

Contents

<i>List of Figures</i>	<i>page</i> xii
<i>Acknowledgments</i>	xiii
Introduction	I
1 Pathogens and Parasites	5
Intestinal Viruses, Protozoa, and Bacteria	6
Intestinal Worms	9
Determinants of Disease Transmission	12
Changing Perspectives on Childhood Diarrheal Diseases	15
The Microbiome	17
Historical Epidemiology and Contemporary Interventions	21
2 Early Change	24
Rethinking the First Epidemiological Transition	25
Patterns of Vulnerability	28
Zones of Infectious Intestinal Disease	33
Eurasian Attitudes toward Human Waste	34
Early Urban Sanitation	36
3 Diffusion and Amplification	42
The Early Diffusion of Infectious Intestinal Disease to the Americas	42
The Uses of Human and Animal Wastes	45
Urban Sanitation Redux	53
Urban Crisis of Scale and the Emergence of Public Health Movements	55
Global Cholera	58

4	Innovations	65
	Early Sewerage	66
	Death by Sewage	69
	The “Dry Earth” and “Tub-and-Pail” Systems	71
	Sewage Farming and Trenching	72
	Flies, Household Hygiene, and Contaminated Milk	75
	The Typhoid Fever Vaccine	79
	Water Filtration and Disinfection	81
5	Adoptions and Adaptations	85
	Water and Sanitation in Latin America	86
	European Colonial Military Sanitation	88
	Water and Sanitation in East Asia	89
	Water and Sanitation in Tropical Africa	92
	Water and Sanitation in India	95
	Sanitation at Mid-Twentieth Century	99
6	The Struggle against Hookworm Disease	103
	Early Control Programs	103
	The Rockefeller Sanitary Commission for the Eradication of Hookworm Disease	108
	The Rockefeller Foundation’s International Programs	113
	The International Health Board (1916–27)	114
	Anemia as Diagnostic Conundrum	119
	The Unmet Challenges of Human Feces Disposal	119
	Assessments of the Hookworm Campaigns	121
7	An Era of Optimism	124
	Sanitary Practices: Soap, Refrigeration, and Screens	125
	Vaccines against Poliomyelitis	128
	The Revolution of Oral Rehydration Therapy	135
	The World Health Organization and Sanitation Initiatives	139
	The First and Second United Nations Development Decades (1960s–70s)	142
	The International Drinking Water and Sanitation Decade (1980s)	144
8	Global Health and Infectious Intestinal Disease	148
	The Infant Formula Controversy	148
	The Child Survival Revolution	151
	A New Campaign to Eradicate Poliomyelitis	154
	Community-Led Total Sanitation	156
	Open Defecation and the Struggle for Modernity	157
	Deworming the World	160
	Rotavirus Vaccine	163

Contents

xi

The Seventh Cholera Pandemic

164

Infectious Intestinal Disease Today

165

Conclusion

169

Bibliography

174

Index

204