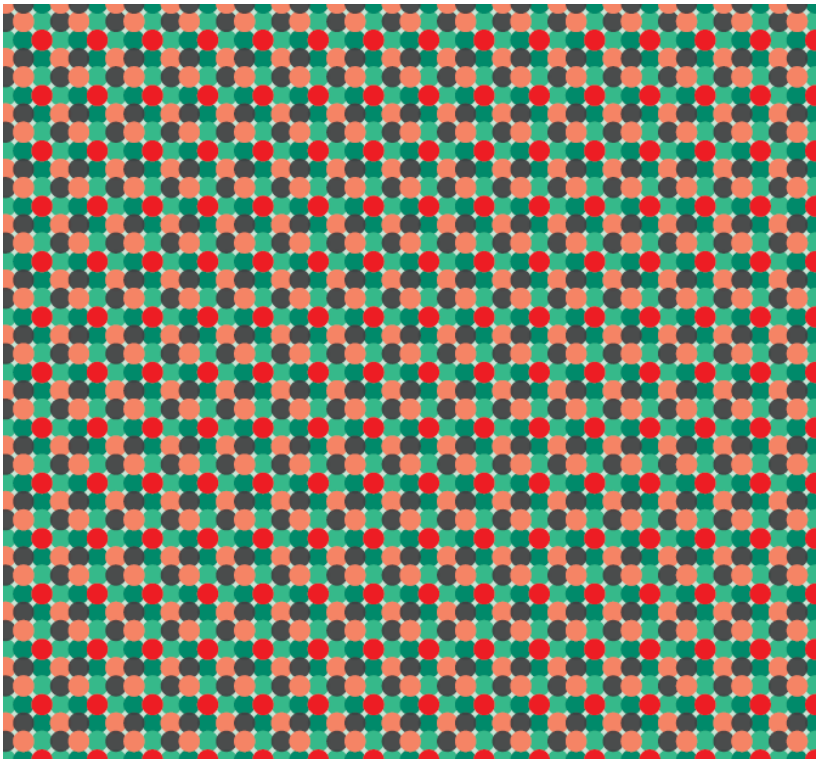
出國報告（出國類別：研習）

赴越南參加世界衛生組織(WHO)及越南國家胸腔醫院共同辦理之結核病計畫評核(Epidemiology Review)



服務機關：衛生福利部疾病管制署
姓名職稱：詹珮君 簡任技正
派赴國家：越南
出國期間：2019.2.24 ~3.9
報告日期：2019.4.15

目次

壹、摘要

藉由參與越南國家結核病疫情評估(Epi Review)，了解越南國家結核病計畫防治及疫苗策略，並參與世界衛生組織就各會員國之結核病防治計畫，所規劃之結核疫情評估模式及方法。此行參與世界衛生組織為越南結核並疫情評估為期一個月的 Program Review 的其中兩週，包含兩個項目: Epi analysis and revision of estimates 和 Standards and Benchmarks assessment，當週還有平行場次 TIME modelling (利用流行病學數據來預估各項策略對終結結核目標的有效性)同時進行；前一週則為美國疾控及預防中心主導的 VITIMES review，為越南非結核病電子線上通報系統的使用評估。這次國際事務之機會，了解越南國家結核病計畫防治及疫苗策略發展情況，提供我國結核病策略、疫苗政策研擬及結核病雙邊合作之規劃參考

貳、背景

越南國家胸腔醫院係越南國家結核病計畫(NTP)最高指導單位，負責越南國內結核病防治相關規劃工作指引之訂定，以及監督指導所轄越南全國共 63 省層級結核病防治工作計畫之執行。越南身為 WHO 會員國，需配合與 WHO 及相關國際專家團體共同進行例行 NTP 評核，這次主要是配合 2006-2007 盛行率調查結果分析，進行結核病通報系統及個案管理資料系統的評估 (名稱為 Epi Review)，以確保 M& E 系統運作良好，可以支持該國之防治計畫策略方向正確且具成效，並提供未來策略規劃之依據

參、目的

1、 參與越南國家結核病疫情評估(Epi Review)

2、 了解越南國家結核病計畫防治及疫苗策略，參與世界衛生組織就各會員國之結核病防治計畫，所規劃之結核病疫情評估模式及方法

3、 加強新南向合作夥伴關係

肆、過程

1、 行程表：本次會議之過程摘要如下表：

日期	工作 日誌	地　點	行 程 內 容
108/02/24	啟程	台北→越南河內	路程、抵達
108/02/25~ 108/03/09	研習	越南河內	參與研習討論
108/03/09	返程	越南河內→台北	路程

2. 重要工作內容摘要：

1) 緣起及準備工作

去年的第四季，我們知道衛福部可能有一個援助計畫要做越南的 TB，所以我就在 11 月初的時候透過美國 CDC 的防疫醫師設法與越南聯繫。沒想到對方也接到上級的指示，正在撰寫對台灣的工作報告，所以在 11 月中旬用通訊軟體進行視訊會議，對方不但提供了越南相關 TB 流病的簡報也針對台灣可能幫助越南的幾個重點進行。美國 CDC 雖然在越南有 68 個人力，但其實直接雇用的僅 10 人，TB 在當地其實只有 2.5 個人力，一位是與我接觸的防疫醫師 Alyssa Finlay，另外一位是雇用越南當地醫師，還有半個人力是實驗室。電話會議相當有收穫，除了了解越南在這麼多國家的協助，以及強而有力的 NTP 之下，還有哪些要克服的挑戰，以及美國主要援助的部分

- PEPFAR TB/HIV 支持 TB preventive therapy 給每位新診斷的 HIV 病人
- Xpert 在西北部山區的普及狀況 (執行到 2018 年底後淡出)
- 技術上協助了解越南流行病學的現況 (inventory study, prevalence survey, Epi-review, patient pathway analysis, VITIMES 等個案通報系統與 HIV 資料的連結等技術性活動)
- 胡志明市區的 X 光車主動發現
- 欲移民美國的 3HP 潛伏結核感染治療計畫

接下來的 2019 年有些目標會希望達到，不過主要還是之前的技術性支援為主；由於過去廣寧的結核病個案管理及越南 NTP 開放的態度，台灣若透過提供援助 (人力或財力支援)協助控制結核病疫情，以我國頻繁與越南交流的現況，亦是有利的。

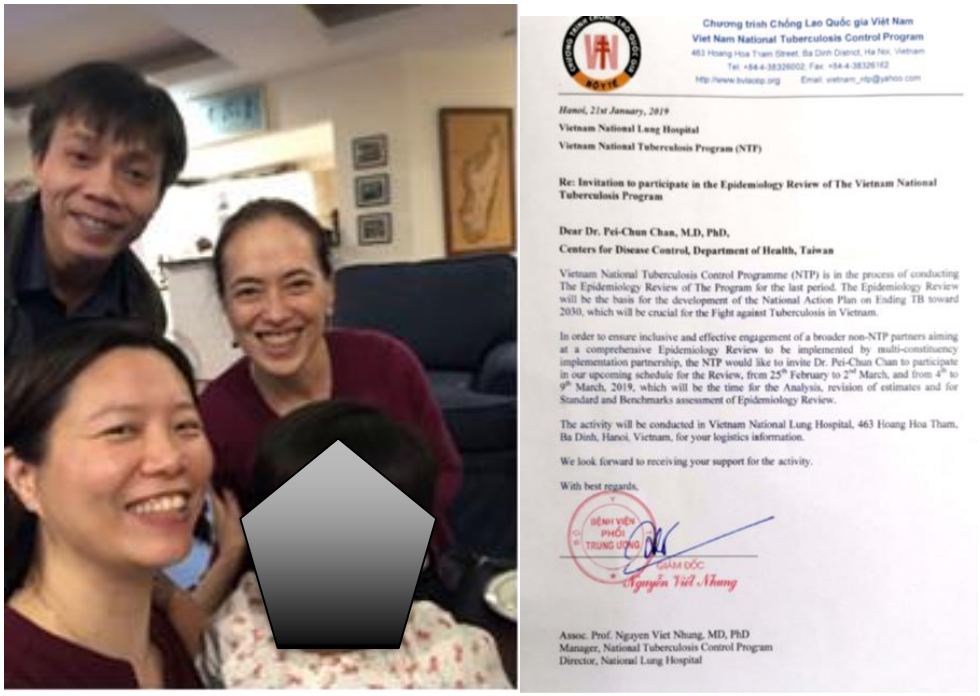
Planned Activities FY19 (1)

- **Continue Support for VN TB/HIV PEPFAR priorities**
  - Consult on and design TPT evaluation
- **Surveillance**
  - Finalize PS analysis
  - Complete Patient Pathways analysis
  - Improve VITIMES Data Quality and Use: automated reports, dashboards, improved data visualization to facilitate use
  - Prepare for Joint Vietnam National Epi Review (Jan 2019)
- **Laboratory**
  - Implement a WHO-recommended Rapid Diagnostic Assay Connectivity Solution (GxAlert)
    - Evaluate the benefits of GxAlert: key laboratory indicators pre- and post- GxAlert; document costs and benefits to inform program planning

Planned Activities FY19 (2)

    - TA to support GxAlert data use
  - TA and supervision to optimize Xpert MTB/RIF specimen referral
  - TA to assess feasibility of Lot Quality Sampling of Xpert MTB/RIF Cartridges
- **Bending the curve**
  - Zero TB HCMC: expand mobile CXR screening and private provider interface network (DGMQ funds 69k)
  - Active TB and LTBI case finding and treatment: potential TA
    - Island of Tân Hiệp, Hội An, Quang Nam Province: demonstration project
    - ACT 5 Woolcock Institute of Medical Research: RCT

會後就暫定，透過越南 NTP 參加 2019 年初的越南 Epi-review 為短期合作的目標，先了解越南整體結核病流病狀況，再來做計畫性的鋪陳。也希望透過這次交流，了解在越南在地的重要相關人 (stakeholders)，在未來協助時達到最大效益，當然最大的夥伴還是美國 CDC。



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Hanoi, 21st January, 2019

Vietnam National Lung Hospital
Vietnam National Tuberculosis Program (NTP)

Re: Invitation to participate in the Epidemiology Review of The Vietnam National Tuberculosis Program

Dear Dr. Pei-Chun Chan, M.D, PhD,
Centers for Disease Control, Department of Health, Taiwan

Vietnam National Tuberculosis Control Programme (NTP) is in the process of conducting The Epidemiology Review of The Program for the last period. The Epidemiology Review will be the basis for the development of the National Action Plan on Ending TB toward 2030, which will be crucial for the Fight against Tuberculosis in Vietnam.

In order to ensure inclusive and effective engagement of a broader non-NTP partners aiming at a comprehensive Epidemiology Review to be implemented by multi-constituency implementation partnership, the NTP would like to invite Dr. Pei-Chun Chan to participate in our upcoming schedule for the Review, from 25th February to 2nd March, and from 4th to 9th March, 2019, which will be the time for the Analysis, revision of estimates and for Standard and Benchmarks assessment of Epidemiology Review.

The activity will be conducted in Vietnam National Lung Hospital, 463 Hoang Hoa Tham, Ba Dinh, Hanoi, Vietnam, for your logistics information.

We look forward to receiving your support for the activity.

With best regards.

BỆNH VIỆN PHỔI TRUNG ƯƠNG
GIÁM ĐỐC
Nguyễn Viết Nhung

Assoc. Prof. Nguyen Viet Nhung, MD, PhD
Manager, National Tuberculosis Control Program
Director, National Lung Hospital

WHO 河內 office 的 VU, Quang Hieu 及 CDC 河內 office 的 Alyssa Finlay 以及越南的邀請函。

有了這個目標，Alyssa 先跟 NTP head Nguyen Viet Nhung 推薦我但是等了將近一個月，都沒有下文；我決定與之前因為 Asia TB Expert Meeting 就同場因演講而認識的 Dr.Nhung 直接連絡。他不但是臨床看 TB 的教授，也是個相當擅長進行國際合作的領導者，英文流利且有豐富的國際交流經驗。之前在廣寧推動合作的時候，曾經又再見上一面，他非常支持台灣在廣寧的國際合作，立刻就承諾將會正式提供邀請函，讓我能順利參加此次活動，相當感激。我在今年的 1 月 23 日拿到越方的邀請函，過完年後拿到出國簽核準的好消息。Alyssa 確認我可以出席後，第二天我就收到 WHO 的 Dr. Hieu 將我置入 email 討論串的動作，反應之快，讓我驚艷。

原來約莫在一月初，WHO 的 Marek Lalli 先通知越南大致的 Schedule 如上，並提供要準備的資料。而越南也依照 WHO 的要求，由 Dr. Binh Hoa (學術地位超高，發表過非常多的 paper) 領軍， 用 Google drive 準備相關的流病資料 (附件 1)，除了 TB 流病資料之外，還需要死亡統計，人口統計以及過去各式各樣的盛行率大調查，死因調查 (verbal autopsy)，以及 inventory study (主要是為了評估 under-reporting 情況) 。 WHO 辦公室負責出資將越南的國家結核病指引翻譯成英文版供委員們理解，並且也協助協調越南及 WHO 來訪過程的一些程序。美國 CDC 因為深入地提供 VITIMES 的教育訓練，這次不但肩負 VITIMES 這個通報系統的 review 還特別針對 e-Manager (DRTB 通報系統)進行深入的了解。我因為在廣寧有系統和到基層了解個管的經驗，補足 review 無法到達基層的缺憾；此外也因為已經有在地防疫經驗，我知道要怎麼問問題來提點已知但重要的問題，將優先次序排出，使 review 進行更有效率。另外你會注意到，因為二月份台灣和越南都要春節，據越南的習慣一直到元宵節都是怎麼工作的，所以這次美國 CDC 和 WHO 本來一開始排 VITIMES REVIEW 在 2/12-15 那週，其實蠻尷尬的。這個 schedule 後來就往後延了 2 週，我也因此可以躬逢其盛。

Draft epi-review mission plan (附件 2)

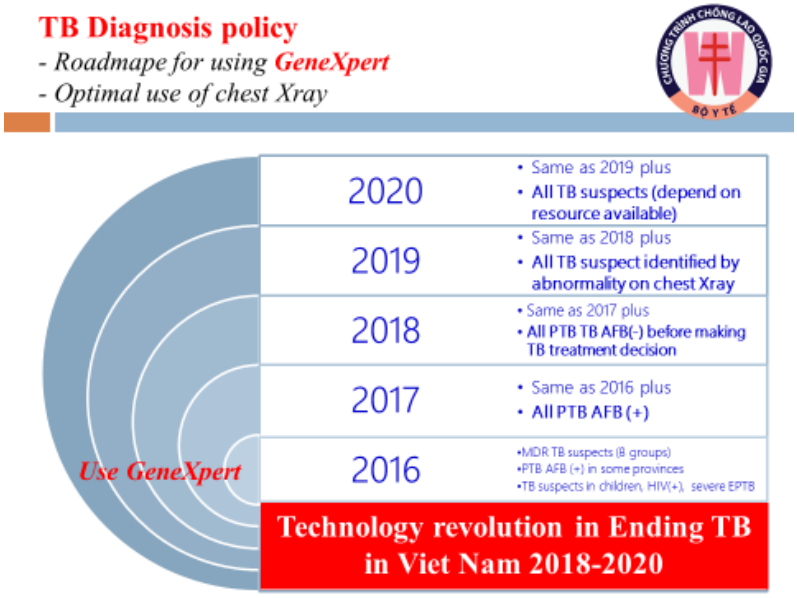
1) Epi analysis and revision of estimates 評核過程

2/25

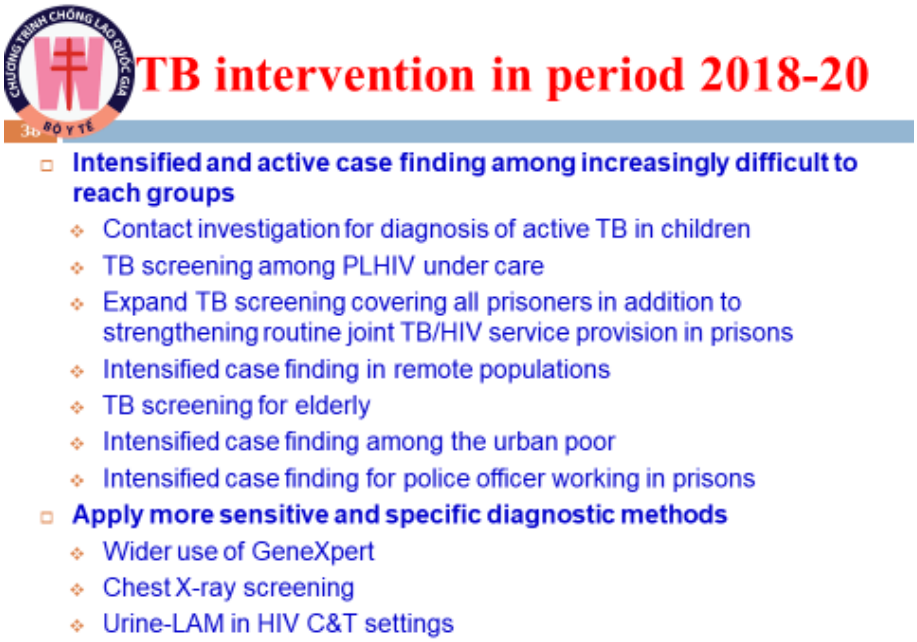
WHO 的 Philippe Glaziou 是第一週的 review leader，主要是為了做疫情 (發生率) 的估計，但通常這是跟在 Standards and Benchmarks assessment 之後做的。才能一邊看資料一邊解讀為什麼發生率其實是沒有下降的或者是穩定在下降。這次有點不同。不過 Philippe 說沒有關係，大家 (包括我) 都對越南有點了解，一樣可以順利完成的。也因為 Dr. Nhung 跟他是舊識，現任衛生部長又是 Philippe 的同學，所以越南自然是很高規格地在面對這次的 review。EpiReview 是下一週，本週是最重要的前置作業 (Epi analysis and revision of estimates & VITIMES 系統評估), 所謂的 estimation 是針對 prevalence 和 incidence，利用 10 年一次的盛行率調查資料來做 NTP 表現的評估. 由於本身也是 sampling，所以需要校正和真對闕漏直進行模式處理。VITIMES 則是進行對 TB 通報及個管系統的評估，主要是美國 CDC 過去投注資源在越南建立 TB 系統，他的功能還在增長中，是越南最重要的 TB 個案管理系統。Prevalence estimation 評估小組 team members 包括 WHO 的 Philippe Glaziou, 過去曾在法國當急診醫師 (老婆是越南人)，轉作 TB Monitoring and Evaluation 在 WHO 的 Global TB program ，代表 funder 的 Global Fund M& E specialist Marta Urrutxi Gallastegi (西班牙北方人) 以及 CDC 在越南的防疫醫師 Alyssa Finlay (菲裔美人), CDC 總部來的 Mark Fajans (印尼裔美人) 跟我一樣來見習, 另外有 WHO 在河內 office Dr Hieu 及代表 NTP 報告的 Dr. Hoa.

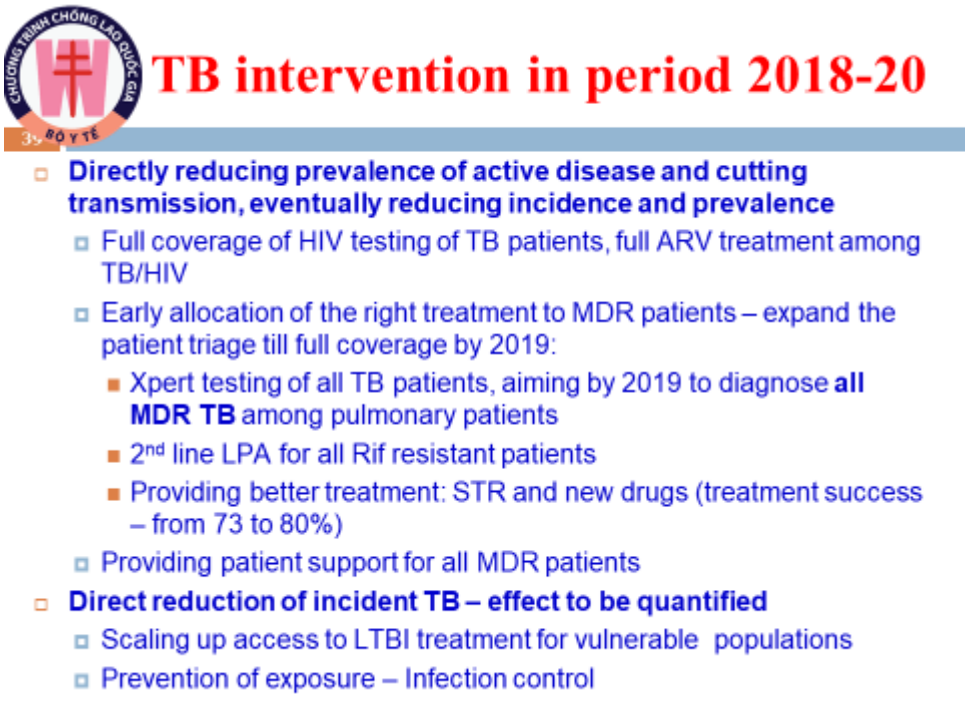
越方就依照行程將自己國家的資料一一報告 (附件 3)

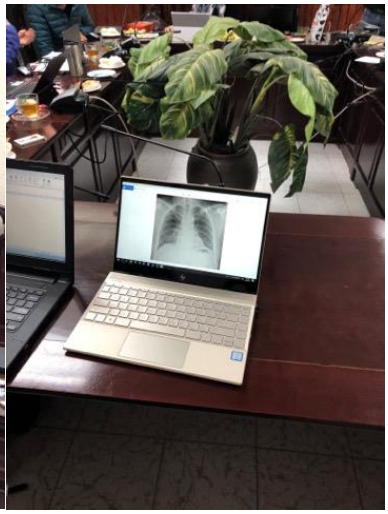
2015-2017	2018-2020
❑ **Strengthen the capacity of TB diagnosis** ➢ Fluorescence microscopy iLED, GeneXperts and X-ray machines to improve TB detection ➢ Upgrade LPA/ DST laboratories ➢ TB LAMP deployment ❑ **Case detection and diagnosis** ➢ Active case finding using X-ray and GeneXpert: people with limited access, children, prisoners, drug users in Methadone centers, elderly, etc. ➢ PPM/PAL ➢ M-health ❑ **Monitoring- Evaluating systems** ➢ Maintain/upgrade the data management system (VITIMES, E-TB manager) ❑ **TB/HIV collaboration** ➢ HR's capacity improvement ➢ TB detection for patients with HIV by GeneXpert ➢ HIV testing for all TB patients ❑ **MDR-TB** ➢ GeneXpert machines, cartridges, reagent, culture, 1st and 2nd Hain test and 2nd line DST for diagnosis and follow-up examinations ➢ Maintain the culture labs, DST, EQA ➢ Upgrade/ support the equipment for culture labs of MDR-TB treatment ➢ Supply N95 mask for infection control ➢ Supply the second-line drugs and ancillary drugs ➢ HR's capacity improvement ➢ Support MDR patients (patients bed, food, follow up transportation)	❑ **Intensified and active case finding among increasingly difficult to reach groups** ➢ Contact investigation for diagnosis of active TB in children ➢ TB screening among PLHIV under care ➢ Expand TB screening covering all prisoners in addition to strengthening routine joint TB/HIV service provision in prisons ➢ Intensified case finding in remote populations ➢ TB screening for elderly ➢ Intensified case finding among the urban poor ➢ Intensified case finding for police officer working in prisons ❑ **Apply more sensitive and specific diagnostic methods** ➢ Wider use of GeneXpert ➢ Chest X-ray screening ➢ Urine-LAM in HIV C&T settings ❑ **Directly reducing prevalence of active disease and cutting transmission, eventually reducing incidence and prevalence** ➢ Full coverage of HIV testing of TB patients, full ARV treatment among TB/HIV ➢ Early allocation of the right treatment to MDR patients – expand the patient triage till full coverage by 2019: ❖ Xpert testing of all TB patients, aiming by 2019 to diagnose **all MDR TB** among pulmonary patients ❖ 2nd line LPA for all Rif resistant patients ❖ Providing better treatment: STR and new drugs (treatment success – from 73 to 80%) ➢ Providing patient support for all MDR patients ❑ **Direct reduction of incident TB – effect to be quantified** ➢ Scaling up access to LTBI treatment for vulnerable populations ➢ Prevention of exposure – Infection control



Philippe 也在一早就 WHO 的立場，闡明由於 2006-2007 的盛行率大調查與此次 2017 的結果，沒有下降，此行的重要性 (Introduce the Epi and benchmarks assessment review: objectives and outcome)，這個檢討因為攸關於全球基金下一個 round 的申請 (2019 開始) ，所以會就數個面向進行理解。當天下午 WHO 的 Philippe 由 Dr. Hieu 和 Alyssa 陪同去了一趟 WHO 辦公室拜會。印象最深刻的是，台灣在報告中被提到是因為，台灣, 柬埔寨和美國是有跟越南交換 TB 病人轉介資料的國家。





工作小組麻煩我幫忙看幾個比較奇怪的病人資料和 CXR

晚餐 NTP Director Nguyen Viet Nhung 親自宴請大家日本料理，情義深重。

2/26

又是一連串的與不同 TB 部門會面，包括多重抗藥性結核病, 兒童結核病等。整天整個 TEAM 都在替越南資料檔案清資料，創造新變項，我趁空檔請教 Nam (IT Person for VITIMED in the NTP)， 發現，原來我們在 QN 看到的 VITIMED 是普及版，其實有升級版，也就是我們在 Union conference 看到的研究者使用畫面，那就用接觸者可以 key in 的功能鍵了。在 QN 看不到的原因是，他們只開放給 Pilot sites 使用。其實全國的目標是 2020 要給接觸者做接觸者檢查 (CXR +LTBI test) ，目前都只是 pilot sites 在用。昨

天因為答應 Alyssa 和 VietNam NTP 幫忙看病人資料判定是否能排除結核病，今天越方本來堅持要求要找自己的 panel 來討論，在盛行率大調查中，有培養結果陽性但他們想要排除診斷的。專家群表示，這樣的討論，並不能改變盛行率大調查將這些病人是病人的結果，因為已經有培養結果哪怕只有一個陽性 MTBC 也應該無法排除才對。

2/27

除了花較長的時間與 e-TB manager 這個 DRTB 的系統奮鬥之外，下午邀請實驗室來，討論 20 為診斷有疑慮的病人中，7 位由於不符合 enrolled criteria 故直接不討論，另外 13 位討論是否有理由排除結核病 。結果 13 個病人直皆有 5 個病人被當作應該不是病人 (4 個 CXR 是我看，排除不是大問題), 有一位是因為阿嬤的心臟很大，沒有辦法看清楚左下葉。實驗室的資料看起來這 5 個都用國外出產的 TB antigen test (+)來確認培養菌株是 TB 菌但 是顯微鏡下 CF(-)，故懷疑是偽陽性。剩下的 8 個人有兩個人實驗室並不支持排除，所以確定是病人，其他需要臨床追蹤。我用簡單的方式給意見，因為盛行率調查都已經是 2017 年的事情了，先請資料人員確認，是不是這 20 個病人有人已經在系統中通報成病人了呢? 有這麼長的時間，卻任憑地方基層不作為，不去追蹤病人的任何臨床狀態，這不是正確的態度，也凸顯中央叫不動個省的無力；此外如果國家實驗室真的認為這是偽陽性，那麼是不是應該用其他的方式來證實培養出來 CF(-) 的其實是 NTM? 國家實驗室不是沒有能力但是對於病人是否是病人，缺乏熱情是很可惜的。

2/28

早上 Philippe 先報告了明天要 debriefing 的資料，最後與 Dr. Hoa 達成的共識是，雖然這次的盛行率調查比起 10 年前，有更好的工具，造成較高的 case finding, 但 Philippe 用 imputation 的方式幫忙 2007 回推，如果當年有今天的工具，會有更高的 prevalence ，大家勉強接受這個結果，並討論怎麼解釋。依照這幾年的 inventory study 的結果，10-30% 可能是已經在治療的病人但是沒有被通報(因為層層通報層層漏失), 20-25% 沒有 detection，來解

釋盛行率和發生率之間的 gap 。當然越南在個案管理和治療上，由於資源不足，仍然有需要多努力的部分，我的觀察主要是每次 WHO 有新的更動，其實越南就得開始找資源，但往往會有缺藥和缺試劑等挑戰必須面對。例如 BDQ 要到 2020 才能取得足夠的量，而 INH 也曾經斷斷續續的缺貨。此外九個月的處方早在 2016 就由 WHO 推薦，也設定了 2018 年要達到 80%的目標，但因為國內指引到 2018 年 8 月才通過，所以 2018 年就只有 30%的病人接受短程處方。對於抗藥性病人的偵測，我認為由於以下幾個原因導致偵測不完整:

1. Presumptive MDRTB => not recorded and monitored only included in guidelines of 8 criteria
2. If they were transferred or sputum to the GeneXpert sites, there was no connection of GeneXpert result of RMP resistant (+) to be registered forcefully in e TB manager or transfer from
3. The procurement of no matter second line drug or first line drug still under pushing system for Quant TB; sometimes lack of cartridge sometimes lack of 2nd line drug will make registration into e TB manager difficult (they need these 2 criteira to transfer the data to VITIMES)

2/29

今天是正式跟 NTP, WHO 以及全球基金代表報告的日子，報告的重點如下

Analysis of 2017 prevalence survey

- Re-analysis of 2007 prevalence survey
- Estimation of trends in prevalence
- Estimation of overall prevalence (all forms, all ages)
- Estimation of incidence over time

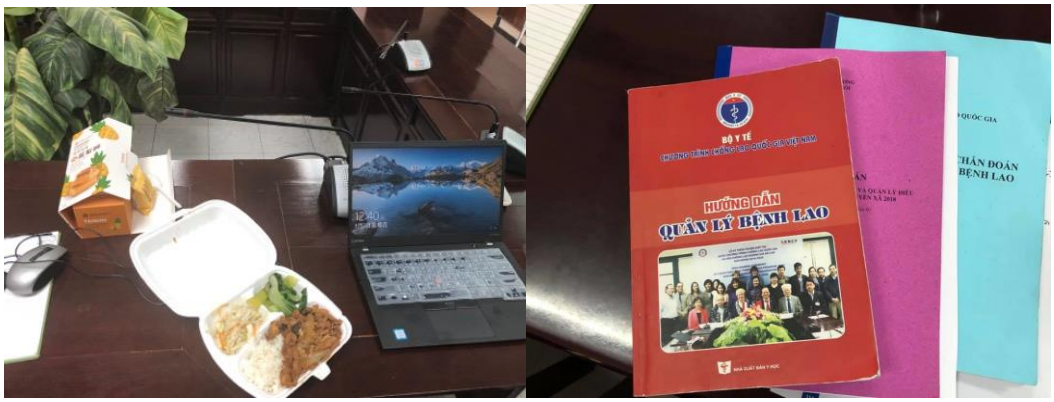
氣氛其實相當凝重，即使有爭議的個案沒有納入盛行率的分子計算(至少還少算 5-8 人)，還是讓 NTP 壓力相當沉重；Philippe 只好拿印尼和菲律賓的例子來鼓勵越南，因為前者的盛行率調查估計有 50%病人沒有通報，而後者兩次盛行率調查都沒有進步。越南則至少在回推發生率是確實有下降，只是下降的速度不如預期，僅有 3%，離 5% 的目標頗遠。Philippe 不斷地

強調男性 90%抽菸是造成越南男性罹病率遠高於女性的主因，應該要想辦法改善這個部分，也對越南已經立法強制通報，卻仍然有一定的個案，在私人醫院診所診斷結核病，沒有通報表示重視；表示過去用全球基金提供資金就通報，一旦計畫結束就整個消失的問題，一直存在，希望越南 NTP 不要只是想用法強制，也要想想為什麼臨床那麼不願意通報，而且補貼就增加通報的現象。Dr. Nhung 則直說，過去這 3 年人民委員會提供龐大的資金濟助結核病防治，但卻無法在短期做出下降的成績來，非常擔憂以後都沒有資金了。希望將胸腔病院轉型成不只是做 TB 還要做非傳染性的肺疾病，這樣才能搶一些非傳染病的資源來幫助 TB。Dr. Nhung 問我有沒有什麼好建議，我就分享台灣在完整通報率上，除了法條完備之外，與全民健康保險合作 No notification / no reimbursement 的政策，一定要胡蘿蔔和棒子都真的有用；即使到現在的今天，台灣還是戰戰兢兢地維護通報的方便性，以及個案管理系統的實用性和便民，對輸入的個案管理者來說，這些東西是對日後他要做成績時，相當方便的系統，他才會願意輸入；如果技術面夠好，能將醫院的 HIS 系統資料直接銜接，也許可以減省更多人力；確保線上通報個案管理系統是方便良好使用的，才有可能將那 10-30% 的 gap 變小。此外，那些沒有找到的個案，除了現在全球基金大力支持的監獄篩檢 (2%的個案從監獄找到)，也要考慮落實基層的接觸者檢查，在接觸者主動發現，畢竟是最經濟實惠的，如果現在就建議接觸者的資料進入 VITIMEDS，未來有能力提供潛伏結核感染治療時，就能夠一網打盡。


本週最後一天 TIME modelling 的 Jamie Rudman (LSHTM 倫敦衛生與熱帶醫學院) 和 WHO 的 Marek Lalli 都抵達河內，一邊調時差一邊開始計算下週要用的資料。

3/1 Alyssa 出面約了大家在週六的午餐，討論下週的工作分配，據說是河內最老的河粉店，北越的 style，清爽無負擔。

2) Standards & Benchmarks 評核過程 (schedule 附件 4)



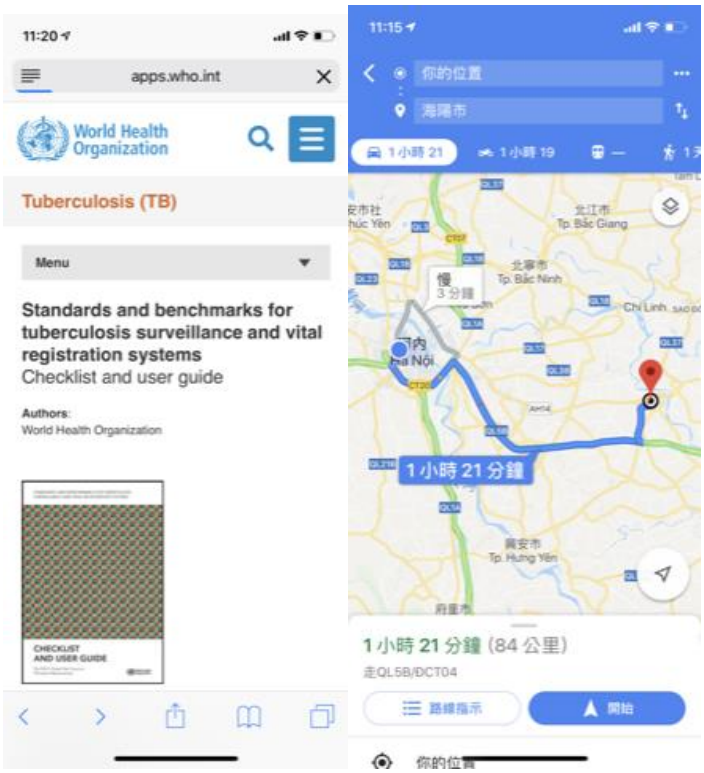
本週 KNCV 派來的喬治亞共和國的 Veriko Mirtskhulava 加入我們，她也是一位醫師，曾經在 Emory University 拿 PhD。詳細的 schedule 請看附件 4。照例，Dr. Nhung 又正式來開場一次，強調要外部專家們，仔細看各個層級如何落實這些 2015 以後引進的新診斷新藥物，再次強調為何沒有扎實的下降 5%。本週的 Team lead 是 Marek Lalli，所以他昨天又再度跟組員闡釋這個 Epireview 的目的，除了協助 team 整理資料，就是要搞懂季報表 (quarterly report) 都在報些什麼，以及相關的表單，是否按照規定在時限內

層層上報，不漏掉任何病人，如果有漏掉比例是多少，在那些情況下可能會漏掉要一一記錄下來。

Detection, treatment management activities:
1. TB register (M1).
2. Request for sputum smear microscopy examination (M2).
3. Register for Sputum smear microscopy examination (M3).
4. Report on laboratory testing activities (M4).
5. Register for TB treatment at district level (M5).
6. Report on the admission of TB patients (M6).
7. Report on sputum conversion after 2 months of treatment (M7).
8. Report on TB treatment outcomes (M8).
9. Report on management of TB control program at district level (M9).
10. DOT card (M10).
11. Patient treatment card (M11).
12. Patient referral form for continuation of treatment (M12).
13. Confirmation of receipt of referral (M13).
14. Treatment outcomes of referred patient (M14).
15. Register for TB treatment management (for commune level and equivalent units) (M15)
Other forms: Register for TB screening and monitoring INH Preventive therapy for children
in contact with TB patients (S1), Referral form for children with symptoms suggestive of
TB (M1-TE), Report on children exposed to sources of infection and INH Preventive Therapy
(M2-TE), etc.

這些評核的方式就是依照以下的這本 WHO 指引 Standards and benchmarks for TB surveillance and vital registration system 來檢視 10 個通報系統完整度的標準和 3 個針對 MDRTB, HIV, 及 pediatric TB 進行的標準，是否都有符合。User guide 針對每一個 checklist 上的項目，像我們感控查核除了條文之外還有基準和共識一樣，有仔細說明評核的標準。而一直到今天我們都還在解決越方將 3/6 要去訪視的兩個省分的人員弄反的事情，原則上在越南進行工作是一定要報給黨知道，但是兩組人馬換來換去，基本上對越方有困難，但越方還是依照 Marek 的要求搞定了，此外因為我和 Veriko 都是拿觀光簽證進來的，本來應該是要由 Marek 和 Alyssa 搭配我們

才對，但是 Marek 希望跟 Alyssa 一組去看河內最大通報最多的肺病醫院 (Hanoi Lung Hospital)，所以就由兩位觀光客加美國 CDC 實習生 Mark 前往海陽市。這是一個距離河內要一小時半的東邊城市。



NGO 來報告越南的成果:

Dr. Nguyen Thu Anh 代表 Woolcock Institute of Medical Research 報告 ACT3 & 4B

主要是投資在接觸者檢查橋接到 LTBI 治療的教育訓練，施行的位置是在中越的兩個縣市，由六國提供資近，治療對象限縮在 50 歲以下，因為是研究，故將接觸者檢查都從 commun 移到 district level，成效明顯比目前全國的一般接觸者檢查要好，建議中央可以做類似的改變。使用保加利亞的 PPD 當作 LTBI 檢驗工具。

Friends for International TB Relief (FIT) 的 Dr. Luan Vo Nguyen Quang 報告 Zero TB VN 雖然報告者掛的是 Dr. Le Van Hoi，但是 Dr. Hoi 似乎不是很清楚細節，上次在亞洲專家會議就見過的 Dr. Quang 真的是非常優

秀，FIT 與 NTP 跟其他 NTP (TB lung association、Hanoi medical university、Hai-phong medical university、HCM public health association、TB REACH、UNOPS) 一起執行所謂 Zero TB VN 的項目:

Two steps:

Optimizing patient cascade from onset to cure and post exposure management

Community and non NTP provider engagement and strengthening

他們透過項目多找到 1100 位病人，治療 900 多位 LTBI 病人，都在 NTP 的框架下運行。主要是社區的志工，協助接觸者檢查，但是有 P4P 制度，志工使用手機將接觸者資料傳回 VITIMES (ACIS model)，介接的主要源頭是指標個案在 VITIMES 裡的系統號碼，所以必須要先有病人被通報才能開始做接檢的概念。接觸者操作型定義包括共用廚房，跟指標住在同一個屋簷下有一個月，並且要能取得接觸者的 ID，發現率每 10 萬人口 243 人。若能提供 mobile CXR 車，那發現率可以衝到 每 10 萬人口 748 人。可惜 LTBI 治療的接受度不高，畢竟還是在 commune level，治療僅 1/4，與 ACT3 & 4B 各有擅長，若 NTP 能夠截長補短，創造一個好的模式給全國使用，那就是越南之福了。還提供少量的 incentive 給窮人，未來打算要做成微型貸款。因為在越南，結核病治療仍然有超過 20%以上的病人面臨災難性支出，目前的善款能夠支付，但是長遠來看還是需要貸款的方式。

另外以 Private Public Mixed (PPM) 的精神，在 Hai Phong Int'l General Hospital (海防國際醫療醫院)的門診，由院長指派最危險的門診，由醫師選擇有呼吸道症狀的病人來由項目提供免費的胸部 X 光片和後續懷疑結核病個案的驗痰費用，一旦找到個案則提供醫師 500000 VND 的獎金 (約 600 NTD)。發現率薇 52/2787=每 10 萬人口將近 2000 人。他們也曾想過增加兒童結核病的診斷，但是兒童醫師太少，很多一般科醫師尤其是 TB 醫師都無法診斷兒童或者治療兒童，導致計畫失敗。

在胡志明市的項目則是 PPM，類似 inventory study 的概念，但是是直接要求私人診所回報是否有疑似結核病的病人需要免費的 CXR 和 Xpert，但容忍陽性不通報。估計因此增加該地區 18%的通報，對於細菌學證據陽性的病人增加了超過 30%。

M& E 系統

靈魂人物是 NAM Do，感覺上整個資訊室，主任搞不清楚的事情他都一清二楚，是這次 Epireview 可以進行得下去的關鍵人物。因為要面對擁有超過 9,500 萬人口，位居世界第 15 名的越南，意味著要面對 8 個區，65 省，700 多個縣市和 11000 多個 commune，資訊系統開發能在經費最小的情況下做最多事情。很遺憾的全國 IT 也都跟他對口，所以我們常常要趁他空檔的時候，跟他討論跟他要資料並且確認資料是乾淨的。以下是這次分析做到的八個區的分布:

由 Translated from Image:VietnameseRegions.png by Esso, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=727383

3/5

今天則是針對兒童結核病, 國家實驗室以及 Xpert, XpertAlert 等分布進行了解

兒童結核病

S1 log book used for HHC at commu level, there's a log book for contact investigation in the 4 project regions
After 2014, revised guidelines started CI scaling up to other regions, but not into VITIMES.
S1 purpose: child presumptive derived from contacts

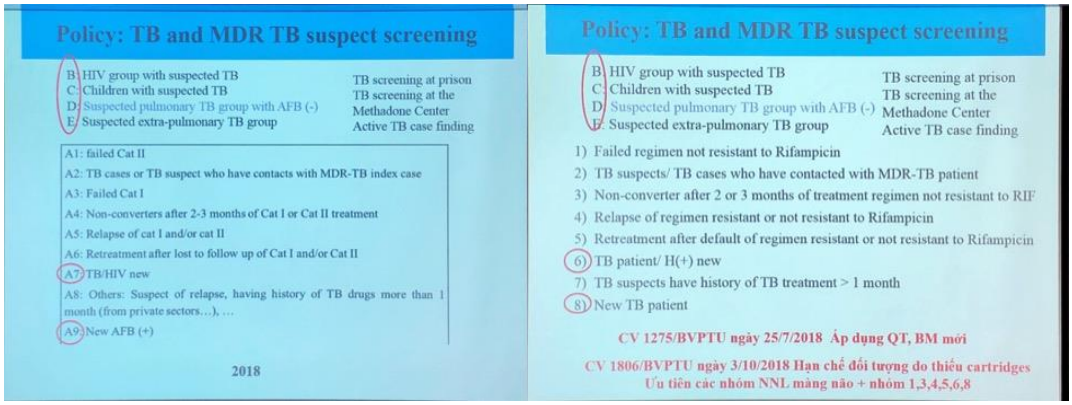
Challenges for Ped TB: Only 3/ 51 national & provincial lung hospital => pediatric department; lack of knowledge of dx and treatment

There's insufficient resources for childhood TB. Children's parents want to take them to General hospitals for diagnosis of TB. Without support of GF, NTP has a difficult time to start the training of pediatric TB diagnosis. Maintain of connection of PPM is also very important => free diagnosis depends on provincial level. They like to have electronic data entry of contacts in M & E.

DRTB 偵測 (完全由實驗室負責但是他們又不負責 DRTB 政策)

GeneXpert 110 sites with 174 machines
Culture: 31
LPA & DST: 4
Indications for test of traditional DST and LPA
DST 1st line: confirmed negative GeneXpert on treatment II (retreatment patient, patient with discrepancy GeneXpert)
DST 2nd line: LPA 2nd sensitive but previously usage of 2nd line drug

LPA 1st line: rarely used, but KAT-G mutation pre- or XDRTB
LPA 2nd line: for all RMP (+) resistance identified by GeneXpert, culture positive after 4 month of treatment IV, failure with treatment IV



2018 plan to do GeneXpert for AFS(-) PTB but not yet enrolled (因為 cartridge shortage)

2019 A1+A3 合併為 failed

1,3,4,5,7 priority，But B,C,D,F (6), (8) 暫時無法執行 (目前的狀態)

預計全國 234 (including 15 Omni) BY 2020

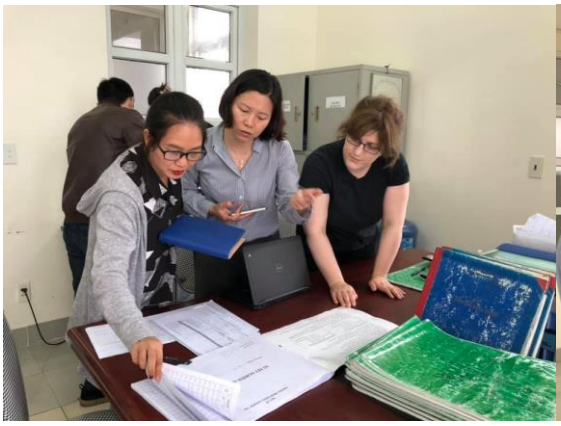
Samples transportation 34 provinces since 2013 -> 63 provinces in 2015，由 NTP 買單 (NTP pay for that inter-provincial and intra-provincial)，但是實際上可能不同縣市不同 level 不一樣。

3/6

Site visits (我參加的是海陽省) (schedule 在附件 5-1, 5-2，附件 6)

因為小組長嚴重時差，最後大部分就由我來主導，把問題問完，讓 Mark 補位詢問 DRTB 的部分，事實上這個選來給我們看的省分是有把 DRTB 鍵入 e-TB manager 資料庫內的，但是問題是出在 VITIMES 與 e-TB manager 之間的互相流動，和 e TB manager 在病人銷案後就看不到的設計問題。以及越南可能要搞清楚到底是哪些省分 (至少廣寧也都有鍵入) 仍然不鍵入，不然又要交季報告又要鍵入電腦，兩邊都要做工的情況不能維持太久，基層會受不了的。在肺病醫院花了很多時間拿不到我們預期的 Lab log book (M5) ，對照完 case base data log book (M10)都已經中午了，所以只好被請去外面用午餐。Veriko 堅持在去 district level 之前一定要回去看 M5，果然完一的問題在於 M5 的病人最後有沒有通報，並沒有直接的權責管理人，即便醫院的回答是 district level 應該要追病人，但是沒有好的機制

可以追蹤。這邊的病人都會進省層級的委員會透過諮詢來確定診斷。也在這邊看到兒童接觸者的 Register for TB screening and monitoring INH Preventive therapy for children in contact with TB patients (S1)的季報表。



3/7

與 Marek 一起去拜會 Farmer Union 這個 NGO 並且回到辦公室跟大家討論明天的 debriefing，幾乎每個成員都有資料還不乾淨的問題，然後大家就 Standard benchmarks 的 part A & part B 進行意見的統合。

3) 報告及相關注意事項

我協助了 WHO team 的資料部分主要有 HIV-TB 資料處理和呈現，收錄在正式報告中，另外對於兒童結核病以及接觸者提供文字於正式報告中，另外就是海陽省 site visit 的 field note 報告。



看到比較直接需要注意的包括:

- 通報個案之男女比，於 2016 年從先前的 3.0~ 3.1 跌至 2.6 之間，但其盛行率調查所推估之模式為 4: 1，不穩定可能意味著男性有低報的問題
- 2016 年份的男性 25-35 歲突然增加了 4000 個病人
- Relapse 病人在 2018 年突然下降
- RR-TB 病人的治療覆蓋率在 2018 年似乎下降且治療成功率(2016 年世代)也有下降的狀況
- 國家的人口資料透過與個省的衛生部取得，非國家正式人口資料之統計，但一直到我們結束離開這個資料還是來不及正式提供給 team。
- 15 歲以下兒童的結核病診斷僅佔全國的 1.6% (Among new TB cases, the percentage of children diagnosed with TB is between 5-15% in low- and middle-income countries.)，且 0-4 歲: 5-14 歲的通報比例為 0.64 (Ratio of age groups

0-4 to 5-14 years is in the range of 1.5-3.0.)，兒童結核病通報低估與診斷低估是兩大待解決問題。

Standard	2013	2019
B1.1 Definitions consistent with WHO	Met	Met
B1.2 Designed to collect minimum set of variables	Partially met	Met
B1.3 Reception of scheduled data	Not met	Could not assess
B1.4 Quality of data in quarterly reports (aggregate)	Not met	Could not assess
B1.5 Quality of data in national database (case-based)	Not met	Not met
B1.6 Surveillance data are externally consistent	Not met	Not met
B1.7 Surveillance data are internally consistent	Met	Partially met
B1.8 All diagnosed cases are reports	Partially met	Partially met
B1.9 Population has good access to health care	Not met	Not met
B1.10 Quality and coverage of vital registration system	Not met	Not met
B2.1 TB Surveillance for MDR TB	Met	Partially met
B2.2 TB Surveillance for TB-HIV	Not met	Met
B2.3 TB Surveillance for paediatric TB	Not met	Not met
	3 met 2 partially met 8 not met	3 met 3 partially met 5 not met 2 not assessed

伍、心得與建議

這次在出發前往河內之前，其實都是很忐忑的。一來雖然跟領導們都見過面，但是怕在地 WHO 辦公室會有什麼動作來阻擋，出政治意涵的狀況，那並非專業結核病專家的我可以分心對付的；二來也怕在書寫報告的過程中，拿捏不好我的角色和國籍有可能帶來負面的結果。幸好，整趟 review 下來，一方面是江振源教授在越南相當有名，幾乎人人都可以跟我來上兩句；此外，廣寧的經驗讓我對越南的 TB 系統不陌生，甚至更接近真實的基層狀況；最後，我可能實在很好用，兩週的 WHO leaders 都相當重用我，甚至拜託我直接進行資料探索及參與報告撰寫給意見。我想這趟對我自己來說是學習付出學習貢獻，一趟收穫很多的旅程。至於在地好朋友 Alyssa 的溫暖態度我只能說溢於言表的感謝，希望未來我們有更多的合作機會。另外廣寧的老朋友 Mr. Chung 還特地在週五跑一趟河內辦事處申請台灣獎學金的同時，來 NTP 辦公室這邊，跟我討論當時廣寧即將要接待台灣過去的合作方案。在此感謝促成這次交流的所有幫手。

建議有三項：

1. 新南向的國際合作推展並不容易，需要很多人脈累積和在地感情
2. WHO 的技術會議或者查核的經驗值，不是不可能參與，只是要經營。
3. 若要在越南要有更好的國際合作成果，需要更多的在地夥伴支援才可行。

陆、附件（照片）


TÌNH HÌNH BỆNH PHỔI TRONG NƯỚC MỚI CHẨN
LÃNH ĐẠO BỆNH VIỆN QUA CÁC THỜI KỲ


HỒ CHÍ MINH
IỆT NAM MUÔN NĂM !


HÀ NỘI
NHỮNG KHOẢNH KHẮC
Tháng 10/1954
HANOI: UNFORGETTABLE MOMENTS IN OCTOBER 1954

附件 1 資料準備

Preparation of the data for analysis can sometimes take a lot of time; therefore, I recommend that this starts as soon as possible and shared with us ahead of the mission.

Purpose:
The Epi Review aims to help us better understand the characteristics of TB epidemiology in the country and estimate the capacity of the TB surveillance system to accurately measure TB incidence and mortality. Specifically, this review will help identify potential gaps in surveillance that could benefit from increased attention; for example, potential under-diagnosis or under-reporting of TB cases.

In collaboration with the NTP, the team will use the findings from the review to develop a set of recommendations and prioritised activities to strengthen the TB surveillance system as well as care and prevention.

Process:
There are two main axes to the Epi Review which will be carried out in two coherent parts:

1. Standards and Benchmarks assessment:
This part of the review will use the WHO TB surveillance checklist of standards and benchmarks (please see attached for blank checklist). The objective of this part of the Review is to describe the TB surveillance system in Vietnam as well as assess the quality and exhaustivity of the available data related to surveillance and vital registration.

The methods include the following:

- We will undertake a **desk review** of all available documents related to TB surveillance, care and prevention. A list of documents we ask for is found in the attached document. We kindly ask that these documents are prepared and shared with us in advance of the mission. English version of the documents will be really helpful. Not all of these documents will be available in country – that's OK.
- We will conduct **interviews** with staff members at various levels of the TB Programme and with other relevant organisations involved in TB surveillance, care and prevention.
- We will perform **site visits** to TB centres and labs to verify data and have conversations with staff members. This will help us gain an understanding of TB data recording at the peripheral level as well as any challenges the staff may experience.

Normally, all of this will be done in collaboration with members of the NTP, specifically members of the M&E team. It would be ideal if members of the M&E team could participant from the beginning to the end as this would facilitate the review process and could serve as a good exercise for them as well.

Please note that we may need someone to act as interpreter during our site visits.

External team:

- Marek Lalli (WHO)
- Jens Levy (KNCV)
- Edine Tiemersma (KNCV),

Local team:

- NTP: M&E staff. We would also request to speak with various focal points at the central level; for example, MDR, paediatric TB, TB/HIV, Private-Public Partnership.
- Alyssa Finlay (CDC)
- WHO-CO

2. Analysis of TB surveillance data

In this part of the review we will analyse routinely collected surveillance data in order to assess TB trends over time and by geographical areas. An update of burden estimates will also be undertaken.

We have added a component to this Review to use the TIME model to generate projections of the trends of TB indicators to complement the analysis of routine data. The NTP has used TIME to inform the development of past funding requests to the Global Fund.

External team:

- Philippe Glaziou (WHO)
- Marek Lalli (WHO)
- Jens Levy (KNCV)
- Edine Tiemersma (KNCV)
- Jamie Rudman (TIME team, LSHTM)

Local team:

- NTP: at least the M&E staff; however, it would be beneficial if focal points could take part in the interpretation of trends.
- Dr Nguyen Tuan Anh (VICTORY / Hanoi Medical University)
- Alyssa Finlay (CDC)

Preparation of documents for desk review:

Please see the attachment for a list of requested documents. Not all will be relevant to the type of surveillance system in Vietnam, and as mentioned, do not worry if not all the documents are available. Please share with us English version of the documents if they are available. Please share the documents in advance of the mission so that we can start to familiarise ourselves with the situation.

Preparation of data:

In order for us to carry out the analysis we will need raw surveillance data that you will have used to produce your own analyses for annual reports, for example. We request that the timeline of the data to be at least for the past 5 years, in order to establish a decent trend. Please provide data at the sub-national level, ideally down to the lowest administrative level.

- If aggregate data is available: We would need case notifications by age, sex, site of disease, treatment history, HIV status, as well as treatment outcomes data, over time and by geography.

- DHIS-2: If you use DHIS-2 for safeguarding and analysis of your TB surveillance data, then we would request access to the data uploaded to this platform.

- If case-based data is available: An export of data for all variables in except or csv format. Please help us by providing the variables translated into English.

If aggregate and case-based data are available, then it would be ideal to provide both datasets.

We would also require demographic/census data to calculate rates. Please provide any population data available by age, sex and geography.

It would be extremely helpful if the data were prepared and shared with us ahead of time so that we can start cleaning/analysis prior to our visit.

Please note that my date of arrival is 28 February; however, I am aiming to start working on the analysis remotely as of the 25 February. However, Philippe will be working with you in Vietnam on the analysis as of 25 February.

Preparation of agenda and visits:
The first week of the mission will be devoted to revising estimates and analysing TB surveillance data. The second week we will work in teams to finish up any outstanding analyses, conduct field visits, perform TIME modelling, and undertake the Standards and Benchmarks assessment.

We would like to visit the following places/individuals during the mission:
- Health Management & Information System office
- National Reference Laboratory
- Any major NGOs contributing to TB control in the country
- The Primary Recipient, if not the programme directly
- Office of National Statistics for mortality and census data
- Focal point for TB/HIV, TB/HIV Clinic
- Focal point for Paediatric TB, Paediatric TB Clinic
- Focal point for MDR-TB, MDR-TB Clinic
- Basic Management Units: at least one in a zone (or high burden) and one in a rural zone (or low burden), including associated lab.

It would also be useful if we could get an understanding of the collaboration the NTP has with local research institutes to see how TB surveillance links with operational and implementation research in the country.

We will provide a rough structure of the agenda and will then ask the NTP to fill in gaps and make adjustments where needed.

附件 2 Draft epi-review mission plan (整個 review 的行程)

Activity	**Dates**	**Lead (s)**	**Contributing**
VITIMES review	12-15 Feb	Alyssa Finlay (CDC)	WHO CO
Epi analysis and revision of estimates	25th Feb-2nd March	Philippe Glaziou (WHO)	Marek Lalli (WHO)
Standards and Benchmarks assessment	4-9th March	Marek Lalli (WHO)	Jens Levy (KNCV)
TIME modelling	4-9th March	Jamie Rudman (LSHTM)	Jens Levy (KNCV)
Final report	9th-22nd March	Philippe/Marek (WHO)	Alyssa, Jens, Jamie
Mission co-ordinator	Jan-Mar 19	WHO CO	NTP

附件 3 **Epi analysis and revision of estimates** 的行程

Tentative agenda: Epi analysis and revision of estimates				
Time: 25th Feb to 1st Mar 2019				
Team leader: Philippe Glaziou (WHO), Dr. Nhung (NTP), Dr. Binh Hoa (NTP)				
International participants: Marek Lalli, Edine Tiemersma, Jamie Rudman, Marta Urrutxi, Anita Chan, Mark Fajans				
Local paticipants: M&E staffs, focal person of PMDT, PPM, Childhood TB, PAL, TB, TB in prision, NRL, TB/HIV, Tuan Anh, Alyssa, Van Anh, Huong, Satoko, Hieu				
Content: Analysis of Epi Data				
Venue: G1 meeting at National Lung Hospital				
Time	**Activities**	**PIC**	**Note**	**Preparation**
Monday, 25/02/2019				
8:45 - 9:00	Welcome speech from Director	Prof. Nguyen Viet Nhung		
9:00 - 10:15	Introduce the Epi and benmarks accessment review: objectives and outcome	Dr.Philippe Glaziou Dr. Marek Lalli		
10:15 - 10:30	Tea break			
10:30 - 11:30	Overview of Vietnam National Tuberculosis Program	Dr. Nguyen Viet Nhung		

11:30 - 12:00	Concensus on the EPI schedule and benmarks accessment	Dr. Nguyen Binh Hoa		
12:00- 13:30	Lunch			
13:30 - 15:00	Updating the interim results of the prevalence survey	Dr. Nguyen Binh Hoa		TB Prevalence survey in 2007 and 2018
15:00 - 15:15	Tea break			
15:15 - 16:30	Comparison with the previous survey	Dr. Nguyen Binh Hoa		
16:30 - 17:00	Review the preparation for desk review			TB Prevalence survey in 2007 and 2018
Tuesday, 26/02/2019				
9:00 - 10:15	Review results of the inventory study (% under-reporting of confirmed and of clinically diagnosed cases)	Dr. Nguyen Tuan Anh Mr. Cu - VICTORY		Inventory data and progress report
10:15 - 10:30	Tea break			
10:30 - 12:00	Trends in provincial case notification rates (new + relapse cases)	Dr. Nguyen Quoc Minh M&E unit - National Lung Hospital	Nam and Thanh to support the data on Vitimes if required	
12:00 - 13:30	Lunch			
13:30 - 15:30	Trends in provincial case notification rates (new + relapse cases)	Dr. Nguyen Quoc Minh M&E unit - National Lung Hospital	Nam and Thanh to support the data on Vitimes if required	Dataset of case notification (new + relapse) by province over time (ideally 2000-2018 or else 2000-2017), including bacteriological confirmation (number with at least one positive result in smear microscopy and/or culture and/or xpert positive), HIV results if available and also population estimates: province, year, population, cases, confirmed, HIVtested, HIVpositive
15:30 - 16:00	Move to WHO office		Number of participants	

			need to be confirmed	
16:00 - 17:00	WR briefing on objctives, methods and plan of implementing Epi-review	Dr. Philippe Glaziou Dr. Satoko Otsu Dr. Hieu		
Wed, 27/02/2019				
9:00 - 10:15	Trend in MDR TB, Pre XDR and XDR	Dr. Nguyen Duc Chinh Dr. Nguyen Van Hung Dr. Khieu Thi Thuy Ngoc Dr. Hoang Thi Thanh Thuy PMDT Unit NRL Unit	Nam for eTB data if required	Dataset of case notification/ enrolment by province over time (2009 - 2018), including bacteriological confirmation (number with xpert positive, LPA and DST resistant to first and/or second line drugs)
10:15 - 10:30	Tea break			
10:30 - 12:00	Trend in MDR TB, Pre XDR and XDR	Dr. Nguyen Duc Chinh Dr. Nguyen Van Hung Dr. Khieu Thi Thuy Ngoc Dr. Hoang Thi Thanh Thuy PMDT Unit NRL Unit	Nam for eTB data if required	
12:00 - 13:30	Lunch			

13:30 - 15:00	Trend in TB/HIV and TB in prison	Dr. Nguyen Van Pham Dr. Chu Manh Dung M&E Unit TB/HIV unit		Dataset of case notification (new + relapse) by province over time (ideally 2000-2018 or else 2000-2017), including bacteriological confirmation (number with at least one positive result in smear microscopy and/or culture and/or xpert positive), HIV results if available and also population estimates: province, year, population, cases, confirmed, HIVtested, HIVpositive
15:00 - 15:15	Tea break			
15:15 - 15:45	Latest TB mortality data	Ngoc Anh		Mortality report
15:45 - 17:00	Trends in pediatric TB	Dr. Pham Quang Tue		Dataset of case notification (new + relapse) by province over time (ideally 2000-2018 or else 2000-2017), including bacteriological confirmation (number with at least one positive result in smear microscopy and/or culture and/or xpert positive)
Thursday, 28/02/2019				
9:00 - 12:00	Relevant research papers (community studies)	Dr. Nguyen Binh Hoa Ms. Pham Huyen Trang Dr. Nguyen Thu Thuong Ms. Le Thi Ngoc Anh	Giang Nguyen to support	List of research conducted from 2000 to 2018
10:00 - 10: 15	Tea break			
10:15 - 12:00	Relevant research papers (community studies)			
12:00 - 13:30	Lunch			

13:30 - 15:00	TIME model to generate projections of the trends of TB indicators to complement the analysis of routine data	Tuan Anh, Hoa, Nam and TIME modeling team	TIME modeling will work for whole week. This section is to work with technical unit to varify some parameter if needed	
15:00 - 15:15	Tea break			
15:15 - 17:00	TIME model to generate projections of the trends of TB indicators to complement the analysis of routine data		TIME modeling will work for whole week. This section is to work with technical unit to varify some parameter if needed	
Friday, 01/03/2019				
9:00 - 16:00	Data analysis and re-estimate the TB incidence and trend of TB	Dr. Philippe Glaziou		
16:00 - 17:00	Concensus on the result of week 1			

附件 4. **Standards and Benchmarks assessment 的行程**

Tentative agenda: Standards and Benchmarks assessment				
Team leader: Marek Lalli (WHO), Dr. Nhung (NTP), Dr. Binh Hoa (NTP)				
International Participants: Veriko Mirtskhulava, Anita Chan, Mark Fajans				
Local paticipants: M&E staffs, focal person of PMDT, PPM, Childhood TB, PAL, TB, TB in prision, NRL, TB/HIV, Tuan Anh, Alyssa, Van Anh, Huong, Satoko, Hieu				
Content: Standards and Benchmark, Completion of ETR review (VITIMES, eTB Manager)				
Venue: G1 meeting at National Lung Hospital				
Time	**Activities**	**PIC**	**Note**	**Preparation**
Monday, 04/03/219				
08:45 - 9:00	Welcome speech from Director	Prof. Nguyen Viet Nhung		
9:00 - 10:00	Introduction of standard and benmarks assesment: Objectives and outcomes	Dr. Marek Lalli		
10:00 - 10:15	Tea break			
10:15 - 12:00	M&E component of NTP, current surveillance system: Vitimes and eTB	Dr. Nguyen Dinh Tuan		
12:00 - 13:30	Lunch			
13:30 - 14:15	Brief overview of innovative program case finding activities and results of ZTV including challenges and successes	Dr. Le Van Hoi		
14:15 - 15:00	ACT3,4 results: challenges and successes and community based research	Dr. Nguyen Thu Anh Woolcock Institute of Medical Research		

	conducted by WIMR			
15:00 -15:15	Tea break			
15:15 - 16:15	Desk review for PMDT management	Dr. Marek Lalli Dr. Nguyen Duc Chinh Dr. Hoang Thi Thanh Thuy	PMDT Unit	• National guidelines for MDRTB o TB Case definitions o NTP Key Indicators List (Draft PF, M&E Framework) • Annual Reports: 2015, 2016, 2017 o Quarterly reports of TB cases sent to the NTP from the Provincial hospitals (2015, 2016, 2017, 2018)
16:15 - 17:00	Desk review for DSTB management	Dr. Marek Lalli Dr. Nguyen Dinh Tuan Dr. Nguyen Quoc Minh Dr. Nguyen Van Pham Dr. Chu Manh Dung	M&E Unit	• National guidelines for TB, TB/HIV, TB in prison o TB Case definitions o NTP Key Indicators List (Draft PF, M&E Framework) • Annual Reports: 2015, 2016, 2017 o Quarterly reports of TB cases sent to the NTP from the DTUs 2015, 2016, 2018
Tuesday, 05/03/2019				
9:00 - 10:00	Desk review for childhood management	Dr. Marek Lalli Dr. Pham Quang Tue	Childhood TB	• National guidelines for childhood TB o TB Case definitions o NTP Key Indicators List (Draft PF, M&E Framework) • Annual Reports: 2015, 2016, 2017 o Quarterly reports of TB cases sent to the NTP from the DTUs 2015, 2016, 2018
10:00 -10:15	Tea break			
10:15 - 12:00	Desk review for NRL management and visit NRL	Dr. Marek Lalli Dr. Nguyen Van Hung Dr. Khieu Thi Thuy Ngoc	NRL	• National guidelines for laboratory o NTP Key Indicators List (Draft PF, M&E Framework) • Annual Reports: 2015, 2016, 2017 o Quarterly reports of TB cases sent to the NTP 2015, 2016, 2018
12:00 - 13:30	Lunch			

13:30 - 15:00	VITIMES Review and overall Standards and Benchmarks Assessment	Dr. Marek Lalli Mr. Do Hoang Nam Ms. Nguyen Cam Thanh		• Description of TB surveillance system, VITIMES o Surveillance related SOPs, including supervisory checklists, DQA tools o Complete data dictionary • Documentation and/or SOPs for electronic surveillance systems o System logs that show which data files were imported for the reporting year and when they were imported o List of automated checks run at the time of data entry o List of data queries used to check data quality at the national level o SOPs for detection and removal of duplicate TB cases at national level • Data collection forms (source for data entry into VITIMES), • Earlier formal reports evaluating VITIMES or the surveillance system (including any previous Standard and Benchmarks Assessment) • Surveillance audits, surveys and data quality assessments • Staffing of routine TB surveillance at central level and its responsiility
15:00 - 15:15	Tea break			
15:15 - 17:00	eTB Review and overall Standards and Benchmarks Assessment			- eTB guideline for user at provincial level - SOP in reporting MDR data - recording and report forms of MDR - Data extracted from eTB
Wednesday, 06/03/2019				
06:00	Depart to Hai Duong from National Lung Hospital (detailed schedule in sheet :Hai Duong); Team: Veriko Mirtskhulava and Mark, Anita Chan, Dr. Tuan,			

	Cam Thanh, Phan			
07:00	Depart to Ha Noi Lung Hospital from National Lung Hospital (detailed schedule in sheet Ha Noi); Team: Marek and Alyssa, Van Anh, Dr. Minh, Nam and Thuong			
Thurday, 07/03/2019				
09:00 - 10:00	Visit Fammer Union	All international participants Dr. Do Thu Thuong Mr. Nguyen Do Phan Mr. Do Hoang Nam		
10:30 - 12:00	Brief on field trip results and data analysis			
12:00 - 13:30	Lunch			
14:00 - 15:00	Prepare for debriefing			
15:30 -16:30	Prepare for debriefing			
16:30 - 17:00	Prepare for debriefing			
Friday, 08/03/2019				
09:00 - 12:00	Prepare for debriefing	All participants		
12:00 - 13:30	Lunch			
13:30 - 15:00	Prepare for debriefing			
15:00 - 17:00	Debriefing at NTP/WHO	Dr. Marek Lalli		

附件 5-1. Site visit schedule **(Hai Duong)**

Tentative agenda: Standards and Benchmarks assessment

Team: Veriko, Mark and Anita, Dr. Nguyen Dinh Tuan, Ms. Nguyen Thi Cam Thanh, Mr. Nguyen Do Phan				
Key contact at Hai Duong Lung Hospital: Dr. Cuong, phone number: 0985 027 866, email:				
Content: Standards and Benchmark, Completion of ETR review (VITIMES, eTB Manager)				
Place: Hai Duong Lung Hospital				
Time	**Activities**	**PIC**	**Note**	**Preparation**
06:00	Depart to Hai Duong Lung Hospital from National Lung Hospital; Team: Veriko, Mark, Anita			
08:00 - 08:15	Welcome speech from Director	TBD		o Documentation and/or SOPs for electronic surveillance systems - System logs that show which data files were imported for the reporting year and when they were imported o Most recent annual report(s) of TB, TB/HIV, MDRTB, and TB in children o Most recent complete years' compiled reports of TB cases (paper and/or electronic) - Quarterly reports of TB cases sent to the NTP from basic management units (BMUs) over the period of one year
08:15 - 08:30	Introduction of standard and benchmarks assessment: Objectives and outcomes	Dr. Veriko		
08:30 - 09:00	Introduction the NTP at Hai Duong Lung Hospital	TBD		
09:00 - 10:00	Visit MDR Ward	All participants		
10:00 - 11:00	Visit Laboratory	All participants		
11:00 - 12:00	Visit childhood TB Ward and TB/HIV	All participants		
12:00 - 13:30	Lunch			
	Visit Binh Giang District	All participants		

附件 5-2. Site visit schedule (**Ha-noi)**

Tentative agenda: Standards and Benchmarks assessment

Team: Marek Lalli (WHO), Alyssa, Dr. Nguyen Quoc Minh, Dr. Van Anh, Mr. Do Hoang Nam, Dr. Do Thu Thuong				
Key contact at Ha Noi Lung Hospital: Dr. Hai, phone number: 093 434 1119, email: haidangpcf@gmail.com				
Content: Standards and Benchmark, Completion of ETR review (VITIMES, eTB Manager)				
Place: Ha Noi Lung Hospital				
Time	**Activities**	**PIC**	**Note**	**Preparation**
07:00	Depart to Ha Noi Lung Hospital from National Lung Hospital; Team: Marek, Alyssa, Van Anh			
08:00 - 08:15	Welcome speech from Director	Dr. Pham Huu Thuong		o Documentation and/or SOPs for electronic surveillance systems - System logs that show which data files were imported for the reporting year and when they were imported o Most recent annual report(s) of TB, TB/HIV, MDRTB, and TB in children o Most recent complete years' compiled reports of TB cases (paper and/or electronic) - Quarterly reports of TB cases sent to the NTP from basic management units (BMUs) over the period of one year
08:15 - 08:30	Introduction of standard and benmarks assesment: Objectives and outcomes	Dr. Marek Lalli		
08:30 - 09:00	Introduction the NTP at Ha Noi Lung Hospital	TBD		
09:00 - 10:00	Visit MDR Ward	All participants		
10:00 - 11:00	Visit Laboratory			
11:00 - 12:00	Visit childhood TB Ward and TB/HIV	All participants		
11:00	Depart to Ung Hoa District	All participants		
12:00 - 13:30	Lunch			
	Visit Ung Hoa District Van Dinh Hospital (PPM)	All participants		

附件 6. Outline for Site Visit: 2 teams

Team 1) Hai Duong and 2) Ha Noi

- Introduce objective of visit: 1) explain the flow the patient and 2) flow of data
- S&B Section 1.4 (see guidance) – look at all forms and registers
    - Review Treatment register and treatment cards – DQA compare indicators reported with counts (treatment card, register, aggregate report, VITIMES
    - Notifications: Q4 2018
    - Outcomes: check for completeness of 2017 cases (Q4)
    - Lab data: "randomly" select individual cases treatment register– verify that diagnostic bac conf, month 2 and month 5 match (register and lab log book)
    - Case based: "randomly" select individual cases and look for them in the case based VITIMES list
    - DR TB ditto
    - Ensure staff understand case definitions and how to fill in reports
- S&B Section 1.5 (Not in the field)
    - VITIMES – agreement between case based and aggregate indicators

Other

- Ask for most recent supervising level checklist results.
- Ask about site Deadlines for reporting
- Childhood TB guidelines: source case define HH contact as living in same house, training apparently emphasizes anyone taking care of child
    - ASK in the field what definition is used
- Initial defaulters how are they handled
- Ask if who cares for prisoners and where are they registered (ie prison is DTU or are their cases recorded by a DTU)
- When was the last time training on R&R was conducted? Who attended
- Do you look at trends of TB in district, have you seen that annual report?
- How are deaths reported (vital statistics?) where do families or clinics report?
- Confidentiality and data management (security/access)
- HIV testing

Some tips for counting (provided my brain is working correctly) and hints to look out for at tomorrow's visits:

- in treatment register, count total, compare against quart reports
- In treatment register, children 14 below, compare against quart reports (assuming filled properly, remainder will be adult)
- in treatment register, count total Females (assuming filled properly, remainder will be male), compare against quart reports,
- in treatment register, count total extrapulmonary (Assuming filled properly, remainder should be pulmonary), compare against quart reports
- If the treatment unit will have been diagnosed at the lab of the same possible, count the total BAC+ cases in the treatment register and match against associated lab register for BAC+ results
- If the treatment cards stay at the treatment unit, check to see if the number of treatment cards match the count in the treatment register.

- please keep an eye out for incorrect logging/empty columns or cells (eg. are all columns being used… hiv testing and art coverage for example… are they being used correctly?)
- look for evidence of linking/lack of linkage (ex. column to specify ID number in lab register is being filled in).
- are treatment outcomes being recorded?
- At what point is the patient considered lost to follow-up? is this indicated in the register for the specific patient?