Haiti’s TB Active Strategic Implementation Plan

Overarching Goal:
Reduce the prevalence of TB in Haiti by 25%

Requirements:
Coordination and Collaboration between MSPP, NGOs and Donors

John L. Ho & Willy Morose

TB Course, September 9 to 17, 2013
Current TB Situation in Haiti:

- Rate highest in the Americas [WHO, 2013; 2011 data]:
  - 307/100,000 prevalence; 222/100,000 incidence
  - 14,361 [16,700 PNLT]

- Estimated case detection rate [CDR, self-referral]:
  - 62% WHO (53% to 77%; estimated cases: 21,248 to >31,000), actual CDR ≤45%

- Active screening in Haiti to detect active TB:
  - Additional cases range: 18,000 to >24,000

- Extent of MDR (H/R) may be significant:
  - MDR TB may be the tip of iceberg
  - XDR detected
Current Status of TB Control in Haiti

- Infrastructure (clinical & laboratory) at 270 CDT & CT is poor [daunting financially & technically]
- Incomplete TB case detection: self-referral-based
- Treatment outcomes don’t meet WHO benchmark
- Prevention efforts are minimal
- PNLT capacity
  - not adequate for optimal program
  - no direct regulatory authority
- Prior country’s National Plan and phase-1 GF grant provided no active implementation plan to reduce TB prevalence
Insufficient Support for TB Program in Haiti

- **USAID (non-PEPFAR)**
  - ~ $600k /year—Rural health centers, smaller component for TB

- **PEPFAR: $7.9M → $3-4M**
  - Supports TB/HIV services, monitoring, development of lab capacity, some personnel (at PNLT, departments, TB centers [bacilloscopists])

- **Post-EQ funds: ~$13M over 3 years to reduce prevalence of TB → $0**

- **Global Fund [GF] phase II application [CDC engagement]:**
  - No active “intensive” case finding
  - Not involve clinical partners
  - Recommend incorporation of active operational implementation plan [PNLT]
  - Inadequate funding in most activities @~$4.5M; >$20M total needed (gap ~$12M)
Diagnostic Capacity at CDTs in Haiti

CDT Facilities

- ◊ Fewer than 100 patients
- H More than 100 patients
- X-ray and Microscopy Capacity
- Microscopy Capacity
- X-ray Capacity
- No x-ray or microscopy

Other Features

- ★ Commune Capital
- ★ Department Capital
- 🚗 Major Road
- ⚪ Dominican Republic

6 February 2012
Overarching Goal: Reduce TB Prevalence by 25%*

- Increase the case detection rate to 70%* (currently estimated at 64%, ?45%)
- Increase treatment success rate for new smear-positive cases to 85% *(currently ~82%)
- Improve TB prevention

*CDC Objectives (and strategies) that are also the key objectives of PNLT
Active Case Finding: Uncovers Significant Numbers of Active TB

- Prevalence of TB in USA Visa Applicants:
  - Active TB (2010, 2011): 188 per 100,000 [16,501 screened were “symptom-free”]; all age 15 or older screen by CXR; Abn CXR $\rightarrow$ culture
  - If such screening applied to 10 million Haitians $\rightarrow$ **18,800 cases**

- Respiratory screening and contact tracing [not done or in completely done]:
  - 52% [150 of 288] reported TB were from by “symptom screening” in 3 HC in Nord that began in January 2012
  - >15,000 more cases if respiratory symptom screening is systematically conducted at HC and for all contacts.
Active Case Finding: Uncovers Significant Numbers of Active TB

- Community screening for coughers [ICC: Delmar; Croix de Bouquet, Ganthier, Thomazeau, Cite-Soleil; pop >600,000]:
  - 14.7% [626] active TB amongst 4,257 coughers evaluated [104/100,000] or ~5,200 additional cases [3800 to >10,000]
  - 72.8% smear positive; ~22% CXR; ~5% clinical only
- Incidence of active TB [per 100,000] at two high risk locale:
  - 1,350 at Cite de Dieu [135 in 10,000 screened over 12 months, 2011]
  - 380 to 718 at tent city-GHESKIO [35 in 7,376 to 3,898; 4 mon 2011]
  - 3800 additional cases (population of 1 million)
- Penitentiary Port au Prince:
  - 4% [3263 screened] have X-ray compatible TB
  - 400 cases [prison 10,000 pop]
# Impact of Active Implementation Plans

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Full impact</th>
<th>? achievable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Find and treat cases (↓ prev)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In HIV care settings</td>
<td>&gt;5000</td>
<td>1500</td>
</tr>
<tr>
<td>Systematic cough screening at health centers &amp; contact tracing</td>
<td>&gt;15000</td>
<td>5000</td>
</tr>
<tr>
<td>Active Case Finding [ACF] community</td>
<td>3,800-10,000</td>
<td>1000</td>
</tr>
<tr>
<td>ACF in hospitals and prisons</td>
<td>&gt;2,100</td>
<td>?</td>
</tr>
<tr>
<td><strong>Prevent infection (↓ inc, by ~10+ % of prevented infection)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>By treating source patients</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Infection control</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td><strong>Prevent disease (↓ inc)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INH for HIV – contacts with LTBI</td>
<td>1100</td>
<td>&gt;200</td>
</tr>
<tr>
<td>ART for HIV+</td>
<td>&gt;750</td>
<td>350</td>
</tr>
<tr>
<td>INH for HIV+ (not on ART)</td>
<td>&gt;750</td>
<td>450</td>
</tr>
</tbody>
</table>
Is Overarching Goal Achievable?

- “Pre”--prevalence 31,000
- Reduction through active strategic implementation plan:
  - $1 - \left\{\frac{(31,000 - [7,500 + >1,000])}{31,000}\right\} \times 100 = 27.4\%$
- 25% reduction will be challenging but possible even though numbers are pretty uncertain
- Highest immediate impact will be from screening of respiratory symptomatic patients at HC, close contacts & in high risk settings, INH preventive treatment [IPT] of PLHIV and ART for CD4 <500, IPT for contacts especially age 5 or less (long term control requires attention to enormous pool of LTBI).
- We’re working on gathering more info and modeling but the proof is to increase case reporting by 8,500 for 2015 (22,861 from 14,361).
Operational Strategic Plan to Achieve Three Objectives/Targets Through:

- Target assessment in high capacity 80 health centers [HC] most are PEPFAR centers that report 84% of TB cases by leveraging PEPFAR capacity to:
  - increase case detection,
  - increase treatment success rate and
  - improve prevention
- TB/HIV Service Integration
- Infection Control
80 High Capacity CDT: Diagnose 84% of TB Cases

CDT High Priority Sites

Port-au-Prince

High Priority CDT Facilities
Criteria: Sites with 42 or more patients tested for TB in 2011

- CDTs with 42 patients to 841 patients
- Facility Name
- The location of some sites in Haiti is not known.

Data Sources: MSPP, ICC, CHAI, IHRP, MSF, DSDS

Map showing CDT high priority sites in Haiti, including Port-au-Prince.
High Capacity CDT: Are Not All Equal in Contribution

CDT High Priority Sites

High Priority CDT Facilities

Port-au-Prince

* The location of Médecins Sans Frontières (MSF) patients in Port-au-Prince is unknown.

Data Sources: MERR, MOH, CRDH, HPS, MOH, DCEO
High Capacity CDT: Without Diagnostic Tools
Overarching Goal: Reduce TB Prevalence by 25%*

- Build Capacity of National TB Program
- Build Diagnostic Capacity: Key levels of the laboratory pyramid
- Build Clinical and Diagnostic Capacity at HC Centers: leverage PEPFAR/USG partners and collaborate with Global Fund
- Build Capacity for MDR TB care, treatment & Management

*CDC Objectives (and strategies) that are also the key objectives of PNLT
Strengthen National TB Program (PNLT)

- Capacitate & re-enforce PNLT: partner with US University with TB expertise
- Governance: leadership, vision and plan, assessment & procurement.
- Capacitate/strengthen the regulatory role of PNLT:
  - Monitor & evaluate [central & Dept. personnel, training, site monitoring]
  - FETP field team for contact tracing esp., MDR TB
  - QA & compliance with standards of care and treatment?
  - Certification of minimal knowledge & standards in TB care & treatment and infection control [with partners, web-based-university approved].
- Improve epidemiologic surveillance/Integrate with ICC:
  - HIMS- iSANTE [national]
  - Single surveillance system (integrate with ICC), web-based [CDC-TA]
- Total year budget: ~$1.4 million (not include iSANTE & web-based surveillance, and current GF support)
La Pyramide de Diagnostique: accroître la capacité, la sensibilité et la précision

Surveillance DR, Tests de Reference, supervision, EQA augmenter la précision

Depistage de résistance & surveillance

Microscopie ID cas traitement

Diagnostic avance: culture LJ et MIGIT, LPA HAIN+ 1er line DST; referrent à SRL for 2nde line culture DST

Xpert screening & referral to Reference Labs

Referrent suspects MDR TB

Source: adapted from WHO recommended tuberculosis diagnostics
Increase Case Detection: Through Improve Diagnostic Capacity Building

- BSL3 Modular TB Laboratory (Lab) & Permanent BLS3 Lab:
  - Clinical culture [LC]/DST & MDRTBplus diagnostic training (FIND, CDC); Protocol/SOP (CDC, FIND, UMA)
  - Routine DR surveillance Ouest Dept & e-lab information system –Q2Your account number -2013 (FIND, CDC, UMA)

- Capacity building of 2 regional BSL2 TB Lab: Les Cayes, Cap Haitien (infrastructure [GF, CDC], LED FM, GeneXpert MTB/RIF®, solid TB culture)

- Roll-out of network of ~12 Xpert: training, QA/QC program –(USAID & CDC)

- Strengthening priority [HC] labs & in PEPFAR sites [~80]: report >80% of TB cases

- Increase fluorescent microscopy (FM: 9 to ~55 sites; ASM, FIND, CDC, GF)

- EQA: microscopy for 80 HC lab with training/certification (develop e-data management system with analytic program)

  * A rough estimate – >$900,000 direct TB; CDC personnel are needed to guide and EQA/M&E; Significant additional cost needed for high capacity labs
Target Higher Capacity Centers For Improvement: Assessment by MSPP-PLNT & LNSP, CDC-PEPFAR

- Assessment ~80 center for 3 objectives: clinical & laboratory
- Infection control- quantified by adapted assessment tool
- HIV/TB integration- quantified by new assessment tool
- Screening of coughs at registration & all clinical care areas
- Integration of HIV and TB Care (addressed?)
  - Simultaneous ordering of sputum AFB smear & serology for HIV & syphilis
  - Screening in HIV positive for active or latent TB (Sx, CXR, sputum, TST)
  - Tracking of HIV/TB patients by both programs to ensure provision of ART
  - Integrate MSPP TB & HIV Lab registry as a single registry
- Clinical collaboration/support between HIV & TB services
- iSANTE: use of HIV, TB and lab modules: Tracking of patients
- Same day results for above labs with reporting to clinician
Improve case identification:
Haitian MSPP & NGO Clinical Partners*

- Build on PEPFAR: ↑TB screening, leverage/assist TB program
  - Screen all PLHIV for active TB to achieve 100% of treatment target
  - Screen all TB patients for HIV to achieve 100% target for ART
- Increasing human resources: recruit, train & retain CHW to MDs:
  - Rapid injection of funds to quickly increase staff pool (esp. MDR)
  - Long-term recruitment, training and retention program
- Expand & improve contact tracing: all family members, neighbors and co-workers
- Screen high TB prevalent populations [prison, IDP camps, slums]
- National TB training and clinical certification program (web)
- Enhance lab diagnostic capacity (light, LED-FM, Xpert, LC/DST): training, SOP & IC & participate in National QA program

*CDC & Other Partner support needed: >$2 million: not include MDR
Increase Treatment Success Rate:
Haitian MSPP & NGO Clinical Partners*

- Build on PEPFAR sites to: increase treatment capacity & success; integrate HIV and TB care; support of TB via PEPFAR program
- Improve follow up: community out-reach, supervised DOT program, computer assisted scheduling/recall & tracking of outcome
- Improve capacity of clinicians to manage TB:
  - Update Treatment Norms, Develop MDRTB policies & guidelines
  - National TB training and certification programs (web-based)
  - Improve TB management at PEPFAR sites’ & provide physician consultation/coverage to TB nurse
- Improve identification of drug resistance: Dx & Rx guidelines
- Provide TB & ART Rx to 100% PLHIV with active TB
- Cross border DR-HT tracking

*CDC & Other support: >$2 million, MDR TB cost not included
Improve TB Prevention: Haitian MSPP & NGO Clinical Partners*

- Improve contact tracing: family [extended], neighbors and co-workers
- Improve INH prevention to 100% of target:
  - Children of close contacts ±TST [up to 5 age, extend ?15]
  - PLHIV screen for latent TB or TB risk in AIDS
- Provide ART to PLHIV to 100% qualified [?CD4 T <500]
- Improve infection control [ventilation, biohazardous waste]
- Improve drug resistance identification

*CDC & Other support: >$1 million
MDR TB in Haiti: Tip of Iceberg

Extent of MDR (H/R) may be significant:

- 2.9% new cases & 20% re-treatment cases: 2008 study of 5 centers, 1006 patients [GHESKIO] in Ouest Dept that reports ~50% of total TB cases [Ocheretina et al, Rev Panam Sulud Publica. 2012;31:221]
- 2.1% new cases, 12% retreatment [WHO, 2013; 2011 data]
- Estimated 260 (88-430) MDR cases [WHO, 2013; on 14,315 cases (2011)]
- Possibly 520 to >800 annual MDR prevalent cases

Drug susceptibility test [DST]: 234 MDR TB strains [1997 to March 2011; MA or NY State Reference Labs]:

- 7.3% (17) pre-XDR TB (quinolone [1.7%] or second-line injectable [5.6%])
- 1% (2) XDR-TB (resistant to both quinolone and second-line injectable)

On-going transmission of MDRTB: 52 cases [Dec 2009 –May 2012]
- ~27% treatment-naïve [14 of 52]
- ~8% [4] children age < 10 years [including 16-mon boy, all treatment naive]

?Clonal transmission of MDR TB [data GHESKIO]:

- 18.2% MDR [200 of 1100 treatment naive patient-isolates, 2001 to 2010]
- 30% of MDR isolates belong to 3 genotypes (spoligotyping)
- In contrast, 6% of sensitive strains are of the same 3 genotypes
# MDR TB Case Estimates Based on Roll-out of New Diagnostic Capacity

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<tbody>
<tr>
<td>Case lower estimate</td>
<td>130</td>
<td>195</td>
<td>292</td>
<td>?</td>
</tr>
<tr>
<td>Case upper estimate</td>
<td>168</td>
<td>252</td>
<td>378</td>
<td>?</td>
</tr>
<tr>
<td>Cumulative cases [2 year treatment, new plus old]^2</td>
<td>217 - 255</td>
<td>325 - 420</td>
<td>487 - 630</td>
<td>?</td>
</tr>
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2^2
MDR TB in Haiti: Needs Assessment

- **Human Resource & Capacity-- limited***:
  - Two partner-centers [GHESKIO, PIH]– increase [most CDC support in Oct 2012]
  - Limited trained personnel at all levels– improve and augment numbers
  - Predominately in-patient ~24months– Reduce to 3 to 6-months
  - Need model MDR TB DOT: quality, rigorous and supervised; delivery of twice daily visits with first 9-months administration of injectable drugs
  - Appreciable intolerance and side-effects– need standardized monitoring, nutritional support
  - Clinical consultation, training and drug level testing by US TB regional center

- **Facility Resource & Capacity--limited‡**:
  - Improve infection control
  - Improve/increase in-patient capacity from ~55 to >75 beds [GHESKIO, PIH, USAID/CDC], Sanatorium PaP & Leogane, Sud & Nord [MDR TB capacity]

*Care & Rx >2 million/year for the next 5 years. ‡ >multi-million for in-patient capacity*
Operational Strategic Plan Can Achieve Three Objectives/Targets Through:

- Target assessment in ~ 80 high capacity [HC] centers’ & PEPAR centers that report >70 of TB cases to:
  - increase case detection,
  - increase treatment success rate and
  - improve prevention
- TB/HIV Service Integration
- Infection Control
Example of Good HIV/TB Integration and IC

- **IMIS – GHESKIO (PEPFAR):** IC assessment observations
  - Triage of coughers at registration and rapid sputum AFB screening (out door production of sample)
  - Sputum and serology for HIV and syphilis obtained
  - Same day results; if HIV or AFB smear positive, Chest x-ray
  - Clinical team [nurse, counselor, physician and pharmacist]
  - Same day CD4 count and initiation of treatment soon after if indicated for AIDS and TB
  - Real time EMR with labs and clinical visit data
  - HIV positive -- rapid TB screening (Chest x-ray, TST, Sputum AFB)
  - State of the arts BSL3 and lab facility
  - Constant electricity generation
Example of Facility Assessment of Nord Dept: Standardized Format Developed by CDC

- TB case detection [diagnosis & finding]:
  - TB diagnosis is based on clinical and laboratory
  - AFB smear microscopy sensitivity 40 to 60%
  - AFB smear positive rate use as a proxy for lab & clinical proficiency.

- TB and HIV service:
  - Screening for HIV
  - Integration through collaboration and tracking of TB/HIV for ARV

- Contact tracing & screening of coughers for TB

- DOT

- Infection control: prevent HC transmission, especially to HIV

PAHO/WHO Review of Haiti TB Program, May 29-June 1, 2012 (5 groups):
Group 4: John L. Ho [CDC], Yves Lambert [I-TECH], Ronald Thiersaint [CDC] & Bernine Bastein [HUJ]
# Institutions Characteristics

<table>
<thead>
<tr>
<th>Institution</th>
<th>HUJ</th>
<th>HSCM</th>
<th>CSTN</th>
<th>CSF</th>
<th>CSFSM</th>
<th>CSBV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level Service</strong></td>
<td>Tertiary/referal</td>
<td>Tertiary/referal</td>
<td>Local/commune</td>
<td>OB Ctr Excellence</td>
<td>Local/commune</td>
<td>Local/commune</td>
</tr>
<tr>
<td><strong>Population coverage</strong></td>
<td>Regional, &gt; 1 million; &gt;3 Dept.</td>
<td>Department</td>
<td>Commune</td>
<td>Dept/2012 PMTCT target:9275</td>
<td>Commune/10,000</td>
<td>Commune</td>
</tr>
<tr>
<td><strong>Service type/volume</strong></td>
<td>Complete [Haiti context]</td>
<td>complete</td>
<td>most</td>
<td>most</td>
<td>Limited April -2545: 961 new &amp; 1544 f/u</td>
<td>Limited/2000 visit/m 100/d</td>
</tr>
<tr>
<td><strong>In-patient</strong></td>
<td>yes</td>
<td>Yes</td>
<td>limited</td>
<td>ER/OB [short]</td>
<td>ER/OB [short]</td>
<td>No</td>
</tr>
<tr>
<td><strong>Out-patient</strong></td>
<td>yes</td>
<td>Yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Campus [acres]</strong></td>
<td>2</td>
<td>2.5/separated</td>
<td>0.5/Cuban</td>
<td>0.25</td>
<td>0.25</td>
<td>1.0</td>
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<td><strong>Type</strong></td>
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<td>Pub/PEPFAR</td>
<td>Pub/PEPFAR</td>
<td>NGO/PEPFAR</td>
</tr>
<tr>
<td><strong>ART</strong></td>
<td>Yes</td>
<td>New ART</td>
<td>New ART</td>
<td>Yes</td>
<td>New ART</td>
<td>ART</td>
</tr>
</tbody>
</table>
**TB Diagnosis and HIV Screening: January 2010 to May 30, 2012 [29 mons] in Nord Department***

<table>
<thead>
<tr>
<th>Institution</th>
<th>HUJ</th>
<th>HSCM</th>
<th>CSTN</th>
<th>CSF</th>
<th>CSFSM</th>
<th>CSBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB cases</td>
<td>550</td>
<td>610</td>
<td>159</td>
<td>339</td>
<td>442</td>
<td>433</td>
</tr>
<tr>
<td>AFB smear positive [% ]†</td>
<td>225 [41%]</td>
<td>230 [54%]</td>
<td>119 [75%]</td>
<td>242 [71%]</td>
<td>241 [55%]</td>
<td>333 [77%]</td>
</tr>
<tr>
<td>HIV screened [% ]</td>
<td>448 [81%]</td>
<td>392 [64%]</td>
<td>94 [59%]</td>
<td>314 [92%]</td>
<td>442 [100%]</td>
<td>433 [100%]</td>
</tr>
<tr>
<td>HIV seropositive [% ]</td>
<td>131 [29%]</td>
<td>136 [34%]</td>
<td>24 [53%]</td>
<td>45 [14%]</td>
<td>72 [16%]</td>
<td>72 [17%]</td>
</tr>
<tr>
<td>% ARV‡</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

*TB registry was reviewed, counted and results tabulated for each center. †AFB smear sensitivity is ~60%; >60% suggests under-diagnosis of clinical TB, <60% under-diagnosis by lab/microscopy. ‡No tracking system or list of TB/HIV patients and ARV treatment, not accessible.
## TB and HIV Assessment at Two Centers: Patterns Over Time

<table>
<thead>
<tr>
<th></th>
<th>HUJ</th>
<th>CSBV</th>
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<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2011</td>
<td>2012 (5 months)</td>
</tr>
<tr>
<td>Total TB cases</td>
<td>257</td>
<td>188</td>
<td>105</td>
</tr>
<tr>
<td>AFB smear positive [41%]</td>
<td>77 [30%]</td>
<td>93 [49%]</td>
<td>55 [60%]</td>
</tr>
<tr>
<td>HIV screened</td>
<td>183 [71%]</td>
<td>163 [87%]</td>
<td>102 [97%]</td>
</tr>
<tr>
<td>HIV seropositive</td>
<td>91 [50%]</td>
<td>54 [33%]</td>
<td>35 [34%]</td>
</tr>
</tbody>
</table>

**Hosp Univ Justinien:**
Improved TB smear dx & HIV screened

**CS Bethesda-Vaudreuil:**
Good HIV screened; need to inc. clinical TB diagnosis [X-ray available]
Institutional Challenges: Need for Improvement

- Insufficient space, especially at TB clinic [5 of 6]
- Inadequate air ventilation in waiting areas and TB clinic for IC
- No formal infection control committee, guidelines or personnel
- Triage of coughers at registration & at all levels
- Improve AFB and clinical diagnosis of TB; MDR diagnosis
- Improve DOT with community health agents performing home visits to ensure treatment success and other strategies [chart]
- X-ray capacity in high volume TB/HIV centers [2 of 6 lacking]
- Tracking of TB treatment outcome
- Coordination/dialogue improve between TB & HIV
- Lack of *systematic* tracking of between TB/HIV receiving ART
- No tracking of TB or TB/HIV patients sent back to primary center
- Improve/expand close-contact tracing, use of cough registry, TB case-finding & INH prophylaxis [3 of 6]
- Stable electricity [inverters, batteries, generator fuel stock; 3 of 6]
- Water shortage for IC; improved biohazardous waste disposal
Respiratory Symptom Screening [3 of 6 Centers]

<table>
<thead>
<tr>
<th>Close-contact</th>
<th>CS Fort St Michel</th>
<th>H. Univ. Justinien</th>
<th>CS Bethesda-Vaudreuil</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 (1mon)</td>
<td>2012 (5mon)</td>
<td>2011 (5mon)</td>
<td>2012 (5mon)</td>
</tr>
<tr>
<td>TB cases</td>
<td>212</td>
<td>74</td>
<td>188</td>
</tr>
<tr>
<td>Coughers Screened</td>
<td>561</td>
<td>55</td>
<td>278</td>
</tr>
<tr>
<td>TB Dx smear positive</td>
<td>65</td>
<td>2</td>
<td>26 [100 LFU]</td>
</tr>
<tr>
<td>% TB</td>
<td>12%</td>
<td>(4%)</td>
<td>15%</td>
</tr>
</tbody>
</table>

- Reviewed registry respiratoire symptomatique: 12% to 22% of coughers had active TB
- 52% [150 of 288] reported TB by symptom screening.
- Passive reliance on self referral misses many active TB cases. Data argue for active case finding and prevention through contact tracing and screening for coughers: >15,000 more cases if done in Haiti.
Development of Infection Control in Haiti: Approach to integrate TB and HIV

- Form Core National (TB) Infection Control Committee: (Initiated 30 January 2012 by PNLT and LNSP), identify stakeholders and point persons
- Develop national guidelines/policies
- Develop/adapt site assessment tools, training materials, IEC materials
- Conduct training/implement activities
- Goal of National & local/site specific assessment, monitoring and data-driven improvements
### Risk Assessment Results: Tableau de Bord du Contrôle de la Transmission de la Tuberculose

<table>
<thead>
<tr>
<th></th>
<th>Clinic 1</th>
<th>Clinic 2</th>
<th>Clinic 3</th>
<th>Clinic 4</th>
<th>Clinic 5</th>
<th>Clinic 6</th>
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<tbody>
<tr>
<td>Politique nationale du CI disponible</td>
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<td>Personnel affecté au contrôle de l’infection</td>
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<td>Comité de CI formé</td>
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<td>Plan de CI élaboré</td>
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<tr>
<td>Suivi quotidien des pratiques du CI</td>
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<tr>
<td>Formation de tout le personnel de santé sur le CI</td>
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<td>Echantillons de crachats collectés dans un endroit isolé</td>
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<tr>
<td>Le personnel reçoit des évaluations annuelles pour la TB</td>
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<tr>
<td>Le personnel fait surveillance de la ventilation chaque jour</td>
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</tbody>
</table>

**Fait, disponible, ou résultat désiré**

**Pas fait, disponible, ou pas correct**

Site assessment by PNLT and LNSP with CDC technical assistance, February 2012
Oui,
Nous Pouvons!