

# Contents

<b>1</b>	<b>Poverty, Health and Livelihoods</b>	<b>1</b>
1.1	Linking Poverty, Health and Livelihoods	1
1.1.1	Non-communicable Diseases and How These Affect Impoverished Communities	1
1.1.2	Infectious Diseases and Livelihoods	2
1.2	Emerging Infectious Diseases (EID) and Neglected Tropical Diseases (NTD)	3
1.2.1	Emerging Infectious Diseases	4
1.2.2	Infectious Diseases	4
1.2.3	Neglected Tropical Diseases	7
1.3	Recent Advances Against Infectious Diseases	9
1.4	Diseases and Livelihoods	10
1.4.1	Consumption of Wild Meat and Risk of Zoonotic Diseases	10
1.4.2	Food, Water, Sanitation and Risk of Diseases	11
1.4.3	Steps in Community Involvement	12
1.4.4	Success Stories on Community Involvement	13
1.5	Conclusion	14
	References	15
<b>2</b>	<b>Rural Livelihood</b>	<b>17</b>
2.1	What Is a Livelihood?	17
2.1.1	Livelihood Determinants	18
2.1.2	What Is a Household?	19
2.2	Sustainable Livelihood Framework (SL)	19
2.2.1	Human Capital	20
2.2.2	Physical Capital	20
2.2.3	Social Capital	21
2.2.4	Case Scenarios—Microfinance	23
2.2.5	Financial Capital	24
2.2.6	Natural Capital	24

2.3	Rural Livelihood Diversification. . . . .	25
2.3.1	Determinants of Livelihood Diversification . . . . .	25
2.3.2	Constraints of Diversification. . . . .	28
2.4	Natural Disasters/Shocks and Rural Livelihood . . . . .	29
2.4.1	Diseases Associated with Contaminated Water. . . . .	29
2.4.2	Diseases Associated with Crowding . . . . .	30
2.4.3	Vector-Borne Diseases . . . . .	30
2.5	Disease Outbreaks and Livelihoods . . . . .	30
2.5.1	Human Behaviour . . . . .	31
2.6	Conclusion . . . . .	32
	References . . . . .	32
<b>3</b>	<b>Infectious Diseases . . . . .</b>	<b>35</b>
3.1	Importance of Infectious Diseases . . . . .	36
3.1.1	Examples of Infectious Diseases. . . . .	38
3.1.2	Research . . . . .	41
3.2	Classification of Infectious Diseases . . . . .	42
3.2.1	Infectious Diseases Transmitted Through Contaminated Food and Water. . . . .	42
3.2.2	Infectious Diseases Transmitted by Vectors . . . . .	43
3.2.3	Infectious Diseases Transmitted by Contact . . . . .	44
3.2.4	Infectious Diseases Transmitted Through Air Particles and Droplets . . . . .	44
3.3	Stages of Infectious Diseases. . . . .	44
3.4	Water and Sanitation . . . . .	45
3.4.1	The Boiling Water Method . . . . .	45
3.4.2	The Filtration Method. . . . .	45
3.4.3	Toilets, Garbage and Disease. . . . .	46
3.5	Lifestyle and Disease . . . . .	48
3.6	Poverty and Disease . . . . .	49
3.7	Impact of Infectious Diseases on Livelihoods. . . . .	49
3.7.1	Decreased Agricultural Production . . . . .	49
3.7.2	Redistribution of Labour . . . . .	50
3.7.3	Loss of Labour . . . . .	50
3.7.4	Loss of Assets . . . . .	50
3.7.5	Increased Number of Dependants . . . . .	51
3.7.6	Human Health and Needs . . . . .	51
3.8	Conclusion . . . . .	51
	References . . . . .	52
<b>4</b>	<b>Infectious Diseases and Livelihoods. . . . .</b>	<b>55</b>
4.1	Agriculture and Health . . . . .	55
4.1.1	Rural Populations and Disease . . . . .	57
4.1.2	Livelihoods and Disease . . . . .	57

4.2	Conflicts and Infectious Diseases . . . . .	57
4.2.1	The Polio Case . . . . .	58
4.3	Lifestyles and Transmission of Infectious Diseases . . . . .	60
4.3.1	Measles. . . . .	60
4.3.2	HIV/AIDS. . . . .	61
4.4	Disease Impact and Case Scenarios . . . . .	63
4.4.1	HIV/AIDS. . . . .	63
4.4.2	The West Africa Ebola Epidemic 2014 . . . . .	66
4.4.3	Malaria and Other Infectious Diseases. . . . .	69
4.5	Through the Lens on the Case Scenarios. . . . .	70
4.6	Treatment Seeking Behaviour . . . . .	71
4.7	Conclusion . . . . .	73
	References . . . . .	73
<b>5</b>	<b>Transportation. . . . .</b>	<b>77</b>
5.1	Transportation and Rural Communities . . . . .	77
5.1.1	Transportation and Livelihood . . . . .	78
5.1.2	Transportation and Diversification . . . . .	79
5.2	Transportation and Infectious Diseases . . . . .	79
5.2.1	Public Transport in Rural Areas . . . . .	80
5.2.2	Transport and Disease Transmission . . . . .	81
5.3	Intermediate Mode of Transport (IMT) . . . . .	82
5.4	An Example of a Rural Road Network . . . . .	82
5.5	Conclusion . . . . .	84
	References . . . . .	84
<b>6</b>	<b>Health care . . . . .</b>	<b>87</b>
6.1	“Health for All by the Year 2000” . . . . .	87
6.2	What Is Fuelling This Poverty? . . . . .	89
6.2.1	Economic Conditions . . . . .	89
6.2.2	Social and Cultural Characteristics . . . . .	90
6.2.3	Poor Coordination Between Various Sectors . . . . .	95
6.2.4	Lack of Community Involvement and Self-Reliance . . . . .	96
6.2.5	Challenges in Healthcare Systems in Developing Countries and Lack of Sustainability. . . . .	96
6.2.6	Human Development Index (HDI) . . . . .	98
6.3	Understanding the Health Structure. . . . .	99
6.3.1	Levels of a Healthcare System . . . . .	99
6.3.2	Components of a Healthcare System? . . . . .	99
6.3.3	How Should a Country Design Its Healthcare System? . . . . .	101
6.3.4	Who Is Responsible for the Healthcare System? . . . . .	102

6.3.5	Constraints of a Healthcare System. . . . .	102
6.3.6	What Is Lacking and How Can Health Care Systems Improve?. . . . .	105
6.4	Adverse Effects of the Provision of Health Services . . . . .	105
6.4.1	The Benefits and Dangers of Conducting Research in Impoverished Communities . . . . .	106
6.4.2	The Challenges of Conducting Research in Impoverished Communities . . . . .	107
6.5	Conclusion . . . . .	108
	References . . . . .	108
<b>7</b>	<b>Surveillance . . . . .</b>	<b>115</b>
7.1	Types of Surveillance . . . . .	115
7.2	The Need for Surveillance. . . . .	117
7.3	Who Should Be Responsible for Civil Registration? . . . . .	118
7.4	Creating a Surveillance Network . . . . .	119
7.4.1	Example of a Surveillance Network . . . . .	120
7.5	Notification Circuit. . . . .	121
7.6	Information Dissemination. . . . .	122
7.6.1	Mode of Communication. . . . .	122
7.7	Why Global Surveillance . . . . .	123
7.7.1	Lessons from the Past. . . . .	124
7.8	International Health Regulations (IHR) . . . . .	125
7.8.1	IHR Purpose and Scope . . . . .	126
7.8.2	Definitions in IHR . . . . .	126
7.9	Conclusion . . . . .	127
	References . . . . .	127
<b>8</b>	<b>Disease Awareness and Prevention . . . . .</b>	<b>129</b>
8.1	Disease Control Strategies. . . . .	129
8.2	Infectious Disease Management . . . . .	131
8.2.1	What Is the Information that Needs to Be Communicated to the Community? . . . . .	131
8.2.2	Training of Health and Essential Personnel . . . . .	131
8.2.3	Strategic Planning . . . . .	132
8.2.4	Coordinating the Response to an Outbreak . . . . .	132
8.2.5	Follow-up . . . . .	132
8.2.6	Assessment of the Operation . . . . .	133
8.3	Disease Prevention . . . . .	133
8.3.1	Emergency Alert Systems . . . . .	133
8.3.2	Radio Communication . . . . .	134
8.3.3	Knowing Your Surrounding. . . . .	134
8.3.4	Be Open and Communicate. . . . .	135

8.4	Clinical and Public Health Interventions . . . . .	136
8.4.1	Diseases with Low Pathogenicity . . . . .	136
8.4.2	Vector-Borne Diseases . . . . .	137
8.4.3	Surveillance. . . . .	137
8.5	Some Food for Thought on Home-Based Care. . . . .	137
8.5.1	SCENARIO 1: Vector-Borne Diseases Spread by Mosquito Bites . . . . .	137
8.5.2	SCENARIO 2: Patient with Diarrhoea (Diseases Spread by Contact). . . . .	138
8.5.3	SCENARIO 3: Patient with Mumps (Diseases Spread Through Saliva). . . . .	138
8.5.4	SCENARIO 4: Patient with HIV and AIDS. . . . .	138
8.6	Livelihoods and Disease Prevention . . . . .	139
8.7	Community Involvement. . . . .	140
8.7.1	Case Scenarios in Community Participation . . . . .	140
8.8	Conclusion . . . . .	144
	References . . . . .	144
<b>9</b>	<b>Infectious Disease Management Strategies . . . . .</b>	<b>147</b>
9.1	Suggested Strategies . . . . .	148
9.1.1	The Infection Tree . . . . .	149
9.2	The Infection Tree Theory (ITT) . . . . .	150
9.2.1	Infectious Disease Progression and Infection Tree Theory . . . . .	150
9.3	Changing People's Views . . . . .	152
9.3.1	Team Work. . . . .	152
9.3.2	Understand the Line of Communication . . . . .	152
9.3.3	Understand the History . . . . .	153
9.3.4	Throw Out Prejudice . . . . .	153
9.3.5	Changing Traditions . . . . .	154
9.3.6	Reaching a Desirable Compromise . . . . .	155
9.4	Factors Affecting Infectious Disease Strategy Design . . . . .	156
9.4.1	Geographical Location . . . . .	156
9.4.2	Knowledge and Understanding of Current/Existing Disease Strategies. . . . .	156
9.4.3	Understanding the Epidemiology of Diseases Occurring in a Community . . . . .	157
9.4.4	Knowledge of People's Livelihoods . . . . .	157
9.4.5	Knowledge of Cultures and Traditions of the Community . . . . .	158
9.4.6	Understanding the Communities Health Needs. . . . .	158
9.5	Transportation and Disease Control Strategies . . . . .	158
9.6	Conclusion . . . . .	159
	References . . . . .	159

<b>10 Way Forward</b> . . . . .	161
10.1 Poverty and Livelihoods . . . . .	161
10.2 Improving Health Systems. . . . .	162
10.3 Rural Development. . . . .	162
10.4 Factors Contributing to Poverty in Rural Areas of Developing Countries . . . . .	163
10.4.1 Geographical Factors . . . . .	163
10.4.2 Political Factors . . . . .	164
10.5 Improving Health and Livelihood. . . . .	164
10.5.1 Need to Develop Infrastructure. . . . .	165
10.5.2 Need to Improve Healthcare Systems . . . . .	165
10.5.3 Need for Vital Registration . . . . .	165
10.5.4 Need to Engage Communities . . . . .	166
10.5.5 Need to Apply the Infection Tree Theory (ITT) . . . . .	166
10.6 Conclusion . . . . .	166
References . . . . .	167
<b>Erratum to: Disease Awareness and Prevention</b> . . . . .	E1
<b>Bibliography</b> . . . . .	169
<b>Index</b> . . . . .	181

Infectious Diseases and Rural Livelihood in Developing  
Countries

Mphande, F.A.

2016, XV, 187 p. 21 illus. in color., Hardcover

ISBN: 978-981-10-0426-1