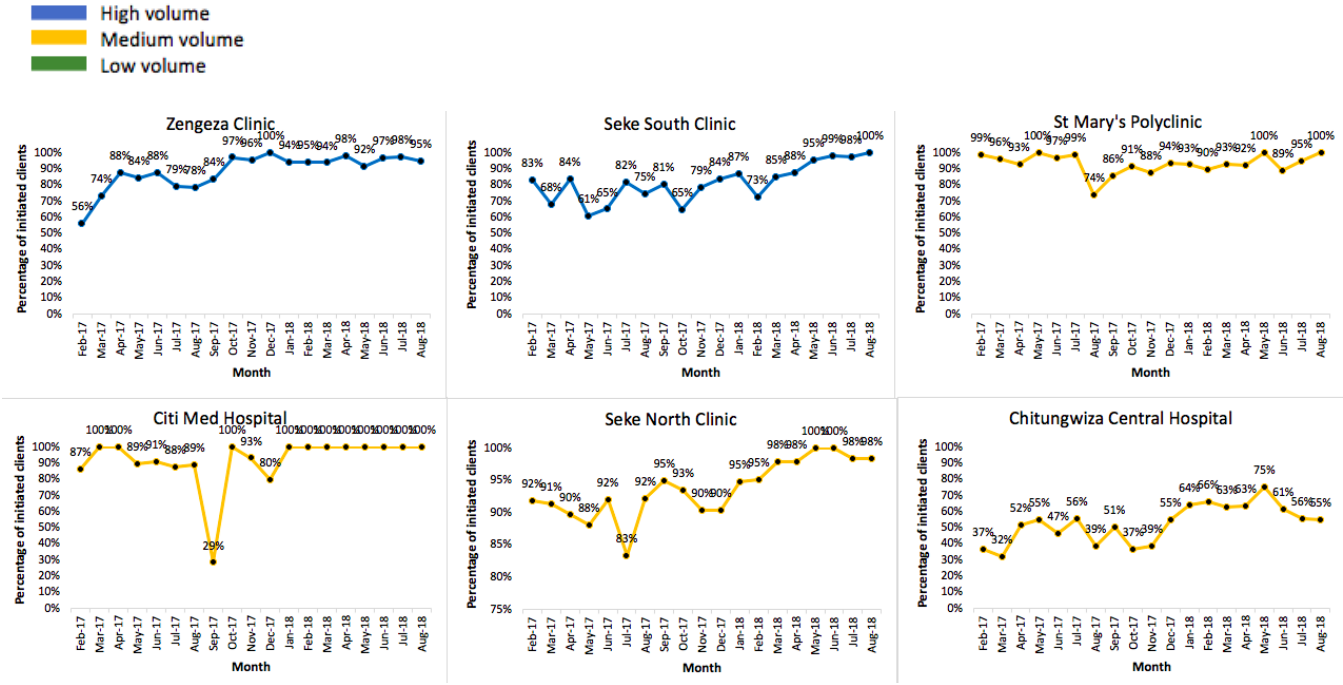
*(>5000 patients on ART); (1000-4999 patients on ART); (<1000 patients on ART)

Figure 15. *Same-day initiation for new-to-care patients by site and facility size - February 2017 - August 2018, Epworth*



*(>5000 patients on ART); (1000-4999 patients on ART); (<1000 patients on ART)

Figure 16. *Same day initiation for new-to-care patients by site and facility size - February 2017 - August 2018, Chitungwiza*

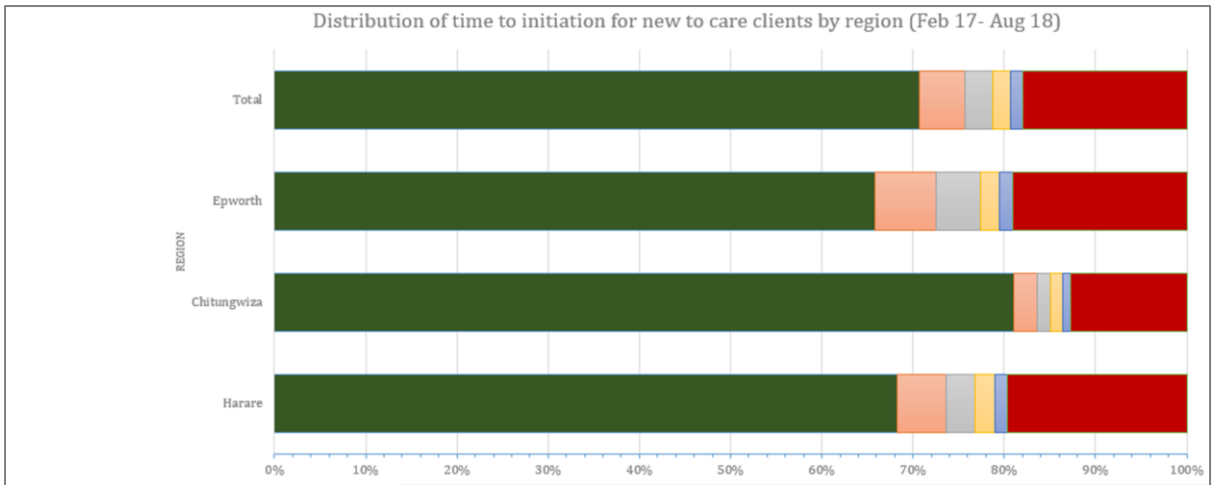


*(>5000 patients on ART); (1000-4999 patients on ART); (<1000 patients on ART)

Time to initiation for new to care patients

Overall, 82% of all new to care patients identified between February 2017 and August 2018 were initiated on ART within the calendar month of diagnosis. The majority of patients (71%) were initiated on ART on the same day of diagnosis, while 79% were initiated within a week of diagnosis. Chitungwiza performed better than Harare and Epworth on same day initiation.

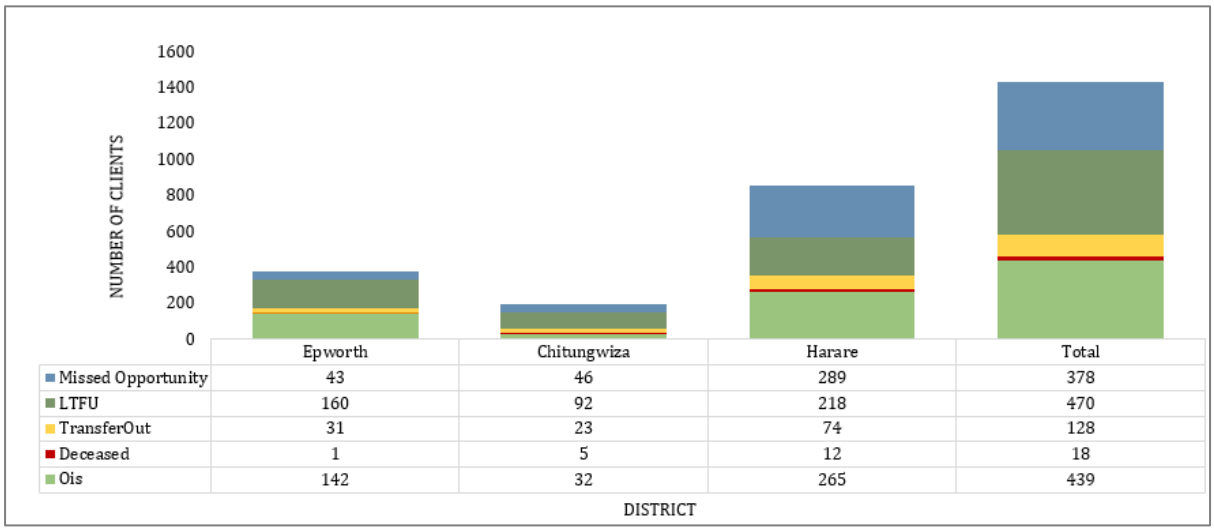
Figure 17*. Time to initiation for new to care patients by region*



	Harare	Chitungwiza	Epworth	Total
Percentage of clients initaited on ART on the same day of being diagnosed of HIV	68%	81%	66%	71%
Percentage of clients initaited on ART within 1-3 days of being diagnosed of HIV	5%	3%	7%	5%
Percentage of clients initaited on ART within 4-7 days of being diagnosed of HIV	3%	1%	5%	3%
Percentage of clients initaited on ART within 8 -15 days of being diagnosed of HIV	2%	1%	2%	2%
Percentage of clients initaited on ART within 16 - 30 days of being diagnosed of HIV	1%	1%	1%	1%
Percentage of clients still to be put on ART treatment after being diagnosed of HIV	20%	13%	19%	18%

The proportion of new to care patients who were not initiated on ART within the calendar month of diagnosis ranged from 13% to 20% across the 3 regions. Loss to follow up, investigation and management of opportunistic infections, missed opportunities, transfer out and deaths accounted for 33%, 31%, 26%, 9% and 1%, respectively, of the patients that were not initiated on ART within the calendar month of diagnosis. Tuberculosis was most common opportunistic infection investigated and managed before ART initiation. According to the national guidelines, all PLHIV should be screened for TB and all TB presumptive cases should be investigated before ART initiation. Missed opportunities included patients who were not psychologically ready for ART and those who wanted to consult or disclose to a partner before initiation.

***Figure 18**. Reasons for not initiating patients on ART within the calendar month by region*

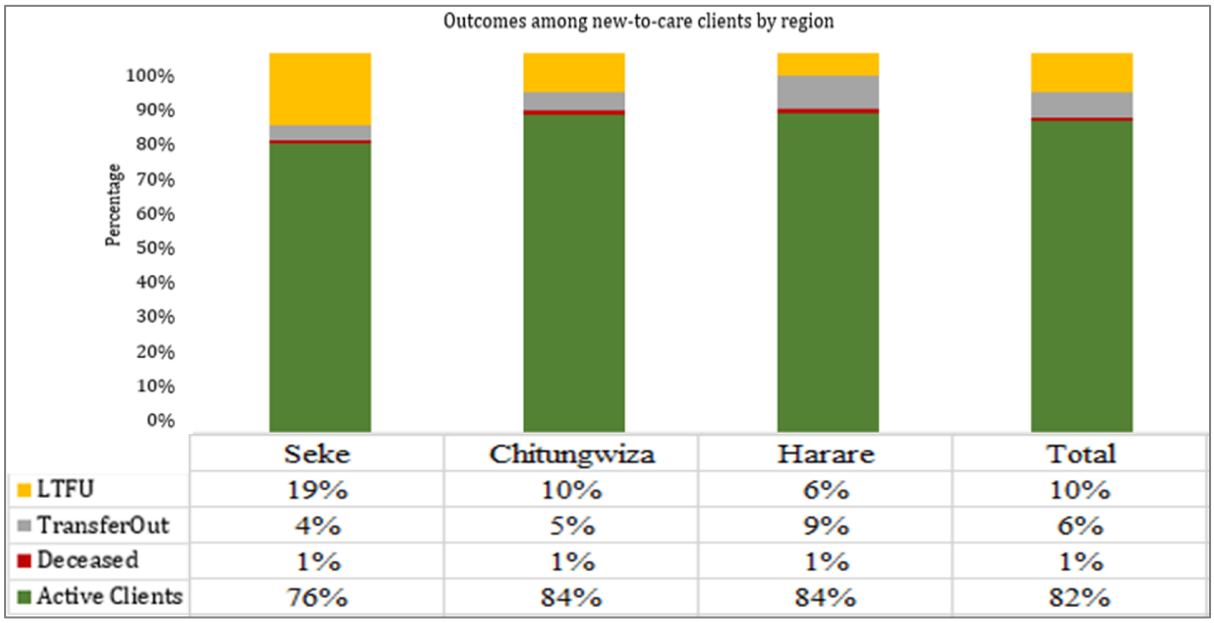


	Epworth	Chitungwiza	Harare	Total
Missed Opportunity	43	46	289	378
LTFU	160	92	218	470
TransferOut	31	23	74	128
Deceased	1	5	12	18
Ois	142	32	265	439

Outcomes among new to care patients

The majority (82%) of new-to-care patients who were initiated on ART during the Collaborative were still active in care at the same site by the end of August 2018. Loss to follow up, transfer out and death accounted for the 10%, 6% and 1%, respectively, that were disengaged from care at the same facilities.

***Figure 19**. Outcomes among new to care patients by region*



	Seke	Chitungwiza	Harare	Total
LTFU	19%	10%	6%	10%
TransferOut	4%	5%	9%	6%
Deceased	1%	1%	1%	1%
Active Clients	76%	84%	84%	82%

Table 3. Process Changes to Improve Early ART Initiation

Intervention	Change Ideas
1. Identifying patients previously in care on ART	Staff training on phone communication; compiling list and tracking system; SMS messaging to patients; calling patients (nurses/counselors); using community health workers
2. Compressed counseling sessions	Consulting patients on messaging; reducing duration of counselling sessions; reducing number of sessions; job aids; static communication points; redesign of post-initiation counseling; shift from group to individualized counseling to improve timeliness; ART readiness assessment; multiple access points; dedicated counseling staff
3. Streamlining the processes before ART initiation	Elimination of other steps such as physical address verification, treatment buddies and disclosure before ART initiation
4. Service integration	Co-location of counselor and initiator; use of adjacent rooms; combining staff functions/ task shifting including dispensing; moving register with patient

5. Navigation to next level of care	Physical escort with staff or expert patients; 'jumping' the queue to reduce waiting time; stationing of full-time nurse-initiator; de-labeling files to reduce stigma
6. Expanded access	Additional days for counseling and initiation; extended operating hours; removal of restrictions on the number of viral load samples collected per day; elimination of user fees for registration and facilitation of transportation of patients to the facility

For a detailed description of the changes, refer to the Change Package.

System challenges

A number of system and policy issues were identified that affected the results of the Collaborative, some of which were not modifiable through methods of quality improvement at the facility-level. System level issues impacting same day initiation that were not addressed at facility level were elevated to the District Health Executive and the relevant departments in the Ministry of Health.

Table 4. System Challenges and Interventions to Improve Early ART Initiation

System Challenge	Intervention
1. Slower overall adoption of the 2016 Treat All guidelines	1. Training and mentorship of site teams to facilitate adoption and implementation of recommendations in the new national guidelines and the service delivery manual.
2. Knowledge gaps in ART provision due to frequent staff rotation out of HIV departments	1. On job training and mentoring by QI coaches 2. Redesigning client flow and task-sharing across different cadres. 3. Reducing frequency of rotation and proportion of staff rotated at a time
3. Resistance and lack of readiness of service providers to change practices to initiate patients on the same day of diagnosis. Many providers continued practices outlined in the previous guidelines, such as insisting on lab investigations, multiple counselling sessions and verification of contact details	1. Orientation of the facility teams/service providers on the new guidelines, including the rationale and evidence supporting the new guidelines through coaches and implementing partners 2. Engaging the district and facility leaders such as DMO, DNO and matrons and supporting them to conduct support and supervision visits 3. Providing regular feedback on performance 4. Creating platforms for peer learning and exchange such as Learning Sessions and WhatsApp groups
4. Delays in printing and disseminating the new guidelines	1. Using Learning Sessions to orient teams on the new guidelines and OSDM 2. Coaches distributing the guidelines and the OSDM and discussing key issues during coaching visits 3. Engaging implementing partners to facilitate dissemination

5. Competing Crypto-ART research study delaying time to initiation to participate in the study	1. Engaging facility teams and orienting them on the new guidelines
6. Limited stocks of first-line antiretroviral drugs (ARVs) in Harare preventing dispensation of 1-month supplies	1. Discussing stock management during Learning Sessions and WhatsApp groups 2. Engaging the pharmacy department and following up on reported stock outs 3. Engaging the pharmacy managers to provide supportive visits and address supply chain management issues at facility level, including quantification of needs

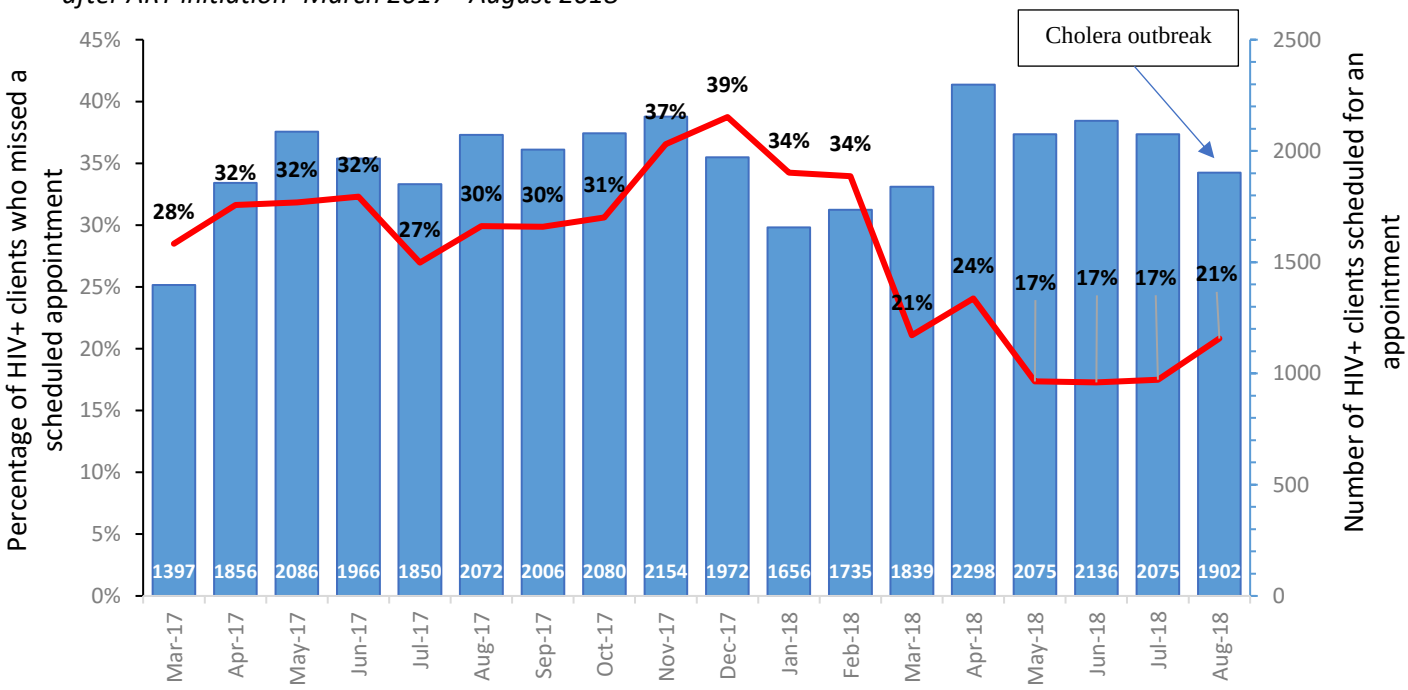
Missed appointments (3 months) for newly initiated patients

The goal of ART4ALL was to have no patients miss their scheduled appointments, allowing for a grace period of 3 days. The National ART Guidelines and the Operational and Service Delivery Manual provide guidance on how patients should be followed up after ART initiation in the context of "Treat All" recommending follow-up visits at 2 weeks and 4 weeks after initiation and then monthly for 2 months and every 3 months thereafter. The Collaborative tracked appointments scheduled within the first 3 months of ART initiation and at 6-months post ART initiation.

The percentage of patients who missed any scheduled appointments decreased by 8%, from a baseline of 29% in March 2017 to 21% in August 2018 (range 17-39%) (Figure 20). The percentage of adults who missed scheduled appointments declined by 10% from 29% in March 2017 to 19% in August 2018 (Figure 24).

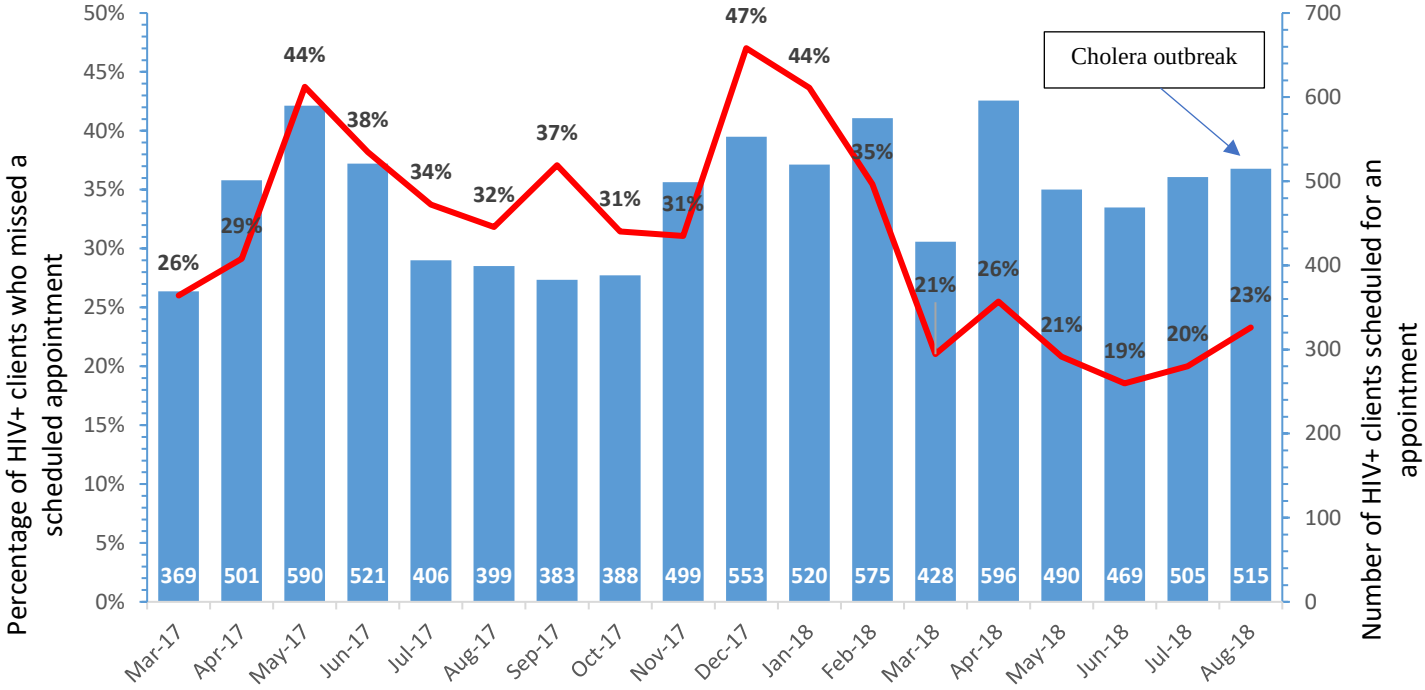
***The increase in missed appointments between July and August 2018 is attributed to a <u>cholera outbreak and immunization campaign</u> that required frontline providers, including nurses and data entry clerks, to work in the field, resulting in staffing shortages in ART programs and documentation issues with fast-track visits.**

Figure 20. *Aggregated proportion of patients who missed appointments within the first three months after ART initiation -March 2017 - August 2018*



In November 2017, following implementation of a national policy, data managers were reduced across the country, resulting in the loss of many data entry clerks (DECs) from Collaborative sites. This deficiency created a backlog of data entry into the electronic Patient Management System (ePMS), which was used by sites to schedule and document appointments and is also the data source for the missed appointment indicator. The interruption of routine data entry is reflected in performance data from November and December 2017. In response to this challenge, the Collaborative data manager led an intervention in January 2018 to address data quality issues resulting from this policy decision. A team of data managers manually reconciled different data sources (electronic patient medical records and patient booklets) at all of the Collaborative sites to preserve data quality for the initiative.

Figure 21. *Proportion of newly initiated patients who missed a scheduled appointment within the first 3 months after ART initiation - March 2017 - August 2018 -Chitungwiza*



Harare had the highest number of patients initiated on ART with scheduled appointments. The proportion of patients who missed scheduled appointments in Harare decreased by 15% from a baseline of 33% in March 2017 to 18% in August 2018, and is notable given the high regional burden.

Figure 22. *Proportion of newly initiated patients who missed a scheduled appointment within the first 3 months after ART initiation - March 2017 - August 2018, Harare*

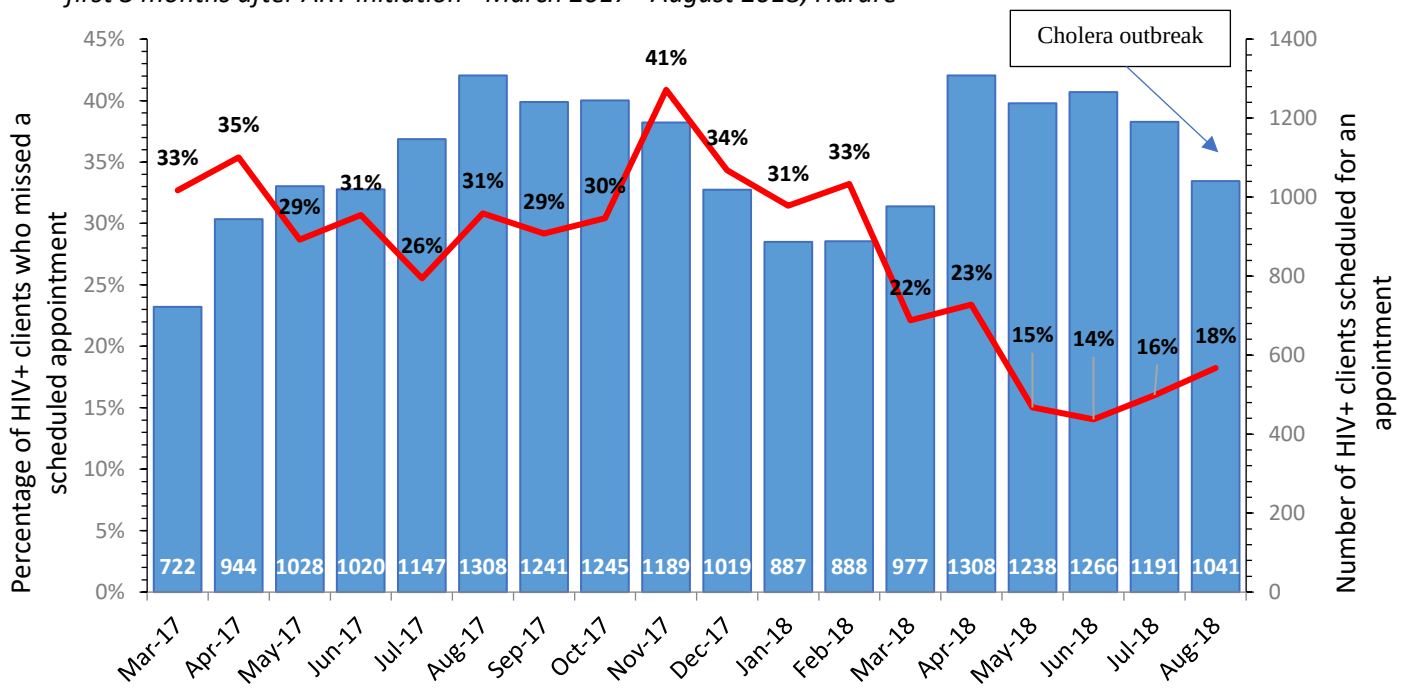
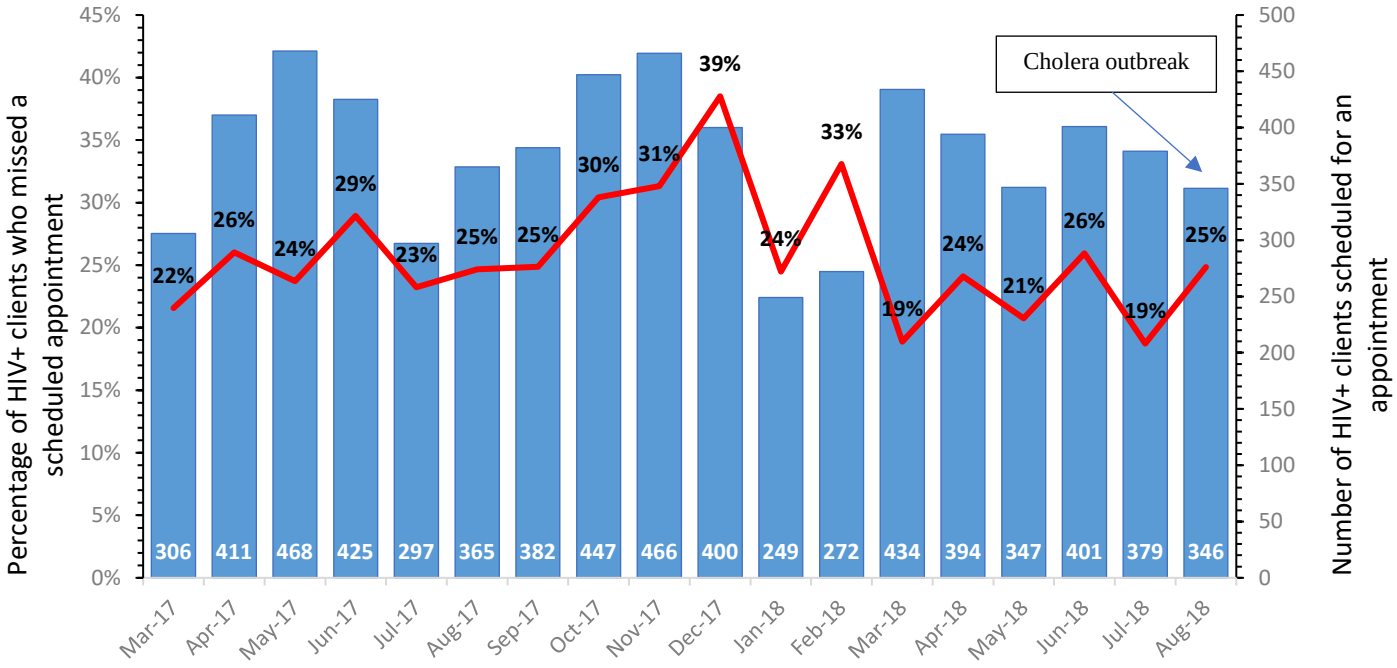
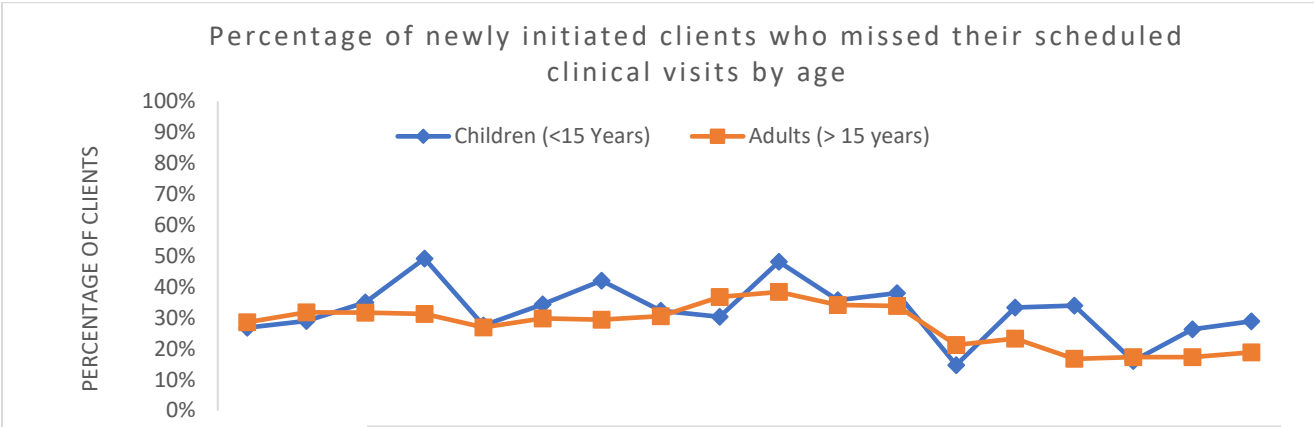


***Figure 23**. Proportion of newly initiated patients who missed a scheduled appointment within the first 3 months after ART initiation - March 2017 - August 2018, Epworth (Seke)*



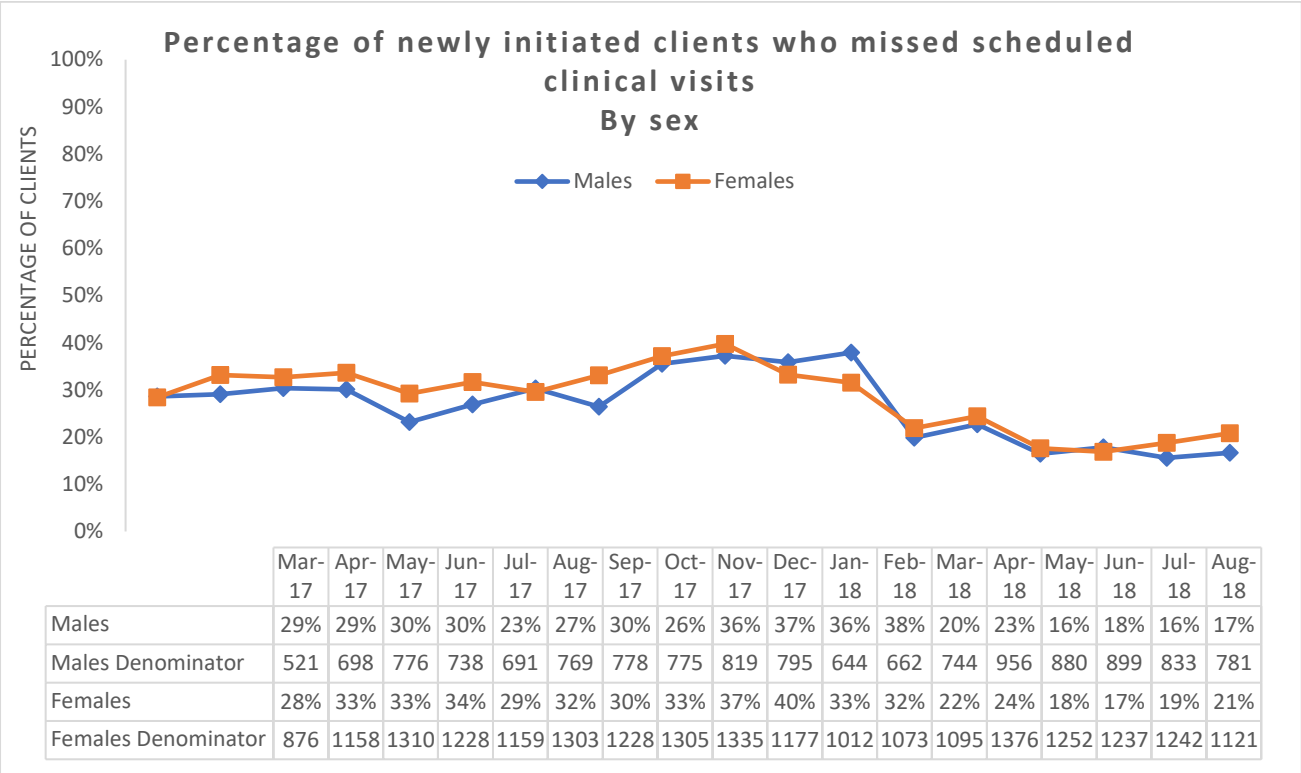
Generally, more children (<15 years) missed scheduled appointments in the first 3 months of treatment compared to adults (>15 years). Collaborative sites addressed this gap by expanding access to services through the introduction of special days (weekends and holidays) for children and adolescents in school. The trends in the reduction of missed appointments for males and females were comparable, especially from November 2017 to December 2018.

***Figure 24.** Percentage of newly initiated patients who missed a scheduled appointment by Age*



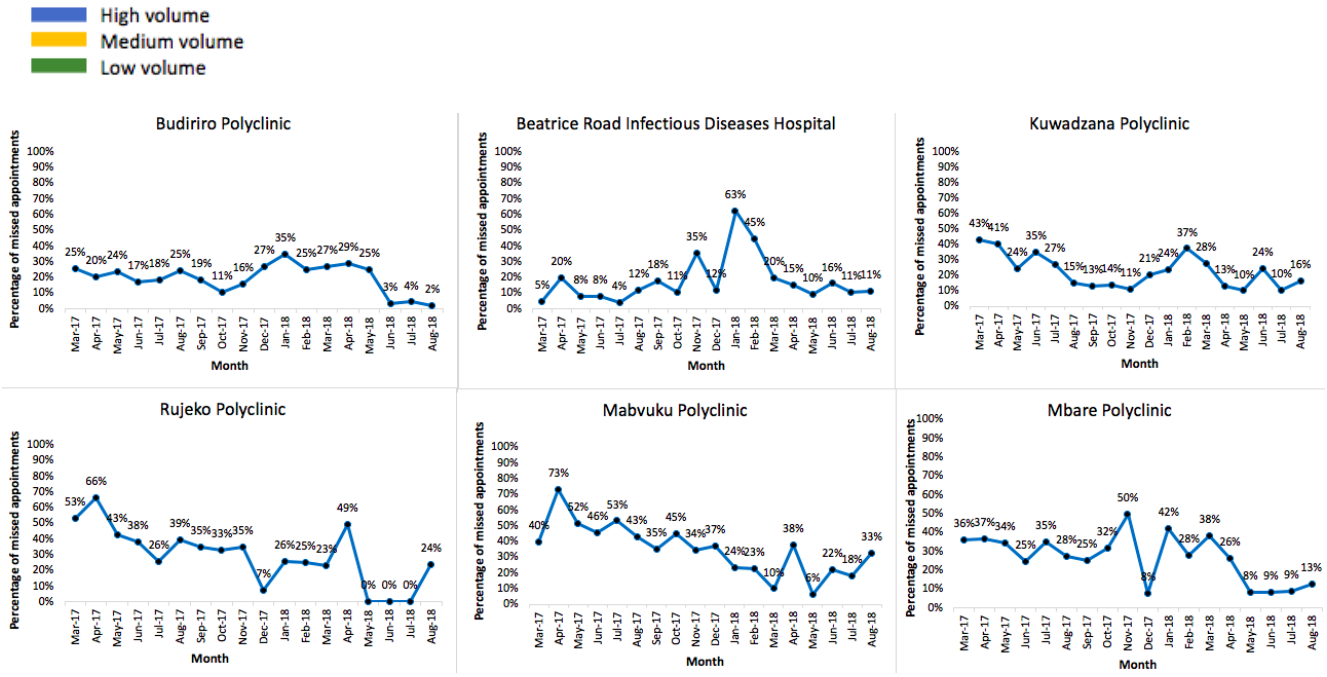
	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Children (<15 Years)	27%	29%	35%	49%	28%	34%	42%	32%	30%	48%	36%	38%	15%	33%	34%	16%	26%	29%
Children Denominator	41	76	100	120	69	67	69	62	66	79	56	58	34	90	56	50	57	52
Adults (> 15 years)	29%	32%	32%	31%	27%	30%	29%	31%	37%	38%	34%	34%	21%	23%	17%	17%	17%	19%
Adults Denominator	1356	1780	1986	1846	1781	2005	1937	2018	2088	1893	1600	1677	1805	2242	2076	2086	2018	1850

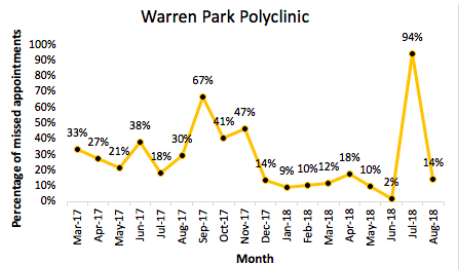
Figure 25. *Percentage of newly initiated patients who missed a scheduled appointment by Sex*

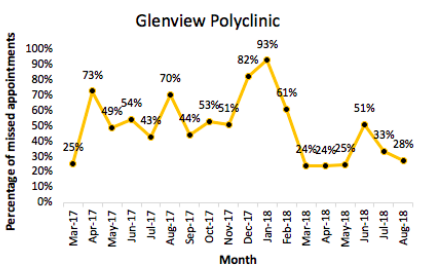


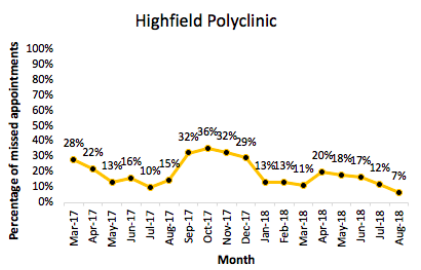
	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Males	29%	29%	30%	30%	23%	27%	30%	26%	36%	37%	36%	38%	20%	23%	16%	18%	16%	17%
Males Denominator	521	698	776	738	691	769	778	775	819	795	644	662	744	956	880	899	833	781
Females	28%	33%	33%	34%	29%	32%	30%	33%	37%	40%	33%	32%	22%	24%	18%	17%	19%	21%
Females Denominator	876	1158	1310	1228	1159	1303	1228	1305	1335	1177	1012	1073	1095	1376	1252	1237	1242	1121

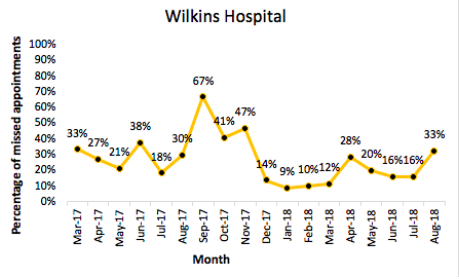
Figure 26. *Missed appointments within the first 3 months after ART initiation by site - March 2017 - August 2018, Harare*

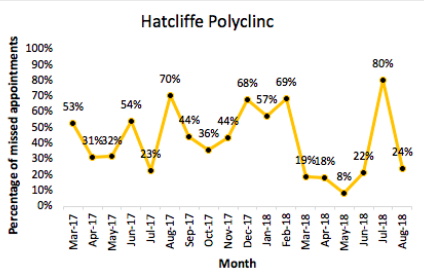


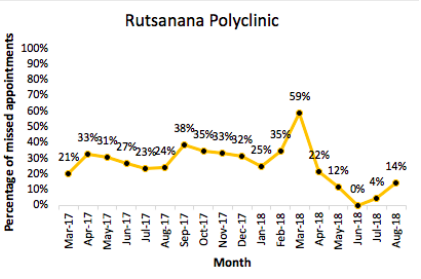


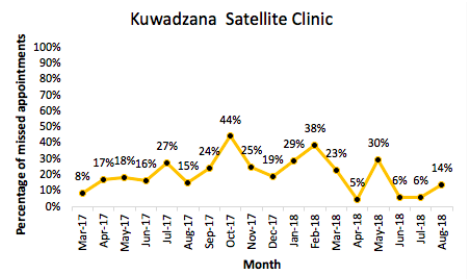


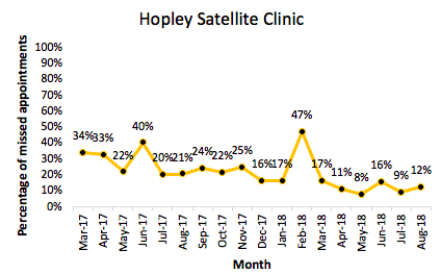


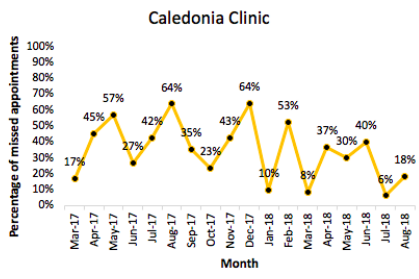


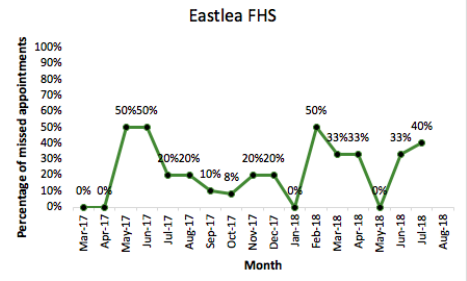


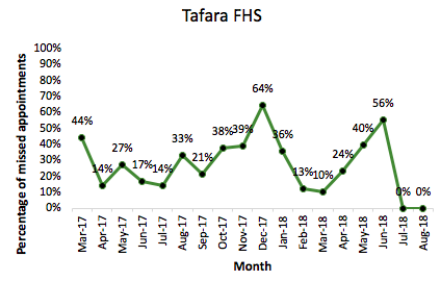


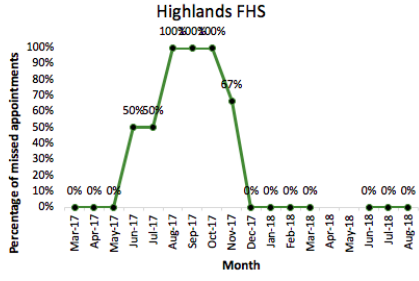






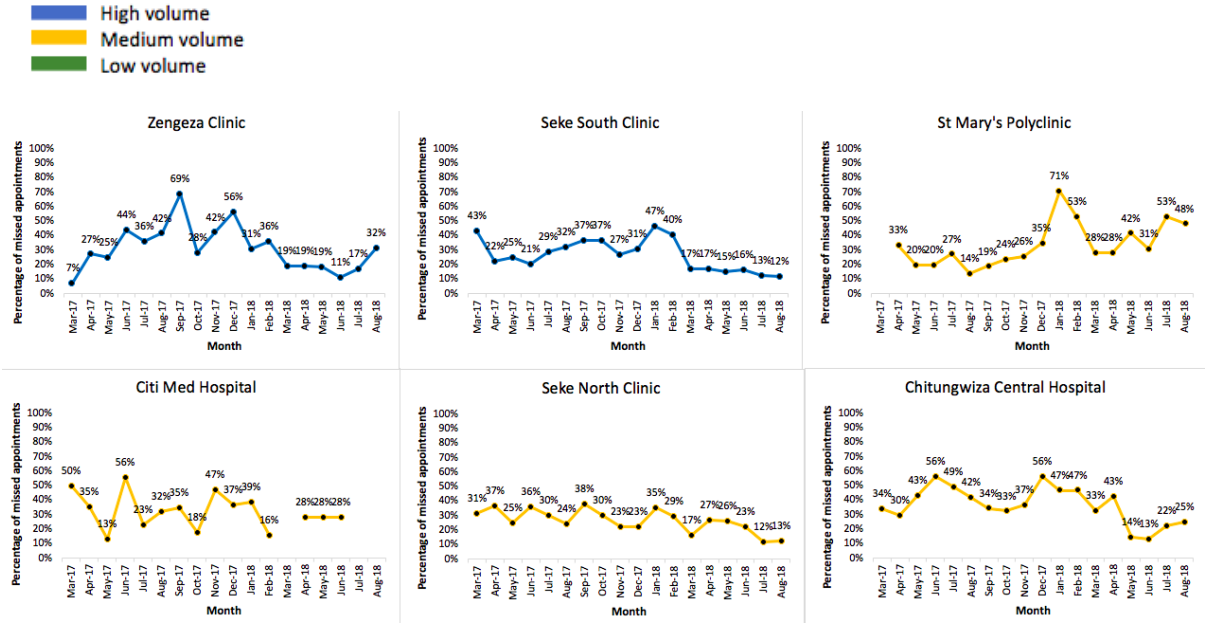






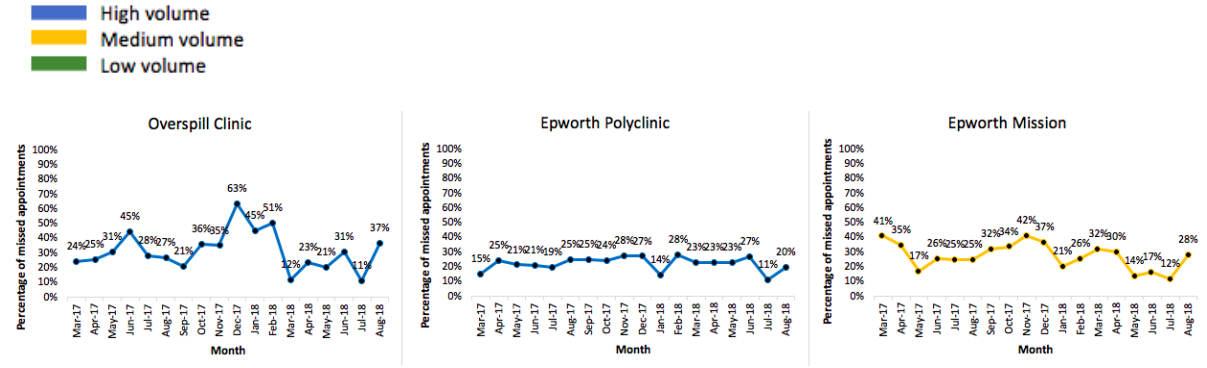
*(>5000 patients on ART); (1000-4999 patients on ART); (<1000 patients on ART)

Figure 27. *Missed appointments within the first 3 months after ART initiation by site - March 2017 - August 2018, Chitungwiza*



*(>5000 patients on ART); (1000-4999 patients on ART); (<1000 patients on ART)

Figure 28. *Missed appointments within the first 3 months after ART initiation by site - March 2017 - August 2018, Seke*



*(>5000 patients on ART); (1000-4999 patients on ART); (<1000 patients on ART)

Missed appointments at six months for newly initiated patients

The percentage of patients who missed their 6-month appointment decreased by 14%, from a baseline of 30% in March 2017 to 16% in July 2018. Chitungwiza and Seke regions achieved the greatest reductions in missed appointments. In Chitungwiza the biggest drop (19%) occurred in April 2018 from a baseline of 37% in March 2017 (see Figures 29-32).

***The increase in missed appointments between July and August 2018 is attributed to a <u>cholera outbreak and immunization campaign</u> that required frontline providers, including nurses and data entry clerks, to work in the field, resulting in staffing shortages in ART programs and documentation issues with fast-track visits.**

Figure 29. *Percentage of patients who missed a scheduled appointment at 6 months – August 2017 – August 2018*

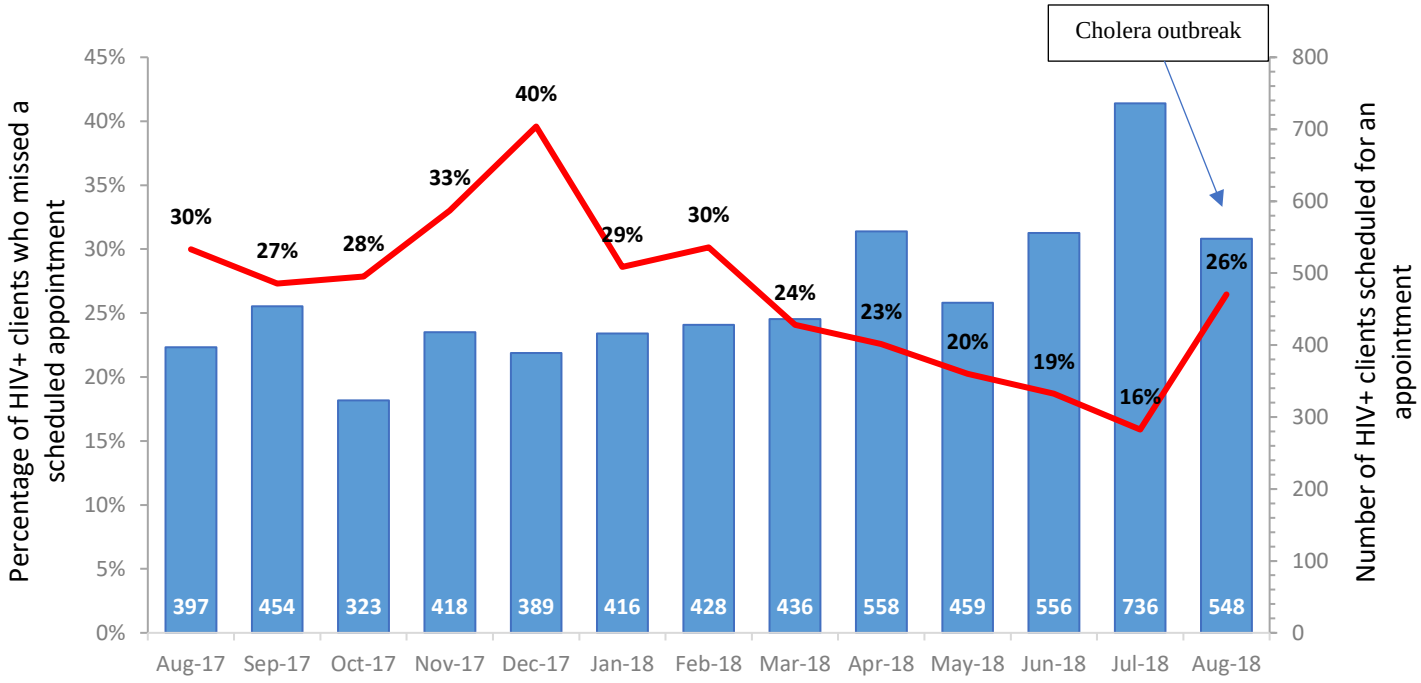


Figure 30. *Percentage of patients who missed a scheduled appointment at 6 months – August 2017 – August 2018, Chitungwiza*

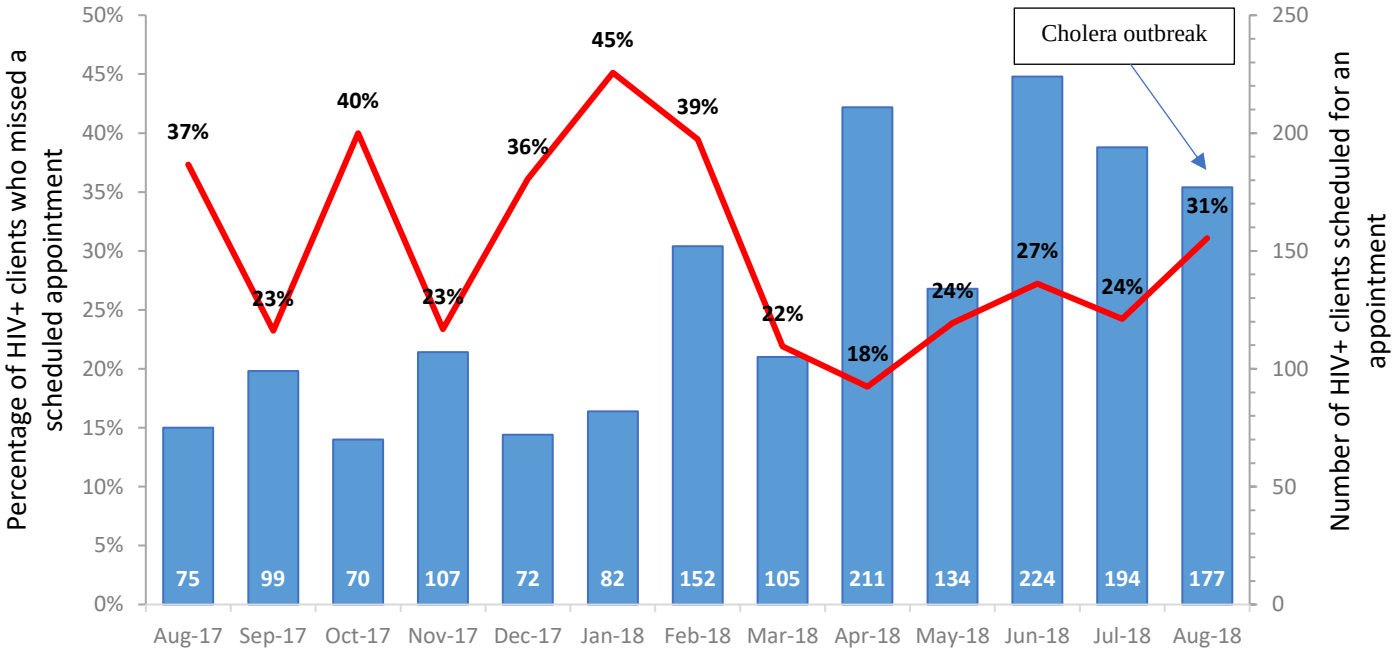


Figure 31. *Percentage of patients who missed a scheduled appointment at 6 months – August 2017 – August 2018, Harare*

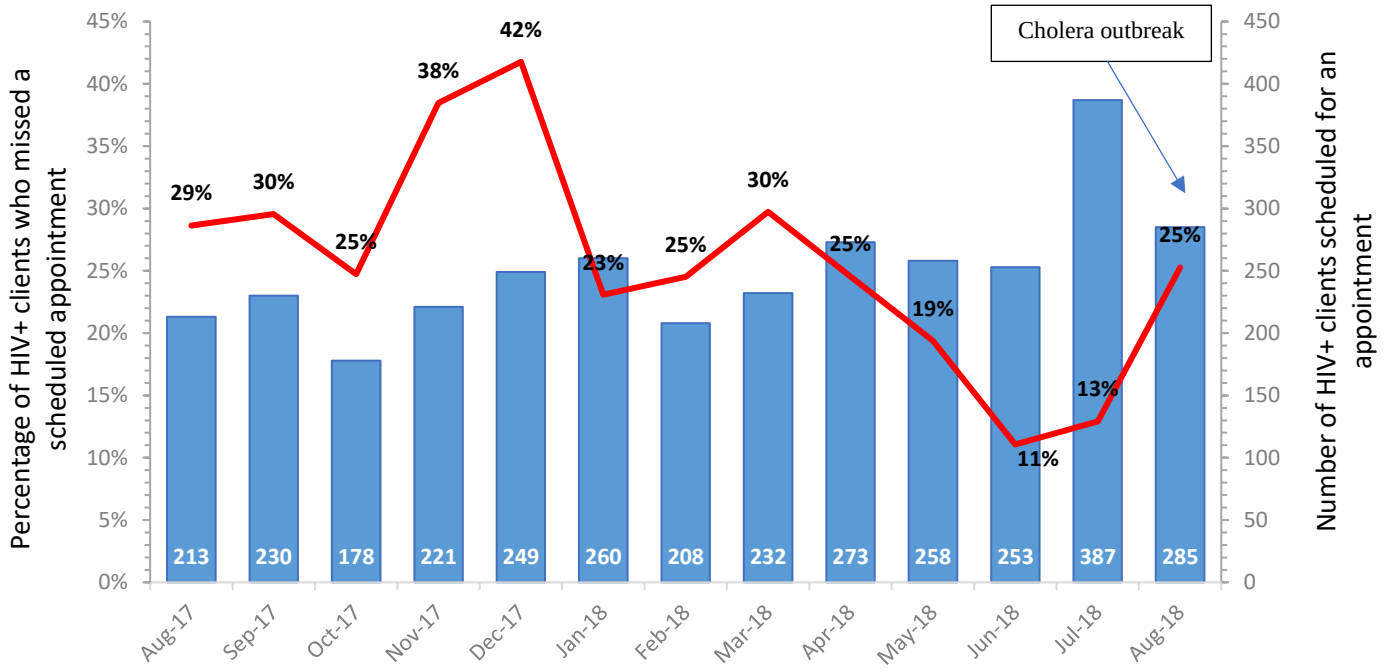


Figure 32. *Percentage of patients who missed a scheduled appointment at 6 months – August 2017 – August 2018, Epworth*

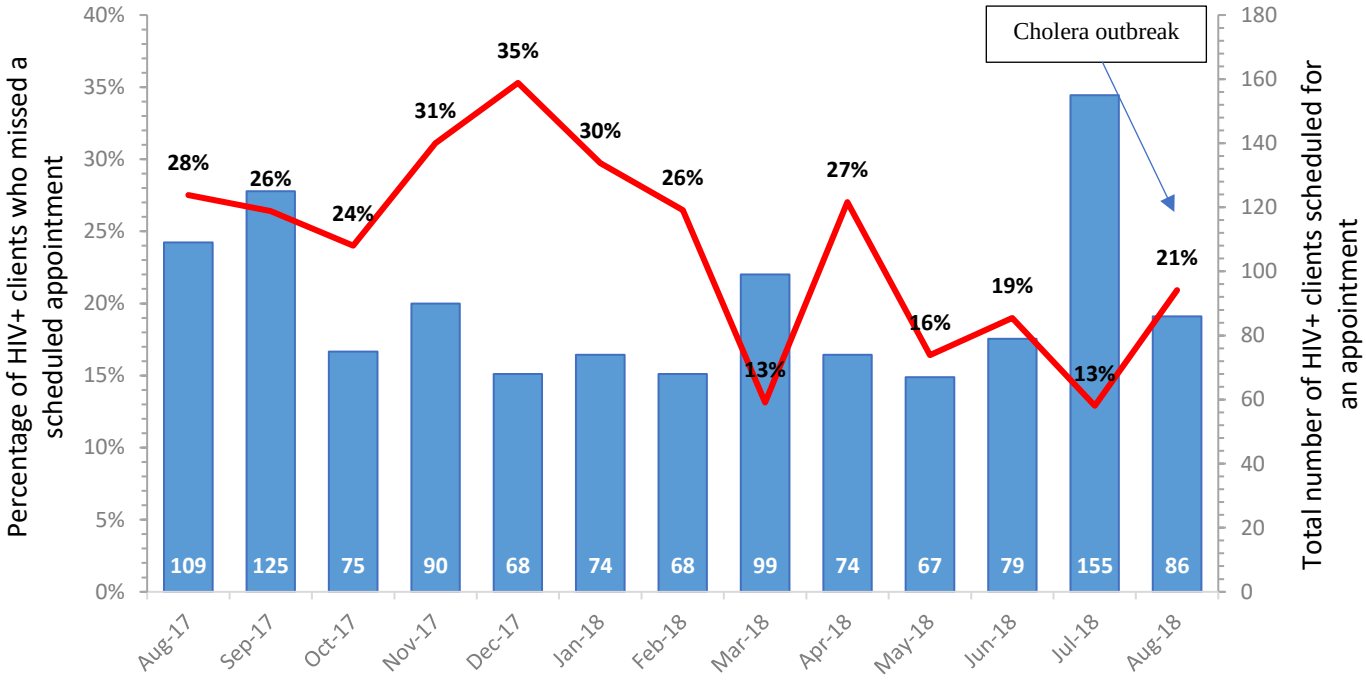


Table 5. Process Changes to Reduce Missed Appointments

Intervention	Change Ideas
1. Improving patient tracking and follow-up	Aligning dispensing practices and visit follow-up schedule with the national guidelines; printing, displaying and using visit schedule and pill count to schedule and negotiate appointment times that are convenient for patients
2. Soliciting patient and family preferences	Self-forming community ART refill groups, medication pick up for family members and multi-month dispensing

For a detailed description of how to implement the changes, refer to the Change Package.

3.2 System challenges

System issues that affected the overall performance on the reduction of missed appointments that were addressed through the Collaborative are highlighted in Table 6 below.

Table 6. System Challenges and Interventions to Reduce Missed Appointments

System challenge	Intervention
1. Drugs dispensed in 100 dose bottles and the pill count does not align with the appointment date, hence some patients did not see the need to come earlier	Dispensing a two-week medication supply at ART initiation to ensure patients come back for the two-week follow up visit
2. Visits through differentiated service delivery models e.g., fast track pick-ups, family or community ART clubs, were not well documented.	Engaging health promoters, community linkages officers, community adolescent treatment supported, expert patients, village health workers and community-based organizations to enhance adherence and retention in care. In addition, differentiated service delivery models such as community ART refill groups were implemented and properly documented.

Viral load monitoring

The Collaborative aimed to improve access to viral load monitoring and ensure all patients on ART were virally suppressed According to the Zimbabwe national guidelines, viral load testing is recommended after ART initiation at 6 months and 12 months and then every 12-months thereafter. A phased approach was adopted to scale up access to viral load in Zimbabwe which coincided with the implementation of the ART4All Collaborative. Participating sites were able to apply quality improvement methodologies and implement changes to improve access to viral load testing (Table 6 and Change Package).

Viral load testing increased from 16% in September 2017 (cohort initiated in February 2017 as per national guidelines) to 40% in August 2018. The greatest improvement was observed after the 3rd Learning Session, where viral load monitoring issues and specific improvement changes were the focus of peer exchange and discussion (see Figures 33-41-). Key changes discussed include collection of whole blood samples in the morning and dry blood spots (DBS) in the afternoon, revising the blood sample transportation schedule, use of patient and health worker reminders, and improving VL literacy among patients.

Figure 33. *Percentage of patients who received a viral load test at 6 months – September 2017 – August 2018*

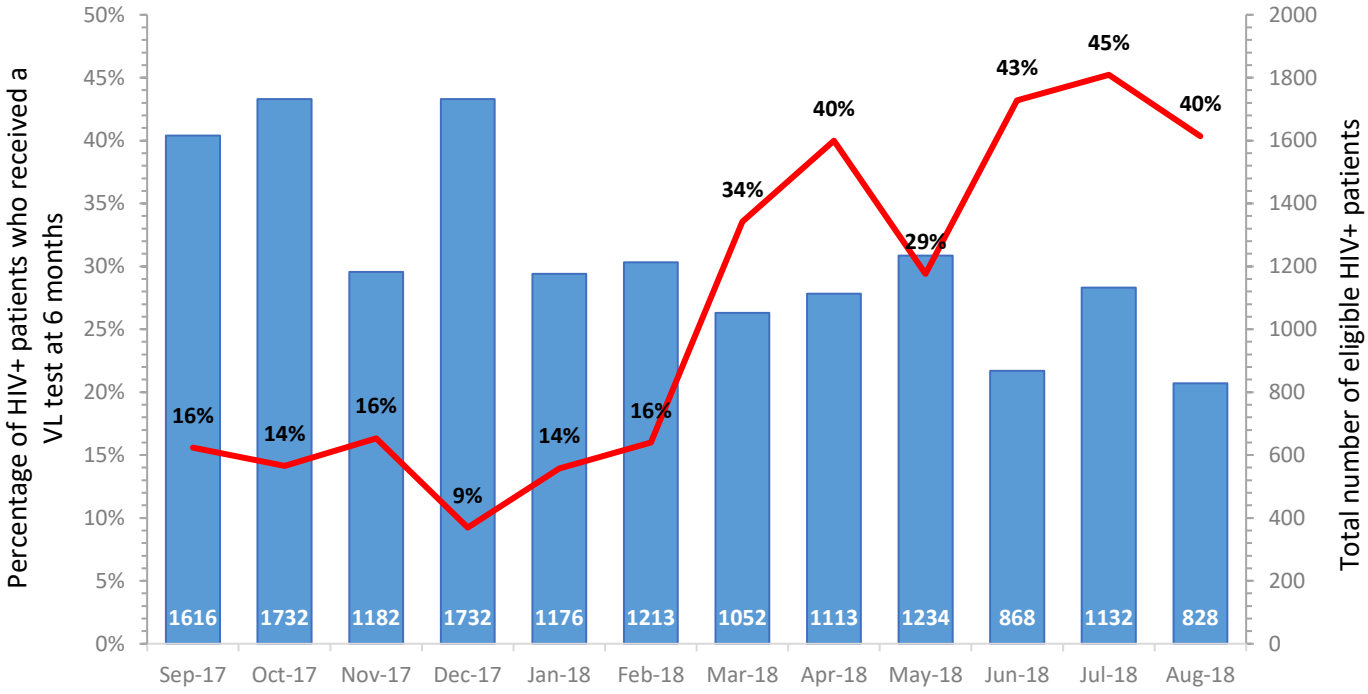
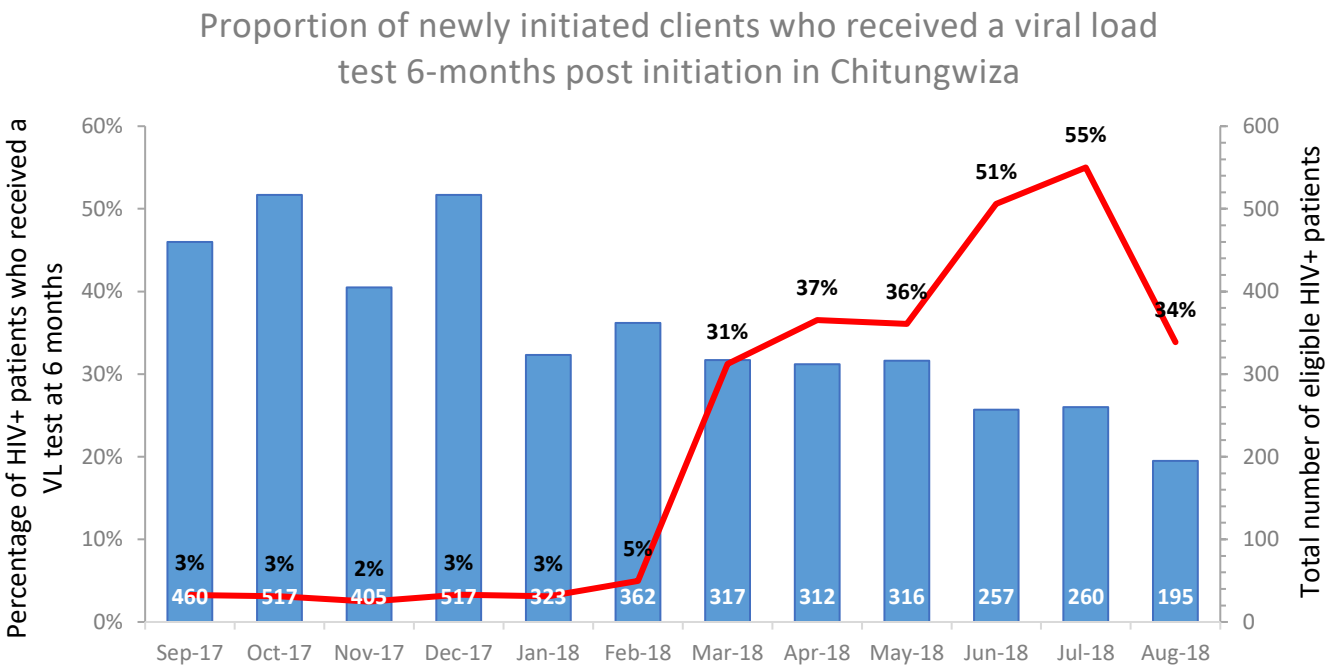


Figure 34. *Percentage of patients who received a viral load test at 6 months – September 2017 – August 2018*, Chitungwiza



*The cause of the decline in August 2018 cannot be determined at this time.

Figure 35. *Percentage of patients who received a viral load test at 6 months – September 2017 – August 2018, Harare*

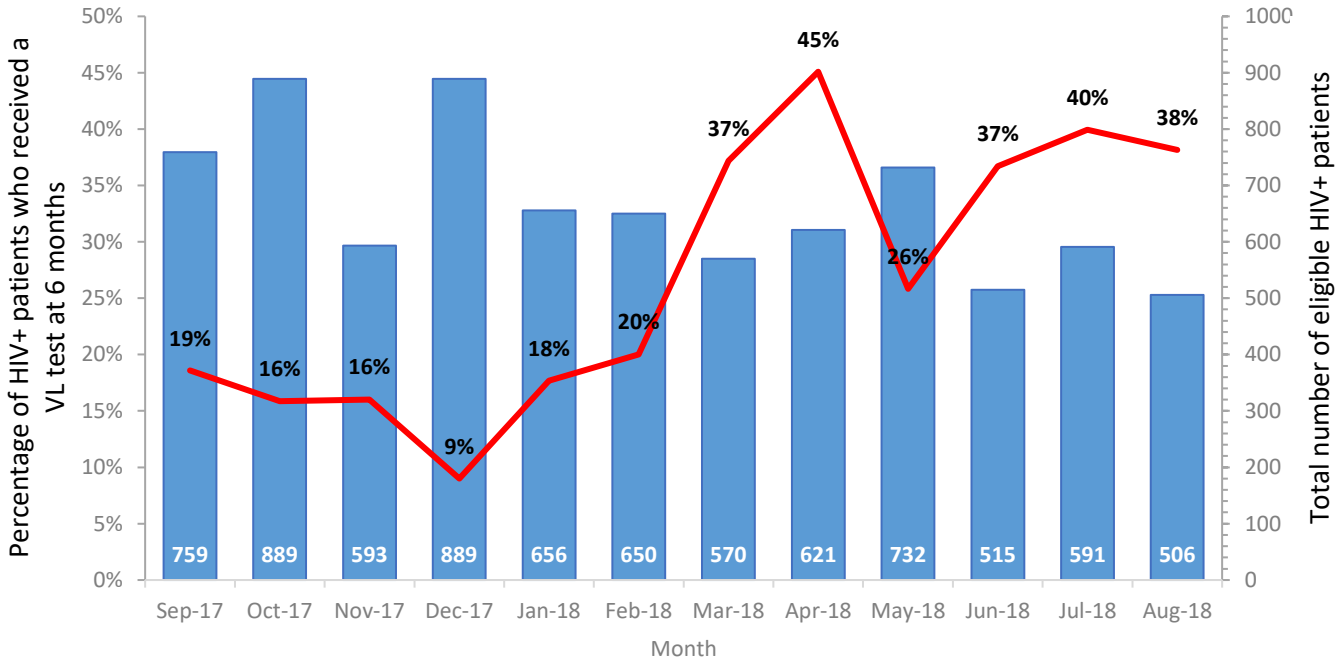
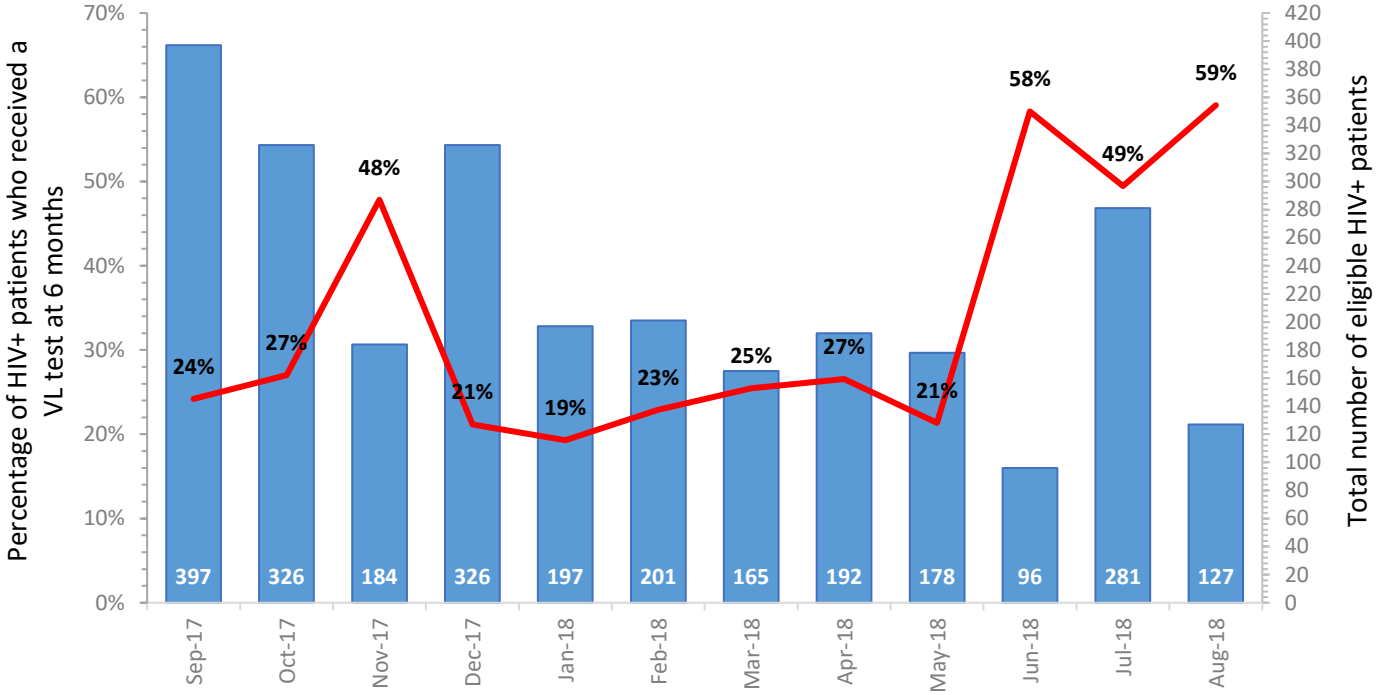
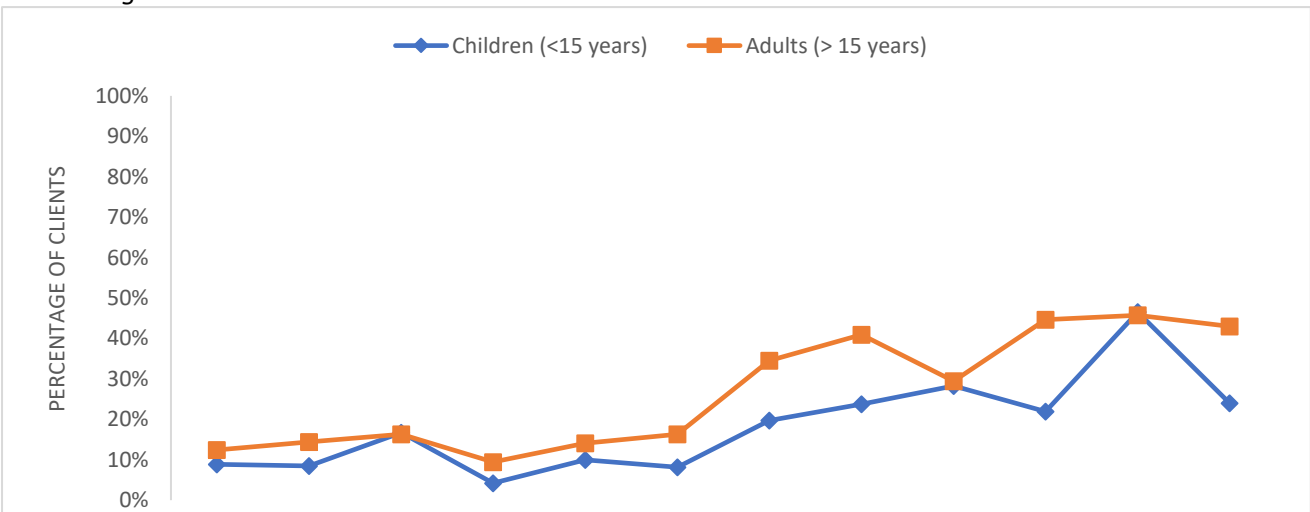


Figure 36. *Percentage of patients who received a viral load test at 6 months – September 2017 – August 2018, Epworth*



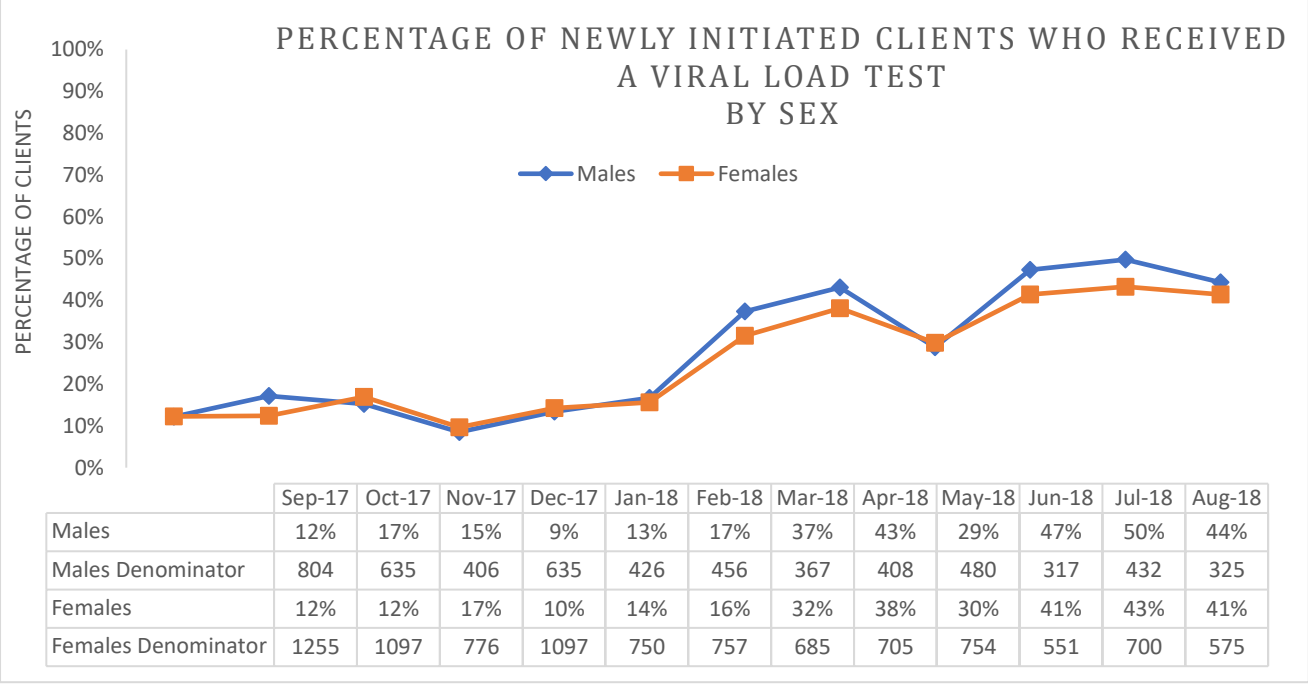
There was no difference in performance on viral load monitoring between males and females (figure 38). Overall, only 16% of eligible children under 15 years had a VL test completed compared to 24% for adults 15 years and above (Figure 37).

Figure 37. *Percentage of patients who received a viral load test at 6 months by Age – September 2017 – August 2018*



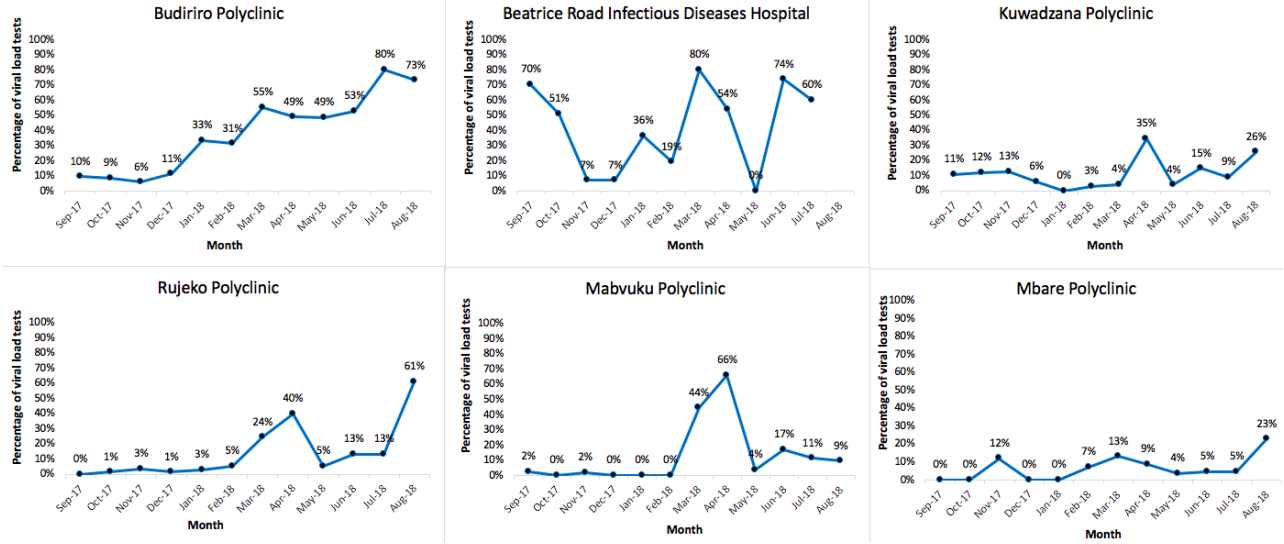
	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Children (<15 years)	9%	8%	17%	4%	10%	8%	20%	24%	28%	22%	47%	24%
Children Denominator	90	71	48	71	40	49	66	59	46	41	43	25
Adults (> 15 years)	12%	14%	16%	9%	14%	16%	34%	41%	29%	45%	46%	43%
Adults Denominator	1969	1661	1134	1661	1136	1164	986	1054	1188	827	1089	875

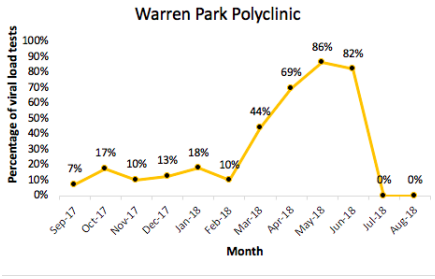
Figure 38. *Percentage of patients who received a viral load test at 6 months by sex – September 2017 – August 2018*

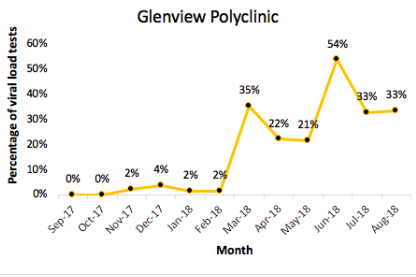


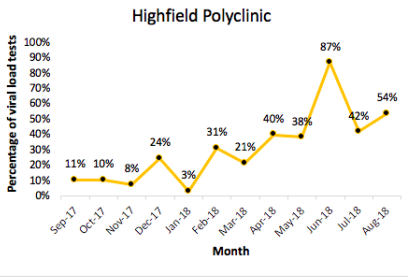
	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Males	12%	17%	15%	9%	13%	17%	37%	43%	29%	47%	50%	44%
Males Denominator	804	635	406	635	426	456	367	408	480	317	432	325
Females	12%	12%	17%	10%	14%	16%	32%	38%	30%	41%	43%	41%
Females Denominator	1255	1097	776	1097	750	757	685	705	754	551	700	575

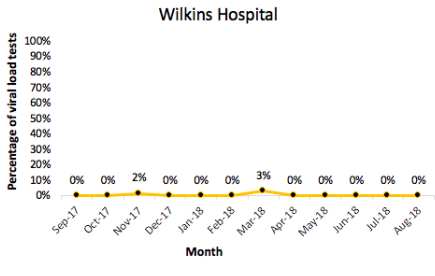
Figure 39. *Viral load monitoring 6-months post-ART initiation by site - September 2017 - August 2018, Harare*

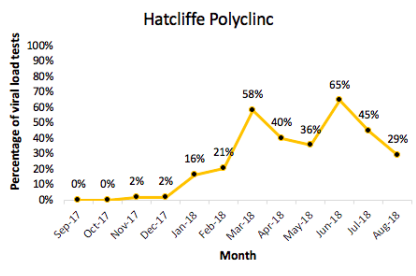


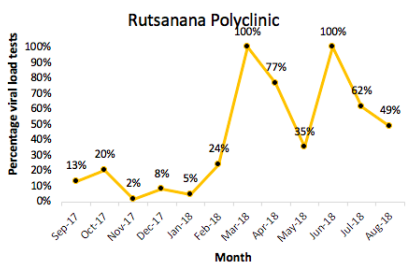

Warren Park Polyclinic
Percentage of viral load tests
Month
7% 17% 10% 13% 18% 10% 44% 69% 86% 82% 0% 0%

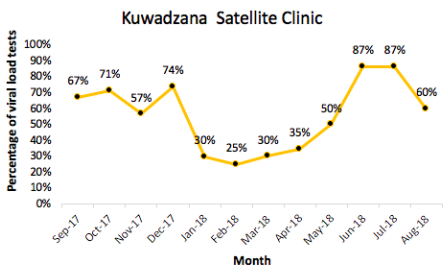

Glenview Polyclinic
Percentage of viral load tests
Month
0% 0% 2% 4% 2% 2% 35% 22% 21% 54% 33% 33%

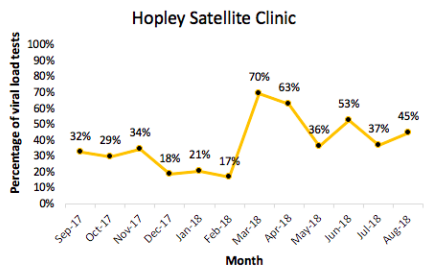

Highfield Polyclinic
Percentage of viral load tests
Month
11% 10% 8% 24% 3% 31% 21% 40% 38% 87% 42% 54%

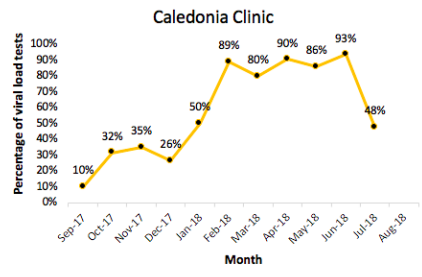

Wilkins Hospital
Percentage of viral load tests
Month
0% 0% 2% 0% 0% 0% 3% 0% 0% 0% 0% 0%

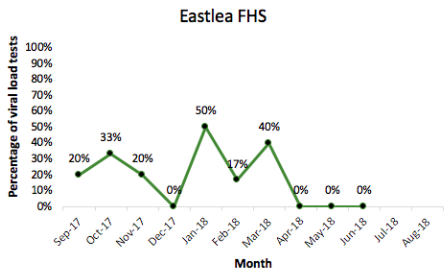

Hatcliffe Polyclinc
Percentage of viral load tests
Month
0% 0% 2% 2% 16% 21% 58% 40% 36% 65% 45% 29%

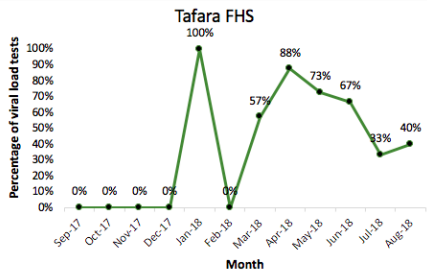

Rutsanana Polyclinic
Percentage viral load tests
Month
13% 20% 2% 8% 5% 24% 100% 77% 35% 100% 62% 49%


Kuwadzana Satellite Clinic
Percentage of viral load tests
Month
67% 71% 57% 74% 30% 25% 30% 35% 50% 87% 87% 60%


Hopley Satellite Clinic
Percentage of viral load tests
Month
32% 29% 34% 18% 21% 17% 70% 63% 36% 53% 37% 45%


Caledonia Clinic
Percentage of viral load tests
Month
10% 32% 35% 26% 50% 89% 80% 90% 86% 93% 48%


Eastlea FHS
Percentage of viral load tests
Month
20% 33% 20% 0% 50% 17% 40% 0% 0% 0%


Tafara FHS
Percentage of viral load tests
Month
0% 0% 0% 0% 100% 0% 57% 88% 73% 67% 33% 40%

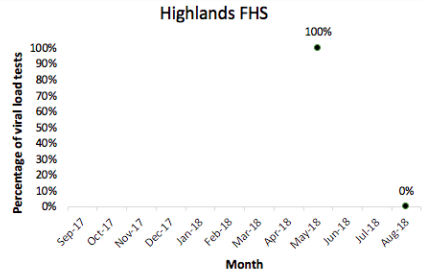

Highlands FHS
Percentage of viral load tests
Month
100% 0%

Figure 40. *Viral load monitoring 6-months post-ART initiation by site - September 2017 - August 2018, Epworth (Seke)*

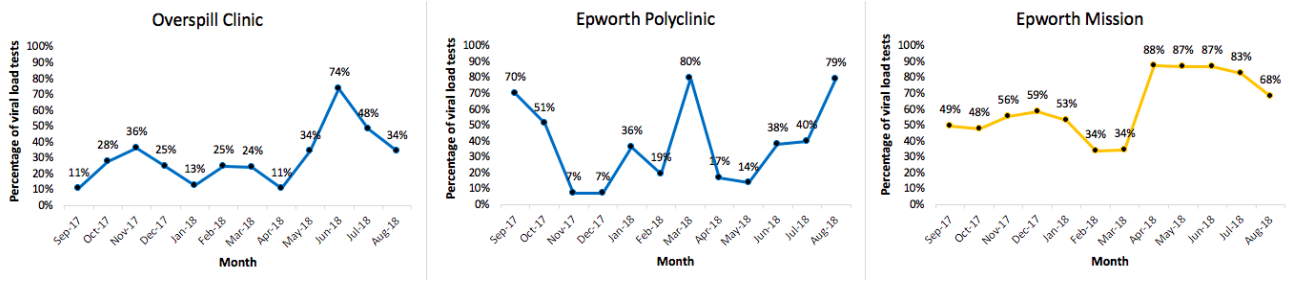
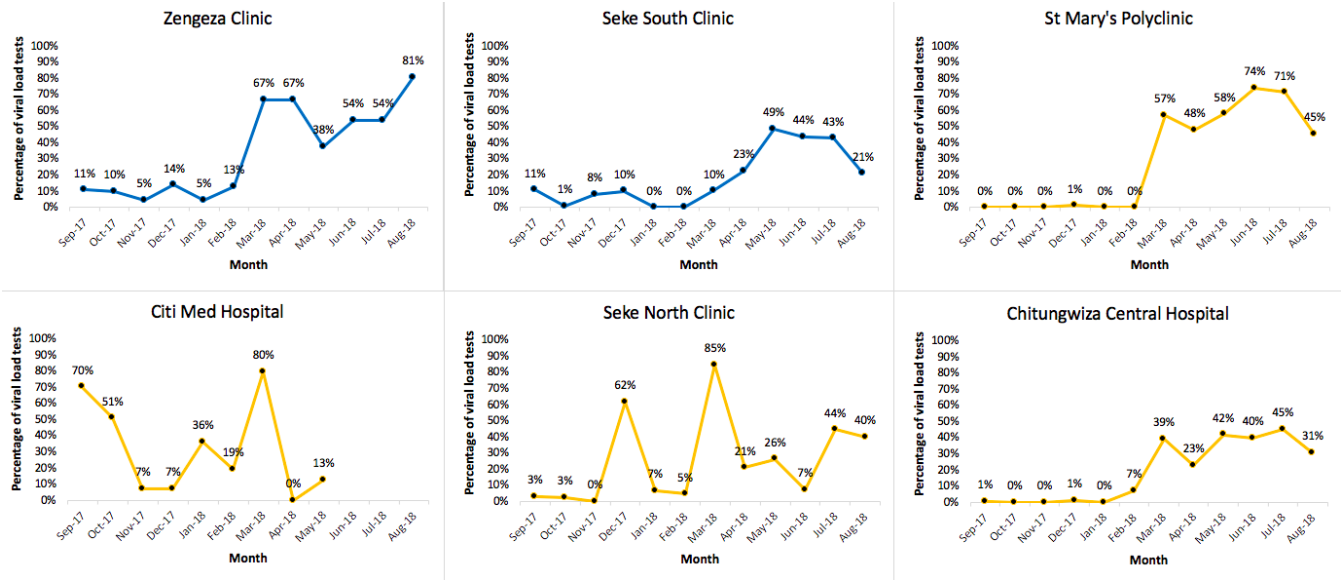


Figure 41. *Viral load monitoring 6-months post-ART initiation by site - September 2017 - August 2018, Chitungwiza*

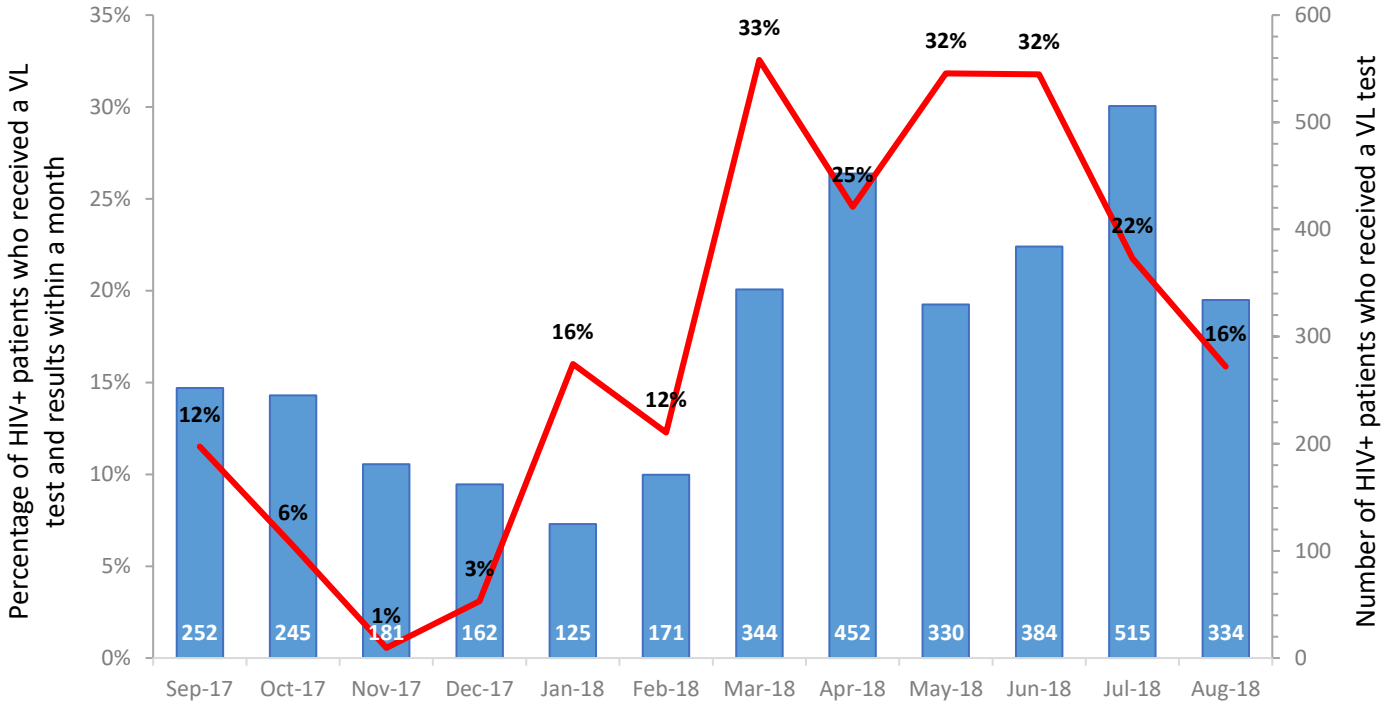


Viral load turn-around time

Prior to the Collaborative, many patients did not receive their results within a month due to long in-lab turnaround time. As a key process measure, ART4ALL monitored viral load turn-around time during the Collaborative. Compared to Seke and Harare, Chitungwiza had a faster turn-around time (TAT) for viral load results (see Figures 42-45).

*Noted variation in aggregated Collaborative-wide and regional data for VL turn-around time (TAT) are attributed to issues in Harare and Epworth. Samples from these two regions were processed at the Beatrice Road Infectious Diseases Hospital lab with samples from neighboring districts. Initially, the lab had only one machine that processed DBS samples, which was funded by one IP. Funding reductions in support for repair, maintenance and reagents led to downtime (machine breakdown) and shortage of reagents, coupled with backlog and delays in capturing and dispatching results leading to long in-lab TAT. An additional machine that uses whole blood samples has since been installed in the lab.

Figure 42 *Proportion of newly initiated patients who received a viral load test and results within a month - September 2017 - August 2018*



The TAT for Chitungwiza was as short as 4 days for whole blood samples and 7 days for dry blood spot (DBS) samples. The Harare laboratories process large numbers of viral load samples from Harare and Seke facilities, as well as neighboring districts in Mashonaland East and Mashonaland Central provinces, which resulted in significant delays in capturing results in the laboratory management information system compared to Chitungwiza. In addition, Harare labs were only processing whole blood samples. Furthermore, Harare laboratories reported more frequent and longer down-times compared to Chitungwiza, which created huge backlogs. Although service and maintenance of the equipment improved with time, the back logs continued to affect the turnaround times in Harare. The proportion of newly initiated patients who received a viral load test at six months and received results within a month increased from 7% in September 2017 to 80% in August 2018.

Figure 43. *Proportion of newly initiated patients who received a viral load test and results within a month - September 2017 - August 2018, Chitungwiza*

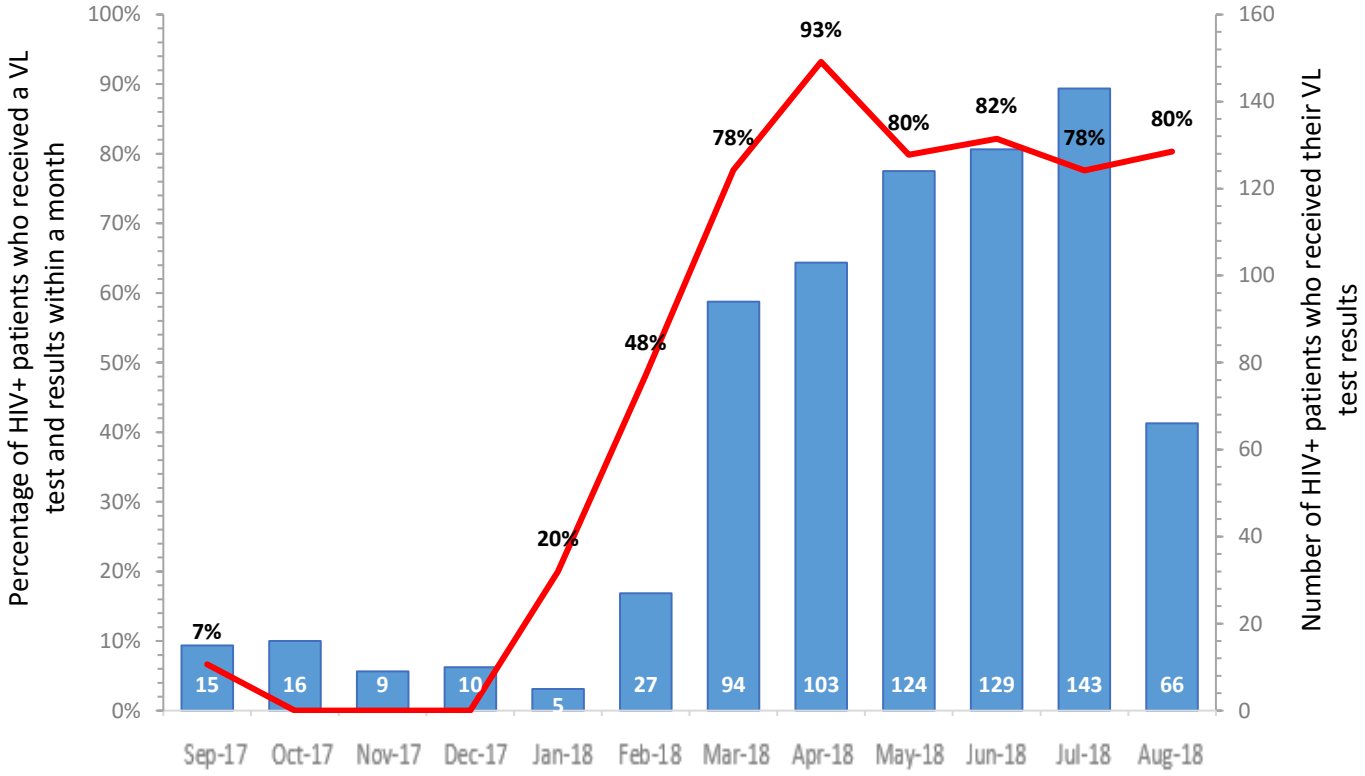
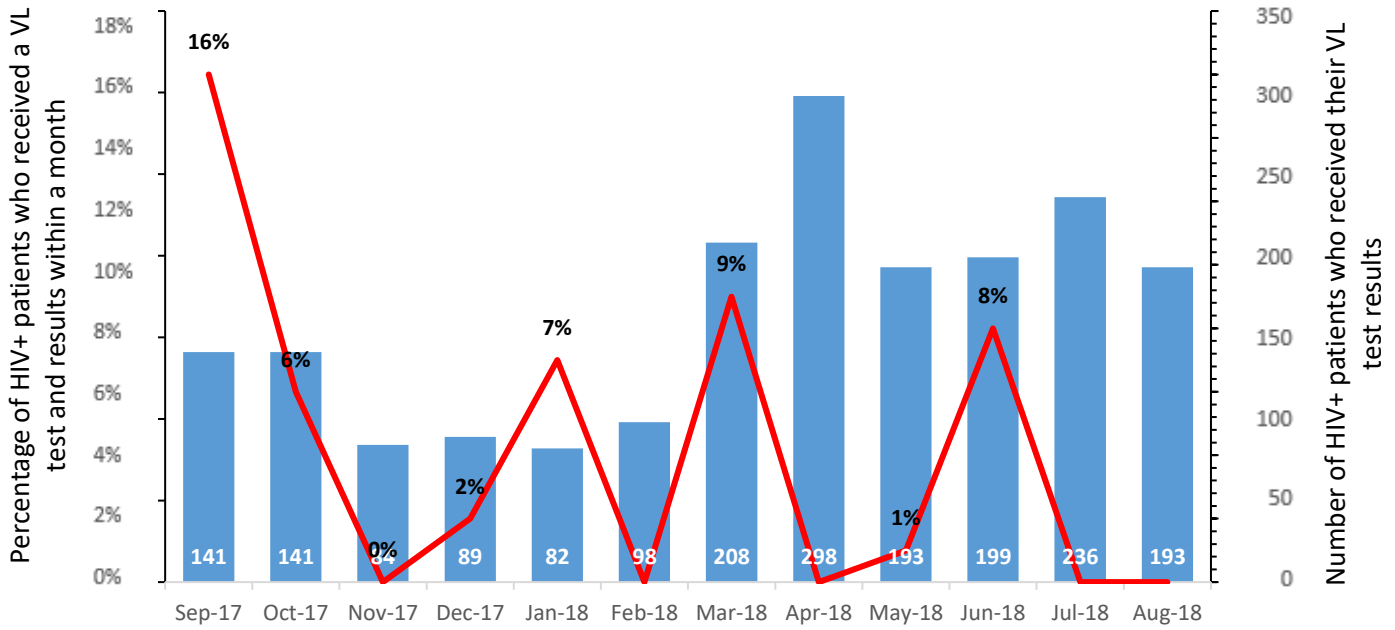
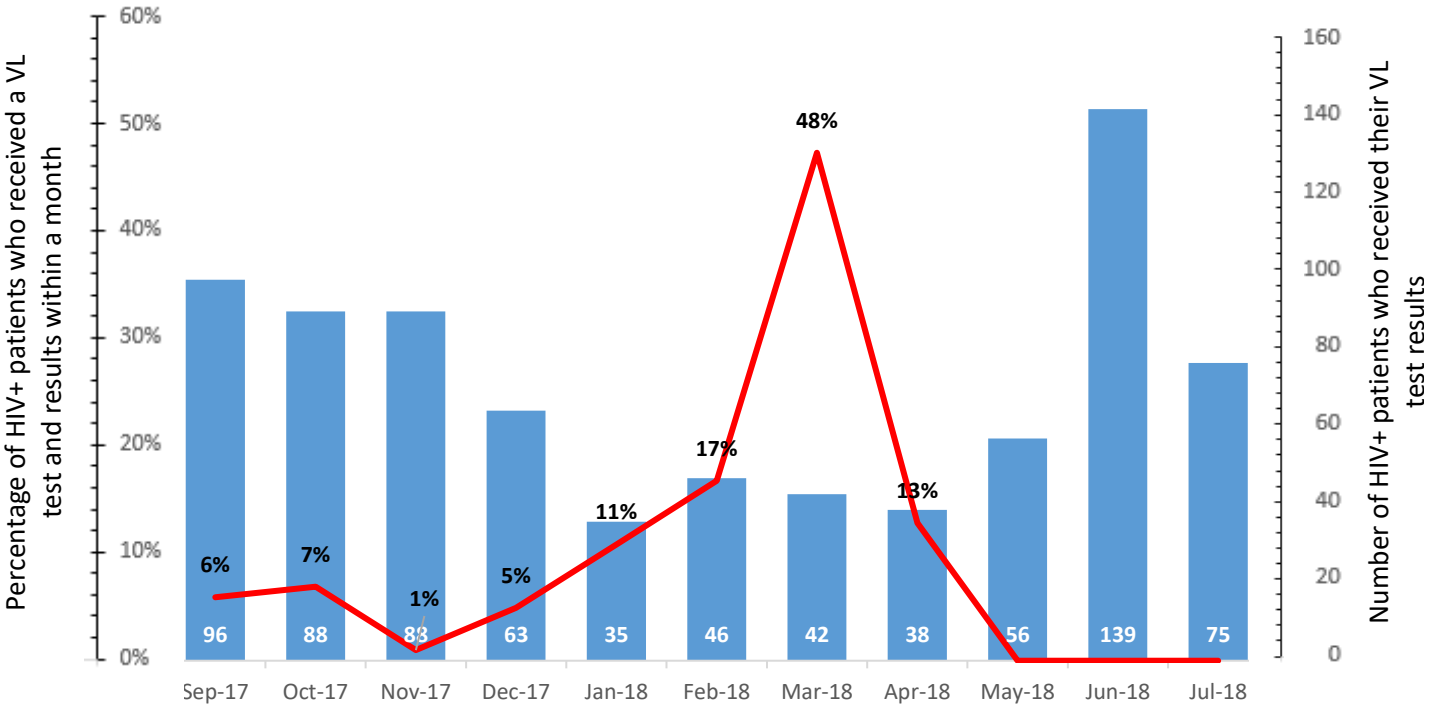


Figure 44. *Proportion of newly initiated patients who received a viral load test and results within a month - September 2017 - August 2018, Harare*



***Please see note above regarding variations in data for Harare and Epworth facilities**

Figure 45. *Proportion of newly initiated patients who received a viral load test and results within a month - September 2017 - August 2018, Epworth*



***Please see note above regarding variations in data for Harare and Epworth facilities**

Viral load suppression

Achieving viral load suppression among patients on ART was a key aim of the ART4ALL Collaborative, in alignment with Zimbabwe's goal to ensure that 90% of all patients on ART achieve maximal and durable viral suppression. Based on the national guidelines, viral load was monitored at 6 and 12 months of ART and yearly thereafter. The number of viral load results received by the facilities each month increased from a baseline of 56 in August 2017 to a peak of 240 in March 2018. Of the patients who received their viral load results each month, over 90% were virally suppressed. It is important to note that the proportion of eligible patients who received their viral load results was small, ranging from 12% in September 2017 to 16% in August 2018, which means that suppression rates may not be representative or generalizable across the different geographic settings and among the different population groups in Zimbabwe. This was mainly a result of long lab turnaround time. Regional analysis of viral load suppression rates shows similar performance across the three regions (Figures 46-49).

Figure 46. *Percentage of patients with viral suppression at 6 months - August 2017 - August 2018*

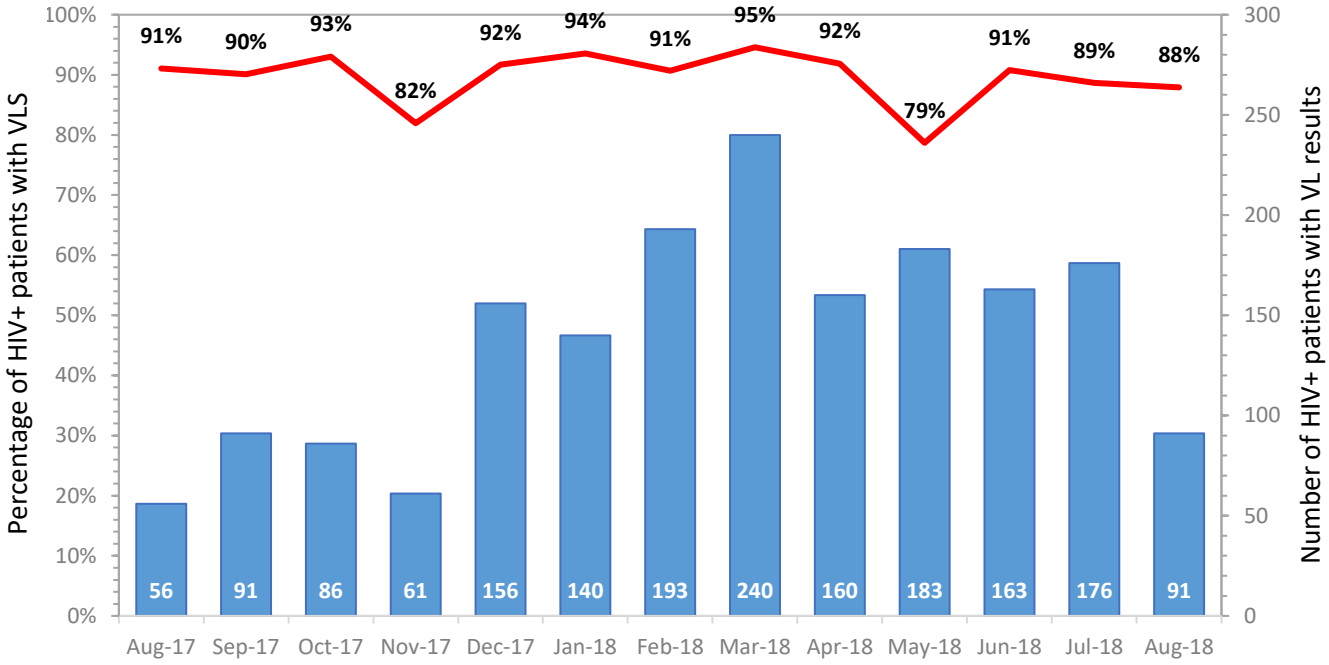


Figure 47. *Percentage of patients with viral suppression - August 2017 - August 2018, Chitungwiza*

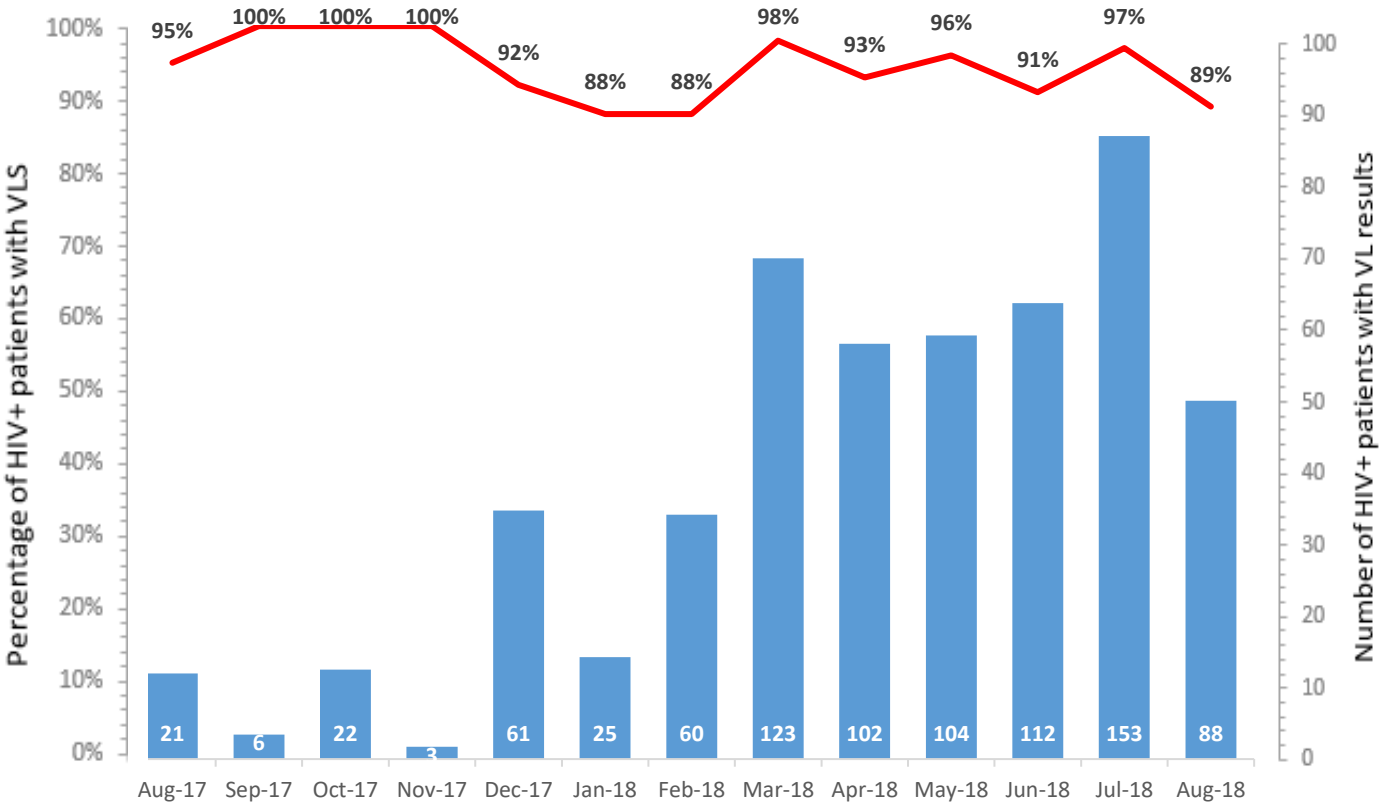
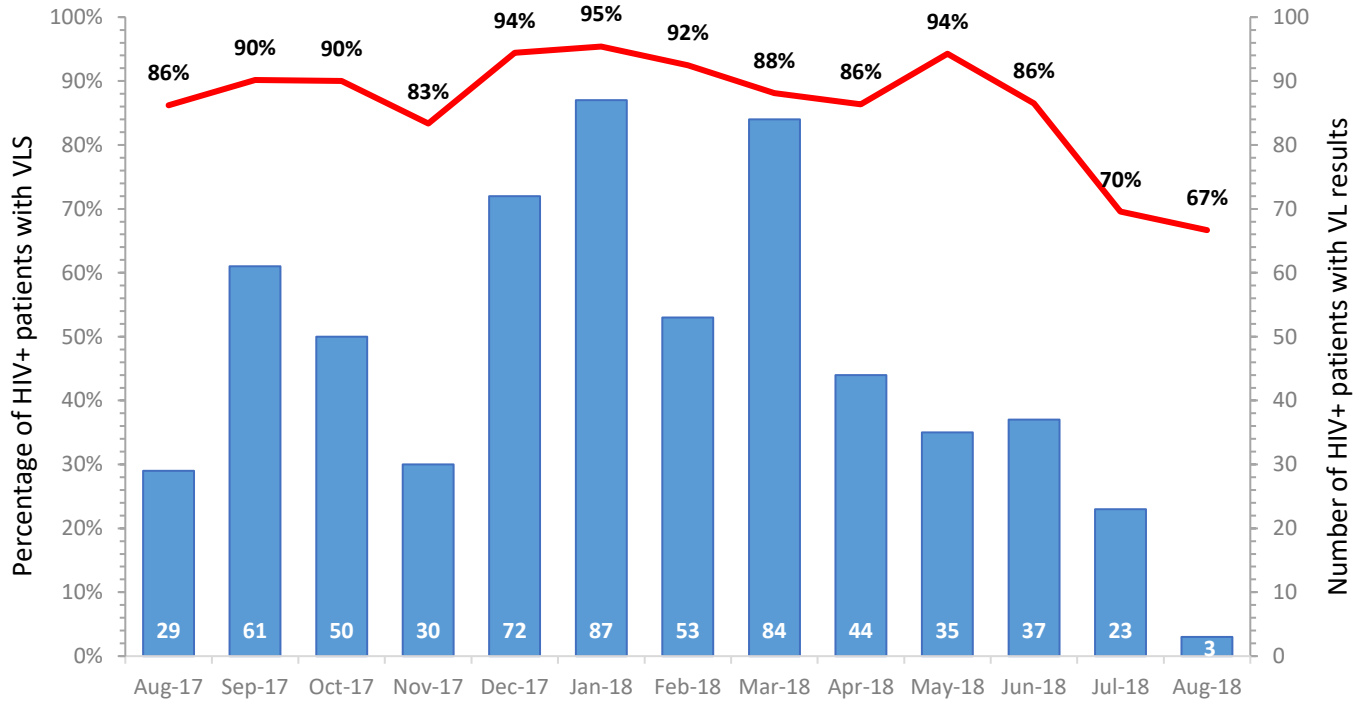


Figure 48. *Percentage of patients with viral suppression - August 2017 - August 2018, Harare*



*The decline in August 2018 cannot be determined at this time.

Figure 49. *Percentage of patients with viral suppression - August 2017 - August 2018, Epworth*

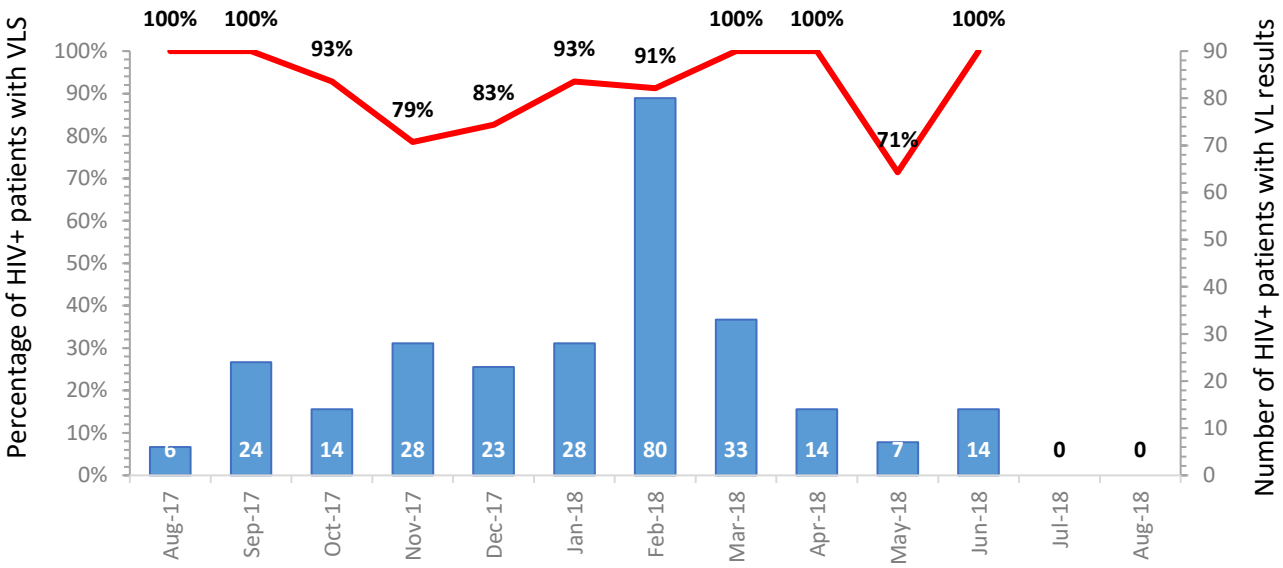


Table 7. Process Changes to Improve Viral Load Monitoring at 6 Months

Intervention	Change Ideas
1. Reinventing the delivery system for systematic identification and outreach to patients due for care or in need of follow-up	Screening patients for viral load testing before medication pickup; providing urgent follow up and adherence counselling for patients with high viral load results
2. Leveraging prompts and reminders for care at the point of service	Using visual reminders (colour coding) for service providers to identify patients who are eligible for or due for clinical visit, and distinguishing patients with low and high viral load results at 6-month dispensing
3. Improving completeness and accuracy of information systems	Developing a register to capture viral load results, identify and follow up missing results; document viral load results in register, patient book and electronic medical record system
4. Expanding access to services	Offering walk-in services such as viral load testing; using multiple testing/sampling methods to expand access to viral load testing

For a detailed description of how to implement the changes, refer to the Change Package.

System challenges

System issues pertaining to regional/national policies and procedures in the broader health system that were identified through the Collaborative and impacted viral load monitoring are highlighted in Table 9 below. The system challenges that were not addressed through the Collaborative were escalated to the relevant laboratories.

Table 8. System Challenges and Interventions to Improve Viral Load Monitoring at 6 Months

Challenge	Intervention
1. Most facilities are using whole blood for VL testing and sending to the lab through a courier. The pick-up time of the courier is too early to accommodate all patients needing a viral load test	Collecting plasma samples in the morning until pick-up and then dried blood spot (DBS) later in the day
2. Facilities did not know they could use DBS to increase capacity and reduce sample rejection	Engaging the laboratory personnel during the Learning Sessions to educate facility teams on the use of DBS to increase capacity for viral load testing
3. Long in-lab turnaround time due to back logs and delays in capturing and dispatching the results	Sending facility staff to the laboratory to capture viral load results for the site
4. Demand is higher than capacity since there are a limited number of machines in Harare and in the country. Harare laboratories are also processing samples from other provinces, such as Mashonaland East and Mashonaland Central.	Suggestions include: 1. Improving efficiency in the utilization of the existing equipment through a) Processing samples 24 hours a day through the use of multiple shifts (three 8-hour shifts) instead of one 8-hour shift b) Improving service and maintenance of the existing equipment to reduce downtime c) Improving supply chain management of reagents and other lab consumables, such as DBS kits, necessary for VL sample processing 2. Mobilizing resources to increase capacity through higher throughput and automated machines
5. Samples are often rejected and reasons for rejections are not communicated to the sites	Suggestions include: 1. Training of health workers in sample collection and processing. Information, Education and Communication (IEC) material, including videos on sample collection and processing were developed by MOHCC but were not effectively disseminated. 2. Employing a sample tracking system to improve communication between the laboratory and facilities

Team Progress Scores

Facility team progress scores were captured monthly by quality improvement coaches. The scoring criteria (Appendix I) were adapted from the IHI Assessment Tool for Collaboratives[1] (Appendix J) designed to track QI team progress. Scoring criteria were modified and used as a guide to assess QIC team advancement in key areas of QI project implementation using a scale of 1 (forming a team) to 5 (achieving outstanding sustainable results) measuring capacity to meet improvement goals and implement changes. The tool was applied monthly by ART4ALL QI coaches who provided teams with feedback on their score, justification for the rating, comments on their improvement activities, and suggestions on how best to proceed. Progress was tracked and recorded.

Figure 50. depicts a heat map tracking the monthly scores for each site. From January 2017 to August 2018, most sites showed steady progress implementing quality improvement activities and demonstrated modest to significant improvement in related measures. This was consistent with the goal of the Collaborative of achieving significant improvement with sustained results around early ART initiation, viral load monitoring and suppression.

Figure 50. Team progress scores - January 2017 - August 2018

Key for Heat map
1. Forming team
1.5. Planning for the project has begun
2. Activity, but no changes
2.5. Changes tested, but no improvement
3. Modest improvement
3.5. Improvement
4. Significant improvement
4.5. Sustainable improvement
5. Outstanding sustainable results
Blank= missing

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Beatrice Road Infectious Disease Hospital	1	2.5	3	3	2.5	2.5	3	3	3	3.5	4	4	4	4	4	4	4.5	4.5	4.5	4.5
Wilkins Infectious Disease Hospital	1	2.5	2.5	2.5	2.5	2	2.5	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Mbare Polyclinic	1	2.5	2.5	3	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Budiriro Polyclinic	1	2.5	2.5	3	3.5	3	3	3	3	3	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5	5
Caledonia Satellite clinic	1	2.5	2.5	2.5	3	3	3	3.5	3.5	3.5	4	3.5	3.5	3.5	3.5	4	4	4	4	4.5
Chitungwiza Central Hospital	1	3	3	3.5	3.5	3	3	3	3	3.5	3.5	3.5	4	4	4	4	4	4	4	4.5
Eastlea FHS	1	2.5	3	3	3	2.5	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4	4.5
Epworth Mission Clinic	1	3	3.5	3.5	4	3	3.5	3	3.5	3.5	4	4	4	4	4	4	4.5	4.5	4.5	5
Epworth Polyclinic	1	2.5	3.5	3.5	3	2.5	2.5	3	3	3	3.5	3	3	3	3	3.5	4	4	4.5	5
Glenview Polyclinic	2	2.5	2.5	3.5	4	3.5	3	3	3	3.5	3	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Hatcliffe Polyclinic	2	1.5	2.5	3	3.5	3	2.5	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Highfield Polyclinic	2	2.5	2.5	3	3.5	2.5	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Highlands FHS	1	1	1.5	1.5	2	2	2.5	2.5	3	3	3	3	3	3	3	3	4	4	4.5	4.5
Hopley Satellite clinic	1	1.5	1.5	2.5	2	3.5	3	3	3.5	3	4	3.5	3	3	3	4	4	4.5	4.5	5
Kuwadzana Polyclinic		3	3	3.5	4	3	3	3	3	3.5	3.5	3	3	3	3	3.5	4	4	4.5	4.5
Kuwadzana Satellite Clinic	1	1.5	3	3	3.5	3	3	3	3	3.5	4	4	4	4	4	3.5	4	4	4.5	5
Mabvuku Polyclinic	2	1.5	2	2.5	3	2.5	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Overspill Clinic	1	3	3	3	3.5	2.5	3	3	3	3	3	3	3	3	3	3	3.5	4	4	4.5
Rujeko Polyclinic	2	2.5	2.5	3.5	4	3.5	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4	4.5
Rutsanana Polyclinic	1.5	3	3	3	3.5	2.5	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Seke North Clinic	1	3	3	3	3	3	3	3	3.5	3.5	4	4	4	4	4	4	4.5	4.5	4.5	5
Seke South Clinic	1	2.5	2.5	3	2.5	2.5	2.5	2.5	2.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4.5	4.5
South Medical Hospital	1	1	1.5	1.5	1.5	2	2	2.5	2.5	2.5	3	3	3	3	3	3	4	4	4.5	4.5
St Mary's Clinic	1	1.5	2.5	2.5	3	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Tafara FHS	1	3	3	3	3.5	3	3.5	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Warren Park Polyclinic	1	2.5	3	2.5	3	2.5	3	3	3.5	3.5	4	3.5	3.5	3.5	3.5	4	4.5	4.5	4.5	5
Zengeza Clinic	1	2.5	3	3	2.5	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4.5	4.5	5

[1]http://www.ihi.org/resources/Pages/Tools/AssessmentScaleforCollaboratives.aspx

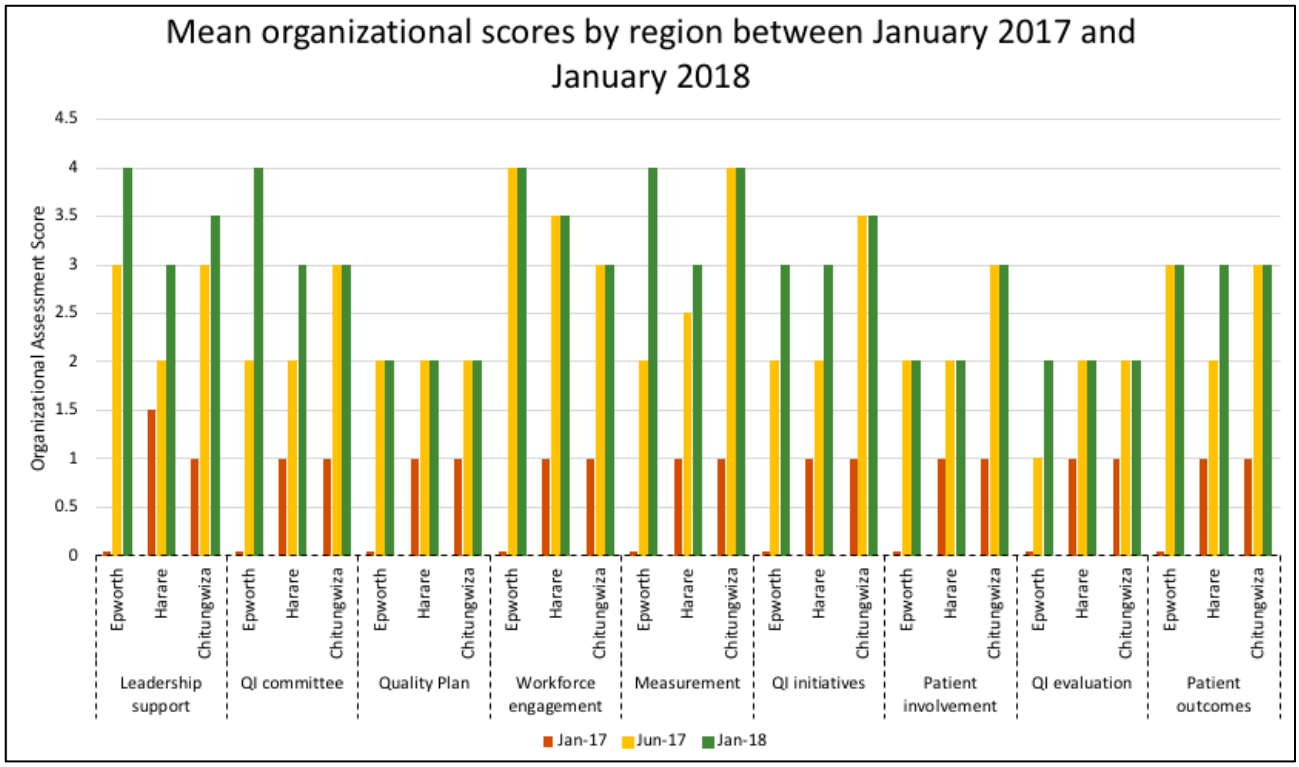
6.0 Organizational Assessment

The Organizational Assessment (OA) (Appendix G), a tool designed by HEALTHQUAL,[2] measures core components of HIV Quality Management programs to support a framework for accountability and development of facility-level quality programs. Organizational Assessments (OAs) were conducted every 6 months by QI coaches to assess structures, processes and functions that support quality management activities. Nine key components are assessed with a score from 0-5, with 5 indicating best performance. Results are used to develop facility-level work plans to address identified gaps.

Improvements across the 3 regions were most notable in the OA domains of leadership support, workforce engagement, functional QI committees and QI initiatives.

Epworth, which did not have any QI activities prior to the launch of the Collaborative, increased from **'0'** (getting started) to **'4'** (progress toward systematic approach to quality) on leadership support, QI committee, workforce engagement and measurement (see Figure 51). See Appendix G1 for scores by site.

Figure 51. Organizational Assessment Scores by region - January 2017 - January 2018



6.0 Knowledge management

Several knowledge management strategies were incorporated into ART4ALL activities. Two Collaborative Briefs were written and disseminated to showcase Collaborative-wide and site-level implementation successes. Routine coaching visits and an active WhatsApp group promoted cross-site and cross-region peer exchange throughout the Collaborative. The MoHCC QI lead and data manager participated in a cross-country Collaborative learning exchange following the 1st Africa Forum in Durban, South Africa, allowing the team to share experiences and learn from experiences of other active Collaboratives in Namibia, Uganda, Nigeria and Malawi. ART4ALL culminated in a

[2] https://healthqual.ucsf.edu/sites/healthqual.ucsf.edu/files/HEALTHQUAL%20OA_February%202018.pdf

harvest session, providing an opportunity for site teams to meet, share implementation experiences and finalize the Collaborative change package.

Successful strategies that were tested during the implementation of the ART4All Collaborative and that led to meaningful improvement will be disseminated in the form of a formal change package, which will be spread by the MoHCC broadly throughout the country. The MoHCC is also exploring spreading successful interventions to other sites in the country and using the same Collaborative approach to address the challenges in other geographic locations.

CONCLUSION

The ART4ALL Collaborative provided a systematic approach to improving early ART initiation that also led to improvements in efficiency of service delivery, completeness and accuracy of data, and cross-departmental communication. As previously mentioned, PLHIV were also engaged as expert patients supporting counselling and patient navigation and through participation at the Collaborative Learning Sessions.

Key findings include:

- 18,775 (70%) new-to-care patients initiated on ART on the same day of diagnosis**.**
- 1,224 (89%) patients initiated on ART on the same day they were brought back to care. These are patients who were diagnosed to be HIV positive and were not initiated on treatment at the time of the launch of the Collaborative.
- 23% increase (54% in February 2017 to 77% in August 2018) in the proportion of newly diagnosed patients who were initiated on ART on the same day of diagnosis per month increased from. Although notable variation in same-day initiation rates for new-to-care patients was observed at baseline, the median rate increased by 28% (52% in February 2017 (IQR 37%-76%) to 79% in August 2018 (IQR 67-96%)). The change noted in the IQR represents a narrowing of the variation in scores, complementing the improvement in mean scores.
- 7% reduction in the proportion of newly initiated patients missing their scheduled monthly clinical visits (28% in March 2017 to 21% in August 2018).
- More than doubling of newly initiated patients who received a viral load test at 6 months post initiation (16% in August 2017 to 40% in August 2018).
- Notable improvement in facility team progress scores demonstrated modest to significant improvement in related measures.

Viral load monitoring, data systems and systems issues pertaining to national policies and procedures are areas for continued attention.

Key Recommendations:

1. **Viral load monitoring**. The ART4ALL Collaborative exposed key issues pertaining to viral load monitoring. Despite improvement, performance remained lower than anticipated and requires continued attention.
    a. Additional resources are required to address inadequate throughput for existing equipment, inconsistent service and maintenance of equipment leading to frequent periods of inactivity, and gaps in supply chain management for reagents and other consumables,
    b. National support for enhancement of lab management information systems, and the lab sample transportation system are essential
    c. Continued resources must be allocated to achieve adequate laboratory capacity and overall performance across the VL cascade.

As a result of low coverage of VL monitoring, it is difficult to interpret VL suppression results.

2. **Data systems**. The Collaborative facilitated site-level improvement in data collection, analysis and use for improvement through the introduction of easy-to-use Excel-based tools designed specifically for QI activities that supplemented existing systems.
    a. Continued use of these tools is recommended.
3. Barriers to site performance that emerged from **system issues**, such as staffing changes, conflicting program goals, and differences in interpreting and implementing new guidelines, were uncovered and successfully addressed through the Collaborative.
    a. The MoHCC and regional coaches should continue to support site-level teams for the elevation of system issues to the appropriate above-site units so that issues can be addressed in a timely fashion.
    b. While the Collaborative introduced structures for routine communication and strategies to address challenges through the Collaborative leadership structure, platforms for bi-directional communication are needed for them to be sustained post-Collaborative.

Following the final harvest session, site teams are working to sustain reliable processes for same day initiation of eligible patients and continue to refine processes that reduce time to ART initiation. Many changes that were tested to improve same-day initiation have been adopted, including compressed counselling sessions, contacting patients previously in care patients and re-engaging them in care, and integrating services. All sites continue to test changes to reduce missed appointments by redesigning their processes and harmonizing appointments on improving viral load monitoring by increasing access. Sites continue to engage people living with HIV as expert patients to support engagement in care, provide care counselling and support, as well as defaulter tracking.

Acknowledgements

We are grateful to the following organizations for supporting the implementation of the ART4ALL Quality Improvement Collaborative:

- Centers for Disease Prevention and Control (CDC)-Zimbabwe
- Chitungwiza City Health Department
- Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)
- Harare City Health Department
- Health Resources and Services Administration (HRSA)
- Ministry of Health and Child Care, Zimbabwe (MOHCC)
- Organization for Public Health Interventions and Development (OPHID)
- Seke District
- UCSF Institute for Global Health Sciences - HEALTHQUAL
- Zimbabwe AIDS Prevention Project Trust (ZAPPT)
- Zimbabwe National Network of People Living with HIV (ZNNP+)

Special thanks to the patients and the following individual for providing guidance, coordination and facilitating the implementation of the Collaborative

Bruce Agins
Richard Birchard
Joshua Bardfield
Eugenia Chinaka
Michelle Geis
Lisa Hirschhorn
Daniel Ikeda
Enelesi Jange
Bekezela Khabo
Japhet Mabuku
Nancy Makunde
Getrude Makurumidze
Joseph Murungu
Blessing Mutede
George Nyandoro
Jeanna Wallenta

APPENDICES

Appendix A: ART4ALL Design Meeting Agenda and List of Participants

Date	Time	Item	Presenter/Facilitator
Day 1: September 22nd, 2016	8:00-8:30	Registration	Mr. Mabuku, Ms. Makurumidze
	8:30-08:40	Welcome remarks and introductions	Dr. Murungu
	08:40-08:45	1. Meeting objectives and outputs	Dr. Apollo
	08:45-09:00	Ground rules	Dr. Khabo
	9:00-9:15	Overview of the purpose of the QI Collaborative	Dr. Balachandra/Ms. Jed
	9:15- 9:30	2. The Ministry "Test and Start initiative"	Dr. Murungu
	09:30-9:45	3. Harare "Test and Start"	Dr. Bvochora
	9:45-10:00	4. Aim statement	Dr. Khabo
	10:00-10:40	5. What is a collaborative? General methods, roles and responsibilities	Dr. Agins
	10:40-11:00	Tea break	
	11:00-11:20	6. Introduction to driver diagrams	Ms. Dolan-Branton
	11:20-13:00	Driver diagram exercise	Ms. Dolan-Branton
	13:00-14:00	Lunch	
	14:00-14:10	Summary of Draft Driver diagram	Ms. Dolan-Branton
	14:10-14:45	Group work: What's missing?	Ms. Dolan-Branton
	14:45-15:30	Report back	Ms. Dolan-Branton
	15:45-16:45	7,8. Measures and data reporting	Dr. Khabo/Mr. Mabuku

Date	Time	Item	Presenter/Facilitator
	8:00-8:30	Registration	Mr. Mabuku, Ms. Makurumidze

Day 2: September 23rd, 2016	8:30-8:40	9. Key issues from Day 1	Dr. Khabo
	8:40-9:00	10. Intervention ideas and concepts	Ms. Dolan-Blanton
	9:00-9:30	11. Case study on intervention ideas	Ms. Inimah
	9:30-9:45	Brainstorming intervention ideas	Ms. Inimah
	9:45-10:30	12. Tennis ball game	Ms. Dolan-Blanton
	10:30-10:45	Tea break	
	10:45-11:00	13. Introduction to terms of reference (TOR)	Dr. Khabo/Ms. Geis
	11:00-11:30	Implementing the Collaborative -- Drafting the TOR	Dr. Khabo/Ms. Geis
	11:30-11:45	Expectations	Dr. Khabo/Ms. Geis
	11:45-12:00	Brainstorming communication platforms	Dr. Khabo/Ms. Geis
	12:00-12:30	Moving towards the Calendar and 14. Next Steps	Dr. Khabo/Ms. Geis
	12:30-12:45	Wrap-up of Design meeting	Dr. Agins/ Ms. Jed
	12:45-1:00	Closing remarks	Dr. Murungu
	1:00-2:00	Lunch	

Design Meeting Participant List	
NAME	**ORGANISATION**
Stanley Takaona	ZHAAU CT
Tsitsi Apollo	MOHCC ATP
Shirish Balachandra	CDC
Angela Mushavi	MOHCC ATP
Brian Komtenza	MOHCC ATP
Caroline Sirewu	NAC
Brilliant Nkomo	MOHCC ATP
Blessing Mutede	EGPAF
Dr. Tonderai Kasu	CHITUNGWIZA MUNICIPALITY
Emily Gwavava	PSI ZIMBABWE
Millicent Matenheyi	MOHCC

Trymore Chawurura	MOHCC ATP
Japhet Mabuku	MOHCC ATP
Nicholas Makombe	I-TECH HARARE CITY
Talent Bvochora	CITY OF HARARE
Bolan Madede	MOHCC
Edwick Mvere	MOHCC
Nyaradzo Tavengwa	PANGAEA/ITECH
Tonderayi Murimwa	UNICEF
Dianah Chioreso	ZAPPT
Rudo Kuwengwa	MOHCC ATP
Gerald Shambira	UZ-DCM
Tendai F Mbengeranwa	NAC
Mukandi Hezel. S	ZNNP+
Dagobert Mureriwa	ZNNP+
Grace M. Longwe	CHITUNGWIZA MUNICIPALITY
Paul Nesara	OPHID
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Joseph Murungu	MOHCC ATP
Bruce Agins	HQI
Michelle Geis	HQI
Julie Neidel	MOHSS NAMIBIA
Kudakwashe C. Takarinda	MOHCC ATP
Shadreck Nyore	SOUTH MED CHITUNGWIZA
Dr John Mandisarisa	CDC
Talent Maphosa	OPHID
Maureen Amagove Inimah	HEALTH QUAL
Getrude Makurumidze	HEALTH QUAL
Suzanne Jed	HRSA

Appendix B: ART4ALL Learning Session 1 Agenda

Tuesday, January 31, 2017	
7:30 AM-8:00 AM	Registration
	Mrs Makwezwa (MOHCC)
8:00 AM-8:20 AM	Official Opening and Welcome Remarks
	Dr. Tsitsi Apollo (MOHCC)
8:20 AM-8:45 AM	Remarks
	Dr. John Mandisarisa (USG), Dr. Bruce Agins (HEALTHQUAL International), Dr. Talent
	Bvochora (City of Harare), Representative (Chitungwiza), Representative (Mashonaland
	East), Shingi Mukandi (ZNNP+)
8:45 AM-9:30 AM	Introductions, Ground Rules and Icebreaker
	Dr. B.B Khabo (MOHCC)
9:30 AM-10:45 AM	Introduction to the Collaborative and Methodology
	Dr. Joseph Murungu
10:45 AM-11:15 AM	Tea Break
11:15 AM-12:45 PM	Baseline findings from the pre-work and indicators
	Dr. B.B Khabo and Japhet Mabuku (MOHCC)
12:45 PM-1:00 PM	Guidelines Overview and rationale for Treat All
	Dr. Rudo Kuwengwa (MOHCC)
1:00 PM-2:00 PM	Lunch
2:00 PM-3:30 PM	Implementation experience panel discussion
	Gloria Gonese (ITECH), Talent Maphosa (OPHID), Dr. Talent Bvochora
	(City of Harare), Sr Matinyarare (City of Harare), Sr Munyukwi
	(Chitungwiza)
	Moderator: Dr. Joseph Murungu
3:30 PM-4:45 PM	Story Board Round (Group A)
4:45 PM-5:00 PM	End of Day Wrap Up
	Dr. Tsitsi Apollo (MOHCC)
5:00 PM-5:30 PM	Tea and Departure
5:30 PM-6:30 PM	Facilitators Debrief

Planning Changes	

Wednesday, February 1, 2017	
7:30 AM-8:00 AM	Registration
	(Mrs Makwezwa)
7:30 AM-8:00 AM	Day 1 Evaluation
8:00 AM-8:30 AM	Team sharing rounds on key issues from Day 1
	(Teams/Facilitator)
8:30 AM-9:00 AM	Driver Diagram
	Lisa Dolan Branton (URC-ASSIST), Dr. B.B. Khabo (MOHCC)
9:00 AM-9:45 AM	System exercise
	Dr. Bruce Agins (HEALTHQUAL International)
9:45 AM-10:45 AM	Process mapping introduction and team time
	Lisa Dolan-Branton (URC-ASSIST), Michelle Geis (HEALTHQUAL
	International)
10:45 AM-11:15 AM	Tea Break
11:15AM-12:15 PM	Problem Solving and team exercise
	Lisa Dolan Branton (URC-ASSIST), Michelle Geis (HEALTHQUAL
	International)
12:15 PM-1:00 PM	Change package
	Dr. Joseph Murungu
1:00 PM-2:00 PM	Lunch
2:00 PM-2:15 PM	Model for Improvement
	Michelle Geis (HEALTHQUAL International)
2:15 PM- 3:45 PM	Tennis Ball exercise: Testing Changes and tracking PDSA's
	Lisa Dolan Branton (URC-ASSIST), Michelle Geis (HEALTHQUAL International)
3:45PM-5:00 PM	Story Board Rounds (Group A, B)
5:00 PM-5:30 PM	Tea and Departure
5:30 PM-6:30 PM	Facilitators Debrief
Setting expectations for next steps	
Thursday, February 2, 2017	

7:30 AM-8:00 AM	Registration
	(Mrs. Makwezwa)
8:00 AM-9:00 AM	Team sharing rounds on key issues from Day 2
	(Teams/Facilitator)
9:00 AM-10:30 AM	Good practices for same day initiation
	Susan Gwashuro (MOHCC), Clinic Referral Facilitators (CRFs), Primary Counselors (PCs)
	Moderator: Dr. Joseph Murungu
10:30 AM-11:00 AM	Tea Break
11:00 AM-12:00 PM	Zin Obelisk Game and Debrief
	Michelle Geis (HEALTHQUAL International)
12:00 PM-1:00 PM	Aim Setting and Team Work Plans
	Michelle Geis (HEALTHQUAL International)
1:00 PM- 2:00 PM	Lunch
2:00 PM-3:30 PM	Team Work Plans continued
	Michelle Geis (HEALTHQUAL International)
2:00 PM-3:30 PM	Break Out: Data entry clerks
	Measurement and Reporting directions and tools
	Japhet Mabuku (MOHCC), Trymore Chawurura (MOHCC), Mr Mukeredzi
	(Harare City Health Department), Cephas Muchuchuti (EGPAF)
3:30 PM-3:45 PM	Measurement and Reporting feedback
3:45 PM-4:45PM	Summary of LS1 goals and Action Period 1 expectations
Dr. Joseph Murungu	
4:45 PM-5:00PM	Learning Session Closing Remarks
	Dr. B.B Khabo (MOHCC)
5:00 PM-5:30 PM	Tea and Departure

Appendix C: ART4ALL Learning Session 2 Agenda

Agenda	
Learning Session Objectives	
• Encourage self-reflection on how ART4ALL Collaborative was implemented by facility teams	
• Facilitate formal peer learning to take place among and within facilities	
• Share experiences on implementation of the ART4ALL Collaborative	
• Update list of "change ideas" with new best practice identified	
• Discuss ways of implementing accelerated tests of change effectively	
• Shortlist change ideas to be tested during AP2	
Day1- Tuesday, June 27th	
08:30-09:00	**Registration & Storyboard Setup – Cynthia/Cassandra**
09:00-09:30	**Welcome and Introductions – Tsitsi/Endris/John/Bruce**
Opening Remarks from MOHCC ATP & QA/QI; CDC and HEALTHQUAL	
Introduction of Participants and Interactive Icebreaker –	
09:30-10:30	**Progress of the ART4ALL Collaborative- Bobbie/Joseph/Japhet**
	(Review of National Milestones Achieved So Far)
-Team will give broad overview of range of PDSAs carried out, summary of system level issues noted and addressed, coaching, data quality issues.	
-Brief summary comparing baseline and current performance for the three regions.	
10:30-11:00	**Tea Break**
11:00-12:30	**Storyboard sharing**
Chitungwiza and Epworth facilities	
12:30-13:30	**Lunch**
13:30-14:15	**QI Game – Red Bead Game**
14:15 -15:30	**Breakout Groups: Session 1** –
	See guiding questions
A1. Improving Data Quality for the Collaborative– Japhet Mabuku, Trymore Chawurura, Brilliant Nkomo	
B1. Role of QI Coaching in Collaboratives– Michelle Geis, Bobbie	
C1. Consumer Involvement in QI work – Bruce, Herzel	
D1. Counselling/patient preparation – Beatrice, Felicia	
15:30-16:30	**Storyboard sharing**
	First half of Harare facilities
16:30-17:00	**Wrap up of Day 1, Tea and Home…**
Day 2- Wednesday, June 28th	

08:30-08:45 Registration – Cynthia, Cassandra
08:45-09:00 Review and recap of day 1
09:00-09:45 The evaluation framework for the ART4ALL Collaborative– *Lisa H*
Background to network analysis, including sharing of LS1 findings; distribution and completion of LS2 questionnaire
09:45-10:15 QI Game
10:15-10:30 Success stories-
One facility gets to share how they managed to improve performance on an ART4ALL Collaborative indicator
10:30-11:00 Break
11:00-13:00 Storyboard sharing
Rest of Harare facilities
13:00-14:00 Lunch
14:00-15:30 Group work: Anticipated gaps during AP2 and recommendations
A2. Data Entry Clerks-
B2. Clinicians-
C2. Primary Counsellors-
D2. Managers- (Sisters-in-charge, DMO, DNO…)
15:30-16:30 Introduction to planning for AP2
Each facility team drafts plan for first two PDSAs of AP2
16:30-17:00 Wrap up of Day2, Tea and Home…
Day 3- Thursday, June 29th
08:30-08:45 Registration – Cynthia, Cassandra
08:45-09:00 Review and recap of day 2
09:00-09:45 Brainstorm session- Team Action Planning Time – teams/coaches
Ideas on how to enable and facilitate peer learning in between now and LS3; and feedback

09:45-10:30	**AP2 Planning continued…**
Facility teams continue planning for AP2- two draft plans each	
10:30-11:00	**Tea**
11:00-11:45	**Finalize plans for AP2**
With support from Coaches	
12:45-13:00	**Closing remarks– MOHCC**
Participants are thanked for their participation and encouraged to complete action items developed in team time.	
13:00-14:00	**Lunch and adjourn**

Appendix D: ART4ALL Learning Session 3 Agenda

Agenda

Objectives

Learning Session Objectives

- Encourage self-reflection on how ART4ALL Collaborative was implemented by facility teams
- Facilitate formal peer learning to take place among and within facilities
- Share experiences on implementation of the ART4ALL Collaborative
- Update list of "change ideas" with new best practice identified
- Discuss ways of implementing accelerated tests of change effectively
- Shortlist change ideas to be tested during AP3

Day 1 Site Sharing and Data Results

8:00 – 8:30AM	**Registration**
8:30 - 9:00AM	**Introductions, Ground Rules and Ice Breaker**
9:00 – 9:30AM	**Opening remarks**
9:30 – 10:30AM	**Collaborative journey so far**
10:30-11:00AM	**TEA**
11:00-100 PM	**Panel Session: Experience Sharing**
1:00 – 2:00PM	**LUNCH**
2:00-3:00PM	**Marshmallow game**

3:00-4:00PM	**Collaborative Performance Measurement**
4:30-5:00PM	**TEA BREAK**

Day 2 – Challenges / emerging issues and group problem solving

8:00-8:30AM	**Registration**
8:30 – 9:00AM	**Welcome and Recap**
9:00 – 9:30AM	**Innovation through infographics**
9:30-10:00AM	**Addressing challenges through optimizing process flow**
10:00-11:00AM	**Panel Session: Viral load monitoring**
11:00-11:30AM	**TEA BREAK**
11:30-12:30PM	**Innovation through infographics**
12:30-1:00PM	**Addressing challenges through optimizing process flow**
1:00-2:00PM	**LUNCH**
2:00-3:00PM	**Panel Session: Data challenges**
3:00-4:00PM	**Storyboard Session**
4:00-4:30PM	**Storyboard debrief**
4:30-5:00PM	**TEA BREAK**

Day 3 – Focus on recognition and the way forward

8:00-8:30AM	**Registration**
8:30 – 9:00AM	**Welcome and Recap**
9:00 – 10:00AM	**Open space: Tying up loose ends (Missed appointments, building data capacity, documentation and team independence)**
10:00-11:00AM	**Storyboard Session and Final voting**
11:00-11:30AM	**TEA BREAK**

11:30PM-12:00PM	**Quality Awards/Recognition**
12:00-1:30PM	**Group Activity: Action Period 4 and Team Action Plans**
1:30-2:00PM	**Closing Remarks**
2:00-3:00PM	**LUNCH**

Appendix E. ART4ALL HARVEST MEETING AGENDA

Rainbow Towers Hotel, Harare

09-10 AUGUST, 2018

Objectives

1. Update Collaborative Change Package
2. Rank interventions by effectiveness
3. Facilitate further peer learning
4. Recognize high-achievers

Time	Day 1 (August 9, 2018)	Presenter/Facilitator
08:00–08:30	Arrival and Registration	Cassandra Hove/Shingi Makumbe
08:30 – 09:00	Opening Session: Introductions, Meeting Objectives	Mr Chirume
10:00 – 10:40	Overview of ART4ALL QI Collaborative *(The Collaborative Journey so far, including outcomes of clients since Collaborative)*	Dr B Khabo
10:40 – 11:10	***Coffee/Tea Break***	
11:10 – 13:00	Group work (Facility Teams): Finalization of list of Tested changes, finalizing details of each change idea adopted, Ranking of the adopted change ideas (sticker notes)	Participants
13:00 – 14:00	***Lunch***	
14:00 – 15:00	Plenary: Ranked changes, by indicator, and by facility	Participants

15:00 – 16:45	Storyboard Session	Participants
16:45 – 17:00	***Tea Break & End of Day 1***	

Time	**Day 2 (August 10, 2018)**	**Presenter/Facilitator**
08:00 – 08:20	Registration	Cassandra Hove/Shingi Makumbe
08:20 – 08:30	Key issues from Day 1	Dr Khabo
08:30- 09:30	Coffee-shop: Headlines	Participants
09:30 – 10:30	Panel Discussion: Summary of successful changes on missed appointments, VL, data quality.	Selected participants
10:30– 11:00	***Coffee/Tea Break***	
11:00 – 11:50	Group-work and plenary: Drafting of sustainability plans by facility teams	Participants
12:40 – 13:00	Group activity/game:	
13:00 – 14:00	***Lunch***	
14:00 – 14:15	Consumer involvement exercise: *ZNNP+/QI team with a consumer*	
14:15 – 15:00	Group work and plenary: Creating a legacy *Also includes a quick survey of participants to get their individual experiences about their participation in the Collaborative.*	Mr Chirume
15:00 – 16:00	Reward and Recognition: Award of prizes	Participants
16:30 – 17:00	**Tea Break & End of Meeting**	

Appendix F: National Organizational Assessment Tool

National Quality Improvement Program
Organizational Quality Assessment Tool

Purpose of the Organizational Assessment:
Sustained improvement activities require attention to the organizational Quality Management Program (QMP), in which structures, processes and functions support measurement and improvement activities. Development, implementation and spread of sustainable QI requires an organizational commitment to quality management. Organizational structure is fundamental to QI success, and involves a receptive health care organization, sustained leadership, staff training and support, time for teams to meet, and data systems for tracking outcomes. This structure supports quality initiatives that apply process improvement including: reliable measurement, root cause analysis and finding solutions for the most important causes identified.

This assessment identifies all of the important elements associated with a sustainable QMP. Scores from 0 to 5 are defined to identify gaps in the QMP and to set organizational priorities for improvement. The scoring structure measures program performance in specific domains along the spectrum of improvement implementation. When assigning a score of 0 to 5 for individual components, select the number that most accurately reflects organizational achievement in that area. **You must meet all of the elements associated with a particular number in order to receive that score.** If all of the boxes are not checked within one particular score section, then the score should be the number preceding that one. To score "2" for example, each box for the elements corresponding to that score section must be checked. If there is any uncertainty in assessing whether performance is closer to the statement in the next higher or next lower range, **choose the lower score**. Applied annually, this assessment will help a program evaluate its progress and guide the development of goals and objectives. Note that you may decide to check boxes for criteria in some of the higher scores and use that information to address gaps in the program that will help you meet the higher score.
The OA is implemented in two ways: 1) by an expert QI coach or 2) as a self-evaluation. The results are ideally used to develop a workplan for each element with specific action steps and timelines guiding the planning process to focus on priorities, setting direction and assuring that resources are allocated for the QMP. Whether performed by a QI coach or applied as a self-evaluation, key leadership and staff should be involved in the assessment process to ensure that all key stakeholders have an opportunity to provide important information related to the scoring.

Results of the OA should be communicated to internal key stakeholders, leadership and staff. Engagement of organizational leadership and staff is critical to ensure buy-in across departments, and essential for translating results into improvement practice.

Improvement activities should be aligned with National Quality Improvement strategies, where applicable.

Note: for small centers with few staff, a formal committee or project team may not be necessary to complete the functions described in this assessment. In these organizations, the entire staff should be considered the "committee" or the "team" that is involved in improvement activities.

A. <u>Quality Management</u>

GOAL: To assess how the organizational Quality Management Plan support a systematic process with identified leadership, accountability and dedicated resources.

Three components form the backbone of a strong sustainable QMP: Leadership, Quality Planning and a Quality Committee.

Leadership

Senior leadership staff are defined by each organization since titles and roles vary among organizations. Clinical programs should include a clinical leader and an administrative leader. Larger programs may include additional leadership positions. There may be other informal leaders in the organization that support quality activities, but these are not included in this section. When reviewing the criteria for each score, consider the clinical or administrative leader who is responsible for the quality management program or is most closely associated it with it if there is no one officially designated for this function. Ideally, this person should be a hospital or health center senior leader who has the authority to convene committees and approve actions that are important to implement the quality management program.

Leaders establish a unity of purpose and direction for the organization and work to engage all staff, patients and external stakeholders in meeting organizational goals and objectives, this includes motivation that promotes shared responsibility and accountability with a focus on teamwork and individual performance. Organizational leaders should prioritize quality goals and improvement initiatives for the year, and establish accountability for performance at all organizational levels. The benefits of strong leadership include clear communication of goals and objectives, where evaluation, alignment and implementation of activities are fully integrated.

Evidence of leadership support and engagement includes establishment of clear goals and objectives, communication of program/organizational vision, creating and sustaining shared values, and providing resources for implementation.

Quality Committee

A quality committee drives implementation of the quality plan and provides high-level comprehensive oversight of the quality program. This involves reviewing performance measures, developing workplans, chartering project teams and overseeing progress. Teams should be multidisciplinary and include a client when feasible. The committee should meet monthly, document their activities and share meeting notes with committee members and other organizational staff and key stakeholders. For smaller organizations the entire staff may be the QI committee and should be considered in that way since they perform all of the functions of the Quality Management Program.

Quality Plan

A quality management plan documents programmatic structure and annual quality program goals. The quality plan should serve as a roadmap to guide improvement efforts, and include a corresponding workplan to track activities, monitor progress and signify achievement of milestones.

A.1. To what extent does senior leadership create an environment that supports a focus on improving the quality of care in the organization?		
Getting Started	0	☐ Senior leaders are not visibly engaged in the quality of care program
Planning and initiation	1	Leaders are: ☐ Primarily focused on reporting requirements ☐ Inconsistent in use of data to identify opportunities for improvement ☐ Not fully involved in improvement efforts ☐ Not fully involved in quality meetings ☐ Not supporting provision of resources for QI activities, including dedicated time for improvement
Beginning Implementation	2	Leaders are: ☐ Engaged in quality of care with focus on use of data to identify opportunities for improvement ☐ Somewhat involved in improvement efforts ☐ Somewhat involved in quality meetings ☐ Supporting resources for QI activities but not yet at optimal levels to support improvement
Implementation	3	Leaders are: ☐ Providing routine leadership to support the quality management program ☐ Providing routine and consistent allocation of staff or staff time for QI (depending on organization size) ☐ Actively engaged in QI planning and evaluation ☐ Actively managing/leading quality committee meetings ☐ Clearly communicating quality goals and objectives to all staff ☐ Recognizing and supporting staff involved in QI ☐ Routinely reviewing performance measures and patient outcomes to inform program priorities and data use for improvement. ☐ Attentive to national health care trends/priorities that pertain to the program
Progress toward systematic approach to quality	4	Leaders are: ☐ Supporting development of a culture of QI across the program, including provision of resources for staff participation in QI learning opportunities, seminars, professional conferences, QI story boards for distribution ☐ Supporting prioritization of quality goals based on data, and critical areas of care ☐ Promoting patient-centered care and patient involvement through the QMP ☐ Routinely engaged in QI planning and evaluation ☐ Routinely providing input and feedback to QI teams

Full systematic approach to quality management in place	5	Leaders are: ☐ Actively engaged in the implementation and shaping of a culture of QI across the program, including provision of resources for staff participation in QI learning opportunities, seminars, professional conferences, QI story boards ☐ Encouraging open communication through routine team meetings and dedicated time for staff feedback ☐ Routinely and consistently engaged in QI planning and evaluation ☐ Routinely and consistently providing input and feedback to QI teams ☐ Encouraging staff innovation through QI awards and incentives ☐ Directly linking QI activities back to institutional strategic plans and initiatives

A.2. To what extent does the organizational program have an effective quality committee to oversee, guide, assess, and improve the quality of services?		
Getting Started	0	☐ A quality committee has not yet been developed or formalized or is not currently meeting regularly to provide effective oversight for the quality program
Planning and initiation	1	The quality committee: ☐ May review data triggered by an event or problem, or generated by donor or Ministry of Health urging ☐ Has not yet developed a systematic process for data use to identify and prioritize annual goals ☐ Has not yet defined roles and responsibilities for participating individuals
Beginning Implementation	2	The quality committee: ☐ Has plans to hold regular meetings, but meetings may not occur regularly and/or do not focus on performance data ☐ Has been formalized, representing most institutional departments ☐ Has identified roles and responsibilities for participating individuals including the QI focal person ☐ Has not yet implemented a structured process to review data for improvement
Implementation	3	The quality committee: ☐ Is formally established and led by the organization's director or manager as chair ☐ Represents most departments and disciplines ☐ The quality committee has established annual calendar of meeting dates ☐ Has defined roles and responsibilities as codified in the quality plan including the QI focal person ☐ Reviews performance data at each meeting ☐ Discusses QI progress and redirects teams as appropriate ☐ Introduces early stages of ground rule management and efficiency tools during meetings

Progress toward systematic approach to quality	4	<u>The quality committee</u>: ☐ Is formally established and led by an organizational director or manager as chair who actively oversees the work of the quality program with established annual meeting dates ☐ Represents all departments and disciplines ☐ Has established a performance review process to regularly evaluate clinical measures and respond to results as appropriate, including staff and patient satisfaction ☐ Communicates with non-members through distribution of minutes and discussion in regular staff meetings ☐ Actively utilizes a workplan to closely monitor progress of quality activities and team projects
Full systematic approach to quality management in place	5	<u>The quality committee</u>: ☐ Is a formal entity led by the organizational director or manager or by an individual as designated by the organization ☐ Represents all departments and disciplines ☐ Has defined roles and responsibilities as codified in the quality plan including a QI focal person ☐ Has established a systematic performance and review process, including structure, and process and outcomes measures. ☐ Is responsive to changes in treatment guidelines and external/national priorities, which are considered in development of indicators and choosing improvement initiatives ☐ Has fully engaged senior leadership who lead discussions during committee meetings ☐ Effectively communicates activities, annual goals, performance results and progress on improvement initiatives to all stakeholders, including staff and patients

A.3. To what degree does the organization have a comprehensive quality plan that is actively utilized to oversee quality improvement activities?		
Getting Started	0	☐ A quality plan, including elements necessary to guide the administration of a quality program has not been developed
Planning and initiation	1	<u>The quality plan</u>: ☐ Is written but does not include the essential components necessary to direct an effective quality program (see level 3)
Beginning Implementation	2	<u>The quality plan</u>: ☐ Is written for the HIV program only, and contains some of the essential components (see level 3) ☐ Is under review for approval by senior leadership, and includes steps for implementation ☐ Includes a designated point of contact to manage QM program communication within the organization and with the national program
Implementation	3	<u>The quality plan</u>: ☐ Is complete, defining all essential QI components. This includes goals and objectives, quality committee roles, responsibilities and logistics, performance measurement and review processes, annual goal identification and prioritization processes, QI methodology, communication strategy, patient involvement, and a program evaluation procedure.

		☐ Includes a workplan/timeline outlining key activities of the quality program and improvement initiatives, including individuals accountable for each. The timeline is reviewed regularly by the quality committee and modified as necessary to achieve the identified goals. ☐ An organogram visually depicting the organizational quality management structure
Progress toward systematic approach to quality	4	<u>The quality plan</u>: ☐ Has been implemented and regularly used by the quality committee to direct the quality program ☐ Includes annual goals identified based on data generated through internal and external reviews, and engagement of the quality committee and staff to elicit priorities ☐ Includes a workplan/timeline outlining key activities in place and routinely used to track progress of performance measures and improvement initiatives, and is modified as needed to achieve annual goals ☐ Is routinely communicated to most stakeholders, including staff, patients, board members and the parent organizations, if appropriate ☐ Is evaluated annually by the quality committee to ensure that the needs of all stakeholders are met
Full systematic approach to quality management in place	5	<u>The quality plan</u>: ☐ Is written, implemented and regularly utilized by the quality committee to direct the quality program and includes all necessary components (see level 3) ☐ Includes regularly updated annual goals that were identified by the quality committee using data based on internal performance measures and externally required indicators through engagement of the quality committee and staff to identify priorities for improvement ☐ Includes the workplan/timeline outlining key activities in place ☐ Is routinely used to track progress on performance measures and improvement initiatives, and modified as needed to achieve annual goals ☐ Is communicated broadly to all stakeholders, including separate staff, patients, board members and the parent organizations, as appropriate ☐ Is evaluated annually by the quality committee and revised as needed to ensure that the needs of all stakeholders are met. ☐ Is adapted to changes in national policies and to ensure that the program continues to meet the changing needs of the patient as the evidence base and guidelines evolve

Opportunity/Gaps

B. <u>Workforce Engagement in the quality program</u>

GOAL: To assess awareness, interest and engagement of staff in quality improvement activities.

Staff engagement in the quality management program at all organizational levels is central to the success of improvement activities. Engagement includes development and promotion of staff knowledge around organizational systems and processes to build sustainable quality management programs, such as internal management processes, operational barriers, patient interaction, and successful strategies and barriers to QI implementation.

Ongoing training and retraining in QI methodology and practical skills reinforces knowledge and the building of workforce expertise around improvement. As staff progress along the continuum of QI sophistication, improvement is slowly integrated into routine work and practice, enhancing staff engagement in the process. Immediate access to improvement data for example, empowers staff to focus on key areas of care and build consensus around QI activities to improve patient outcomes.

As QI becomes part of the institutional culture and team work progresses, staff embrace their respective roles and responsibilities, acquiring a sense of ownership and deeper involvement in improvement work.		
B.1. To what extent are clinicians and staff routinely engaged in quality improvement activities and provided training to enhance knowledge, skills and methodology needed to fully implement QI work on an ongoing basis?		
Getting Started	0	☐ All of the staff (clinical and non-clinical) are not routinely engaged in QI activities and are not provided training to enhance skills, knowledge, theory or methodology or encouragement to identify opportunities for improvement and develop effective solutions
Planning and initiation	1	Engagement of core staff in QI (clinical and non-clinical): ☐ Is under development and includes training in QI methods and opportunities to attend meetings where QI projects are discussed
Beginning Implementation	2	Engagement of core staff in QI (clinical and non-clinical): ☐ Is underway and some staff have been trained in QI methodology ☐ Includes QI meetings attended by some designated staff
Implementation	3	Engagement of core staff in QI (clinical and non-clinical): ☐ Includes attendance in at least one training in QI methodology. Staff members are generally aware of Program QI activities (quality plan/priorities) ☐ Includes involvement in QI projects, project selection and participation in a QI committee ☐ Includes QI project development, where projects are discussed and reviewed during staff meetings ☐ Includes defined roles and responsibilities related to QI. Clinicians and staff are aware of the organizational quality management plan and priorities for improvement. ☐ Includes a formal process for regularly recognizing staff performance in QI via performance appraisals, public recognition during staff meetings, etc.
Progress toward systematic approach to quality	4	Engagement of core staff in QI (clinical and non-clinical): ☐ Is demonstrated by evidence that staff members are engaged and encouraged to use those skills to identify QI opportunities and develop solutions ☐ Involves a shared language regarding quality, which is evidenced in routine discussion ☐ Is described in the annual quality plan, and includes staff training and roles and responsibilities regarding staff involvement in QI activities ☐ Includes a formal process for recognizing staff performance internally. QI teams are provided opportunities to present successful projects to all staff and leadership.
Full systematic approach to quality management in place	5	Engagement of core staff in QI (clinical and non-clinical): ☐ Is defined by staff awareness of the importance of quality and continuous improvement, and their participation in identifying QI issues, developing strategies for improvement and implementing strategies ☐ Is evidenced by regular and continuous QI education and training in QI methodology ☐ Is reinforced by leadership who encourages all staff to make needed changes and improve systems for sustainable improvement including the necessary data to support decisions ☐ Involves formal and informal discussions where teamwork is openly encouraged and leadership shapes teamwork behavior ☐ Incorporates routine communication about new developments in QI, including promotion of QI projects both internally (e.g., quality conferences) and externally (e.g., national meetings) ☐ Includes a formal process for recognizing staff performance internally. QI teams are provided opportunities to present successful projects to all staff and leadership

		☐ Includes opportunities for abstract development and submission to relevant professional conferences and authorship of related publications about development and implementation of institutional QM programs ☐ Involves clearly defined roles and responsibilities which are utilized to assess staff performance

C. Measurement, Analysis and Use of Data to Improve Program Performance

GOAL: To assess how the organization uses data and information to identify opportunities for improvement, develops measures to evaluate the success of change initiatives, to align initiatives with national priorities, and to monitor results; and to ensure that accurate, timely data and information are available to stakeholders throughout the organization to drive effective decision making.

The Measurement, Analysis and Use of Data section assesses how the organizational program selects, gathers, analyzes and uses data to improve performance. This includes how leaders conduct performance reviews to ensure that actions are taken, when appropriate, to achieve the organization's program goals.

C.1. To what extent does the organization routinely measure performance and use data for improvement?

Getting Started	0	Performance measures: ☐ Have not been identified
Planning and initiation	1	Performance measures: ☐ Have been identified to evaluate some components of the organization's program, but do not cover all significant aspects of service delivery
		Performance data: ☐ Collection is planned but has not been initiated
Beginning Implementation	2	Performance measures: ☐ Are defined and used by staff in all applicable service delivery areas
		Performance data: ☐ Analysis and interpretation of results on measures is in early stages of development and use ☐ Results are occasionally shared with staff and patients, but a structured process is not yet in place
Implementation	3	Performance measures: ☐ Are defined by the Ministry of Health or donor partner ☐ Are consistently used by staff in all applicable service delivery areas
		Performance data: ☐ Are longitudinally tracked, analyzed and reviewed with the frequency required to identify areas in need of improvement. A structured review process is used regularly by the leadership to identify and prioritize improvement needs and initiate action plans to ensure that goals are achieved. ☐ Are collected by staff with working knowledge of indicator definitions and their application ☐ Results and associated measures are routinely shared with staff and their input is elicited to make improvements ☐ Clinic has a process for checking the accuracy of its data occasionally but not systematically
Progress toward systematic approach to quality	4	Performance measures: ☐ Are tied to organizational goals and priorities ☐ Are defined and consistently used by staff in all applicable departments
		Performance data: ☐ Are reviewed for accuracy on all measures in all departments ☐ Are actively used to drive improvement activities ☐ Results and associated measures are frequently shared with staff to elicit their input and engage them in improvement processes aligned with organizational goals

Full systematic approach to quality management in place	5	Performance measures: ☐ Are selected using national/donor partner measures and organizational annual goals, with the intent to meet Ministry of Health requirements and the needs of stakeholders and patients ☐ Reflect organizational priorities and patients, in consideration of organizational & local issues ☐ Are defined for key component ☐ Are evaluated regularly to ensure that the program is able to respond effectively to internal and external changes quickly. ☐ Are linked to performance of key clinical outcomes
		Performance data: ☐ Are reviewed for accuracy on all measures in all applicable departments ☐ Visible or easily accessible to ensure data reporting transparency throughout the organization ☐ Are arrayed in formats that enable accurate interpretation, such as run charts or simple bar graphs ☐ Results and associated measures are systematically shared with all key stakeholders, including staff and patients ☐ Are systematically reviewed through a Formal Data Quality Assurance program
Opportunities/Gaps:		

D. Quality Improvement Initiatives

GOAL: To evaluate how the organization uses QI methodology and teamwork to achieve program goals and maintain high levels of performance over long periods of time.

The Quality Improvement Initiatives section examines how leadership and workforce use these methods and tools to conduct improvement initiatives with emphasis on identification of the exact causes of problems and designing effective solutions; determining program specific best practices and sustaining improvement over long periods of time. In high reliability organizations, robust process improvement methodology is routinely utilized for all identified problems and improvement opportunities to assure consistency in approach by all staff members.

D.1. To what extent does the organization identify and conduct quality improvement initiatives using QI methodology to assure high levels of performance over long periods of time?

Getting Started	0	☐ Formal quality improvement projects have not yet been initiated in the organizational program
Planning and initiation	1	QI initiatives: ☐ Focus on individual cases without assessment of organizational performance or system level analysis of data. Reviews primarily used for inspection. ☐ Are not team-based ☐ Do not use specific tools or methodology to understand causes and make effective changes
Beginning Implementation	2	QI initiatives: ☐ Are prioritized by the quality committee based on program goals, objectives and analysis of performance measurement data ☐ Involve team leaders and team members who are assigned by the quality committee or other leadership ☐ Begin to use specific tools or methodology to understand causes and make effective changes

Implementation	3	QI initiatives: ☐ Are ongoing based on analysis of performance data and other program information, including external reviews and assessments ☐ Focus on processes of care in which QI methodology is routinely utilized ☐ Are regularly documented and provided to the Quality Improvement Committee ☐ Involve staff on QI teams. Cross departmental/cross functional teams are developed depending on specific project needs. This would include laboratory, administrative and pharmacy staff where relevant.
Progress toward systematic approach to quality	4	QI initiatives: ☐ Are ongoing based on analysis of performance data and other program information, including external agency reviews and assessments ☐ Can be identified by any member of the program team through direct communication with program leadership ☐ Routinely and consistently reinforce and promote a culture of quality improvement throughout the program through shared accountability and responsibility of identified improvement priorities ☐ Are supported with appropriate resources, including people and time, to achieve effective and sustainable results ☐ Involve support of data collection with results routinely reported to QI project teams
Full systematic approach to quality management in place	5	QI initiatives: ☐ Are ongoing in core service categories ☐ Correspond with a structured process for prioritization based on analysis of performance data and other factors, such as patient surveys ☐ Are implemented by project teams. Further, physicians and staff can identify an improvement opportunity at any point in time and suggest a QI team be initiated ☐ Consistently and routinely utilize robust process improvement and multidisciplinary teams to identify actual causes of variation and apply effective, sustainable solutions ☐ Are guided by a team leader, and include all relevant staff depending on specific project needs ☐ Are regularly communicated to the Quality Committee, staff and patients ☐ Routinely involve patients on QI project teams ☐ Are presented in storyboard context or other formats and reported to the larger organization and/or placed in public areas for staff and patients (if relevant) ☐ Involve recognition of successful teamwork by senior leadership ☐ Are supported by development of sustainability plans
Opportunities/Gaps:		

E. Patient Involvement

Goal: This section assesses the extent to which patient involvement is formally integrated into the quality management program.

Patient involvement encompasses the diversity of individuals using the organization's services and can be achieved in multiple ways, including solicitation of patient perspectives through focus groups, key informant interviews and satisfaction surveys; a formal patient advisory board that is actively engaged in improvement work; including patients as members of organizational committees; conducting patient needs assessments and including patients in specific QI initiatives. Ideally patients have a venue to identify improvement concerns and are integrated into the process to find solutions and develop improvement strategies. Overall, patients are considered valued members of the program, where patient perspectives are solicited, information is used for performance improvement and feedback is provided to patients. Patient experience is considered an important dimension of quality that is considered in determining improvement priorities and included as an important component of the quality management plan.

E.1. To what extent are patients effectively engaged and involved in the HIV quality management program?

Getting Started	0	☐ There is currently no process to involve patients in HIV quality management program activities
Planning and Initiation	1	Patient involvement is demonstrated by: ☐ Occasionally soliciting patient feedback, but no formal process is in place for ongoing and systematic participation in quality management program activities
Beginning Implementation	2	Patient involvement is demonstrated by: ☐ Soliciting patient feedback, with development of a formal process for ongoing and systematic participation in quality management program activities, such as through patient satisfaction surveys
Implementation	3	Patient involvement is demonstrated by: ☐ Engagement with patients to solicit perspectives and experiences related to quality of care ☐ Formal involvement in quality management program activities through a formal patient advisory committee, satisfaction surveys, interviews, focus groups, storytelling and/or patient training/skills building. However, the extent to which patients participate in quality management program activities is not documented or assessed.
Progress toward systematic approach to quality	4	Patient involvement is demonstrated by: ☐ A formal process for patients to participate in quality management program activities, including a formal patient advisory committee, surveys, interviews, focus groups and/or patient training/skills building ☐Three or more of the following activities: – Sharing of performance data and discussing quality during formal patient meetings – membership on the internal quality management team or committee – training in quality management principles and methodologies – engagement to make recommendations based on performance data results – increasing documentation of how recommendations by patients are used to implement quality improvement projects ☐ Use of documented information gathered through the above activities to improve the quality of care. However, staff does not review with patients how their involvement contributes to refinements in quality improvement activities.
Full systematic approach to quality management in place	5	Patient involvement is demonstrated by: ☐ A formal, well-documented process for patients to participate in HIV quality management program activities, including a patient advisory committee with regular meetings, patient surveys, interviews, focus groups and patient training/skills building ☐ Quality improvement activities that include at least four of the items bulleted in E1#4 ☐ Information gathered through the above noted activities being documented, assessed and used to drive QI projects and establish priorities for improvement ☐ Review of changes by patients with program staff based on recommendations received with opportunities to offer refinements for improvements. Information is gathered in this process and used to improve the quality of care.

		☐ Involvement on at least an annual basis in the review by the quality management team/committee of successes and challenges of patient involvement in quality management program activities, with the goal of enhanced collaboration between patients and providers engaged in improvement
Opportunities/Gaps:		

F. Quality Program Evaluation

GOAL: To assess how the organization evaluates the extent to which it is meeting the identified program goals related to quality improvement planning, priorities and implementation.

Quality program evaluation can occur at any point during the cycle of quality activities, but should occur annually at a minimum. The process of evaluation should be linked closely to the quality plan goals: to assess what worked and what did not, to determine ongoing improvement needs and to facilitate planning for the upcoming year. The evaluation examines the methodology, infrastructure and processes, and assesses whether or not these led to expected improvements and desired outcomes. At a minimum, the evaluation should assess access to data to drive improvements, success of QI project teams; and effectiveness of quality structure. The evaluation is most effectively performed by program leadership and the program's quality committee, optimally with some degree of patient involvement. Although external evaluations may be useful by peers or formal evaluators, the purpose of this assessment is focused on internal routine evaluation of the quality management program.

F.1. Is a process in place to evaluate the organization's quality management plan and related activities, and processes and systems to ensure attainment of quality goals, objective and outcomes?

Getting Started	0	☐ No formal process is established to evaluate the quality program
Planning and Initiation	1	Quality program evaluation: ☐ To assess program processes and systems is exclusively external (National/donors/partners)
Beginning Implementation	2	Quality program evaluation: ☐ Is part of a formal process and is integrated into annual quality management plan development, but has not been consistently employed
Implementation	3	Quality program evaluation: ☐ Occurs annually, conducted by the quality committee, and includes QM plan and workplan updates and revisions ☐ Involves annual (at minimum) revision of quality goals and objectives to reflect current improvement needs ☐ Results are used to plan for future quality efforts ☐ Includes a summary of improvements and performance measurement trends to document and assess the success of QI projects ☐ Results, noted above, are shared with patients and other key stakeholders
Progress toward systematic approach to quality	4	Quality program evaluation: ☐ In addition to the elements listed in F1.3, findings are integrated into the annual quality plan and used to develop and revise program priorities ☐ Is reviewed during quality committee meetings to assess progress toward planning goals and objectives ☐ Includes review of performance data, which is used to inform decisions about potential changes to measures

		☐ Is used to determine new performance measures based on new priorities if they are identified ☐ Includes analysis of QI interventions to inform changes in program policies and procedures to support sustainability
Full systematic approach to quality management in place	5	Quality program evaluation: ☐ In addition to the elements listed in F.1. 3 and 4, findings are integrated into routine program activities as part of a systematic process for assessing quality activities, outcomes and progress toward goals. Data and information from the evaluation are provided regularly to the quality committee. ☐ Is used by the quality committee to regularly assess the success of QI project work, successful interventions and other markers of improved care ☐ Includes data reflecting improvement initiatives, and is presented to ensure comprehensive analysis of all quality activities ☐ Uses a detailed assessment process. The results of this assessment are utilized to revise and update the annual quality plan; adjust organizational program priorities; and identify gaps in the program. ☐ Includes an analysis of progress towards goals and objectives and QI program successes and accomplishments ☐ Describes performance measurement trends which are used to inform future quality efforts
Opportunities/Gaps		

G. Achievement of outcomes

GOAL: To assess HIV program capability for achieving excellent results and outcomes in areas that are central to providing high quality HIV care.

To determine whether a program is achieving excellence in HIV care, a system for monitoring and assessing clinical outcomes should be in place. This system should include routine analysis of an appropriate set of measures; trending results over time; stratifying data by high-prevalence populations and comparison of results to a larger aggregate data set* used for programmatic target setting. A set of appropriate measures may be externally developed (national government, PEPFAR, WHO/UNAIDS) and/or internally developed based on program goals. Examples of outcome measures include viral load suppression, retention in care, mother-to-child transmission rates, and late diagnosis of HIV as measured by either CD4<200 or AIDS diagnosis at time of testing. At least one of these measures should be incorporated into the program's set of clinical measures.

*Possible data sets for comparison include national, provincial or partner network data sets.

G.1. To what extent does the HIV program monitor patient outcomes and utilize data to improve patient care?

Getting Started	0	☐ No clinical performance results are routinely reviewed or used to monitor patient outcomes and guide improvement activities
Planning and Initiation	1	Data: ☐ A clinical database is used to routinely measure performance of care (EMR, database, register) ☐ Some measures are routinely reviewed and used to guide improvement activities ☐ Trends for some measures are reported to determine improvement over time

Beginning Implementation	2	Data: ☐ Results for most measures are routinely reviewed and used to guide improvement activities ☐ Trends for most measures are reported and many show improving trends over time
Implementation	3	Data: ☐ A listing of active patients is maintained and refreshed at least annually to remove those who have died, transferred or are lost to follow-up according to national definitions ☐ Results for all measures are routinely reviewed and used to guide improvement activities, including one of the following: viral load suppression (CD4 may be used as a proxy if viral load is not available), retention in care, late diagnosis, MTCT transmission rate ☐ Trends for all measures are reported and many show improving trends over time ☐ Results are compared to a larger aggregate data set for **at least one** outcome measure (see above) ☐ Comparison to a larger aggregate data set is used to set programmatic targets
Progress toward systematic approach to quality	4	Data: ☐ Results for all measures are routinely reviewed and used to guide improvement activities, including outcome measures ☐ Trends are reported for all measures and most show improving trends over time ☐ Results are compared to a larger aggregate data set for **two** outcome measures ☐ Comparison to a larger aggregate data set is used to set improvement goals which are met for at least 50% of measures
Full systematic approach to quality management in place	5	Data: ☐ Results for all measures are routinely reviewed and used to guide improvement activities, including outcome measures ☐ Trends are reported for all measures and most show sustained improvement over time in areas of importance aligned with organizational goals ☐ Results are compared to a larger aggregate data set for all core national prioritized outcomes measures (such as retention, viral load suppression, etc) ☐ Comparison to a larger aggregate data set is used to set programmatic goals which are met for at least 75% of measures ☐ Results for outcomes measures are above the 75th percentile of the comparative data set
Opportunities/Gaps		

What are the major findings from the Organizational Assessment?

What are the key recommendations and suggestions? What specific areas should be improved?

What are specific improvement goals for the upcoming year?

Appendix G. Facility Organizational Quality Assessment Tool

Hospital/Clinic name……

Rater team:

( ) Administrative/Hospital committee/hospital quality team

( ) HIV coordinator team/clinic team

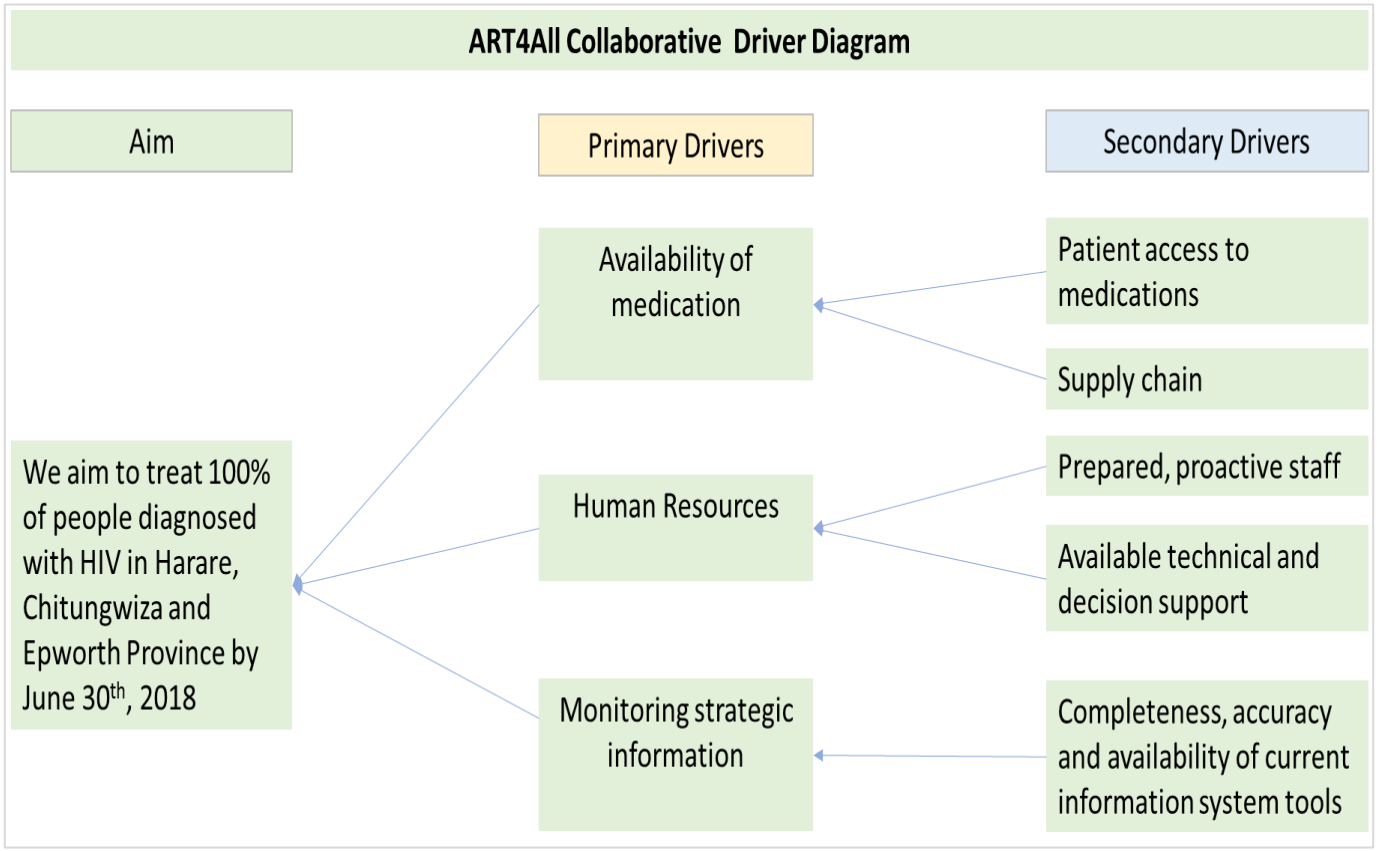
( ) external survey/assessment

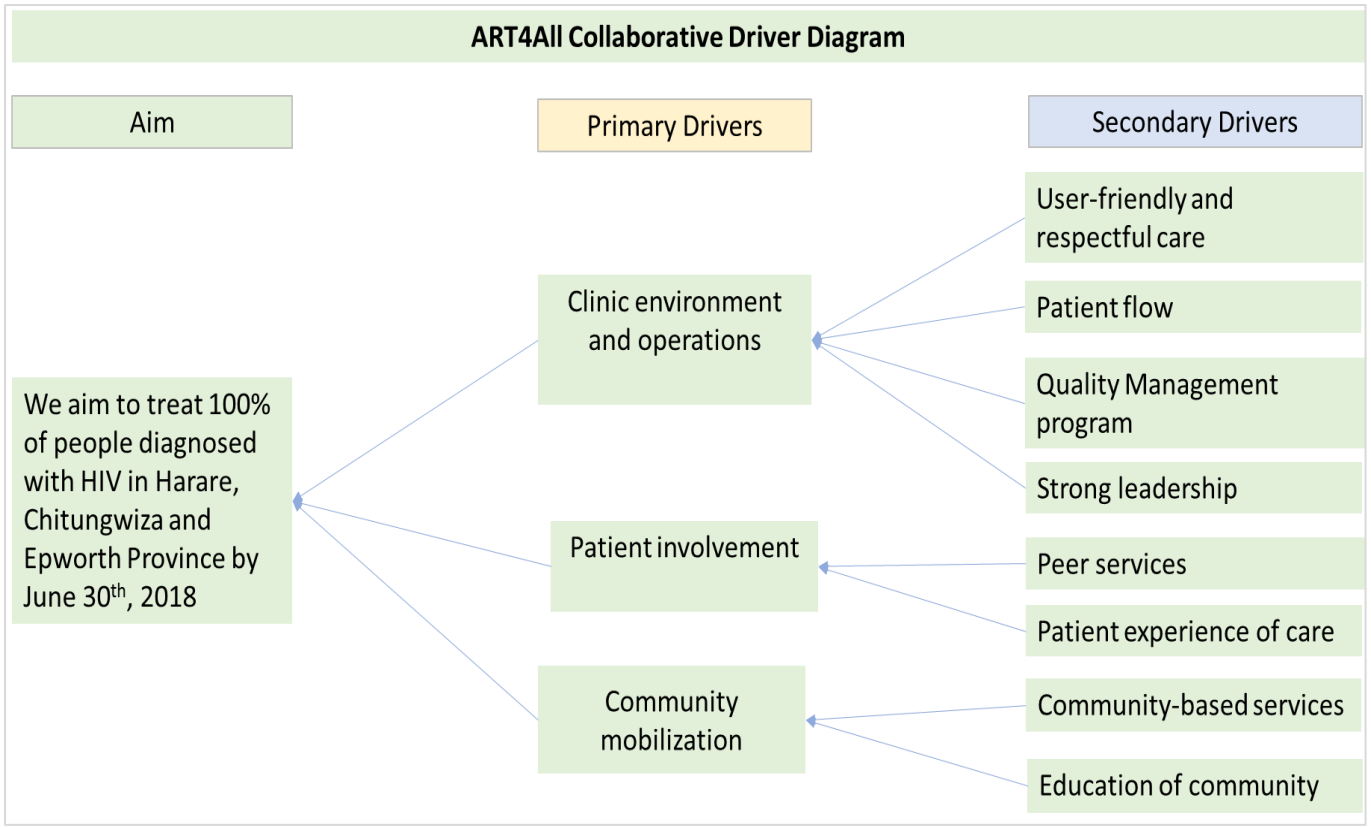
Organization Assessment	Score					
	0	1	2	3	4	5
A. Quality management						
A.1. To what extent does senior leadership create an environment that supports a focus on improving the quality of care in the hospital?						
A.2. To what extent does the hospital program have an effective quality committee to oversee, guide, assess, and improve the quality of hospital services?						
A.3. To what degree does the hospital have a comprehensive quality plan that is actively utilized to oversee quality improvement activities?						
B. Workforce engagement in the quality program						
B.1. To what extent are clinicians and staff routinely engaged in quality improvement activities and provided training to enhance knowledge, skills and methodology needed to fully implement QI work on an ongoing basis?						
C. Measurement, analysis and use of data to improve program performance						
C.1. To what extent does the Hospital routinely measure performance and use data for improvement?						
D. Quality improvement initiatives						
D.1. To what extent does the hospital identify and conduct quality improvement initiatives using QI methodology to assure high levels of performance over long periods of time?						
E. Patient involvement						
E.1. To what extent are patients effectively engaged and involved in the HIV quality management program?						
F. Quality program evaluation						
F.1. Is a process in place to evaluate the hospital's QMP and related activities, and processes and systems to ensure attainment of quality goals, objective and outcomes?						
G. **Achievement of outcomes**						
G.1. To what extent does the HIV program monitor patient outcomes and utilize data to improve patient care?						

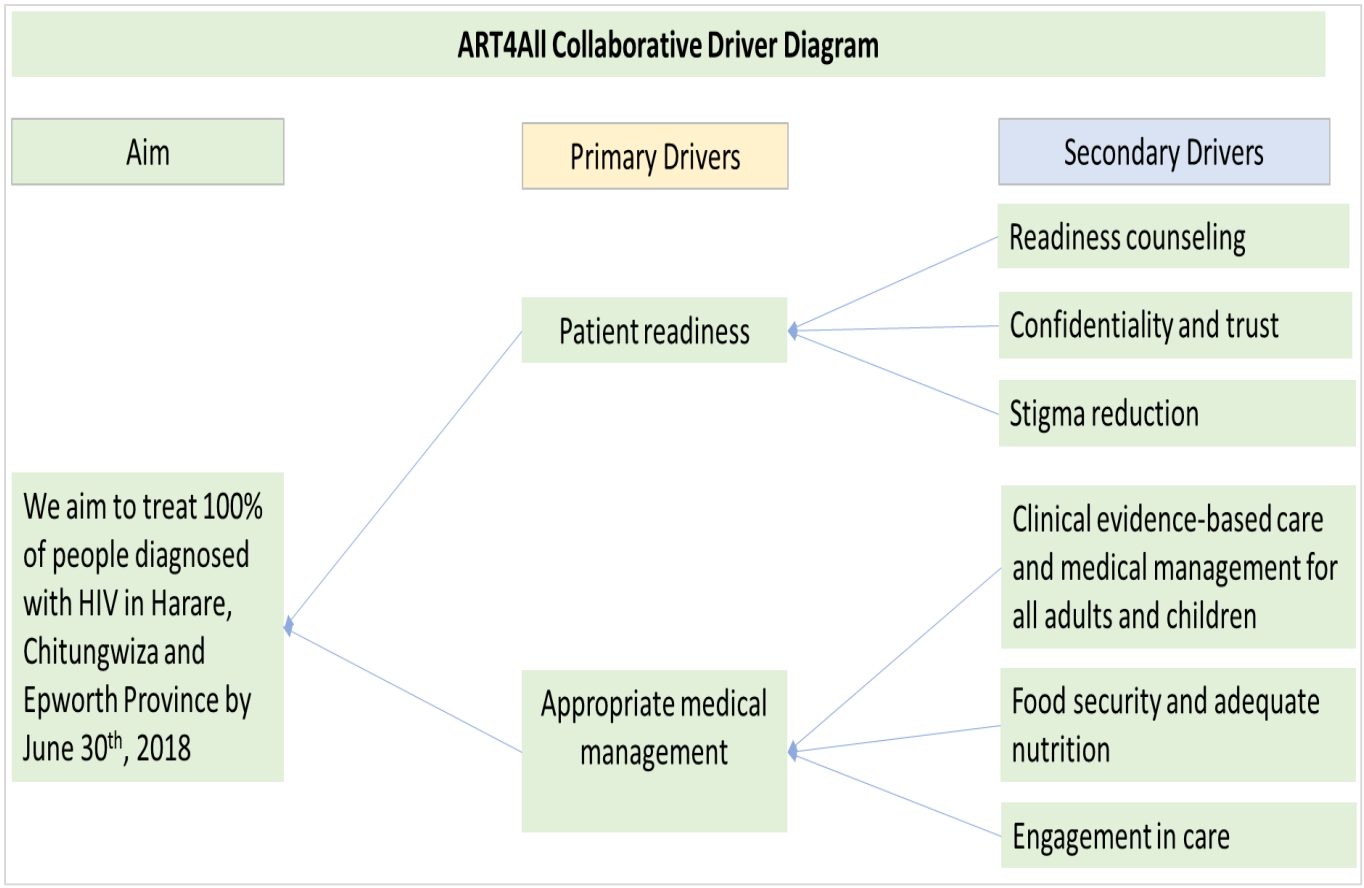
Appendix G1: Facility Organizational Assessment Scores

Score 1-5	A.1. To what extent does senior leadership create an environment that supports a focus on improving the quality of care in the hospital?			A.2. To what extent does the hospital program have an effective quality committee to oversee, guide, assess, and improve the quality of hospital services?			A.3. To what degree does the hospital have a comprehensive quality plan that is actively utilized to oversee quality improvement activities?			B.1. To what extent are clinicians and staff routinely engaged in quality improvement activities and provided training to enhance knowledge, skills and methodology needed to fully			C.1. To what extent does the Hospital routinely measure performance and use data for improvement?			D.1. To what extent does the hospital identify and conduct quality improvement initiatives using QI methodology to assure high levels of performance over long periods of time?			E.1. To what extent are patients effectively engaged and involved in the HIV quality management program?			F.1. Is a process in place to evaluate the hospital's QMP and related activities, and processes and systems to ensure attainment of quality goals, objective and outcomes?			G.1. To what extent does the HIV program monitor patient outcomes and utilize data to improve patient care?		
	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18	Jan-17	Jun-17	Jan-18
Beatrice Road Infectious Disease Hospital	1	2	3	2	2	3	1	1	3	1	2	3	1	2	3	1	2	3	1	1	3	1	1	3	1	2	3
Budiriro Polyclinic	1	3	4	0	2	3	0	2	3	0	4	4	0	3	3	0	3	4	1	3	3	0	3	4	1	2	3
Caledonia Satellite clinic	3	3	3	0	2	3	0	2	3	1	4	4	0	3	3	1	3	4	0	3	3	0	3	4	2	3	3
Chitungwiza Central Hospital	3	4	4	2	1	3	2	0	3	2	4	4	1	3	3	1	3	4	1	4	4	2	5	5	1	2	3
Eastlea FHS	0	3	3	0	1	3	0	1	3	0	2	3	0	2	3	0	2	4	0	1	3	0	1	3	0	1	3
Epworth Mission Clinic	1	3	3	1	3	3	1	3	4	2	4	4	2	3	3	2	3	4	2	3	3	2	2	3	4	3	4
Epworth Polyclinic	1	3	3	1	1	3	1	1	3	2	4	4	2	2	4	2	1	4	2	2	3	2	1	3	3	3	3
Glenview Polyclinic	3	3	3	2	3	4	2	3	4	3	4	4	1	3	3	3	3	4	3	3	4	1	2	3	2	3	3
Hatcliffe Polyclinic	3	2	4	3	2	3	2	2	3	3	4	4	3	3	3	3	2	3	2	2	3	3	3	3	2	3	3
Highfield Polyclinic	3	2	4	3	2	3	2	2	3	3	4	4	3	3	3	3	2	3	2	2	3	3	3	3	2	3	4
Highlands FHS	0	1	2	0	1	3	0	1	3	0	1	3	0	2	3	0	2	3	0	1	3	0	1	3	0	1	3
Hopley Satellite clinic	0	1	4	0	1	3	0	0	3	1	4	4	0	2	3	0	1	3	1	1	3	0	2	3	0	2	3
Kuwadzana Polyclinic	1	3	4	1	2	4	1	2	3	2	4	4	2	3	4	2	3	4	2	2	4	2	3	3	2	3	4
Kuwadzana Satellite Clinic	0	2	4	0	1	4	0	2	3	0	4	4	0	2	3	0	2	3	0	1	3	0	1	3	0	2	3
Mabvuku Polyclinic	3	2	4	3	1	4	2	2	3	2	4	4	1	2	3	1	2	3	0	1	3	1	2	3	1	2	3
Mbare Polyclinic	1	3	4	2	2	4	1	2	3	1	4	4	1	3	4	2	3	4	1	3	3	1	3	3	1	3	4
Overspill Clinic	1	3	4	1	2	4	1	2	3	1	3	3	1	3	3	1	3	3	1	3	4	1	3	3	1	3	3
Rujeko Polyclinic	2	3	4	2	2	4	2	2	3	2	4	4	2	3	3	3	3	3	2	3	4	2	3	4	2	3	4
Rutsanana Polyclinic	2	2	3	1	2	4	1	2	3	1	4	4	0	2	3	0	2	3	1	2	4	1	2	3	3	3	3
Seke North Clinic	1	3	4	1	5	5	1	4	4	1	4	4	1	4	4	1	5	5	1	5	5	1	5	5	1	5	5
Seke South Clinic	1	3	4	1	4	4	1	3	4	1	4	4	1	4	4	1	4	4	1	0	3	1	4	4	1	5	5
South Medical Hospital	1	4	4	1	4	4	1	4	4	1	4	4	1	3	3	1	4	4	1	5	5	1	5	5	1	4	4
St Mary's Clinic	1	3	4	1	2	3	1	2	3	1	3	4	1	4	4	1	4	4	1	3	3	1	4	4	1	4	4
Tafara FHS	0	3	4	0	2	3	0	2	3	0	4	4	0	3	3	0	3	3	0	2	3	0	3	3	0	2	3
Warren Park Polyclinic	3	1	4	2	1	4	0	0	3	2	4	4	2	2	3	2	1	3	2	1	4	1	1	4	2	3	4
Wilkins Infectious Disease Hospital	1	1	3	1	1	4	1	1	3	1	2	3	1	2	3	1	1	3	1	1	3	1	1	3	1	2	3
Zengeza Clinic	1	5	5	1	5	5	1	4	4	1	5	5	1	3	3	1	4	5	1	3	3	1	4	3	1	5	5

Appendix H: ART4ALL Collaborative Driver Diagram




ART4All Collaborative Driver Diagram
Aim
Primary Drivers
Secondary Drivers
We aim to treat 100% of people diagnosed with HIV in Harare, Chitungwiza and Epworth Province by June 30th, 2018
Clinic environment and operations
Patient involvement
Community mobilization
User-friendly and respectful care
Patient flow
Quality Management program
Strong leadership
Peer services
Patient experience of care
Community-based services
Education of community


ART4All Collaborative Driver Diagram
Aim
Primary Drivers
Secondary Drivers
We aim to treat 100% of people diagnosed with HIV in Harare, Chitungwiza and Epworth Province by June 30th, 2018
Patient readiness
Appropriate medical management
Readiness counseling
Confidentiality and trust
Stigma reduction
Clinical evidence-based care and medical management for all adults and children
Food security and adequate nutrition
Engagement in care

Appendix I: IHI Assessment Scale for Collaboratives

Assessment Scale for Collaboratives

Assessment/Description	Definition
1.0 Forming team	Team has been formed; target population identified; aim determined and baseline measurement begun.
1.5 Planning for the project has begun	Team is meeting, discussion is occurring. Plans for the project have been made.
2.0 Activity, but no changes	Team actively engaged in development, research, discussion but no changes have been tested.
2.5 Changes tested, but no improvement	Components of the model being tested but no improvement in measures. Data on key measures are reported.
3.0 Modest improvement	Initial test cycles have been completed and implementation begun for several components. Evidence of moderate improvement in process measures.
3.5 Improvement	Some improvement in outcome measures, process measures continuing to improve, PDSA test cycles on all components of the Change Package, changes implemented for many components of the Change Package.
4.0 Significant improvement	Most components of the Change Package are implemented for the population of focus. Evidence of sustained improvement in outcome measures, halfway toward accomplishing all of the goals. Plans for spread the improvement are in place.
4.5 Sustainable improvement	Sustained improvement in most outcomes measures, 75% of goals achieved, spread to a larger population has begun.
5.0 Outstanding sustainable results	All components of the Change Package implemented, all goals of the aim have been accomplished, outcome measures at national benchmark levels, and spread to another facility is underway.

Appendix J. Team Progress Scores – January 2017 – August 2018

Key for Heat map
1. Forming team
1.5. Planning for the project has begun
2. Activity, but no changes
2.5. Changes tested, but no improvement
3. Modest improvement
3.5. Improvement
4. Significant improvement
4.5. Sustainable improvement
5. Outstanding sustainable results
Blank= missing

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18
Beatrice Road Infectious Disease Hospital	1	2.5	3	3	2.5	2.5	3	3	3	3.5	4	4	4	4	4	4	4.5	4.5	4.5	4.5
Wilkins Infectious Disease Hospital	1	2.5	2.5	2.5	2.5	2	2.5	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Mbare Polyclinic	1	2.5	2.5	3	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Budiriro Polyclinic	1	2.5	2.5	3	3.5	3	3	3	3	3	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5	5
Caledonia Satellite clinic	1	2.5	2.5	2.5	3	3	3	3.5	3.5	3.5	4	3.5	3.5	3.5	3.5	4	4	4	4	4.5
Chitungwiza Central Hospital	1	3	3	3.5	3.5	3	3	3	3	3.5	3.5	3.5	4	4	4	4	4	4	4	4.5
Eastlea FHS	1	2.5	3	3	3	2.5	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4	4.5
Epworth Mission Clinic	1	3	3.5	3.5	4	3	3.5	3	3.5	3.5	4	4	4	4	4	4	4.5	4.5	4.5	5
Epworth Polyclinic	1	2.5	3.5	3.5	3	2.5	2.5	3	3	3	3.5	3	3	3	3	3.5	4	4	4.5	5
Glenview Polyclinic	2	2.5	2.5	3.5	4	3.5	3	3	3	3.5	3	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Hatcliffe Polyclinic	2	1.5	2.5	3	3.5	3	2.5	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Highfield Polyclinic	2	2.5	2.5	3	3.5	2.5	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Highlands FHS	1	1	1.5	1.5	2	2	2.5	2.5	3	3	3	3	3	3	3	3	4	4	4.5	4.5
Hopley Satellite clinic	1	1.5	1.5	2.5	2	3.5	3	3	3.5	3	4	3.5	3	3	3	4	4	4.5	4.5	5
Kuwadzana Polyclinic		3	3	3.5	4	3	3	3	3	3.5	3.5	3	3	3	3	3.5	4	4	4.5	4.5
Kuwadzana Satellite Clinic	1	1.5	3	3	3.5	3	3	3	3	3.5	4	4	4	4	4	3.5	4	4	4.5	5
Mabvuku Polyclinic	2	1.5	2	2.5	3	2.5	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Overspill Clinic	1	3	3	3	3.5	2.5	3	3	3	3	3	3	3	3	3	3	3.5	4	4	4.5
Rujeko Polyclinic	2	2.5	2.5	3.5	4	3.5	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4	4.5
Rutsanana Polyclinic	1.5	3	3	3	3.5	2.5	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Seke North Clinic	1	3	3	3	3	3	3	3	3.5	3.5	4	4	4	4	4	4	4.5	4.5	4.5	5
Seke South Clinic	1	2.5	2.5	3	2.5	2.5	2.5	2.5	2.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4.5	4.5
South Medical Hospital	1	1	1.5	1.5	1.5	2	2	2.5	2.5	2.5	3	3	3	3	3	3	4	4	4.5	4.5
St Mary's Clinic	1	1.5	2.5	2.5	3	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Tafara FHS	1	3	3	3	3.5	3	3.5	3.5	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4.5	4.5
Warren Park Polyclinic	1	2.5	3	2.5	3	2.5	3	3	3.5	3.5	4	3.5	3.5	3.5	3.5	4	4.5	4.5	4.5	5
Zengeza Clinic	1	2.5	3	3	2.5	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4.5	4.5	5