

CONTENTS

| | |
|--|-----------|
| Foreword to second edition | 11 |
| Foreword to first edition | 12 |
| Preface to second edition | 13 |
| Glossary and abbreviations | 15 |
| Introduction | 21 |
| I Background information on tuberculosis and human immunodeficiency virus | 23 |
| 1.1 Tuberculosis | 23 |
| 1.1.1 Basic facts about TB | 23 |
| 1.1.2 Pathogenesis of TB | 25 |
| 1.2 Human immunodeficiency virus | 27 |
| 1.2.1 Introduction: HIV and AIDS | 27 |
| 1.2.2 HIV/AIDS epidemiology | 28 |
| 1.2.3 HIV transmission | 28 |
| 1.2.4 Prevention of HIV transmission in health units | 29 |
| 1.2.5 Immunopathogenesis of HIV infection | 30 |
| 1.2.6 Natural history of HIV infection | 31 |
| 1.2.7 Clinical staging | 32 |
| 1.2.8 Epidemiological surveillance of AIDS | 35 |
| 1.3 HIV-related TB | 36 |
| 1.3.1 Epidemiology of coinfection of HIV and <i>M tuberculosis</i> | 36 |
| 1.3.2 HIV infection and risk of TB | 37 |
| 1.3.3 TB in the course of HIV progression | 37 |
| 1.3.4 Consequence of HIV/ <i>M tuberculosis</i> coinfection | 37 |
| 1.3.5 Impact of HIV on TB control | 37 |
| 1.3.6 Patterns of HIV-related TB | 38 |
| 1.3.7 Impact of TB on HIV | 39 |
| 2 An expanded framework for effective tuberculosis control | 41 |
| 2.1 Introduction | 41 |
| 2.2 Components of expanded TB control framework | 41 |
| 2.2.1 Goals of TB control | 42 |
| 2.2.2 Targets for TB control (cure and case detection) | 42 |
| 2.2.3 TB control policy package (the DOTS strategy) | 43 |

| | | |
|----------|--|-----------|
| 2.2.4 | Key operations for DOTS implementation | 44 |
| 2.2.5 | Indicators to measure NTP progress in TB control | 45 |
| 2.3 | Directly observed treatment | 45 |
| 2.4 | TB/HIV | 46 |
| 2.5 | DOTS-Plus | 47 |
| 3 | Diagnosis of pulmonary tuberculosis in adults | 49 |
| 3.1 | Diagnostic approach | 49 |
| 3.2 | Clinical features | 50 |
| 3.3 | Diagnostic sputum smear microscopy | 51 |
| 3.4 | Differential diagnosis of pulmonary TB | 54 |
| 3.5 | Chest X-ray in diagnosis | 55 |
| 3.6 | Radiographic abnormalities seen in pulmonary TB | 55 |
| 3.7 | Differential diagnosis of chest X-ray findings | 56 |
| 3.8 | The place of mycobacterial culture in the diagnosis of TB | 57 |
| 3.9 | Sepsis and concomitant TB | 57 |
| 3.10 | Distinguishing other HIV-related pulmonary diseases from pulmonary TB | 58 |
| 4 | Diagnosis of pulmonary tuberculosis in children | 61 |
| 4.1 | Epidemiology of childhood TB | 61 |
| 4.2 | How does TB in children differ from TB in adults? | 62 |
| 4.3 | Approach to diagnosis of TB | 63 |
| 4.4 | Score system for diagnosis of TB in children | 66 |
| 4.5 | Tuberculin skin test | 67 |
| 4.6 | The decision to start TB treatment in children | 68 |
| 4.7 | Impact of HIV on the diagnosis of TB in children | 69 |
| 4.8 | Differential diagnosis of pulmonary TB in HIV-infected children | 70 |
| 4.9 | Management of child contacts of infectious adults | 71 |
| 5 | Diagnosis of extrapulmonary tuberculosis in adults and children | 75 |
| 5.1 | Diagnostic approach | 75 |
| 5.2 | Tuberculous lymphadenopathy | 75 |
| 5.3 | Miliary (disseminated) TB | 78 |
| 5.4 | Tuberculous serous effusions (pleural, pericardial, ascites) | 79 |
| 5.5 | Tuberculous meningitis | 84 |
| 5.6 | Other forms of extrapulmonary TB | 87 |
| 5.7 | Further information on spinal, gastrointestinal and hepatic TB | 88 |

| | | |
|----------|---|------------|
| 6 | Diagnosis of HIV infection in adults with tuberculosis | 91 |
| 6.1 | Clinical recognition of HIV infection in TB patients | 91 |
| 6.2 | HIV testing. | 92 |
| 6.2.1 | HIV antibody tests | 92 |
| 6.2.2 | Tests to detect the virus itself | 93 |
| 6.2.3 | Objectives of HIV antibody testing in TB patients | 94 |
| 6.2.4 | Strategy for HIV antibody testing in TB patients | 94 |
| 6.2.5 | Diagnosis of HIV infection in individual TB patients | 95 |
| 6.3 | HIV counselling | 95 |
| 7 | Diagnosis of HIV infection in children with tuberculosis. | 99 |
| 7.1 | Clinical recognition of HIV infection in children with TB . | 99 |
| 7.2 | HIV testing. | 100 |
| 7.3 | Counselling | 101 |
| 8 | Standardized tuberculosis case definitions and treatment categories. | 105 |
| 8.1 | Standardized case definitions | 105 |
| 8.1.1 | Introduction. | 105 |
| 8.1.2 | Questions and answers about case definitions. | 105 |
| 8.1.3 | Case definitions by site and result of sputum smear . . . | 106 |
| 8.1.4 | Category of TB patient for registration on diagnosis . . . | 107 |
| 8.2 | Standardized diagnostic categories. | 108 |
| 9 | Management of patients with tuberculosis | 111 |
| 9.1 | Introduction. | 111 |
| 9.2 | Modes of action of anti-TB drugs. | 112 |
| 9.3 | TB treatment regimens | 113 |
| 9.3.1 | New cases | 114 |
| 9.3.2 | Re-treatment cases | 114 |
| 9.3.3 | Standard code for TB treatment regimens | 114 |
| 9.3.4 | Recommended treatment regimens. | 115 |
| 9.3.5 | Use of streptomycin in areas of high HIV prevalence. . . | 117 |
| 9.3.6 | Use of TB drugs in children | 117 |

9.4 TB treatment regimens: questions and answers 118

9.5 Use of anti-TB drugs in special situations 120

9.6 The role of adjuvant steroid treatment: questions and answers. 121

9.7 Monitoring of TB patients during treatment. 122

9.7.1 Monitoring of patients with sputum smear-positive PTB . 122

9.7.2 Recording treatment outcome 123

9.7.3 Cohort analysis: questions and answers 124

9.8 Response of HIV-positive TB patients to anti-TB treatment 124

10 Side-effects of anti-tuberculosis drugs. 129

10.1 Introduction. 129

10.2 Prevention of side-effects 129

10.3 Where to manage drug reactions 129

10.4 When to stop anti-TB drugs 129

10.5 Side-effects of anti-TB drugs 130

10.5.1 Side-effects of anti-TB drugs in HIV-positive TB patients 131

10.6 Symptom-based approach to management of drug side-effects. 132

10.7 Management of skin itching and rash 132

10.7.1 Treatment regimen includes thioacetazone 133

10.7.2 Treatment regimen does not include thioacetazone. . . 133

10.8 Desensitization 134

10.9 Management of hepatitis 135

11 Antiretroviral therapy for the treatment of HIV infection 137

11.1 Introduction. 137

11.2 Antiretroviral drugs 138

11.3 Principles of ART 138

| | | |
|-----------|--|------------|
| 11.4 | Principles of a public health approach to ART | 139 |
| 11.5 | Initiation of ART. | 139 |
| 11.5.1 | Adults and adolescents with documented HIV infection | 140 |
| 11.5.2 | Infants and children | 140 |
| 11.6 | Recommended doses of ARV drugs | 141 |
| 11.6.1 | Adults and adolescents | 141 |
| 11.6.2 | Children. | 142 |
| 11.7 | Choice of ART regimen | 149 |
| 11.7.1 | Adults | 149 |
| 11.7.2 | Children. | 150 |
| 11.8 | Monitoring the efficacy of ART. | 151 |
| 11.9 | Adverse effects | 151 |
| 11.10 | Interactions between ARV drugs and drugs used to prevent or treat opportunistic infections | 153 |
| 11.11 | Antiretroviral drugs and TB treatment | 153 |
| 11.11.1 | Drug interactions. | 153 |
| 11.11.2 | Treating TB and HIV together | 153 |
| 11.11.3 | Immune reconstitution syndrome | 154 |
| 11.11.4 | Options for ART in patients with TB | 154 |
| 12 | Treatment and prevention of other HIV-related diseases in TB/HIV patients | 157 |
| 12.1 | Introduction. | 157 |
| 12.2 | Clinical spectrum of HIV-related disease | 157 |
| 12.3 | Sexually transmitted infections. | 158 |
| 12.3.1 | Syndromic management. | 158 |
| 12.3.2 | Treatment regimens for common STIs. | 159 |
| 12.4 | Skin and mouth problems | 161 |
| 12.5 | Respiratory problems | 165 |
| 12.5.1 | Respiratory problems in adults | 165 |
| 12.5.2 | Respiratory problems in children. | 167 |
| 12.6 | Gastrointestinal problems | 167 |
| 12.6.1 | Dysphagia. | 167 |
| 12.6.2 | Diarrhoea in adults | 168 |
| 12.6.3 | Diarrhoea in children. | 170 |

| | | |
|-----------|--|------------|
| 12.7 | Neurological problems in adults | 171 |
| 12.7.1 | Acute confusion | 171 |
| 12.7.2 | Chronic behaviour change | 172 |
| 12.7.3 | Persistent headache | 172 |
| 12.7.4 | Difficulty in walking | 174 |
| 12.7.5 | Poor vision | 175 |
| 12.7.6 | Burning sensation in the feet | 175 |
| 12.8 | Neurological problems common in children | 175 |
| 12.9 | Fever | 176 |
| 12.9.1 | Approach to management | 176 |
| 12.9.2 | Disseminated infection | 176 |
| 12.10 | Other HIV-related problems | 177 |
| 12.11 | Prevention of HIV-related opportunistic infections | 179 |
| 12.11.1 | General measures | 179 |
| 12.11.2 | Immunizations | 179 |
| 12.11.3 | Primary chemoprophylaxis in adults | 180 |
| 12.11.4 | Primary chemoprophylaxis in children | 181 |
| 12.11.5 | Secondary chemoprophylaxis in adults | 181 |
| 13 | Coordinated care in different settings | 185 |
| 13.1 | Introduction | 185 |
| 13.2 | The expanded scope of a new approach to decrease the burden of TB/HIV | 185 |
| 13.3 | Referral to local HIV/AIDS care services | 186 |
| 13.4 | Benefits of support from local HIV/AIDS care services | 186 |
| 13.5 | A framework for HIV/AIDS care that incorporates interventions to address TB | 187 |
| 13.5.1 | Home and community care | 187 |
| 13.5.2 | Primary care | 188 |
| 13.5.3 | Secondary care | 189 |
| 13.5.4 | Tertiary care | 189 |
| 13.6 | The private sector | 191 |
| 13.6.1 | Private medical practitioners | 191 |
| 13.6.2 | Traditional practitioners | 191 |
| 13.7 | Operational research aimed at improving integrated TB and HIV/AIDS prevention and care | 192 |

| | | |
|-----------|---|------------|
| 13.7.1 | Promoting voluntary counselling and testing (VCT) for HIV as an entry point to better TB care | 192 |
| 13.7.2 | The Practical Approach to Lung Health (PAL) | 192 |
| 14 | Prevention of tuberculosis in HIV-infected individuals | 195 |
| 14.1 | Introduction | 195 |
| 14.2 | Protection of HIV-positive persons against exposure to TB | 195 |
| 14.2.1 | Environmental control | 195 |
| 14.2.2 | Face-masks | 196 |
| 14.2.3 | Patient education | 196 |
| 14.2.4 | Pulmonary TB suspects | 196 |
| 14.2.5 | Patients with sputum smear-positive pulmonary TB | 197 |
| 14.2.6 | Patients with multidrug-resistant TB (MDR-TB) | 197 |
| 14.3 | Role of BCG in preventing TB in HIV-infected individuals | 197 |
| 14.3.1 | Background | 197 |
| 14.3.2 | BCG protection against TB in HIV-infected children | 198 |
| 14.3.3 | BCG safety in HIV-infected children | 198 |
| 14.3.4 | WHO recommended policy on BCG and HIV | 198 |
| 14.4 | The role of the Expanded Programme on Immunization (EPI) | 199 |
| 14.5 | Preventive treatment | 199 |
| 14.5.1 | Target groups for preventive treatment | 200 |
| 14.5.2 | Role of isoniazid preventive treatment in HIV-positive individuals | 201 |
| 14.5.3 | WHO/UNAIDS recommendations on preventive therapy against TB in HIV-positive persons | 201 |
| | Index | 205 |

| | | | | | |
|--|----|-----|-----|--------|--|
| UNIVERSIDAD MAYOR DE SAN SIMÓN | | | | | |
| FACULTAD DE MEDICINA | | | | | |
| INVENTARIO: Biblioteca "Julio Rodríguez Rivas" | | | | | |
| 07 | 13 | 01 | 201 | 598077 | |
| Código de inventario | | | | | |
| 24 | 10 | 09 | Bs. | 44 | |
| Día | | Mes | | Año | |
| | | | | Valor | |