## Contents

Series Foreword xi Introduction xiii

- I Enduring Themes in Vaccination History and Ethics 1
- The History of Vaccines and Immunization: Familiar Patterns, New Challenges 3 Alexandra Minna Stern and Howard Markel
- 2 Immunity for the People: The Challenge of Achieving High Vaccine Coverage in American History 17 James Colgrove
- 3 The Age-Old Struggle against the Antivaccinationists 39 Gregory A. Poland and Robert M. Jacobson
- 4 Ethics and Immunization Policy: Promoting Dialogue to Sustain Consensus 43 Chris Feudtner and Edgar K. Marcuse
- II Issues in Vaccine Research and Development 57
- 5 The Vaccine Industry (*Excerpt*) 59 R. Gordon Douglas and Vijay B. Samant
- 6 A Global Roadmap Is Needed for Vaccine Research, Development, and
  Deployment 65
  Adel Mahmoud
- 7 Making Practical Markets for Vaccines 79 Donald W. Light

- 8 Ethical Issues in International Vaccine Research and Development 89 Robert J. Levine
- 9 Thorny Issues in the Ethics of AIDS Vaccine Trials 99 Seth Berkley
- 10 The Vaccine (*Excerpt*) 103 Michael Specter
- 11 Ethical Considerations in Biomedical HIV Prevention Trials (*Excerpt*) 115 UNAIDS
- III Vaccine Regulation, Risk-Benefit Assessments, and Safety 119
- 12 Immunization in the United States (*Excerpt*) 123 Lance E. Rodewald, Walter A. Orenstein, Alan R. Hinman, and Anne Schuchat
- Addressing the Vaccine Confidence Gap (Excerpt) 131
  Heidi J. Larson, Louis Z. Cooper, Juhani Eskola, Samuel Katz, and Scott Ratzan
- 14 A Half-Century of Prevention—The Advisory Committee on Immunization
  Practices 137
  Jason L. Schwartz and Adel Mahmoud
- **15 The National Vaccine Injury Compensation Program 141** Katherine M. Cook and Geoffrey Evans
- 16 Rationalizing Vaccine Injury Compensation 145 Michelle M. Mello
- 17 Mercury, Vaccines, and Autism: One Controversy, Three Histories 163 Jeffrey P. Baker
- 18 Vaccines and Autism: A Tale of Shifting Hypotheses 183 Jeffrey S. Gerber and Paul A. Offit
- 19 Wakefield's Article Linking MMR Vaccine and Autism Was Fraudulent (*Excerpt*) 195
   Fiona Godlee, Jane Smith, and Harvey Marcovitch
- IV Vaccination Requirements and Responses to Vaccine Hesitancy 199
- 20 Compulsory Vaccination and Conscientious or Philosophical Exemptions:
  Past, Present, and Future 203
  Daniel A. Salmon, Stephen P. Teret, C. Raina MacIntyre, David Salisbury,
  Margaret Burgess, and Neal A. Halsey

Vaccine Refusal, Mandatory Immunization, and the Risks of Vaccine-Preventable
 Diseases 217
 Saad B. Omer, Daniel A. Salmon, Walter A. Orenstein, M. Patricia deHart, and

22 Fatal Exemption 231 Paul A. Offit

Neal Halsey

- 23 Politics, Parents, and Prophylaxis—Mandating HPV Vaccination in the United States 233
   R. Alta Charo
- 24 Lessons from the Failure of Human Papillomavirus Vaccine State
  Requirements 237
  Jason L. Schwartz, Arthur L. Caplan, Ruth R. Faden, and Jeremy Sugarman
- **25** Responding to Parental Refusals of Immunization of Children **245** Douglas S. Diekema and the American Academy of Pediatrics Committee on Bioethics
- 26 Influenza Vaccination of Healthcare Personnel: Revised Society for Healthcare Epidemiology of America (SHEA) Position Paper (*Excerpt*) 253
  Thomas R. Talbot, Hilary Babcock, Arthur L. Caplan, Deborah Cotton,
  Lisa L. Maragakis, Gregory A. Poland, Edward J. Septimus, Michael L. Tapper,
  and David J. Weber
- V Pandemics and Bioterrorism: The Role of Vaccines in Preparedness and Response 257
- 27 Who Should Get Influenza Vaccine When Not All Can? 261 Ezekiel J. Emanuel and Alan Wertheimer
- 28 Ethical Vaccine Distribution Planning for Pandemic Influenza: Prioritizing Homeless and Hard-to-Reach Populations (*Excerpt*) 269
   Kristy Buccieri and Stephen Gaetz
- 29 Poverty, Wealth, and Access to Pandemic Influenza Vaccines 281 Tadataka Yamada
- 30 Negotiating Equitable Access to Influenza Vaccines: Global Health Diplomacy and the Controversies Surrounding Avian Influenza H5N1 and Pandemic Influenza H1N1 285 David P. Fidler

- Safeguarding Children: Pediatric Medical Countermeasure Research (*Executive Summary*) 295
  Presidential Commission for the Study of Bioethical Issues
- 32 Protecting Our Children from Bioterrorism Requires Testing of Anthrax Vaccine 305 Tia Powell
- VI Global Vaccination and Disease Eradication Programs 307
- 33 Rethinking Global Access to Vaccines (*Excerpt*) 311Dave A. Chokshi and Aaron S. Kesselheim
- 34 Improving Access to Vaccines through Tiered Pricing 315 Seth Berkley
- 35 Ethical Considerations for Vaccination Programs in Acute Humanitarian
  Emergencies 321
  Keymanthri Moodley, Kate Hardie, Michael J. Selgelid, Ronald J. Waldman,
  Peter Strebel, Helen Rees, and David N. Durrheim
- 36 Lessons from the Eradication of Smallpox: An Interview with D. A. Henderson (*Excerpt*) 335
  D. A. Henderson and Petra Klepac
- 37 Intimidation, Coercion, and Resistance in the Final Stages of the South Asian
  Smallpox Eradication Campaign (*Excerpt*) 343
  Paul Greenough
- 38 Is Disease Eradication Ethical? 351 Arthur L. Caplan
- **39** Is There an Ethical Obligation to Complete Polio Eradication? **355** Claudia I. Emerson and Peter A. Singer
- 40 Letter from Public Health Deans Regarding Fictional Vaccination Campaigns in the Search for Osama Bin Laden and Response from The White House 359
- VII Frontiers in Vaccination 363
- 41 A Handful of "Antipoverty" Vaccines Exist for Neglected Diseases, but the World's Poorest Billion People Need More 367 Peter Hotez

- 42 Vaccines against Stimulants: Cocaine and Methamphetamine (*Excerpt*) 377 Thomas Kosten, Coreen Domingo, Frank Orson, and Berma Kinsey
- 43 Anti-Cancer Vaccines—A One-Hit Wonder? (*Excerpt*) 381 Justin H. K. Liu
- 44 Synthetic Generation of Influenza Vaccine Viruses for Rapid Response to Pandemics (*Excerpt*) 387
   Philip R. Dormitzer, Pirada Suphaphiphat, and colleagues
- 45 Vaccines against Malaria (*Excerpt*) 393 Amed Ouattara and Matthew B. Laurens
- **46 Randomized Controlled Trials for Ebola: Practical and Ethical Issues 399** Clement Adebamowo, Oumou Bah-Sow, and colleagues
- **47** Evaluating Ebola Therapies—The Case for RCTs **403** Edward Cox, Luciana Borio, and Robert Temple

Index 407