1. INTRODUCTION

The Malaria Oversight Committee carried out a five day field visit to the Ashanti Region from 19th to 23rd September 2016. The objectives of the mission were:

a) Monitor Global Fund supported projects with a focus on malaria to develop a better understanding of grant implementation on the ground
b) Witness how indoor residual spraying (IRS) is prepared and carried out
c) Get insight in antenatal care services, particularly in the context of malaria in pregnancy and PMTCT
d) Review data capturing instruments
e) Understand the dynamics of stock keeping and redistribution at the level of the RMS
f) Assess the impact of the pharmacists' strike on health service delivery

The week contained a public holiday during which the team visited the Adansi North District Health Directorate / Fomena District Hospital and the Bekwai District Hospital. However, due to the holiday, activities at these two facilities were reduced and not all of the departments were functional.

2. PARTICIPANTS

- Samuel Dodoo (Stop TB Partnership)
- Jonathan Tetteh-Kwao Teye (Dream Weaver Organization)
- Laud Baddoo (USAID GHSC-PSM)
- Annekatrin El Oumrany (CCM Secretariat)

3. SITES AND PERSONS VISITED (CTRL + click to access the relevant chapter)

- Ashanti Regional Health Directorate, Kumasi
- AGA Mal in Obuasi
- AGAMal Health Foundation in Obuasi
- Ntonsua (Community close to Obuasi in which IRS was undertaken)
- Obuasi Government Hospital
- Models of Hope of the Obuasi Government Hospital
- Adansi North District Health Directorate in Fomena
- Bekwai District Hospital
- Network for Health and Relief Foundation, Kumasi (Implementing Partner of NMCP and NTP)
- Regional Hospital Kumasi South
- Ashanti Regional Chair of NAP+
- Ashanti Regional Medical Stores

4. SUMMARY OF CHALLENGES IDENTIFIED AND RECOMMENDATIONS

CHALLENGES IDENTIFIED	RECOMMENDATIONS	TO WHOM	CHAPTER (CLICK TO SEE DETAILED INFO)
1. HIV			
Treatment adherence seems to positively correlate with the time of staff available. The visited ANC facilities have much more time available for their clients and enroll close to 100%. Similar for EID, TB screening coverage and correct/complete documentation in client folders.	• Evaluate feasibility and possible impact of additional clinic days and/or longer opening hours of ART clinics on treatment adherence, EID coverage and TB screening consistency (and possibly others) • Develop audiovisual spots to be shown in the waiting area (ANC)	NACP	5.1 5.9 5.9 (diff. chapter) 5.11
Very good PMTCT results but only 85% of all ANC facilities covered. Lack of HIV counselors in the remaining facilities.	• Identify a solution for pregnant women at community level who do not attend ANC • Scale up to 100% PMTCT in ANC facilities	NACP / GHS	5.1
ART distribution for PMTCT only at ART clinics but not at other PMTCT sites contributes to significant loss to follow up	• Consider training community level PMTCT sites and midwives on ART, so they can provide ART at community level • Review and possibly improve HIV counselling skills of ANC personnel who do not provide ART services • Evaluate possibilities to have HIV+ women accompanied to the ART clinic to ensure their registration and quality counselling	NACP	5.8 5.12
Loss to follow up of pregnant women and their babies	• Incorporate HTS into delivery services • Consider revision of EID policy to take EID sample right after birth whenever possible	NACP / GHS	5.1
Only 50% of facilities trained on EID	• Scale up	NACP	5.1

EID results arrive after several months due to availability of one facility only (KATH), expiry of reagents and breakdown of the machine. Risk of stock out of prophylactic commodities if babies have to wait much longer for test results than anticipated.	• Implement GeneXpert for VL and EID asap • Communicate to PMTCT facilities that taking of samples shall be continued even if diagnosis is temporarily not available. • Review if number of prophylaxis commodities will be sufficient even if babies will take them much longer than anticipated due to the delayed EID result	NACP	5.1 5.9 5.11 5.12
Lack of comprehensive pediatric care Loss to follow up particularly at adolescent age	• Analyse scope of the problem	NACP / GHS	5.1
Increasing number of patients lost to follow up due to wellbeing under ART and false cure claims	• Develop campaign on treatment adherence • Intensify adherence counselling at ART clinics (take time!) • Lobby for interdiction of false cure allegations by pastors, spiritualists, traditional healers etc. • Enhance involvement of religious leaders, herbalists etc.	NACP	5.1 5.7 5.9 5.12
Defaulting due to stigma and lack of T&T	• Integrate ART services in other departments as much as possible • In times of ART shortage, prioritize those coming from far	GHS / NACP	5.1 5.9 5.12
Lack of funds for follow up of defaulters	• Ensure availability of functioning phones at ART clinics or provide funds for the use of private phones • Involve community health nurses / officers in follow up of defaulters	GHS / NACP	5.1 5.11
Severely decreasing number of 2nd line patients	• Implement viral load monitoring particularly for those patients in a bad state of health asap • Accelerate enrollment on 2nd line treatment	NACP	5.1
Trainings / refresher courses considered as insufficient	• Provide regular in-service training	NACP / GHS	5.1 5.12

HIV trainings and training on patient rights of other healthcare staff needed to beat stigma at healthcare facilities			
MoH do not seem to have the same updated information on treatment guidelines as staff	• Ensure that MoH get refresher trainings so that there are no conflicting messages to the clients	GAC / NACP	5.9
Inadequate supply of OraQuick test kits Intermittent shortage of pediatric ART (syrups) Shortage of ARTs in some facilities Shortage of Cotrimoxazole Shortage of CD4 reagents Stock out of female condoms	• Improve availability of commodities at RMS • Enable facilities to build up healthy stock levels • Give bigger ART supplies to those who live far away compared to those who live in the neighborhood of the ART clinic	NACP	5.1 5.6 5.9 5.11 5.11 (diff. chapter) 5.12 5.13
Charges for lab exams are beyond financial capacities of many PLHIV and result in significant delays in treatment and defaulting. Partly, PLHIV cannot even access Full Blood Count tests free of charge. Poverty is a barrier to treatment in this context.	• Develop nationwide fee guideline for ART clinics and monitor their application • Consider offering essential lab tests free of charge • Ensure availability of reagents at facilities with ART clinics, so clients will not have to be referred to private facilities	NACP / GHS	5.7 5.9 5.11 5.12
Questionable fees in various hospitals / ART clinics (5 GHS, consultation fees, appointment card fees, defaulter fees)	• Develop nationwide fee guideline for ART clinics and monitor their application	NACP / GHS	5.12
Payment of NHIS premiums through hospital accountants partly significantly delayed	• Follow up with hospital accountants	GAC	5.12
Inadequate compensation of Models of Hope / inadequate T&T	• Review payment scheme of Models of Hope in comparison to their ToR	GAC	5.7
ART clinic staff not always informed about Test & Treat starting about 10 days later	• Improve communication on Test & Test and guide facilities on the best way forward • Review level of implementation of Test & Treat in the various facilities in the four priority regions	NACP / regional HIV coordinator	5.9

Challenges with treatment of prison inmates due to inadequate food and delays because of lack of NHIS insurance / timely payment by relatives	• Enroll all prison inmates on NHIS • Identify solutions for ensuring treatment in prisons	PPAG / NACP / ?	5.11
Patient folder: no field for entering HTS result of spouse (there is only for children)	• Review patient folders	NACP	5.11
Inconsistent TB screening at ART clinics (seems to be associated with average time available for each client)	• Ensure that clients is accorded enough time during consultations	NACP	5.12
2. Tuberculosis			
Low case detection	• Use digital X-ray machines in community outreach activities to identify TB cases • Train OPD healthcare personnel to actively look out for TB • Train chemical sellers and community health nurses to carry out TB screening and referral	NTP	5.1 5.8
Lab results only available once the patient has already left the hospital. Clients will have to be called back into the hospital which has its own challenges	• Ideal if patients could wait for their test result • Consider GeneXpert diagnosis for those who live at a distance	NTP	5.11
Late implementation of GeneXpert (training planned for November)	• Accelerate GeneXpert implementation in the regions as much as possible	NTP	5.1
Increase in death rate attributed to discontinued enablers package	• Discuss enrollment in alternative programs, e.g. LEAP	NTP	5.1
Shortage of drugs for drug susceptible TB, two persons on waiting list	• Ensure consistent availability of drugs • Encourage facilities to keep healthy stock levels at all times	NTP / GHS	5.11 5.13
Low enrolment of co-infected clients on ART	• Review causes and implement counter measures	NTP / NACP	5.1
Inconsistent TB screening at ART clinics	• Ensure that enough time is accorded to ART clients	NACP / NTP	5.12

High level of stigma in communities and healthcare facilities	• Intensify IEC on tuberculosis • Equip NGOs with IEC materials • Provide TB refresher training to healthcare personnel not working at DOTS	NTP	5.8 5.10 5.11
Pastors and fetish priests engage people with tuberculosis in prayer camps or alternative treatment resulting in delayed treatment or defaulting and deteriorating health	• Develop campaign on importance of medical treatment / treatment adherence • Enhance involvement of religious leaders, herbalists etc. • Lobby for interdiction of false cure allegations by pastors, spiritualists, traditional healers etc.	NTP	5.10
Follow up of defaulters / contact tracing requires use of private funds. No outreach possible	• Make means for follow up of defaulters / contact tracing available • Provide a functioning telephone • Involve community health nurses / officers	NTP / GHC	5.11
Private funds used to supply drugs to and collect reports from private DOTS facilities	• Evaluate situation and offer a solution	NTP / GHS	5.11
Training considered as insufficient. Cases likely to be missed even by healthcare providers.	• Provide regular in-service training	NTP	5.1 5.8 5.11
3. Malaria			
Increasing number of malaria cases in spite of stable OPD attendance	• Analyze the contributing factors	RHD/NMCP	5.1 5.8
Insufficient malaria IEC and prevention Children with fever still brought late to the OPD	• Intensify malaria prevention efforts • Provide malaria IEC materials to NGOs • Intensify environmental control of malaria	NMCP	5.1 5.8 5.9 5.10
LLIN usage is below LLIN ownership; high percentage of interviewed healthcare personnel who promote bed nets do not use them themselves	• Intensify malaria prevention efforts	NMCP	5.1 5.8 5.9 5.9 (diff. chapter)
Low IPT coverage due to incomplete ANC coverage and incomplete IPT provision to ANC attendants	• Increase ANC coverage and ensure IPT expertise of ANC providers at all levels	RHD / NMCP	5.1

IPT coverage below ANC coverage	• Review why ANC attendants did not consistently receive IPT, particularly in facilities that had continuous IPT availability, and implement adequate measures	RHD / NMCP	5.1 5.8
Treating without testing, particularly when ACTs are sold over the counter	• Review scope of the problem	NMCP	
Insufficient allocation of RDTs by the malaria focal person even though enough stock is available. Periodic stock out of RDTs at service delivery point levels	• Review adequacy of allocation in times of sufficient stock • Encourage health facilities to order RDTs according to established max/min stock levels, whiles NMCP works to ensure adequacy of supply	RHD	5.6 5.8 5.9 5.13
Esp. in rural areas, a large number of facilities does not have microscopy.	• Prioritize those facilities that do not have microscopy in times of low RDT stock	RHD / RMS	5.8
RDT result always coupled with microscopy in case of a positive test result in some facilities 2-4 drops of buffer liquid used	• Verify if this corresponds with guidelines	NMCP	5.6
RDT often accomplished at lab, not consulting room, resulting in additional effort and waiting time for feverish clients	• Review appropriateness and feasibility of RDT use at the consulting room	NMCP / GHS / RHD	5.9
Issues with drug compliance	• Evaluate severity of the problem and possible impact on drug resistance	NMCP	5.9
Lack of ACTs (stock out of AL adult for several months, expired AA) at both the RMS level and health facilities	• Ensure consistent adequate supply at RMS level • Develop a national guideline on facility / regional redistribution	NMCP / GHS / SSDM	5.11 5.13
Experience from prison visited in Eastern region indicates that prison nurses can currently not provide malaria rapid testing and treatment	• Discuss possibilities of malaria diagnosis and treatment at prison level with prison authorities	RHD / NMCP	5.1
In spite of a decade of IRS, IRS related rumors as well as privacy, theft and smell concerns make some residents hesitant to have their houses sprayed.	• Sustain IEC activities	AGAMal	5.5

Current mine closure raises questions on sustainability of AGAMal	• Keep NMCP, GF and CCM informed about any new developments	AGAMal	5.2
Often too short notice for AGAMal for meetings held in Accra	• Inform AGAMal one week upfront on meetings held in Accra	NMCP / CCM	5.2
4. Commodity security			
Pharmacists' strike and associated closure of the Ashanti RMS affect drug availability at the facilities as early as the third week of strike. Healthcare facilities have not been able to build up healthy stock levels due to previous shortages (esp. ARTs).	• Ensure that facilities have healthy stock levels at all times • Ensure that stock levels at RMS are sufficient for healthcare facilities to build up healthy stock levels	GHS / All MoH PRs	5.8 5.9 5.11 5.13
Limited redistribution of stock between healthcare facilities and between RMS leading to avoidable expiries as well as shortage of commodities. Stock sharing between facilities seems to depend on proactive commitment of facilities. No guidelines on procedures of stock sharing	• Develop national guidelines for commodity redistribution within a region or between the RMS and ensure that they are known by all actors • Encourage regular but efficient redistribution to avoid expiries and stock out	GHS	5.1 5.8 5.11
Healthcare facilities need to hand in their requisition in person to the RMS resulting in additional cost and effort	• Review if personal delivery cannot be replaced by electronic communication	RMS / RHD	5.13
5. NGOs as implementing partners			
Lack of IEC materials to reinforce impact of IEC	• Provide NGOs with IEC materials	NMCP / NTP	5.10 5.10 (diff. chapter)
No feedback on the reports or results	• Provide feedback in writing or during an evaluation workshop	NMCP	5.10
Funds are insufficient for the work expected and too inconsistent in order to keep NGOs sustainable	• Review remuneration in comparison to work expected	NMCP / NTP	5.10 5.10 (diff. chapter)
6. Collaboration with actors			
Insufficient collaboration and mutual information between healthcare facilities, health directorates and NGOs	• Improve communication between NGOs and RHD and/or between DHD and RHD • Inform healthcare facilities about NGOs operating in the district	NMCP / NTP / RHD	5.1 5.9

Insufficient collaboration and mutual information between RHD and PRs	• Improve communication	GAC / AGAMal	5.1
High turnover rate within the Global Fund Country team affects efficiency of collaboration	• Keep GF CTs stable across each grant cycle	Global Fund	5.2
Disbursements to the RHD tend to be effected too late so that there is not enough time for optimum implementation	• Disburse funds as timely as possible	PRs	5.1
7. Data capturing and reporting			
Non and late reporting esp. in private facilities	•	GHS / RHD	5.1
Challenges with internet connectivity make reporting very cumbersome	• Upgrade DHIMS to allow offline data capturing	PPME	5.1

5. ACTIVITIES

5.1 Visit to the Ashanti Regional Health Directorate, Kumasi

The team was welcomed by Dr. Alexis M. Nang-Beifubah (Dir., RHD) in the presence of a large RHD team. Annekatrin El Oumrany provided an overview on the CCM and the objectives of this mission. The CCM team was pleased to note that the Ashanti Regional Health Directorate had well prepared this meeting. Dr. Kwasi Yehoah-Awudzi, Deputy Director of Public Health, held a presentation on the malaria, HIV and TB situation in the region:

The region consists of 30 districts with more than 5 million inhabitants, or 20% of the nation's population. There are currently 644 healthcare facilities of which 55% are part of Ghana Health Service. There are 25 district and 96 other hospitals. Ashanti Region is one of the four high HIV prevalence regions.

For antenatal care (ANC) there is a 90% initial registration rate, which is a significant improvement compared to 2015 (73%). Additional CHPS zones were made operational, midwives have been deployed to CHPS zones, hence more centers have been created for ANC. Some of the midwives in the CHPS zones are conducting ANC outreach services in the zones. The 90% ANC registration rate is hence a great basis for high IPTp and PMTCT coverage.

Malaria

Malaria still tops OPD attendance, is the leading cause of infant death and a major contributing factor to anaemia in pregnancy in Ashanti Region. After a continuous reduction of malaria cases until 2015, the region noted an increase in suspected (+23%) and confirmed (+16%) malaria cases in children under five in the 1st half of 2016. This trend needs to be analysed in more detail since the number of OPD visits and OPD insurance coverage had remained rather stable between 2013 and 2015 (source: 2015 GHS report). The prevalence of severe malaria as well as malaria related deaths have been decreasing though.

The RHD pointed out that last year a mass LLIN distribution campaign took place which had a number of shortcomings due to the short preparation phase. Furthermore, a large number of LLIN got burned so that LLINs were not available in sufficient numbers. Unfortunately, net ownership and net usage do still not match. Enhancing education on net usage remains a priority.

With the exception of 2014 in which a significant drop in IPT coverage occurred, IPT1-3 coverage in absolute numbers was relatively stable between 2012 and 2015, however slightly declining percentage wise taking population growth into account. During these years, IPT2 was given to about 80-85% of those who received IPT1 and around 60% also received IPT3. It was pointed out that some women start ANC rather late so that it is not possible to administer three or more doses of intermittent preventive treatment (IPTp) for malaria. However, respective ANC rates listed in the annual report are higher than IPT coverage, e.g. 2015 only 65% of the ANC registrants received IPT1. IPT3 coverage has been stable at 38-39% during the past two years, which is attributed to the lack of SP particularly in 2016. In order to improve IPTp coverage in remote areas, community health nurses were recently trained.

The RHD expressed regret about the lack of a holistic approach to malaria prevention and emphasized there are currently no other malaria prevention strategies than those supported by the Global Fund.

HIV

According to DHS 2014, Ashanti region has an HIV prevalence of 1.9% (women 2.6%, men 1.1%), sentinel sites indicated an HIV prevalence among pregnant women of 2.7% in 2015. Recently the number of ART clinics were increased from 24 to 52 allowing all 30 districts to offer HIV services. In

the first half year 2016, 20,916 people were tested in health care facilities (excl. ANC) and 18% (3846) received a positive test result. 1983 PLHIV were enrolled into ART during the same period, while 590 were lost to follow up or died.

The number of PMTCT sites increased to cover currently around 85% of all ANC facilities. The RHD is positive to cover the remaining facilities within 2016. 180 service providers from 120 facilities were trained in PMTCT and EID recently. The week before the CCM site visit, a mop up activity was finalized. 97% (PMTCT only) and 82% (ANC) of all ANC registrants were tested for HIV in the first half of 2016. The testing rate has increased significantly over the past years (e.g. 2014: 67%) The lower coverage among all ANC facilities is due to the lack of trained counsellors so that some facilities can currently not offer HTS. 1.4% (=976) of the pregnant women received a positive test result, which is significantly below the 2014 DHS (2.6%) and 2015 sentinel results (2.7%). The RHD attributes this to the incomplete PMTCT coverage and the lack of high quality data while believing that the DHS and sentinel data represent the real situation on the ground. 95% of those pregnant women tested positive were enrolled on treatment in the first half of 2016. Option B+ has been implemented and all districts participated in the respective sensitization meetings.

Regarding the CCM team's question for the low performance in terms of EID in spite of the excellent PMTCT results, the RHD explained only 50% of the facilities have been trained. There is only one machine at KATH to test the samples, there were no reagents for several months and the machine broke down as well. As a consequence, mothers had to wait for the results for several months and healthcare staff partly stopped taking new samples. Also, pregnant women often give birth at a different place than their home community (e.g. in their mother's community) where they do not necessarily inform the staff about their HIV infection. RHD proposes to also incorporate HTS and EID in delivery services, so EID can be undertaken right after birth. While this will certainly have some impact, a lot of mothers will still be missed as the skilled delivery rate in Ashanti region in 2015 was at 52%. Furthermore, another aspect concerns counselling of the pregnant women. Experience shows that once pregnant women understand the implications of a positive test result on their baby, they will do everything to ensure that their baby remains in good health. However, time for a comprehensive counselling may not be available in every ANC facility. The RHD proposes to develop spots that can be played during ANC consultations so that even those pregnant women will be informed who do not attend the sensitization round in the early morning.

Paediatric care remains a great challenge. There are shortages of the syrups and a lack of comprehensive care as very few sites have paediatricians or doctors trained in paediatric HIV. The challenge becomes even bigger when children become adolescents and remain in school and particularly boarding schools until late hours. For the fear of stigma headmasters or teachers are not informed of their status, which prevents the student from accessing HIV services at the ART clinics that usually close around 2pm. In boarding schools where students cannot enjoy any privacy, HIV+ students are forced to hide their medication partly even outside the school, so nobody would be aware of their status. According to the Regional HIV Coordinator, a lot of HIV+ adolescents pass away because of these challenges.

There is a worrying trend in terms of deaths and loss to follow up. The number of deaths has increased by 36%, the number of people lost to follow up has almost nine folded between 2014 and 2016. A major problem in this context is the promotion of cures by religious leaders and herbalists via radio as well as the inconsistent supply with ARTs. Furthermore, the number of patients on second line treatment has reduced from 67 in 2014 to 29 in 2016. The RHD explained that patients on 2nd line are those who have failed on 1st line. In many instances, they are not in a good condition because of the 1st line treatment failure. The decision to put them on second line times may take unduly long, which worsens the situation. While with 90-90-90, the patients' viral load will be consistently monitored, it is proposed to undertake a survey on the mortality of 2nd line patients.

The RHD believes that more must be done to mainstream HIV services across all disciplines. One solution could be comprehensive HIV modules including patient rights to be integrated in pre-service trainings. This would also have an impact of HIV related stigma and discrimination within the health sector. Furthermore, it was suggested to waive the separation between HTS and other services to not expose PLHIV any longer. In terms of loss to follow up, it is believed that clients may in many instances just change the ART clinic, e.g. if they have seen anyone they know in or around the HTS unit, resulting in double registrations. The RHD confirms that the ART clinics to not have funding for investigations of loss to follow up but suggest to increasingly involve community health nurses/officers in the follow up of defaulters.

Tuberculosis

Case finding results in Ashanti Region are still unsatisfactory. In the first half year 2016, 1225 cases among adults and children were identified. This is only a marginal increase of 4% over the same period in 2015. 36% of those cases were new smear negative. Based in the average prevalence of 290/100,000, there may however be close to 16,000 cases in Ashanti Region. The percentage of extra pulmonary cases has remained stable at around 3-4%. The biggest improvement took place among children where 70% more TB cases were identified compared to last year.

The RHD suggested that a large number of cases may be missed in the healthcare facilities themselves. Many providers risk to treat the cough without suspecting tuberculosis. Initially, intensified case finding was undertaken in 14 district hospitals, however, a scale up in planned to cover all 30 districts. In order to improve case identification through contact tracing, the Ashanti RHD places greater emphasis on the increasing involvement of community health nurses and officers (CHNs/CHOs). Additionally, it was suggested to use digital X-ray machines for a mobile outreach activity to detect the cases in their communities. When asked for the implementation of the additional GeneXpert machines, the RHD indicated November as the time for respective trainings.

While the retention in treatment generally does not cause major challenges (lost to follow up rate of 3%), the discontinuation of the enablers' package led to an increase in deaths to 8%. Treatment success has been stable at 88-90% over the past three years.

Improvement of TB linkages to HIV care for co-morbid cases remains one of the priorities. In the first half of 2016, 883 TB clients were tested for HIV (+13%), 194 turned out positive but only 76 (39%) were put on ART. While the latter percentage is an improvement compared to 2015, it is still a significant drop compared to 2014 (56%). The CCM team was informed that part of the problem was due to the distance to the next ART clinic, which should now be lessened because of the significant scale up of ART clinics in Ashanti Region. However, this alone does not seem to explain the large number of co-infected clients not on ART. It may be advisable to look into the quality of counselling by the DOTS centre staff who have all received comprehensive counselling training or investigate this issue with the clients concerned to identify the best way forward.

Furthermore, the RHD pointed out that data discrepancies between DHIMS and hard copies is a major challenge particularly with TB.

Commodity security and impact of the pharmacists' strike (GHOSPA)

Due to the population of the region covering one fifth of the national population as well as its high HIV prevalence, the RHD demands a higher focus in terms of commodity coverage. Commodities provided to the Ashanti RMS are often inadequate in numbers.

The region has not yet implemented last mile distribution, i.e. direct distribution of health commodities from the RMS to health facilities by the RMS. Healthcare facilities receive an appointment for a specific day during which they may pick up their commodities.

The RHD has weekly meetings with the RMS. In case of stock outs or expected expiries, information is shared with the RHD, the concerned PR, as well as with SSDM. The Ashanti RMS currently only has a minor problem of expiry risk; it is rather subject to stock outs in all program categories. The CCM team encouraged the RHD to regularly review the monthly stock status reports and to initiate redistributions in order to minimize the risk of stock outs and expiries. Especially the Northern Region tends to have stocks of more than six months that partly risk expiry. There do not seem to be clear modalities for regional and intraregional redistribution though.

The Ashanti RMS has stopped most activities due to the pharmacists' strike. Emergency orders are supposed to be handled. The RHD does not see any short term challenges for the delivery of healthcare services since the pharmacists usually run the dispensary or pharmacy of the various facilities in collaboration with pharmacy assistants or nurses. The biggest problems exist with the ART clinics since in most of them in A/R, it is the pharmacists who are providing not only the drugs but also the services. The CCM team verified the situation on the ground during the five day site visit. The findings will be listed in the relevant chapters.

Data capturing and reporting

There are a lot of internet related challenges in the context of DHIMS reporting. Non and late reporting on DHIMS remains a challenge particularly at district level particularly among private facilities. Incomplete reporting concerns a few districts only. The lack of stable internet connection makes data capturing a very cumbersome activity in many places. DHIMS data are not always consistent with respective data in the hard copies, particularly in terms of TB. Those facilities newly established that have only temporal registrations cannot report on DHIMS yet, there is hence a certain level of underreporting. Data district validation teams exist but it is pointed out that more validation and more staff is needed to ensure high quality data. The RHD recommended a particular budget line for data capturing.

Collaboration with other stakeholders

Linkages with other stakeholders in the region remain weak. Most contact is established at the district level, e.g. NGOs are supervised by the DHD. While several NGOs were contracted in the region by NMCP and NTP, the RHD has not received any information particularly on the NGOs working on malaria. The RHD also wishes to be better informed about AGAMal's and GAC's activities and achievements. The RHD suggested the need for a reporting focal point at their end to improve the level of information about health interventions outside the GHS.

Administration and AOB

Resources from the Government of Ghana and the Sector Budget Support have been dwindling over the years. In the year 2015, Ashanti region did not receive any funds for Sector Budget Support, and only the RHD and 5 DHD were able to access the GoG budget making continuous operations increasingly difficult. The RHD pointed out that program funds are often disbursed quite late which does not leave enough time for optimum implementation. Furthermore, it was noted that in terms of national planning the various regions are subject to "one approach fits all", without considering their specificity. The Ashanti RHD recommends to encourage regions to develop with a region's specific plan that offer more flexibility to tackle the regionally different challenges. The CCM team also discussed the issue to staff rotation that frequently leaves a facility without the needed capacities. The RHD replied that the rotation system was no longer in place and that trained staff are kept. He however called for continuous training in order to cover new entrants who may have missed earlier training and also ensure that staff are kept up-to-date with new developments.

Debriefing meeting
During the last day of the site visit, the CCM team returned to the RHD for a debriefing meeting. Annekatrin El Oumrany held a presentation on the main findings as outlined further in this report.

Recommendations to the PRs and the RHD that were discussed include the following:

- Lobby for the modification of the EID policy: Blood sampling may start right after birth
- Lobby for rapid implementation of GeneXpert for viral load and EID diagnoses
- Identify a solution for pregnant women at community level who do not attend ANC or PMTCT
- Follow up on illegal charges for PLHIV
- Advocate for campaign on treatment adherence, lobby for interdiction of false cure allegation by pastors, spiritualists, traditional healers etc.
- Intensify follow up of defaulters, involve community health nurses/officers
- Use digital X-ray machines in community outreach activities to identify TB cases
- Intensify malaria prevention efforts
- Discuss possibilities of malaria diagnosis and treatment at prison level with prison authorities
- Closely monitor pharmacists' strike as some facilities have already indicated to face shortages
- Review if personal delivery of facility requisition to the RMS cannot be replaced by electronic communication
- Lobby for national guidelines for interregional redistribution to avoid stock out and expiry
- Challenges with vehicle availability for monitoring of the various programmes.

No.	Key informants	Job title / Designation	Contact
1	Dr. Alexis M. Nang-Beifubah	Regional Director of Health Services	024-4212143
2	Dr. Kwasi Yeboah-Awudzi	Dep. Dir. Public Health	027-7899666
3	Dr. Fred Adomako-Boateng	Dep. Dir., Clinical Care	020-6300763
4	Mr. Yaw Boamah	Dep. Dir., Administration	024-4720009
5	Mad. Rita Amafu	Chief Nursing Officer	
6	Mr. Kofi Sroda	Focal Person for TB	024-4569741
7	Mr. Samuel Woode	Focal Person for Malaria	023-3212140
8	Mr. Afful	Auditor	
9	Mr. Zanu Dassah	Regional HR Officer	
10	Mr. Dennis Bandoh	Data Officer	024-4561741

5.2 Office visit to AGA Mal in Obuasi

The CCM Team was welcomed by AGAMal Programme Director Sylvester Segbaya and his team. Mr. Segbaya informed that Indoor Residual Spraying (IRS) begun in the first week of August 2016 and will be finalized within the week of the CCM visit.

History of AGAMal
The CCM team was provided with an overview on the history of malaria control under AngloGold Ashanti. Before the start of the program, the Obuasi Mine Hospital recorded on average 6,800 malaria cases each month (there may have been a high number of false positive diagnoses due to the low coverage of parasitological tests), of whom more than one third were mine workers. One third of the mine workers were continuously ill, primarily due to malaria. The company spent $55,000 each month on malaria treatment for its staff and their family members. In order to tackle

the situation, the company rolled out a comprehensive malaria control program including IRS in 2006. The target to halve malaria cases in the mines hospital in two years was achieved within 13 months only. Nowadays, the hospital records on average 400 malaria cases per month (down from 6,800). Due to the great success, malaria control has become an essential component of AngloGold Ashanti's operation, not only in Ghana but also in other mining sites such as Mali.

In 2007 AngloGold Ashanti applied to the Global Fund to scale up IRS to other communities in Ghana but did not succeed initially. In 2008 another proposal to the Global Fund was accepted and the malaria control program of AngloGold Ashanti was nominated a PR with the objective to cover 40 districts primarily in Upper East and the Upper West Regions. Implementation was delayed because of a number of factors beyond AGAMal control but by the end of 2015, 25 districts were covered. Due to resource constrains, the number of districts had to be scaled down under the NFM to nine in the Upper West Region and one in Obuasi. Currently AGAMal currently has a temporary community work force of 600 people (sprayers, IEC officers and community volunteers), and a fixed staff of 27 people. AGAMal's contribution to the IRS activities involve:

- Administrative support, including salaries of 8 project staffs, office space, support with vehicles and
- Financial support of currently $500,000 per annum.

Currently, AGAMal is in discussion with a USAID funded project Next Generation IRS that seeks to reduce the price of the insecticide to about ¼, which would enable AGAMal to cover additional districts.

Collaboration with the GF, NMCP and CCM

The AGAMal team is very content with the excellent collaboration with the Global Fund Country team that is described as very responsive and supportive. Disbursements have always been timely enough to ensure continuous implementation. The team however expressed concern about the turnover rate in the Global Fund Country Team that affects the efficiency of the collaboration and proposes 3-4 year terms for Global Fund staff on the same grants. The collaboration with NMCP and CCM is described as efficient. However, the AGAMal team points out that invitations to meetings often come at a too short notice. Since the team is based in Obuasi and travel arrangements need to be made, a notice of about one week would be appreciated.

Selection of insecticides

AGAMal uses different categories of insecticides for IRS in order to prevent insecticide resistance. The resistance survey carried out last year indicated increasing resistance in Obuasi. As a consequence, comprehensive discussions have been held with the Global Fund to identify the best way forward, which delayed the timely start of IRS in Obuasi. It was finally decided to continue with organophosphates while carefully monitoring resistance. In the past, AGAMal sprayed the community twice a year. Due to a new insecticide that provides protection for nine months, AGAMal now sprays once a year. This brings down the cost, however, AGAMal also noted a slight increase in malaria prevalence during the three months before the next IRS season starts. An additional problem is that temporary staffs are employed only half of the time which has an impact on their economic security as well as on the staff turnover.

Distribution of LLINs

In addition to IRS, AGAMal continues to distribute LLINs to the population in Obuasi with the justification that inhabitants can take their bed nets when paying visits or studying outside Obuasi.

As a matter of fact, most malaria cases that are confirmed in Obuasi are brought in from outside. It is rare that an Obuasi resident who stays in Obuasi continuously is diagnosed with malaria. The AGAMal team estimates that bed net use is at around 80-90%. The importance of LLIN use is also one of the topics of the biweekly radio shows in which AGAMal sensitizes on malaria and its various prevention measures. The radio shows also offer the opportunity to phone in and ask questions.

Closure of mining operations

At the time of the site visit, all AngloGold Ashanti mining operations were closed down due to security concerns related to "Galamsay" operators. It is hoped that Government of Ghana and AngloGold Ashanti will reach an agreement after the election in order for the mines to be reopened in 2017. While most of the mine workers have been laid off, the company still supports the malaria control activities in Obuasi with however decreasing financial amounts. This has among others contributed to the decision to enroll sprayers on NHIS while in the past their medical bills were fully covered by the company. The company still reimburses expenditures that are not covered by NHIS. Regarding the CCM team's question if AGAMal could be eventually closed down if the mine operations remain discontinued, AGAMal explained that they have developed a number of different risk scenarios. Should this case occur, AGAMal will be prepared.

Experiences as a private sector PR

When asked about a differences between a private sector company and other types of PRs, AGAMal indicated the impact of the PR activities on the reputation of the mother company. In a business like the mining business that is very closely monitored by the communities it is crucial to ensure correct procedures, so AGAMal is strongly concerned about any risks and controls are very tight. AGAMal has strict policies on corruption which do not allow speeding up tedious processes via a "motivation".

Outlook

The CCM team inquired what should be done to further lower malaria prevalence in the country. The AGAMal team believes that more resources should go into prevention which will automatically reduce the funds necessary for diagnosis and treatment. Only a stronger focus on prevention will bring the country closer to elimination.

No.	Key informants	Job title / Designation	Contact
1	Sylvester Segbaya	Programme Director	054-4342589
2	Eric Obu Buetey	Head of Operations & IEC Officer	020-3298068
3	Godwin Kwame Yamoah	Head of Administration & Human Capital	050-1296696
4	Eric Fosu-Kwabi	Head of Finance	024-4339109

5.3 Visit to the AGAMal Health Foundation in Obuasi

The AGAMal Health Foundation is formally known as AngloGold Ashanti Hospital which has been in existence for over 100 years. The hospital currently has five medical doctors, one visiting specialist, and a gynecologist and attends to a daily average of 400 clients, primarily for non-communicable and respiratory diseases. In addition to the regular health services, incl. ART and TB services, the hospital provides also occupational health services for AngloGold Ashanti as well as for other companies. Most clients nowadays are NHIS insured.

The CCM team was welcomed by the Mad. Janet Osei (Nurses Management Officer), Richard Cromwell (Chief Executive Director), Dr. James Banie (Medical Director), Michael Banoba (Administration & Information Officer), and Peace Bansah (Nurse & HIV Counsellor) who led the team around. The CCM team was highly impressed with the cleanliness and the equipment of the hospital. The hospital staff pointed out proudly that the hospital has become one of the most important reference hospitals in Ashanti region.

Prior to AGAMal operations in 2005 the hospital records 60% of admissions as malaria cases. Nowadays, malaria has become an exception. This became particularly apparent during a visit to the children's ward that used to admit 60 children with malaria per day. The children's ward was almost empty, the ward had less than 10 children on admission. The hospital on the average assists in 120 deliveries in a month.

ART Clinic

On Antiretroviral treatment, AGAMal Health Foundation was part of the private sector institution that started the antiretroviral treatment on the Treatment Acceleration Project (TAP) in 2006 which was sponsored by Bill and Melinda Gate Foundation through the World Bank and was facilitated by the Family Health International now FHI360.

The clinic has registered about 1,600 clients and at the time of the visit has about 550 PLHIV on ART. Recently, the ART clinic personnel was trained on EID. While the clinic never experienced any shortages in ART, test kits and particularly OraQuick are lacking from time to time.

Laboratory

The lab uses RDT as a first test for malaria case detection, which is confirmed by microscopy if the need arises. The lab has a note book with records of all malaria suspected cases tested. The hospital also receives blood samples from outside for testing except for microbiology diagnoses that are sent to Komfo Anokye Teaching Hospital in Kumasi.

The Hospital is connected to Administrated Management Software (HAMS) which links with both lab and the pharmacy. Medical services and the pharmacy are connected online so that the prescriber can send the prescription online to the pharmacy where the drugs are prepared for pick up before the client even arrives there. By next year 2017, the hospital laboratory is expected to offer services 24/7.

No.	Key informant	Job title/designation	contact
1	Dr. James Banie	Medical Director	024-4329818
2	Richard Cromwell	Chief Executive Director	
3	Janet Osei	Nurses Manager	024-43463770
4	Michael Banoba	Administration & information	
5	Peace Bansah	Nurse & HIV Counsellor	

5.4 Visit to the AGAMal Entomology Unit

The AGAMal team accompanied the CCM team to the AGAMal Entomology Unit, which falls under Monitoring and Evaluation (M&E) and Surveillance. The unit looks at quality assurance issues, e.g. by testing the effectiveness of IRS through introducing mosquitoes to the sprayed walls and counting the number of mosquitoes that die within 30 minutes. The unit also analyses the infection rate of mosquitoes using mosquitoes caught by specifically trained community volunteers between 6pm to 6am in order to calculate the number of infective bites. Ethical issues are minimized since those volunteers are trained to catch the mosquitoes before being bitten. Additionally they are enrolled in NHIS. A related task is the review of resistance issues. All survey results are shared with NMCP.

The CCM team was explained the particular features of the malaria transmitting anopheles mosquitoes and could verify them through a look through the microscope. The team also visited the mosquito breeding room that was kept at a steady temperature and humidity. The room in tiled white in order to quickly identify any escaped mosquitoes. The CCM team was surprised about the information that mosquitoes are increasingly breeding in dirty waters in order to adapt to the changing environment.

The CCM team inquired if the entomology unit engages in research on other mosquito transmitted diseases but this is currently not the case.

No.	Key informants	Job title / Designation	Contact
1	Kwame Desewu	Entomologist	050-12911579
2	Bernard Afoakwah	Entomologist Technician	024-6325622
3	Nicholas Ato Egyir	Entomologist Technician	020-32981225

5.5 Participation in the AGAMal community sensitization and IRS at Ntonsua

Ntonsua
The CCM team went to Ntonsua, a suburb of Obuasi which is about 7 Kilometers away to witness AGAMal IRS sensitization and implementation activities in the community. Because of the road conditions, even the 4x4 vehicle could hardly exceed 20 km/h. Since this was a dry day while most of the IRS activities take place during the rainy season, the team got a good idea of some of the challenges reaching some of the communities and of the wear and tear of the vehicles. The community was a rather small and a relatively poor farming one. Several houses were mud houses and many houses, even concrete houses, were not in a good shape. There is no health center in Ntonsua, inhabitants have to commute to the Obuasi healthcare facilities.

Malaria and IRS community sensitization
The AGAMal sensitization team usually offers a 30 min talk on malaria and issues related to the indoor residual spraying using visual aids for the community members before continuing with the actual spraying activity. The AGAMal team has established a very good working relationship with the opinion leaders who always participate in these educational sessions and who engage the community members. In Ntonsua, about 40-45 community members participated actively in the sensitizations.

Even after 10 years of IRS in the community, an astonishing amount of questions and concerns was raised by the inhabitants. The AGAMal team explained why IRS is now undertaken only once a year and provided evidence that that IRS does not promote contamination of the houses with bed bugs but rather kills them (community members thought that the sheets used to cover items that remain in the house during IRS would carry the bed bugs from one house to another). The CCM team was surprised to hear that some refusal is actually due to the protective impact of IRS. “Since there are no mosquitoes anymore, it is not necessary to continue IRS.” was a comment the AGAMal team was repeatedly confronted with. Continuous IEC is consequently more important than one would think – even after ten years of IRS in the same community.

The AGAMal team also touched upon the use of LLINs that they have seen used in farming but the community members insisted that those were old ones that were indeed used as bed nets in the houses before they got replaced. Community members requested more solid nets that would not tear easily but on the other hand “lighter” nets that allow a better ventilation. The CCM team got the impression that community members were very much concerned about malaria, e.g. they asked AGAMal to open a shop in which they themselves can procure items that would protect them against malaria, particularly during the three months when the IRS protection is fading. Community members are furthermore afraid that the rain water filled open pits as a result of galamsey in their neighborhood could bring malaria back to their community.

A major community concern is theft. A few inhabitants complained that items were missing after the IRS team had left. Some of the claims were immediately rejected by other community members saying that too many people entered the complainant’s house to evaluate who actually took the items. AGAMal explained that every sprayer needs to provide a police report before being employed. The teams are briefed on the importance of integrity and incidents hardly ever happen. As a matter of fact, leaving personal items in the open also attracts thieves from the community, which is why AGAMal recommends the community members to surveil their possessions anytime. In several instances, AGAMal staff has caught community members stealing and handed them over to the police. On the other hand, also AGAMal team members became victims of theft in some communities.

Preparations for Indoor Residual Spraying (IRS)

A spray team engages households at least a day before an intended spraying date. Households are educated on the preparatory activities needed to be put in place before spraying is done. Consequently, most households prepared their rooms in advance for IRS and the CCM teams saw matrasses, clothes, kitchen items and other personal belongings in heaps in front of the houses. Where the household members are not available on the day of visit, a family member or neighbor is usually available to assist with the preparations.

Organization of the IRS teams

Each AGAMal team contains 25 team members, including one supervisor and five team leaders. The team leaders provide supervision on the actual IRS and validates and collates the data collected by each spray man, not only on the number of rooms and household members but also on additional mosquito barriers, such as number of doors and windows screened or number of LLINs in possession and used. Each team meets in the end of each day to share their experiences. The supervisors have weekly supervisory meeting, during which any incidents are discussed.

The CCM team found the spray men and their supervisors highly motivated for their work. Those questioned reported their satisfaction to have an impact on the quality of life in the communities. Personnel are adequately trained to effectively carry out spray activities and the related supervision

and community mobilization and monitoring activities. Due to the nature of the spray cycle, spray men and their supervisors are employed for IRS only and are released thereafter.

IRS

Most community members, in spite of some concerns, have fully bought into IRS. They are often the ones who fetch the water to dissolve the insecticide. Some of the household members were not available but had prepared their rooms, and a neighbor was on hand to observe the exercise. Spray men and their teams are adequately supervised to ensure compliance with quality standards. After IRS the spray team get a written confirmation from a household members that the rooms were sprayed and all items were left in place.

Supervisors are available to monitor IRS to ensure spray men adhere to the correct procedures in terms of the IRS itself as well as of safety and efficiency protocols. There were adequate tools to ensure accountability of insecticides after spray team completes a day's work.

Impact of IRS on the Ntonsua community

The community highly appreciates IRS. A number of community members interviewed confirmed they have not had malaria in many years as a result of the spray activities. One woman stated that she has not had malaria in more than five years. She particularly expressed her relief that IRS had a similar impact on her younger daughter who used to be always down with malaria, which saved the family from a lot of efforts and expenditures to visit the hospital.

Other inhabitants expressed content that due to the efficacy of the insecticides, not only mosquitoes but also other insects, such as cockroaches and bed bugs, are killed. The AGAMal team later showed the CCM team highly infested foam matrasses that gave the team an idea about the relief the residents must have felt after the spraying.

AGAMal explained that satisfaction surveys are carried out in some sampled communities. Additionally, the biweekly radio shows with the possibility of phoning in allow further feedback from the residents that enable AGAMal to improve their services.

Safety and environmental issues

All staff receive medical entry and exit exams of which the results are thoroughly documented for possible future reference. Every sprayer goes through a two week training. So far sprayers are only male because of the weight of the equipment. Alone the insecticide solution weighs up to 10kg without the equipment. Close monitoring during the training also ensures that only those fit enough for the job will do the job. Every spray man receives two uniforms and two sets of underwear: one to be used in IRS while the other one can be washed and dried to minimize contact with the insecticide. The CCM team was very much impressed by the high standards applied to the insecticide preparation and actual spraying. One of the examples cited was that door knobs are always wiped off after IRS to prevent accidental eye and mouth contact with the insecticide via contaminated hands. Furthermore, when mixing the insecticide with water, a cloth is used underneath to avoid contamination of the ground.

Every Tuesday, AGAMal holds safety talks for all employees, on Thursdays, environmental talks are offered.

No.	Key informants	Job title / Designation	Contact
1	Eric Obu Buetey	Head of Operations & IEC Officer	020-3298068
2	Bright Akortsu	Supervisor	054-9100631
3	Benedict Botchwey	Supervisor	

5.6 Visit to the Obuasi Government Hospital

The CCM team did unfortunately not have a lot of time for the visit to Obuasi Government Hospital because of the scheduled appointment with the Models of Hope.

ART clinic
In spite of the pharmacists' strike, the ART clinic was supposed to be open. The CCM team was however still not able to talk to clinic personnel because the team arrived past the usual closure time (around 1:30pm). Services were supposedly run smoothly by the VCT nurse who had access to the ARTs as well.

Pharmacy
The pharmacist had embarked on strike and the pharmacy was run by Dispensing Technicians who did not have much information on program commodity stock levels. They did not know about the Early Warning System either that the CCM wanted to inquire about.

Laboratory
At the lab, the team met with the biomedical scientist Abigail Kwakye-Fosu. The lab is very small and Abigail explained that some analyses can only be carried out in the very end of a day to be able to open the windows.

RDTs for malaria are usually allocated and hardly ever sufficient. The hospital usually receives 75 boxes independent from the hospital request and uses 10 boxes per week. Malaria RDTs are always used at the lab, not at the OPD. The first test of choice is RDT but when the hospital runs out of RDT, microscopy is used. Every positive test result via RDT is backed up with microscopy to count the parasites.

While first response test kits are available in adequate numbers, the hospital has regular shortage of OraQuick. The CD4 count machine is functional, however, for several years there have not been any reagents.

OPD clients are routinely screened for TB and referred to the lab for further diagnosis if necessary.

No.	Key informants	Job title / Designation	Contact
1	Osman Bawa	Administrator	
2	Abigail Kwakye-Fosu	Biomedical Scientist	024-3566185

5.7 Meeting with Models of Hope of the Obuasi Government Hospital

The CCM team met with two Models of Hope (MoH), who support the ART Clinic in Obuasi Government Hospital. Both have had experience in HIV counselling since 2006 when they were working with a ProLink project. At the Obuasi hospital, they work three times a week during clinic days from 6:30 am to 1:30 pm but spend even more time on their community activities.

The MoH started with an introduction on their responsibilities:

- Take care of newly diagnosed PLHIV
- Treatment adherence talks
- Follow up of defaulters
- Home based care
- Condom and lubricant trainings
- Preparation of monthly reports for NAP+

The MoH pointed out the high defaulter rate that is supposed to be largely due to cure claims of pastors, spiritualists and traditional healers as one their main challenges. Others convince PLHIV that their condition is due to a curse, which requires prayers and the like but not medication. Other reasons for defaulting include the wellbeing under ARTs that encourages PLHIV to experiment without. The MoH confirm that prison inmates are treated at Obuasi Government Hospital but are not aware of any issues with the inmates' HIV treatment.

Fees that PLHIV are requested to pay at Obuasi Government Hospital are as follows:

- GHS5.00 each time they visit the hospital whether they have NHIS or not. Non NHIS insured PLHIV's pay GHS10.00 in addition as consultation fee.
- Kidney function test
- Liver function test
- HB test
- Food supplements

The MoH explained that these fees have a big impact on the loss to follow up and mortality rate since those who are not able to pay would not come back until their condition worsens. Apparently, the Medical Director of the Hospital has not received any directive on the GHS5.00, which is why PLHIV are still requested to pay.

The MoH were asked about their work related expenditures for T&T and others and they explained that they receive 175 GHS as a compensation, of which 25 GHS are meant for refreshments. However, they do spend quite a large amount for T&T, especially for follow up of defaulters and home based care. In order to reach the patients in the communities, Mariama and Priscilla often cover large distances by foot. Since community members suspect them to receive additional funds for taking care of patients, often enough they even have to pay for the transport of bed ridden patients if nobody else volunteers. The team asked them how they survive on the remaining, which seems more than difficult, especially since the work does not allow them to spend time on market activities as they used to. Consequently, the work as MoH is their only source of income.

The whole CCM team was very much impressed by the commitment of the MoH.

No.	Key informants	Job title / Designation	Contact
1	Mariama Seidu	MoH at Obuasi Government Hospital	024-6333289
2	Priscilla Noba	MoH at Obuasi Government Hospital	020-9250018

5.8 Visit to the Adansi North District Health Directorate in Fomena

The CCM team actually wanted to visit the Fomena Health Centre but since it was a public holiday and the health center rather small, many staff of the clinics were not in section. The nurse officer in charge has to send for the District Health Administrator to come and attend to the team. The District Health Administrator has a well-organized overview on district related health data in his office with reports on various diseases and programs displayed on his notice board and was very well informed himself.

Fomena is in the Adansi North District. The district has a total population of 125,665 which are taken care of by 13 health facilities, incl. a CHAG hospital and 4 CHPS compounds.

Malaria

Malaria is still the number one on the top ten diseases. 75% of all OPD consultations were related to malaria cases. The data indicated a sharply increasing trend within the first semester of 2016 compared to last year that cannot be explained by OPD attendance trends. In the first half year of 2016, 18,000 people were diagnosed with malaria, though not all cases were parasitologically (RDT or microscopy) confirmed. The district faces periodic stock out of RDT's and since there is only one GHS and one CHAG facility with microscopy out of 13, most cases will then have to be diagnosed based on symptoms. It was the second time that the CCM team learned that malaria RDTs are allocated by the RMS even though sufficient stock should have been available at the regional level. The non-drug section of the RMS was kept open during the pharmacists' strike so that the DHD was hopeful to access RDTs and other medical commodities. ACTs were available in sufficient quantities, the same applied to LLINs. Net usage has not been surveyed yet but it does not seem uncommon that people own but not use their LLIN. Previously AGAMal used to spray some parts of the district of malaria but has pulled out entirely, which might explain the increase the recent increase in malaria prevalence. When asked for solutions on how to reduce malaria prevalence, the DHD proposed IEC at household level considering that mass approaches did not have the desired impact in the past. He suggested a national campaign similar to the National Immunizations Day that couples distribution of bed nets with a high intensity of malaria related information. Since he considers attitudes that are difficult to change as the main problem, he also emphasized the importance of environmental control.

HIV

Fomena just started an ART Clinic in July 2016. 4 staffs were trained, incl. a data officer, who is responsible for two districts. Currently, there are six clients on treatment. This is a major improvement since before the district had not had a single ART clinic. Five more ART clinics are earmarked. The e-tracker software has not been introduced yet. Clients, while getting appointments, may drop in any day and will be seen at the OPD, not at a separate VCT facility. According to the Regional HIV coordinator, this is the current strategy with new ART clinics in order to cut down stigma. So far, there has always been sufficient stock of ARTs.

Tuberculosis

Case finding is accomplished rather passively and it is assumed that a lot of cases are missed at healthcare facilities treating cough while not suspecting TB. The DHD is very much concerned about the low case detection rates and well aware of the gap compared to the national prevalence: While one would expect about 300 cases in this district, 21 TB clients were detected and are on treatment,

one being hospitalized and no MDR-TB case. The district is satisfied with drug adherence (0% defaulter rate) and treatment success rates (100%). Community health nurses are increasingly involved in tuberculosis related IEC activities. It is further planned to use various durbars to inform the inhabitants about TB to create more awareness and to train more chemical sellers on TB, so they would not simply sell cough medication but could also screen their clients for TB and refer them accordingly. The DHD pointed out that health workers need refresher courses to beat stigma at healthcare facilities and to make them actively look for TB cases during all kinds of consultations. Microscopy can only be done at the facility in Fomena. The DHD is not aware of any shortages of TB drugs. TB consumption data are available. The DHD does not have any information on issues regarding TB case management among prisoners.

ANC (PMTCT and IPT)

In 2015, 15 nurses and midwives were trained for PMTCT. Contrary to other locations, they only provide HTS, but not ARTs to their clients. HIV positive clients are referred to an ART clinic from which they obtain their drugs. Since during the first semester 2016, there was no ART clinic in Adansi North district, all women had to be referred elsewhere. Only since July 2016 it has been possible to receive treatment in the district.

Compared to the half year target of 2513 ANC clients, Adansi North achieved a 76% ANC coverage, which is below the national coverage of 90%. However, the remaining 24% do probably not entirely miss out on ANC as there are some hospitals in neighboring districts which are preferred by some women over the Adansi North district's facilities. In 2016, all 1906 ANC registrants were tested for HIV. 20 of them received a positive test result and 12 of them are on ART. It is not known if the remaining eight women have moved to other districts and receive ART there or if they ignore their HIV infection. Telephone numbers provided by the pregnant women often turn out as dysfunctional. The district has not yet received any information on PMTCT at community level (distribution of ARTs by local midwives), so that all women have to commute to an ART clinic of their choice for their medication.

In terms of prevention of malaria in pregnancy, 79% of the ANC registrants receive IPT1, 50% IPT3, while IPT5 dropped to 9%. 62% of the clients accomplished four ANC visits, however, only 24% received IPT4. There have not been any SP stock outs during this period. It remains hence to be analyzed by IPT coverage is not higher. LLINs, which are given out during the first appointment, have always been available in sufficient numbers.

Stock management

Whenever the Adansi district runs low on certain commodities, they approach other districts with a request to share. Obtaining stock from other facilities has never been a problem in the past as long as the commodities were available elsewhere. However, sharing of stock seems to depend on proactive commitment of healthcare facilities and is not an established practice in all facilities. The Adansi North DHD pointed out that they have been helped by other districts but other districts have never approached them with a similar request. Whenever commodities are shared, they need to be returned later onwards. There is a reporting system in case on medication close to expiry with the objective to achieve timely redistribution. It is reported that expiries at the facility level are rather rare. For non-medical supplies, the Fomena health center keeps a low stock of about 10% in order to support facilities that run low. Stock management in the various facilities used to be a major challenge due to lack of trained staff and inadequate or non-existing documentation on the

handover of drugs. The situation seems to improve though. The DHD further indicated a need for a harmonized collection of consumption data across all programs.

Collaboration

The health administrator noted that he had not been in contact with NTP during the past two years. He is further not aware of any NGOs in his district focusing on TB or malaria. To the knowledge of the CCM team, there are currently no NGOs in this district contracted by NTP or NMCP.

Impact of the pharmacists' strike

During the first week of the strike, the DHD wanted to pick up drugs from the RMS on their scheduled day but in spite of prior telephone confirmation, they were not served. The DHD was not aware about any emergency services of the RMS. The district is otherwise not affected by the strike as it does not have any pharmacists. After the visit, the DHD confirmed during a telephone interview that they were able to also pick up drugs from the RMS even though the strike was still ongoing.

No.	Key informant	Organization	Job title / Designation	Contact
1.	Isaac Odame Awuku	District Health Directorate	District Health Director / Administrator	054-590 9579

5.9 Visit to Bekwai District Hospital

ART Clinic

The ART Clinic at Bekwai Government Hospital was established in November 2007. There are two clinic days per week (Tuesdays and Thursdays) which usually last from 8:00am to 2:00pm. Clients are received at the OPD and the ART facilities are also used for different consultations, which prevents clients from being identified as PLHIV. HIV positive pregnant women receive treatment at the ANC facilities.

The ART clinic has more than 1000 clients. Averagely the clinic receives 120 clients on each clinic day and has 3 clinicians who provides services to them. This implies an average of 9 min per patient which is significantly above of what the CCM teams have seen elsewhere (sometimes as low as 3 min). During each visit, each client is screened for TB. The ART clinic currently provides only first line treatment such as Tenofovir, Nevirapine, Combivir and Efavirenz. Old clients who are stable receive a supply of up to 3 months, however, due to the current drug shortages, most patients have to come in monthly intervals for a refill.

The ART clinic works hand-in-hand with two Models of Hope (MoH) who help out during clinic days. During the other days, the MoH follow up on defaulters in the communities. The MoH are reported to be proficient with adherence counseling. When asked for a grade between 0 and 10, the ART staff gave them a "7" stating that they should be more patient and tolerant. The CCM also asked how their work could be improved and was told that the MoH should receive the same information as the nurses to avoid conflicting messages to the clients. Since the day of the visit was not a clinic day, the CCM was not able to interact with the MoH.

The primary reason for defaulting is lack of T&T, another reason is the clients' wellbeing due to ART that lures them into experimenting without ART. HIV is often still considered as a spiritual disease or curse. This assumption can be mostly found in discordant couples who do not find another explanation for their statuses.

In terms of stigma, the ART staff reports that the situation has improved a lot. Nowadays it is much easier to get spouses and children tested and it has become common that husbands come to collect the drugs for their wives.

At the time of the visit, there was an overall shortage of ARTs as well as of Oraquick, which is why clients were provided with supplies lasting maximum one month. Regarding the fees to be paid by PLHIV, the previous 5 GHS consultation fee has been waived long ago. While CD4 tests are free (however, there have not been any CD4 analyses for a long time due to the lack of reagents), all other lab exams have to be paid for. Septrin (Cotrimoxazole) is usually provided free of charge unless the hospital runs out of stock, which is when patients have to buy it elsewhere (low stock at the time of the visit).

The team inquired about the preparations to implement 90-90-90 and heard that the ART staff was not informed about the start of Test & Treat in October 2016. PLHIV who are not yet on ART are not regularly followed up. The ART staff considered it as difficult to get many of them back who were tested but not treated in the past. The ART staff believes that following up on them should be spearheaded by the MoH. Staff also suggested to make public announcements on the availability of treatment for every PLHIV and to offer more clinic days to cope with the additional number of clients.

Malaria

The Hospital also serves as one of the malaria sentinel sites in the Ashanti Region. The malaria focal person at the hospital estimates that the number of malaria cases in the district is going down. This is attributed, among others to the malaria sensitization programs that are offered at the OPD each morning. However, children are still brought on the third day of fever on average after home treatment failed.

All feverish patients are automatically sent for a malaria test. The first test for malaria is RDT and microcopy is done on a case by case basis or when the hospital runs out of RDT's. RDT test is free of charge and done at the lab, not the consulting room. Currently, there have not been any challenges with malaria commodities (RDTs, ACTs, SPs and LLINs) recently, however, there have been periodic challenges with the availability of RDTs. The hospital staff mentioned that compliance with the medication is an issue. Patients tend to stop taking ACTs as soon as they feel better, possibly contributing to drug resistance.

When asked how to further reduce malaria prevalence, the hospital staff suggested more mass education on malaria. Community members are reported to complain about the discomfort related to sleeping under the bed net. Hospital staff does not know whether the bed net distributed so far are being use by beneficiaries. The CCM team asked the hospital staff if they sleep under a bed net and three out of four staffs present declined. The CCM team wondered how they can convince others to use a bed net if they themselves could not be convinced either.

The hospital's malaria focal person was not aware of any NGOs working in the district, even though at least one was contracted by NMCP.

ANC Clinic (PMTCT and IPT)

The ANC clinic was very full even though this day was a public holiday. The clinic registered 644 clients during the first half of 2016. All of them have been tested for HIV, 18 women tested HIV positive and all are on ARV treatment. 31 infants born to positive mothers during the same period are given Zidovudine syrup and at six weeks all the 31 children were brought for EID and additional

cotrimoxazol treatment. When asked for their secret of success to achieve a 100% EID coverage, the staff explained that mothers, once they have understood the implications of HIV on themselves and their babies, will to everything to have them protected and tested. The women are told that after six weeks that the baby needs a different drug to remain healthy and women will not fail to come for their appointment. Furthermore, the nurses and midwives consider it as crucial to accord sufficient time to HIV positive pregnant women, so they will understand all the information clearly.

The biggest challenges include the low stock of ART that could not be replenished due to the pharmacists' / RMS strike when the facility was not able to build up healthy stock levels prior the strike due to shortages at the regional level. Furthermore, the one PCR machine for EID at KATH is more and more insufficient for the increasing number of EID. It currently takes several months for the results to arrive and mothers who had their babies tested in 2016 had still not received their results.

In terms of stigma, the ANC clinic confirmed that stigma is less and less a problem. Pregnant women increasingly ask for an HIV test themselves. Husbands who accompany their HIV positive wives to the ANC consultations or who pick up ARTs for them are not an exception anymore.

Every morning, the ANC Clinic offers general education on HIV, malaria, LLIN usage and other health topics every morning. LLINs are given to pregnant women at their first ANC attendance. LLINs are double size (1.80m) and are probably appropriate for most but not all beds used. At the ANC clinic LLIN usage among hospital staff seemed higher but even there several nurses admitted not using them. Pregnant women are given first dose of SP at 14 week and then in monthly intervals. Within 2016, there have not been any stock outs of SP or LLINs.

Tuberculosis
During the day of the visit, the DOTS center was closed due to the public holiday and the staff was not available to provide the CCM team with more information.

Impact of the pharmacists' strike
At the time of the visit, the ART clinic as well as the ANC clinic were stocked out on ARTs and were not able to get any from the RMS because of the pharmacists' strike. Because of the previous low amount of ARTs they were allocated, the hospital could not build up a healthy stock level. The hospital has tried to borrow from other facilities but the facilities approached were in a similar situation. ART clients continue to receive services but have to be turned away when it comes to drug refill. The hospital pharmacy was open and run by three staffs who are not pharmacists.

The hospital pharmacy was found open and functional. There was stock of some ACTs to be able to treat most clients with malaria. However according to the staff, if supplies were not received soon, the pharmacy runs the risk of an expiry for malaria ACTs, in which case, they will have to issue clients with prescription to procure from pharmacies outside the hospital.

No.	Key informants	Organization	Job title / designation	Contact
1.	Felicia Cobbinah	Administration	Nurse Manager	024-4720227
2.	Delphine Gborgblorvor	ART Clinic	Senior Physician Assistant	020-5926702
3.	Samuel Nuvor	ART Clinic	ART Adherence Counsellor	020-6152468
4.	Michael Turkson	OPD	Prescriber	024-9374153
5.	Benedicta Osei-Tutu	OPD	Nurse	024-2003350
6.	Esther Addei Ashie	ANC Clinic	SSM/ HIV Counsellor	024-6731702
7.	Patricia Assibi Kabah	ANC Clinic	Mid-Wife Officer / HIV Counsellor	024-4419137

5.10 Visit to Network for Health and Relief Foundation, Kumasi

The Network for Health and Relief Foundation is an NGO that was contracted as implementing partner by NMCP and NTP. The NGO was founded in 1990 and has survived in spite of severe financial hardship. During the past three years, the NGO did not have any funding. Nonetheless, the Executive Director made a very committed impression not willing to give up.

Malaria grant

The NMCP implementing partner NGOs received training in 2015 and in October 2015, the NGO received its first disbursement on 8,000 GHC. The DHD determined the communities to work in and it was agreed to cover 10 communities in Bekwai district. The NGO trained 50 community based agents (CBAs), five in each community, to track IPT intake and to provide malaria sensitization in schools, churches and markets. A stakeholder workshop was organized to inform them about the project and to get their support.

The first cycle of the project lasted from October 2015 to February 2016, a second one lasted from April to June 2016. While there is no target for community sensitization, so far, the NGO has reached 9,000 people with information on malaria. Since the NGO did not receive any films from NMCP, they could not organize the requested video shows. The NGO considers the funds available as too low to be able to organize film shows in the various communities. For IPT tracking, the NGO collaborates with community health nurses to identify pregnant women eligible for IPT and subsequently engages in a house to house approach. The women contacted are registered in sheets that follows up on IPT1-5. At the same time the CBA benefit of the opportunity to provide education on malaria to the women. An NMCP team visited some of the communities with the NGO for M&E.

Regarding the collaboration with NMCP, the NGO expressed its disappointment about the fact that the NGOs were not allowed to implement activities as listed in their proposals but rather those determined by NMCP. A big challenge is said to be the lack of IEC materials that would reinforce the impact of any oral communication. The NGO would have also wished to receive feedback on their reports from NMCP. It would have been further appreciated to share experiences with other NGOs during an evaluation meeting and to have an idea how their efforts and results compare with others to determine the way forward to stronger performance.

For each of the two phases, the NGO received about 8000 GHC, which is considered to be largely insufficient. The NGO pays 30 (thirty) GHC per month as allowance to the 50 community based agents and partly some small T&T. It is hard to believe that 30 GHC a month constitute a major motivation for the community based agents to put in more effort than absolutely necessary. These tiny allowances alone add up to 4,500 GHC over a three month period. This leaves an average of 1,150 GHC per month for other expenditures, incl. stakeholder meeting, T&T for the collection of the reports or monitoring and salaries of the NGO staff, which raises questions about the sustainability of NGOs.

TB grant

The NGO received initially 9,970 GHC from NTP to contribute to TB case detection in Ashanti Region between November 2015 and February 2016. After an initial training provided by NTP, the NGO started activities with a stakeholder workshop to inform key stakeholders about the screening activities planned in the same 10 communities with the help of two community based agents. The NGO, as any other by NTP contracted organization, shall identify a minimum of 20 cases per quarter. So far, the NGO is satisfied with its results.

After an assessment by Stop TB Partnership and NTP, the NGO was informed about the continuation of the contract. In June they received the second disbursement that shall cover expenditures from July to November, which means that the NGO was left without funding for four months.

The NGO uses the community information centers to inform residents about the activities. Because of the high level of TB related stigma, the community based agents inform about a health screening while avoiding the word tuberculosis. The NGO proposes to couple the screening activities with education to address stigma at the same time. However, the NGO has not received any IEC materials beyond a few posters, which are not appropriate for 1:1 or small group discussions. The groups particularly interested in the "health" screening are primarily seniors while young people need to be addressed via youth associations. The NGO points out that the biggest likelihood to detect cases would be in prayer camps, however, the pastors would not allow community based agents in. It is considered as highly desirable to engage pastors, traditional healers and fetish priests to make them understand tuberculosis, so they would rather refer sick people to the healthcare facilities instead of reducing their strength remaining by fasting regimens.

No.	Key informant	Job title / Designation	Contact
1	Samuel Oraka-Tetteh	Executive Director	020-9341855

5.11 Visit to the Regional Hospital Kumasi South

Tuberculosis

Since March 2016, the Task Shifting Officer in collaboration with the DOTS clinic screens an average of 150-200 persons per day, mainly by approaching them at the OPD but also at different departments. TB screening at the OPD is done at the vital signs table, usually between 7am to 3pm (opening hours of the OPD).

Month	Attendants	People screened*	People tested	People with TB	People enrolled in treatment
April	13386	3287	76	12	12

May	15478	4409	100	11	11
June	13199	6626	201	13	13
July	11007	242	81	6	6
August		373	47	12	12

* From July onwards only those clients are counted on whom the screening tool was used.

Once the patients eligible to a sputum test have provided their sample to the lab, it takes a maximum of 24h for the results to arrive. However, this means that the patients have to be called back in, which is not without issues. It would be preferable to run the tests more quickly, so patients would be able to pick up their results after the consultation they actually came for.

Before the start of treatment, all TB patients are tested for HIV. A treatment monitor is required to receive a one month supply for home treatment. Due to TB related stigma and lack of education on TB, it is often a challenge to find an appropriate volunteer. If the patient is not able to identify a treatment monitor, s/he will have to come to the hospital on a daily basis for directly observed treatment. At the time of the visit, 77 patients were on treatment including one person with MDR-TB. For the past two weeks, there had been no drugs available at the RMS; the regional TB Coordinator was informed. The hospital tries to keep healthy stock levels at all time. In the few instances that the regional hospital runs out of drugs, KATH tends to help them out. However, this time, even KATH is running out of stock. Two persons were on the waiting list for treatment.

Follow up on defaulters as well as contact tracing is considered a challenge. Funds are not available; a monthly need of 1000 GHS was estimated. Currently, staff tends to use own resources to call the patients concerned. The patients are invited to bring their close contacts to the hospital for diagnosis. Whoever does not come to the hospital risks to be missed.

The hospital staff confirms that TB related stigma is still serious. Initially, the task shifting officer combined the screening with some education about TB, however, stigma around TB is this elevated that even the notion of TB would scare the patients to an extent that they would not provide their contact details. Even the screening nowadays is not called TB screening but is often explained as a survey on cough that is run at the hospital. However, some improvement is seen: Close contacts of TB clients tend to come voluntarily to the hospital to be screened/tested and those with TB usually come before their condition becomes severe.

The DOTS staff was not aware of any NGOs working on TB in the district. Collaboration with the Regional TB Coordinator was described as efficient. The DOTS staff suggested regular in-service training on TB for new staff to enhance TB screening at all levels and to reduce TB related stigma within healthcare facilities.

HIV

The ART clinic is open on a daily basis (no clinic days) and attends to about 5,600 clients, of which about half of them are on ART. All PLHIV have at least quarterly appointments for checkups – even those who are not yet on ART who receive immune boosters and Septrin. Thursday and Fridays are reserved to PMTCT. Most clients were referred from the OPD, others walk in or are referred by the DOTS center. Six nurses, a data manager and a dispensary technician work at the ART clinic that receives an average of 130 clients per day. The nurses share the tasks. Some take care of drug refills only, while others concentrate on counselling and other tasks. Considering the number of staff at the ART clinic, the CCM team assumes that enough time for quality services should be available. The ART

clinic used to be supported by a Model of Hope, however, he has not been seen for several weeks. NAP+ Ashanti confirmed later that no MoH was assigned to the Regional Hospital Kumasi South.

The CCM team asked about the fees to be paid by PLHIV and was informed that non NHIS insured clients pay 10 GHS for each consultation. CD4 tests are supposed to be free of charge, however, reagents have not been available for a long time so that clients have to be referred to private facilities. Renal and liver function tests are all payable. The same applies even to full blood count since reagents are not available at the hospital. Those not NHIS ensured also need to pay for Cotrimoxazole. As a result, clients who are not able to pay may significantly delay the start of treatment and only return when their condition worsens. The ART staff highly recommends to make the above mentioned lab tests free of charge to ensure timely enrollment on treatment.

The lack of a treatment monitor is not an obstacle to treatment. Drug adherence is considered a major problem. The ART clinic has no means to follow up on defaulters since their clinic phone has not been functional anymore. Considering the lack of Models of Hope at this hospital, it can be established that there is no follow up on defaulters.

ARTs, with the exception of Lamuvidine, is available and clients can be given a three month supply. Oraquick is out of stock and confirmation tests have to be run at KATH.

All pregnant HIV positive women are managed at the ART clinic, not at the ANC clinic. Initially, they receive a two week supply and may receive a monthly supply if the review after two weeks does not indicate any complications or issues. Pregnant women tend to have much higher adherence rates than the ordinary ART client. The ART staff attributes this to the quality counselling of the women. EID is undertaken after six weeks at the ART clinic. The regional trainer who initiates in service training ensures that all nurses at the ART clinic have the expertise required. While the data manager was on leave and it was not possible to get data of EID coverage rates, the ART staff believes strongly to have achieved a coverage higher than the national average. However, it was pointed out that it takes about three months for the results to be returned.

Prisoners, who are treated at the hospital are known to receive inadequate food so that there is a high number of people who refuse to take their drugs. Several of the ART clients among the prisoners are not NHIS insured. Since the prison would not pay for them, treatment may be delayed or discontinued until their relatives provide the funds necessary.

The CCM team had a look at a few patient files and found that those are mostly well kept. Information is largely complete and correct. TB screening seems to be done consistently. Pregnant women are usually enrolled on treatment the same day they were tested positive (or with a very short delay), even other PLHIV are enrolled rather rapidly (within 1-2 weeks). The CCM team noted that the patient folder has a section for HTS results of children, however, there is nothing comparable for spouses or partners.

The ART staff does not expect any major challenges with the start of 90-90-90. Since HIV positive clients have quarterly appointments anyhow, no major increase in the number of clients is anticipated. Additionally, due to their regular appointments, it will be easy to enroll them on treatment.

Pharmacy

The pharmacy was fully functional in spite of the pharmacists strike. Some pharmacists – even though officially on strike – were found in their offices to ensure that their strike does not have any serious impact on the patients. The strike was not supposed to have any impact on the hospital's

operations as the pharmacy picked up a large supply right before the start of the strike, however, they are running low on ARTs.

In cases of low stocks, the pharmacy usually liaises with KATH and other facilities to avoid stock outs. Stock shared does not need to be returned once available. In 2016, there have been several instances of low stock (particularly ART) that could be managed with the help of other facilities. The pharmacy staff also confirmed that the RMS usually informs about alternatives if certain regimens are not available.

The availability of HIV test kits has been a challenge in 2016 and Oraquick was not available at the time of the visit. In terms of malaria, there have been no AL for adults for about four months. AA had expired and was also not available at the time of the visit. Injections for severe malaria were available in sufficient quantities and there have been no shortages of SPs. TB drugs were stocked out and could not be obtained during the recent visit of the RMS.

The pharmacy stocks up with the RMS once a month.

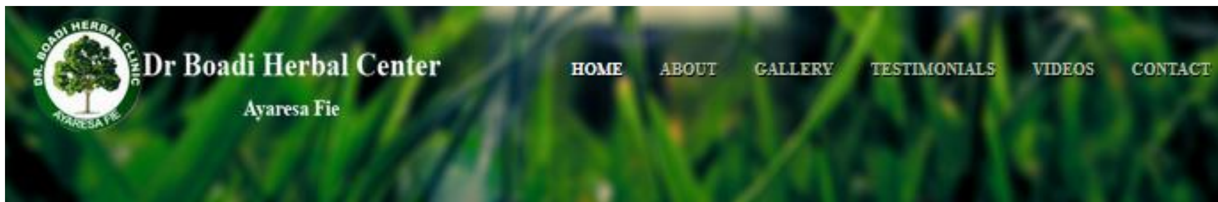
No.	Key informants	Job title / Designation	Contact
1	Fauscia Yakubu	Task Shifting Officer	024-4953565
2	Baffour Asare-Bediako	Disease Control Officer	024-4946675
3	Matilda Addai-Frimpong	Physician Assistant / ART Clinic	024-4630864
4		Dep Dir. Pharmaceutical Services	

5.12 Meeting with the Ashanti Regional Chair of NAP+

Beyond their support for people living with HIV, the Ashanti NAP+ group organizes two outreach activities every month for community sensitization through group discussions. One of their key messages is that HIV/AIDS are not a spiritual disease or curse. Whenever possible, the outreach activities are combined with HTS. According to NAP+, incidence has been reducing over time. Recently, out of 300 persons tested, only six were reactive, which is a much lower number than there used to be. Additionally, NAP+ refers people to HTS facilities and ART clinics.

Tasks of the Models of Hope (MoH) include adherence talks at the ART clinic, support to PLHIV, home based care, HIV and TB sensitization of communities, palliative care as well as follow up of defaulters. NAP+ field officers visit the MoH on a monthly basis, establish the quality of their services through interactions with the ART staff and their clients and collect their reports.

Follow up of defaulters is always a challenging task since many PLHIV are not providing their correct contact details. However, the number of defaulters has been decreasing over time but is still worrying. Loss to follow up is often related to stigma, e.g. when they have seen anyone they know in the environment of the ART clinic. This problem is particularly dominant in those ART clinics that are not fully integrated in other departments. Particularly public announcements on billboards and on the radio of pastors and herbalists with offers of cure for HIV meet open ears among PLHIV. An example provided was a certain Dr Yaw Boadi Mensah (> 1400 likes on Facebook):



Welcome to Dr Boadi Herbal Centre's Hompage

Dr Boadi, a herbalist in Asante Agona of Ghana has been curing hundreds of **HIV/AIDS** patients using natural herbs. He has on countless occasion after curing patients presented lab results both positive and negative, together with the cured person.

Many PLHIV use their last resources to pay for herbal cure at herbalists' clinics or for prayer camps, however, NAP+ was not able to identify a single PLHIV who was cured. Many return to the ART clinic in a deteriorated state of health, others have passed away. The Ashanti NAP+ group is requesting action against these kinds of false allegations and proposes campaigns featuring pastors living with HIV who describe how they have become convinced that ART clinics are the best option for anyone living with HIV.

Thanks to a lot of education, stigma is reducing. The involvement of CHRAJ is very much appreciated. NAP+ has developed a booklet on human rights in the context of HIV. However, while PLHIV can expect respectful treatment in ART clinics, violations of patient rights of PLHIV in other departments of healthcare facilities still occur too frequently. NAP+ informed the CCM team about cases of disclosure of status to third parties without consent and others that revealed lack of essential knowledge on HIV among nurses.

In terms of fee to be paid by PLHIV, NAP+ pointed out that GAC has been very successful in enrolling PLHIV on NHIS. However, those clients enrolled partly have to wait several months before they receive a valid health insurance card since some hospital accountants will not timely forward funds paid by GAC to the NHIS. Other hospitals do not offer NHIS registration at all, e.g. KATH. However, without a valid NHIS card, many hospitals are still charging the 5 GHS and partly additional consultation fees. Some hospitals charge PLHIV 10 GHS for an appointment card, some ART clinics demand a defaulter fee of up to 10 GHS. Liver and renal function tests tend to be payable and together with CD4 tests for which the reagents are still not available in many GHS facilities, these tests can easily cost 200 GHS. As long as the test results are not available, clients are not enrolled in treatment. Poverty is hence an important barrier to treatment.

Many pregnant women who tested positively at ANC facilities at community level are referred to ART clinics where they however never register. Since the experience shows that women who have all the information will do everything possible for the health of their babies, it seems that the HIV

counselling skills of those midwives and nurses at community level need to be improved. Midwives and nurses could be requested to accompany the women to the ART clinic. Alternatively, a Model of Hope could be invited to join the next consultation for appropriate counselling and to accompany the women to the ART clinic. NAP+ did not have any information about ART distribution at community level in the context of PMTCT in Ashanti Region.

When asked about the challenges related to EID, NAP+ pointed out that the machine at KATH had not been functional for several months. Consequently, several clinics have stopped sending any additional samples. HIV exposed infants receive prophylactic treatment until the EID result comes back, with the result that they may take the prophylactic treatment much longer that scheduled. If this trend continues, it may lead to a severe shortage of the prophylactic commodities.

In many ART clinics, TB screening is not done systematically according to NAP+ but based on symptoms like cough. Commodities reported as lacking in Ashanti Region include Oraquick, Nevirapine as well as second line ARTs. In the context of the pharmacists' strike, NAP+ pointed out that initially some ART clinics that were primarily run by pharmacists closed down. Upon intervention of the NAP+ president, those could be convinced to hand over the ARTs to nurses, so service delivery to PLHIV could continue.

No.	Key informants	Job title / Designation	Contact
1	Theresa Ampah	Regional Chairperson, NAP+ Ghana	024-9314853

5.13 Visit to the Ashanti Regional Medical Stores

Warehouse infrastructure and storage conditions

The general outlook of the medical store has been renovated over the past two years and outwardly looking clean and maintained. The stores for program commodities visited had very good storage conditions. The store has a good ceiling with no sign of leakage. The store looked clean without any sign of rodent infestation; commodities were arranged on strong metal racks, with those off the rack packed on pallets. Temperature control was adequate for storage of pharmaceuticals, as there was a functioning air conditioner in the store. There was also refrigerator for storing cold chain commodities with temperature monitors, however there was no stock of such commodities at the time of the visit. Fire extinguishers were present. The warehouse is insured (goods and warehouse).

Transport fleet

The RMS has two 3.5 ton trucks for the delivery of commodities; one donated by the Global Fund and the other procured by the regional health administration.

Distribution of health commodities

In order to receive any commodities, the facilities need to hand in their requisition in person. Emailed requisitions are not accepted. While the RHD as well as all the facilities visited pointed out that healthcare facilities have to pick up themselves their commodities from the RMS, the RMS explained that it operates some form of scheduled delivery; the region is divided into clusters based on geography for the purposes of service. The RMS has established a schedule where the trucks deliver the commodities at the respective facilities. Requisitions brought outside of the schedule will be served but the truck will not be available to go deliver the commodities for the facility. The RMS

charges small amounts for the truck to deliver the commodities to facilities under this schedule. Under this schedule, all commodities, including HIV, TB and Malaria commodities are delivered. Transport capacity was judged as inadequate to be able to deliver commodities to all health facilities.

Impact of Pharmacists strike action on distribution and availability of commodities
Due to the ongoing strike action by government pharmacists, the operations of the RMS seemed to have halted since most of the key functions and management of the various stores are run by pharmacists. There was however, a skeletal staff of pharmacists to respond to the questions of the team on the day of the visit. The GF logistics support officer was also available to assist the team and help respond to some of the questions by the team.

Ashanti districts and facilities have been informed that the drug section of the RMS will be closed due to the strike. The staff confirmed that they are not be available to issue medicines to facilities due to the strike action. The CCM team asked about the availability of emergency services, which were however not known to any of the healthcare facilities visited. The RMS staff confirmed that some facilities in emergency situations were served but it would not be in the interest of the striking pharmacists if all facilities were informed about emergency services. Consequently, this situation is likely to result in stock out situation in the facilities, particularly in terms of ARTs for which the ART clinics could not build up healthy stock levels due to the previous shortages.

Logistics Management Information System
The RMS through the assistance of the GF logistics support officer collates stock information of all program commodities and shares the data with the national coordinator of the Global Fund Logistics Support Project, where the report is aggregated into a national stock report. A feedback report is shared back to the region for decision making.

Stock status on the day of visit
Malaria: According to the Pharmacist in charge of the malaria commodity store, the RMS had a stock out of ACTs (Artemether/Lumefantrine tablet for adults) in the past few months, but received stock in the most recent delivery of commodities from the central level. Stock of all other malaria commodities were available. These include SP, RDTs, injection artesunate and LLINs. In terms of the complaint of several facilities of never receiving the RDT quantities ordered, the RMS explained that it is the regional malaria coordinator to determine the stock that facilities receive. Sometimes there are challenges with coordination for the supply of the commodities between the program focal persons and the relevant staff of the RMS in the allocation of some key program commodities like SP, RDTs and LLINs.

HIV: The RMS had just received some very minimal stock of Oraquick test kits. The test kits have been out of stock for the past few months, and this stock has just been received from the NACP (which was however less than the quantity ordered), and has been allocated to the various ART sites in the region awaiting collection. Other commodities were available, with high stocks of Nevirapine tablets available.

TB: Stock levels of TB commodities was not adequate, as there was stock out of a number of the TB commodities.

No.	Key informants	Job title / Designation	Contact
1	Priscilla Anane Donkor	Snr. Pharmacist	