MINISTRY OF HEALTH & WELLNESS

REPUBLIC OF BOTSWANA

INTEGRATION OF SEXUAL & REPRODUCTIVE HEALTH RIGHTS AND HIV SERVICES IN BOTSWANA

"Leave no one behind"

UNAIDS

UNFPA

TABLE OF CONTENTS

ACRONYMS

ANC	Antenatal Care
ARV	Antiretroviral
ART	Antiretroviral Therapy
Ca Cx	Cervical Cancer
FP	Family Planning
GBV	Gender Based Violence
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
HTA	Health Technology Assessment
HPV	Human Papillomavirus
IDCC	Infectious Disease Care Clinic
IEC	Information, Education and Communication
IUD	Inter Uterine Device
LAB	Laboratory
MCH	Maternal and Child Health
MoHW	Ministry of Health and Wellness
MDR	Multi Drug Resistant
NGO	Non-Governmental Organization
OPD	Out Patient Department
PEP	Post Exposure Prophylaxis
PEPFAR	Presidents Emergency Fund for AIDS Relief
PMTCT	Prevention of Mother to Child HIV Transmission
SDGs	Sustainable Development Goals
SRHR	Sexual Reproductive Health and Rights
STI	Sexually Transmitted Infections
TB	Tuberculosis

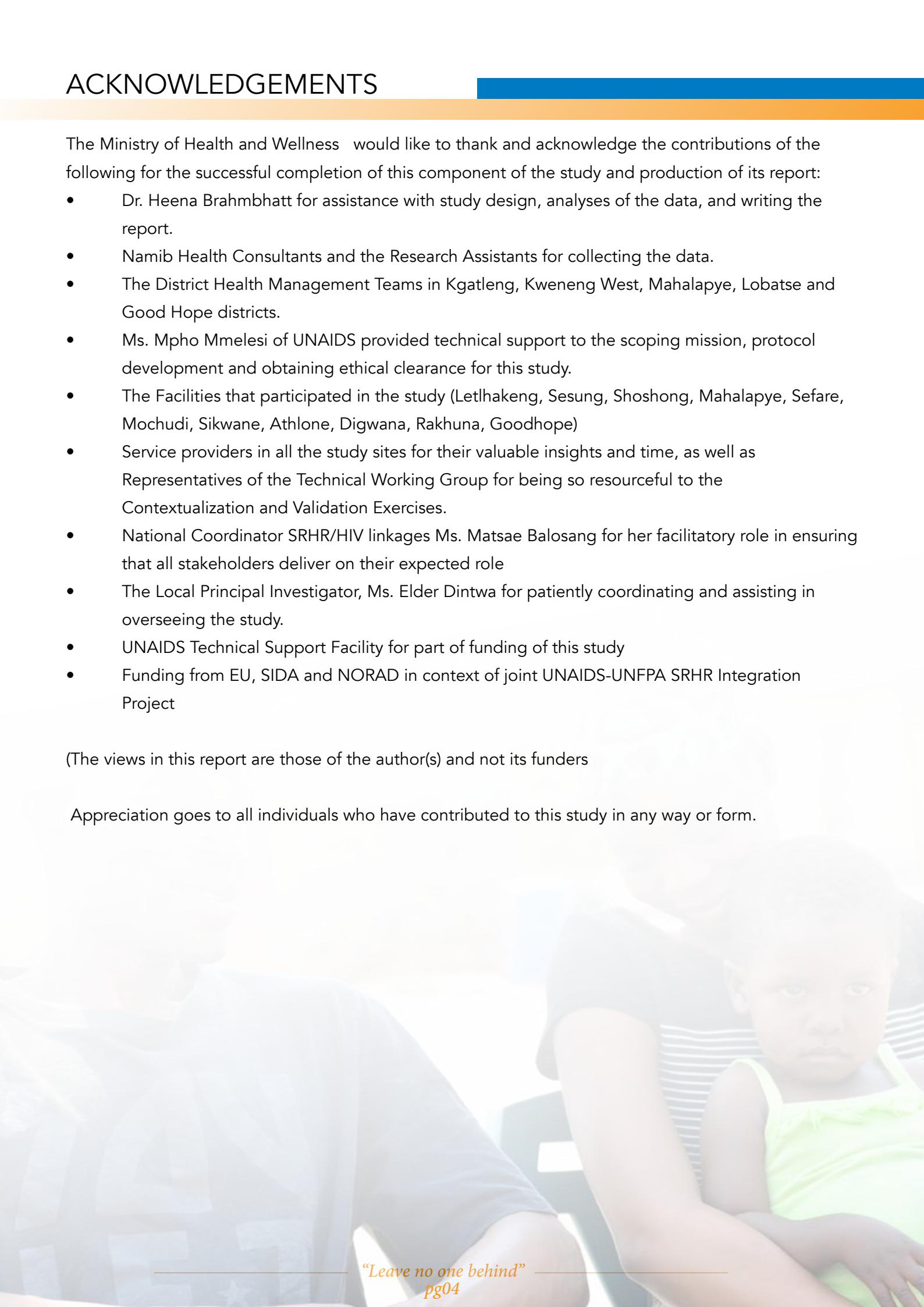
ACKNOWLEDGEMENTS

The Ministry of Health and Wellness would like to thank and acknowledge the contributions of the following for the successful completion of this component of the study and production of its report:

- Dr. Heena Brahmbhatt for assistance with study design, analyses of the data, and writing the report.
- Namib Health Consultants and the Research Assistants for collecting the data.
- The District Health Management Teams in Kgatleng, Kweneng West, Mahalapye, Lobatse and Good Hope districts.
- Ms. Mpho Mmelesi of UNAIDS provided technical support to the scoping mission, protocol development and obtaining ethical clearance for this study.
- The Facilities that participated in the study (Letlhakeng, Sesung, Shoshong, Mahalapye, Sefare, Mochudi, Sikwane, Athlone, Digwana, Rakhuna, Goodhope)
- Service providers in all the study sites for their valuable insights and time, as well as Representatives of the Technical Working Group for being so resourceful to the Contextualization and Validation Exercises.
- National Coordinator SRHR/HIV linkages Ms. Matsae Balosang for her facilitatory role in ensuring that all stakeholders deliver on their expected role
- The Local Principal Investigator, Ms. Elder Dintwa for patiently coordinating and assisting in overseeing the study.
- UNAIDS Technical Support Facility for part of funding of this study
- Funding from EU, SIDA and NORAD in context of joint UNAIDS-UNFPA SRHR Integration Project

(The views in this report are those of the author(s) and not its funders

Appreciation goes to all individuals who have contributed to this study in any way or form.



EXECUTIVE SUMMARY

The goal of our study was to assess improvements in efficiencies associated with integration of Sexual and Reproductive Health and Rights (SRHR) and HIV services at health facilities across Botswana. In order to have successful integration of health services and scaling up of these services across facilities in Botswana, it is important to assess if health systems support SRHR and HIV integration. Integration of SRHR/HIV was implemented in 7 health facilities in Botswana and these were compared in a cross sectional design to 4 health facilities where integration of services was not implemented. The relationship between integrated health care and client satisfaction is complex and multifaceted and we were able to assess these outcomes from the perspective of the facilities, health care providers and clients.

The main findings were that overall, there were significant improvements in service delivery and client and provider satisfaction in integrated compared with non-integrated sites. These improvements were linked to improvements in schedules, referrals, linkages with the community, quality of services, presence of a doctor at the facility, positive interactions with the nurses and client satisfaction.

Some of the challenges raised where the lack of awareness among clients about integration, even in facilities that were integrated, as well as missed opportunities where many clients were not made aware of or offered services they did not request. Long waiting times were reported at integrated facilities but this was not linked to less satisfaction and this may be because longer waiting times were acceptable if the client was getting more services in one visit. Stratifying our results by district, and type of facility (Kiosk, Supermarket and Mall models) demonstrated some significant differences and highlighted the importance of disaggregating findings which are often missed when looking at results collectively.

Overall, clients reported more satisfaction with the quality of services as well as with referrals, and schedules in integrated facilities. Although challenges such as long wait times persist, with improvements in education and service delivery, client satisfaction is expected to continue improving. However, for successful scaleup of integration in Botswana, it is important that the focus of integration is not only at the facility level. It is critical that at a national level, there is support to enforce integration at the policy, management, financial and service delivery level, and to ensure there is synergy between these levels in data collection and ongoing monitoring and evaluation of integration efforts. Community sensitization, education and engagement has to be strengthened so that there is improved understanding of the benefits of integrated and increase in awareness of integrated service delivery.

GENERAL OVERVIEW

Background

The "Maputo Plan of Action,"1 was conceptualized with the recognition that African countries will be challenged to meet the SDGs without significant improvements in SRH and highlighted priority areas and recommended among a number of measures including: (i) integrating HIV/AIDS services into SRH, (ii) promoting family planning, (iii) supporting SRH needs of adolescents and young people, (iv) addressing unsafe abortions through family planning, (v) ensuring quality and affordable services are available for maternal and child health and survival, (vi) ensure security of reproductive health commodities. In addition to improving SRH services, linkages of SRH and HIV was widely accepted as a strategy for HIV prevention and control.

The integration of SRH and HIV services has wide acceptance and support from stakeholders in Botswana who believe that this is an important strategy to address SRHR and HIV challenges in the country. In partnership with UNAIDS and UNFPA, an assessment was done in 2014 of 9 pilot sites in Botswana where SRH and HIV services were integrated. The goal of the assessment was to assess improvements and efficiencies gained from integration of health services and describe resources necessary for successful scale up of SRH and HIV linkages in Botswana. Botswana has some of the highest rates of HIV infection globally and the Ministry of Health and Wellness (MoHw) is committed to scaling up SRHR/HIV linkages based on the success of the integrated pilot sites. As part of the national SRHR/HIV integration plan, the MOH of Botswana identified nine strategic pillars required to effectively and efficiently scale up SRH and HIV linkages across the country. Among the 9 strategic pillars, "research, monitoring and evaluation" was recognized as a key component for wide scale implementation and scale-up.

The integrated pilot clinics each used one of the following models based on the type of facility: (i) Kiosk model was used by health posts and smaller clinics and provided a number of services within the same room by one health provider, (ii) Supermarket model was applicable to clinics with or without maternity wards and had a similar approach to the kiosk model except the physical clinic was larger with a number of rooms providing different services by different health care professionals, (iii) Mall model in hospitals where different services were provided in different rooms

STUDY OBJECTIVE AND SPECIFIC AIMS

The Sustainable Development Goals [SDGs] adopted by governments and partners stipulate that achieving Goal 3: Ensure Healthy Lives and promote well-being for all at all ages requires them "By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes." In this context, integration of SRH/HIV was implemented by 2015 in nine pilot health facilities in Botswana, in three districts. The government of Botswana recognized the significant public health benefits of linking these services which in addition to reducing the stigma associated with accessing HIV prevention and treatment services, could result in improved program effectiveness and efficiency with clients' multiple needs addressed during each clinic visit. In order to inform further integration of SRHR/HIV services across other clinics in Botswana, our study aims to assess program efficiencies in 7 integrated clinics. Given that there was no baseline pre-integration, baseline assessment done for the pilot clinics, we will compare the 7 integrated versus 4 non-integrated sites so as to assess efficiencies generated through integration of services.

Objective: To assess program efficiencies generated through integration of SRHR/HIV services at the pilot versus non-integrated sites in Botswana so as to inform scale up activities for integrated services.

Specific Aims. He study will assess outcomes in the integrated versus control sites in the following 5 districts in Botswana; Kweneng West, Lobatse, Mahalapye DHMT, Kgatleng DHMT, Goodhope:

1. Program efficiencies were assessed at each clinic using observation guides of services and layout at each clinic as well as structured questionnaires for the clients and service providers.

The following outcomes were assessed:

a. Mapping of services provided
b. Patient flow
c. Time spent per service (through time motion observation)
d. Service delivery modality
e. Services requested and received by clients
f. Referral mechanisms
g. Quality of services
h. Barriers to coming to accessing health services
i. Number of service providers at the facility
j. Appropriate personnel recruited.
k. Working hours for each provider
l. Trainings for providers:
    i. Number of service providers trained on rights-based approach to service delivery
    ii. Number of service providers trained (on stigma and value clarification)
m. Education and Promotion activities:
    i. Number (per type) of SRHR/HIV linkages promotional materials disseminated
    ii. Number of IEC activities conducted
n. Flowchart for health care providers in place
o. Quality/Control Measures:
    i. Existing SRHR and HIV policy and protocols reviewed

ii. Frequency of staff assessments
iii. Number of monitoring and support visits conducted
iv. Number of district -level reviews on integrated approaches performed

p. Programs for vulnerable populations:
i. Number of programs implemented to reduce stigma and discrimination
ii. Number of programs implemented involving men or vulnerable groups

q. At a macro level:
i. Number of districts with NGOs implementing SRHR/ HIV and AIDS linkages/ integration activities
ii. Number of health facilities providing both SHRH and HIV comprehensive services

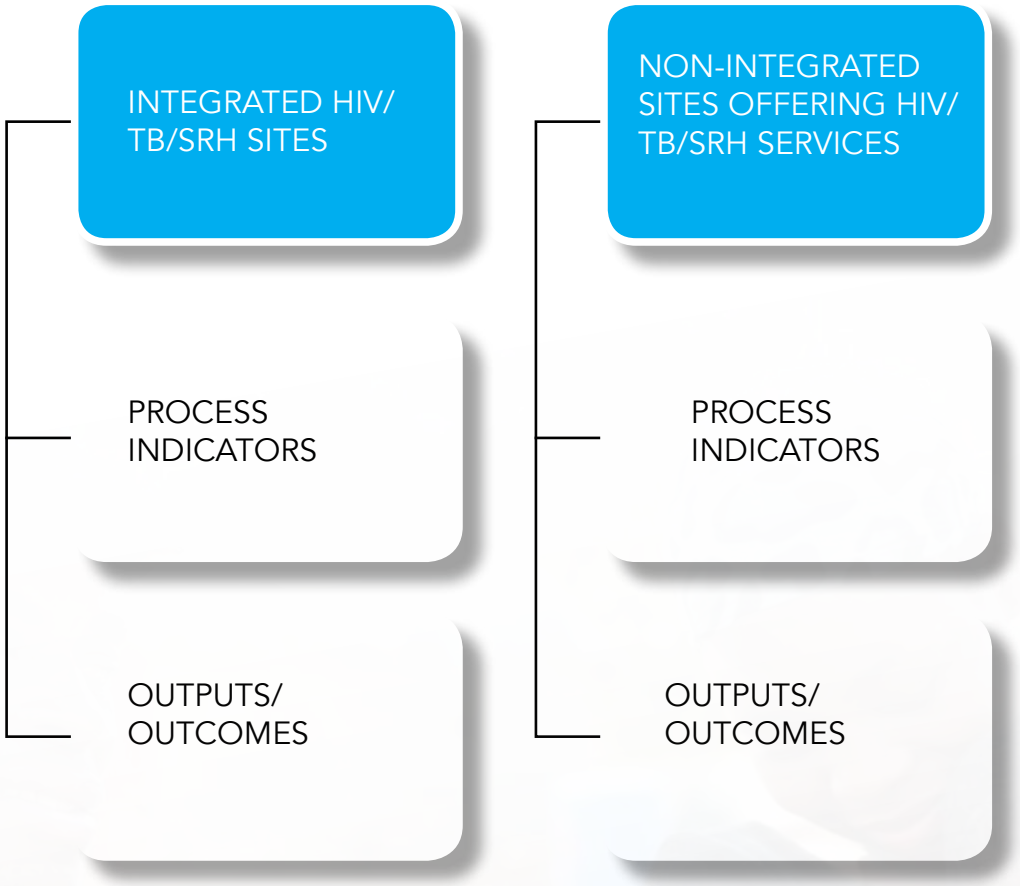
2. Impact of integrated approach on HIV and SRH outcomes will be assessed by reviewing statistics collected by each clinic. The following outcomes will be assessed in the integrated versus control sites:

a. Uptake of HIV testing
b. Proportion of population with access to ARV drugs
c. Proportion of patients reporting they received all HIV and SRHR services they wanted or needed
d. Uptake of contraceptives
e. Proportion of clients reporting stigma and discrimination in accessing SRHR/HIV services
f. Number of women screened for cervical cancer
g. Client satisfaction with services received and time spent at clinic

METHODS

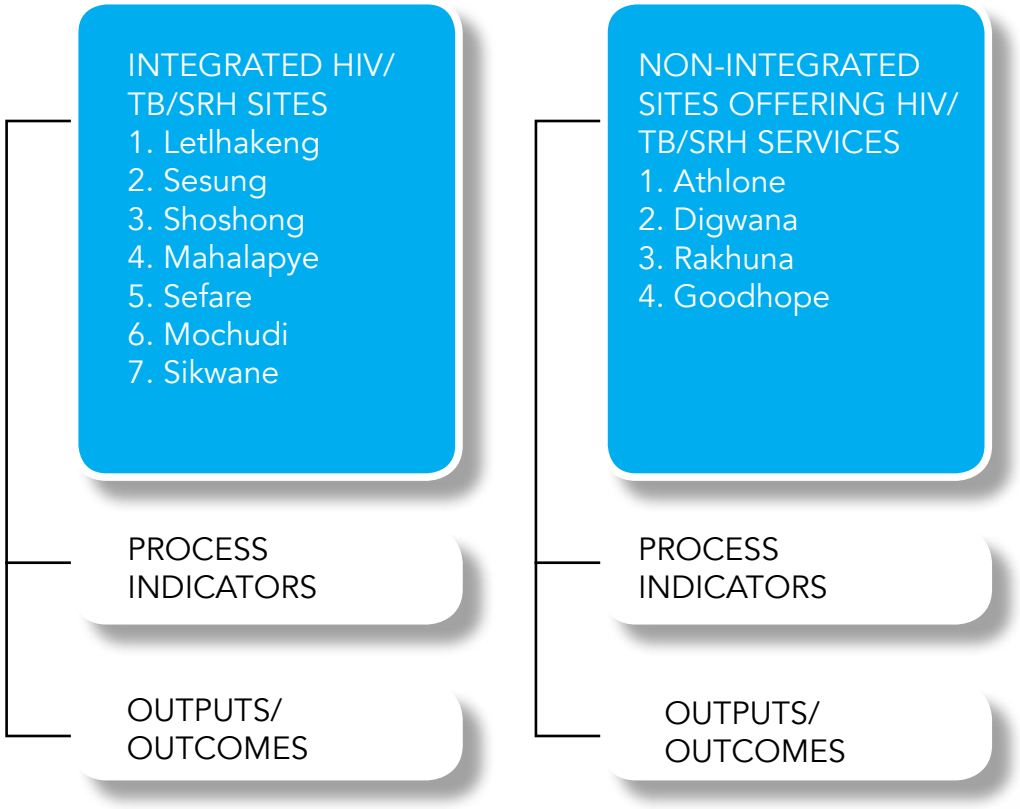
STUDY DESIGN

Given that the project was initiated without establishing a baseline about service utilization, efficiencies generated included a comparison of efficiency for a given set of indicators between the sites where the project is implemented and other sites where integration has not taken place. We conducted a cross-sectional, case-control study in Botswana, comparing outcomes of interest from 7 pilot clinics where integration of SRH and HIV has already been implemented, with 4 control clinics where integration has not been implemented. Of the seven pilot sites where integration was facilitated, we excluded the clinics where Macro has conducted activities.



As shown in the figure, health facilities where integration of HIV and SRH services was implemented were compared with facilities where integration has not yet been implemented. Data were collected at the facility, provider and client level to assess the impact of integration on program efficiencies.

The clinics included in this study are outlined in the table below



The study was conducted from the provider and the client perspectives.
In the classical approach, measuring efficiencies includes delivering a maximum number of outputs at the lower cost per output. The Program Efficiency approach is a departure from the traditional approach as relation between the inputs and outputs as well as the process lead to delivering the outputs were examined.

DATA COLLECTION AND ANALYSES

The data were collected from the following sources and provided multiple perspectives to assess the impact of integrating health services at the facilities.

1. Facility level data
2. Client exit interviews
3. Health care provider interviews

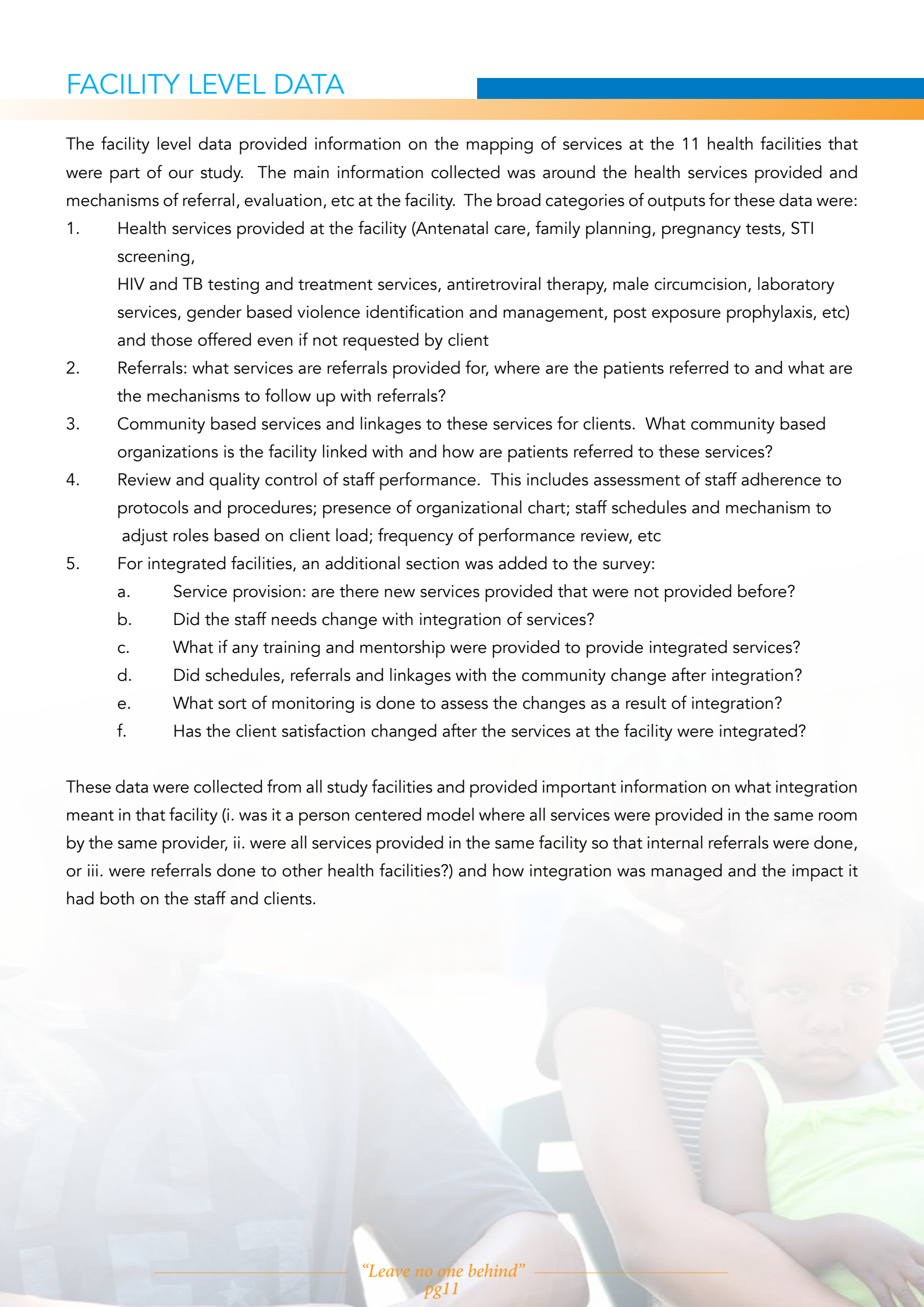
This document summarized the analyses required for the facility level, client exit interviews and health care provider interviews. All data were entered in excel or word by the data collectors and data cleaning was done in STATA 12. Data entry platforms were created in excel and code books were created for all data bases. All analyses were performed using the statistical analyses software STATA 12 (StataCorp LP, College Station, TX).

FACILITY LEVEL DATA

The facility level data provided information on the mapping of services at the 11 health facilities that were part of our study. The main information collected was around the health services provided and mechanisms of referral, evaluation, etc at the facility. The broad categories of outputs for these data were:

1. Health services provided at the facility (Antenatal care, family planning, pregnancy tests, STI screening,
   HIV and TB testing and treatment services, antiretroviral therapy, male circumcision, laboratory services, gender based violence identification and management, post exposure prophylaxis, etc) and those offered even if not requested by client
2. Referrals: what services are referrals provided for, where are the patients referred to and what are the mechanisms to follow up with referrals?
3. Community based services and linkages to these services for clients. What community based organizations is the facility linked with and how are patients referred to these services?
4. Review and quality control of staff performance. This includes assessment of staff adherence to protocols and procedures; presence of organizational chart; staff schedules and mechanism to adjust roles based on client load; frequency of performance review, etc
5. For integrated facilities, an additional section was added to the survey:
   a. Service provision: are there new services provided that were not provided before?
   b. Did the staff needs change with integration of services?
   c. What if any training and mentorship were provided to provide integrated services?
   d. Did schedules, referrals and linkages with the community change after integration?
   e. What sort of monitoring is done to assess the changes as a result of integration?
   f. Has the client satisfaction changed after the services at the facility were integrated?

These data were collected from all study facilities and provided important information on what integration meant in that facility (i. was it a person centered model where all services were provided in the same room by the same provider, ii. were all services provided in the same facility so that internal referrals were done, or iii. were referrals done to other health facilities?) and how integration was managed and the impact it had both on the staff and clients.



ANALYSES OF FACILITY LEVEL DATA

All data from the 11 health facilities were analyzed aggregately and then separately to assess the prevalence of outcomes outlined above. Descriptive data analyses were used to assess the outcomes of interest. As summarized in table 1, for all the services, we assessed how many facilities provided these services, where services were provided even if not requested, if referrals for services were available, where the referral was done to and what the mechanism of referral was.

As summarized in Table 1(see annexes), antenatal care (ANC) services were provided in a majority of the facilities assessed and in about half the facilities, these services were offered even when not requested. Referral was provided for ANC in over 60% of the facilities and the referrals were mainly to hospitals and intra-facility. Referrals to hospitals were for many services which included ANC, family planning, STI screening and treatment, HCT and TB treatment. Referrals were done mainly by providing a referral letter but other approaches such as patient cards, getting assistance from NGO/community staff and a nurse accompanying the patient to the referral service were also used.

Postnatal care and newborn care services were also provided in a majority of the facilities and referral was provided in about half of them. Intra-facility referrals were the most common for these services, followed by referral to hospitals.

Family planning services were provided in all facilities we assessed and these services were offered in over 60% of the facilities even when not specifically requested by the clients. Given that contraceptive services were available in all clinics, very few provided referral services. In addition to family planning services overall, table 1(see annexes), summarizes statistics on all contraceptives provided at the facilities. The contraceptives that were available in all facilities were injectables, oral pills, female and male condoms and dual methods.

Immunization services were available in a majority of the facilities and patient cards provided referral information when necessary. Screening for adults for triage was done in all facilities and for children in a majority of facilities. Cervical cancer screening was done in all facilities and was recommended in a majority of facilities even when not requested. ART services were provided in 10 out of 11 facilities and HIV viral load monitoring and CD4 testing were provided in 8 out of 11 facilities. STI screening and treatment were provided in all facilities in the study. Pregnancy tests were offered in 10 out of 11 facilities as was HIV counseling and testing (HCT) services. Tuberculosis (TB) screening was offered in all facilities and treatment for TB was offered in 10 out of 11 facilities.

Prevention of Mother to Child HIV (PMTCT) services were offered in over 60% of the facilities and where not available, referral was done to the hospital, intra-facility or the maternal and child health (MCH) department. HIV testing for HIV exposed children was offered in 9 out of 11 facilities and ART for PMTCT was offered in 10 out of 11 facilities. A majority (80%) of facilities provided ART for HIV positive infants as well as provision of formula. Male circumcision services were only offered in 4 out of the 11 facilities of

which 3 were integrated facilities. Dressing services were offered in a majority of facilities and lab services in about 50% of the facilities in our study. Prevention and management of gender based violence (GBV) and post exposure prophylaxis (PEP) was provided in 10 out of 11 facilities. General consultation services were offered in only 3 out of 11 facilities.

Table 2 (see annexes), summarizes the quality of services, including referral mechanisms from the perspective of the providers. Results are summarized overall as well as by level of integration at the health facility. Overall, 10 out of 11 facilities kept record of referrals and 9 out of 11 facilities followed up with referrals. When stratified by integration status, as can be seen in the table, both record of referrals and follow up of referrals was more frequent in the integrated versus non-integrated facilities. A majority of the facilities followed up with the client referrals through client contacts and phone calls. Home based HCT was provided in 7 out of 11 facilities of which 6 were integrated and 1 was non-integrated. Mobile HCT was also provided in 6 out of 11 facilities.

In addition to the health and service statistics obtained from all the health facilities, specific data were collected from integrated sites to assess the impact of integration on service quality. Table 3 below provides a summary of the impact of integration on health service delivery as assessed at the facility level.
TABLE 3: IMPACT OF INTEGRATION ON HEALTH SERVICE DELIVERY

IMPACT OF INTEGRATION	N (%)
MORE SERVICES THAN BEFORE	7 (100.0)
NEW SERVICES NOT AVAILABLE BEFORE	6 (85.7)
SAME SERVICES OFFERED IN SHORTER TIME	4 (57.1)
NUMBER OF STAFF	
1.Increased	1 (14.3
2.Stayed the same	5 (71.4)
3.Decreased	2,3 (14.3)
MENTORSHIP TO STRENGTHEN INTEGRATION	4 (57.1)
SCHEDULE	
1.Improved	1 (100.0)
2.Stayed the same	
3.Worse	
REFERRAL	
1.Improved	1 (71.4)
2.Stayed the same	2 (28.6)
3.Worse	
LINKAGES WITH COMMUNITY	
1.Improved	1 (71.4)
2.Stayed the same	2 (28.6)

3.Worse	
MONITORING AND EVALUATION	
1.Improved	1 (85.7)
2.Stayed the same	2 (14.3)
3.Worse	
QUALITY OF SERVICES	
1.Improved	1 (85.7)
2.Stayed the same	2 (14.3)
3.Worse	
CLIENT SATISFACTION	
1.Improved	1 (100.0)
2.Stayed the same	
3.Worse	

CLIENT EXIT INTERVIEWS

Data were collected from 148 clients from the 11 health facilities. These exit interviews were done for all consenting adults over the age of 18 years once their health checkups at the facility were done. Clients were recruited based on a convenience sample of adults who consented to participate in the study. The data collectors spent a few days at each clinic as the type of clients visiting the clinics may be different based on the day of the week, especially if specific services were offered only on specific days of the week. The following data were collected from all clients at the exit interviews:

1. Socio-demographic information: Sex, nationality, age (in years), marital status (single, married, widowed, divorced/separated, not declared), employment status (full time, part time, student, etc), and education level (none, primary, form 1-3, form 4-5, tertiary, no response)
2. Service utilization by clients: for all health services (ANC, family planning, HIV and TB testing, ART, male circumcision, diabetes screening, GBV, laboratory services, PMTCT, etc), which services did the client request and of those requested, which ones were received?; which services were offered (even if not requested) and of those offered, which ones were received?
3. Time spent for services: clients were asked for the total time they were in the facility, if they were satisfied with time spent on services and if they were satisfied with services provided
4. Integration of services: clients were asked about their opinions about integrated services and the questions included: if they are aware that all services can be obtained in the same visit, where they learnt about integrated services (friend, NGO, TV/radio, pamphlet, doctor, etc), and what their opinion is about getting all their health needs met in the same visit.
5. Health clinic accessibility: clients were asked about the length of time they have been coming to the facility, how often they come, and if there were any barriers to coming to the facility

"Leave no one behind"

6. Cost to patient: all clients were asked about the amount (if any) they paid for services they received that day, what the other costs were to come to the clinic (transport, child care, work absenteeism, etc) and if other non-monetary inconveniences were experienced as a result of coming to the clinic.

Analyses of client data

Descriptive data analyses were conducted to assess the prevalence of outcomes above. Data were analyzed aggregately to assess the distribution of outcomes of interest and will then be stratified by integrated versus non-integrated sites to assess differences between them. Within integrated sites, we assessed differences between clinics in the outcomes of interest. The goal of this analyses was to assess what efficiencies improved as a result of integration from the perspective of the client. The tables below provide a summary of the sociodemographic characteristics of the clients.

Table 4: Summary of Sociodemographic Characteristics of the Clients

	Integrated Non-Integrated	N=97 (%) N=51 (%)
Age in years (mean, range)	31.2 (16-61)	31.4 (16-60)
Sex (F%)	70.0	70.6
Marital Status		
1.Single	74.2	64.7
2.Married/co-habitat	18.6	35.3
3.Widowed	1.0	0
4.Divorced	0	0
5.Not declared	4.1	0
6.Minor	2.1	0
Nationality (%)		
1.Motswana	99.0	100.0
2.South African		
3. Zimbabwean, etc	1.0	
Employment (%)		
1.Full time	16.8	13.7
2.Parttime	7.4	3.9
3.Unemployed	46.3	70.6
4.Retired	1.1	2.0
5.Student	20.0	5.9
6.Work home	5.3	0
7. Other	1.1	0
8. Self employed	2.1	3.9
Highest education (%) *		
1.None	4.2	2.0
2.Primary	13.5	35.3
3.F1-3	46.9	43.1
4.F4-5	24.0	11.8
5.Tertiary	8.3	7.8
6. No response	2.1	0
7. Non-formal	1.0	0

*$p<0.05$

The mean age of the participants in our study was about 31 years and a majority were women (70%). There was no significant difference in demographic characteristics of clients in the integrated verses non-integrated sites, except for education where clients from integrated sites were significantly more likely to have completed Form 4 and tertiary level education compared with clients in the non-integrated sites. Proportions accessing services at the health facilities are summarized in Table 5 below. Based on the services requested by the client, the following services were received by all clients when asked: vital statistics, ANC, ANC visit 1, ANC follow up, post natal care, male condoms, immunizations, ART, HIV counseling and testing, TB screening, male circumcision, Health Technology Assessment (HTA) of Human Papillomavirus (HPV) follow up and mental health services. For all other services, the proportions who received the services they requested have been summarized in the table. In addition to what the client requested, we assessed what additional services were offered in addition to what was requested. The service offered to majority of clients even if not requested was vital statistics which was accepted by most clients. For all other health services, only a minority of clients were offered additional services when not requested.

Table 5: Health Service Provision for All Clinics

Health Service	Services requested by client	Services you received	Services offered in addition to what was requested	Out of additional service offered identified in the column four , indicate the services received
	N=138	%	N	N (%)
Vital Statistics	11	100.0	75	93.3
ANC	5	100.0	0	0
ANC Visit 1	2	100.0	0	0
ANC Follow Up	22	100.00	1	100.0
Post Natal Care	3	100.0	0	0
Family Planning	2	50.0	1	0
Injectables	10	90.0	0	0
IUD	0	0	0	0
Norplant	4	50.0	0	0
Female Condoms	0	0	1	0
Male Condoms	1	100.0	3	66.7
Dual Family Planning	0	0	5	0
Sterilization	0	0	0	0
Immunization	5	100.0	1	0
Cervical Cancer Screening	11	28.6	4	0
ART	4	100.0	0	0
ART:1st and 2nd line	46	89.1	0	0
Drug Management	0	0	7	100
HIV/TB	0	0	0	0
Opportunistic infections	0	0	0	0

Referrals	0	0	0	0
Viral Load Monitoring	0	0	0	0
STI Screening	0	0	4	0
STI Treatment	3	33.3	4	0
Pregnancy Test	0	0	0	0
HCT	0	0	1	0
Counseling	5	80.0	0	0
Counseling and Testing	3	100.0	0	0
HIV Positive	0	0	0	0
Infant HIV Test	0	0	1	100.0
TB Screening	1	100.0	0	0
TB Treatment	0	0	0	0
MDR	0	0	0	0
PMTCT	0	0	0	0
Male Circumcision	6	100.0	0	0
Dressing	8	100.0	0	0
Lab Services	3	66.7	1	0
GBV	0	0	1	0
Diabetes Screening	0	0	0	0
Diabetes follow up	2	2	0	0
HTA Screening	0	0	1	100
HTA Follow Up	1	100.0	0	0
Mental Health Services	1	100.0	0	0
Other Services (general consultation, health education, diet education, etc) Breast Cancer Diet Rash	9 1 1 1			

The important analysis for clients was to assess their perspective of integration of services. Again, since the same participants were not asked about their experiences before and after integration, the perspectives of clients in the integrated were compared with those in non-integrated sites. The questions asking about their opinions on integration were analyzed using descriptive analyses and the proportions stratified by integrated versus non-integrated sites to assess if the outcomes vary by integration at the facility as summarized in Table 6 (see annexes).

When assessing the wait time for health services, about an equal number of clients (~20%) in the integrated and non-integrated sites reported wait times not being too long. Interestingly, a higher portion of clients in the integrated vs non integrated sites found the wait times too long (40% verses 25%) although these differences were not statistically significant. The average length of waiting for services was significantly higher ($p<0.05$) among clients at the integrated versus non-integrated sites as shown in figure 1 below. An important measure of integration was whether service quality had changed as a result of integration? Again, a majority of clients (~80%) in the integrated and non-integrated sites reported that the quality of services was either good or very good.

The clients were also asked what the reason was for their response on quality of services and a majority stated the service quality was good because the nurses were helpful and informative, although there was no difference by integration site. Another important indicator of integration was whether the clients felt the services improve, were the same or worse after integration. Irrespective of whether the clients were in integrated or non-integrated sites, a majority (<90%) reported that integrated services would be better. Reduction in wait time and cost were stated as the most common reasons for reporting that integrated services would be better. Most of the clients (~90%) had been coming to the facility they were interviewed at for an average of 9 to 12 years. Barriers to coming to the clinic was also assessed and although a majority (~70%) of clients reported no barriers, the remaining 30% of clients reported a range of barriers summarized in table 6 and included a combination of language barriers, time operations of the clinic, schedule of services (more clients in the non-integrated site reported this as a barrier), costs and transport. As per the guidelines in Botswana for provision of free basic health services, most of the clients (~97%) reported no cost associated with the health services received. When payment was made, the average amount was about 12-15 pulas (~$1.00). Other costs associated with coming to the clinic included transport and work absenteeism.

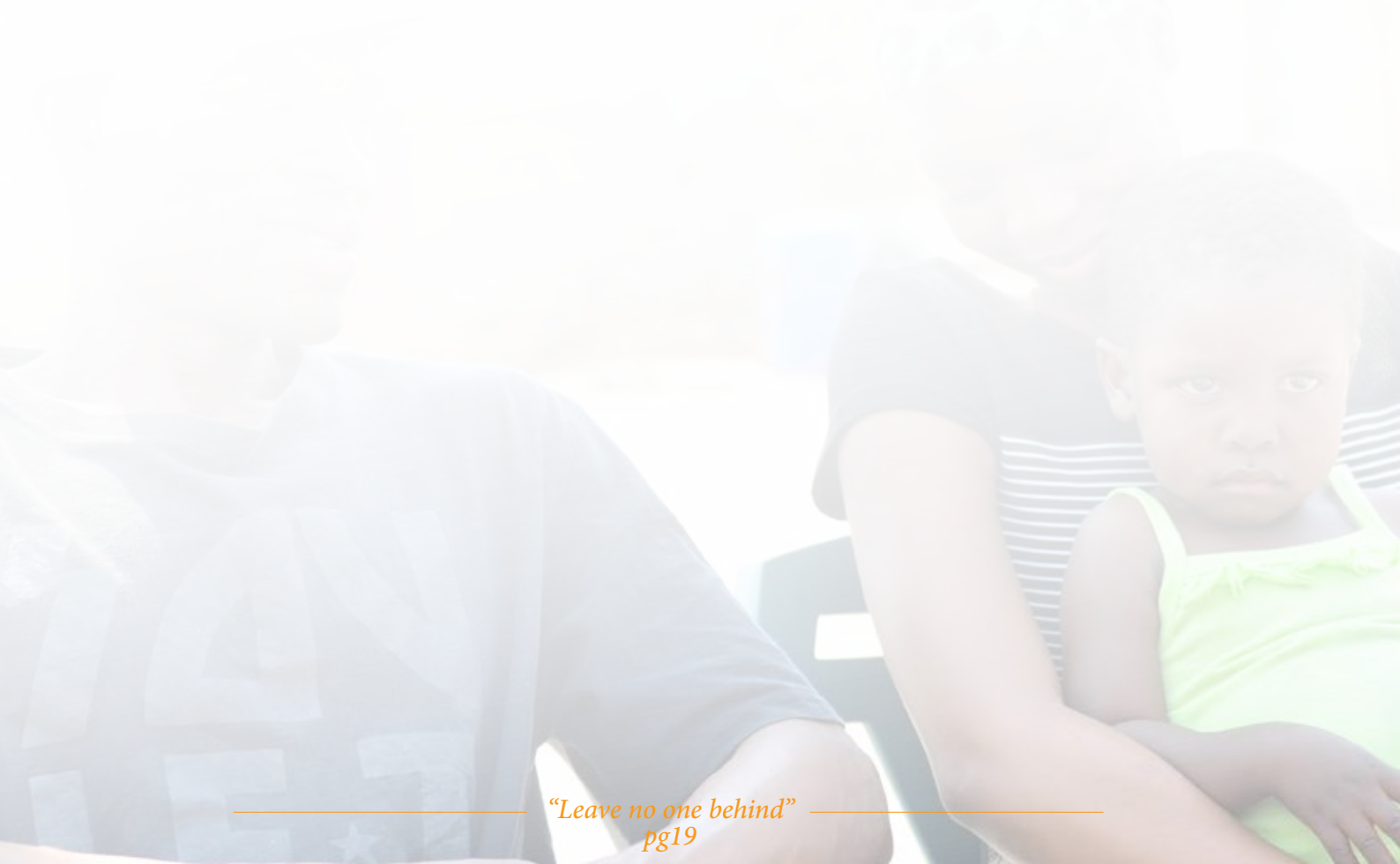
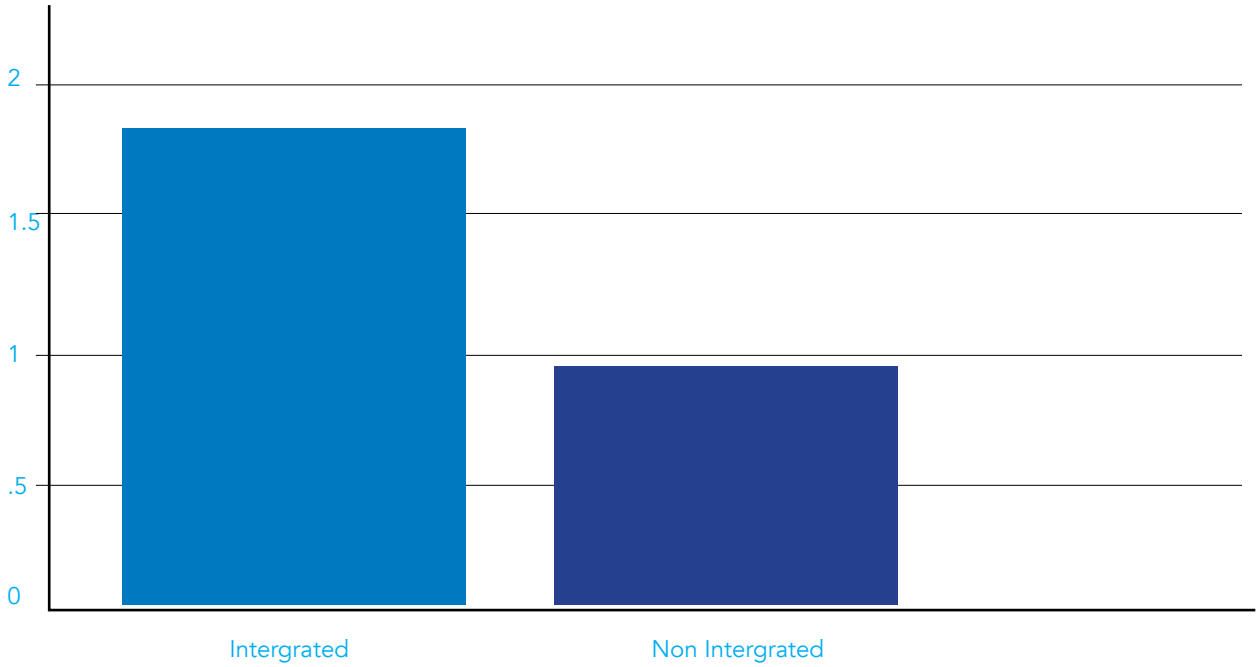


Figure 1: Wait time length of clients in integrated versus non-integrated sites



In addition to assessing the differences in service quality by level of integration, we were also interested in assessing client perspectives by facility type. As discussed earlier in this report, the integrated pilot clinics used one of the following models based on size of facility, services provided and the number of clients accessing the health facility. The three types of Models were: (i) Kiosk model - used by health posts and smaller clinics and provided a number of services within the same room by one health provider, (ii) Supermarket model - applicable to clinics with or without maternity wards and had a similar approach to the kiosk model except the physical clinic was larger with a number of rooms providing different services by different health care professionals, (iii) Mall model - hospitals where different services were provided in different rooms. Table 7 below summarizes client perspectives on quality of services, stratified by the type of facility the client was interviewed at.

Table 7: Perception of service quality, stratified by facility type

	KIOSK N=28 (28.9%)	SUPERMARKET ET N=45 (46.4%)	MALL N=24 (%)	P-value
WAIT TIME				
Not too Long	28.6	20.0	12.5	0.5
Just Right	42.9	37.8	37.5	
Too Long	28.6	42.2	50.0	
WAIT LENGTH (average hours)	1.5	1.9	1.9	0.19
SERVICE QUALITY				
Very good	39.3	34.1	16.7	0.01
Good	39.3	31.8	75.0	
Okay	17.9	20.5	8.3	
Poor	0.0	13.6	0.0	
Bad	3.6	0.0	0.0	

REASON FOR OPINION ABOUT INTEGRATED SERVICES	67.9	34.9	16.7	0.002
1.less wait time	10.7	25.6	66.7	
2.less cost	3.6	14.0	0.0	
3.doc/nurse providing services	0.00 3.6	2.3 3.6	0.0 0.0	
4.Other	10.7	16.3	0.0	
5.Reduced repeat visits	0.00	4.7	16.7	
1,2	0.00	2.3	0.0	
1,2,3	3.6	0.0	0.0	
1,3				
2,5				
HOW MANY MONTHS COMING TO FACILITY (Average and range)	240.9	197.4	40.7	0.011
WHAT WAS AMOUNT PAID AT CLINIC TODAY? (PULAS) N (Average and Range)	11.2	16.5	10.3	0.04

In addition to assessing wait length and time which were important indicators of service quality, we also assessed other factors by facility type as summarized in Table 7. There was no significant different in clients reporting wait time or length by facility type; it was concerning however, that 42% of clients in the supermarket and 50% of clients in the mall models found the wait time too long compared with the kiosk model where 28% of clients found the wait time too long. Average wait time however was similar in the facilities so perhaps the expectation of the wait time from the perspective of the clients was different based on the type of facility being accessed.

A majority of the clients reported that the service quality was either good or very good. Clients in the kiosk or supermarket models compared with mall models were significantly more likely to report that service quality was very good (39% and 34%, respectively, versus 16%, p=0.01)) whereas a majority of the clients in the mall model (75%) reported that the quality of services was good. When asked about why they liked integrated services, there were significant differences among clients based on the facility being assessed. A majority of the clients at the kiosk model facilities (68%) reported it was because of less wait time whereas a majority of the clients at the mall model facilities (67%) reported it was because of reduced costs associated with receiving services at integrated facilities. Clients at the mall model facilities were also more likely to list a combination of factors (less wait time, less cost and doctor/nurse providing services) compared to clients in other facilities. On average, clients accessing the kiosk and supermarket model facilities were accessing services and using these facilities for a lot longer period compared to clients at the mall model facilities (20 years and 16 years, respectively, compared to 3.4 years, p=0.011). Interestingly, the average amount paid at the clinic during the visit was significantly higher among clients at the supermarket compared with kiosk or mall model facilities (P16.5, P11.2 and P10.3, respectively, p=0.04).

Of interest was assessing whether service provision quality was different in the youth verses general clinics in our sample. We interviewed clients from 2 youth facilities: The Athlone Hospital Youth Clinic and Mahalapye Youth Clinic. There were no significant differences reported by clients on the following indicators: quality of services, if they had heard about integrated services (approximately half had heard of integrated services), where they had heard about integrated services (majority had from doctor/ nurse at the facility), barriers to coming to the health facility (majority reported none), cost of services (majority paid nothing), other costs associated with the visit to the health facility (for a majority it was none or transport), or if coming to the clinic had caused any inconvenience (majority said there was no inconvenience caused).

Table 8. Summary of perceptions about quality of services from clients in the youth versus other general health facilities.

	Youth Facilities N=20 (14.5%)	General Facilities N=118 (85.5%)	P-value
Wait Time			
Not too long	35.0	19.5	0.006
Just right	60.0	38.1	
A long time	5.0	42.4	
Opinion on integration			
Better	95.0	93.1	0.91
Neither better/worse	0.0	1.7	
Worse	5.0	5.1	
Reason for opinion on integration	90.0	32.8	0.005
1. Reduced wait time	5.0	31.9	
2. Reduced costs	0.0	12.1	
3. Doctor/nurse providing services	0.0 0.0	1.7 0.9	
4. Other	5.0	12.9	
5. Reduced repeat visits	0.0	4.3 1.7	
1,2	0.0	0.9	
1,2,3	0.0	0.9	
1,3	0.0		
2,3			
2,5			

Length of time coming to facility?	20.0	6.0 91.5	0.01
1st visit	75.0	2.5	
Several months	0.0		
Don't know			
Average number of months coming to facility? Average (range)	38.8 (2-120)	156.4 (0.9-720)	0.02

As summarized in table 8, clients in youth facilities compared with other health facilities were significantly more likely to find the wait time at the facility just right (60.0% versus 38.1%, respectively, p=0.006) and clients in other facilities compared with youth facilities were significantly more likely to report that wait time was too long (42.4% versus 5.0%, respectively, p=0.006). A majority of the clients from youth and other clinics (over 90%) reported that compared to repeated visits to the facility, receiving all services in one visit to the clinic was better. It was interesting to see the differences in the opinion about integration; 90.0% of clients from youth facilities reported that integration was better due to reduced wait times, whereas for clients from other facilities, about a third of the clients reported that it was reduced wait time and a third reported it was due to reduced costs (p=0.005). A significantly higher proportion of clients from youth compared to other facilities were at the health facility for their first visit (20% versus 6.0%, p=0.01). Clients from youth facilities were coming to the facility on average for a significantly shorter time period compared with clients from other facilities (about 3 years versus 13 years, p=0.02).
A comparison was also made on the perception and experience with services between districts. Study facilities were located in 5 districts in Botswana: Kweneng West, Lobatse, Mahalapye, Kgatleng and Goodhope. Table 9 (see annexes) summarizes findings by the District the health facility is located in.

There were some interesting differences in client experiences and perspectives by District level. There were significant differences in the wait time clients experienced, with clients in Mahalapye district reporting the longest waiting times whereas a majority of the clients from Lobatse reported that the waiting time was just right (p=0.048). The average length of waiting time at the health facility ranged from 0.8 hours in Goodhope to 2.0 hours in Mahalapye district (p=0.002). Clients also had significantly different opinions about the quality of services at the health facility (p=0.001); A majority of the clients in the facilities reported that the quality of services was either good or very good (Kweneng West: 95.8%, Lobatse, 85.0%, Mahalapye 70.8%, Kgatleng 66.6% and Goodhope 76.7%, p=0.001). Clients reporting less satisfaction with the services offered ranged from none in Kweneng West to 15% in Lobatse (p=0.001). The reasons for their opinion on the service quality also varied and differed by district; Over 35% of clients from Mahalapye district reported that the wait was too long or service was slow. However a majority of clients in Kweneng West, Lobatse, Mahalapye, Kgatleng and Goodhope districts had a positive experience with services received and reported that the nurses were informative or they received help quickly (95.8%, 76.2%, 62.5%, 68% and 79.3%, respectively, p=0.004). The responses on what aspect was positive varied however with over 87% of clients in Kweneng West reporting that it was because the nurses were

informative, whereas over 37% of clients in Goodhope reported it was because they were helped quickly. Between a third to over 50% of clients had heard about integrated services but the place they heard about this varied by district (p=0.02); all the clients at Kweneng West district had heard about integrated services from the doctor or nurse at the facility, whereas in Kgatleng district only half had received this information from a doctor or nurse, with other clients ranging from TV/Radio, brochure/poster, or a NGO. When asked about their opinion on integration, over 80% of clients from all districts reported that integrated services were better compared with non-integrated services. However, a significant proportion at Kweneng West and Goodhope districts reported that integrated services would be worse (16.7% and 6.7%, p=0.03), compared with none reporting this in Mahalapye and Kgatleng districts. The reasons for their opinion on integrated services also differed by district with a majority in Kweneng West and Lobatse districts reporting reduced waiting time (75% and 85.7%, respectively) whereas over a third in Mahalapye and Kgatleng districts reported reduced costs as a result of reduced repeat visits reported by over 20% of clients in Mahalapye (p<0.001).

There was no significant difference in the length of period the clients had been using the facilities but the frequency of visits varied; a majority of clients from Kweneng West and Lobatse districts came to the facility once a month whereas a majority of clients from Kgatleng and Goodhope reported coming to the facility whenever there was need (p<0.001). When assessing barriers to coming to the health facility, there were also significant difference by district; although over 80% of clients from Lobatse and Mahalapye reported no barriers, only 44.0% of clients from Kgatleng reported no barriers to coming to the clinic (p=0.007). Some of the barriers coming to the clinic reported by the clients were operation time (working hours) of the clinic, schedule of services, costs, transport and for some clients, it was a combination of the factors listed above. Although over 90% of clients did not pay for any services at the facility, of those that paid, the highest amount was reported by clients in Kweneng West and lowest from clients in Lobatse and Mahalapye districts (P31.0, P8.0, P8.0, respectively, p=0.01). In addition to the monetary costs associated with coming to the health facilities, there were significant differences in other costs associated with accessing health facilities and all clients listed at least one cost associated with coming to the health facility; A majority of clients from Kweneng West, Kgatleng and Goodhope districts reported transport being a major cost to come to the clinic whereas about a third of clients from Lobatse and Mahalapye districts reported transport as a barrier (67%, 76% and 73%, 38% and 39%, respectively, p<0.001). Child care was another significant cost reported and there were significant differences between districts; a majority of clients from Lobatse and Mahalapye (62% and 58%, respectively) reported child care as a major cost whereas the proportions reporting this as a cost in Kweneng, Kgatleng and Goodhope districts was significantly lower (8.3%, 20.0% and 23%, respectively, p<0.001).

HEALTH CARE PROVIDER DATA

To assess the perspective of health care providers, up to 3 consenting providers per facility (total N=23) were interviewed at the health facilities. Where possible, the data collectors interviewed different health care providers (nurse, doctor, HIV counsellor, etc) at the facilities to assess if their perspectives differed. The following data were collected from the health care providers:

1. Sociodemographic data (sex, age, education, employment, etc)
2. Health services available at the facility (all outlined previously)

a. What is available?

b. What is offered even if not available?

c. For what services not offered are referral services provided?

3. Timing of service provision: all providers were asked what the average waiting time is for clients before services are offered? (<1/2 hour, <1 hour, >1 hour, several hours, etc).

4. Opinion about integrated services: providers were then asked if they were aware of all services being provided at the same visit, and what their opinion is of provision of integrated services?

5. Integrated clinics: all providers at integrated clinics were asked about:

a. Length of time integrated services have been offered at the facility

b. The impact of integration on quality of services

c. What has improved as a result of integration? (waiting time, client satisfaction, provider satisfaction, less turn over of providers, reduction of loss of follow up of patients).

Analyses of health care provider data

Descriptive data analyses were done to assess the distribution of outcomes for 24 health care providers, 15 from the integrated and 9 from the non-integrated sites. All analyses were done aggregately first with all clinics and then stratified by integrated versus non-integrated clinics to assess differences between them.

Table 10: Demographic characteristics of health care providers

Characteristics	Overall N=24V	Integrated N=15	Non integrated N=9
Sex			
1=Females	37.5	46.7	22.2
Age (mean and range)	37.5 (25-54)	39 (29-54)	35 (25-53)
Education			
1. Never been to school	0	0	
2. Primary (Standard1-7)	0	0	
3. Form 1-3	0	0	
4. Form 4-5	100.0	100.0	
5. Tertiary education (college or University)	0 0	0 0	
Role at Facility			
1. Nurse	75.0	66.7	88.9
2. Doctor	21.0	26.7	11.1
3. HEA	4.0	6.7	0
Average length of time worked in facility (months and range)	41 months (2-132)	46.9 (2-132)	32.6 (8-72)
Satisfaction with work load at facility			
1.My work load is not high	4.2	0	11.1
2.My work load is just right	29.2	33.3	22.2
3.My work load is very high	66.7	66.7	66.7

As summarized in table 10, there were significantly more male heath care providers at the non-integrated versus integrated facilities. The average age and education levels of both integrated and non-integrated facilities was similar with all providers having completed form 4 (high school equivalent). A majority of the health care providers at all facilities was nurses, with more doctors available at the integrated versus non-integrated facilities. Providers at the integrated facilities had worked longer on average compared with non-integrated facilities (47 versus 33 months, respectively). When asked about work load, a slightly higher number of providers at the integrated facilities reported that the work load was just right. However, interestingly, about two thirds of providers at all facilities reported that the work load was high and this did not differ by integration status.

All health care providers at the facilities were asked about the availability of each health service that should be available at the facility, whether additional services were offered in addition to what was requested and what facilities referrals were provided to if referral was provided. All facilities provided vital statistics, cervical cancer screening, TB screening and STI treatment services. A majority provided ANC services, family planning, male and female condoms, immunization services, HIV/TB testing, treatment of opportunistic infections, viral load monitoring, pregnancy tests, HIV testing and counseling, infant HIV testing, TB treatment, PMTCT, dressing, diabetes screening and follow up, and HTA screening for Human Papillomavirus and follow up.

Table 11 (see annexes) summarizes health care provider perspectives on health services provided at the facilities, stratified by integration status. Wait time for clients for a majority of clients was less than an hour although providers who reported longer than an hour wait time were more likely to be in integrated sites. All the providers at integrated facilities were aware of integration of SRHR/HIV and other services as were a majority of providers from the non-integrated facilities. Over 90% of providers in the integrated and over 80% in the non-integrated facilities reported that getting all your health services in one visit is better than repeated visits. The reason stated for the preference for integrated services was mainly reduced wait times, reduced costs and the preference for doctors and nurses providing all the services.

Table 12: Health care provider perspectives on health service quality, stratified by integration status

	Overall N (%)	Integrated N (%)	Non Integrated N (%)
WAIT TIME FOR CLIENTS			
1,2.	1 (4.2)	0 (0)	1 (11.1)
3.	1 (4.2)	0 (0)	1 (11.1)
4.Less than 30 mins	4 (16.7)	2 (13.3)	2 (22.2)
5.Less than an hour	11 (45.8)	6 (54.6)	5 (55.6)
6.More than 1 hour	5 (20.8)	5 (33.3)	0 (0)
7.Several Hours	1 (4.2)	1 (6.7)	0 (0)
8.Don't remember	1 (4.2)	1 (6.7)	0 (0)
Heard about accessing family planning, ANC and HIV services in one visit? YES	21 (95.5)	15 (100.0)	6 (85.7)

Compared repeated visits to the facility, receiving all services in one visit is:			
1. Better	19 (90.5)	14 (93.3)	5 (83.3)
2. Neither better or worse	1 (4.7)	1 (6.7)	0 (0)
1 and 2	1 (4.7)		1 (16.7)
3. Worse	0		
4. Much worse			
What is the main reason for opinion on integrated services			
1.Reduced wait times	8 (38.1)	7 (46.7)	1 (16.7)
2.Reduced costs	3 (14.3)	3 (20.0)	0 (0)
3.Doctor or nurse providing services	4 (19.1)	3 (20.0)	1 (16.7)
4.Reduced repeat visits	1 (4.8)	0 (0)	1 (16.7)
5.Other	2 (9.5)	0 (0)	2 (33.3)
1,2	1 (4.8)	0 (0)	1 (16.7)
1,2,3	1 (4.8)	1 (6.7)	0 (0)
1,3	1 (4.8)	1 (6.7)	0 (0)
INTEGRATED SITES ONLY			
Length of time facility has been providing integrated SRHR/HIV services (average months, range)	38.5 (12-72)		
Has the quality of services improved after integration? Yes No Don't Know	12 (80.0) 0 (0) 3 (20.0)		
What do you feel has been improved a result of integration 1.Less waiting time for clients 2.Clients more satisfied with services 3.Clients paying less as more done in the same visit 4.Providers more satisfied with delivery of comprehensive services to the same client 5.Less waiting time for patients and better overall movement through facility by clients	1 (7.1)		
6.Less provider turnover	3 (21.4)		
7.Less loss to follow up of patients needing long term continuous care (such as ART)	1 (7.1) 2 (14.3)		
1,2,4,5 1,2,4,5,6,7 1,2,4,5,7 1,2,5 1,2,5,7 1,4,5,7 1,4,7 1,5 1,5,6 2,5,7	1 (7.1) 1 (7.1) 1 (7.1) 1 (7.1) 1 (7.1) 1 (7.1) 1 (7.1)		

DISCUSSION

Main Findings

The goal of the study was to assess the improvements in efficiencies as a result of integration of services in health care facilities in different districts in Botswana in 2016-2017. We compared clinics where integration had been implemented with clinics where integration was not implemented and assessed many key outputs from the perspective of the facility, health care provider and the client. The relationship between integrated care and client satisfaction is complex and multifaceted and the strength of the study was the ability to understand this impact from multiple perspectives. The key findings from the study were that overall, there were improvements in service delivery at integrated sites: improvements in schedules, referrals, linkages with the community, monitoring and evaluation, quality of services and client satisfaction. In addition, clients reported more satisfaction in clinics where doctors were present and this was more likely to be in integrated facilities. However, some of the challenges reported were that services not requested by clients were not routinely offered, long wait times were reported, especially in integrated facilities and knowledge about integration was poor: only about half the clients in integrated and non-integrated sites were aware that reproductive health and HIV services could be obtained in the same visit. The Glion Call to Action called for increased linkages between SRH and HIV services to address the high rates of HIV prevalence in women and high levels of unmet need for contraception.2 Several countries in sub-Saharan Africa, including Botswana, have since prioritized integration in their national HIV strategic plans. However, rigorous evaluation of these integration efforts and assessing its impact on improvements in efficiencies and cost are important in order to scale up integration at a national level.

Impact of integration by District

Botswana has an extensive network of health facilities with 27 health districts which include 3 national Referral Hospitals, 15 District Hospitals, and 17 Primary Hospitals 3. Although the aggregate results found many overall benefits of integration from the perspective of clients and providers, there were interesting and significant differences when stratified by district. There were significant differences in client perspectives of wait times and average length of waits ranged from 2 hrs in Mahalapye district to 0.8 hrs in Goodhope district; However, the perception of wait time did not always align with actual time waited; despite having the longest wait time, over 70% of clients from Goodhope district found wait times to be either just right or not too long, whereas 52% of clients from Kgatleng found wait times too long (actual wait times was an average of 1.6 hours). There were significant differences on quality of services as well. Although a majority of clients found the quality of service either good or very good, 15% of clients from Lobatse and 10% from Mahalapye found the quality of service bad. Good nurses and especially presence of doctors were the main reason listed for higher quality of services in clinics where client satisfaction was high. Across all districts, a majority of clients reported that integrated services would be better and reduced wait time and costs were listed as the most common reasons. Other costs related to coming to the clinics also varied by district and the most common reasons were transport and child care costs. The results demonstrate the importance of evaluating integration not only overall, but also by district as some important differences were highlighted through district level analyses. The goal

was to scale up integration to 12 districts initially. However, out of the 12 districts, only 9 have developed integration plans and only 6 were already actively implementing their transition plans. During discussions with colleagues in the Ministry of Health and Wellness as well as the Botswana UNFPA offices, some of the challenges in scale up raised were: i) all district coordinators have been trained in integration however, there is variation in implementation, ii) at the district level, there is not always accountability in health facilities implementing integration and change is coming rather slowly as integration service delivery is government policy, iii) there needs to be capacity building of health care providers as well on integration. Although health care providers are being trained, other measures have to be implemented as training alone does not ensure that there will be successful integration.

In order to scale up effectively, developing detailed integration plans as well as getting support at the policy and management level will be optimize efficiencies gained by integration. On-site supportive supervision is critical.

Impact of integration by type of health facility

There were significant differences in the type of health facility; Kiosk model (health posts and smaller clinics where a number of services are provided within the same room by one health care provider), Supermarket model (clinics with or without maternity wards and slightly bigger than Kiosk model where there may be a number of rooms from which different services are offered by different health care providers. Referrals may or may not be common), and Mall model (hospitals with different rooms and services provided by different health care providers and where referrals are inevitable. There were no significant differences in wait times by type of facility, however there were differences in service quality; although a majority of clients in all facilities found the quality of services either good or very good, a third (34%) of clients in the Supermarket model found the quality of services poor or okay.

Improvements from integration

It is clear that in order to meet the Sustainable Development Goals, universal access to both Sexual and Reproductive Health Rights (SRHR) services and HIV prevention, treatment and care are critical 4. It has been speculated that stand-along HIV services may be particularly stigmatizing and that linkages may enhance not only programme efficiencies but will also meet the clients' multiple needs in one setting 5. We found several improvements reported by the providers and clients in facilities where integration of services had been implemented. Clients reported more satisfaction with the quality of services as well as with referrals, and schedules. Other improvement reported by clients and providers when asked about integrated services included, improvement in quality of services, reduced wait times, reduced costs, more satisfaction in providing and receiving comprehensive services, less provider turn over and reduced loss to follow up.

It is important when assessing improvements in quality of care that in addition to outcome measures such as adherence, loss to follow up, mortality, etc, that client and provider perspectives on quality of care are also assessed 6. Client satisfaction is very important, particularly when considering adherence to treatment as it impacts on continuity of care and clinical outcomes 7. Multiple studies have demonstrated

that clients are satisfied when able to access broader packages of health care under one roof 8. A review9 on studies assessing the impact of integration found that generally, facilities with linkages had positive effects on HIV incidence, STI incidence, condom use, and uptake of HIV services. Another study in Kenya found that there were improvements in contraceptive and HIV service uptake as well as increased client and health worker satisfaction in "one-stop shops" compared with referral-based services 10.

The issue of wait times was interesting as the actual wait times were higher in the integrated sites, but both clients and providers listed reduced wait times as a primary improvement from integration. Wait times were also impacted by type of health facility; almost half the clients in Mall and Supermarket facilities found wait time too long. A significantly higher proportion of clients from Youth Friendly Facilities found wait time either not too long or just right, when compared with those from general facilities. The finding of increased wait times is consistent with studies in other sub-Saharan African settings; clients in integrated health facilities in Zambia while demonstrating preferences for integrated care, also reported increased wait times 11. This increase in wait times may be due to new services offered that were not offered before as well as more services offered to the same client. However this does need to be assessed over time as any potential negative impact of integration on wait times is concerning, especially for clients needing multiple follow up visits for the management of HIV disease or other chronic health conditions. It is also important to note that measuring client satisfaction is complex and often higher quality of care can raise expectations12 so that the different levels of satisfaction may simply be a measure of different perspectives on health care. Over time, the goal is that these negative consequences of integration will be balanced with more equitably distributed resources and more comprehensive delivery and management of the health needs of clients.

Barriers to integration

One of the challenges reported both from the perspectives of the providers and clients was that a majority of clients did not get services offered when not requested. Prevention of Mother to Child HIV Transmission (PMTCT) for example was provided in about 63% of the facilities but offered in only 36% when client did not request it. It is important that even in the instance a client does not request a health service, the provider offers information regarding other services available at the facility, as it would otherwise be a missed opportunity to provide comprehensive services to all clients. However, there may have been challenges with clients comprehension and in understanding questions around health care services as well as what integrated services included, highlighting the need of better education on integration for clients. In addition, satisfaction with service delivery was impacted by the type of health facility; a higher portion of clients from Supermarket facilities (34.1%) found the quality of services poor or okay compared to clients from the Mall or Kiosk facilities, highlighting the need to scale up integration in a way that optimizes the existing resources at these facilities. When assessing other barriers to coming to the health facility, transport costs was highlighted as most common barrier to coming to the clinic so needs to be addressed in order to improve access to health facilities. Knowledge about integrated services was also highlighted as a significant challenge as only about half the clients in integrated and non-integrated services were aware that you could get FP and HIV services in the same visit. This was surprising, especially in the integrated sites and highlighted the need for increased education and awareness.

Longer wait times were reported by both providers and clients in integrated sites, however when asked what the most significant improvement from integration was, both also reported lower wait times. It may be that although the actual time spent is higher, perhaps getting more health services in the same visit improved client and provider satisfaction as most providers (80%) at integrated sites reported improvement in services after integration. Linkages to other community services such as adherence support, TB contact tracing mobile HIV testing and counselling were more likely to be reported by clients in non-integrated sites where PEPFAR implementing partners (NGOs) are delivering community care level services. It would be important to consider funding by the government for provision of these services, especially in rural, more remote areas of Botswana where access to health care facilities for ongoing care may be more of a challenge.

Considerations when scaling up integration in Botswana: Recommendations

As integrated services are being scaled up at a national level, it is important to understand the barriers and enablers of integration, and to ensure that the needs of provider and clients are considered. Three models of integrated service delivery are documented in the literature: one-stop shop (single provider), referral-based (same facility), and referral-based (different facility) 13,14. Integration needs to be carefully planned in relation to health systems functions and resources available. One of the limitation emphasized in a review of studies on integration9, was a lack of integration at the policy level as majority of the studies focused on integration at the service delivery level.

Ideally, integration should be at different levels: 1) policy and governance, 2) financial systems, 3) service delivery, 4) monitoring and evaluation and 5) education and demand generation15. In addition, there is need for the creation of unified accountability system, integration of datasets and reporting and a common performance management system. There is a need for strong leadership at all levels to ensure successful integration and improvement of efficiencies from linkages. In addition, linkages at different levels are important so that leadership and funding are coordinated and integrated at different levels. Currently, programs (HIV, TB, Maternal and Child Health, etc) are funded vertically, with managers responsible for their particular division. Unless there is integration at the policy, financial and leadership level, the integration at service delivery level alone will not be sustainable and successfully scaled up.

The Botswana Government adopted the Primary Health Care Strategy (AlmaAta Declaration of 1978) which aims to provide universal primary health care services to all citizens. One of the goals of the declaration is that primary health care should be sustained through an integrated and supportive referral systems leading to the development of comprehensive health care for all 16. According to the Integrated Health Service Plan (2010-2020) of the Ministry of Health and Wellness in Botswana17, there are several challenges Botswana is facing in meeting the targets set out by the Sustainable Development Goals and these include: 1) poor development of the health infrastructure. Some of the older primary facilities (clinics) and some hospitals are not designed to ensure the right patient flow and care. In addition, there is under or over utilization of certain facilities, 2) monitoring and evaluation systems are weak. Providers in the study also reported that in many facilities there is no routine record of health services or dispensation of contraceptives making the evaluation of this over time challenging. Not all health systems data are

captured and stored in a single database and the referral systems are weak making timely reporting and analyses of data challenging.

There is also report of several databases existing in parallel making monitoring and evaluation challenging. Some suggestions were to use electronic systems to capture data as currently this is only being used in laboratories and some facilities 3) There is a shortage of trained and qualified staff in Botswana. Staff turnover is high and there and inadequate health care worker training, supervision and retention 13. Staff retention and turn over were highlighted as challenges by providers in our study, mainly driven by feeling over worked in under-staffed facilities as well as being rotated to remote rural facilities. Some of the reasons may be that Botswana has a highly centralized system of human resources and in order to ensure all citizens get the same quality of care, health providers are rotated to remote, understaffed rural clinics every 2-5 years. Many of these staff trained in integration delivery are then lost and new staff have to be trained again which does not always happen. and inadequate health care worker training, supervision and retention 13 4) Inequitable deployment and failure to optimize existing skills continue to be challenges and appropriate division of labor could address some of the staff shortage challenges, 5) lack of coordinated leadership as well as unified national integration policy continue to be a challenge in Botswana as integration of front-line service delivery may remain ineffective if there is no linkage and coordination at other levels such as management structures, financing mechanisms, supply chain and provider training13. In addition, the report highlights separate financial streams for SRHR and HIV services. When scaling up integration, it is important to address these challenges and emphasize greater career opportunities and increased responsibilities that have been reported as a positive aspect by providers in other studies18.

When assessing the scale up of integrated services in Botswana, it is important to conduct ongoing evaluations from the perspectives of clients and providers to ensure that their needs are met. In a study conducted in Swaziland 19 (highest global HIV prevalence), they found that satisfaction was higher in fully-stand alone clinics compared to integrated clinics. Clients reported that they felt that HIV status exposure was higher in partially integrated sites compared with the fully stand alone facilities and they felt that confidentiality was maintained in stand alone sites in various ways through separated waiting areas for HIV testing and treatment. It is clear that the needs of HIV infected patients may be unique and aspects such as convenience, confidentiality, waiting times, food assistance, costs and having specialized HIV providers may be important to consider20. Part of the preference for stand alone clinics by people living with HIV may stem from a perception of higher quality of care in ART units compared to outpatient facilities, an effect that has been found in a study of ART decentralization in Zambia21. However stigma is a significant issue and the stage at which the epidemic is in Botswana with universal coverage and treat for all strategy, HIV is managed as a chronic rather than special disease condition so the country is moving away from stand alone clinics and instead providing integrated services at all facilities. These studies highlight that HIV positive patients in particular may have different and complex needs and qualitative studies have found that many clients at HIV only sites found greater satisfaction knowing that those around them were also positive as well as getting support from other people living with HIV 19. It is important to also keep in mind that interventions for HIV/AIDS are relatively more complex and require ongoing

follow up (to monitor side effects, treating co-infections, etc), multiple workers (outreach workers, doctors, nurses, peers, family, etc), and groups (civil society, people living with HIV, human rights organizations, etc) to meet the needs of HIV infected individuals, some who may be difficult to reach (sex workers, and injecting drug users) as well as require creative methods to improve adherence to ARTs (adolescents) 15.

Ongoing training and assessment of provider satisfaction and needs is also important for scaling up integrated services. A majority of the providers in the clinics found their work load too high and there was no difference between integrated vs non-integrated facilities. Providers in integrated sites also reported longer wait time for clients compared with non integrated sites. Studies have found that while integration may increase satisfaction by delivering a broader range of services to clients, it may also lead to dissatisfaction if health care workers become overloaded and their ability to deliver individual services is compromised22. The reduction in satisfaction reported by providers in integrated facilities is often as a result of additional work load without improvements in infrastructure, working conditions, salary or career structure19. In addition, ongoing and clear education about services provided at facilities is critical. Although there are posters on services available in most clinics, many clients were not aware that all services could be obtained in the same visit.

Limitations

A primary limitation of the study was that there was no baseline conducted on the facilities that implemented integration. It would have been useful to see the impact of integration over time on the same clients, providers and facilities. In the absence of this, we did a cross sectional study comparing sites that were integrated with sites that were not integrated. Although efforts were made to ensure that the sites were comparable, it was not always possible. As seen in the demographic table, we had more married and unemployed clients in the non-integrated facilities, whereas there were more students who had completed secondary school in the integrated sites. These differences in the types of clients may impact on satisfaction as our study found that youth were more likely to be satisfied with the wait times at the integrated facilities. In addition, the measure of quality of services was subjective and hence does not necessarily reflect on the technical quality of care. Also, the health services are supposed to be provided at no cost in these facilities so was not clear what the payments indicated by some clients were related to as this information was not collected.

Conclusions

The study provided data from facility, provider and client perspectives on integration and highlighted some important strengths and barriers for integration that are important to consider when scaling up integration at a national level in Botswana. Overall, there were improvements reported in multiple outcomes as a result of providing comprehensive services in the same facilities. Although challenges such as long wait times persist, with improvements in education and service delivery, client satisfaction is expected to continue improving. It is critical that integration occurs not just at the facility level but that at a national level, there is support to enforce integration at the policy, management, financial and service delivery level, and to ensure there is synergy between these levels in data collection and ongoing monitoring and evaluation of integration efforts. Community sensitization, education and engagement

has to be strengthened so that there is improved understanding of the benefits of integrated and increase in awareness of integrated service delivery.

BIBLIOGRAPHY

1. Commission AU. The Maputo Plan of Action.
2. WHO. Glion Consultation on Strengthening the Linkages Between Reproductive Health and HIV/AIDS: Family Planning and HIV/AIDS in Women and Children. Geneva, Switzerland2006.
3. MOH B. Ministry of Health, Botswana
4. Nations U. Millennium development goals. 2013.
5. WHO U, IPPF, UN, UNAIDS. Sexual and reproductive health and HIV/ AIDS: a framework for priority linkages 2005 2005.
6. Kane RL, Maciejewski M, Finch M. The relationship of patient satisfaction with care and clinical outcomes. Medical care. Jul 1997;35(7):714-730.
7. De Cock KM, El-Sadr WM, Ghebreyesus TA. Game changers: why did the scale-up of HIV treatment work despite weak health systems? Journal of acquired immune deficiency syndromes. Aug 2011;57 Suppl 2:S61-63.
8. Vo BN, Cohen CR, Smith RM, et al. Patient satisfaction with integrated HIV and antenatal care services in rural Kenya. AIDS care. 2012;24(11):1442-1447.
9. Kennedy CE, Spaulding AB, Brickley DB, et al. Linking sexual and reproductive health and HIV interventions: a systematic review. J Int.AIDS Soc. 2010;13:26.
10. Mutemwa R, Mayhew S, Colombini M, Busza J, Kivunaga J, Ndwiga C. Experiences of health care providers with integrated HIV and reproductive health services in Kenya: a qualitative study. BMC health services research. Jan 11 2013;13:18.
11. Topp SM, Chipukuma JM, Giganti M, et al. Strengthening health systems at facility-level: feasibility of integrating antiretroviral therapy into primary health care services in lusaka, zambia. PloS one. Jul 13 2010;5(7):e11522.
12. Bond S, Thomas LH. Measuring patients' satisfaction with nursing care. Journal of advanced nursing. Jan 1992;17(1):52-63.
13. Hope R, Kendall T, Langer A, Barnighausen T. Health systems integration of sexual and reproductive health and HIV services in sub-Saharan Africa: a scoping study. Journal of acquired immune deficiency syndromes. Dec 01 2014;67 Suppl 4:S259-270.
14. WHO. Global Health Sector Strategy on HIV/AIDS 2011–2015. Geneva, Switzerland2011.
15. Atun R, de Jongh T, Secci F, Ohiri K, Adeyi O. Integration of targeted health interventions into health systems: a conceptual framework for analysis. Health policy and planning. Mar 2010;25(2):104-111.
16. MOH B. A TWO YEAR COSTED SCALE UP PLAN FOR SEXUAL AND REPRODUCTIVE HEALTH RIGHTS (SRHR) AND HIV LINKAGES IN BOTSWANA. 2015.
17. Botswana M. An Integrated Health Service Plan: A Strategy for Changing the Heatlh Sector for Healthy Botswana 2010-2020. 2010.
18. French RS, Coope CM, Graham A, et al. One stop shop versus collaborative integration: what is the best way of delivering sexual health services? Sexually transmitted infections. Jun 2006;82(3):202-206.

19. Church K, Wringe A, Fakudze P, et al. The relationship between service integration and client satisfaction: a mixed methods case study within HIV services in a high prevalence setting in Africa. AIDS patient care and STDs. Nov 2012;26(11):662-673.
20. Orner P, Cooper D, Myer L, Zweigenthal V, Bekker LG, Moodley J. Clients' perspectives on HIV/AIDS care and treatment and reproductive health services in South Africa. AIDS care. Nov 2008;20(10):1217-1223.
21. Church K, Wringe A, Fakudze P, et al. Are integrated HIV services less stigmatizing than stand-alone models of care? A comparative case study from Swaziland. Journal of the International AIDS Society. Jan 11 2013;16:17981.
22. Lewin S, Lavis JN, Oxman AD, et al. Supporting the delivery of cost-effective interventions in primary health-care systems in low-income and middle-income countries: an overview of systematic reviews. Lancet. Sep 13 2008;372(9642):928-939.

ANNEXES

Table 1: Summary of health services provided at the clinics

Health Services	Provided at site	Offered even if not requested	Referral provided	Referral provided to where? 1.Hospital 2.Clinic 3. NGO 4. Intra-Facility 5. IDCC 6. OPD 7. MCH 8. LAB	How is referral done? 1.Letter 2.Patient card 3.NGO/Community staff 4.Pamphlet/Booklet 5. Accompanied by a nurse 6.Phonecall
	N=11 (%)	N(%)	N(%)	N(%)	N(%)
ANC	90.9	45.5	63.6	1 (42.9)	2 (57.1)
				2 (14.3)	2,3 (14.3)
				4 (28.6)	2,5 (28.6)
				1,4 (14.3)	
PNC	90.9	45.5	54.5	1 (16.7)	2 (50.0)
				2 (16.7)	2,3 (16.7)
				4 (33.3)	2,5 (33.3)
				1,3,4 (16.7)	
				1,4 (16.7)	
NEW BORN CARE	63.6	36.4	45.5	1 (20.0)	2 (60.0)
				4 (40.0)	2,3 (20.0)
				1,4 (40.0)	2,5 (20.0)
FP	100.00	63.6	27.3	1 (33.3)	2 (66.7)
				2 (33.3)	2,4 (33.3)
				1,4 (33.3)	
INJECTABLES	100.00	72.7	27.3	2 (33.3)	2 (100.0)
				1,4 (66.7)	
ORAL PILLS	100.0	63.6	18.2	2 (50.0)	2 (100.0)
				1,4 (50.0)	
IUD	72.7	63.6	36.4	1 (25.0)	2 (100.0)
				2 (50.0)	
				1,4 (25.0)	
NORPLANT	54.5	45.5	36.4	1 (25.0)	1 (33.3)
				2 (25.0)	2 (66.7)
				4 (25.0)	
				2,4 (25.0)	
FEMALE CONDOM	100.00	72.7	9.1	2 (100.0)	2 (100.0)
MALE CONDOM	100.00	72.7	9.1	2 (100.0)	2 (100.0)
DUAL METHOD	100.00	90.9	18.2	1 (50.0)	2 (100.0)
				2 (50.0)	

STERILIZATION	9.1	36.4	63.6	1 (83.3)	2 (100.0)
				4 (16.7)	
IMMUNIZATION	81.8	63.6	18.2	4 (100.0)	2 (100.0)
SCREEN ADULTS TRIAGE	100.00	63.6	36.4	1 (50.0)	2 (50.0)
				1,4 (50.0)	2,5 (50.0)
SCREEN CHILD TRIAGE	81.8	45.5	36.4	1 (25.0)	2 (66.7)
				1,3 (25.0)	2,5 (33.3)
				1,4 (50.0)	
CERVICAL CANCER SCREENING	100.00	72.7	45.5	1 (60.0)	2 (40.0)
				1,4 (40.0)	2,5 (40.0)
					2,6 (20.0)
ART	90.9	63.6	72.7	1 (25.0)	2 (85.7)
				4 (37.5)	1,2 (14.3)
				5 (12.5)	
				1,4 (25.0)	
HIV VIRAL LOAD MONITORING	72.7	54.5	54.5	2 (16.7)	2 (100.0)
				4 (50.0)	
				5 (16.7)	
				1,4 (16.7)	
CD4 TESTING	72.7	54.5	54.5	2 (16.7)	1 (20.0)
				4 (50.0)	2 (80.0)
				5 (16.7)	
				1,4 (16.7)	
STI SCREENING	100.00	81.8	27.3	1,4 (100.0)	2 (100.0)
STI TREATMENT	100.0	90.9	36.4	4 (20.0)	2 (75.0)
				1,4 (80.0)	2,6 (25.0)
PREGNANCY TEST	90.9	63.6	36.4	2 (33.3)	2 (100.0)
				4 (33.3)	
				1,4 (33.3)	
HCT	100.0	72.7	36.4	1 (33.3)	2 (66.7)
				1,4 (66.7)	2,3 (33.3)
TB SCREENING	100.0	70.0	40.0	1 (33.3)	2 (100.0)
				1,4 (66.7)	
TB TREATMENT	90.9	72.7	45.5	1,4 (75.0)	2 (100.0)
				6 (25.0)	
PMTCT	63.6	36.4	36.4	1 (25.0)	2 (75.0)
				7 (25.0)	2,6 (25.0)
				1,4 (50.0)	
TESTING PREG WOMEN	100.0	81.8	54.5	1 (20.0)	2 (100.0)
				4 (40.0)	
				1,4 (40.)	

HIV TESTING FOR HIV EXPOSED CHILDREN	81.8	72.7	63.6	4 (33.3)	2 (60.0)
				7 (16.7)	4 (20.0)
				1,4 (50.0)	2,6 (20.0)
ART FOR PMTCT	90.9	45.5	54.5	1 (16.7)	2 (80.0)
				4 (33.3)	2,3 (20.0)
				7 (16.7)	
				1,4 (33.3)	
ART FOR HIV+ INFANTS	81.8	54.5	45.5	1 (40.0)	2 (100.0)
				4 (20.0)	
				7 (20.0)	
				1,4 (20.0)	
PROVISION OF FORMULA	81.8	36.4	18.2	1 (50.0)	2 (100.0)
				7 (50.0)	
MALE CIRCUMCI-SION	36.4	27.3	54.5	2 (83.3)	2 (100.0)
				7 (16.7)	
DRESSING	81.8	54.5	36.4	1 (25.0)	2 (66.7)
				6 (25.0)	2,6 (33.3)
				1,4 (50.0)	
LAB SERVICES	50.0	27.3	63.6	1 (50.0)	1 (25.0)
				2 (33.3)	2 (75.0)
				8 (16.7)	
PREV AND MAN-AGEMENT OF GBV	90.9	36.4	54.5	2 (16.7)	2 (66.7)
				3 (16.7)	1,2 (16.7)
				4 (16.7)	2,5 (16.7)
				1,3 (16.7)	
				1,4 (33.3)	
PEP	90.9	54.5	36.4	3 (25.0)	1 (33.3)
				6 (25.0)	2 (33.3)
				1,4 (50.0)	1,2 (33.3)
GENERAL CON-SULTATION	27.3	9.1	9.1	1 (100.0)	0 (0)

Table 2: Summary of Service Quality by Integration Level

	OVERALL N=11	INTEGRATED N=7 %	NON-INTEGRATED N=4 %
RECORD OF REFERRALS	90.9	100.0	75.0
1.Yes			
FOLLOW UP OF REFERRALS			
1.Yes	81.8	85.7	75.0
MECHANISM TO FOLLOW UP WITH REFERRALS			
1.Client Contacts	1 (71.4)	3 (60.0)	2 (100.0)
2.Phone call	2 (28.6)	2 (40.0)	0
COMMUNITY COLLABORATIONS			
HOME BASED HCT	63.6	6 (85.7)	1 (25.0)
WHO PROVIDES HBC?*	1 (25.0)	1 (33.3)	1 (0)
	2 (50.0)	2 (50.0)	2 (50.0)
	1,2 (25.)	1,2 (16.7)	1,2 (50.0)
MOBILE HCT	63.6	57.1	75.0
WHO PROVIDES MOBILE HCT?*	1 (50.0)	1 (25.0)	1 (75.0)
	2 (25.0)	2 (50.0)	2 (0)
	1,2 (12.5)	2,3 (25.0)	1,2 (25.0)
	2,3 (12.5)		
ART ADHERENCE SUPPORT	90.9	85.7	100.0
WHO PROVIDES ART ADHERENCE SUPPORT?*	1 (33.3)	1 (33.3)	1 (33.3)
	2 (22.2)	2 (0)	2 (66.7)
	3 (33.3)	1,2 (16.7)	1,2 (0)
	1,2 (11.1)	3 (50.0)	3 (0)
TB CONTACT TRACING	90.9	85.7	100.0
WHO PROVIDES TB CONTACT TRACING?*	1 (55.6)	1 (50.0)	1 (66.7)
	2 (11.1)	2 (16.7)	2 (0)
	3 (11.1)	3 (16.7)	3 (0)
	1,2 (11.1)	1,2 (16.7)	1,2 (0)
	1,3 (11.1)	1,3 (0)	1,3 (33.3)
YOUTH SERVICES	100.00	63.6	36.4
WHO PROVIDES YOUTH SERVICES?*	1 (45.5)	1 (42.9)	1 (50.0)
	2 (18.2)	2 (14.3)	2 (25.0)
	3 (36.4)	3 (42.9)	3 (25.0)
CONDOM DISTRIBUTION	90.9	100.0	75.0
WHO PROVIDED CONDOM DISTRIBUTION?*	1 (50.0)	1 (42.9)	1 (66.7)
	3 (50.0)	3 (57.1)	3 (33.3)
SGBV	90.9	85.7	14.3
WHO PROVIDES SGBV?*	1 (50.0)	1 (33.3)	1 (75.0)
	2 (10.0)	2 (0)	2 (25.0)
	3 (30.0)	3 (50.0)	3 (0)
	1,2,3 (10.0)	1,2,3 (16.7)	1,2,3 (0)

	OVERALL N=11	INTEGRATED N=7 %	NON-INTEGRATED N=4 %
WHAT OTHER COMMUNITY COLLABORATIONS EXIST?	1 (16.7)	1 (33.3)	1 (0)
1.Motswedi Rehab	3 (16.7)	3 (0)	3 (33.3)
2.Center-offer physio	4 (16.7)	4 (0)	4 (33.3)
3.Comm youth support group	5 (16.7)	5 (33.3)	5 (0)
4.District comm office	6 (16.7)	6 (33.3)	6 (0)
5.BOFWA	6,7 (16.7)		6,7 (33.3)
6.Village health community			
HOW TO ASSESS IF PROTOCOLS AND PROCEDURES ARE FOLLOWED?			
1.No measurement	2 (9.1)		
2.Checklist completed by staff	3 (18.2)	2 (14.3)	2 (0)
3.Site visit by management staff	4 (9.2)	3 (28.6)	3 (0)
4.Observations		4 (14.3)	4 (0)
5.Other (Monthly checks on milestone achievements)			
2,3,4	2,3,4 (36.4)	2,3,4 (28.6)	2,3,4 (50.0)
3,4	3,4 (27.3)	3,4 (14.3)	3,4 (50.0)
HOW OFTEN ARE OFTEN ARE ASSESSMENTS DONE?			
1.Monthly	1 (44.4)	1 (40.0)	1 (50.0)
2.Quarterly	2 (22.2)	2 (0)	2 (50.0)
3.Bi-annually	3 (11.1)	3 (30.0)	3 (0)
4.When needed	4 (22.2)	4 (40.0)	4 (0)
ORGANIZATIONAL CHART PRESENT			
1.YES	100.0	100.00	100.00
MECHANISM TO ADJUST ROLES			
1.YES	100.0	100.0	100.0
MAIN REASONS FOR ADJUSTING ROLES			
1.Staff absenteeism		1	1
2.Staff burnout	2 (9.1)	2 (0)	2 (25.0)
3.Staff rotations between facilities		3	3
4.Staff turnover		4	4
1,2,3	1,2,3 (9.1)	1,2,3 (0)	1,2,3 (25.0)
1,2,3,4	1,2,3,4 (36.4)	1,2,3,4 (57.1)	1,2,3,4 (0)
1,2,4	1,2,4 (18.2)	1,2,4 (28.6)	1,2,4 (0)
1,3,4	1,3,4 (9.1)	1,3,4 (0)	1,3,4 (25.0)
2,4	2,4 (18.2)	2,4 (14.3)	2,4 (25.0)
STAFF WORK SCHEDULE PRESENT			
1.Yes	100.0	100.0	100.0
ARE SOME DAYS BUSIER THAN OTHERS AT FACILITY?			
1.YES	100.0	100.0	100.0

REASONS SOME DAYS ARE BUSIER:			
1.Certain services only on certain days	1 (27.3)	1 (28.6)	1,2 (25.0)
2.Doctor availability		2	2
3.NGO activities on site		3	3
4. Other		4	4
1,2	1,2 (18.2)	1,2 (14.3)	1,2 (25.0)
1,2,3	1,2,3 (45.5)	1,2,3 (42.9)	1,2,3 (50.0)
1,3	1,3 (9.1)	1,3 (14.3)	1,3 (0)
1ST POINT OF CONTACT FOR CLIENT			
1.Receptionist	1 (9.1)	1 (14.3)	1 (0)
2.Nurse	2 (36.4)	2 (28.6)	2 (50.0)
3.Security guard		3	3 (0)
4.Any staff member	4 (27.3)	4 (28.6)	4 (25.0)
2,3,4	2,3,4 (9.1)	2,3,4 (14.3)	2,3,4 (0)
2,4	2,4 (18.2)	2,4 (14.3)	2,4 (25.0)
WHEN CLIENT ARRIVES AFTER HOURS			
1.Is it possible to receive service?	1 (45.5)	1 (57.1)	1 (25.0)
2.Is there referral available	2 (9.1)	2 (0)	2 (25.0)
3. Are there health care providers on call for emergencies?		3 (0)	3 (0)
1,2	1,2 (9.1)	1,2 (14.3)	1,2 (0)
1,2,3	1,2,3 (36.4)	1,2,3 (28.6)	1,2,3 (50.0)
FREQUENCY OF PERFORMANCE EVALUATIONS			
1.Never	1 (9.1)	1 (14.3)	1 (0)
2.Twice a year		2 (0)	2 (0)
3. Quarterly	3 (90.9)	3 (85.7)	3 (100.0)
4.Once a year			
5.When he/she requests it			
HOW DO CLIENTS PROVIDE FEEDBACK?			
1.Not possible to give feedback			
2.Box present for comments			
3.Questionnaire filled out at end of visit			
4.They can speak to staff anytime			
2,3,4	2,3,4 (72.7)	2,3,4 (71.4)	2,3,4 (75.0)
2,4	2,4 (27.3)	2,4 (28.6)	2,4 (25.0)
TO WHOM TO CLIENTS PROVIDE FEEDBACK?			
1.Head nurse	1 (9.1)	1 (14.3)	1 (0)
2.Doctor			
3.Head of facility	3 (18.2)	3 (0)	3 (50.0)
4.Other health workers			
1,2,3	1,2,3 (27.3)	1,2,3 (42.9)	1,2,3 (0)
1,2,3,4	1,2,3,4	1,2,3,4 (42.9)	1,2,3,4 (25.0)
1,3,4	(36.4)	1,3,4 (0)	1,3,4 (25.0)
	1,3,4 (9.1)		

*1:Health community worker 2: NGO 3: ALL Staff

Table 6: Summary of Service Quality by Integration

	Overall N (%)	Integrated N (%)	Non Integrated	P-Value
WAIT TIME				
Not too Long	32 (21.6)	20 (20.6)	12 (23.5)	0.12
Just Right	64 (43.2)	38 (39.2)	26 (51.0)	
Too Long	52 (35.1)	39 (40.2)	13 (25.5)	
WAIT LENGTH (average)*	1.5 hrs	1.8	0.9	<0.001
SERVICE QUALITY				
Very good	42 (28.8)	30 (31.3)	12 (24.0)	
Good	71 (48.6)	43 (44.8)	28 (56.0)	0.42
Okay	21 (14.4)	16 (16.7)	5 (10.0)	
Poor	9 (6.2)	6 (6.3)	3 (6.0)	
Bad	3 (2.1)	1 (1.0)	2 (4.0)	0.31
REASON FOR SERVICE QUALITY	18 (12.2)	14 (14.4)	4 (8.0)	
1. Wait too long	9 (6.1)	7 (7.2)	2 (4.0)	
2. Service Slow	86 (58.5)	59 (60.8)	27 (54.0)	
3. Nurses Informative	23 (15.7)	11 (11.3)	12 (24.0)	
4. Helped Quickly	1 (0.7)	1 (1.0)	0 (0)	
5. Stock out of Medicine	2 (1.4)	1 (1.0)	1 (2.0)	
6. Did not receive service requested	5 (3.4)	3 (3.1)	2 (4.0)	
7. Satisfied	1 (0.7)	0 (0)	1 (2.0)	
2 and 6	1 (0.7)	1 (1.0)	0 (0)	
3 and 5	1 (0.7)	0 (0)	1 (2.0)	
5 and 6				
HEARD ABOUT GETTING FP AND HIV SERVICES IN 1 VISIT?				
YES	71 (48.0)	49 (50.5)	48 (49.5)	0.4
NO	77 (52.0)	22 (43.1)	29 (56.9)	
WHERE DID YOU HEAR ABOUT INTEGRATED SERVICES? *				
1.Friend/family	6 (8.7)	6 (13.6)	0 (0)	0.05
2. NGO/CBO	2 (2.9)	0 (0)	2 (8.0)	
3. TV/Radio	1 (1.5)	1 (2.3)	0 (0)	
4. Pamphlet/Brochure/Poster	1 (1.5)	1 (2.3)	0 (0)	
5. Doctor/Nurse	43 (62.3)	26 (59.1)	17 (68.0)	
1,2,3,4,5	2 (2.9)	0 (0)	2 (8.0)	
1,3,5	1 (1.5)	1 (2.3)	0 (0)	
1,4,5	1 (1.5)	0 (0)	1 (4.0)	
1,5	5 (7.3)	5 (11.4)	0 (0)	
2,3,5	2 (2.9)	0 (0)	2 (8.0)	
2,5	2 (2.9)	1 (2.3)	1 (4.0)	
3,4,5	1 (1.5)	1 (2.3)	0 (0)	
3,5				
4,5				

INTEGRATED SERVICES BETTER?	138 (93.2)	90 (92.8)	48 (94.1)	0.6
1.Better	2 (1.4)	2 (2.1)	0 (0)	
2.Same	7 (4.7)	4 (4.1)	0 (0)	
3.Worse	1 (0.7)	1 (1.0)	5 (5.9)	
1,2				
REASON FOR OPINION ABOUT INTEGRATED SERVICES	66 (45.2)	38 (40.0)	28 (54.9)	
1.less wait time	38 (26.0)	30 (31.60)	8 (15.7)	
2.less cost	14 (9.6)	7 (7.4)	7 (13.7)	
3.doc/nurse providing services	2 (1.4)	1 (1.1)	1 (2.0)	
4.Other	1 (0.7)	1 (1.1)	0 (0)	
5.Reduced repeat visits	16 (11.0)	14 (14.7)	2 (3.9)	
1,2	2 (1.4)	2 (2.1)	3 (5.9)	
1,2,3	1 (0.7)	1 (1.1)	1 (2.0)	
1,3	1 (0.7)	0 (0)	0 (0)	
2,3				
2,5				
LENGTH OF TIME COMING TO FACILITY				
1.1st visit	11 (7.5)	9 (9.4)	2 (3.9)	0.56
2.Several months	132 (89.8)	84 (87.5)	48 (94.1)	
3.Don't Know	2 (2.0)	3 (3.1)	1 (2.0)	
HOW MANY MONTHS COMING TO FACILITY (Average and range)	152 (1-720)	171 (1-720)	117 (0.9-480)	0.12
IF 1st VISIT, WHICH OTHER CLINIC DID YOU GO TO?				
1. Leetile Clinic	2 (16.7)			0.06
2. Selibe Hospital	1 (8.3)			
3. Xhosa Clinic	1 (8.3)			
4. Chadibe Clinic	4 (33.3)			
5. Shoshong Clinic	1 (8.3)			
6. Makakatlela	2 (16.7)			
7. Gopong Clinic	1 (8.3)			
WHERE DID YOU HEAR ABOUT SERVICES IN THIS CLINIC?				
1.Friend/Family	65 (45.8)			0.09
2.NGO/CBO	2 (1.4)			
3.TV/Radio	2 (1.4)			
4.Pamphlet/Brochure/Poster	1 (0.7)			
5.Doctor/Nurse	38 (26.8)			
6.Other	3 (2.1)			
7.Kgotla Meeting	2 (1.4)			
1,2,3,4,5	4 (2.8)			
1,2,3,5	1 (0.7)			
1,2,4,5	1 (0.7)			
1,3,4,5	1 (0.7)			
1,4,5	1 (0.7)			
1,5	14 (9.9)			

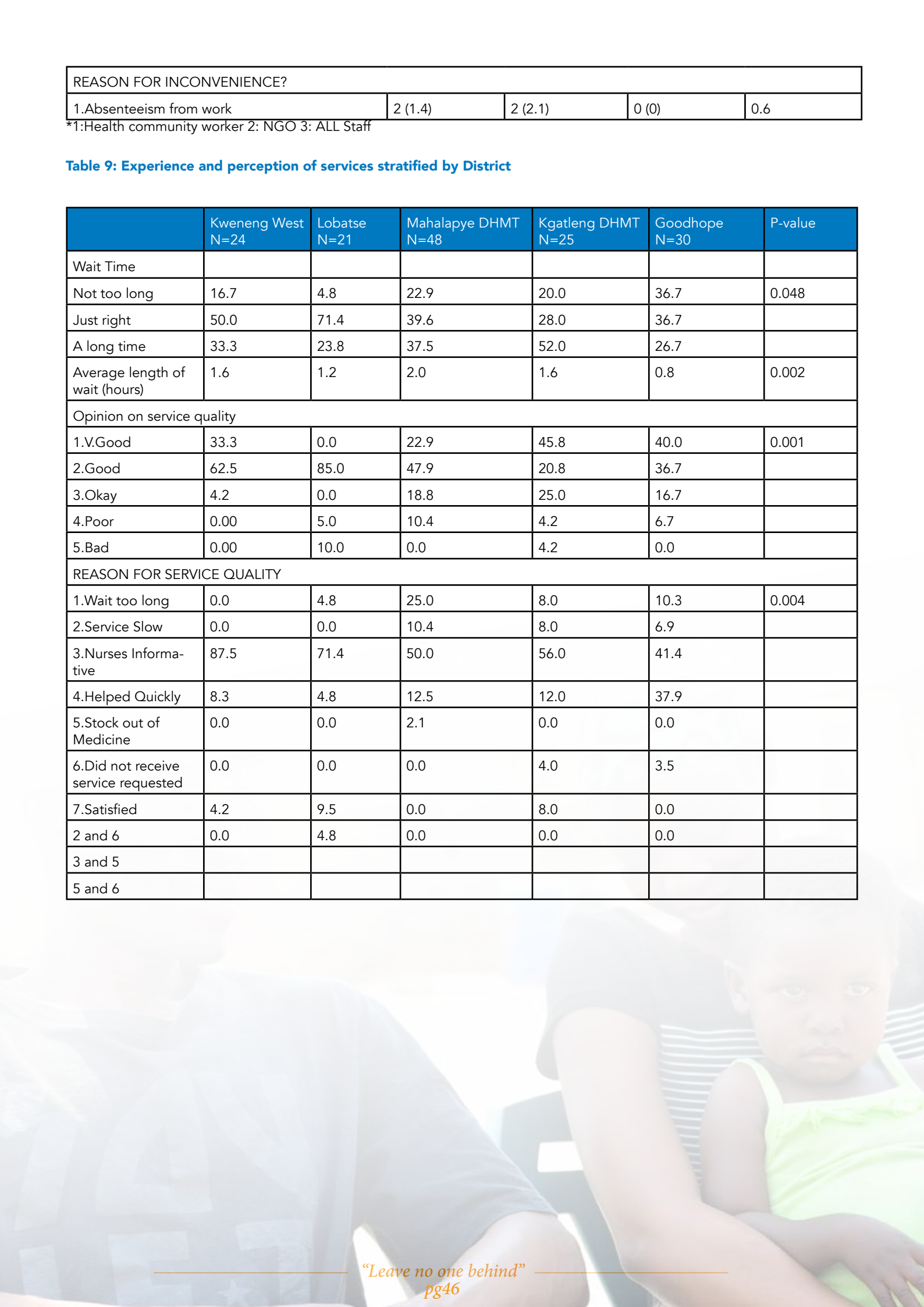
2,3,4,5	1 (0.7)			
2,5	3 (2.1)			
3,5	1 (0.7)			
4,5,7	2 (1.4)			
BARRIERS TO COMING TO THIS CLINIC?				
1. Language	4 (2.9)	3 (3.1)	1 (2.3)	0.24
2. None	98 (70.0)	67 (69.1)	31 (72.1)	
3.Type of service provider	0	0	0 (0)	
4.Attitude of providers	1 (0.7)	1 (1.0)	1 (1.0)	
5.Time operations of the clinic	4 (2.9)	3 (3.1)	1 (2.3)	
6. Schedule of services	4 (2.9)	2 (2.1)	2 (4.7)	
7. Costs	7 (5.0)	7 (7.2)	0 (0)	
8. Other	2 (1.4)	1 (1.0)	1 (2.3)	
9. Transport	4 (2.9)	4 (4.1)	0 (0)	
3,6	1 (0.7)	1 (1.0)	0 (0)	
3,5	2 (1.4)	0 (0)	2 (4.7)	
3,6,7	1 (0.7)	1 (1.0)	0 (0)	
3,6,9	1 (0.7)	1 (1.0)	0 (0)	
5,6	2 (1.4)	0 (0)	2 (4.7)	
5,7	2 (1.4)	1 (1.0)	1 (2.3)	
6,7	1 (0.7)	1 (1.0)	0 (0)	
6,7,8,9,10	1 (0.7)	0 (0)	1 (2.3)	
6,8,9	1 (0.7)	1 (1.0)	0 (0)	
6,9	1 (0.7)	1 (1.0)	0 (0)	
7,10	1 (0.7)	1 (1.0)	0 (0)	
8,4	1 (0.7)	0 (0)	1 (2.3)	
8,9				
COST FOR SERVICES				
1.Paid Something	2 (1.4)	3 (3.0)	1 (2.0)	0.3
2. Paid Nothing	144 (98.6)	94 (97.0)	50 (98.0)	
WHAT WAS AMOUNT PAID AT CLINIC TODAY? (PULAS)				
N (Average and Range)	61 (13.5; 2-100)	12.6 (4-99)	15.0 (2-100)	0.4
OTHER COSTS TO VISIT THE CLINIC	84 (56.8)	54 (55.7)	30 (58.8)	0.3
1. None	55 (37.2)	35 (36.1)	20 (39.2)	
2.Transport	2 (1.4)	2 (2.1)	0 (0)	
3.Child Care	4 (2.7)	4 (4.1)	0 (0)	
4. Work Absentee	1 (0.7)	0 (0)	0 (0)	
5.Food	2(1.4)	2 (2.1)	0 (0)	
3,5				
ANY OTHER NON MONETARY INCONVENIENCE COMING TO CLINIC TODAY?				
1.YES	2 (1.4)	2 (2.1)	0 (0)	0.3
2.NO	146 (98.7)	95 (97.9)	51 (100.0)	

REASON FOR INCONVENIENCE?				
1.Absenteeism from work	2 (1.4)	2 (2.1)	0 (0)	0.6

*1:Health community worker 2: NGO 3: ALL Staff

Table 9: Experience and perception of services stratified by District

	Kweneng West N=24	Lobatse N=21	Mahalapye DHMT N=48	Kgatleng DHMT N=25	Goodhope N=30	P-value
Wait Time						
Not too long	16.7	4.8	22.9	20.0	36.7	0.048
Just right	50.0	71.4	39.6	28.0	36.7	
A long time	33.3	23.8	37.5	52.0	26.7	
Average length of wait (hours)	1.6	1.2	2.0	1.6	0.8	0.002
Opinion on service quality						
1.V.Good	33.3	0.0	22.9	45.8	40.0	0.001
2.Good	62.5	85.0	47.9	20.8	36.7	
3.Okay	4.2	0.0	18.8	25.0	16.7	
4.Poor	0.00	5.0	10.4	4.2	6.7	
5.Bad	0.00	10.0	0.0	4.2	0.0	
REASON FOR SERVICE QUALITY						
1.Wait too long	0.0	4.8	25.0	8.0	10.3	0.004
2.Service Slow	0.0	0.0	10.4	8.0	6.9	
3.Nurses Informative	87.5	71.4	50.0	56.0	41.4	
4.Helped Quickly	8.3	4.8	12.5	12.0	37.9	
5.Stock out of Medicine	0.0	0.0	2.1	0.0	0.0	
6.Did not receive service requested	0.0	0.0	0.0	4.0	3.5	
7.Satisfied	4.2	9.5	0.0	8.0	0.0	
2 and 6	0.0	4.8	0.0	0.0	0.0	
3 and 5						
5 and 6						



HEARD ABOUT GETTING FP AND HIV SERVICES IN 1 VISIT?						
YES	37.5	57.1	56.3	52.0	33.3	0.21
WHERE DID YOU HEAR ABOUT INTEGRATED SERVICES?	0.0	0.0	23.1	0.0	0.0	0.02
1.Friend/family	0.0	8.3	0.0	0.0	7.7	
2. NGO/CBO	0.0	0.0	0.0	8.3	0.0	
3. TV/Radio	0.0	0.0	3.9	0.0	0.0	
4. Pamphlet/Brochure/Poster	100.0	83.3	53.9	50.0	53.9	
5. Doctor/Nurse	0.04	0.0	0.0	0.0	15.4	
1,2,3,4,5	0.0	0.0	0.0	8.3	0.0	
1,3,5	0.0	0.0	0.0	0.0	7.7	
1,4,5	0.0	0.0	19.2	0.0	0.0	
1,5	0.0	8.3	0.0	8.3	15.4	
2,3,5	0.0	0.0	0.0	8.3	0.0	
2,5	0.0	0.0	0.0	8.3	0.0	
3,4,5	0.0	0.0	0.0	8.3	0.0	
3,5						
4,5						
Opinion on integration						
Better	83.3	95.2	97.9	92.0	93.3	0.03
Neither better/ worse	0.0	0.0	2.1	8.0	0.0	
Worse	16.7	4.8	0.0	0.0	6.7	
Reason for opinion on integration						
1.Reduced wait time	75.0	85.7	37.0	12.0	33.3	<0.001
2.Reduced costs	12.5	9.5	39.1	36.0	20.0	
3.Doctor/nurse providing services	8.3	4.8	0.0	20.0	20.0	
4.Other	4.2	0.0	0.0	0.0	3.3	
5.Reduced repeat visits	0.0	0.0	0.0	4.0	0.0	
1,2	0.0	0.0	23.9	12.0	6.7	
1,2,3	0.0	0.0	0.0	8.0	10.0	
1,3	0.0	0.0	0.0	4.0	3.3	
2,3	0.0	0.0	0.0	0.0	3.3	
2,5	0.0	0.0	0.0	4.0	0.0	
Length of time coming to facility?						
1st visit	0.0	4.8	12.8	12.0	3.3	0.28
Several months	91.7	95.2	85.1	88.0	93.3	
Don't know	8.3	0.0	85.1	0.0		

Average number of months coming to facility? Avera ge (range)	198 (1-468)	87 (1-468)	126 (1-468)	139 (1-480)	0.13	

How often do you come to clinic?						
1.Once a month	54.2	66.7	43.8	16.0	34.5	<0.001
2.Once every 6 months	4.2	0.0	12.5	4.0	0.0	
3.Once a year	0.0	0.0	0.0	0.0	0.0	
4.Whenever there is need	8.3	23.8	37.5	68.0	58.6	
5.Rarely	12.5	9.5	4.2	8.0	3.5	
6.Other	20.8	0.0	0.0	0.0	0.0	
1,4	20.8	0.0	0.0	0.0	3.5	
1,7	0.0	0.0	0.0	0.0	0.0	
BARRIERS TO COMING TO THIS CLINIC?						
1. Language	0.0	0.0	6.3	0.0	3.3	
2. None	62.5	84.6	85.4	44.0	66.7	
3.Type of service provider	0.0	0.0	0.0	0.0	0.0	
4.Attitude of providers	0.0	0.0	2.1	0.0	3.3	
5.Time operations of the clinic	0.0	0.0	2.1	8.0	0.0	
6. Schedule of services	4.2	0.0	0.0	4.0	0.0	
7. Costs	0.0	0.0	4.2	4.0	6.7	
8. Other	4.2	0.0	0.0	4.0	0.0	
9. Transport	12.5	0.0	0.0	4.0	3.3	
3,6	0.0	0.0	0.0	4.0	0.0	
3,5	0.0	0.0	0.0	0.0	0.0	
3,6,7	4.2	0.0	0.0	0.0	0.0	
3,6,9	4.2	0.0	2.1	0.0	0.0	
5,6	0.0	0.0	0.0	0.0	0.0	
5,7	0.0	0.0	0.0	4.0	0.0	
6,7	0.0	7.7	0.0	4.0	0.0	
6,7,8,9,10	0.0	0.0	0.0	0.0	0.0	
6,8,9	0.0	0.0	0.0	0.0	0.0	
6,9	4.2	0.0	0.0	0.0	0.0	
7,10	0.0	0.0	0.0	4.0	0.0	
8,4	0.0	7.7	0.0	4.0	0.0	
8,9	0.0		0.0	0.0		
0.007						

COST FOR SERVICES						
Paid Nothing	95.8	95.2	97.9	96.0	100.0	0.33
WHAT WAS AMOUNT PAID AT CLINIC TODAY? (PULAS) N (Average and Range)	31 (4-99) 0.0	8 (7-8) 0.0	8 (4-30) 0.0	10 (8-20) 0.0	25 (2-100) 0.0	0.01 <0.001
1. None	66.7	38.1	39.6	76.0	73.3	
2.Transport	8.3	61.9	58.3	20.0	23.3	
3.Child Care	4.2	0.0	2.1	0.0	0.0	
4. Work Absentee	12.5	0.0	0.0	4.0	0.0	
5.Other	0.0	0.0	0.0	0.0	3.3	
6.Food	8.3	0.0	0.0	0.0	0.0	
3,5						

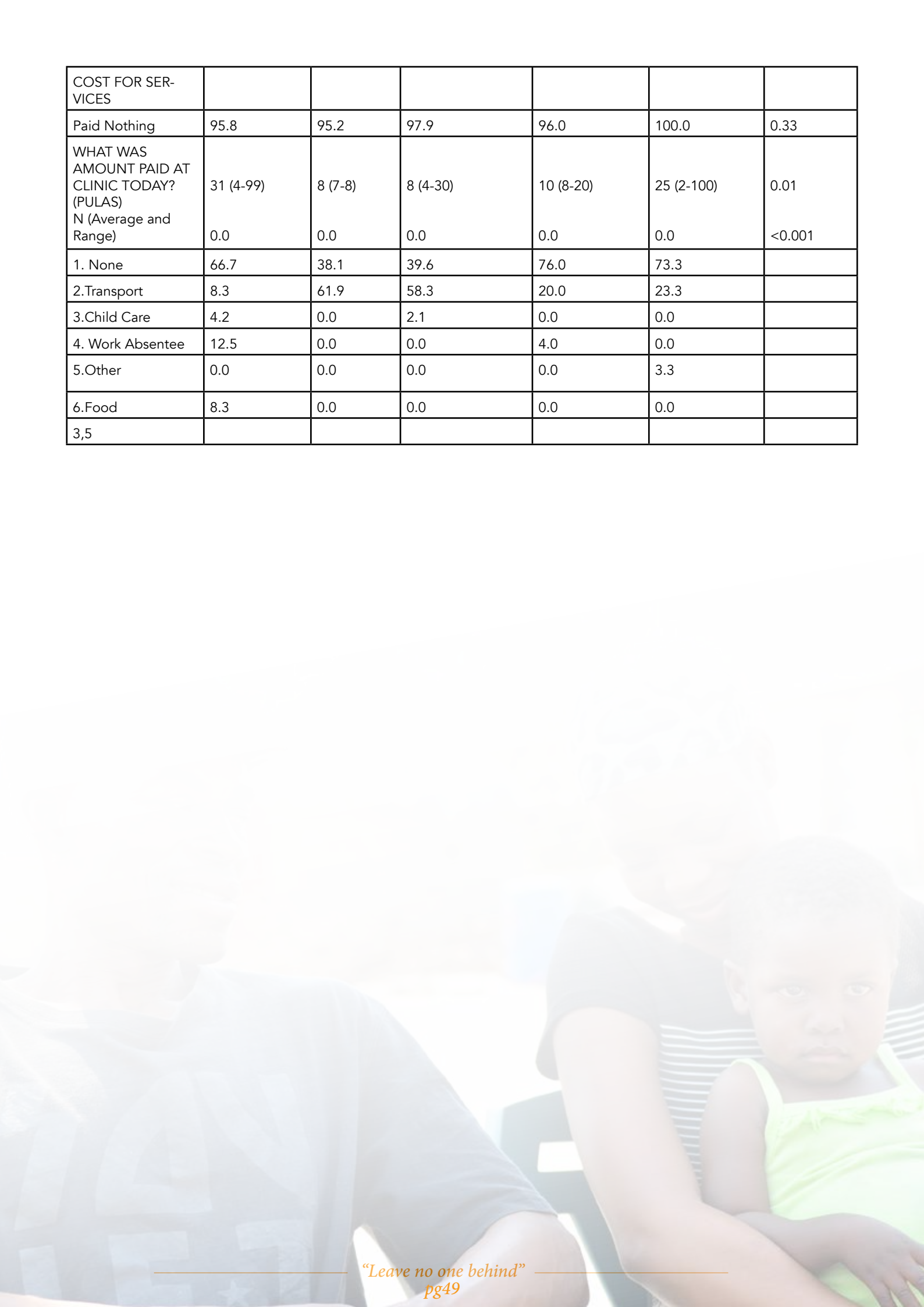


Table 11: Health care provider feedback on services provided

Health Service
For all below:

1=services you requested
2=services you received
3=services offered
4=services received from those offered Services available at facility Services offered in addition to what was requested REFERRED TO ANOTHER HEALTH FACILITY

1. YES
2. NO
3. MARINA
4. MOTSWEDI
5. GOOD HOPE CLINIC(GPH)
6. GABARONE CLINIC
7. IDCC WITHIN CLINIC
8. SOCIAL WORKER
9. HYPERTENSION CLINIC
10. SABRANA
11. BONEPWA
12. TB WARD WITHIN CLINIC
13. DIABETIC CLINIC
14. DEBORA RETIEF MEMORIAL HOSPITAL(DRM)
15. BOSEJA CLINIC
16. SRH WITHIN CLINIC
17. MMATHUBUDUKWANE
18. MAHALAPYE HOSPITAL
19. MATERNITY WARD WITHIN CLINIC
20. SEKGOMA CLINIC
21. STEPPING STONE
22. LABS
23. ANC REGISTRATION
24. VE INTRA FACILITY
25. MOCHUDI CLINIC
26. OPD WITHIN FACILITY
27. PHSYCIATRIC WARD
28. ATHLONE CLINIC

			14:3
ANC Follow Up	87.5	45.8	2:1 5:2
Post Natal Care	87.5	45.8	1: 1 5:2 14: 3
Family Planning	70.8	70.8	14:1
Injectables	95.8	91.7	2:3 5:1
Pills	95.8	83.3	2: 2 5:1
IUD	62.5	79.2	1:1 2:2 5:1 28:2
Norplant	70.8	79.2	1:1 2:1 5:2 18:1
Female Condoms	95.8	87.5	2:5
Male Condoms	95.8	91.7	2:5
Dual Family Planning	54.2	87.5	2:2 5:2
Sterilization	16.7	66.7	1:1 2:2 14:1 15:1 18:3 28:4
Immunization	75.0	66.7	2:1 5:2
Cervical Cancer Screening	100.0	100.0	2:3 5:1
ART	58.3	41.7	2:2 5:2 7:5 14:1
ART:1st and 2nd line	46	89.1	0
Drug Management	50.0	50.0	1:2 2:3 5:1 7:4 14:2
HIV/TB	83.3	58.3	2:1 5:2 6:1 7:3 14:1

PMTCT	83.3	70.8	1:1 2:2 3:1 7:2 14:1 16:1
Male Circumcision	41.7	70.8	1:1 2:3 4:4 5:1 15:3 19:1 25:1
Dressing	70.8	54.2	1:2 2:4 26:1 28:1
Lab Services	54.2	54.2	1:2 2:1 5:3 14:4 18:3 22:1 28:1
GBV	58.3	20.8	1:2 2:1 5:1 8:3 14:1 21:1
Diabetes Screening	91.7	83.3	2:3 5:1 14:3
Diabetes follow up	87.5	62.5	2:3 5:1 13:4 14:2
HTA Screening	95.8	87.5	2:3 5:1 14:3
HTA Follow Up	95.8	66.7	1:2 2:1 9:2 14:1
Mental Health Services	54.2	54.2	2:2 5:1 10:4 14:2 18:2 27:1

Other Services (general consultation, health education, diet education, etc)			
Breast Cancer			
Diet			
Rash	4.2	4.2	2:3

"Client focused integrated service delivery makes perfect people sense"