OPHID Knowledge and Innovation Series: Vol.1 | 2016

Tackling the first two 90s

Rapid Assessment of facility linkages between HIV testing and treatment

Mutare and Makoni Districts, Manicaland Province

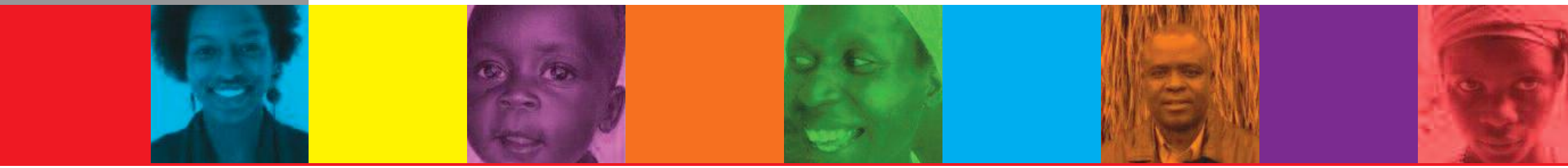

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Table of Contents

Acronyms

ANC	Antenatal Care
ART	Antiretroviral Therapy
EPI	Enhanced Program on Immunization
FACE	Families and Communities for Elimination (of HIV)
HIV	Human Immunodeficiency Virus
IATT	Inter-Agency Task Team (IATT) for Prevention and Treatment of HIV Infection in Pregnant Women, Mothers and Children
L/D	Labour/Delivery
LTFU	Loss to follow up
MNCH	Maternal Newborn and Child Health
MOHCC	Ministry of Health and Child Care
OI	Opportunistic Infection
OPD	Outpatient Department
OPHID	Organisation for Public Health Interventions and Development
PEPFAR	President's Emergency Plan for AIDS Relief
PITC	Provider Initiated Testing and Counselling
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PNC	Postnatal Care
RA	Rapid Assessment
START	Strategic Timing of AntiRetroviral Treatment
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
VL	Viral Load
VMMC	Voluntary Medical Male Circumcision
YP	Young People
ZAPPT	Zimbabwe AIDS Prevention Project Trust

Acknowledgements

The Organisation for Public Health Interventions and Development (OPHID) Trust expresses its gratitude and appreciation to the leadership of the Ministry of Health and Child Care for their support in the design and implementation of the *Tackling the First 2 90s Rapid Assessment*. This assessment has been conducted by OPHID's Knowledge Management and Impact Analysis Unit. Specific thanks go out to the offices of the Provincial Medical Director for Manicaland Province, and District Health Authorities in Makoni and Mutare Districts, Ministry of Health and Child Care.

We gratefully acknowledge the support of the President's Emergency Plan for AIDS Relief (PEPFAR) through USAID and Families and Communities for Elimination of HIV in Zimbabwe (AID-613-A-12-00003, FACE HIV). This support enables OPHID and FACE HIV consortium partners J.F. Kapnek Trust and the Zimbabwe AIDS Prevention Project Trust (ZAPPT) to directly support over 330 high priority health facilities across the country within the Zimbabwe National HIV Care and Treatment Program of the Ministry of Health and Child Care.

Families and Communities for Elimination of HIV - FACE HIV Program

Together we will end the AIDS Epidemic in Zimbabwe by 2030


clinic
VACCINATION SCHEDULE
VACCINATION RECORD

1 Background

Importance of link between HIV Testing and Treatment

Timely access to antiretroviral therapy (ART) following HIV diagnosis is critical to improve health and survival of people living with HIV and reducing transmission rates. Linkages between HIV testing and treatment and care are unacceptably low across the sub region.[1]

Programmatic reports from the Zimbabwe National HIV Care and Treatment Program indicate poor linkage of individuals testing HIV positive to treatment and care, and varying rates of linkage at different entry points. Such reports are reinforced by existing data demonstrating that the highest rates of loss to follow up (LTFU) occur between testing and enrolment on ART.[2] Development of referral tools (e.g., referral forms, registers) and strengthening the follow-up system could facilitate the link between HIV Testing and Counselling Services and ART treatment and care. The implementation of simple referral system has been effective in linking diagnosed patients with ART clinics in rural Tanzania.[3] Better health information systems that allow patients to be tracked between service delivery points are needed to properly evaluate pre-ART loss to care, and attempts to standardize the terminology, definitions, and time periods reported should be made.[4, 5]

The need to identify and respond to barriers for effective transition from HIV testing to treatment are further highlighted by recent evidence from the Strategic Timing of AntiRetroviral Treatment (START) trial indicating starting anti-retroviral treatment (ART) early (prior to declines in CD4 count) has significant individual health benefits and the potential to improve public health outcomes.[6]

> Linkage to care after receiving an HIV-positive diagnosis remains challenging. In resource limited settings, primarily sub-Saharan Africa, it is estimated that as much as 40% of people who are diagnosed through HTS are not linked to care, and late initiation of ART continues to be common.
>
> **WHO (2015) Consolidated Guidelines on HIV Testing Services**

90-90-90 driving the agenda for universal treatment

The ambitious treatment targets of 90-90-90 as the mechanism towards seeing the end of the AIDS epidemic, underscore the importance of strengthening access to HIV testing and counselling at all health care entry points as well as ensuring effective linkages to treatment and care for all people diagnosed with HIV.[7, 8]

1. 90% of people with HIV know their status
2. 90% of individuals that are HIV positive receive sustained ART
3. 90% of individuals on ART are virally suppressed.

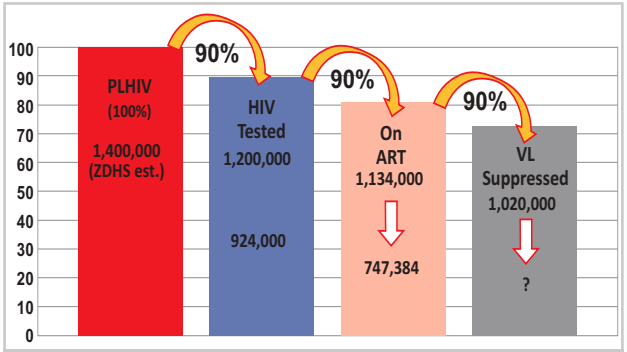

Figure 1. 90-90-90 in Zimbabwe: Ambitious targets with current missed opportunity and uncertainty


CASH OUT

2 Relevance of the First 2 90's Rapid Assessment

90-90-90 driving the agenda for universal treatment

Based on available data as of December 2014 (MOHCC presentation, March 2015), it has been indicated that to meet 90-90-90 targets, with an estimated 66% of people living with HIV aware of their status, and 66% of those living with HIV on sustained ART, increasing current HIV test rate yields and strengthening linkages between HIV treatment and care should be considered priority areas for programmatic action (Figure 1).

Developing a clear understanding of the high and low-yield facility level entry points for HIV testing and treatment are an important first step towards designing appropriate and effective technical assistance to Ministry of Health and Child Care supported health facilities.

Focusing efforts on priority facilities and hotspots

Achieving PEPFAR's Impact Action Agenda involves doing the *right things, in the right places at the right time*. This will necessarily involve understanding where missed opportunities exist for reaching HIV positive individuals with testing services as well as linking those testing positive to treatment and care. Similarly, establishing the number of HIV positive individuals linked to both HIV care and treatment are among the 10 global measurements for achieving the 90-90-90 goals.[9]

Health facility prioritisation based on ART client volume

Tier 1: 1500+ clients on ART
Tier 2: 200 – 1500 clients on ART

Through USAID support to the Families and Communities for Elimination (FACE) HIV program, OPHID Trust and its partners provide site-level support to over 330 health facilities prioritised based on volume of HIV positive patients on ART.

Aggregate facility-based data currently precludes routine reporting on the proportion of individuals testing HIV positive linked to HIV treatment and care from different entry points. Our cohort-based rapid assessment approach sought to facilitate an operational and data-based understanding of how HIV testing and treatment services are structured at priority sites and in different entry points. We anticipate that rapid assessment findings, conducted in collaboration with Ministry of Health and Child Care, will provide useful information to consider in program and planning moving forward.


ABC of first aid

3 Goals and Objectives

Goal:

The goal of the rapid assessment was to establish current rates of HIV testing and linkage of HIV positive individuals to treatment and care from different entry points at Tier 1 and 2 sites.

Objectives:

1. **PROCESS:** Describe the **process of linking individuals** testing HIV positive to treatment.
2. **HIV TEST YIELDS:** Document the **number of people HIV testing and testing positive** at different entry points.
3. **LINKAGE TO CARE AND TREATMENT:** Describe proportion of individuals testing HIV positive with documented **evidence of linkage to treatment and care** at 11 facilities in Mutare and Makoni Districts of Manicaland Province.
4. **TRANSLATION TO PROGRAMS:** Rapidly **disseminate findings,** with recommendations on related programmatic actions to strengthen documentation and practices for linking HIV positive individuals to treatment and care.

4 Method

In order to begin to understanding current performance and facility-level bottlenecks to successful linkage between HIV testing and treatment and OI/ART treatment, we conducted a rapid assessment utilising existing, routine Ministry of Health and Child Care registers and data systems to determine the proportion of individuals (men, women and children; disaggregated by age) testing HIV positive that have documented linkages to treatment and care.

Assessment Population

Individual cohort level: Individuals accessing HIV testing services at targeted health facilities in the 3 months between January to March 2015. Among those accessing HIV testing and counselling (HTC) services, all those testing HIV positive comprised of our cohort for register tracing to determine documented uptake of subsequent pre-ART and care and treatment services was reviewed up to September 2015. No individual patient identifiers were recorded.

Aggregate proportions: We used routine data from all HTC registers available at the facility to determine the proportion of those testing positive at different service entry points, disaggregated by select characteristics (age and sex).

Facility processes: Finally, we sought to determine whether existing health information systems enable the documentation of linkage to HIV treatment and care following an HIV positive test result.

Sampling approach

We utilised a modified sampling approach for conducting enhanced monitoring activities as proposed by IATT (2015) to select sites in Mutare and Makoni Districts, Manicaland Province to introduce rigor and randomisation into our site selection. We employed this sampling to enable targeted inclusion of sites with characteristics of interest useful for informing OPHID and the Ministry of Health and Child Care regarding a specific problem in a timely manner (in this case, HIV testing and treatment linkages at Tier 1 and Tier 2 sites). Sampling was therefore not intended to be representative of all sites in Manicaland Province.

This approach, which can be regarded as a simplified probability proportional to size technique 'is *intended to oversample larger clinics because of their greater impact on the national program, while allowing for collection of information from smaller clinics with lower patient volume,*[10] and is a sampling strategy OPHID has utilised in previous investigations.[11] This sampling strategy is therefore consistent with the PEPFAR district and site-prioritisation processes of Tier 1 scale up and Tier 2 maintenance sites. Figure 2 describes the purposeful sampling strategy proposed for this rapid assessment.

Using the sampling strategy in Figure 2, the proposed sites were randomly chosen for participation in the First 2 90s': Linkages to HIV Testing and Treatment Rapid Assessment:

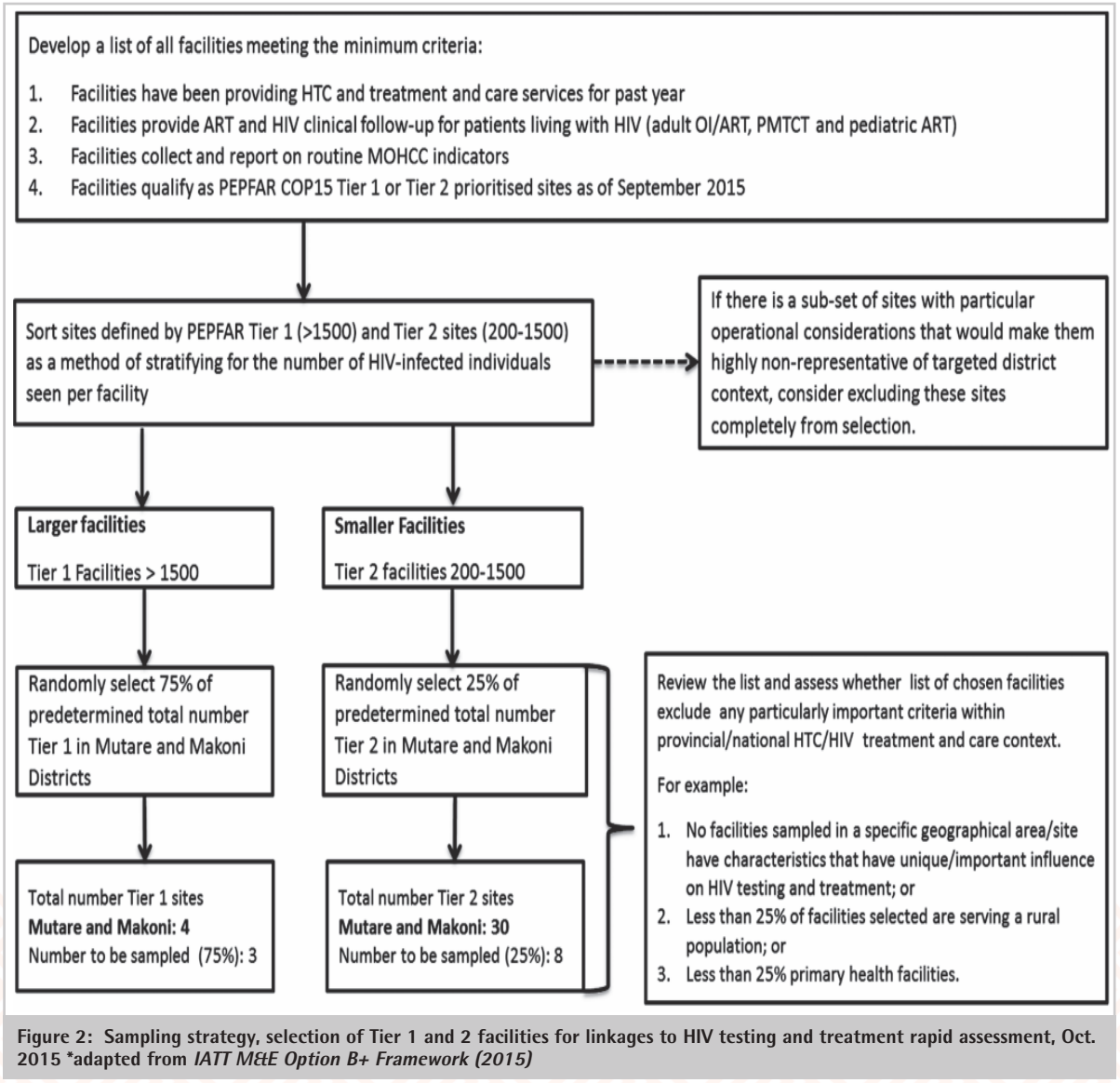

Figure 2: Sampling strategy, selection of Tier 1 and 2 facilities for linkages to HIV testing and treatment rapid assessment, Oct. 2015 *adapted from *IATT M&E Option B+ Framework (2015)*

Table 1: Selected sites for participation in the First 2 90s Rapid Assessment

Tier 1 sites selected (3/4)	Tier 2 sites selected (8/30)
Sakubva Clinic St Joseph's Mission Hospital Marange Rural Hospital	Weya Rural Hospital Makoni Rural Hospital Nyazura Clinic Masvosva Rural Health Centre Matsika Clinic Chipfatsura Clinic Burma Valley Clinic Odzi Clinic

Procedures: We completed the HIV Testing and Treatment Linkage Rapid Assessment in October 2015 at 11 selected sites in Mutare and Makoni Districts of Manicaland Province.

Three separate tools were drafted to facilitate data collection under each of the rapid assessment (RA) objectives. In August 2015, these tools were pre-tested at one Tier 1 and one Tier 2 site. Changes were made to improve accuracy and efficiency of data collection required to achieve our assessment goal and objectives. A summary of the procedures for each objective are described below:

Objective 1: Describe the process of linking individuals testing HIV positive to treatment.

Form 1. Facility Processes for HIV testing and linkage to care structured questionnaire. This data collection

tool was intended to capture the processes for HIV Testing and Counselling (HTC) and referral and documentation procedures in HIV care and treatment at each facility. Open-ended questions were used to document health care worker perceptions on the barriers to linkage of patients testing HIV positive to quality care and treatment, and questions regarding provider-views on interventions that could be implemented to improve linkages to HIV treatment and care.

Objective 2: Document the number of people HIV testing and testing positive at different entry points.

Form 2. Facility Data on HIV testing and positivity rates by entry point captured aggregate and individual-level data regarding the 'HIV test yields' of HTC in different service entry points. Existing registers were used to document: the # of clients newly tested for HIV; # of clients retested for HIV; # of clients who received their results; # of clients tested HIV+ by reason for HTC. For adults, the number testing was disaggregated by reason for test: 1) for tuberculosis (TB); for prevention of mother to child transmission (PMTCT), antenatal care (ANC), labour and delivery (L/D), postnatal care (PNC), Family Planning (FP) & Partner; for voluntary medical male circumcision (VMMC), nutrition, diagnosis, occupational, sexual abuse, death of spouse/child, other (i.e., outpatient department, OPD); and finally, for index case (family member on ART). To enable cohort-level analyses regarding age and sex disaggregation, de-identified individual data by HTC model (1. Voluntary Counselling and Testing (VCT); 2. Provider Initiated Testing and Counselling (PITC); 3. Mobile (Outreach); 4. Workplace & Campaign) and entry point (see Appendix 1) was captured.

For children, numbers by reason for HTC services were disaggregated by reason and age: TB (0-2 years); TB (2-14 years); for Expanded Program on Immunization (EPI) (0-24 months); for EPI (2-5 years); for Exposed Infants (0-24 months); for Exposed infants 2-14 years.

Objective 3: Describe proportion of individuals testing HIV positive with documented evidence of linkage to treatment and care at 11 facilities in Mutare and Makoni Districts of Manicaland Province.

Finally, *Form 3. Individual with documented linkage to HIV services following HIV positive* involved tracing individuals testing HIV positive from January to March 2015 at sampled facilities to determine what post-test services for PLHIV have been accessed 1) Medical care for OIs; 2) Pre-ART care; 3) CD4 Test; 4) ART Eligible; 5) ART Initiated. Ultimately, the analysis of individual cohort data in Form 3 was intended to ascertain the proportion of individuals testing HIV positive for whom documented linkage to HIV care and treatment could be established.

Ethical Consideration

This assessment involved the use of routine programmatic data within the scope of OPHID's current support to the Ministry of Health and Child Care within the PMTCT and HIV Care and Treatment Programs. All assessment activities were conducted in conjunction with OPHID Trust programmatic staff together and relevant MOHCC personnel, to enable real-time sharing of lessons learned and strengthening of continuous site support and data verification exercises.

No personal identifiers were recorded during data collection, to minimise confidentiality risks of disclosure of patient information. Electronic data has been stored securely under protected software and hard copy forms stored under lock and key at OPHID's central offices in Harare. Only relevant OPHID and MOHCC personnel have had access to the data.

The primary purpose of capturing data in this assessment was to make recommendations to MOHCC for programmatic actions to strengthen linkages between HIV testing and treatment at Tier 1 and Tier 2 sites where OPHID operates.

5 Results

This results section summarises key findings under each rapid assessment objective. Key results annotated by *# symbols, correspond to the numbering of key discussion points in Section 6, Discussion.

As results are a summary of routine facility-level data, it should be noted that the findings presented are a reflection of what is documented in facility registers only, and should not be interpreted as definitive patient outcomes as would be provided by patient-level tracing.

Objective 1: Describe the process of linking individuals testing HIV positive to treatment.

A process questionnaire was administered to senior health care officials at participating sites - intended to explore the services offered by health facilities for HIV testing and counselling and post-test services available. It also looked at how the services are linked from the first day of accessing services and the follow up visits thereafter. Key findings from this questionnaire include:

- **Entry Points offering HTC:** All the health facilities (11/11) offered HIV testing and counselling services including VCT for individuals and couples. PITC was offered to PMTCT clients, OPD patients (STIs, TB clients), family planning clients and EID for the HIV exposed infants.
- **HTC Outreach:** The facilities reported that service providers at their health facilities participate in District coordinated community and outreach HTC services and the records for such programmes are stored at District Level. **Data on outreach HTC was only available at one site** for Voluntary Medical Male Circumcision (VMMC).
- **Model for Counselling services:** Pre-test counselling services reported included both group and individual counselling. Post-test counselling was offered at individual level.
- **Linkage of HIV positive individuals to post-test care and treatment:** Pre-ART monitoring, ART initiation and ART re-supplies were provided at all the health facilities in the same building at Tier 2 sites (200-1500 patients on ART/year) although Tier 1 sites (>1500) had a special division for these OI/ART services. The availability of ART initiation and resupplies at all levels of the health facilities were consistent with the decentralisation efforts of HIV care and treatment services in the country including ART initiation for children.
- **Post-test services offered:**
  - **Tier 1:** Post-test services including psychosocial support, family planning and management of opportunistic infections including

TB services are offered at the same facility, with clients referred to the specific unit e.g. family planning services are found in family health/maternal newborn and child health (MNCH). **No formal mechanism to document uptake of post-test services between departments was in place.**

- **Tier 2:** Two tier 2 health facilities reported that they did not have support groups for people living with HIV and 3 health facilities including one Tier 1 facility did not have home-based care activities.

- **Linkages and referral systems (internal and external):**
  - **Tier 1:** Facilities reported that as referral sites, they do not have external referral systems but manage internal referrals. Internal referrals are documented in the patient hand-held card and the pre-ART registers. Internal referrals include those to the laboratory for CD4 count, TB diagnosis if person has symptoms and family planning services. However, there is **no follow-up mechanism**[*1] to check if the client has reached the referred unit. The service providers depend on clients to report back to them on the access to services referred.
  - **Tier 2:** Sites reported external referrals specifically for viral load (VL) testing and in some cases cervical cancer screening. The external referrals are documented in the patient held card and the facility register. 5/8 Tier 2 sites reported that there is **no standard procedure to follow up clients** to monitor and record if they have reached the referral health facility. The majority of facilities indicated they wait upon the client to provide feedback of services accessed and recommendations for future management. Two

facilities reported that they follow-up on clients referred for external services through telephone to the referred health facility and clients are advised to return with medical records of services accessed. Only one health facility reported use of village health workers to follow-up clients who do not return to report on referral services accessed.*1

- Tier 2 sites (6) without CD4 machines on site reported sending blood samples to the nearest health facility for CD4 testing as recommended by the MOHCC. All facilities reported receiving CD4 test results within 7 days of sending the samples to the laboratory. Two health facilities reported conducting 3 monthly CD4 monitoring while the others were conducting CD4 monitoring after 6 months.

The end of the process questionnaire included open ended questions to health care workers regarding their perceptions of the primary barriers to linkage and quality of HTC and HIV treatment and care services. In addition, HCWs were asked to make suggestions regarding priority actions that could be taken to improve linkages and quality of care. A summary of responses are provided in Table 2.

Table 2: Healthcare worker perceptions, barriers and facilitators to linking patients to HIV testing and treatment

Perceived Barriers to Linkages and Quality of HIV treatment and care services	Suggestions to improve to Linkages and Quality of HTC and treatment and care services
Laboratory Services • Electricity cuts/interruptions when conducting CD4 testing • CD4 samples transportation is not reliable, sometimes collected samples over stay and are discarded • Lack of CD4 machine for ART initiation and monitoring • Shortage of stabilising tubes for CD4 • Some patients can't afford to have required tests to determine eligibility and monitoring*2 • Viral Load results take long to reach the facilities (3 weeks) • Viral load tests monitoring is currently expensive and beyond the reach of many **Service Delivery** • Some facilities charging patients for drug collection e.g. drug pickup ($2) and this is not affordable for some patients • Staff shortages compared to overwhelming number of clients, PLHIV • Staff shortages hinder patient tracking • Short supplies for pediatric ART drugs and second line drugs not available for switching patients • Lack of efficient referral mechanisms **Patient level Barriers** • Some female clients are delaying treatment initiation for Option B+ wanting to seek consent from male partners • Religious groups that object to medical care	• PIMA machine needed for CD4 testing on site for both initiation of adults not on Option B+ and for monitoring patients • Rapid HIV testing training for all nurses • Free services for HIV positive people • Less frequent visits for resupplies and weekend opening hours for employed people to collect their drugs (e.g. because teachers were used as an example of formally employed people) • Long term FP methods training • Increase staff establishment to enable appropriate management of patient volumes • Find alternative sources of power like solar or generator so that use of machinery e.g. CD4 machines are not interupted*3 • Provision of 2nd line drugs and pediatric ART supplies

Objective 2: Document the # of people HIV tested and testing positive at different entry points.

HIV Testing summary – Individual-level data

- From Jan.-March 2015 a total of 4,407 individuals were offered HIV testing at selected sites, 99.8% of these accepted testing (Figure 3)

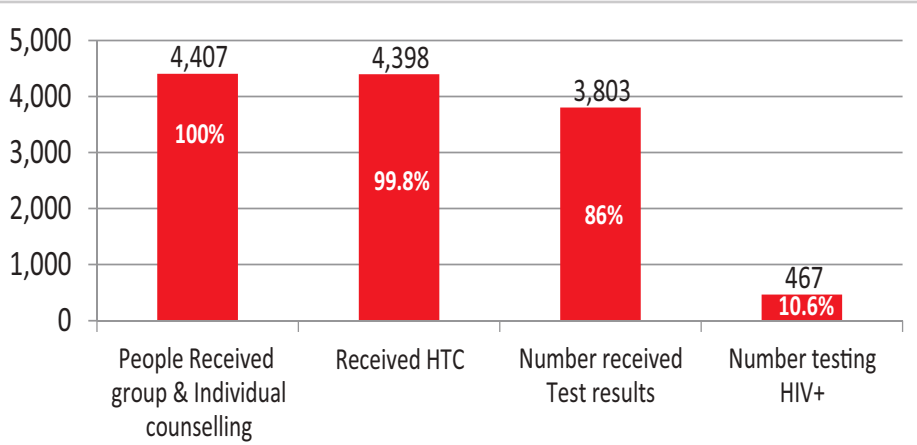

Figure 3. Distribution of the HTC cascade

- Among the 4,398 HIV tested, 86% (n=3,803) received their test results. **Result receipt outcomes were missing for 13% (n=575)**[*4]
- Among those tested, 10.6% were HIV positive. **The majority of individuals testing HIV positive were tested for the first time (64%; n= 2,815),** with 31% repeat tested, and 5% not recorded.[*5]
- Over the same time period, a total of 100 infants were tested for HIV using DNA PCR. 57% of these infants were tested within 6 weeks of birth. Four of the 93 infants who had received their results were HIV positive (4%). Of the infants tested within 6 weeks of birth 2%(1/50) tested positive, **9%(2/22) tested positive among those tested after 6 weeks to 6 months and 6%(1/16) tested positive among the infants tested above 6 months of age.**[*6]

HIV Test Yields[i]

To calculate HIV test yields disaggregated by age, individual level cohort data were collected. It should be noted that data within monthly return forms, while disaggregated by age among adults and children, does not enable

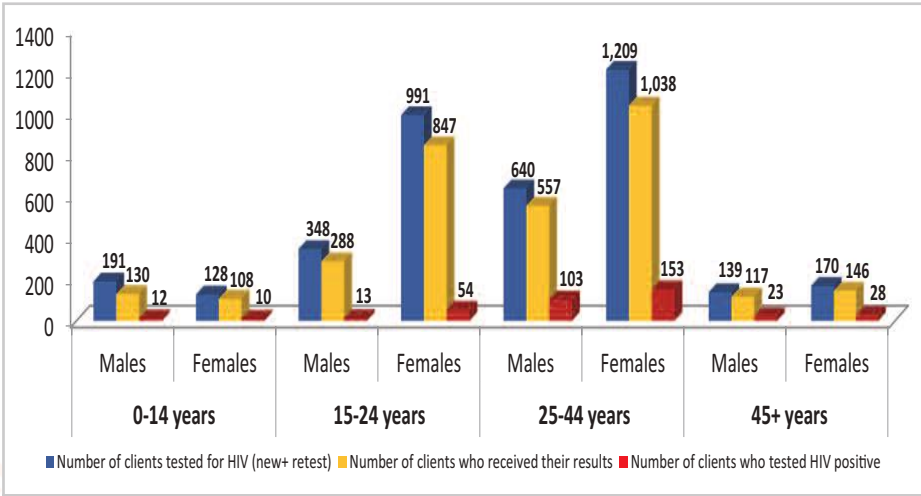

Figure 4. HIV testing, results received and positivity based on individual-level HTC cohort data (N= 3 816)

[1] Data presented on this section was collected from 9 of the 11 sites. The first to sites were excluded because the data collected were not disaggregated by age.

inclusion of women tested in PMTCT. The exclusion of 2 sites to enable reporting of all those tested from every possible entry point while reducing the total number of individuals tested reported, provides a more accurate picture of HTC by age and sex disaggregation.

HTC by age and sex

- Overall, 3 816 HIV tests were conducted, with 2 498 women (65.5%) and 1 318 men (34.5%) tested.
- Among age/sex groupings, **the greatest number of HIV rapid tests were conducted among females aged 25-44 years (Figure 3) 31% of whom tested in PMTCT settings**[*7]. Younger women aged 15-24 were the next sex and age disaggregated group tested most frequently, more of whom tested in PMTCT (46%).
- **Men aged 25-44** comprised of the third most frequently tested group, comprising of 16.8% of all HIV tests done among men and women, and 48.6% of all tests done among men.
- **Young people** aged 15-24 represented 38.3% of all HIV tests done among those 15 years and older of whom **74% were young females.**[*8]
- **HIV testing in PMTCT:** the vast majority of HIV tests among women under PMTCT were done among women in ANC (89%), followed by in Labour and Delivery (7.6%) and Post natal care (3.4%). However, HIV test yields in PMTCT were inverse, with **the highest proportion of women testing positive in PMTCT settings in postnatal care PNC (5.4%),** followed by ANC (4.4%) and L&D (3.3%)[*9]

Table 3: HIV test yield by age and sex (N= 3,816)

Age Group (years)	Gender	Clients tested for HIV	Clients tested HIV positive	Positivity rate %
0-14	Males	191	12	6%
	Females	128	10	8%
15-24	Males	348	13	4%
	Females	991	54	5%
25-44	Males	640	103	16%
	Females	1209	153	13%
45+	Males	139	23	17%
	Females	170	28	16%

HIV test positivity rates

- In terms of absolute **HIV test yield among all adults tested, males age 45+ (17%)**[*10] **had highest reported HIV positivity rate.** HIV test positivity rates by age and sex are provided in Table 3.
- **Older men as a key population:** Sub analyses conducted among **older men aged 50+ demonstrated HIV positivity rates of 22%.** In comparison, women of the same age group had a positivity rate of only 14%.[*11]
- The overall prevalence was **10.7% in adults** (15-45+) and **6.9% in children** tested.
- There were **more boys aged 0-14 tested 60% (n=191) tested than girls 40% (n=128)** with HIV positivity rates of 5.6% and 7.5% respectively. More young boys were tested through the VMMC program, accounting for 42% (80/191) of boys 0-14 years tested.

- **More women age 15 years and above were tested (n=2,370) than men (n=1,127),** with men having a higher HIV positivity rate, 12.3% than women 9.9% respectively.

By entry point

- Entry points with highest positivity rate were those in which patients were seeking care for other illnesses (TB: 30%; OPD diagnosis: 22%) and those which involve index cases (family member on ART and deceased family member 24%) presented in Table 4.

- Entry points with lowest positivity rate included PMTCT (5%), Pediatric services (7%) and VMMC (1%).

- ***General note on Entry Point documentation:*** process of collecting data for the rapid assessment revealed that the **use of entry point codes is highly variable across sites,** making interpretation of entry point data difficult (i.e., some sites, largest proportion of clients tested were categorised under VCT or PITC 'Other' without any specification (See Appendix 1 for full list of possible entry point codes). In addition, the system of codes should be re-examined or receive enhanced supportive supervision to agree on standardised documentation procedures reflective of current policy changes (i.e., under Option B+ not correct that women be classified under separate PMTCT categorisations of VCT and PITC, as MOHCC guidelines indicate all pregnant women with unknown status should be offered an HIV test, PITC).

Table 4: HIV Test Yield for the HTC Entry Points

Entry Point Categorised	HIV+	HIV-	Not Recorded	Total	HIV Positivity rate %
PMTCT	75	1290	9	1374	5%
TB	10	23	0	33	30%
Pediatric Services	5	61	1	67	7%
OPD	121	427	8	556	22%
OPD STIs	17	93	0	110	15%
Family Member on ART or Deceased	8	25	1	34	24%
VCT Other Unspecified	130	1058	10	1198	11%
PITC Other Unspecified	42	280	1	323	13%
VMMC	1	116	0	117	1%
Not Recorded	7	28	9	44	16%
Total	**416**	**3401**	**39**	**3856**	**11%**

Objective 3: Describe proportion of individuals testing HIV positive with documented evidence of linkage to treatment and care.

In this section we report findings from register-tracing of all individuals testing HIV positive from January to March 2013 within HTC registers to determine if there was documentation of subsequent uptake of services in Pre-ART and ART registers up to September 2015.

Table 5. Linkage between HIV testing and pre-ART registers			
Age (yrs)	**Documented Linkage**	**Total**	**% from HTC Appearing in Pre-ART**
0-14	17	24	71%
15-24	39	79	49%
25-44	186	279	67%
45+	50	75	67%
Not recorded	5	10	50%
Total	**297**	**467**	**64%**

Linkage from HTC to Pre-ART

- Overall, **64% of individuals documented as testing HIV positive from all entry points had documented evidence of linkage to care and treatment** (Table 5).
- **Young people (15-24yrs) had the lowest documented linkage from HTC to appearing in Pre-ART registers at 49%.**[*12]
- Women testing HIV positive were more likely to have documented linkage to Pre-ART and ART (67%) compared to men (61%). This can be attributable to **high linkage rates among women testing HIV positive in PMTCT settings (82%).**[*13]
- Rates of documented linkage to HIV care and treatment varied widely by:
  - **Entry point:** Highest linkage rates in PMTCT, 82% and PITC other 74%, lowest linkage in OPD for STIs 42% and VCT 'other' 53% (Table 6).
  - **Facility:** Rates of linkage by facility ranged from 44% to 100%
  - **Tier: Tier 1 facilities had lower documented linkage rates** (range from 44-59%) than Tier 2 facilities (range from 53-100%).[*14]
- It should be noted that due to small denominators for some entry points (such as Pediatric services), these categories should be interpreted with caution, and would require larger-scale cohort analysis to confirm. However, **low documented linkage of HIV positive pediatric clients to documented ART requires further follow-up.**

Table 6. Documented linkage to pre-ART following HIV positive diagnosis by entry point (N=446)				
Entry Point Categorised	**No**	**Yes**	**Total**	**% Linked to Pre-ART**
PMTCT	15	68	83	82%
TB	4	6	10	60%
Pediatric Services	4	1	5	20%
OPD	53	98	151	65%
OPD STIs	11	8	19	42%
Family Member on ART or Deceased	5	9	14	64%
VCT Other	62	69	131	53%
PITC Other	11	32	43	74%
Missing entry point		11		NA
Total	**158**	**297**	**446**	65%

Clinical Staging and CD4

- The majority of clients had some form of clinical staging or CD4 assay (80%) as a means of determining ART eligibility. However, 28% of clients were recorded as having clinical staging only, and **20% had neither clinical or CD4 staging done** (Table 7).*[15]

Table 7. Proportion of clients receiving clinical staging for ART eligibility (N=297)

	Number	%
Clinical Stage only	82	28%
CD4 Test only	10	3%
Clinical staging or CD4 test	239	80%
Both CD4 and Clinical Staging	147	49%
No CD4 or Clinical	58	20%

- Higher volume, Tier 1 sites had higher documented clinical staging than lower volume sites with no CD4 machines.
- The **median CD4 counts of people linked to care are generally low (Table 8), indicating access and linkage to care and treatment when disease has progressed.** The decreasing median

Table 8. Median CD4 count by age

Age group	Median CD4
0-14	402
15-24	323
25-44	220
45+	219

CD4 counts by age group are consistent with disease progression as older age groups are likely to have been infected earlier and seek HTC when ill.

ART eligibility and initiation

- Of the 297 people enrolled in pre-ART care, 211 (71%) were eligible for ART among the 239 assessed using clinical staging or CD4 count.
- While documented initiation rates among those eligible was generally high (88%), there was a **decreasing rate of ART initiation rates as age of clients increased, with those 45+years having the lowest initiation rates (80%) presented in Table 9.**[*16]

Table 9. Distribution of individuals initiated on ART by age-group (N=205)

Age group	Initiated on ART	Not Initiated on ART	Total	%
0-14	9	0	9	100%
15-24	28	3	31	90%
25-44	110	14	124	89%
45+	33	8	41	80%
Total	**180**	**25**	**205**	**88%**

- Men had higher initiation rates than women, 91% and 86% respectively.
- Entry points with lowest documented ART initiation rates included TB (60%), STI (75%) and family member on ART (75%) as compared to high initiation rates in PMTCT (94%). Such findings again indicate value of the 'test and start' approach in Option B+.
- **Site-level initiation rates ranged from 50% to 100%** and unlike linkage to pre-ART, once eligibility was established, did not seem to be related to site volume.
- Among the 17 children testing HIV positive, 71% were assessed for ART eligibility using CD4 count and 47% were assessed using CD4 testing. Of the 9 children eligible all were initiated on ART. However, eligibility of 35% (n=6) of the children was not documented (Table 10).

Table 10: Access to Care and Treatment among Children Linked to Pre-ART Care

Age Group	Total HIV+ Children Linked to Pre-ART	Clinical Staging Done		CD4 Testing Done		ART Eligible			% Initiated on ART		% Initiated on ART
		Yes	No	Yes	No	Yes	No	Not Recorded	Yes	No	
0-4	3	3	0	2	1	2	0	1	2	0	100%
5-9	8	4	4	2	6	2	2	4	2	0	100%
10-14	6	5	1	4	2	5	0	1	5	0	100%
Total	**17**	**12**	**5**	**8**	**9**	**9**	**2**	**6**	**9**	**0**	**100%**

ART Pick-Ups

- Of concern, **20% (36/184) of the people initiated on ART had only one pick-up documented - at ART initiation.** There were no

documented comments of the status of the patients whether transferred or deceased indicating weak follow-up systems in treatment and care services.*[17]

- **ART-pick up rates were highest among older clients aged 45+ (47%) and lowest among the youngest aged 0-14yrs (10%).***[18]

Age disaggregated profiles of HIV testing and linkage to care and treatment

Sub analyses were conducted to further disaggregate and group age groups among adults and young people in order to explore trends revealed in the main analysis. The age aggregated profiles are summarised below.

SUB-ANALYSIS 1: Young People (Age 10-24): Profile of linkages between HIV testing and treatment

From January to March 2015, a total of 1,477 young people (YP) accessed HTC services at 9 of the 11 health facilities that participated in the rapid assessment. Sixty nine per cent (1,022) were young women.

Table 11. Distribution of YP accessing HTC service by age group (N=1,477)

Age group	Freq.	Per cent
10-14	126	8.53
15-19	480	32.5
20-24	871	58.97
Total	**1,477**	**100**

HIV Testing and Counselling for YP

Age 10-14

- Of the 126 young people (YP) who accessed HTC aged 10-14, three quarters were males (95) and a quarter was females (31).
- **Males 10-14:** The entry point for more than half (59%; n= 56) was VMMC followed by 18% (18) through VCT and PITC 'other' and 17% (16) VCT and PITC diagnosis.
- **Females 10-14:** The main entry points for HTC services were VCT and PITC diagnosis 42% (13), VCT and PITC other 23% (7) and **PMTCT 19% (6- specifically 5 ANC and 1 PNC).***[19]

Age 15-19

- More females were tested for HIV than males in the 15-19 age-group 76% and 24%, respectively. The main **entry points for HTC among young women in this age group was PMTCT which accounted for 66%** of the tests followed by 24% for VTC/PITC other and 4% VCT/PITC diagnostic.
- Among young males, 47% were tested for HIV through VCT/PITC other, 21% were tested through VMMC and another 21% through VCT/PITC diagnosis. Seven per cent (7%) of the young males were tested as partners for PMTCT.

Age 20-24

- In the **20-24 age group, again more females were tested for HIV than males, 72% and 28% respectively.***[20]

- Among the females, 59% were tested through PMTCT, 28% through VTC/PITC other and 8% through VCT/PITC diagnosis.
- Among the males the main entry points were, VCT/PITC other 61%, partners for PMTCT 17% and VCT/PITC diagnosis was 11%.

Table 12: Cascade of HTC services accessed by young people

YP HIV Test Yields	10-14			15-19			20-24		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
# Received HTC	31	95	**126**	366	110	**476**	625	238	**863**
# Tested for HIV	31	95	**126**	364	110	**474**	624	238	**862**
# Received HIV test results	26	61	**87**	312	82	**394**	534	205	**739**
#HIV+	2	5	**7**	17	3	**20**	37	10	**47**
Positivity Rate	6.5%	5.3%	**5.6%**	4.7%	2.7%	**4.2%**	5.9%	4.2%	**5.5%**

Young female generally have a higher HIV positivity rate compared to their male counterparts, though not significantly.

While the majority of young women are tested through PMTCT settings, a low proportion of young men were tested as partners for PMTCT.

YPLHIV Linkage to care and treatment

- There was a low rate of documented linkage of HIV positive YP to pre-ART services (21/47; 44.7%).
- Young men had lower documented linkage to care and treatment (5/18; 27.8%) than young women (32/56; 57.1%)[*21]

- Once enrolled in care there was universal initiation for ART among the eligible YP.

Table 13: Linkage to HIV care and treatment services among the YP testing HIV+

YP linkage to care and treatment	10-14			15-19			20-24		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
HIV+	2	5	**7**	17	3	**20**	37	10	**47**
# Enrolled in Pre-ART	2	3	**5**	11	0	**11**	19	2	**21**
# Assessed by Clinical Staging	1	3	**4**	9	0	**9**	17	2	**19**
# Accessed CD4 testing	0	3	**3**	6	0	**6**	5	1	**6**
# Eligible for ART	1	3	**4**	8	0	**8**	15	1	**16**
# Initiated on ART	1	3	**4**	8	0	**8**	15	1	**16**

SUB-ANALYSIS 2: Adults (Age 25 – 50+): Profile of linkages between HIV testing and treatment

HTC uptake and positivity among adults

- Sixty four per cent (64%) of the adults 25+ tested for HIV were females.
- **HIV positivity was highest among men 50+ (21.3%)** followed by 35-49 (21.2%) and women 35-49 (19.2%). (Table 15)

Table 14. Access to HTC adults age 25+ (N=2,173)

Age	Freq.	Per cent
25-34	1,308	60.2%
35-49	655	30.1%
50+	210	9.7%
Total	**2,173**	**100%**

Entry points for HTC among adults

- The main entry points for HTC among the **25-34 age group** were 52% PMTCT, 35% VCT/PITC other and 8% VCT/PITC diagnostic for females and 51% VCT/PITC other, 18% partners for PMTCT and 15% diagnostic for males.

Table 15: Uptake of HTC and Positivity among adults 50+

HIV testing cascade	25-34			35-49			50+		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
# Received HTC	882	415	**1297**	382	270	**652**	115	94	**209**
# Tested for HIV	881	415	**1296**	381	269	**650**	114	94	**208**
# Received HIV test results	753	367	**1120**	331	231	**562**	100	78	**178**
#HIV+	93	49	**142**	73	57	**130**	15	20	**35**
Positivity Rate	**10.6%**	**11.8%**	**11.0%**	**19.2%**	**21.2%**	**20.0%**	**13.2%**	**21.3%**	**16.8%**

- For the **35-49 age group** main entry points were VCT/PITC other 42%, PMTCT 29% and VCT/PITC diagnosis 16% among females while for males 48% were tested in VCT/PITC other, 24% in VCT/PITC diagnosis and 14% were partners for PMTCT.
- In the older age group 50+ the main entry points for HTC were **VCT/PITC other where 52% and 55%** females and males were tested respectively while in VCT/PITC diagnosis 36% of the females and 27% of the males were tested for HIV.*[22]

Access to HIV Care and Treatment

- **Enrolment in care (Pre-ART) ranged between 55% and 93% and was lowest among the older men 50+ at 55%.***[23]
- Among those eligible, older men also had the lowest documented initiation rates at 63.6% followed by women aged 35-49 (72.5%) and men aged 35-49%. Men and women aged 25-34 had the highest ART initiation rates among all adult age groups (83% cumulative). Table 16.

Table 16: Uptake of HTC and Positivity among adults 50+

Care and treatment cascade	25-34			35-49			50+		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
# HIV positive	93	49	142	73	57	130	15	20	35
# Enrolled in Pre-ART	60	35	95	51	41	92	14	11	25
# Assessed by Clinical Staging	50	27	77	45	33	78	12	10	22
# Accessed CD4 testing	25	17	42	31	28	59	9	8	17
# Eligible for ART	43	22	65	40	35	75	13	11	24
# Initiated on ART	35	19	54	29	27	56	11	7	18

6 Discussion

Prior to interpretation of key findings, it is important to note the current assessment was neither nationally representative, nor representative for Manicaland Province. Rather, the current rapid assessment conducted in two districts, was intended to provide a snapshot of the first 2 90s and provide indications of key areas for further investigation and programmatic follow-up.

The following discussion points arising from the First 2 90s Rapid Assessment are linked to key findings in corresponding numbered annotations in the results section.

***1:** **Referral services:** There is need to develop **standard operating procedures (SOPs) and improve documentation** regarding both internal and external referrals from HTC to HIV care and treatment. Specifically, while referrals are recorded, there is no record of outcomes of referral in registers, so it is impossible to note how effective referrals have been. Under the current systems described, the onus of reporting successful uptake of referral services rests largely on the client. Communication systems within and between facilities to follow up on patient referrals and transfers should be implemented that is linked to the documentation of patient outcomes in facility registers. This will be required to support linkage to care among those who fail to uptake referral services, and to better understand the effectiveness of referral systems and patient outcomes.

The proactive efforts of a few facilities to actively trace and document referrals indicate that follow-up mechanisms can be effectively implemented using existing resources. Documentation of promising and innovative practices in referral documentation and follow-up should be documented and shared between sites in the midst of development and support for SOPs.

***2** **CD4 Clinical Staging:** The documented influence of **cost, availability and transportation of samples required** to determine eligibility for ART was highlighted as a barrier to linking HIV positive clients to care and treatment. This finding provides support for test and treatment approaches as a method for improving linkages to HIV care and treatment. Such approaches, however, must be weighed against availability of funds to cover ART costs for a large number of individuals for life in HIV endemic settings such as Zimbabwe.

***3** **Human resources and infrastructure constraints:** Such system constraints were perceived to negatively influence linkage between

testing and treatment. Site support should seek to strategically identify and address key barriers in health care worker capacity/training, systems and support to overcome gaps.

*4 **Missing and incomplete data:** Incomplete documentation of health information and patient outcomes was noted as a problem at many sites (for example large number of blank 'results received'). Site support should emphasise the importance of data quality and completeness for determining outcomes. Key gaps in data completeness should be identified and problem-solved together with health care workers during the site support and supervision. The benefits of introducing electronic registers and databases to record health information for longitudinal cohorts for overcoming shortcomings of paper-based systems, should be explored as a matter of urgency.

*5 **HIV positive largely recorded as testing for first time:** The large proportion of those testing for the first time among those testing HIV positive underscores the **importance of improving test coverage to reach key groups if the first 90 is to be achieved in Zimbabwe.** Such high yield of first time HIV tests, supports MOHCC data indicating that a large proportion of HIV positive individuals in Zimbabwe remain unaware of their status.

*6 **Higher HIV positivity rates in children being HIV tested 6 months after birth:** Higher positivity among infants testing later indicates **missed opportunities for PMTCT** and potential higher postnatal transmission during the breastfeeding period. More information is required to understand the characteristics of women at high risk of vertically transmitting HIV to their infants. Such information will enable health care workers to identify high risk mothers for increased counselling and adherence support.

*7 **PMTCT Program is successful increasing testing coverage in women:** The larger proportion of women testing overall and in each age group of women of childbearing age from PMTCT program settings highlights the **PMTCT program's success at increasing coverage of the first 90 among women in Zimbabwe.** Normalisation of HIV testing in ANC setting provides a good programmatic model of a successful approach to increasing HIV testing rates in targeted entry points.

*8 **Low testing rates among young people:** With young people (15-24) viewed as a key population in need of HIV testing and treatment, additional efforts are required to **increase test coverage**

among young women and men, but particularly young men, as they were a low proportion of those tested.

*9 **Higher HIV positivity rate among women HIV tested in postnatal care under the PMTCT program** require further investigation to determine whether this represents missed opportunity for HIV diagnosis in ANC, or if it reflects incident HIV infection following initial HIV test in ANC (and if so, the corresponding increased risks for MTCT).

*10 **Highest HIV positivity rate among men and women over 45+ years:** Higher HIV positivity among older adults highlights this as a key population to reach with HIV testing and treatment services, in an effort to prevent new infections (particularly within context of inter-generational sex with young women being a vulnerable group).

*11 **Disproportionately high HIV positivity rate among older men aged 50+:** High observed positivity rates in older men require further investigation regarding the characteristics of the cohort of older men testing positive, and indicates this as a potential priority group for HIV care and treatment programs to reach the first 2 90s, as well as prevention.

First 2 90s findings indicate older men and women are groups which require targeted models of coverage and care

*12 **Low linkage rates of YP testing positive to pre-ART:** Indicates need to explore processes and potential requirement for differentiated models of care for enhanced post-test counselling among young people to ensure linkage to HIV care and treatment. Targeted research to understand barriers and facilitators to linkage among this group are required.

*13 **High linkage of women in PMTCT to pre-ART:** The documented success of Option B+ in linking HIV positive women to HIV treatment and care provides good justification for transition to test and start approaches in the drive towards 90-90-90. Key lessons and good practices from transition to Option B+ should be strategically factored into test and start for life policy shifts.

*14 **Poor documented linkage rates at large (Tier 1 and high volume Tier 2) facilities:** While linkage rates varied both within and between site volume Tiers, the low documented linkage rates at Tier 1 sites **highlight difficulty in accurate documentation of referrals and mobility of populations accessing care at large referral centres.** Greater emphasis on the design of systems for follow up among HIV positive individuals with no documented linkage to care to record outcomes in the case of silent transfers related to mobility are required.

*15 **One-fifth of patients had no documented clinical staging:** Despite extensive efforts to increase availability of CD4 testing in Zimbabwe, **ensuring all HIV positive individuals access timely CD4 testing for both ART eligibility and monitoring remains a**

challenge. Such challenges are reinforced by health care worker comments regarding cost of assays acting as a barrier to timely linkage to care and treatment. Facilities with POC CD4 demonstrated higher documented clinical staging rates. These findings seem to support policy shift to test and start, as has been done with Option B+, where ART initiation and linkages to care and treatment are demonstrated to be high.

*16 **High HIV positivity/low ART initiation in older adults:** While ART initiation rates among all age groups are relatively high, the **reverse trend of older men and women having the highest HIV positivity rates, but among those eligible, the lowest ART initiation rates of any age group** underscores the requirement for additional research to understand the needs, barriers and facilitators of this group for HIV testing and linkage and retention in care and treatment. Potential need for differentiated models of care for key target groups such as older men should be explored.

*17 **Impossible to distinguish between self-transfer and LTFU in registers:** Limitations of documentation systems to distinguish between self-transfers and LTFU among those, **particularly at high volume sites,** who drop out of ART pick-ups requires further study. Sampling based approaches, such as those OPHID has used in the LTFU for timely Early Infant Diagnosis in Mashonaland East Province, should be used in adult ART settings to determine true outcomes of individuals who appear LTFU in registers. Health facilities require support to strengthen follow-up of defaulters and documentation of standard

patient information that facilitates tracking and tracing through cost effective and evidence-based systems (such as SMS reminders and text follow up).

*18 **Differences in HIV positivity, linkage to pre-ART and ART initiation between facility volume, sex and age:** Importance of disaggregated data to ensure needs of key groups for reaching 90-90-90 are met have been demonstrated, including need to ensure retention in ART care among younger clients and improve documentation of deaths and transfers as reasons for defaulting from pick-ups at site initiated. This rapid assessment has demonstrated the importance of age and sex disaggregation for understanding key bottlenecks and opportunities for improvement in the HIV Care and Treatment, and provides a useful initial snapshot of the value of data that will be captured under the current COP as per PEPFAR/USAID guidance.

*19 **Child marriage and abuse of young girls requires advocacy and further study:** While low in absolute numbers, almost **1/5 of girls aged 10-14 accessing HTC services did so through the PMTCT program** in antenatal and postnatal care. Such figures provide indication of need for education regarding the rights of the girl child including prevention of child sexual abuse through enforcement of laws and transformational changes at community level regarding acceptability of child marriage.

*20 **High test rates among young women in PMTCT – what does it mean?:** Among **young people aged 15-24, young women represent approximately ¾ of all HIV tests, the majority of whom are tested in PMTCT settings**. This finding has three major implications: 1) Success of the PMTCT program in testing all women; 2) Given established risks for HIV of early sexual debut, there is need to enhance efforts for HIV prevention among young women, and to strengthen both Prong 1 prevention of primary HIV infection and Prong 2 prevention of unwanted pregnancies for PMTCT; 3) Low testing rates of young men in facility-settings indicate need to develop targeted strategies to reach young men for HIV testing.

*21 **Young men (15-24) have both lower uptake of HTC services, and among those that are HIV positive, lower documented linkage to HIV care and treatment than their female age counterparts.** In order to reach ambitious 'All In' strategies to increase HIV testing and decrease infections and death among adolescent populations, such findings highlight the necessity for research to understand the best methods to both reach young men and the particular need of this group for supporting linkage and retention in care.

*22 **High test rates in general testing, high positivity rates in those seeking treatment:** The entry point for HTC from adults age 25-34 from general settings such as PMTCT towards VCT/PITC 'other' among 35+ is reflective of **higher positivity test yields among these populations** as PLHIV are likely presenting following episodes of illness or as an index case. Such findings provide strong support for **opt-out testing approaches** similar to PMTCT for in-patient departments and all adults presenting for health services in any entry point.

Rapid Assessment - Rapid Action: First 2 90s Dissemination

As part of its model of generating programmatic evidence resulting in real-time action, following analysis of the First 2 90s rapid assessment, OPHID Trust Knowledge Management and Impact Analysis conducted District-level results dissemination with Ministry of Health and Child Care stakeholders. Results were presented back to District health officials and health workers from participating districts at MOHCC-led District Health Team and District Nurses meetings.

Key feedback and recommendations from District participants following presentation of rapid assessment findings:

1. Sensitization Required on the 'what' and 'how' of 90-90-90

Assessment Feedback: Health care workers indicated participation in the rapid assessment and presentation increased their awareness of 90-90-90 goals and practical implications for provision of care. Such feedback highlights how the trickledown effect of high-level policy agendas often does not reach site level.

Partners supporting MOHCC to implement HIV Care and Treatment activities at site level should sensitise all levels of health system actors on major policy goals such as 90-90-90. Health care workers have important perspectives regarding the reality of barriers to achieving such goals, and can support problem solving activities in a bottom-up approach to attaining national-level goals.

OPHID Knowledge Management and Impact Analysis Officer, Vivian Chitiyo, presenting RA findings to Mutare District Health Team Meeting, Jan 2016.

Looking ahead, sites expressed concern regarding ability to attain the 3rd 90 of 90% of all PLHIV virally suppressed at current Viral Load capacity.

Action: OPHID supportive supervision at site level will include a review of 90-90-90 and the implication of these goals on setting performance targets at site level. Through MOHCC leadership, OPHID and partners are currently engaged in activities to rapidly increase coverage and testing for viral load in line with national targets.

2. Need to improve documentation

Assessment Feedback: Health officials and health care workers acknowledged assessment findings indicating the need to strengthen site-level documentation of referral and patient outcomes between registers.

Action: Health care workers committed to reviewing site-level processes around documentation procedures. To ensure referrals between entry points and linkages to care are accurately documented in facility registers, healthcare workers proposed exploring potential for procedural task-shifting at site level. The need to strengthen institutional linkages between entry points and between facilities where referrals are made for efficiently and precisely documenting patient outcomes was highlighted as a priority action.

Through FACE-program activities, OPHID will further support strengthening of documentation of services and outcomes through Quality Improvement and performance management support. Standard Operating Procedures for documentation of referrals are in development to increase procedural clarity regarding documentation procedures.

3. Differentiated models for supporting key populations

Assessment Feedback: Disaggregated data by sex and age provided useful information regarding some of the 'key populations' for HIV testing, care and treatment at sampled facilities. Health facilities appreciated feedback regarding the entry points with highest HIV test yield to inform enhanced testing, and also key groups such as men and young people with lower documented HIV testing, high HIV positivity and low linkages to care and treatment. Sites expressed the need for further information on effective models of care to best serve groups such as men and young people to increase the first 2 90s.

Action: Through USAID/PEPFAR support, OPHID and implementing partners will continue to pursue evaluations and evidence-based program strategies to understand and meet the needs of key populations. Continuing on the 90-90-90 theme and building on rapid assessment results and priority actions, OPHID's next rapid assessment will explore the characteristics of high performing health facilities in HIV testing and linkages to care and treatment among men through the 'Positive Deviance for Male Engagement' assessment.

7 Conclusion

The *Tackling the First 2 90s* rapid assessment has provided an important first glimpse into what the existing health information systems can tell us about the facility linkages between HIV testing and treatment in Zimbabwe. Findings of the assessment have highlighted that health information documentation systems require strengthening if we are to keep track of our 90-90-90 goals, with varying rates of consistency and completeness of patient information both within and between site volume Tiers. The assessment has also underscored the importance of collecting accurate data and knowing the groups composing our epidemic. We need to understand the key groups of boys, girls, women and men living with HIV who may require strategic support and interventions to achieve the uptake, linkages and retention to reach the end of AIDS in Zimbabwe.

Our analysis has highlighted a number of successes of the Ministry of Health and Child Care, such as the high rates of HIV testing and linkage to care among pregnant and lactating women in PMTCT settings. Such successes provide us with useful lessons regarding how to approach the evolution of our programs towards universal test and start strategies. Findings of the rapid assessment requiring further investigation and confirmation include high positivity rates among older men paired with lower linkage to care, low test rates among young men, and low linkage rates of YPLHIV to pre-ART, among others. Within each of these groups, there are large numbers of individuals with indeterminate outcomes - their service use, transfers, illness (and wellness) experiences, or deaths currently a blank field in a register.

Finally, while our assessment indicates that closer examination of data within existing health information systems is clearly valuable for providing focus for additional site support, programs and assessments - such methods will not be sufficient to tell the full story required for tackling the First 2 90s and beyond. Supplementing national program data with cohort-based analyses and sampling-based methods will be needed to understand the outcomes of PLHIV who we know are likely to access services from multiple sites over the course of their lifetime in care and treatment. The findings of this assessment highlight that to reach 90-90-90 within Zimbabwe's HIV Care and Treatment and PMTCT Programs we will need to move closer to models of care that recognise and respect the needs and preferences of different groups of individuals comprising PLHIV. Through the commitment of the Ministry of Health and Child Care and its partners, Zimbabwe will achieve its 90-90-90 goals. This rapid assessment has demonstrated that the accurate measurement of this success will require the concerted effort of multiple actors from communities, facilities and systems in required evidence generation and knowledge mobilisation.

Families and Communities for the Elimination of HIV (FACE HIV) – Together we will achieve 90-90-90 and see the end of AIDS in Zimbabwe by 2030

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1 Appendix

List of Possible Entry Points by Test Result – HTC Register

Entry Point	HIV Test Result		Result Not Recorded	Total	% HIV+
	HIV+	HIV -			
1c (VCT -STI)	0	9	0	9	0%
1d (VCT-VMMC)	0	31	0	31	0%
1f (VCT-Family Planning)	0	11	0	11	0%
1j (VCT-Occupational)	0	1	0	1	0%
2d (PITC-VMMC)	0	61	0	61	0%
2j (PITC-Occupational)	0	1	0	1	0%
2l (PITC-Family member on ART)	0	7	0	7	0%
2m (PITC-Death of child/spouse)	0	1	0	1	0%
2i (PITC-Exposed Infant)	2	47	1	50	4%
3d (Mobile/outreach VMMC)	1	24	0	25	4%
2b1 (PITC - ANC)	54	949	6	1009	5%
2b2 (PITC-L&D)	0	27	0	27	0%
2b3 (PITC-PNC)	3	66	0	69	4%

Appendix 1: List of Possible Entry Points by Test Result – HTC Register

Entry Point	HIV Test Result		Result Not Recorded	Total	% HIV+
	HIV+	HIV -			
2b4 (PITC PMTCT Partner)	10	142	2	154	6%
1b1 (VCT-ANC)	7	76	1	84	8%
1b2 (VCT-L&D)	0	3	0	3	0%
1b3 (VCT-PNC)	0	15	0	15	0%
1b4 (VCT-PMTCT Partner)	1	12	0	13	8%
1N (VCT-Other)	130	1,058	10	1198	11%
2vct (VCT-VCT)	19	150	0	169	11%
1i (VCT-Exposed Infant)	2	14	0	16	13%
2n (PITC Other)	23	130	1	154	15%
Not recorded	7	28	9	44	16%
2c (PITC-STI)	17	84	0	101	17%
1e (VCT-Diagnosis)	17	83	0	100	17%
2e (PITCT-Diagnosis)	104	331	8	443	23%
2a (PITC-TB)	8	20	0	28	29%
1l (VCT - Family Member of ART)	7	16	1	24	29%
1a (VCT-TB)	2	3	0	5	40%
1m (VCT-Death of child/spouse)	1	1	0	2	50%
2h (PITCT Nutrition)	1	0	0	1	100%
Total	**416**	**3401**	**39**	**3856**	**11%**

2 Appendix

Legend to Categorization of HTC Register Entry Points in Current Analysis

Entry Points Categorised	Entry Points HTC Register
PMTCT	: VCT-b1-b4 and PITC-b1-b4
TB	: VCT a and PITC a
Pediatric Services	VCT/PITCT g, h and i
OPD	VCT/PITC e, f and j
OPD STIs	VCT/PITC c
Family Member on ART or Deceased	VCT/PITC l and m
VCT Other	Other Unspecified n
PITC Other	Other Unspecified n
VMMC	PITC/VCT/Mobile/Outreach d

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