The Union

International Union Against Tuberculosis and Lung Disease

Health solutions for the poor

Principles of Tuberculosis Care and Prevention: Translating Knowledge to Action

Bulawayo, Zimbabwe – 27 March to 5 April 2017

Day 1 Monday 27 March 2017: Bacteriological basis for TB care and prevention and methods of TB diagnosis

Learning objectives:

1. Understand how TB bacilli are transmitted and how exposed persons may progress to infection and from infection to disease.
2. Diagnose latent TB infection based on medical history and tests.
3. Diagnose TB based on history, clinical examination, bacteriologic methods and results and radiographic findings.
4. Describe the various bacteriologic methods for the identification of *M. tuberculosis* and drug susceptibility.
5. Interpret basic typical and atypical radiographic manifestations of TB.

Time	***Topic***
8:00-9:00	Opening and welcome address
	Icebreaker Participant and faculty introductions Overview of training objectives & course Ground rules R Dlodlo and R Bhavaraju
9:00-10:30	Basic mycobacteriology V Robertson
10:30-11:00	Break
11:00-12:30	Transmission of *Mycobacterium tuberculosis* and pathogenesis - Factors that increase transmission - Persons at high risk of progression to active disease N Schluger
12:30-13:00	Diagnosis of latent TB infection - TST - IGRA R Dlodlo

13:00-14:00	Lunch
14:00-15:00	Diagnosis of TB disease: medical history, clinical examination and laboratory diagnosis Case studies S Chadha
15:00-15:30	Diagnosis of TB: laboratory diagnosis V Robertson
15:30-16:00	Break
16:00-17:00	Diagnosis of TB: laboratory diagnosis (continued) Sputum microscopy and Xpert testing V Robertson
17:00-17:45	Diagnosis of TB disease: radiography, including digital radiography Case studies N Schluger
17:45-18:00	End of Day 1 reflection, evaluation and adjourn – R Bhavaraju

Day 2 Tuesday 28 March 2017: Treatment of TB / Interventions

Learning objectives:

1. Explain the pharmacokinetic and pharmacodynamic mechanisms of the first- and second-line TB medicines.
2. Provide appropriate treatment for latent TB infection and TB disease, including cascade of TB treatment regimens and patient-centred care and treatment support, including directly observed treatment (DOT).
3. Understand how drug resistance develops and how it can be prevented.

Time	***Topic***
8:00-10:00	Diagnosis of TB: laboratory diagnosis (continued) - TB laboratory network - External quality assurance - Communication and relationship between clinicians and laboratory staff - TB infection control in laboratory V Robertson
10:00-10:30	Break
10:30-11:30	Treatment of latent TB infection: Preventive TB therapies - Isoniazid

	- Rifampicin - Rifapentine + Isoniazid - Side effects/adverse reactions - Case presentations N Schluger
11:30-13:00	Treatment of drug-susceptible TB - Rationale for multidrug regimens - Regimen cascades - First-line drugs - Side effects/adverse reactions S Chadha
13:00-14:00	Lunch
14:00-14:30	Treatment of drug-susceptible TB (cont'd) - Special circumstances (e.g., pregnancy, alcohol use, extended regimens) S Chadha
14:00-15:15	Development and diagnosis of drug-resistant TB N Schluger
15:15-15:45	Break
15:45-17:00	Treatment of drug-resistant TB N Schluger
17:00-17:30	End of Day 2 reflection, evaluation and adjourn R Dlodlo

Day 3 Wednesday 29 March 2017: Treatment of TB / Interventions

Learning objectives:

1. Apply understanding of transmission of TB bacilli to need for identification and screening of close contacts.
2. Realise special considerations for management of TB in vulnerable populations, including children, people living with HIV and persons with co-morbidities.
3. Become familiar with international guidance on the ethical treatment of persons with TB and its application to patient-centred care.

Time	***Topic***
8:00-10:30	TB and HIV: treatment and programmatic considerations R Dlodlo

10:30-11:00	Break
11:00-12:00	TB and Diabetes S Chadha
12:00-13:00	TB in Children BCG Vaccine N Schluger
13:00-14:00	Lunch
14:00-15:00	Contact tracing and other modes of active TB case finding R Dlodlo
15:00-15:30	Break
15:30-17:15	Patient-centred care - Options/modalities of directly observed treatment (role of facility, community, family) - Informing and communicating with patients - Patient-centred language - Ethical management of TB patients - Case studies and ethical dilemmas R Bhavaraju
17:15-17:30	End of Day 3 reflection, evaluation and adjourn R Bhavaraju

Day 4 Thursday 30 march 2017: Basis of TB care, prevention and control and Programmatic issues

Learning Objectives

1. Understand the bacteriological and epidemiological basis for the principles of TB control.
2. Learn recording and reporting in TB control and how data can be used to strengthen TB patient and programme performance from health facility, district, province/region to national levels of health services.
3. Recognise benefits of collaborative health programmes, community TB care and public-private partnerships.

Time	***Topic***
8:00-10:30	Summary: from exposure to TB bacilli to TB infection to disease. - What do these transitions mean to TB elimination and TB prevention and care programmes? - Applying the bacteriological and epidemiological basis for programmatic management of TB services

	R Dlodlo, S Chadha and E Heldal History of TB care and prevention: from control to elimination E Heldal
10:30-11:00	Break
11:00-13:00	Example: National TB programme in Zimbabwe - How general health services and TB services relate and are organised - Fundamental components of TB care, prevention and control - Trends in programme performance in Zimbabwe - TB-HIV and collaboration with National AIDS Programme - DR-TB R Dlodlo
13:00-14:00	Lunch
14:00-15:30	Recording and reporting in TB care and prevention: recording and reporting system, indicators, how to collect, analyse and use routine programme data to strengthen patient and programme management? E Heldal How to tabulate and analyse facility level TB data? Exercises. E Heldal
15:30-16:00	Break
16:00-17:15	How to tabulate and analyse district level TB data? Exercises. R Dlodlo
17:15-17:30	Day 4 reflection, evaluation and adjourn R Bhavaraju

Day 5 Friday 31 March 2017: Programmatic issues

Learning Objectives:

1. Learn recording and reporting in TB control and how data can be used to strengthen TB patient and programme performance at all levels of health services.
2. Recognise the benefits of collaborative health programmes, community TB care and public-private partnerships.
3. Recognize the need of efficient supply chain mechanism in TB control programmes.
4. Apply understanding of transmission of TB bacilli to infection prevention and control procedures within health care settings.

Time	***Topic***

8:00-10:30	How to tabulate and analyse provincial level TB data? Exercises. Data-driven supervision Performance review meetings R Dlodlo, E Heldal, A Nakanwagi
10:30-11:00	Break
11:00-13:00	Supply chain management for TB medicines and consumables A Nakanwagi
13:00-14:00	Lunch
14:00-15:00	Infection control and prevention (CDC ICP films) - TB prevention among HCWs A Nakanwagi
15:00-15:30	Training, re-training and capacity building in TB control R Bhavaraju
15:30-16:00	Break
16:00-17:15	Other TB control issues (specimen transportation and result communication, m/eHealth; continued) A Nakanwagi, NTP representative (if present)
17:15-17:30	End of Day 5 reflection, evaluation and adjourn R Bhavaraju

Day 6 Saturday 1 April 2017 - TB in the World

Learning objectives:

1. Learn about the evolution of global TB control strategies from the mid 1990's to today's 'End TB Strategy' and the Global Plan and how one's programme fits into its objectives.
2. Apply epidemiologic data to one's understanding of TB trends and identification of groups at higher risk for TB exposure and progression to disease once infected.
3. Apply data collection, analysis and use skills to assessment of the local TB programme during field visits.

Time	***Topic***
8:00-10:00	TB burden in the world - WHO estimates (worldwide/regional/national) - Sources of data: measurement in TB care and prevention and strengths and weaknesses of :

	○ Prevalence and other surveys ○ Annual risk of infection ○ Surveillance ○ Surveillance among HCWs - Data integrity (why the above data are estimates) E Heldal and A Nakanwagi
10:00-10:30	Post-test (same test as pre-course but as a hard copy)
10:30-11:00	Break
11:00-13:00	Data-driven supervision: check list, summary tables Introduction of field visits: visit sites, groups, facilitators Group work and organisation of questions and field tasks Include tabulation of data from the districts/clinics to be visited R Dlodlo and R Bhavaraju
13:00-14:00	Lunch and adjourn
Sunday 2 April 2017: Independent study and rest	
Day 7 Monday 3 April 2017: Field visit **Learning objectives:** 1. Familiarise oneself with strengths and challenges of TB control services in selected field sites in Zimbabwe. 2. Learn basics of data-driven supervision, register review and data collection and tabulation.	
7:30-8:00	Convene in field visit groups and meet with facilitators
8:00	Depart for field visits
Day 8 Tuesday 4 April 2017: Field visit and preparation for group presentations **Learning objective:** 1. Familiarise oneself with strengths and challenges of TB care and prevention services in selected field sites in both rural and district settings in Zimbabwe. 2. Learn basics of data-driven supervision. 3. Demonstrate monitoring and evaluation skills based on field observation and record reviews.	
7:30	Depart for field visits
In13:00-14:00	Return from field visits and lunch
14:00-17:30	Preparation of group presentations
Day 9 Wednesday 5 April 2017 : Field Visit Presentations and Closure **Learning objectives:** 1. Share lessons learned and experiences in data-driven supervision at field sites.	

2. Demonstrate monitoring and evaluation skills based on field observation and record reviews.	
Time	***Topic***
8:00-10:30	Field visit group presentations
10:30-11:00	Break
11:00-13:00	Field visit group presentations (continued)
13:00-14:00	Lunch
14:00-15:30	Discussion and summary Overall course evaluation
15:30-16:00	Closing ceremony and presentation of certificates