USAID
FROM THE AMERICAN PEOPLE

TUBERCULOSIS SOUTH AFRICA PROJECT

Overview of TB Administrative Infection Prevention and Control Strategies for COVID-19 response

Matsie Mphahlele (PhD, M. Phil)

June 30th, 2020

Stop TB Partnership Webinar

Presentation outline

- Background
- Administrative Control Measures in response to COVID-19
  - Key components of FAST strategy
    - Find TB cases, Actively screen, Separate safely & Treat Effectively
    - Overall Performance in FAST Implementing Hospitals
- IPC in Patient Homes
- Lessons Learnt

Background

- COVID–19 pandemic has affected the TB response in South Africa
  - Average weekly GeneXpert testing volumes for TB decreased by 48%
  - Weekly number of persons tested positive for TB declined by 33%
- TB has much to teach us about the tools that can help to mitigate the current pandemic
  - Importance of infection control to reduce the risk of nosocomial infection; active surveillance, triaging in the health care setting, cough etiquette, rapid testing and diagnosis, isolation, treatment, contact tracing and public awareness
  - Importance of community participation and other congregate settings
  - Collaborations of national programs-HIV and non-communicable diseases (NCD)

USAID
FROM THE AMERICAN PEOPLE

TUBERCULOSIS SOUTH AFRICA PROJECT

Administrative Control Measures

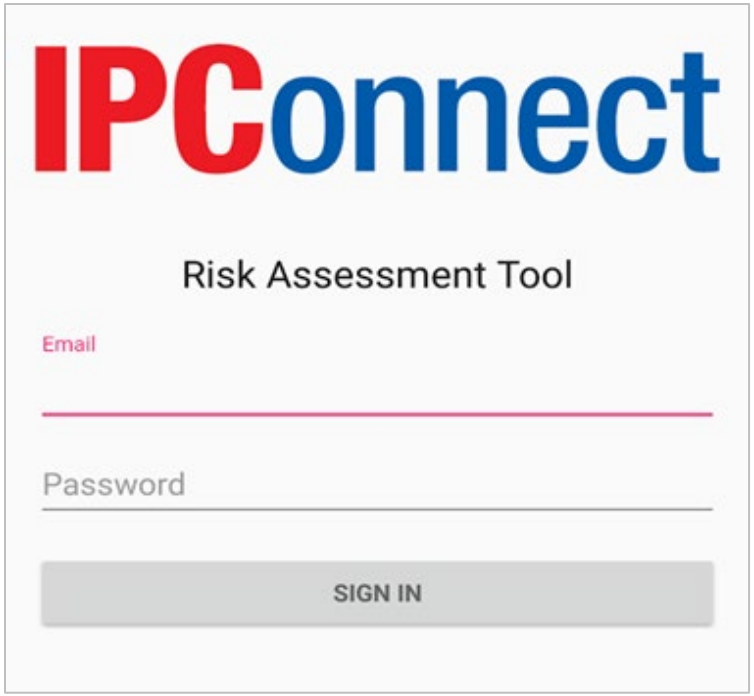
Facility Risk Assessment

- Risk assessments conducted to evaluate preparedness, prevention and control of COVID-19 in facilities. Provinces have integrated the TB component for dual application for COVID-19 and TB.
  - use of compliance dashboard to monitor IPC practices

    Compliance dashboard
    Green = in place
    Orange = partially in place
    Red = not in place

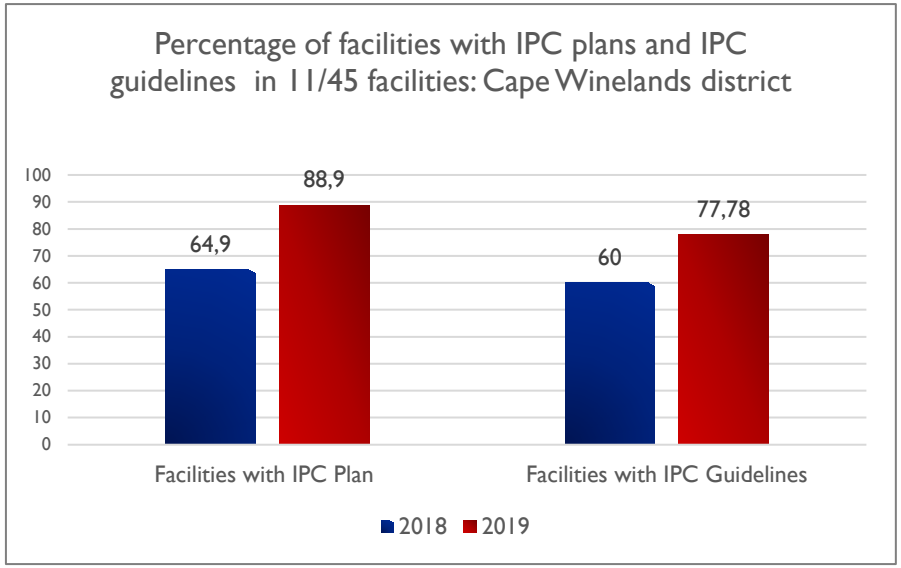
  - integrated IPC plans that outlines a protocol for the prompt recognition, separation, provision of services, investigation for COVID-19, referral of patients presenting with TB symptoms or confirmed TB disease, prompt management of patients;
  - quality improvement plans (QIPs) for each facility developed to help facilities attain minimum requirements, reviewed weekly by the Task Teams

Use of mHealth to strengthen administrative controls



Example: TBIPC Risk Assessment data currently collected and stored on IPConnect: www.ipconnect-sa.org

- Zero rated application
- View the Dashboard - list of assessed facilities
- View the score of a Completed Assessment
- Print reports
- Flag areas for follow-up



Capacity building of health care workers

- Education and training of relevant HCWs on guideline recommendations and monitoring of adherence if key to achieve successful implementation.

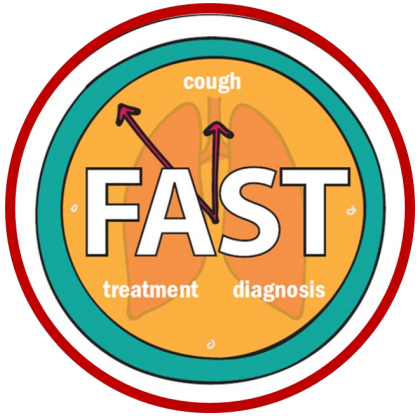
Community healthcare workers trained on IPC related issues on COVID 19 and TB during DOTS, contact screening, sputum collection

Virtual training of HCWs on TB, IPC & COVID-19

Capacity building of health care workers

- Fit testing and in-service training conducted
- Respirator Seal Check: required to help you ensure your respirator is sealing correctly but does not replace fit testing.

Key components of FAST strategy



- **F**ind cases, **A**ctively, **S**eparate, **T**reat effectively
  - Hospital-based TB transmission control
  - General approach:
    - TB screening of hospitalized patients
    - Diagnosis supported by rapid molecular drug susceptibility testing
    - Expedited treatment with regimens tailored to resistance profiles
- Triage and patient separation systems (i.e. management of patient flows to promptly identify and separate presumptive TB cases), prompt initiation of effective treatment and respiratory hygiene
- Administrative measures must be put in place to limit transmission of TB and COVID-19 health care facilities

COVID-19 and TB Screening in FAST hospitals

- A standardized triage algorithm/questionnaire to determine the priority of patients
- All patients actively screened for TB and COVI-19 at hospital entrances
- Risk zoning used to manage queues:

  Yellow- COVID-19 moderate risk zone- 1st screening station
  Orange- COVID-19 high risk zone
  Blue-COVID-19 low risk and protected zone

Example of an Integrated COVID-19/TB Screening Tool

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Sedibeng District
Health Services

Have you recently had any of the following symptoms?

Symptoms	Yes	No
1. Cough of any duration		
2. Fever (Temperature ≥38°C)		
3. Difficulty Breathing		
4. Weight Loss (unexplained)		
5. Sore Throat		
6. Headache		

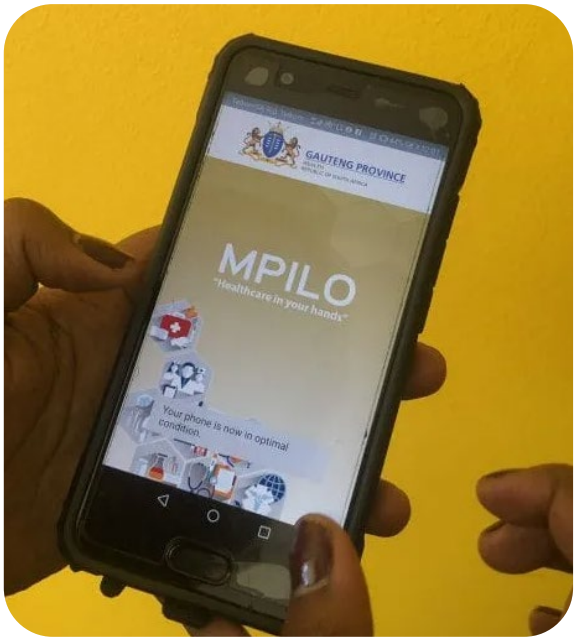
If yes to any of the following, report to the Outreach Team Lead (OTL)

If Yes to any of the above, continue with the following questions:

COVID-19	Yes	N
1. Have you travelled to any high risk countries within the last 14 days?		
2. Have you had any contact with any person who has travelled to any of the high risk countries within the last 14 days?		
3. Have you been in contact with someone who has been diagnosed with the Corona Virus infection in the last 14 days?		
4. Do you work in a place where COVID-19 cases / patients are kept?		

OTL to assess for COVID-19 testing or TB presumptive and manage accordingly as per Corona Virus Flow chart, NICD approved case definitions and TB Algorithm

OTL to assess for COVID-19 testing or TB presumptive and manage accordingly as per Corona Virus Flow chart, NICD approved case definitions and TB Algorithm



- COVID-19 screening app.
- Report submitted NICD through the app and results communicated to the user
- Patients that are symptomatic for other conditions (incl TB) are flagged on the system for further investigation.

COVID-19 and TB Testing in FAST hospitals

- Accurate diagnostic tests are essential for both TB and COVID-19
- All facilities screen and collect samples for COVID-19 but only dedicated hospital labs can test for COVID-19
- Orange- COVID-19 high risk zone- 2nd COVID-19 and TB Testing Station

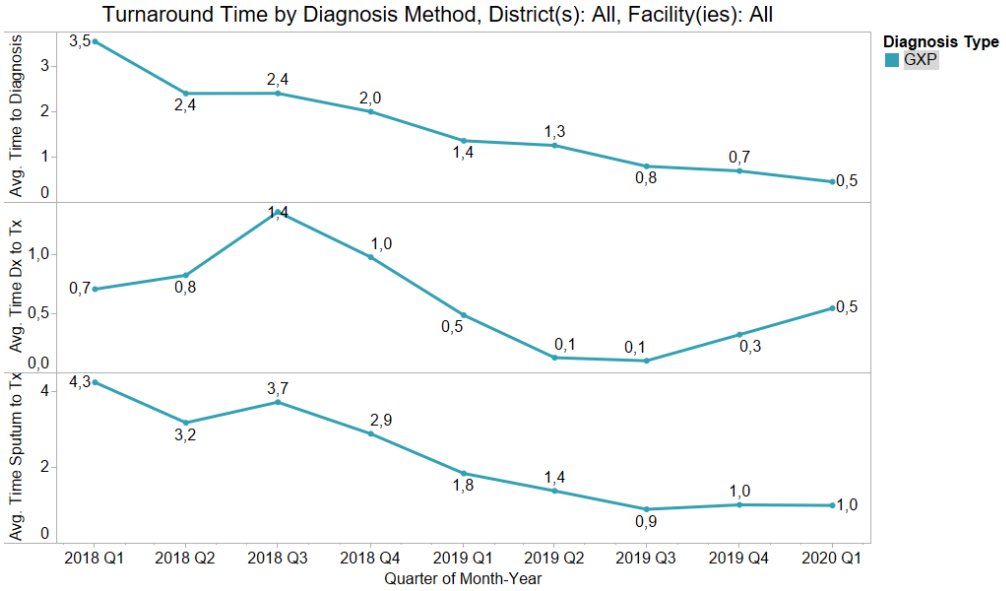
Separate safely

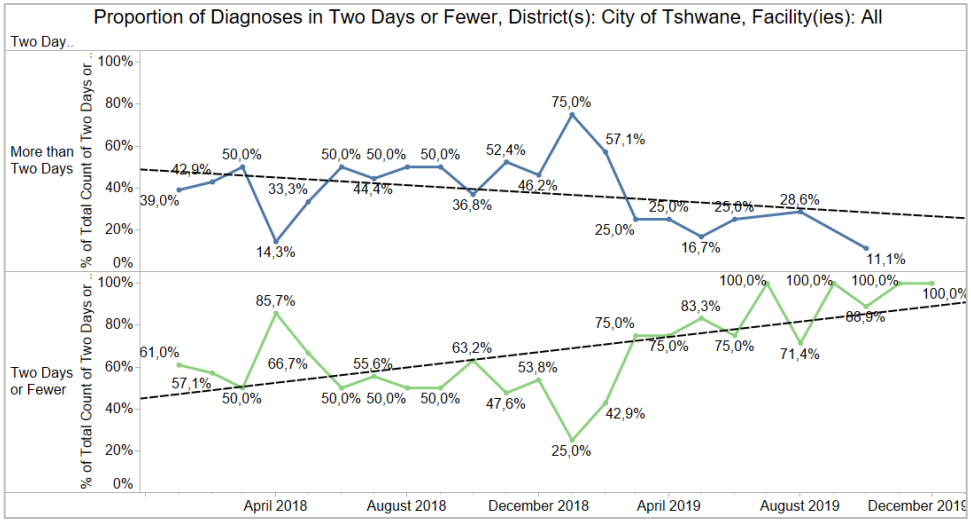
- While waiting for a laboratory diagnosis, patients with COVID-19/TB signs and symptoms are:
  - educated on respiratory hygiene (cough etiquette and separation)
  - counselling to address COVID-19 related stigma and discrimination
  - moved to a designated, well-ventilated area (quarantine ward for COVID-19 within the facility) away from other patients to prevent further spread of COVID-19/TB.

Waiting area: Tshwane district hospital

Impact of FAST implementation on TB program performance

- The FAST Approach overall Turnaround Time from sputum collection to treatment has reduced in hospital settings in 2018-2020, from 4.3 days to 1.0 days, through the TB South Africa Project's implementation of FAST in 14 hospitals in Gauteng Province.
- Time from diagnosis to treatment reduced from 3.5 days to 0.5 days within the same period
- Proportion of patients put on treatment increased from 61% to 100% within two or fewer days of sputum collection.



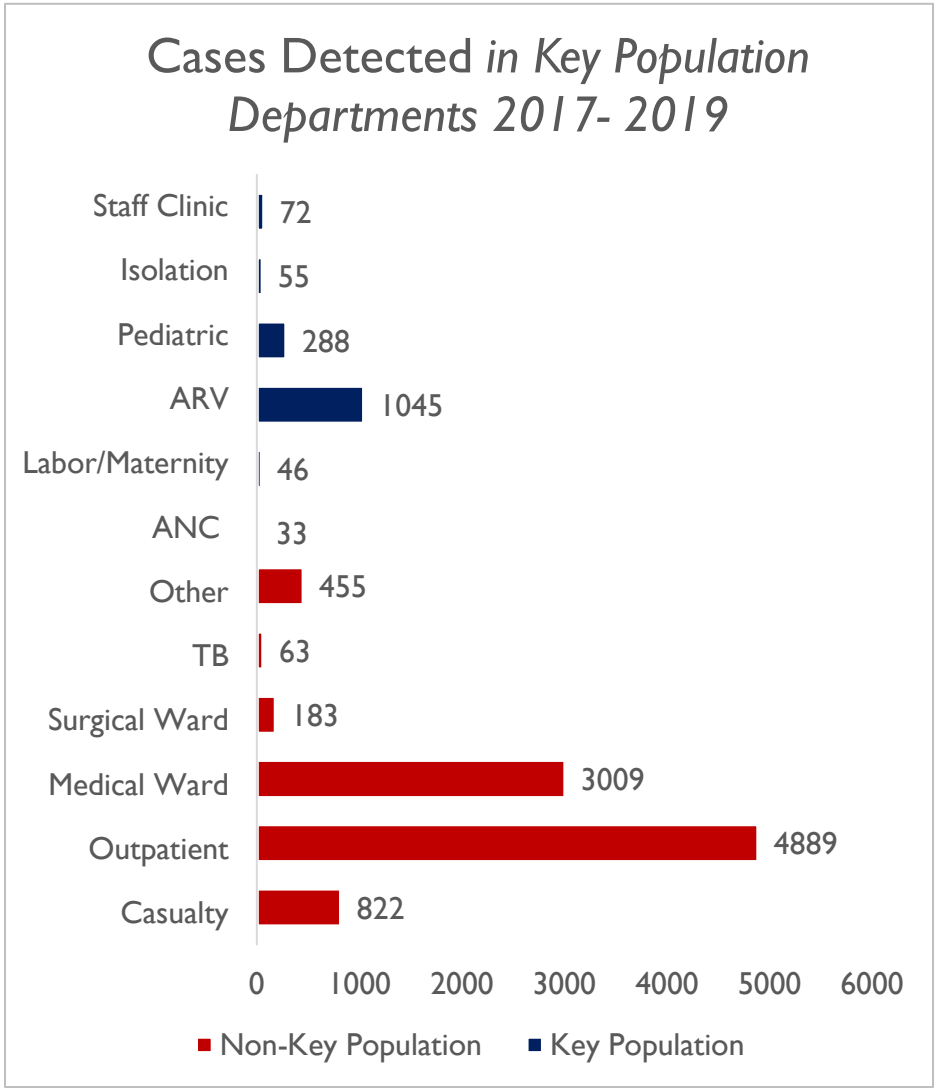


The proportion of patients initiated on treatment within two days, fewer or more than two days of sputum collection

Performance: Unsuspected TB cases in wards admitting Key Populations

- FAST approach in key populations: implemented in all hospital wards (ANC, OHS, Maternity, ARV Clinic) allowing for case finding in wards which would not otherwise screen for TB

- Overall, the project detected 14% (n=1,539/10960 cases) Q3 2017- Q4 2019: ARV wards (1,045 patients), isolation (55), staff clinic (72), pediatric (288) labor and maternity (46) and ANC wards (33).



Performance: implementation of LF-LAM

Results of the implementation of LF-LAM in 42 implementing sites among immunocompromised people also at high risk for COVID

DATA ELEMENT	Total		Year 3 (Oct 17 -Sep 18)	%	Year 4 (Oct 18-Sep 19)	%	Year5 (Oct 19-Mar 20) 6 months	%
	No.	%	No. (#)	%	No. (# 14)	%	No. (# 42)	%
Number of HIV positive patients with low CD4 count (less than or equal to 100 cells/ul	2551		878		1227		446	
Number of HIV positive patients who are seriously ill and regardless of low CD4 count	4513		587		1147		2799	
Total Number of HIV positive patients eligible	**7084**		**1465**		**2374**		**3245**	
Number of clients LAM tested	5753	81%	1443	98%	1642	69%	2968	91%
Number tested LAM positive	1861	32%	391	27%	561	34%	909	31%
Number initiated on TB treatment	1717	92%	371	95%	470	84%	876	96%
Number done Xpert/MTB Rif	1619	94%	273	74%	145	31%	220	25%

The 3-fold increase in case detection from 391 in FY3 to 909 in FY5 is due to an increasing number of hospitals implementing LF-LAM

USAID
FROM THE AMERICAN PEOPLE

TUBERCULOSIS SOUTH AFRICA PROJECT

Other existing practices for TB infection control

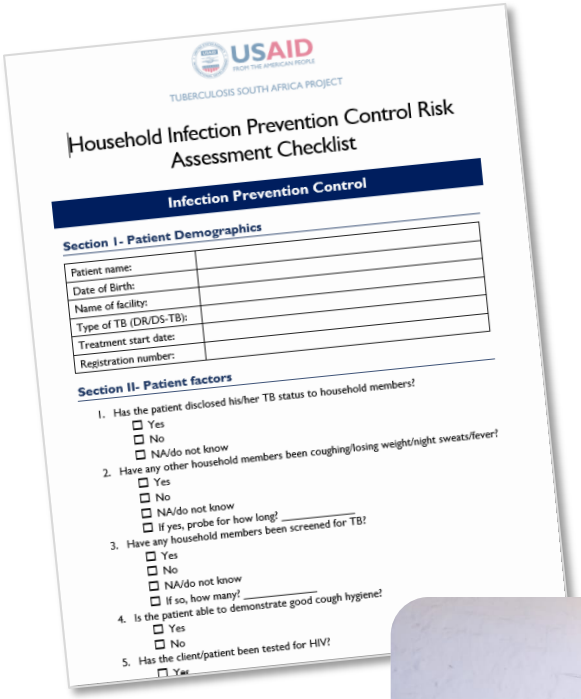
Example: *South Africa*

Infection Prevention & Control in the Community

- Community care workers (project funded grantees) ensuring continuity of TB services in the context of COVID-19.
- NGOs conducted door to door screening for both TB and COVI-19.
  - In May 2020 Care Ministry and Tokollo Foundation screened 3447 people, 66 symptomatic for TB and referred COVID-19 symptomatic patients to DoH for testing, 3 (4,5%) tested for TB and started on treatment.

Door to door campaigns at shopping malls and taxi ranks

Infection Prevention & Control in Patient Homes



USAID
FROM THE AMERICAN PEOPLE

TUBERCULOSIS SOUTH AFRICA PROJECT

Household Infection Prevention Control Risk Assessment Checklist

Infection Prevention Control

Section I- Patient Demographics

Patient name:	
Date of Birth:	
Name of facility:	
Type of TB (DR/DS-TB):	
Treatment start date:	
Registration number:	

Section II- Patient factors

1. Has the patient disclosed his/her TB status to household members?
   - ☐ Yes
   - ☐ No
   - ☐ NA/do not know
2. Have any other household members been coughing/losing weight/night sweats/fever?
   - ☐ Yes
   - ☐ No
   - ☐ NA/do not know
   - ☐ If yes, probe for how long? _____
3. Have any household members been screened for TB?
   - ☐ Yes
   - ☐ No
   - ☐ NA/do not know
   - ☐ If so, how many? _____
4. Is the patient able to demonstrate good cough hygiene?
   - ☐ Yes
   - ☐ No
5. Has the client/patient been tested for HIV?
   - ☐ Yes

- Use of household risk assessment intensified to support patients through
  - screening
  - contact tracing,
  - referring symptomatic people to clinics for testing
  - counselling to ensure TB patients adhere to treatment
  - educate patients on IPC

Door to door screening in the community

Lessons Learned

Integration of TB activities to support COVID-19 interventions at Philadelphia hospital in Limpopo province

- 27 persons under investigations for COVID-19 were admitted in Isolation Unit of Philadelphia hospital in May 2020.
- They came in as referrals from household COVID-19 screening contacted by the community health workers.
- After admission, they were tested for COVID-19 and all found to be negative.
- All 27 patients screened for TB and tested for TB by XpetMTB/Rif.
- From the 27 patients tested for TB, 4 were found to DS-TB positive; 2 males and 2 females
- All four (4) identified patients were all linked to TB care

Lessons Learned

Successes

- Political will: Buy-in and support at national, provincial, district and facility level
- Implementers empowered, took leadership in adaptation. Peer learning sessions to improve motivation and confidence
- Time to commencement of treatment reduced from 42 hours to less than 12 hours among DS-TB patients
- Expanding access to LF-LAM has improved time to effective treatment; collaboration with HIV program strengthened
- Surveillance of TB among HCWs improved; raised awareness of occupational TB risk.
- Integration of Continuous Quality Improvement (CQI) Model to remedy identified gaps
- Monitoring of IPC activities improved; facilities reporting on IPC indicators

Dr Phophi Ramatuba –MEC for Health launching FAST at WTD commemoration in LP

Challenges and Gaps

- Infrastructural problem for separation
- Lack of commitment from staff- missing patients
- Restricted Scope of Practice for nurses in hospitals. LF-LAM Doctor-driven, leads to treatment delays

Acknowledgements

- National Department of Health (NDoH)
- Limpopo Provincial Department of Health
- Eastern Cape Provincial Department of Health
- Free State Provincial Department of Health
- Gauteng Provincial Department of Health
- KwaZulu-Natal Provincial Department of Health
- Participating health facilities
- United States Agency for International Development (USAID)

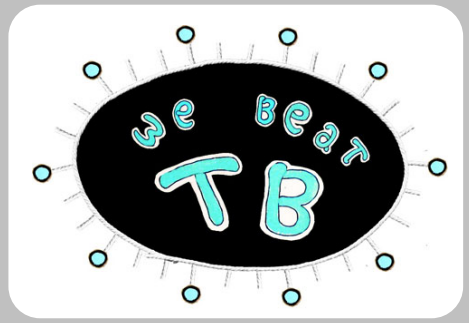
health
Department:
Health
REPUBLIC OF SOUTH AFRICA

USAID
FROM THE AMERICAN PEOPLE

TUBERCULOSIS SOUTH AFRICA PROJECT

USAID
FROM THE AMERICAN PEOPLE

TUBERCULOSIS SOUTH AFRICA PROJECT



Thank you

We Beat TB South Africa

@WeBeatTB #BeatTB

www.tbsouthafrica.org.za