



Mission Report Ghana

26 October – 8 November 2008

Full Report

Project: APA 3 Ghana TBCAP – activity 3.1
Organization: KNCV Tuberculosis Foundation
Consultant: Eveline Klinkenberg, senior epidemiologist
Report by: Eveline Klinkenberg, December 2008

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Mission dates: 26 October - 8 November 2008
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Background:

Within the TBCAP project for Ghana, for which MSH is the main coordinating partner, the research unit of KNCV Tuberculosis Foundation is responsible for activity 3.1 “Support the NTP with data collection, analysis and performance improvement”. A first mission was conducted in May 2008 to analyze existing data. During the mission, after discussions, field visits and an inventory of available data a key list of potential reasons for low case detection was made. Based on the existing data the conclusion was made that:

- Potential reasons for low case detection could be identified
- There is not enough information to quantify the amount of cases missing
- There is a need for systematic register checks to assess data quality and the magnitude of data/reporting inconsistencies
- There is a need for further studies to assess the magnitude of some of the factors listed.

To provide an indication of the magnitude of inaccurate reporting systematic register checks were proposed to be included in future quarterly monitoring missions. A format was developed for this. The key list of potential reasons for low case detection was prioritized and two topics were selected for further study based on priority and feasibility. The topics selected were 1) Not all people diagnosed come to collect their results, what happens to them? 2) Referrals of newly diagnosed TB patients, do they all start treatment and if not what happens to them? These topics were prioritized as these are known cases that might not all end up being registered and might partly get lost in the system. For both topics a draft project layout was discussed and agreed upon during the first mission. Study protocols were finalized afterwards by email and telephone conversations. Data collection was planned to be finalized before the second mission in order to finalize data analysis during the second mission.

Objectives

This report is the report of the second mission conducted by the consultant with as:

General objective:

Provide technical assistance in operational research focusing on uncovering the reasons for low case detection.

Specific objectives:

- Analyze the data (so far) collected from Korle Bu facility in Accra and if needed assist in finalizing data collection.
- Assist in analyzing the data collected from Korle Bu facility in Accra.

- Discuss planning of data collection at other facilities in the country based on the results of the Korle BU data.
- Explanation on use of epimap/GIS to assist the Central Unit (CU) in their monitoring activities.
- Discuss development of further operational research activities to look into the prioritized reasons for low case detection.
- Assist the NTP to analyze the existing surveillance data to determine which regions report high case fatality rates and high default rates.

Additional objectives

- Discuss the planned TB prevalence survey
- Discuss the QUOTE tool

Summary of activities carried out by consultant

- Work with regional parents on data collected from Korle Bu and collect additional data
- Discuss the NTP strategic plan with the NTP and representatives of school of public health, QHP
- Analyse data (register checks, sputum conversion) collected during last monitoring visits
- Analyse NTP data to look at mortality & defaulting
- Discuss prevalence survey with Dr Addo at Noguchi Memorial Institute
- Give introduction of EPImap to regional parents
- Visit Central Region to join stakeholder meeting (tomorrow)

Outputs

Below a summary of the activities and discussions during the mission are given in details by key output:

1. Results small studies

Due to budget constraints data could only be collected in Korle Bu teaching hospital in Accra and not in the proposed additional two sites. Two teams each carried out one study:

1 Sputum results: *assessment of people that do not collect their sputum results from the lab to see what happens to them*

2 Referral tracing: *assessment of people referred from Korle Bu TH to another facility (before being put on treatment) and verifying if they have arrived there and if not what happened to them*

A. Study on SPUTUM results

Methodology (in brief, see protocol developed by each team for full details):

- Data collected for first three quarters of 2008 (1st January 2008 until 30 September 2008)
- From the lab register the number of new sputum smears analysed in the lab were counted during each of the three quarters.
- For the three quarters all the sputum results forms that were not collected till date were collected from the lab technician

- All data from the non collected sputum results forms was entered.
- The recorded addresses on the sputum results forms were classified for traceability using six categories (1-3 traceable- 3-6 non traceable)
- A list was made of all not collected SS+ results for tracing of patients. Note: from smear negative results it is not sure if they are cases or not, there is no system in place to link the lab results to further evaluation of the patients.
- A questionnaire for those traced was developed to assess what happened to them

Results

The tables below give an overview of the main results found in the study.

Table 1 Overview of patients diagnosed and results not collected during the first three quarters of 2008 at Korle Bu teaching hospital, Accra, Ghana.

Health Facility	Quarter 2008	#patients diagnosed in laboratory	# results not collected	% not collected
<i>KBTH</i>	<i>1</i>	<i>888</i>	<i>58</i>	<i>6.5%</i>
<i>KBTH</i>	<i>2</i>	<i>983</i>	<i>68</i>	<i>6.9%</i>
<i>KBTH</i>	<i>3</i>	<i>870</i>	<i>82</i>	<i>9.4%</i>
Total	-	2741	208	7.6%

Table 2 Detailed results of table 1 regarding the non collected results.

Health Facility	Quarter 2008	# results not collected	# with adequate address	# SS+
<i>KBTH</i>	<i>1</i>	<i>58</i>	<i>25</i>	<i>6</i>
<i>KBTH</i>	<i>2</i>	<i>68</i>	<i>33</i>	<i>8</i>
<i>KBTH</i>	<i>3</i>	<i>82</i>	<i>42</i>	<i>13</i>
TOTAL	-	208	100	27

The main observations from the results are:

- About 8% of patients did not collect their results
- 48% of people had no traceable address
- 27/208 of those who did not collected their results were SS+, from whom only 7/27 had traceable addresses. Tracing of these patients was not done at present.
- At KBU no active tracing of people who fail to collect their results is done currently. Results that are not collected are put aside if not collected after 2 weeks. If a person still comes after 2 weeks the sputum sample is redone
- Two people from whom the sputum results form was still there, were registered in the treatment register and can therefore be assumed to be on treatment. This is strange and it could not be explained how this could have happened.

Next steps/recommendations

- Trace the SS+ patients that did not collect their results as they are smear positive and find out what happened to them.
- Discuss with Korle Bu a system for follow up of people who do not collect their results.
- Conduct a prospective study: Ask Korle Bu laboratory to record proper addresses on sputum results forms and preferably telephone numbers from now on. Repeat the same study in 3-6 months and contact those that have not collected their results to find out what happened to them. In this way we are sure they can be traced/contact by phone. Contacting by phone will also save considerable time compared with home visits for tracing.
- Ask the laboratory people to add a column to lab register wherein the date the results were collected is indicated. This allows to assess treatment delay due to late collected of results and also allows to quickly see who did not collect their results and if this matches with the non collected sputum results forms still available. Currently only the sputum results forms can be used as indicator for non collection, if a form gets misplaced/missing there is no way to know if the result was collected or not. Also in the current study some discrepancies with the non-collected results were observed as for two people the sputum results form was still there, indicating that results were not collected while these two people were registered in the treatment register and could therefore be considered to be on treatment.
- Use the above as indicator for lab performance, i.e. the percentage of laboratory results not collected. If a tracing system is installed an indicator on percentage collected after tracing could be added.

B. Study on referral tracing

Methodology (in brief, see protocol developed by each team for full details):

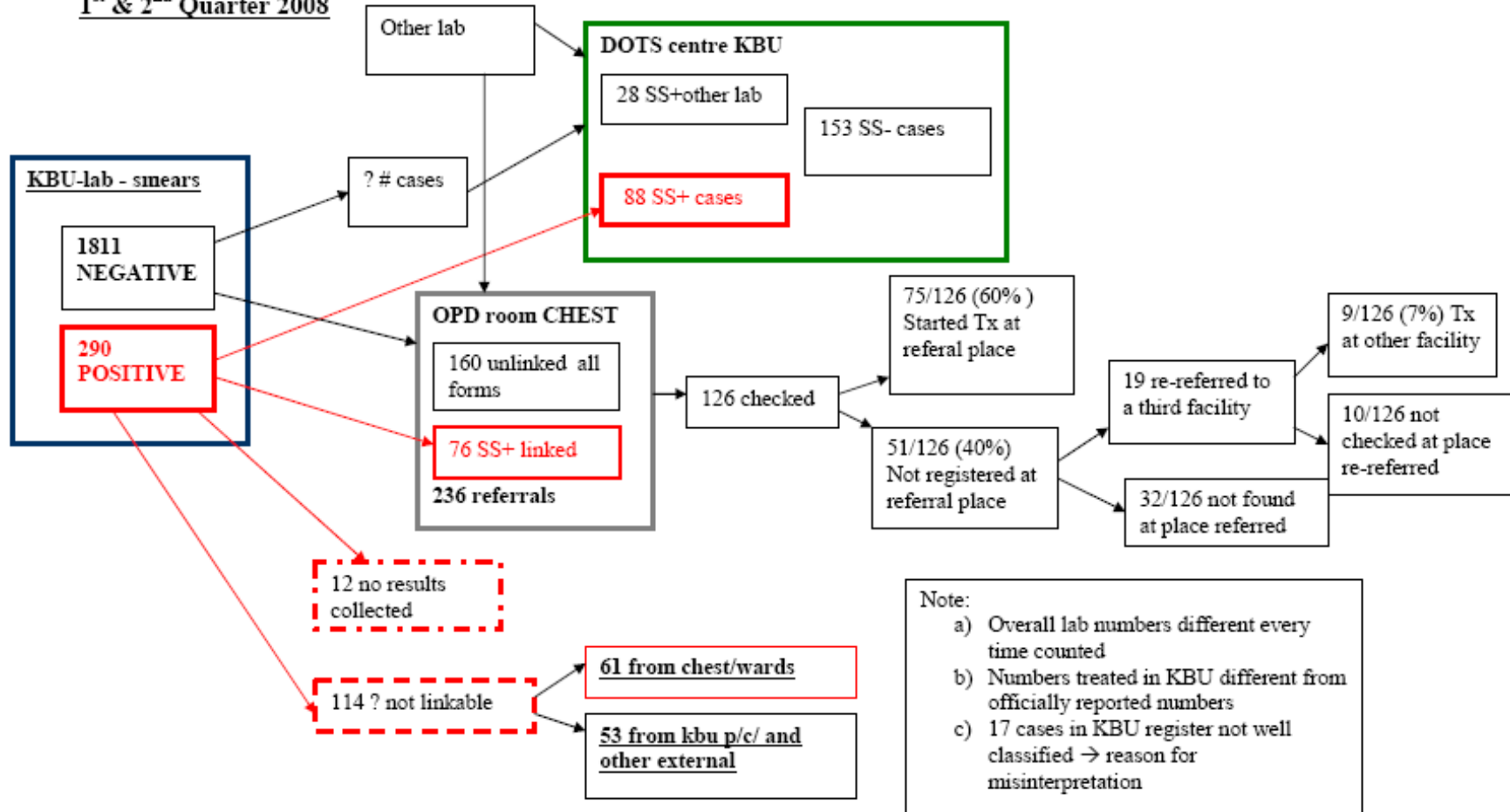
- Period: first TWO quarters of 2008
- Count lab results done in the study period from lab register, list all positive
- Check and list from OPD room books those that were referred during the study period and where they were referred to
- Check and list those starting treatment in Korle Bu facility
- Link the above and identify gaps
- Check at (main) referral centres if people have arrived there and started treatment

Results

(see overview of key results in figure on next page)



1st & 2nd Quarter 2008



Main observations – Korle Bu Teaching Hospital

- Not all SS+ patients were linkable, half of those not linkable come from inside Korle Bu (chest clinic and wards)
- For SS- results it is not clear who are cases (lab results can not be linked to eventual diagnosis)
- Only 88/290 (30%) SS+ people diagnosed at KBU are put on treatment at Korle BU
- No systematic registering and follow up of referrals is done. People are only registered in the consulting room register (OPD book). Herein no clear addresses are listed and not all results indicated which makes it difficult to know where people go and jeopardize traceability.

Table 1 Results from referral tracing at six polyclinics in Accra, Ghana

Facility	Nr not traced at referral centre /total referred*
Achimota polyclinic	4/19
Kaneshie polyclinic	5/36 (14 referred further)
Mamobi polyclinic	8/22
Mamprobi polyclinic	0/21 (1 referred further)
La polyclinic	8/18 (4 referred further)
Usher polyclinic	7/11

**the number in brackets indicates patients who reported at the referral centre but where further referred to another centre (when this was recorded in the referral centre)*

Main observations –referral centres

- The majority of referred persons arrives in the referral place but of 33% we can not be sure if they are really on treatment
- There are large differences between facilities in the number that were traced (see table)
- In some facilities people were further referred, e.g. in Kaneshie p/c 14 of 36 people referred there were further referred (re-referred).
- No systematic registering of re-referrals is done. Some facilities created their own registration system or notes on where they referred people further but his is not done in all facilities. Therefore people who are referred further can not be traced.

Other findings - delays

- For referrals from Chest OPD the median delay (for those traced) from referral till starting treatment at referral place was 2 days (inter quartile range (IQR) 1-5 days. Note there was one patients who had a delay of 140 days! Also to assess this proper recording of date of referral and data treatment started is needed as in some patients there was an issue with the dates.
- At Korle Bu teaching hospital the median delay from availability of the laboratory results till patients were referred to another clinic by the Korle Bu Chest Clinic was 2 days (IQR 1-4.5 days)
- At Korle Bu teaching hospital the median delay from availability of laboratory results till starting treatment at KBU DOTS centre was 3 days (IQR 2-6 days)

Next steps/recommendations

- Discuss findings of the study with staff of Korle Bu teaching hospital and assess where improvements can be made
- As initially planned still carry out the same study in a regular (regional) hospital to assess the referral process in these facilities
- One solution for Korle Bu might be to start a referral register in which all referrals are recorded, besides the TB09 forms. A register provides an easier overview than a pile of forms and therefore it can more easily be checked if patients referred have arrived and started treatment, for example by adding a column in which this information is recorded.
- Discuss how the laboratory register can be linked with the eventual diagnosis and follow where cases go. Currently from people who were smear negative in the lab it is not possible to know what follow up tests if any, were done to assess if they are smear negative TB patients. This could maybe also be combined with the above into one tracing system
- Use the home visits that are already done to verify the home before a person starts treatment to do contact tracing. In this way more cases are likely to be detected.
- Set up a formal re-referral register in all polyclinics to facilitate tracing of referrals. Some polyclinics kept notes if they referred people further to another facility that were referred to them by Korle Bu TH. This was not systematically done in all clinics and therefore it was not for all referred patients clear if they had visited the referral place or not.

2. Results monitoring visits

After the first mission (in May 2008) it was recommended to perform register check during monitoring mission to assess the quality of the data. Since the last visits monitoring visits were carried out during which:

- In four regions register check were done to assess recording practices in the facilities visited using a therefore designed form
- In four regions results were collected on smear conversion at month 2 and 5 using a special form

In addition to the additional collected data during the missions, the consultant also looked at reports of the missions in all the regions.

Register check

Main Findings (from forms plus monitoring reports)

- Systematic data using the form were only collected in four regions: Central, Eastern, Ashanti and Volta
- Only 100/298 (33%!) of TB01 forms checked were filled correctly
- 18/33 (55%) of institutional registers was not correctly filled
- 44% of patients had inadequate addresses recorded that make follow up not possible.
- There were issues with incorrect filling of disease classification & type, HIV status reporting, treatment outcome, smear conversion results etc
- Nearly all monitoring reports mentioned that there were issues with recording and documentation in the region.

Next steps/recommendations

- Use tool developed for register checks in all future monitoring visits
- Adapt the tool to be used by regional team to do district monitoring. In this way there is systematic recording of data quality issues and improvements can be monitored.

Smear conversion

Main Findings (from collected data in 4 regions)

- 659/708 (93.1%) cases had month 2 smear done
- 61/659 (9.3%) of patients with month 2 smear results did not convert
- 21/23 clinic switch such patients to continuation phase
- 55/61 had a smear done at month 5
- 14/55 (25%) were still positive at month 5
- HIV status was available for only 23/61 (38%) of patients

Next steps/recommendations:

- Collect same data in all regions to assess if similar non conversion rate is obtained, especially asses higher number of people still positive at month 5 (25% here but low numbers).
- Emphasize proper regimen for non-converters
- Do further research on issue of conversion rate especially at month 5 as these are potential drug resistant cases
- Emphasize on HIV testing for all patients as HIV status was known in only 38% (of non converters).

3. Results analysis regional data mortality & default

On request of the central unit the consultant analyzed the regional mortality & default data to assess the region(s) with high mortality and default rates.

Results

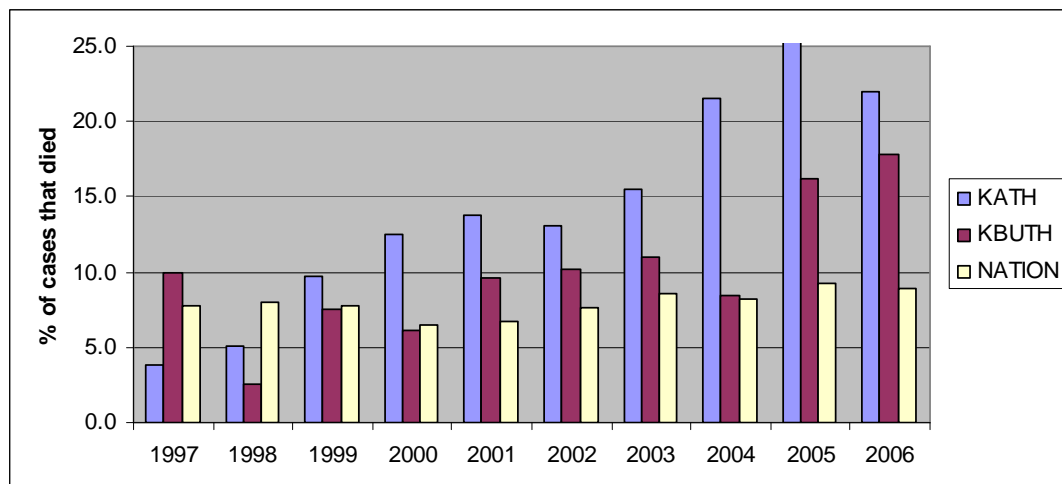


Figure 2 Mortality data from 1997 till 2006 for Ghana national with the two teaching hospitals separate

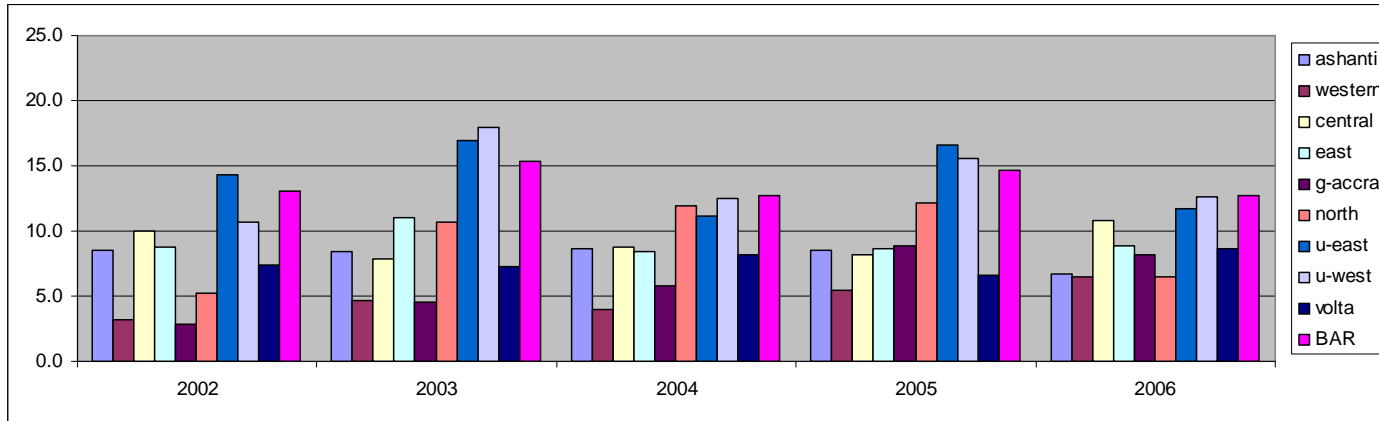


Figure 3 Mortality rate (% of cases that died) by region 2002-2006, note both teaching hospitals are excluded

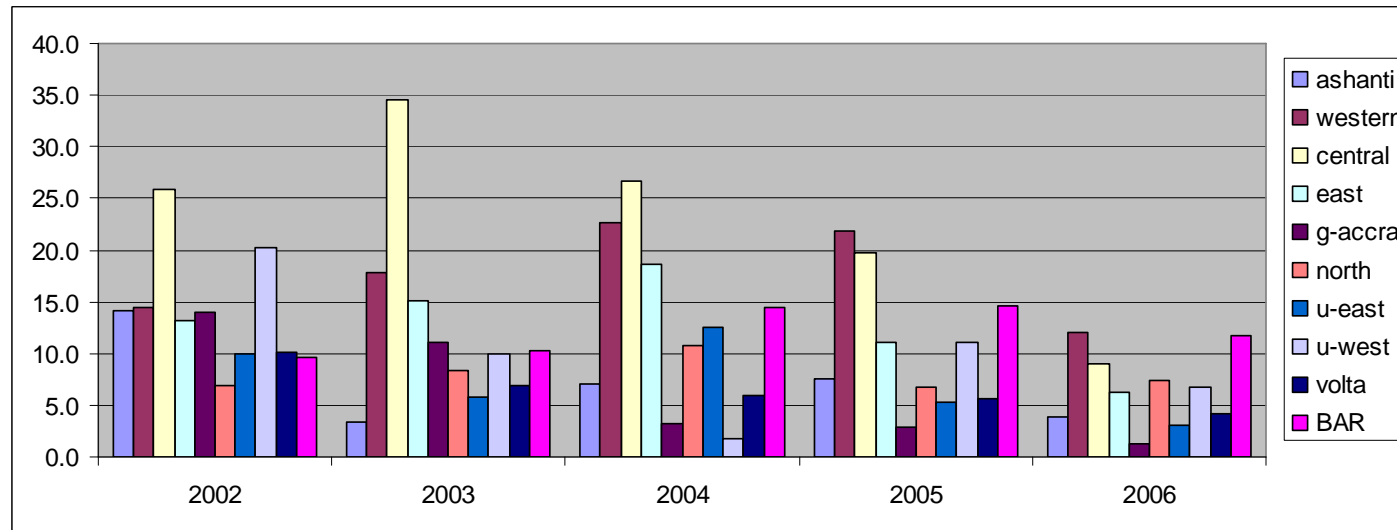


Figure 4 Default rate (% of cases that defaulted) by region 2002-2006, note both teaching hospitals are excluded

Main observations from the graphs

- The national mortality trend fluctuates between 6-10% from 1997-2006
- The teaching hospitals Korle Bu (KBUTH) and Komfo-Anokye (KATH) have the highest mortality rates (KATH 20-25%; KBUTH 15-20%).
- The mortality rate in the teaching hospital increased over the last decade while the mortality rate in the rest of the country is more or less stable.
- The regional mortality pattern shows a general decline to below 10% in most regions, except Upper-East, Upper-West, Central and Brong Ahafo region, where mortality remains high and above 10%.
- The default rate declined over the years to a 6% national rate in 2006. However in Western and Brong Ahafo region the default rate remains above 10%, while in central region the default rate is still 9%
- High default and mortality rate regions partly overlap. Mortality rates might actually be higher as deaths will be "hidden" in defaulters

Next steps/recommendations:

- Further develop the planned mortality survey with a focus on the high mortality rate regions to investigate time of death during the course of treatment and underlying reasons.
- Investigate the linkage between defaulting and mortality in the region where both rates are high.
- Investigate the effect of the enabler's packages on the default rate in more detail to see if a decline was observed after introduction of the enablers in the region.

5. Observations from field visit Central Region

- Make an inventory of regional operational research ideas and ongoing projects. Several districts talked about OR ideas that were not done/worked out. It would be good to know what districts are doing and to make use of the lessons learned for other districts
- Set targets were often very high and sometimes unrealistic. If set targets are never reached this could be demotivating. The consultant advices to set realistic targets than can be reached, i.e. a BCC target was set of 20,000 while only 600-1000 people were reached quarterly. It is good to set ambitious targets but they should be realistic.
- Way forwards stated should also provide ideas on how to reach them. For example the way forward for most districts was to increase case detection rate while none of them indicate how they expected to realize this.
- Districts used as indicator the number of TB/HIV patients targeted for counseling and testing, it might be better to use the proportion of patients that have received counseling and testing. This makes it better comparable across districts and also easier to set realistic targets.
- Several districts reported on the number of service delivery points that were submitting complete and timely reports. This indicator

should be reported up to central level so it can be used to assess completeness of national data. See also report of mission 1.

- Unfortunately the issues from the CU on forms and registers was put last on the agenda and due to the late start there was not enough time left to sufficiently address this issue.

6. Contributions to NTP strategic plan to promote research

- Develop TB research agenda and implementation plan of issues the NTP want to see investigated
- Set up research task force/committee to “push” research agenda and set annual priorities.
- Organize stakeholder meeting to guide pilot interventions like cough register, involvement pharmacies
- Collect data of ongoing small scale intervention like cough registers and NGO work that is happening in places to determine what works and what are lessons learned.

7. Suggestions for OR research

- OPD cough surveys and investigation of experiences with cough registers that are used in certain districts
- Adherence study
- Mortality studies, when are people dying
- Periodic collection and analysis of certain data like sputum conversion rates etc.
- Collection and analysis of data when policy changes have been implemented to assess effect of these changes.
- Collection of data of ongoing interventions. Several things are ongoing but their effect and use for other areas is not being assessed.
- Setting up of sentinel sites
- Investigate the increase in SS- cases
- GPS all treatment facilities and diagnostic centres to assess real coverage using GIS

Additional Recommendations

- Improve M&E for data accuracy & good record keeping (addresses for follow up, disease classifications, CPT treatment)
- Collect complete district and facility data at CU (now regional & national) – use # facilities reporting as indicator for completeness of data
- Keep referral register to follow up referrals & use person referred and started on treatment as indicator
- Add information to lab register if results are collected, if not follow up SS+ cases, use % lab results collected as indicator
- Conduct OPD cough survey to assess % send for sputum examination
- Investigate the possibility to combine home visit with contact tracing
- Make 1 page guidance for TAB09 form and all other forms
- Appoint research focal person at Central Unit for overall coordination and promotion of research activities. This could also help to create better motivation for research activities. It should be noted that all activities carried out by TBCAP are for the benefit of the TB control program and not for TBCAP as such. The consultant feels that more presence/involvement of senior CU staff will increase the motivation of junior staff for research activities as this is currently quite low.
- Better involvement of the lab in activities to solve the lab issue is needed as otherwise all efforts to increase case detection could be jeopardized

General recommendation:

Make use of your data to assist you in your program activities!

Annex 1: Terms of reference (ToR) – Mission Ghana

Project: APA3 Ghana TBCAP –activity 3.1
Organization: KNCV Tuberculosis Foundation
Consultants: Eveline Klinkenberg, senior epidemiologist – Research Unit
Start date: 26 October 2008
End date: 7 November 2008

Background:

Within the TBCAP project for Ghana, for which MSH is the main coordinating partner, the research unit of KNCV Tuberculosis Foundation is responsible for activity 3.1 “Support the NTP with data collection, analysis and performance improvement”. A first mission was conducted in May 2008 to analyze existing data. During the mission after discussions, field visits and inventory of available data a key list of potential reasons for low case detection was made. Based on the existing data the conclusion was made that potential reasons for low case detection could be identified (list made), there is not enough information to quantify the amount of cases missing, there is a need for systematic register checks to assess magnitude of the problem of data/reporting inconsistencies, there is a need for further studies to assess the magnitude of some of the factors listed.

To provide an indication of the magnitude of inaccurate reporting systematic register checks will be included in the planned quarterly monitoring missions and a format was developed for this. The key list of potential reasons for low case detection was prioritized and two topics were selected for further study before the 2nd mission based on priority & feasibility. The topics selected were 1) Referrals of newly diagnosed TB patients: what happens to them? 2) Referrals of newly diagnosed TB patients: what happens to them? These topics were prioritized as these are diagnosed cases that might not all end up being registered and might partly get lost in the system. For both topics a draft project layout was discussed and agreed upon during the first mission and finalized afterwards.

Objectives

General objective:

Provide technical assistance in operational research focusing on uncovering the reasons for low case detection.

Specific objectives:

- Analyze the data (so far) collected from Korle Bu facility in Accra and if needed assist in finalizing data collection.
- Assist in analyzing the data collected from Korle Bu facility in Accra.
- Discuss planning of data collection at other facilities in the country based on the results of the Korle BU data.
- Explanation on use of epimap/GIS to assist the CU in their monitoring activities.

- Discuss development of further operational research activities to look into the prioritized reasons for low case detection.
- Assist the NTP to analyze the existing NTP data to determine which regions report high case fatality rates and high default rates.

Additional objectives

- Discuss the planned TB prevalence survey
- Discuss the QUOTE tool

Scope of Work

- Presentations by KNCV on data monitoring, data validations and data analysis.
- Discussions with Ghana team on data quality and data collection issues
- Work jointly with Ghana team to analyze the collected data and to decide on the next steps for the small projects.
- Work with M&E officer and TBCAP country representative to analyze existing NTP data.
- Work jointly with Ghana team to identify additional work to be done and discuss planning
- Discuss further operational research assistance for the program and draft a plan for this.
- Demonstration of use of GIS/Epimap

Outputs

- Korle Bu data collected and analyzed and planning made for collection at other facilities in the country
- Plan for further operational research assistance for the program
- Demonstration of use of GIS/Epimap given
- Region and facilities with highest case fatality and default rates identified
- Discussion on QUOTE tool conducted
- Discussion on TB prevalence survey conducted

Reporting

A report of the mission will be written by KNCV within 3 weeks after the end of the mission.

Process

After the update by the team on the status of the small studies a plan will be made for the first week to maximize time and outputs. In the second week the analysis of the small studies can hopefully be round up and planning made for further steps. In addition discussion will be held with a wider range of stakeholders on further TA for operational research in Ghana and planning thereof.

Persons involved

- Ghana NTP (regional parents, director Frank Bonsu, Dr Nii Nortey and Mr Afutu)
- Rhehab Chimzizi, MSH, country representative TBCAP

- Stakeholders for TB prevalence and QUOTE tool discussions (program to decided who needs to be involved, i.e. research unit GHS, Noguchi Memorial Institute, School of Public Health etc)
- KNCV Tuberculosis Foundation: Eveline Klinkenberg

Proposed work Schedule

Note: this schedule is indicative and flexible and will be adjusted where needed.

Date	Activity	Involved
Sun 26 th Oct	Travel Amsterdam - Accra	Eveline
Mon 27 th Oct	Morning: Meet Ghana team to discuss current status of data collection small studies Afternoon: work on data	Eveline & Ghana team
Tues 28 th to Thurs 30 th Oct	work on data small studies	Eveline & Ghana team
Friday 31 st Oct	Feedback on program's Friday meeting to update on status of small studies and discussion of further steps and planning 2 nd week mission	
Sat 1 st Nov	Work on Ghana data	Eveline
Sun 2 nd Nov	Work on Ghana data	Eveline
Mon 3 rd Nov	Presentation and discussion data quality and data considerations	Eveline & Ghana team
Tues 4 th Nov	AM: discussion on TB prevalence survey with stakeholders involved. PM discussion on QUOTE Tool	Eveline & Ghana team & stakeholders
Wed 5 th Nov	Discuss available data and assess quality	Eveline & Ghana team
Thurs 6 th Nov	List data still needed	Eveline & Ghana team
Friday 7 th Nov	Morning: debriefing program Afternoon: debriefing USAID mission Evening; Travel Accra- Amsterdam	Eveline & Ghana team & USAID mission

Data/information needed

- Data files of all data collected to date for the small studies
- In the report of the last mission it was indicated that before this mission the following some additional data would be sought:
 - Mortality data – verbal autopsy from DSS survey
 - Screening results visa applicant screening

Via the USAID mission it was found out that data for b are not available. Availability of mortality data is not yet known

Background document

- None.

Language

The language of the mission will English.

Annex 2: Detailed itinerary

Date	Activity	Involved
Sun 26 th Oct	Travel Amsterdam - Accra	Eveline
Mon 27 th Oct	Meet Ghana team to discuss current status of data collection small studies	Eveline & Ghana team
Tues 28 th Oct	collect additional data at Korle Bu	Eveline & Ghana team
Wed 29 th Oct	work on data small studies	Eveline & Ghana team
Thurs 30 th Oct	Collect additional data from referral clinics	Eveline & Ghana team
Friday 31 st Oct	Attend meeting on Strategic Plan	Eveline
Sat 1 st Nov	Work on Ghana data	Eveline
Sun 2 nd Nov	Work on Ghana data	Eveline
Mon 3 rd Nov	Presentation and discussion results small studies	Eveline & Ghana team
Tues 4 th Nov	Meet with Dr Addo at Noguchi on TB prevalence survey	Eveline
Wed 5 th Nov	Introduction to EpiMap	Eveline
Thurs 6 th Nov	Debrief at NTP, Dutch Embassy and USAID	Eveline
Friday 7 th Nov	Visit Central Region stakeholders meeting Evening; Travel Accra-Amsterdam	Eveline & Ghana team & USAID mission

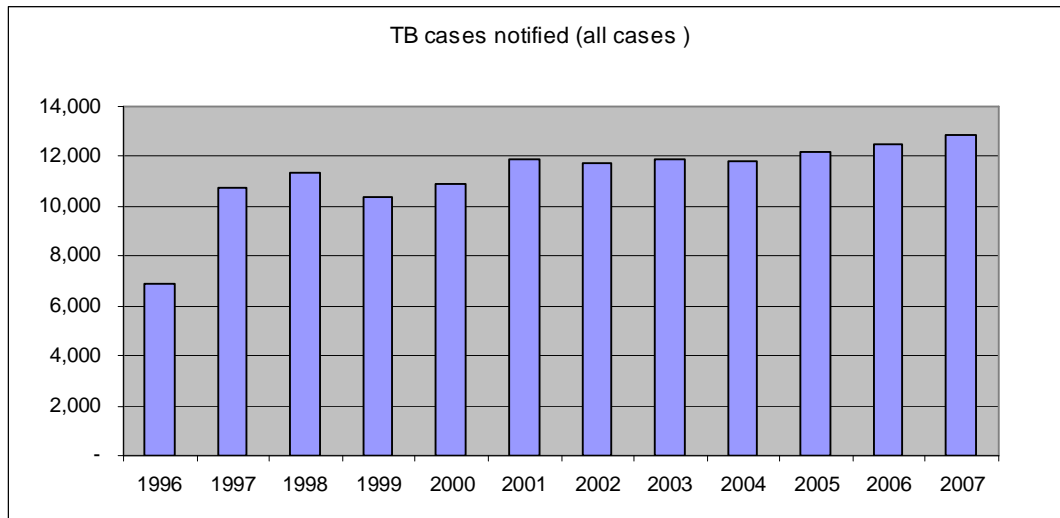
Annex 3: main observation on overall data from mission 1

Three important questions to be answered:

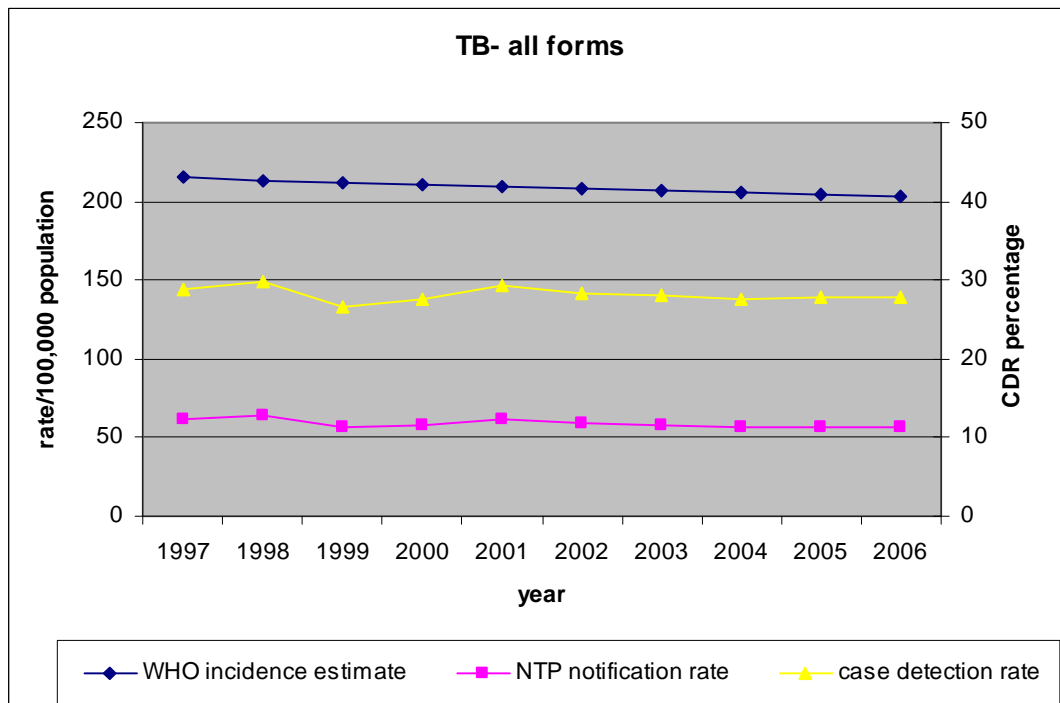
- 1) Are cases missed?
- 2) How many cases are missed?
- 3) Why are they missed?

Analysis of data available at central level

NATIONAL DATA

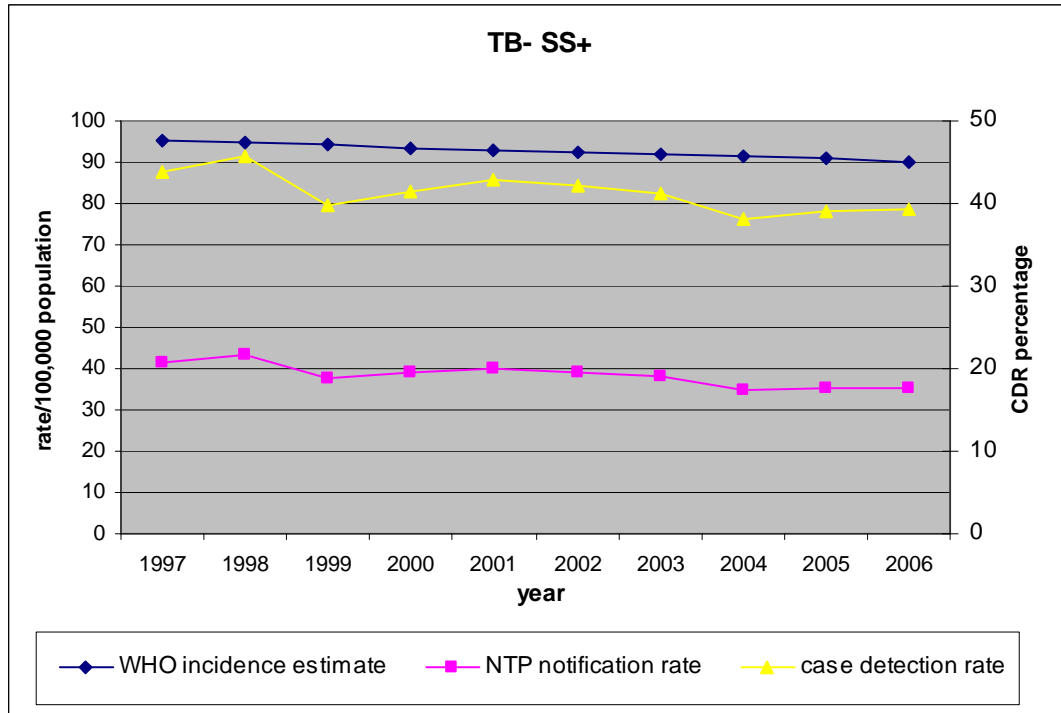


Case notification slightly increased trend, but population also increased.

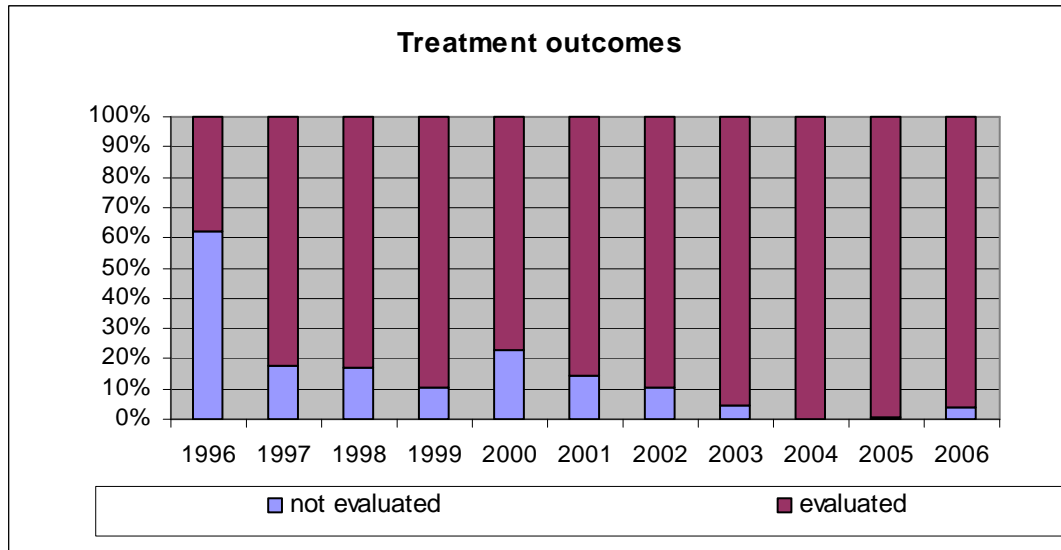


But no increase in rate/100,000, stable over the last years, no real

impact visible of rolling out of program initiatives (PPM, enablers package, COMdots etc.).

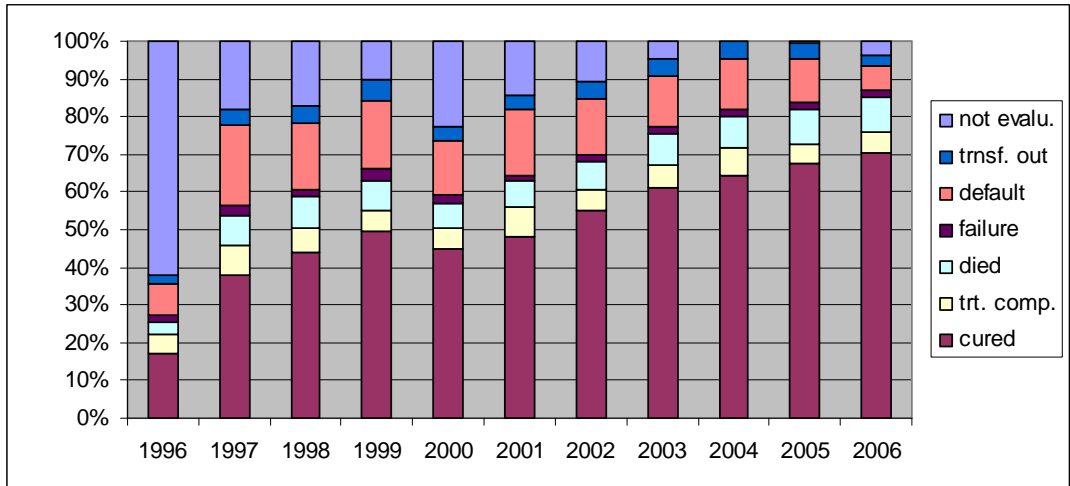


Same pattern when we only look at smear positive patients.



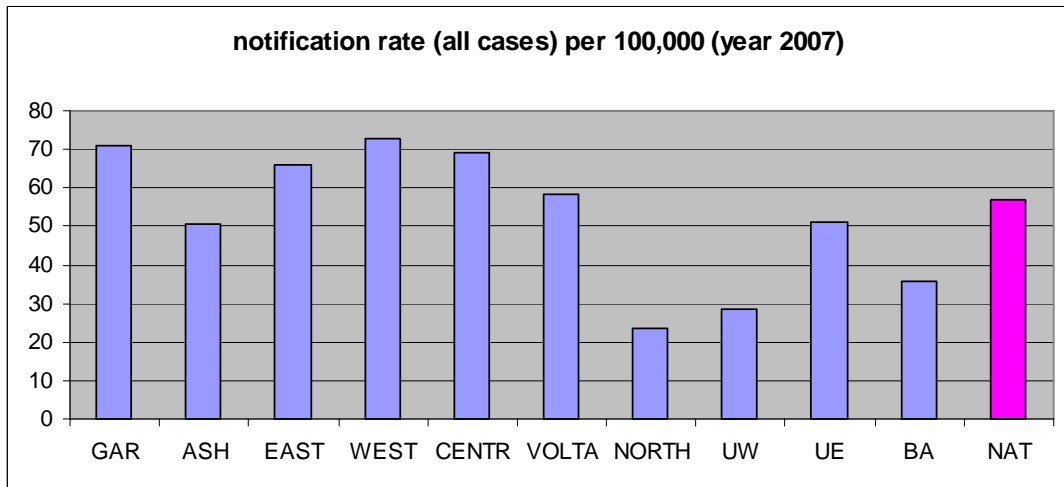
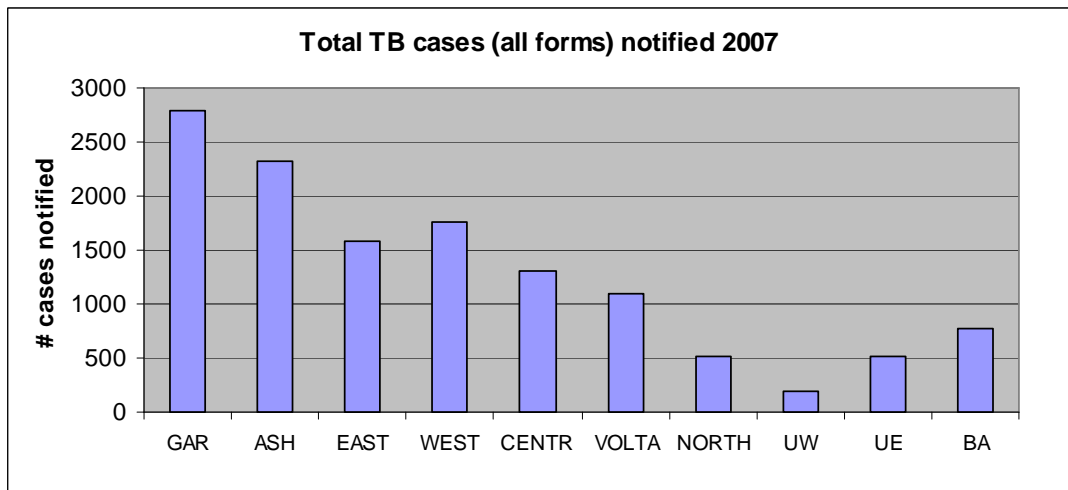
Treatment outcome

Good improvement nearly all cases evaluated, although increase in 2006

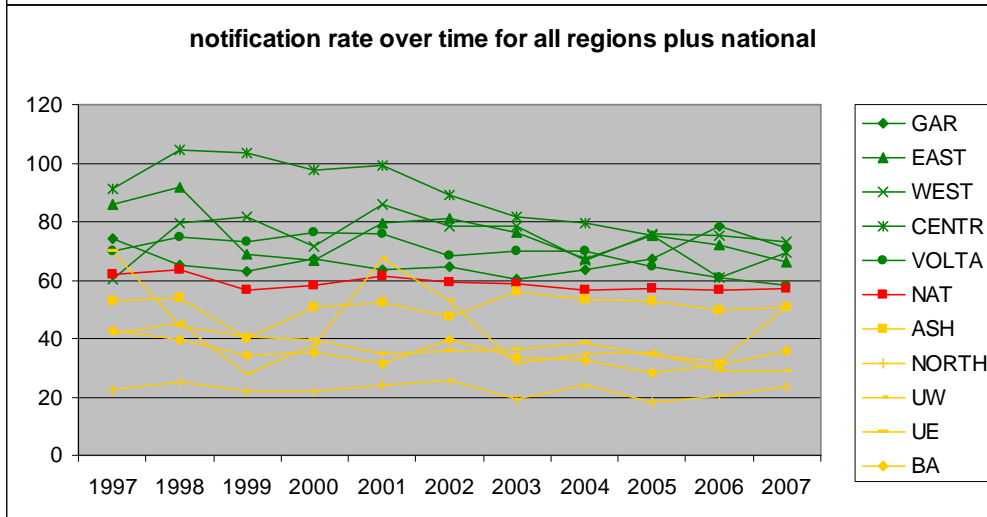
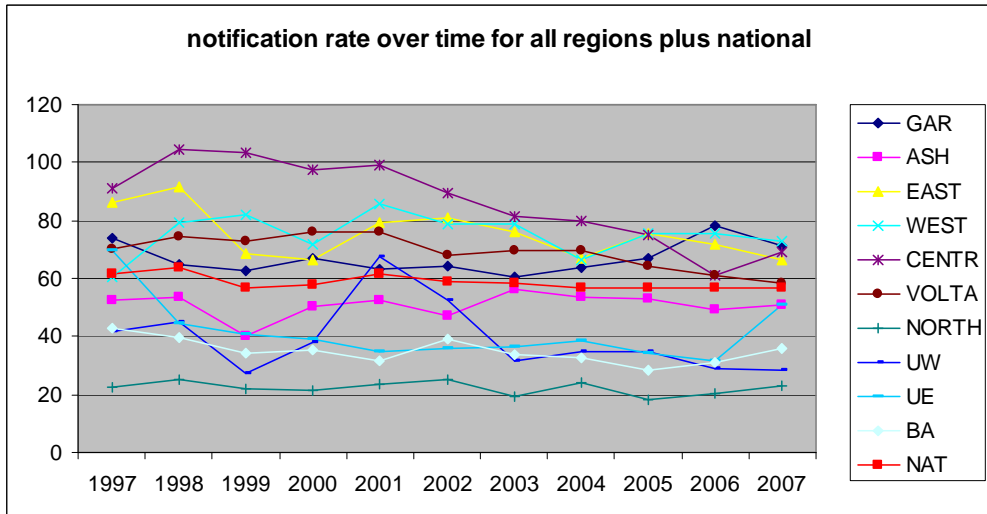


Treatment success rate shows increasing trend, reaching 75% national (in Accra reaching 85%)

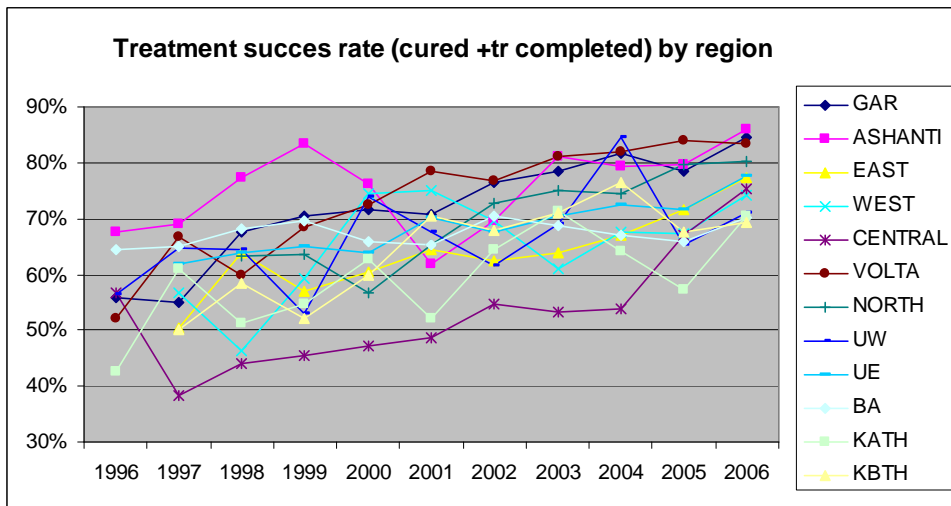
REGIONAL DATA



*North, UW and BA much lower – REAL TREND OR MISSING CASES?
Tuberculin survey data indicated lower ARTI in North, UE and UW*



Is impact from rolling out program visible?



Note:
many non-
matching
figures!

Overall trend: increase, although some regions fluctuate

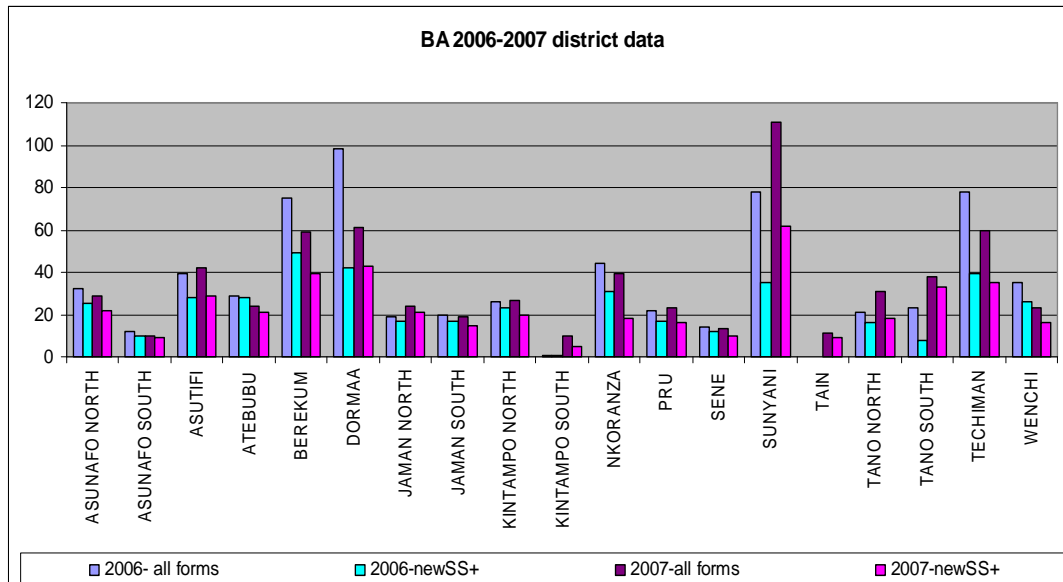
DISTRICT DATA

Table. Data Regional NTP dbase vs district datasheets

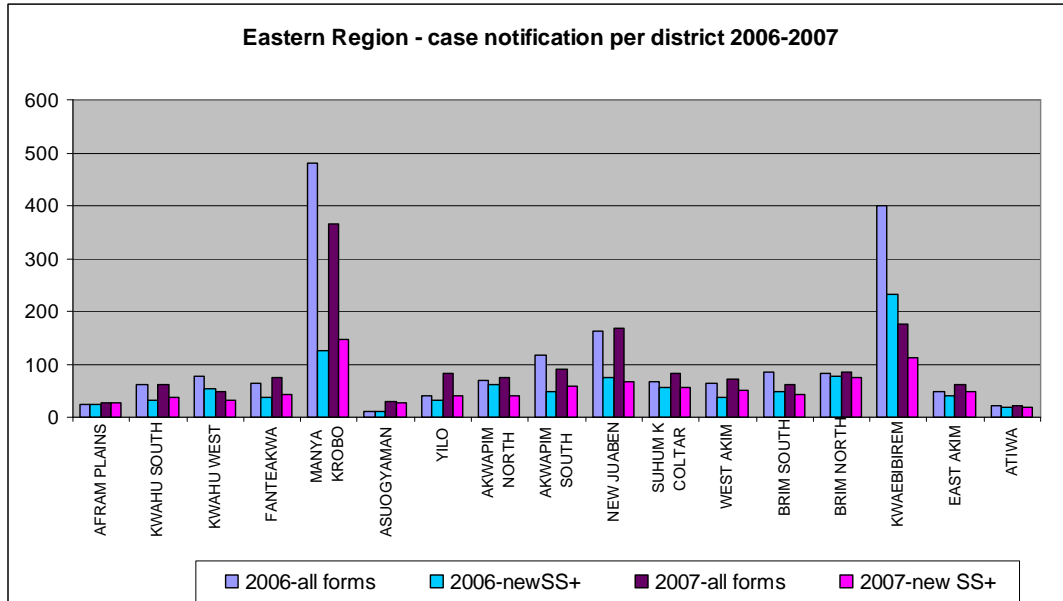
	2005		2006		2007	
	NTP-db	distr-db	NTP-db	distr-db	NTP-db	distr-db
GAR	2412		2949		2788	
ASHANTI	2268		2199	1931	2328	
EAST	1749		1689	1879	1579	1579
WEST	1716		1766		1761	
CENTRAL	1361		1125	1131	1302	
VOLTA	1175		1135		1102	
NORTH	381		437		515	
UW	225		189		190	
UE	345		323		522	
BA	588	590	659	666	781	654
NATIONAL	12220		12471		12868	

Note: Discrepancies between data!

Example district data Brong Ahafo region



Example district data Eastern region



Key observations:

Despite program roll out no increased case detection

PPM increased treatment success rate, but not case detection, redistribution of cases

Need to address inconsistencies between data from different databases

QUESTIONS TO BE ANSWERED:

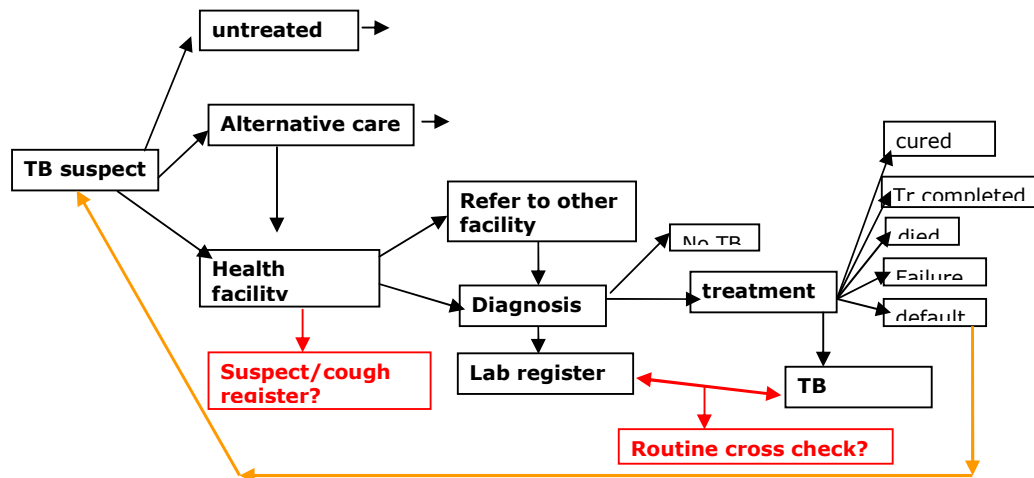
Are cases missed?

- Look at trends to see if there are discrepancies that could indicate reporting gaps (between districts, age pattern, gender pattern, type of cases, mortality rates)
- Crosscheck labregister with TB register to see if all cases diagnosed are put on treatment (Nyirenda et al 1995 Malawi: 14% not registered in TB register)
- Are all suspects diagnosed? Check patients register with TB register and lab register. Is there a suspects/cough register? (Harries 1997 South Africa : Not all suspects get sputum examination. But 98% patients in cough register diagnosed.

Why are cases missed?

- Stigma
- Diagnostic delay
- Barriers to seeking care (financial, attitude HF)
- Lost in referrals
- Discrepancies between registers
- others

TB care pathway



Jointly developed list key issues low case detection:

1. Reporting not 100% accurate, discrepancies in data. Magnitude?
2. No recording/tracing of referrals, part lost in the system? How many?
3. Part of people diagnosed do not come for their results (incl SS+ cases), what happens to these people? Picked up later? How many are these?
4. Not all TB suspects (cough \geq 2 weeks) send for sputum smear examination (SPR, staff knowledge, number of slides examined)
5. Not all suspect seek healthcare at PPM facility
6. Sect that does not take medication (probably <5 %) , others go to healing camps
7. What is first point of contact? Pharmacy for cough drugs?
8. Contacts of index cases
9. target specific groups: HIV+, prisoners, refugees, slums,
10. Expand smear microscopy initiated by patient instead of HW. Already operational in some areas (new juaben in eastern region, several others).
11. Better involvement of NGOs throughout the country (reaching communities)
12. ACSM via churches + other groups

Conclusion existing data

- Potential reasons for low case detection identified (listed before)
- Not enough information to quantify amount of cases missing
- Need for register checks and small studies to assess magnitude of the problem

Prioritization of key issue low case detection led to selection of two topics (listed below). These were quick wins as they are existing cases that might get lost in the system.

Topics - Planned studies

1. No recording/tracing of referrals, part lost in the system? How many?
2. Part of people diagnosed do not come for their results (incl SS+ cases), what happens to these people? Picked up later? How many are these?

Data still to be collected

- Mortality data – verbal autopsy from DSS survey
- Screening results visa applicant screening
- Other?

Are their other data that could give indication of prevalence or insight in LCD?

- Workplace programs?
- TB screening at HIV clinics?

Recommendations

- Improve M&E for data accuracy & good record keeping (addresses for follow up, disease classifications, CPT treatment)
- Collect complete district and facility data at CU (now regional & national) – use # facilities reporting as indicator for completeness of data
- Keep referral register to follow up referrals & use person referred and started on treatment as indicator
- Add information to lab register if results are collected, if not follow up SS+ cases, use % lab results collected as indicator
- Conduct OPD cough survey to assess % send for sputum examination
- Set up sputum register (combined with cough register) to monitor results & follow up
- Need for evaluation enablers package & PPM impact & other interventions (ComDOTS)
- Active screening/increased attention of specific groups like HIV+, slum-inhabitants, prisons
- Conduct prevalence survey to establish current prevalence in Ghana

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