CCM Site Visit to Volta Region

16th – 19th October 2017

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1 INTRODUCTION

The HIV/TB Oversight Committee carried out a four day field visit to the Volta Region from 16th to 19th October 2017. The objectives of the mission were

a) Monitor Global Fund supported projects with a view of understanding status of ARV's and other essential commodities and equipment, procurement systems,
b) Understand the root causes of the increased HIV prevalence in Volta region,
c) Identify bottlenecks related to EID and TB case finding
d) Establish the progress of implementation of the Viral load scale up plan
e) Document best practices, challenges and proposed solutions to scale up HIV, TB and Malaria interventions.

The site visit was undertaken primarily in Ho and Aflao, with a visit to Ziope health center on the way between Ho and Aflao.

2 PARTICIPANTS

- Helen Odido (UNAIDS)
- Dr. Felicia Owusu-Antwi (WHO)
- Evans Opata (Ghana Coalition of NGOs in Malaria)
- Annekatrin El Oumrany (CCM Secretariat)

3 SITES VISITED

a) NAP+ Ghana (Sokode / Ho)
b) Volta Regional Health Directorate
c) Pro-Link Ho (under ADRA)
d) Regional Medical Stores Ho
e) Ho Regional Hospital (ANC, DOTS, pharmacy, lab)
f) CEPEHRG Ho
g) Male and female prison Ho
h) Health center Ziope
i) Aflao District Hospital (DOTS, ANC, lab, pharmacy)
j) Cured MDR-TB patients

4 SUMMARY OF CHALLENGES IDENTIFIED AND RECOMMENDATIONS

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER
1. HIV			
1.1 Health Facilities			
Staff attrition limits the impact of trainings as the region has a negative net flow	• Ensure that those participate in trainings who are not expected to be rotated very soon and ensure that immediate knowledge transfer at the level of the facility takes place • Review experiences of facilities that have successfully implemented training on the job to provide guidelines for other facilities	GHS / RHD	5.1.1
Allegation on inadequate selection of training participants	• Develop a national data base on training participants accessible by each healthcare facility as a basis for selection for training participants	GHS	5.2.1
Low number of EID and VL samples sent to regional lab, delays occur because of waiting for the critical mass to run the PCR machine HIV+ women not sufficiently informed about the benefits of EID and will not ask for it if they deliver at a different than their ANC facility	• Consider intensifying communication on EID / VL targeted at all ANC facilities • Ring fence facility specific amount for sample transport • Consider mass campaign on PMTCT / EID targeted to clients	NACP / GHS / RHDs NACP / NAP+	5.1.2.4 5.2.1
Viral suppression rate = 51% among those tested (821)	• Find out if there is a high proportion of clients who were newly enrolled on treatment. If so, review if ART facilities know that every PLHIV needs to be tested.	NACP / RHD	2.1.2.4
Women who deliver at a different facility than their ANC facility may not disclose their status, which results in a missed opportunity for EID	• Guideline that all women who cannot provide proof on their status shall be tested during delivery	NACP / GHS	5.1.1 / 5.1.2
Ziope Health Center is not informed about semester/annual VL test nor about EID after birth	• Repeat communication of guidelines	GHS / RHD	5.1.3
Enrollment and EID rate differs across facilities	• Considering that not all nurses/midwives are equally capable for counselling, develop a database with selected highly talented counsellors to follow up via telephone with “resistant” clients at other facilities	NACP / RHD	5.1.2 / 5.1.3

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER
NAP+ VR requests improving counselling skills of medical staff, particularly in those ART clinics without MoH Fears, stigma and discrimination are still common	• Evaluate need, consider training on the job at other facilities with highly skilled counsellors	NACP	5.2.1
Only 15 out of 35 MoH still active due to zero allowance MoH is committed to tracing LTFU cases but does not have any T&T	• MoH contribute to the NACP outcomes and deserve a compensation of their time, efforts and expenditures.	NACP / GHS	5.2.1
Ziope Health Center (small community) seems to be about opening a separate VCT center, solely dedicated to HIV treatment services, possibly risking stigma and discrimination	• Ensure that building will not carry a revealing name tag and try to incorporate other services to be delivered at the same building	RHD	5.1.3
Lack of ANC registers and EDTA tubes for VL samples	• Provide	NACP	5.1.2 / 5.1.4
Lack of IEC materials for clients and staff	• Evaluate need and incorporate in communication plan	NACP / GAC	5.1.2
Even though test and treat has started in August, staff is more successful in promptly enrolling newly diagnosed clients than PLHIV who were diagnosed in the past	• Consider a nationwide communication campaign on test and treat to create more demand	NACP / GAC	5.1.2
Lab co-payments still persist for PLHIV	• Provide advocacy to NHIA for timely reimbursements • Ensure maintenance and repair agreements for lab equipment that guarantee short response times	MOH / GHS GHS	5.1.2
Long waiting times affect primarily those with a job	• Consider appointments for those employed	NACP	5.2.1
1.2 Civil society and other			
1.2.1 PLHIV			
Regional NAP+ Executives are based all across the region which makes coordination of activities very difficult	• Consider requirement that NAP+ Execs must be from the same district	NAP+	5.2.1
NAP+ monthly amount of 800 GHC seems woefully inadequate to run any activities. NAP+ Volta was not aware of a possibility to apply for larger funds for activities.	• Consider possibilities to make additional funds available for thought through projects	WAPCAS as next PR	5.2.1
Monthly processing of NAP+ advance payments as low as 800GHS seems very ineffective considering the time for processing. In the case of VR, it resulted in being able to carry out less than 50% of the monthly meetings	• Consider paying and retiring funds on a quarterly basis	WAPCAS	5.2.1

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER
VL load scale up plan not known to NAP+ VR NAP+ VR considers support and communication from NAP head office as inadequate	• NAP+ at central level should improve information of their regional offices to ensure that news are forwarded to members in the communities	NAP+ Head Office	5.2.1
Lack of activities due to lack of funds	• NAP+ head office to come up with an overview of suggested low cost activities that can be continuously carried out	NAP+ Head Office	5.2.1
False cure claims at Amenuveve Herbal Computer Clinic, Gbadago Mathew, 0246556461, 0249267993	• Follow up	GAC / FDA	5.2.1
NAP+ VR representatives need to truly represent PLHIV in their region	• Set up WhatsApp group for region wide exchange with PLHIV • Refresher training for regional execs	NAP+	5.2.1
1.2.2 FSW			
Low condom use with non-paying partners	• Consider stronger involvement of NPPs	ADRA / WAPCAS as future PR	5.2.2
High demand for female condoms but low supply in times over large stocks	• Provide female condoms in larger quantities	ADRA	5.2.2
Problems with condom breakage (no logo)	• Review use practices	ADRA	5.2.2
Loss to follow up on women who tested positive	• Train a few HIV+ FSW to act as moral support for those newly diagnosed	ADRA / WAPCAS	5.2.2
1.2.3 MSM			
Numbers of condoms supplied is inadequate	• Communicate need estimation to WAPCAS	CEPEHRG	5.2.3
High prevalence of STIs diagnosed at the DIC Low ratio of self-reported consistent condom use (1/23)	• Enhance efforts to improve consistent condom use	CEPEHRG/WAPCAS/GAC	5.2.3
Heterosexual relationships are common	• Provide MSM with information on PMTCT	CEPEHRG/WAPCAS/GAC	5.2.3
1.2.4 Ho male and female prison			
Major reported problem with hepatitis B	• Evaluate and address this issue	GHS	5.2.4
Hygiene kits have been distributed three times per year	• Ensure quarterly distributions	PPAG / WAPCAS	5.2.4
PE certificates requested to continue PE work once released	• Supply asap	PPAG	5.2.4

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER
2. Tuberculosis			
No information about roll out of e-tracker beyond the pilot facilities	• Inform	NTP	6.1
Downward trend of case finding in spite of all efforts, possibly related to discontinuation of cash rewards for volunteers	•	NTP	6.1
No task shifting officer at Ho Regional Hospital. Screening focus is on primarily on those who cough	•	NTP / RHD	6.2
About 40-60% of people tested do not wait / do not come back for their results and need to be traced	• Review procedures (possibly do the TB test before seeing the physician)	NTP / RHD / Ho Regional Hospital	6.2 / 6.5
Lack of / inadequate supply with sputum containers and slides	• Procure in sufficient quantities, base allocation on real case load • Ensure a buffer stock	NTP / GHS	6.3 / 6.4 / 6.5
No digital X-ray available at Ketu South District hospital. Desire to do culture onsite	• Looking at the tremendous commitment of the chest clinic and the high reported incidence in the district, a digital X-ray should be considered	NTP / GHS	6.5
Ketu South: only coughing OPD clients are screened (=less than 10% of the registrants)	• Reorient task shifting officers on the correct procedures	NTP / RHD	6.5
Ketu South: first diagnosis of choice is still microscopy in spite of the available and functional GeneXpert	• Remind lab managers of diagnosis protocol	NTP / RHD	6.5
Insufficient involvement of pastors and traditional healers in the national response to enhance case finding and reduce defaulting	• Consider respective interventions	NTP	6.5
Lack of N95 makes medical staff afraid of TB infection, possibly resulting in low quality service	• Procure in sufficient numbers • Inform healthcare personnel about risk of infection and means of protection	NTP	6.5 / 6.6
Strong need of psychosocial support of MDR-TB clients related to the long and painful treatment, the risk of permanent disability and the long period during which no income can be generated	• Review options	NTP	6.6
Low TB knowledge in general population according to MDR-TB patients but not confirmed by chest clinic	• Evaluate situation and consider mass campaign	NTP	6.5 / 6.6
Low level of TB knowledge particularly among medical staff in smaller healthcare facilities	• Review information provided in medical / nursing schools	NTP	6.6

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER
	• Consider fact sheet on TB or other IEC means for healthcare providers		
3. Malaria			
IPT3 data subject to significant data errors due to manual counting. Up to 25% of the women may be overlooked	• Monitor consistent use of the newly introduced tally car	NMCP / RHD	7.1
Prison infirmaries are currently not accredited facilities at NHIA and cannot get reimbursed for commodities consumed. Providing prison infirmaries with health commodities results at a loss at either end compared to having inmates tested and treated at healthcare facilities	• Advocacy to NHIA to accredit prison infirmaries, so they can get the commodities to test and treat inmates	MoH / GHS / Prison service	7.1
Inconsistent start of IPT across healthcare facilities possibly results in lower indicator achievement	• WHO recommendation: Start as early as possible after the first trimester	NMCP	7.2 / 7.3 / 7.4
No dispersible tablets for children, not enough tablets for buffer solution	• Review situation	NMCP	7.2 / 7.4
Ziope Health Center was lacking basic commodities, such as ACTs, analgetics, dewormers, antibiotics, supposedly because of delays in NHIA reimbursements	• Advocacy to NHIA for timely payments • Review of financial management capacities of Ziope Health Center	MoH / GHS RHD	7.3
High number of malaria cases in Ho prison	• Advocacy to accredit prison infirmaries at NHIA, so they diagnose and treat malaria instantly	MoH / GHS	7.5
4. Other / cross cutting observations			
Lack of women in leadership positions at RHDs	• Review if GHS promotion scheme offers equal opportunities to women • Consider a mentoring program for women with career ambitions	GHS	8
Lack of vehicles for monitoring Different timing for disbursements to regions makes integrated approaches across programs difficult, e.g. joint monitoring	• Coordinated disbursements across programs	MoH / GHS as next PR	8
Fear that the new implementation arrangements could further delay decision making and disbursements to regions	• Closely monitor	MoH / GHS as next PR	8
RHD has no information about the way forward in 2018 and beyond	• Programs to inform RHDs about their work plans and targets	NMCP/ NTP / NACP / GHS / MoH	8
Bad internet connectivity affects timely data capturing	• Develop offline modus for DHIMS data entering	GHS / PPME	8

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER
Lack of functional appraisal system at GHS	• Develop and adopt performance based appraisal system and publically justify rewards and sanction	GHS	9.1
5. Commodity security			
Filling requisitions manually is extremely cumbersome and time consuming, which may result in estimated numbers	• Consider automatic allocations for selected low cost commodities with the possibility to adjust quantities on a semester basis if necessary to reduce the monthly work load	GHS	9.1
Reproach that GF commodities often have very short shelf lives that are then pushed onto the RMS and facilities that quickly need to adjust their treatment regimens	• IHS to inform about remaining shelf life before order is placed to allow RMS to better manage their stock	P&S / MoH	9.1
Perceived lack of adequate and consistent response by programs to issues identifiable in the stock reports (e.g. timely redistributions)	• Address concern either by enhanced action or communication	NACP / NMCP / NTP	9.1
Ziope Health Center was lacking basic commodities, such as ACTs, analgetics, dewormers, antibiotics, supposedly because of delays in NHIA reimbursements	• Advocacy to NHIA for timely payments • Review of financial management capacities of Ziope Health Center (and possibly others)	MoH / GHS RHD	9.2

5 HIV

5.1 Clinical Perspective

5.1.1 Regional Health Directorate

Volta Region is has about 6500 PLHIV on treatment in 22 ART facilities in 25 districts. E-tracker is expected to be implemented within 2017. The team inquired about possible root causes of the significantly increased HIV prevalence in Volta region and learned that the routine data do not confirm the increase. The HIV experts are still trying to explain this increase in the HSS 2016. The site visit team was particularly interested in challenges related to PMTCT, including viral load testing and EID, considering that at least 160 people from VR received the respective training in 2015 and 2016. The Regional HIV/TB Coordinator, Dr. Anthony Ashinyo, intimated the training and capacity building program for EID, PMTCT and TB to be very beneficial.

Staff attrition and training on the job: When asked for the low performance of Volta Region on some of those indicators, he bemoaned the high attrition rate of health personnel in the region. Contrary to other regions, the local net flow of personnel is negative, thereby making it impossible to realize the benefits of training personnel for specific program interventions like EID, PMTCT, ART and TB. This assertion was corroborated by the Deputy Director of Public Health. The RHD liked the proposal of expanding training on the job beyond malaria to ensure availability of capable staff at all times, however pointed out a need of support for its implementation. NACP is proposed to study the example of the Northern region that has set up additional ART facilities using training on the job and remote support whenever necessary.

Viral load and EID: The PMTCT trainings have resulted in a better uptake of those services. The viral load scale up has been initiated in the end of September, which explains that the NAP+ members who visited facilities recently were not tested. The sample transport is said to be well organized with samples from the communities transported to the districts from which they are sent to the regional lab. However, it was noted that it will be necessary to ring fence an amount X for sample transport to ensure that the funds are available at all times. Because of the inadequate staff at the regional laboratory that tests the viral load and EID samples, the results are delayed two (2) weeks on average. The PCR machine can run 20 samples per day or 5000 per year, which seems inadequate considering the 6500 PLHIV on treatment that will quickly increase with the recently introduced test and treat. One of the problems is those women who deliver in a different facility than their ANC facility and the problem that they may not want to disclose their status for fear of stigma.

Daily services, integrated services and waiting time: The team inquired about the percentage of ART facilities that offer daily services and brought up the issue of the long waiting hours (2-5h according to NAP+) during clinic days that particularly affect working

PLHIV and learned that there are similar waiting times at OPD. Furthermore, the waiting time has been devised for health talks of various kinds to keep clients willing to wait.

Data challenges: Midwives used to confound the number of pregnant women tested positive with those tested at 34 weeks and rather entered the entirety of those tested. This created the impression that a lot of women tested positive were not enrolled in treatment. This issue has been resolved through on the job coaching.

Commodity security: According to the RMS manager, commodities are currently all available with the exception of some pediatric drugs that expired in the past.

5.1.2 Ho Regional Hospital

Ho Regional Hospital has the following number of PLHIV on ART (loss to follow up and deaths are not taken into account, so that the actual number is lower):

- Adults: 220 men, 651 women
- Children: 60

The defaulter rate is very similar among men compared to women.

5.1.2.1 ANC

Procedures: Women enrolled on treatment at the ANC facility are usually retained for two years before they are referred to an ART facility. Within the same day of the positive test result, they are enrolled on ART but have to come back after two weeks to evaluate any possible side effects. There are no additional lab exams beyond the regular ANC exams and particular medical conditions. The women are usually ask to bring a treatment support, ideally their husband. Women who do not dare to disclose their status to him, are invited together with their husband to discuss issues related to the pregnancy. About 50% of the husbands come. In a confidential situation and if desired in the presence of the nurse, the woman discloses her status to her husband and the nurses seizes the opportunity for a thorough counselling. The husband is offered a test, usually 30% of them accept the offer after counselling. For the remaining, the wife is sent outside for the nurse to ask is the husband had possibly already done a test in the past. In many instances this is the case. It seems that husbands who tested HIV positive are equally afraid of the reactions of their spouses and a possible divorce as positively tested women.

Enrollment in treatment: The team was tremendously pleased with the performance of the ANC facility. Testing of pregnant women is usually done at 100%, partly because HTS is integrated in a number of ANC related lab tests and not treated as a special test. The nurses told the team that if the women tested HIV positive receive a quality counselling, they do not opt out of testing. The few women who opt out usually know their status already. Test kits are usually available in sufficient quantities. The 2017 data (see table below) show a facility specific prevalence rate of 1.3%, which is significantly below the HSS 2016 prevalence rate of Volta Region of 2.7%. The ANC facility has a 100% success rate of enrolling women

onto ART. The ANC staff attributes it to the awareness and knowledge created through the counselling. Negative women are retested at 34 weeks and it is interesting to note that the women increasingly remind the ANC staff.

MONTHS	REGISTRANTS	NO. TESTED	NO. POSITIVE	NO. GIVEN ARV	EID
JANUARY	105	105	0	0	1
FEBRUARY	104	104	1	1	2
MARCH	125	125	0	1	2
APRIL	106	106	3	3	0
MAY	106	106	2	2	6
JUNE	126	126	3	3	2
JULY	128	128	1	1	2
AUGUST	128	128	2	2	5
SEPTEMBER	130	130	1	1	1
OCTOBER	136	136	2	2	2
TOTAL	1194	1194	15	16	23

EID: All women who cannot produce an HIV test result at the time of labor are tested. This was introduced very recently. All babies of HIV+ mothers are subject to EID on the date of birth. They are retested after three days and six weeks. The DBS papers have always been available in sufficient quantities. All exposed babies receive cotrimoxazol.

Training for ANC staff: There has been a lot of PMTCT training for facility staff so that nurses and midwives are all equally apt to provide ART services. Similarly, every single midwife at this facility knows how to do EID. Staffs who were not able to attend formal training, are trained on the job to ensure that every woman and every baby receives the services they are entitled to without delay.

Referral and loss to follow up: At six weeks of age, positive children and after two years of ART services at the ANC facilities, women are transferred to a regular ART center proximate to their residence to continue treatment. They may also chose to continue treatment at the regional hospital. Upfront contact with the community health nurse is established upfront to be able to follow up on the women and her baby. The ANC has comprehensive telephone numbers of all facilities in the region and beyond for this purpose. When women or their babies are lost to follow up, their outreach points are contacted to undertake home visits. Usually, those community health nurses are able to track out most of the defaulters, partly with the help of NGOs.

New registers: The ANC staff was very pleased about the integration of PMTCT in the new registers but pointed out that they need additional ones.

IEC: Since HIV education is part of the ANC's responsibilities, the staff would be glad about print and audio-visual materials about general HIV information for clients as well as healthcare personnel, HTS and information on breast feeding in the context of HIV. The videos would be played to educate the waiting clients.

5.1.2.2 ART Center

The team did not physically visit the ART center as it was closed but received information from the HIV data officer and the Head Public Health who is also the in charge of the ART center.

Test and treat started officially in August. As the below table (includes ANC data) shows, enrollment rates have increased significantly since then. However, while it seems that most people tested positive have been enrolled in treatment since August, data seem to indicate that the ART clinic has not been very successful yet in calling back all previously tested PLHIV to put them on treatment. It was bemoaned that there are partly considerable delays for the results from the lab.

MONTHS	NO. OF NEW CASES REGISTERED		NO. PUT ON ARVS		% PUT ON ARVs	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
JANUARY	2	9	4	4	57%	74%
FEBRUARY	5	9	1	4		
MARCH	5	15	1	10		
APRIL	4	6	1	7		
MAY	2	12	1	11		
JUNE	9	14	4	10		
JULY	3	5	5	6		
AUGUST	5	10	2	10	100%	86%
SEPTEMBER	7	8	6	7		
OCTOBER	5	10	9	7		

5.1.2.3 Commodity situation

RDTs and ARVs seem to be generally available while pediatric formulations were out of stock. Shortages and alternative regimens / combinations are communicated upfront by the RMS. The monthly supplies are not delivered by the RMS but collected by the hospital.

5.1.2.4 Lab

Payment: While the HIV test is provided free of charge, no statement was made if or not other lab test are payable. Those not on NHIS either have to pay for their lab exams or wait until they are NHIS enrolled (possible on the hospital grounds). Particularly if NHIS does not pay for a very long time, it seems that clients are requested to provide copayments in order to be able to continuously provide the services.

Equipment and maintenance: Hematology and chemistry analyzer machines are functional and subject to maintenance according to the supplier's schedule. If they break down, they tend to be repaired within 48 h. Back up machines are available to prevent interruptions and delays in testing. The machines have been procured on the open market and the maintenance agreement was negotiated alongside. The PCR machine has been functional during the entire year and reagents have been available throughout. Samples are brought from the district with a weekly schedule. In 2017, 821 samples were tested and 422 (=51%) were confirmed as viral suppressed. The machine can process 40 samples simultaneously; the machine is started with a minimum of 20 samples. The test takes about 4 hours, so it can be repeated during the same day if necessary. On average, the machine is run twice a week and results are sent to the facilities within a week. The lab confirms that there are currently no backlogs. Currently, not many EID samples arrive and the lab usually has to wait for a sufficient number of samples before they run the test. Earlier this year, the machine was started only every third month for the lack of EID samples. The EID ratio among exposed infants has been improving in 2017 to 66% of the infants tested in Q3. If the machine is run, results are usually available within two weeks. The lab has a standby generator but it was pointed out that a higher capacity one is needed.

EID Indicators	**Q1**	**Q2**	**Q3**
# of HIV exposed Infants	**10**	**32**	**56**
# receiving ARV prophylaxis from birth	10	34	48
# receiving Septrin prophylaxis from 6 weeks	0	29	59
# Number tested by PCR at 6 weeks	**0**	**14**	**37**
# Number tested by PCR < 18 months	0	6	44
#Number tested positive at 6 weeks	0	2	0
# Number tested positive < 18 months	0	0	2
# Infants positive enrolled into care	0	4	2

Reagents: All reagents were available at the time of the visit with the exception of Eliza. Hematology and chemistry reagents are purchased on the open market.

5.1.3 Ziope Health Center

Ziope Health Center was proposed by the RHD as one of the health centers on the way of the team from Ho to Aflao. It is a small health center with a new immaculate lab for basic analyses. An ART center will be opened very soon, unfortunately in a separate building that is likely to quickly raise suspicion in this rather rural community. It would be preferable if this building could be used for a number of different health topics. The in-charge was not present at the time of the meeting, however, several staff members, including a few midwives, responded to the questions of the team.

ANC: Every pregnant women is tested for HIV. When women want to give birth at the health center but cannot produce their HTS result, they are retested during labor. All of the ANC staff have the skills to do HTS. There have not been any RDT shortages lately. Husbands are usually invited to attend a counselling session but they reportedly never come. Those tested positive are put on ARV on the spot, a procedure that has been initiated as early as 2014. Women who were tested positive during CHPS outreach activities are referred to the health center for ART. The provision of the health center with ARVs is supposedly working without challenges. ARVs are provided by the health center as long as the woman wishes. At the time of the visit, two women were on ART. When women have given birth, they are reminded to bring their babies for EID but often do not do so. The current status of knowledge of the healthcare staff is that DBS samples are taken at six weeks of age of the baby. The DBS sample sent to Ho in 2017 took about two weeks for a result to arrive. There is currently one child on treatment who is seven weeks old. One midwife has received training on EID but has not shared her knowledge and skills with her colleagues. She admits that this is a regrettable omission. The Ziope Health Center staff was not aware that PLHIV shall have a viral load test at least once a year and has hence not sent any VL samples to the regional hospital.

ART: As long as the health center's ART center is not operational, HIV+ men are referred to Ho for ART.

5.1.4 Ketu South District Hospital

This hospital has big ART clinic that caters for about 1500 clients. The below table shows the 2016 statistics generated from the registers

	Clients tested	HIV+	Positivity rate
Pregnant women	2098	31	1.5%
Non-pregnant women	520	147	28.3%
Men	377	78	20.7%

The high positivity rate among men and non-pregnant women is largely attributable to testing of clients who already know their status, but need to be initiated on ART. It takes approximately one month for a patient to be tested and initiated onto treatment and patients receive up to 4 month drug supply, depending on whether or not dealing with a stable patient. The team learnt that testing of HIV patients for TB is not done routinely.

ANC: The ANC clinic tests all pregnant women for HIV and refers positive pregnant women to the ART clinic. It was reported that a good number of pregnant women referred to the ART clinic don't go. Despite the fact that clinic encourages pregnant women to come with their partners, this rarely happens due to fear related to disclosure. Out of 100 pregnant women approximately five will be accompanied to the ANC clinic by their husband/partner. However, the clinic gives priority to accompanied pregnant women. 90% of the pregnant HIV positive women in the district receive their ARVs at this hospital. Since the beginning of 2016, women can also decide to receive their ARVs from the local health facilities and about 10% of the HIV+ pregnant women currently benefit of this opportunity. This system supposedly works well. There is conflicting message on whether babies born to HIV positive women should be receive a BCG vaccine. The practice is that if the baby looks healthy, the vaccine can be administered but should be postponed if the baby is not healthy or has low birth weight.

Models of Hope: This clinic has a committed Model of Hope who provides counselling and treatment literacy on clinic days (Tuesday and Thursday). The MoH also takes part on radio talks advising people to attend clinic and take their medicines routinely as well as on stigma and discrimination. She does not get any allowance or T&T at all so that her work is now confined to the clinic, providing counselling, marriage/sex/condom use/nutrition/diet and treatment literacy to new clients. Her biggest plea was that the program provides some incentives and T&T to enable her trace defaulters. The MoH is unable to effectively trace clients lost to follow up, including a number of HIV+ young children whose mother passed on a couple of months ago and clients from Togo (this clinic is frequented by clients from both countries Aflao being a border town). The stand-alone ART clinic, she is allegedly creating stigma as community members in the clinic know what the "special clinic" deals with. When we inquired what the nurses do when an MSM presents with anal warts, they reported that the physician assistant administers treatment.

Diagnosis: While HTS is usually done at the counselling unit, the lab may assist if the counselling unit is too busy. Regular maintenance of chemistry and hematology analyzer machines is ensured. The reagents are fully paid by the facility, the last NACP requisition was received so long time ago that the lab staff could not recall. Problems arise particularly when NHIS reimbursements are significantly delayed. In this case, patients either have to wait until the hospital is able to procure additional reagents or get the tests done at a different, possibly private facility. Patients are reportedly never requested to provide any co-payments for lab tests that should be free of charge for NHIS insured individuals. The only exception is for full blood count, when a 15 GHS co-payment is requested in times of

financial constraints. However, if people seem to be too poor to pay, they are exempted to ensure that everyone has access to needed lab tests.

Viral load testing: Systematic viral load testing started in late September. Until the time of the visit, two batches of samples had been sent to the regional lab. The transport is not without challenges as the samples need to be temperature controlled. A meeting with the medical sub resulted in making a GHS vehicle available for sample transport once a week. The lab informed the team that EDTA tubes are in short supply.

Stock situation: The ART clinic reported no ARV stock out this year. At the time of the visit, ARVs were available in sufficient quantities as the hospital had received new commodities the previous day. Oraquick is reportedly always short and there is shortage of condoms.

Consumption data: Consumption data are reported for ARVs, TB medication, and HIV test kits. The hospital also updates the EWS data on a weekly basis.

5.2 Civil Society perspective

5.2.1 NAP+

Activities: The executive members are not permanent NAP+ staff and live in Aflao, Kpando, Ho and even Brong Ahafo, which makes planning and implementation of coordinated activities difficult. The office is only opened for meetings and upon request and can hence not serve as permanent point of contact for concerns of PLHIV. Furthermore, the funds are woefully inadequate to carry out activities according to the NAP+ mandate. The NAP+ secretariat complained about lack of transport to carry out outreach activities, especially visits to the support groups across the region. Therefore, NAP+ participates in those activities organized and financed by other organizations, such as SAMC. The site visit team oriented NAP+ that there is enough work today even in their immediate neighborhood and that it is important to establish evidence on the NAP+ impact before asking for larger funds.

Funds: On the paper NAP+ Volta is eligible for 300 GHS petty cash and 500 GHS for the organization of meetings monthly. Also, considering that each month the advance needs to be retired before new funds can be applied for and taking into account the processing time both at WAAF and GAC for the retirement and the application for new funds, it is practically impossible to get hold of the monthly installments. In 2017, NAP+ has hence been able to conduct four meetings only across nine months in spite of timely reporting.

SAMC: NAP+ as a member of the Volta SAMC participates in the respective activities, including monitoring trips. NAP+ is very pleased with the impact of SAMC, citing:

- Capacity building of counselling units at certain ART centers
- Improved drug availability
- Resolution of a stigma and discrimination issue involving a Model of Hope in Aflao
- Stronger position of NAP+

Quality of HIV services: The NAP+ members spoke generally positively about the quality of HIV services in Volta Region. PMTCP is said to be working very well in the region and HIV positive pregnant women are enrolled timely on treatment. The team was pleased to hear that TB testing tends to be done at every call to an ART facility. However, the NAP+ members pointed out simultaneously that GHS staff needs to provide a better counselling to ART clients considering especially that only few of the Models of Hope (15 out of 35 trained) are still active due to the complete lack of T&T and/or allowance. Considering that these MoH have been trained, it is a waste of money abandoning them. Most of them deliver quality services and take off some of the pressure on the ART staff and have the potential to contribute to the NACP target achievement. Identifying a solution to provide them with some allowance is hence highly recommended. Issues of discrimination and stigmatization are still rife in the region, also among health workers. The key informants claimed that many nurses seem to be scared of PLHIV and do not know how to talk to them. One of the NAP+ members is a nurse whose colleagues did not know her status. She believes that her colleagues would not even have believed her as they still have an outdated image of PLHIV on their minds. She also pointed out that some nurses even refuse to work at ART clinics. Unconsented disclosure of status by healthcare personnel still occurs. NAP+ mentioned critically that training opportunities are often not given to those untrained yet highly committed staffs at ART clinics but to the same preferred persons, who are partly not even in contact with ART clients, which also has an impact on the motivation of the others. Daily services are supposedly available in a few ART centers only resulting in 2-5 hours waiting time on a clinic day, which can be particularly difficult for PLHIV with a job who hesitate to inform their superiors about their condition. While it was claimed that drug stock level tend to be too low, NAP+ confirmed that PLHIV receive on average a three months supply. The viral load scale up plan was not known to the NAP+ team visited and the CCM team explained to them that each PLHIV on ART is supposed to be tested at least once a year. This has not taken off in Volta Region by the time of the visit as two key informants had visited an ART facility in September but were not asked to do the VL test. Apparently there is not enough information among HIV positive pregnant women about the importance of early infant diagnosis, and women do hence not ask for it when they deliver elsewhere.

False cure claims: There are still false cure claims in Volta Region partly even transmitted through the radio stations. The SAMC visited prayer camps and traditional medicine shrines and observed that some clients died in these facilities. One particular herbal center at Battor (by name: Amenuveve Herbal Computer Clinic, Gbadago Mathew, 0246556461, 0249267993) claimed to have a cure for AIDS by using powered substance as medication. Interestingly, the center applies HIV test kits. This and the details/contacts were reported to the Volta Regional Health Directorate, GAC and the AIDS Focal Person in the region. NAP+ would like to engage radio in order to counterclaim some of these falsehoods but lacks the funds. Radio engagement in Volta region for about six emissions is expected to cost 300-400 GHS per emission per station of which about six are needed to cover the entire region.

Other observations: The site visit team noted on various occasions that VR NAP+ executives talked about themselves only, when they should actually be a voice of all PLHIV in Volta region. It also seems that they are not sufficiently liaising with PLHIV across the region, possibly through support groups and Models of Hope, to know their situation and to speak and act on their behalf. There are 26 registered support groups in the region, who supposedly can be mobilized whenever necessary. The site visit team also inquired about their relationship with the National NAP+ Secretariat and learned that the exchange between the National and the Regional Secretariats is limited to an extent that doubts were expressed if the National Secretariat really knew the situation of PLHIV on the ground.

5.2.2 Pro-Link project, SR of ADRA with a focus on FSW

The team visited the Pro-Link office that also houses the DIC, talked to program staff and peer educators and then moved on the meet FSW at one of their hotspots. In the Ho Municipality, Pro-Link addresses FSWs at 10 hotspots. Most of them are roamers, with few seaters only. The roamers' community is estimated at about 2000 FSWs of whom 1600 are reached by Pro-Link. When the team asked the PE about the numbers of FSW at their particular hotspots, most gave numbers between 40-60. The gap between those numbers and the previously stated 1600 FSWs in Ho Municipal is possibly explained by the mobility of the FSW. Prolink reaches the FSW via the peer educators and FSW Queen mothers at the hotspots. The Volta Pro-Link office is rather small with two field officers and project nurse. 10 PEs are engaged who take care of one hotspot each. The activities run are the same as listed in the reports on previous visits to other ADRA implementation sites.

Condoms: According to the project team, Volta region used the have a relatively low condom use rate of about 70%. Therefore, a lot of emphasis of the Pro-Link activities is on condom use. While about 250,000 – 300,000 condoms were distributed in 2015, the number has gone up to 500,000 condoms in 2017 by the time of the visit. FSWs tend to prefer branded condoms but can be successfully convinced by the influential queen mothers to use no logo condoms. While condom use with non paying partners (NPP) is much lower, they are considered as very important gate keepers. They will still want to have unprotected sex with their girls but want to ensure at the same time that they do not run a risk of infection that stems from unprotected intercourse with clients. The FSWs agreed that a few years back, about 60% of the clients would insist on unprotected intercourse while the number has gone down to about 30% recently because of the determination of the FSW. The FSWs reported however, that they cannot always use condoms. It happens frequently that men accept condom use initially, only to beat up the women later in the room until she accepts unprotected sex. Nonetheless, in spite of the still large proportion of clients who prefer unprotected intercourse and to the team's positive surprise, the FSWs claimed unanimously that they would not accept any amount to consent with unprotected sex. On the other hand, PEs reported that unprotected intercourse is at about 100 GHS while protected sex is about 50 GHS. The same applied to oral sex that according to the FSWs in the group is only done with a condom. The team found it interesting that the FSW generally

preferred female condoms because it gives them control over their lives. They insert the female condom before meeting a client, which eliminates the tough condom negotiation. The demand for female condoms is in contrast to the fact that the project distributed 225 female condoms between January and September (25 per month on average) only. The project should review the need of female condoms and make them available in sufficient quantities, especially considering the large stocks still available at Volta Region (about 5000 pieces with an average monthly consumption of 120). The FSW interrogated found the condom quality acceptable but they complained about the one-size fits all approach. According the FSWs some penises are too big for the no logo condoms available resulting in getting burst during usage.

HTS: During outreach activities, only First Response is used. Women who test positive are referred to the DIC for a confirmation test. Since the beginning of the NFM, close to 1,800 FSW have been tested. However, it was estimated that 25-35% of the FSW refuse to be tested. In 2016, 15 tested positive and in 2017 until October, 16 FSW tested positive. One woman has died. The project team believes that almost all are on treatment but it is difficult to get evidence since FSW tend to leave the community right after a positive HIV test for an unknown destination. In most instances they cannot be traced since once they leave, they tend to change name and phone number.

DIC: The DIC that equally serves as CHPS compound for the community in which it is located is open five days a week. This enables the DIC to offer a wide range of services that are also available every day. The DIC is manned by a qualified nurse seconded by GHS. This collaboration concept works out well, probably also since FSWs in Ho claim that they are not recognizable as such when they attend the services. Sometimes, if FSWs desire more confidentiality, the nurse is also available during off hours. Average attendance to the DIC is about 5 clients daily. The team found the DIC neatly kept and well equipped. The FSW who the team met at the hotspot confirmed that they attend the DIC for general malaise, family planning as well as HIV services. The team was excited of this example of sustainability even in the context of program discontinuation. When the team asked the FSWs about any suggestions to improve the DIC, they replied that it is perfect.

Stigma: FSWs testified that stigmatization of FSWs by healthcare personnel in Ho Municipality has decreased over the past years. On the other, the FSWs claimed that they do not know any FSW tested positive. Consequently, it is currently not possible to use an HIV+ FSW as a role model / counsellor for others.

Peer education: The PEs work two to three hours during three days of the week. Each day they state to reach about two to three people for around 45 minutes. The FSW group mentioned that they meet as a larger group for the weekly 30-60 min sensitization sessions. Prolink occasionally organizes in capacity building program for the PE to up their skills. PEs are always at risk of being arrested but are in contact with a police friend who helps to release them timely. They talk mainly about condom use, often coupled with condom

demonstrations and medical attention opportunities at the DIC. ProLink has supplied them with teaching aids and instructional materials. The FSWs are very comfortable with the services of the PE of Prolink especially the condom distribution and DIC services. They also expressed content about the sex health education. When the FSWs were asked about the success of the program, they primarily listed that they learned about the importance of consistent condom use that they previously they did not know much about. They stated that the frequency of STIs has reduced considerably. Furthermore, the FSWs said that they always enjoy listening to the PEs who do not only talk about HIV but also about other health topics.

FSW suggestions: The FSW asked for more female condoms to be supplied. They also suggested exchange programs and games to be organized for them and other FSW groups in other locations.

5.2.3 CEPEHRG, SSR under GAC

CEPEHRG started the program for MSM in Volta Region in 2009. Initially they were supported by the Global Fund under ADRA, now under GAC. Other funding sources included FHI360, Heartiland Alliance and the GF supported ALCO project. The CEPEHRG project is implemented in 10 out of the 25 districts in Volta Region. The GF supports activities in four districts, namely Ho, Denu, Hohoe and Juapong and target in total around 400 MSM. The other sites are located in Kpando, Peki, Afao, Keta, Sogakope – Adidome and Jasikan. It is estimated that Volta Region has in total about 1000 MSM. Most of the MSM cannot easily be recognized as such as they try to blend in; the problem of stigma and discrimination seems hence at a lower level than elsewhere. The collaboration with other players in the regions is described as very positive and supportive. The regional hospital helps them with a nurse and joins them for outreach programs and the TSU helps out with fliers and condoms until the WAPCAS stock arrives.

Activities: CEPEHRG collaborates with four peer educators to reach out to their target groups with BCC, information on STIs including HIV, self-esteem, human rights, use of condoms and lubricant, partner reduction, and TB. Condoms and lubricant are sold to the target group. However, condoms are always in short supply. CEPEHRG considers lubricant as a must since anal intercourse with a condom without additional lubrication is supposedly painful. HTS is organized and MSM tend to test without hesitation according to the Volta CEPEHRG group. Test kits have been available in sufficient quantities. As a new activity, CEPEHRG follows up on those people tested positive to enroll them on treatment. Additionally, CEPEHRG organizes sensitization programs for Ghana Police, often supported by SUPT Blantari, district assemblies, and immigration services. CEPEHRG pursues an LGBT approach and does not target MSM alone. Moreover, CEPEHRG provides a safe space for MSM to socialize at the center and organizes a number of social activities. Partly the men travel far in order to attend some of the activities.

HTS and STI diagnosis: HTS is available during outreach activities as well as at the DIC. From January to November 2017, 630 MSM were tested of whom 33 reacted positive (5.2%). This is a fairly low prevalence compared to the tentative results of the men's study that is going to be published within the next weeks. 164 STI cases were treated, which confirms the low condom use considering the target group of 400 MSM in the four districts.

DIC: The DIC is located at the project office and has support from ART center at the regional hospital. A qualified nurse provides services each Tuesday and Friday afternoon. On average, the DIC receives on average 20 clients per day, which is significantly higher than the 2-5 clients at FSW DICs the team had visited before. About 20% of clients are diagnosed with gonorrhea, several ask about a solution for their anal warts, which are often an indicator of an HIV infection. The nurse also visits different places in Volta Region to support the CEPEHRG team with medical services.

Project success: When asked for the project success, the following was mentioned:

- More MSM know their status regarding HIV and other STIs
- Condoms and advice is available for an otherwise stigmatized population group
- Free space to socialize, which was mentioned as the preferred space in Volta Region by many of the community members, which allows MSM to express themselves
- Social support for those in need

Meeting with community members: After the meeting with the project team, the CCM team had an opportunity to chat with about 23 community members. When asked whether they consistently uses condoms, only one responded to the affirmative. The men indicated a lack of condoms and their wish to have a condom vending machine for continuous access to condoms. Some spoke about a high level of promiscuity, considering it a game to cheat on the partner. Financial implications of sexual activities are common as already reported in Eastern Region. Condom negotiations do take place, the outcome of which is often determined by financial needs of one partner and willingness to pay on the other side. This casual transactional sex is however not considered as sex work. According to the group, the "real" transactional sex takes place primarily in Accra. Several among the community members confirmed being married or intending to marry and to have a family, while maintaining secrecy around their sexual exploits with men. Providing them additionally with information on PMTCT is recommended. The CCM oversight team was further informed that they know of traditional leaders and fetish priests who are MSM. Some of the challenges presented by the MSM's and CEPRG included: high incidence of gonorrhea and anal warts and lack of T&T to conduct outreach services.

5.2.4 Ho male and female prison

At the time of the visit, the prison had 457 male and 11 female inmates. The commander stated that this prison holds an enviable record as the best kept and hygienic facility in the country, the standard of health in the facility being outstanding in the country. The facility expressed contentment about the effective collaboration with the health authorities in the

municipality and particularly the regional hospital to ensure appropriate health care delivery to the inmates. There are four staff members at the infirmary. The prison currently has seven male HIV+ inmates, three cases are yet be confirmed. There is one inmate with drug sensitive tuberculosis diagnosed about two months ago. All of them are on treatment.

Major health problem: An initial discussion with prison and infirmary officers revealed that there are a lot of health problems, of which the biggest is hepatitis B. Some inmates have even passed on. It is believed that a high proportion of the cases got infected through sweat. The prison is requesting support to inoculate the inmates.

PPAG activities in the facility date back four years ago and are the same as in all the other prisons visited. The team could interact with 23 male and four female PEs. Because of the turnover of inmates, only about 10 men have been PEs for more than 2 years. There seems to be a good system in place to concentrate on new arrivals to enhance their knowledge quickly before they are transferred or released. Language barriers are effectively resolved. Hygiene kits are usually distributed three times per year to every inmate but PEs desired a higher frequency since tooth brushes and blades hardly last this long. PEs confirmed that they have booklets, manuals and pens available. The prison officers store pen drives with films on HIV related topics that are shown occasionally on the only TV in the prison. It was noted that about 10% of the inmates initially refuse testing but can usually convinced through counselling. ART is dispensed at the infirmary to avert revelation of status and possible stigmatization. PE inform their fellows on TB as well using a flipchart. Inmates who cough for a longer period of time are sent to the infirmary.

Sexual HIV transmission in prison: As in all previously visited prisons, all key informants agreed that sexual activities in prisons are rare due to regulations and the respective taboo. There are no male officers in the female prisons to prevent allegations of sexual activities between officers and inmates, particularly if a female inmate gives birth. PEs stated there are few incidents of sexual activity among the inmates and they provide information on all modes of transmission.

Confidentiality and stigmatization: All actors involved have done a great job to ensure confidentiality. No inmate is known to live with HIV. Also only few of the PEs were informed about HIV+ inmates. One stated that he learned about one inmate's status by watching him going to the pharmacy on a daily basis. When asked what is expected to happen if the status became known, most officers and PEs agreed that the HIV+ inmate is likely to be isolated. A few months prior, the PEs have received a stigma and discrimination specific training. When the team probed, they learned that the stigma would primarily originate from newly admitted inmates, not the longer term ones who have been thoroughly educated about HIV. However, fear of stigma is so severe that the officers did not allow the team to talk to HIV+ inmates.

Success of the program: Prison officers informed the team that the biggest impact of the program is the discontinuation of the previously common practice of blade and tooth brush sharing. The regular HTS session have helped to demystify HIV testing, inmates are now eager to know their status. Less than a handful of inmates are not tested. PEs agreed that a lot of misconceptions could be erased, most of all the perception that PLHIV should not even be part of society. The PEs believe that most inmates have understood that there is life after a positive test result. All PEs agreed that this program needs to continue and some expressed their desire to continue with peer education after their release. However, they said that they have still not received their certificate that proves that they have worked as a peer educator for an extended period of time.

6 TUBERCULOSIS

6.1 Regional Health Directorate

The region currently has 10 GeneXpert with four additional to arrive soon. The first diagnosis is usually based on microscopy. Positive tests are further sent for confirmation by GeneXpert, negative samples are only retested on GeneXpert in cases of suspicion. The TB e-tracker has been implemented about a year ago on a pilot basis in a few facilities (Nkwanta, Ho Municipal, Anfoega, Jasikan, Ketu South, Sogakope). The region is waiting for NTP for scaling up to the rest of the districts. The RHD stated that no challenges with TB e-tracker have been reported. Unfortunately, the team did not have enough time to see the e-tracker functionality. Since the team was most interested in challenges related to case detection, the HIV / TB Coordinator explained that case detection in TB has plateaued and even started a downward trend.

Case finding: In order to find the missing cases, chemical sellers and pharmacies have been involved in case finding. The region also introduced "cough police" strategy, where any unusual prolonged cough is reported by community members to the nearest health facility. However, considering the poverty of many people diagnosed with TB, the discontinuation of the enablers package for people with drug sensitive TB may have resulted in higher defaulter rate. Another factor adduced for low detection rate in the region is discontinuation of cash reward for volunteers who shepherd suspects to health facilities for testing.

Contact tracing: The RHD believes that nurses in the various DOTS facilities are aware of the amounts available at their facilities for contact tracing.

6.2 Ho Regional Hospital

Case finding: Intensified case finding is undertaken at the OPD and wards. However, contrary to other district level facilities there is no dedicated task shifting officer. Regular nurses, mostly when they hear patients cough, use the screening tool but there does not seem to be consistent screening of all OPD clients.

Diagnosis: GeneXpert and digital x-ray are both available for TB diagnosis. Every suspected case is now tested on GeneXpert, while microscopy is still used for the follow up. The sample is usually tested immediately with the result available after about two hours. While GeneXpert use on the facility's client has increased by about 50% between the first and third quarter, requests from other district's facilities have tripled. In October and November the number of tests run on GeneXpert was close to 200 monthly indicating a significant increase in capacity utilization. X-ray is mostly used for PLHIV and those who tested negative but are suggestive of TB. For all clients with NHIS, the chest X-ray is free of charge. All TB clients are retested after four months to establish treatment progress. In case of lacking conversion, the respective DHD is requested to link up with the closest facility to residence to refer the patient to the regional hospital for a new treatment regimen.

Use of GeneXpert:

2017	**Q1**	**Q2**	**Q3**
ICF / eligible for testing	103	154	158
ICF / tested	103	154	158
GeneXpert on in-house samples	103	154	158
Tested positive	14	20	13
GeneXpert on referred samples	34	86	168
Total number of GeneXpert tests	**137**	**240**	**326**

Tracing of clients and contacts: In spite of the quick testing using GeneXpert, about 60% of the tested clients do not come back for their results. It is assumed that the clients, who initially came for a different health problem simply forget about picking their result. The nurses then have to trace all clients, either to enroll them on treatment or to have their chest x-ray done. Usually a number of different phone numbers, including those of relatives are requested before the test to facilitate the search for the client.

Sample referral: The GeneXpert is the only one in the district, other facilities hence rely primarily on microscopy and sample transferal. Few health centers in the district can supposedly do TB microscopy. If they refer a sample for testing on GeneXpert, the cold chain needs to be maintained, otherwise the sample has to be tested during the same day.

In most instances the samples arrive at the regional hospital in a good state. Results are communicated to the referring facility via phone call or Whatsapp. Challenges include that some of the samples contain only saliva but no sputum. In this case, the lab calls to request for a new sample. Sample transport can be a problem for some of the facilities.

MDR-TB: There are currently two primary MDR-TB cases. Contact tracing was accomplished, no additional cases were identified. Once a district has a MDR-TB case, the DHD, the facility in charge of DOTS as well as the community receive some orientation on TB and MDR-TB, combined with contract tracing. Two to three nurses are selected for the daily injections and trained accordingly. They receive T&T to see the client at their residence on a daily basis as long as the client is too weak to come to the health facility (usually around 2 months). The T&T has so far been always available. From the third month onward, the MDR-TB patient needs to be seen by the regional hospital on a monthly basis. Since most clients are very poor, they receive an enablers package that contains T&T on the basis of the distance as well as food. During the first two months, the food part of the enablers package is delivered to the client by doctor of the Regional Hospital on this visit.

Commodities: TB commodities are available in sufficient stock, including Capreomycin. Sputum containers are available but inadequate in numbers.

6.3 Ho Male and Female Prison

Four months prior to the CCM visit, all inmates with cough were screened for TB by the infirmary nurse in collaboration with the Municipal Hospital and PPAG. TB screening is done regularly at the Ho prison. Whenever inmates cough for an extended period of time, the Municipal Hospital is called for further diagnosis. The screening and testing is reported to be without any challenges.

6.4 Ziope Health Center

Ziope Health Center was proposed by the RHD as one of the health centers on the way of the team from Ho to Aflao. It is a small health center with a new immaculate lab for basic analyses that also offers TB microscopy. The TB Focal Person was not available at the time of the visit but was called afterwards for the following information. Currently, the sub district does not have any TB clients. One TB client recently finalized her treatment.

Case finding: There are three main ways of identifying clients with TB:

1. Screening of clients with cough at the health center
2. TB Police Volunteers in the communities who report coughing people to the TB Focal Person. The TB Focal Person then uses his motorcycle to screen the client and to get a sputum sample
3. Mass screenings in the communities, including a durbar on World TB Day

If they hear about coughing people in shrines and prayer camps, they try to find the person for screening and treatment. The person who recently finalized her treatment was actually taken away from a prayer camp after the pastor was informed about a disease called tuberculosis.

However, since May 2017, no sputum containers have been available and a directive has been communicated to stop screening until the sputum containers become available. In the meantime, about 30 clients are considered as eligible for further testing but they will have to wait until the sputum containers arrive. The TB Focal Person tried to borrow sputum from other sub districts but to no avail. The Regional TB Coordinator was contacted by the team and confirmed that there has been a shortage of sputum containers since the beginning of this year. The NTP is aware of this problem and has supposedly asked the facilities to procure sputum containers from the open market. Considering the financial constraints caused by the delayed payment of NHIS, this may not be an option for several facilities. The Regional TB Coordinator has promised to follow up on this issue and do his best to provide the Ziope TB Focal Person with some containers to allow at least those eligible for further diagnosis to be tested. According to the TB Focal Persons, they would happily go the extra mile if T&T was available to cover more communities, shrines and prayer camps and if all materials were available.

Diagnosis: The sample can be tested in the attached lab using microscopy. If the sample is tested negative but the suspicion is strong enough, the patient is referred to the regional hospital in Ho. The reagents are usually available, however, slides may be in short supply from time to time. If the sample tests positive, the client is referred to Ziope Health Center for comprehensive counselling and treatment initiation.

Treatment: In Ziope sub district, there has been one TB client on treatment last year and one who finalized treatment in October 2017. The TB Focal Person ensures that all TB clients have all the information they need, including nutrition counselling, adherence counselling etc. He also provides TB clients with about 6kg of fortified flour per month. The TB focal person visits each client once per week and get a better overview on the progress of treatment. Sometimes, he also provides treatment support if other relatives are not available.

6.5 Ketu South District Hospital, Aflao

At the Chest Clinic, there are currently 225 people on TB treatment of whom 18 are children. 43% are female. 71 clients are co-infected. One MDR-TB client is currently on treatment, another person is waiting to be enrolled. The Chest clinic was founded upon initiative of a very committed TB nurse and has now the support of two additional staffs. She is actually retired but was contracted again for her achievements that are known across the entire region as the team witnessed. In other part of Volta Region the team was already informed this TB nurse who will trace contacts as far as Togo and Benin if necessary. The

chest clinic does not have specific clinic days and is open on Monday to Friday from 7:30 to 5pm. Co-infected clients tend to come on ART clinic days. The clinic has a GeneXpert but no digital X-ray. Considering the high TB prevalence in this district, the Chest clinic feels a strong need for a digital X-ray.

Case finding: The TB nurse closely collaborates with CHPS nurses across the district. CHPS nurses are trained on TB and undertake TB screening in the communities. Clients eligible for further diagnosis are referred in person to the district hospital. Additionally, the Chest clinic staff provides TB sensitization at durbars and through radio stations to invite coughing clients for screening and possibly testing. The TB nurse is to congratulate for her commitment as she also actively looks for clients at shrines, prayer camps, prisons, and churches. Chemical sellers were trained and also refer coughing clients to the hospital. So far the numbers are relatively small, the Chest clinic cites at least one referral per month, in June five clients were sent, but the process has been launched and can be enhanced over time. Additionally, there is intensified case finding at the OPD from Monday to Friday between 7am and 5pm. The task shifting officer observes the clients and approaches those who he witnesses coughing. Those eligible for further diagnosis are walked to the lab. At the ART clinic, testing of HIV patients for TB is reported not done routinely.

Diagnosis: Below data show that almost everyone eligible for further diagnosis is tested. The first choice of diagnosis is microscopy, positive samples are retested on GeneXpert for drug resistance. If the clients are tested early enough, they receive their test result during the same day. In an estimated 40% of the cases, this is not possible and clients are asked to return the next day for their result. According to the task shifting officer, most of the clients do indeed return. The physician seen is informed about the TB test and helps to convince the client to return for the result. The collaboration with other units ensures preferential treatment for suspected cases to enhance their willingness to comply with the additional and unexpected TB procedures. Ketu South hospital is very successful in enrolling 100% of the clients tested positive into treatment. About 90% of the persons screened as well as the majority of TB cases (considering the data available at least 75%) were identified at OPD.

Number of people screened at OPD and various departments and wards:

Quarter	Registrants	Screened	Presumed	Tested	Diagnosed	Treatment
Q1	15450	1391	424	424	91	91
Q2	18656	639	256	256	57	57
Q3	17732	430	250	248	54	54

Referrals: Whenever a community health nurse refers a client for further diagnosis, s/he informs the chest clinic and obtains feedback if the person has come. If the person does not come, efforts will be put in place to trace the person. If TB clients among the prison inmates are released before their treatment is finalized are referred to the hospital, which usually works out well. No samples have been received from NGOs but there are no contracted

NGOs in Ketu South (only one in Ketu North) but other facilities do send samples for GeneXpert testing.

Diagnosis: Every sample is tested using GeneXpert. The team counted the following tests on GeneXpert in 2017 according to the lab register:

January: 12
Feb-June: renovation
June: 18
July: 44
August: 46
September: 57
Until 19th Oct: 43

For every positive test result, contact tracing is initiated. Follow up tests several weeks after the start of treatment are done using microscopy. There is a great border-crossing collaboration with a hospital in Lome. If the GeneXpert cannot be used in either hospital, the other hospital will help out. All culture samples are sent to Accra, however, the lab would be glad to do TB culture to avoid challenges related to transportation.

Contact tracing: Contact tracing is always done going to the client's household since clients are not likely bring their household members to the Chest clinic. The hospital administration is known to support all the activities of the chest clinic including case finding and contact tracing by making a vehicle and fuel available. In times of no funds, the very committed staff complements using their private funds.

Availability of commodities: Normally, medication and reagents are available, however, there was a shortage of pediatric medicine at the time of the visit. Furthermore, the requisition of TB slides and sputum containers is usually significantly cut. While at the time of the visit the stock levels were fine, shortages have occurred frequently in the past. It is proposed to base the allocation on real case load.

e-tracker: The e-tracker is installed at OPD and supposedly functional. Due to time constraints, the team had not a chance to get a demonstration.

Treatment adherence: Except for those who pass away, all clients finalize their treatment (estimated at 90%). This is supposedly due to the outstanding commitment the TB staff. The defaulter rate is reported at about 2%, all defaulting clients are followed up, partly even across borders and in most instances found and reoriented to treatment. According to the TB nurse, one main reason for defaulting is traditional and religious beliefs, which is why it is important to involve pastors and traditional healers in the TB response.

MDR-TB: The Chest clinic staff is yet to receive information on training on short term MDR-TB treatment scheduled for October according to NTP.

Stigma and discrimination: Even within the Ketu South Hospital, nurses stigmatize against the chest clinic personnel, usually for lack of TB knowledge. Finding staff for the chest clinic is not easy. However, according to the chest clinic staff, the level of stigma against TB patients has reduced over time. Despite the fact that other nurses are still afraid of TB clients, they no longer stigmatize them. The Chest clinic staff testifies that 80% of their clients already have some knowledge about TB.

Collaboration with NGOs: The Chest clinic staff was not aware of any NGOs working on TB in Volta Region. While there is no NGO particularly in Ketu South district, it may be recommendable to inform the bigger DOTS centers of the active NGOs to facilitate case tracing across district boundaries.

Biggest challenges:

- Lack of digital X-ray
- Lack of means for transport for many TB clients
- Lack of funds for community sensitization on TB
- Loss to follow up in spite of all efforts to trace them
- Task shifting officer requests N95 masks

6.6 MDR-TB treatment – the patient perspective

The team talked to two recently cured patients with MDR-TB. Robert (not real name) started TB treatment in Volta Region but did most of his MDR-TB treatment in Accra, while Albert (not real name) accomplished his entire treatment in Volta Region. Both are young men in their twenties who developed TB in their teens. Both of them come from financially deprived households and had limited family support (one being an orphan).

Diagnosis: While Robert went initially through an odyssey of traditional treatments due to the lack of money, both men were diagnosed with TB almost instantly when attending a hospital. Both were quickly enrolled in treatment and completed the usual six month's course, during which their symptoms improved quickly. Albert was called back by the Ketu South Hospital since his final tests did not reveal a cure while Robert returned to the hospital when his cough returned. Both were then quickly diagnosed with MDR-TB.

Injection phase: The eight months of daily injections were tremendously challenging as the state of health initially deteriorates to a state that both men needed significant social support in order to not give up. Both felt incredibly sick and suffered from joint and body pains. TB nurses or other staff involved in psychosocial support need to be very patient people. Rejoice told the team how she is called literally around the clock and insulted by MDR-TB patients who cannot bear the treatment any longer, who wish to die. Also Robert says he is not sure if he could have sustained the treatment without the permanent assistance of the hospital pharmacist. Albert serves now as a Model of Hope for newly diagnosed clients. Around 15 tablets must be taken on a daily basis and cause nausea and other health challenges if not adequately accompanied by food. For people from poor

households this is a significant challenge, especially if the food rations as part of the enablers package need to be shared with the rest of the family.

TB knowledge: Neither man had a much knowledge about TB at the time of the initial diagnosis. Robert in particular pointed out that Ghanaians do generally not believe that TB can be treated. Most people are convinced that TB is ultimately fatal.

Stigma and discrimination: Both men shared information about their disease and treatment only within the immediate family for fear of stigma and discrimination and partly even regretted that when unconsented disclosure happened. Robert believes that particularly in the later phase of the treatment when he had regained his forces and started working, his colleagues would not have shared their food with him if they had known. Even after the successful end of his treatment, he is hesitant to talk about his disease in public. While Albert did not tell anyone in the community, the community suspected him to have AIDS because of his appearance but did not shy him away.

Treatment experiences: Robert explained that TB and MDR-TB treatment is without major challenges in the bigger hospitals. However, the smaller the facility, the more ignorant the nurses are. Particularly in the initial phase, when local nurses from small health centers or CHPS do the injections, they are so scared of TB that they try to give the injection as quickly as possible without considering the patient's pain. They may even insult the patients. On the other hand, the nurses the team met who took care of Albert, complained that they did not even have N95 masks available to protect themselves.

Enablers package: Both men were very grateful for the support provided through the enablers package. In Volta Region, the enablers package contains T&T for the monthly or bimonthly trips to the regional hospital that depends on the distance. Apparently, the T&T does not cover the full transport cost. At each visit of the regional hospital, the men received a standard package consisting of

- 15 sachets of powder milk
- 2.5 kg of rice
- 5 small cans of coffee creamer
- 12 packs of corn flour for porridge
- 15 eggs

Economic consequences: MDR-TB often hits the poorest. The medication is so toxic that clients are usually not able to work during many months. If the patient is then an orphan, in spite of all enabler's support, survival is tremendously difficult. Robert explained that many MDR-TB patients permanently lose their hearing and/or eye sight in the course of the treatment. So even though MDR-TB patients may survive the disease and be cured, they may be disabled and not be able to continue with their previous professions. Luckily both men survived without any major side effects. Albert used to be a driver but he was discouraged to drive any time soon because of his weak lungs that may not be able to cope

with the head wind. Not being able to work for many months leaves MDR-TB patients often without opportunities and has a severe impact on their mental health. Robert is therefore tremendously grateful to the pharmacist who continued to pay his school fees to help him build a professional and financial future for him.

7 MALARIA

7.1 Regional Health Directorate

IPT: The team was particularly interested in IPT3 considering that the country has still not re-reached previous coverage rates. The RHD confirmed that there have not been any commodity shortages since the national stock out in 2015. Initially, only midwives were in charge of IPT, now community health nurses are also engaged (which was previously not possible since NHIS only paid for IPT administered by midwives). Midwives also provide IPT during their outreach services leading to a greater coverage. In 2017, 180 staffs, including midwives, nurses, lab personnel, and pharmacists from low performing facilities were trained in a targeted manner. Currently midwives are only located in hospitals and health facilities but not CHPS compound. Plans are far advanced to post midwives to CHPS compound as permanent staff, which is expected to contribute to the quality of care and IPT3 coverage.

Data challenges: The regional Malaria Coordinator explained that the data on IPT3 are subject to significant error. The number of women receiving IPT3 needs to be counted manually in the ANC register before the total number can be entered into DHIMS. A review found that 10-25% of women who received IPT3 may be overlooked during this manual counting. Also, the old registered did not contain a column for IPT resulting in significant underreporting, which is now resolved with the new ANC registers. Furthermore, the lack of a decent internet connectivity remains a problem for DHIMS reporting.

RDTs and ACTs for prisons: There seems to be a very good collaboration between the region's health authorities and the prison infirmaries. The team understood that NHIS cannot accredit prison infirmaries with the result that they cannot get reimbursed for medication prescribed to inmates. However, the region has found a way to provide the prisons with a regular allocation of various commodities through the municipal office.

7.2 Ho Regional Hospital

ANC: Every ANC registrant is tested for malaria. After the first trimester, the women receive IPT. It was pointed out that the low IPT3 coverage may be due to the fact that other facilities start initiation of IPT much later. SPs have been uninterruptedly available since last year. Free bed nets are distributed to all pregnant women. In subsequent ANCs, healthcare staff inquires about the actual use of the bed net.

Commodities: At times, there have been problems to get the needed ACTS. However, it was pointed out that the hospital has no interest in permanently buying from the open market due to prices that are often higher than the NHIS price resulting the hospital to run at a loss. In case of shortage and approaching expiries the hospital rather contacts other facilities, there is a Whatsapp platform for easy communication of all pharmacists in the region. AL is much more accepted than AA; the consumption ratio is about 75:1. The hospital has no issues with expiring ACTs. It was assumed that this problem arises rather at the lower level facilities that may have buffered for shortages that did not occur. These lower level facilities may now have even problems with shortages due to problems related to the delayed payment by NHIA preventing them to procure additional stock. The team had evidence of this problem at the Ziope healthcenter. Dispersible tablet for children are out of stock. SPs are available for another six months, the stock of RDTs is considered as adequate.

Diagnosis: RDTs are usually used at OPD and wards. The lab only undertakes smear tests on selected negative cases.

7.3 Ziope Health center

Ziope Health Center is relatively small and receives about 25 clients daily for all causes. Every ANC registrant is tested for malaria. IPT starts at 16 weeks, which is later than in other facilities. Ever since IPT has been initiated at this facility, SPs have been consistently available. During their first appointment, women also receive a bed net. Once per quarter, the community health nurse checks if the women are using the bed net, which is the case in 90% of the women. When the team inquired with the healthcare staff how many of them sleep under a bed net, it turned out to be two out of seven. The reason given is that the wealthier people do not feel to be at risk due to better housing conditions. Due to NHIS payment delays, the facility has not been supplied with a number of medications, including ACTs. The team informed the Regional Malaria Coordinator instantly and received a confirmation that the problem was addressed.

7.4 Ketu South Hospital, Aflao

Diagnosis: Contrary to other facilities that initially test all pregnant women for malaria, the ANC of Ketu South Hospital only tests those with symptoms. SP is started at 16 weeks. All blood samples are always tested using microscopy, while RDTs are normally used for emergency cases only. While this is usually without problems, more tablets are needed to prepare the buffer.

Stock situation and management: At the time of the visit, the hospital had sufficient stock of ACTs as they received their requisition only the previous day. All of the ACTs are usually obtained from the RMS. Only in times of shortages at the RMS, the hospital will have to procure on the open market.

The SP shortage experienced in the past was resolved by resorting to procurement from the open market and asking pregnant women to co-pay a small amount (less than 5 GHC).

7.5 Ho male and female prison

Because of the effective collaboration with the regional hospital and the health authorities, the prison has continuously enough stock of RDTs. In cases of positive test results, the inmates are referred for treatment to the Municipal Hospital. When the team asked the prison infirmary staff how many inmates have had malaria this year, they replied that almost every inmate was concerned.

8 OTHER OBSERVATIONS AND CHALLENGES

Lack of women in leadership positions at RHDs: All the nine key respondents at the Volta RHD were men. This picture has been very similar at other RHDs visited during previous site visits.

Lack of vehicles: Another complaint cutting across all RHDs visited since 2015 relates to the inadequate number and state of maintenance of vehicles at the level of the Regional and District Health Directorates that prevents them to carry out monitoring activities as scheduled.

Lack of adequate resources: Because of the lack of adequate resources, compromises need to be made, e.g. regarding the length and frequency of district and regional monitoring. The RHD further pointed out challenges related to delayed disbursements of funds, particularly in this context. While there is an interest in integrated monitoring activities, the funds tend to arrive at different points in time that prevents the desired integrated approach. When the site visit team informed the RHD about the new implementation arrangements, their immediate concern was that the often delayed disbursements could be subject to further delays. Similar delays are feared for the communication of decisions made at the central level.

Lack of information about strategic decisions: The RHD key informants confirmed that they have not received any information about the planned strategies concerning the three diseases under the NFMII.

Data collection: Internet connectivity in the region is very poor thereby hampering data capture and transmission especially from the underserved and marginalized districts and communities.

Collaboration with NGOs: The RHD confirmed being aware of NGOs recruited by NMCP to link up pregnant women to ANC and IPT. The RHD seemed very pleased about the NGOs' results in the hinterland where the pregnant women are difficult to reach. They suggest to reach additionally out to NGOs to follow up to which extent people actually use their bednets and to educate them about malaria. NGOs could also be employed to help in the communities to hang the nets. The RHD did not have much knowledge about NGOs working

in HIV since those are rather managed by GAC. There was no knowledge about NGOs working in TB; the team shared their contact details.

9 COMMODITY SECURITY

9.1 Regional Medical Stores

LMD: Scheduled Delivery or now called Last Mile Distribution (LMD) started in July 2015. Hospitals and larger health centers are currently served directly while the entire supplies for CHPS and smaller health centers are dropped at the respective District Health Directorate. There are now efforts in place to serve all health centers directly. Consignments for each facility served by the districts are packed and sealed in a separate labelled carton box to avoid repacking. CHPS will have to pick them from the DHD unless the DHD can deliver. Some hospitals, including the Ketu South hospital still pick their commodities themselves the same day when they hand in their manually filled requisition.

Requisition: TB drugs, ARVs, HIV RDTs and ACTs will be delivered according to requisition, while malaria RDTs and SPs are allocated. Currently, requisition from facilities and districts (for CHPS) is by hard copy and personally submitted by the officer in charge of the facility store once the requisition is authenticated. Completing the requisition seems very cumbersome since several data, incl. previous consumption, need to be filled manually for every single commodity ordered and there may be hundreds of commodities to order. RMS staff noted that the data in the requisition sheet may not be reliable. Some pharmacists may just write in any estimated numbers because of the work load, others are convinced that their requisition is automatically reduced and hence produce inflated orders. It may be worthwhile considering equal allocations of less value intensive products with biannual reviews to reduce the workload. Additionally, the RMS has started a pilot at hospitals with a good internet connection and the respective IT equipment to fill and send the requisition electronically. However, considering the approvals needed, this option is not without challenges and will probably have to be improved over time.

Consumption data: ARV consumption data are collected from 22 facilities. The regional hospital as well as Sacre Heart hospital also provide ARVs to PMTCT facilities. Those PMTCT facilities are hence not served directly from the RMS and consumption data will appear under the respective hospitals. 37 DOTS centers are currently reporting TB consumption data, which is the majority. The major issue is getting consumption data from smaller facilities. Part of the reason is the lack of qualified personnel, so nurses will take care of the reports, also plays staff attrition a larger role. Currently, the RMS does not collect consumption data for lab reagents but indicated that the biomedical scientists may have the data available. About 16 out of 22 ART facilities also report RDT consumption but some report irregularly. The problem may have to do with frustrations of the pharmacists related to getting the data from the lab staff.

Expiries: There seems to be a general problem that GF commodities with a short shelf life are delivered and some instances pushed to the RMS and facilities respectively. Sometimes commodities that are requested are not supplied but unrequested commodities are pushed on the RMS creating artificial shortages that shall be "rectified" though the pushed commodities, which changes the consumption pattern. As an example, the recently delivered malaria RDTs have expiry dates between March and May 2018 and 24 AL will expire in February 2018. While it is usually requested that commodities have a remaining shelf life of minimum 18 months, the impression is created that GF commodities are accepted with much shorter shelf lives. The RMS requests that the remaining shelf life is made known to them before orders are placed to allow them to better manage their stock. Expiries also occur when one component of a combination therapy is available in abundance while the other line is in short supply. A better coordination is hence desirable.

Shortages: TB Cat I and II are entirely out of stock.

Redistribution: A Whatsapp platform exists for an exchange with all RMS in the country and is used to deal with shortages and approaching expiries. However, it is perceived that it is primarily the programs who are in charge of redistribution. The stock reports provide a better overview on the commodity situation but the RMS staff bemoans the lack of adequate and consistent response to issues identifiable in the stock reports.

Other challenges: Some of the challenges the RMS deals with is the lack of a functional appraisal system in the public sector. The existing appraisal system does supposedly not acknowledge performance but is rather based on personal factors. The worst sanction available is a punishment to a small place but it seems that this risk is not perceived as severe enough to result in greater efforts. The lack of an effective appraisal systems therefore also affects the commodity situation in some of the facilities.

9.2 Ziope Health Center

Significant challenges related to NHIS payment delays: While the team has heard complaints from several healthcare facilities about the impact of the outstanding NHIS payments, no case has been as severe as the Ziope Health Center. Ziope Health Center as one of the smaller ones receives its commodities through the district, not LMD. They have entirely run out of stock on antibiotics, analgetics, anthelmintics, hemawhat and recently also ACTs. Patients in need receive a prescription and have to buy the commodities that otherwise may be free of charge. Orders were placed but not delivered due to accumulated debt because of outstanding NHIS reimbursements. The Regional Health Directorate was informed instantly about this problem and ensured that the commodity situation was improved.

9.3 Ketu South Hospital, Aflao

The hospital aims at keeping a three MoS stock level. The hospital still personally hands in the manually filled requisitions to the RMS and leaves with its commodities during the same day. The requisition if said to be frequently cut because of regional shortages.

The pharmacist confirmed the active use of the WhatsApp platform created for pharmacists in the region. He exchanges whenever necessary with his colleagues in other facilities and districts to obtain additional quantities in times of shortages and to push out about-to-expire drugs. The pharmacist was proud to mention that no stock expired in 2017 at Ketu South Hospital.

ANNEX – KEY INFORMANTS

A) NAP+ Sokode / Ho – 16th October 2017

Name	Job Title	Contact
William Marrah	Treasure	020-2419664
Soglo Henry Yao	PLHIV	024-1034602
Patricia Soudi	PLHIV	054-2433843
Paul Alossode	Chairman	054-2193404
Yvonne Nyadroh	PLHIV	027-0033786

b) Volta Regional Health Directorate Ho – 16th October 2017

Name*	Job Title	Contact
Dr. Anthony Ashinyo	HIV/TB Coordinator	024-4255145
Livingstone Asem	RHIO	024-4148092
Roland Glover	Reg. Malaria Focal Person	024-4854220
Michael Annor	Reg. Supply Manager	024-4278447
Augustine A. Owusu	Re. Accountant	024-3259347
Anthony Pani	Reg. Disease Control Officer	024-9136688
Richard Tsipotod	Reg. Internal Auditor	024-4514875
Ofori Yeboah	DDPH	020-8123202
Divine Azameti	DDPS	020-8128770

* The Regional Director could not participate in the meeting because this was his first day of reporting as a new director for the region.

c) Pro-Link Ho (under ADRA) – 16th October 2017

Name	Job Title	Contact
Benjamin Agbenyo	Field Staff	050-7750838
Agede Lawrencia	Field Staff	024-4126105
Rita Seyram Dey	Project Nurse	024-9918770
Nana Adjoa Nettey	Project Coordinator GF	024-4080320
Regina Asilevi	PE	024-0174227
Agyare Cecilia	PE	054-3949508
Dansu Faustine Edem	PE	054-3478378
Ivy Klutse	PE	024-5245025
Asempah Magdaline	PE	055-6497849
Anani Mathilda	PE	024-2303236
Ramatu Sulemana	PE	024-4570649
About 15 FSW		

d) Regional Medical Stores Ho – 17th October 2017

Name	Job Title	Contact
Michael N. Annor	RMS Manager	024-4278447
Alphonse Daouda	Prin. Storekeeper	024-3053123
Vincent Koso Sekey	Supply Officer	024-6492831
Emmanuel Adzah	Sen. Storekeeper	024-5649777
Justice Dery Koku-Anu	Regional Logistics Officer, GF Supply Chain	020-8294071

e) Ho Regional Hospital (ANC, DOTS, pharmacy, lab) – 17th October 2017

Name	Job Title	Contact
Dr. Emmanuel S. Kasu	Head Public Health Dept	024-4087676
Lucy Bonuedie	DDNS	024-3272906
Lydia Akortia	PND	024-5699251
Samuel E. Hodogbe	Principal Pharmacist	024-3285287
Charles Yao Agede	Prin. Biomedical Scientist	024-4721513
Buti Benedicta Abena	Community Health Nurse, TB Coordinator	020-8910580
Akpene Awittor	HIV Data Manager	024-6407174
Isaac Folitse	Pharmacist (HIV)	024-8906259
Dr. John Tampuori	Medical Director	024-5444143

f) CEPEHRG Ho – 17th October 2017

Name	Job Title	Contact
Adjei Lawrence Shone Edem	Field Officer Volta	050-4800897
Obed Segbe	DIC Staff / PE Volta	054-4538116
Gbesemde, Derrick	PE Volta	026-5421744
Selorm Nartey	PE Aflao	024-2352509
Rexford Obeng Abong	Nurse	020-8631598
About 23 community members		

g) Male and female prison Ho – 18th October 2017

Name	Job Title	Contact
Vida E. Owusu	Sgt.	024-2048610
Adisu Senyo	Sgt.	024-8481655
Mavis Harrison	Epl	024-1130436
Cecloo Divine	Supt.	024-4025736
Wilson Sallah	C / Supt.	024-3248642
Wilson Gagakuma	DSP	020-8849572

Name	Job Title	Contact
Beatrice N.K. Mensah	ASP	020-8849572
Patience Amartey		020-4080513
Victor Agbelengor	Deputy Director of Prisons	024-4626489
Kenneth Atsu Goka	PPAG Senior Project Officer	024-2136788
19 male and 4 female PEs		

h) Health center Ziope – 18th October 2017

Name	Job Title	Contact
Adzernu Collons	Enrolled Nurse	024-8287014
Freda Agyibea Danso	Enrolled Nurse	024-0844010
Priscilla Kudjo	PCHN	024-2546378
Sasia Kugblenu	Midwife	024-3961180
Victoria Amevinga	Enrolled Nurse	024-7184225
Salomey Kofigah	Midwife	024-8866241
Gladys Moukli	Midwife	024-9991928
Newton Fiator (via telephone)	TB Focal Person Ziope Sub District	054-1800050

i) District Hospital Ketu South, Aflao (DOTS, ANC, lab, pharmacy) – 19th October 2017

Name	Job Title	Contact
Damalie John Kwabla	Data Officer ART	024-3664180
Patrick Pani	Data Officer ART	024-3305149
Leticia Narkie Narzey	Nurse ART	024-2568596
Adamuwa	Physician	024-3877387
Gloria Sowah	NAP+, Model of Hope	024-5675048
Elizabeth Borbordzi	Midwife	024-3222878
Dorothy Nayo	Midwife	024-2931549
Esther Asiamah	Community Health Nurse	024-2589955
Degley, Joseph K.	DDHS	024-4975062
Farsuk Idrisu	Snr Health Serv. Admin	054-1277113
Rejoice Ndewu	TB Coordinator KSMH Aflao	024-4441046
Amedeka Raymond	Inst. Coordinator Sen./DOTS	024-3852456
Jacob Ehomah	Enrolled Nurse / DOTS	024-3680424
Jonathan Bugnam	Snr. Pharmacist	024-3960754
Atisu Moses	Task Shifting Officer	024-7827033

j) Cured MDR-TB patient – 19th October 2017

Name	Contact
R. A. (29th Sep, Accra)	confidential
A. S.	confidential