Global Maternal and Child Health:
Medical, Anthropological, and Public Health Perspectives
Series Editor: David A. Schwartz

Kim Gutschow
Robbie Davis-Floyd
Betty-Anne Daviss *Editors*

Sustainable Birth in Disruptive Times

Springer

Global Maternal and Child Health

Medical, Anthropological, and Public Health Perspectives

Series Editor:

David A. Schwartz
Department of Pathology
Medical College of Georgia
Augusta University
Augusta, GA, USA

Global Maternal and Child Health: Medical, Anthropological, and Public Health Perspectives is a series of books that will provide the most comprehensive and current sources of information on a wide range of topics related to global maternal and child health, written by a collection of international experts. The health of pregnant women and their children are among the most significant public health, medical, and humanitarian problems in the world today. Because in developing countries many people are poor, and young women are the poorest of the poor, persistent poverty exacerbates maternal and child morbidity and mortality and gender-based challenges to such basic human rights as education and access to health care and reproductive choices. Women and their children remain the most vulnerable members of our society and, as a result, are the most impacted individuals by many of the threats that are prevalent, and, in some cases, increasing throughout the world. These include emerging and re-emerging infectious diseases, natural and man-made disasters, armed conflict, religious and political turmoil, relocation as refugees, malnutrition, and, in some cases, starvation. The status of indigenous women and children is especially precarious in many regions because of ethnic, cultural, and language differences, resulting in stigmatization, poor obstetrical and neonatal outcomes, limitations of women's reproductive rights, and lack of access to family planning and education that restrict choices regarding their own futures. Because of the inaccessibility of women to contraception and elective pregnancy termination, unsafe abortion continues to result in maternal deaths, morbidity, and reproductive complications. Unfortunately, maternal deaths remain at unacceptably high levels in the majority of developing countries, as well as in some developed ones. Stillbirths and premature deliveries result in millions of deaths annually. Gender inequality persists globally as evidenced by the occurrence of female genital mutilation, obstetrical violence, human trafficking, and other forms of sexual discrimination directed at women. Many children are routinely exposed to physical, sexual, and psychological violence. Childhood and teen marriages remain at undesirably high levels in many developing countries.

Global Maternal and Child Health: Medical, Anthropological, and Public Health Perspectives is unique in combining the opinions and expertise of public health specialists, physicians, anthropologists and social scientists, epidemiologists, nurses, midwives, and representatives of governmental and non governmental agencies to comprehensively explore the increasing challenges and potential solutions to global maternal and child health issues.

More information about this series at http://www.springer.com/series/15852

Series Editorial Advisory Board

Kim Gutschow • Robbie Davis-Floyd
Betty-Anne Daviss
Editors

Sustainable Birth in Disruptive Times

Springer

Editors
Kim Gutschow
Department of Anthropology and Religion
Williams College
Williamstown, MA, USA

Robbie Davis-Floyd
Department of Anthropology
The University of Texas at Austin
Austin, TX, USA

Betty-Anne Daviss
Women's and Gender Studies
The Pauline Jewett Institute
Carleton University
Ottawa, ON, Canada

ISSN 2522-8382 ISSN 2522-8390 (electronic)
Global Maternal and Child Health
ISBN 978-3-030-54774-5 ISBN 978-3-030-54775-2 (eBook)
https://doi.org/10.1007/978-3-030-54775-2

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

The Labor & Delivery room at Sonam Norbu Memorial Hospital in Leh, Ladakh, India in 2006 (top) and 2019 (bottom). The upper image shows two tables for delivery, the stirrups that women were required to use for most deliveries, buckets for absorbing blood, and other bodily fluids during the delivery, as well as wooden tray used to measure newborns on the right-hand table. The lower image shows the brand new Labor & Delivery room that was part of an entirely new hospital construction that followed partial destruction of the hospital during the catastrophic Leh flash floods in 2010. Published with permission from © Kim Gutschow. All Rights Reserved.

From Kim Gutschow:
This book is dedicated to the childbearers, providers, and babies, born and unborn, past, present, future,
for their care and compassion.

From Robbie Davis-Floyd:
This book is dedicated to my culture heroes Robin Lim and Vicki Penwell, who have developed and practiced sustainable models of birth, saved countless lives, and brought love, light, and joy to the thousands of people who experienced their care, even in the most disruptive of times.

From Betty-Anne Daviss:
This book is dedicated to all of our grandchildren in the hope that they will understand that social activism is as important as education, regulation, and association.

Acknowledgments

Kim Gutschow is profoundly grateful to the women and providers—midwives, obstetricians, nurses, neonatologists in the USA, India, Germany, Nepal, and elsewhere—who have participated in countless conversations on maternity care and MNCH (maternal, neonatal, and child health) over the past 16 years. She deeply thanks the doctors—Dr. Michelle Lauria, Dr. Torren Rhodes, and Dr. George Little (coauthor of Chapter 19)—who helped steward her vaginal delivery of 26-week-old breech twins who spent 77 days in the NICU at Dartmouth-Hitchcock Hospital in 2004. Subsequent conversations with these and other providers helped shape her research into the anthropology of maternal and newborn health and reproduction. She is so very grateful to Robbie and Betty-Anne for their inspirational work and wonderful friendship, cemented in 2015 on a train journey from Bad Wildbad, Germany, that helped conceive this book. Last but not least, she thanks her family—her children Tashi, Krishan, and Yeshe as well as her partner Robin Sears—for their support and many questions about how the book was coming to fruition in past years.

Robbie Davis-Floyd is deeply grateful to lead editor Kim Gutschow for her long-term dedication to seeing this book through to completion, for her international understanding of the issues surrounding sustainable birth—which enabled her to invite just the right authors for the chapters in this collection–for her outstanding editing skills, and for her ongoing friendship. She is also grateful for that train trip from Bad Wildbad—it is amazing what people can come up with when their brains are moving as fast as that fast-moving train!

Betty-Anne Daviss would like to thank her coeditors for their patience with her as they did the main work on this book while she was finishing another book, *Birthing Models on the Human Rights Frontier: Speaking Truth to Power* (BMHRF). She sees BMHRF as highly complementary to this volume, yet different in that it often takes a more iconoclastic approach and proactively calls people to action. Both styles are needed. She finds that a book focusing on sustainability is critical, given that some of the optimal birth models in BMHRF have already been threatened by the neoliberal economic values that plague healthcare funding. Betty-Anne would also like to thank a casualty of those problems, traditional midwives the

world over, whose work often goes unnoticed and disrespected at best; at worst, many are being persecuted and arrested. Finally, she would like to thank her husband, Ken Johnson, a steadfast support, who reminds her, when she engages with Kim and Robbie in trying to fix everything in the world, that Marshall Klaus said: "Opinion divides, data unites."

Contents

1 Introduction: Sustainable Birth in Disruptive Times 1
Kim Gutschow and Robbie Davis-Floyd

Part I Sustainable Maternity Solutions in High-Income Countries

2 Sustainable Midwifery 29
Elizabeth Davis

3 Bringing Back Breech by Reframing the Language of Risk 43
Betty-Anne Daviss, Anita Hedditch, Vijaya Krishnan, and Helen Dresner Barnes

4 From Home to Hospital: Sustainable Transfers of Care in the United States 61
Bria Dunham and Sara Hall

5 Structures for Sustainable Collaboration Between Midwives and Obstetricians in the Netherlands: The Obstetric and Midwifery Manual and Perinatal Care Partnerships 73
Rachael Kulick Bommarito

6 Re/Envisioning Birth Work: Community-Based Doula Training for Low-Income and Previously Incarcerated Women in the United States 85
Rebecca L. Bakal and Monica R. McLemore

7 Sustainable Metrics: Using Measurement-Based Quality Improvement to Improve Maternity Practice While Avoiding Frustration and Pitfalls 99
Kathleen H. Pine and Christine H. Morton

8 Unsustainable Surrogacy Practices: What We Can Learn from a Comparative Assessment 115
Elly Teman and Zsuzsa Berend

Part II Sustainable Maternity Solutions in Latin America

9 Childbirth in Chile: Winds of Change 131
Michelle Sadler, Gonzalo Leiva, and Ricardo Gómez

10 Humanizing Care at the Maternity Hospital Estela de Carlotto in Buenos Aires: Providers Relearning Their Roles 145
Celeste Jerez

11 Luna Maya Birth Centers in Mexico: A Network for Femifocal Care 157
Cristina Alonso, J. M. López, Alison Lucas-Danch, and Janell Tryon

12 Reconstructing Referrals: Overcoming Barriers to Quality Obstetric Care for Maya Women in Guatemala Through Care Navigation 171
Kirsten Austad, Anita Chary, Jessica Hawkins, Boris Martinez, and Peter Rohloff

Part III Sustainable Maternity Solutions in Low- and Middle-Income Countries

13 A Sustainable Model of Assessing Maternal Health Needs and Improving Quality of Care During and After Pregnancy 187
Mary McCauley and Nynke van den Broek

14 Sustainable Maternal and Newborn Care in India: A Case Study from Ladakh 197
Kim Gutschow, Padma Dolma, and Spalchen Gonbo

15 Giving Birth at Home in Resource-Scarce Regions of India: An Argument for Making the Women-Centric Approach of the Traditional Dais Sustainable 217
Bijoya Roy, Imrana Qadeer, Mira Sadgopal, Janet Chawla, and Sandhya Gautam

16 It Takes More Than a Village: Building a Network of Safety in Nepal's Mountain Communities 233
Vincanne Adams, Sienna R. Craig, Arlene Samen, and Surya Bhatta

17 Tranquil Birth: Revising Risk to Sustain Spontaneous Vaginal Birth 249
Kathleen Lorne McDougall

18 Sustainable Birth Care in Disaster Zones and During Pandemics: Low-Tech, Skilled Touch 261
Robbie Davis-Floyd, Robin Lim, Vicki Penwell, and Tsipy Ivry

19 Sustainable Newborn Care: Helping Babies Breathe and Essential Newborn Care 277
Chiamaka Aneji and George Little

20 Conclusion: Sustainable Maternity Care in Disruptive Times 295
Kim Gutschow, Robbie Davis-Floyd, and Betty-Anne Daviss

Correction to: Introduction: Sustainable Birth in Disruptive Times C1

Index 309

About the Editors and Contributors

Editors

Kim Gutschow, PhD, is a Lecturer in Anthropology and Religion and affiliated with Public Health, Asian Studies, and Women's, Gender, and Sexuality Studies at Williams College, in Williamstown, Massachusetts, where she has taught since 2003. Since 1989, she has published over 35 articles on maternity care, maternal death reviews, and counting maternal mortality in India and the USA, as well as on the gender dynamics and discourses of Buddhist monasticism, Tibetan medicine, community-based irrigation, and land use practices in the Indian Himalayas. She is the author of *Being a Buddhist Nun: The Struggle for Enlightenment in the Himalayas* (Harvard 2004) which won the Sharon Stephens Prize for best ethnography (2005). Her collaborative research projects with Ladakhi teams have received several awards including a Humboldt Research Fellowship for Experienced Researchers (2009) for *Birth: From Home to Hospital and Back Home Again*; a National Geographic Award (2019) for "Climate Change Adaptation: By the People & For the People"; as well as a postdoc at the Harvard Society of Fellows (1997–2000) for research on gender, social power, and birth in the Indian Himalayas. She raised $100,000 for Zangskari women and nuns through the Zanskar Project from 1991 to 2015 (https://gadenrelief.org/project/zangskar-project/) .

Robbie Davis-Floyd, PhD, Senior Research Fellow, Department of Anthropology, University of Texas at Austin, and Fellow of the Society for Applied Anthropology, is a well-known medical anthropologist, midwifery and doula advocate, and international speaker and researcher in transformational models in maternity care. She is author of over 80 journal articles and 24 encyclopedia entries, and of *Birth as an American Rite of Passage* (1992, 2003) and *Ways of Knowing about Birth: Mothers, Midwives, Medicine, and Birth Activism* (2018); coauthor of *The Power of Ritual* (2016); and lead editor of 13 collections, including the award-winning volumes *Childbirth and Authoritative Knowledge* (1997) and *Cyborg Babies* (1998), and the "seminal" *Birth Models That Work* (2009). Her most recent collection, coedited with Melissa Cheyney, is *Birth in Eight Cultures* (2019). *Birthing Models on the Human Rights Frontier: Speaking Truth to Power*, coedited with Betty-Anne Daviss, is in press. As a Board Member of the International MotherBaby Childbirth Organization, Robbie served as lead editor for the "International Childbirth Initiative: 12 Steps to Safe and Respectful MotherBaby-Family Maternity Care" (a joint IMBCO/FIGO global initiative). She presently serves as lead editor for a Routledge series called "Social Science Perspectives on Childbirth and Reproduction" and as senior advisor to the Council on Anthropology and Reproduction. Many of her published articles are freely available on her website: www.davis-floyd.com.

Betty-Anne Daviss, MA, BMJ, RM (Registered Midwife), has served as a midwife for 45 years, practicing in various countries on six continents, and as a researcher in the social sciences and clinical epidemiology for over 25 years. She is an Adjunct Professor in Gender and Women's Studies at Carleton University, Ottawa, Ontario, Canada, and has taught since the 1980s on reproductive issues and the politics of gender and health, while working towards midwifery legislation in North America and abroad. She coauthored the large prospective home birth study of Certified Professional Midwives in North America published in the BMJ (2005) that continues to be accessed 500–800 times a month and the World Report on Postpartum

Hemorrhage when she worked for the International Federation of Gynecology and Obstetrics (FIGO) (Lalonde et al. 2006), which continues to be used with updates, and was the co-principal investigator and principal writer for the Frankfurt study comparing vaginal breeches born with the mothers on their backs versus in upright positions (Louwen et al. 2017). The only midwife in Canada in the last two decades to have achieved official hospital privileges to attend breech births without a transfer to obstetrics, Betty-Anne has been involved with over 170 planned vaginal breech births, and provided workshops, rounds, and/or plenaries on vaginal breech in Europe, Africa, North and South America, China, India, Australia, and Turkey. She has testified for 10 midwifery hearings/court cases and 11 state and 3 provincial legislative processes. Some of her published articles are freely available on her website: www.understandingbirthbetter.com.

Contributors

Vincanne Adams, PhD, is professor in the Department of Anthropology, History, and Social Medicine and the joint Program in Medical Anthropology at the University of California, San Francisco. She serves as editor of the journal *Medical Anthropology Quarterly* and is the author of *Markets of Sorrow, Labors of Faith*; *Sex in Development*; *Metrics*; and other books. She teaches and conducts research on several topics, including safe motherhood in Tibet, Nepal, and the USA.

Cristina Alonso, MPH, CPM, founded the Luna Maya birth center in Chiapas in 2004 and opened the second Luna Maya birth center in Mexico City in 2014. She was a founding member and served as president of the Mexican Midwifery Association, and has served on several birth and midwifery boards including the Midwives Alliance of North American and Human Rights in Childbirth. In 2018 she founded the Mexican Network of Birth Centers and published the book *Open a Midwifery Center* in Spanish. This book was later adapted, translated, and published for a global audience in 2020. Author of several articles on midwifery in Mexico, she is currently a Doctor of Public Health candidate at Harvard University.

Chiamaka Aneji, PhD, is an Associate Professor of Pediatrics in the Division of Neonatal-Perinatal Medicine, McGovern Medical School, at the University of Texas Health Science Center at Houston. She is a master trainer of the Helping Babies Survive program and a Fellow of the American Academy of Pediatrics. Her academic career focuses on medical education and global health with a focus on Africa and

quality improvement in health care. She is a recognized master educator and has taught Helping Babies Survive courses in North America, Nigeria, and Haiti.

Kirsten Austad, MD, MPH, Center for Research in Indigenous Health, Wuqu' Kawoq | Maya Health Alliance, Tecpán, Guatemala, is an Assistant Professor at Boston University School of Medicine. She is a family medicine physician and public health researcher with field experience in the Dominican Republic, Guatemala, Ghana, and Lesotho. She completed her medical education at Harvard Medical School, her residency at Boston Medical Center, and her fellowship training at the Edmond J. Safra Center for Ethics and the Global Women's Health Fellowship at Harvard University. Since 2013, she has directed comprehensive women's health programming for the Maya Health Alliance and Friendship Bridge—nongovernmental organizations in Guatemala.

Rebecca L. Bakal, MPH, is a community health professional based in Chicago, Illinois. She is currently Program Manager of Health Education at the Jewish United Fund. In her research and practice, she examines community health education and peer support as tools to improve health equity. She has presented her work nationally and is currently finalizing a health education curriculum on genetics for international distribution. She also practices as a full-spectrum doula.

Zsuzsa Berend, PhD, Academic Administrator, Department of Sociology, University of California, Los Angeles, has been teaching sociology at UCLA since 1996 and is the academic administrator of the departmental Honors Program. Her earlier research was in the field of historical sociology. Her most recent research was an ethnographic study of a large public surrogacy information and support forum. She has published articles in *Medical Anthropology Quarterly*, *Sociological Forum*, *Anthropology and Medicine*, and *American Anthropologist*. Her book, *The Online World of Surrogacy*, was published in 2016 by Berghahn Books.

Surya Bhatta is the Executive Director of One Heart Worldwide, based in Kathmandu, Nepal. He is a public health professional and health development practitioner who has been trained in Nepal and the USA. He earned his master's in Healthcare Delivery Science from a joint program at Dartmouth's Geisel School of Medicine and the Tuck School of Business.

Rachael Kulick Bommarito, PhD, studies direct entry midwifery and planned home birth in high-income countries. She is an Accreditation Coordinator at the Midwifery Education Accreditation Council (MEAC). MEAC creates standards and criteria for the education of midwives in the USA and is a federally approved accreditation agency.

Anita Chary, MD, PhD, Center for Research in Indigenous Health, Wuqu' Kawoq–Maya Health Alliance, Tecpán, Guatemala, is an emergency physician at Massachusetts General Hospital and Brigham and Women's Hospital. She is chief

resident at the Harvard Affiliated Emergency Medicine Residency and a clinical fellow at Harvard Medical School. Dr. Chary is also an anthropologist whose research focuses on health disparities and health systems development in low-resource settings. She has worked with Maya Health Alliance, a nongovernmental organization in Guatemala, since 2008 on child nutrition, women's health, and chronic disease programs.

Janet Chawla, BA, MA, is an activist, childbirth educator, scholar, and founder-director of the NGO MATRIKA (www.matrika-india.org), a trust for research and advocacy on traditional midwifery and noninvasive birth methods. She researches, writes, and lectures on traditional midwives (*dais*) and indigenous body knowledge. MATRIKA's data on rituals, birth songs, notions of goddess and demoness, ghosts and ancestors span the gaps between medicine, religion, and gender. Chawla taught classes to prepare women and couples for natural childbirth for 25 years in Delhi and meanwhile earned an MA in Religious Studies (1985) focusing on the role of the *dai* as a ritual practitioner. She lectures and writes on the religio-cultural and ethnomedical aspects of dais' traditions. She is author and editor of the book *Birth and Birth Givers: The Power Behind the Shame* (2006). She has taken part in the JEEVA initiative since its inception in 2007 and lives in New Delhi, India.

Sienna R. Craig, PhD, is Associate Professor in the Department of Anthropology at Dartmouth College in Hanover, New Hampshire, where she teaches and conducts research on medical anthropology, global health, and migration and social change, with a focus on Tibetan and Himalayan communities. She is author of *Healing Elements: Efficacy and the Social Ecologies of Tibetan Medicine* and coeditor of *Medicine Between Science and Religion: Explorations on Tibetan Grounds*, among other books and articles.

Elizabeth Davis, CPM, BA, has been a midwife, international educator, consultant, and reproductive health-care specialist for over 40 years and is the author of six books on topics of midwifery, sexuality, and female psychology (see https://elizabethdavis.com for details). She served as Regional Representative and Education Committee Chair for the Midwives Alliance of North America, as President of the Midwifery Education Accreditation Council, and as midwife consultant to the State of California's Alternative Birthing Methods Study. She received the Brazen Woman Award from the California Association of Midwives and a Lifetime Achievement Award from Midwifery Today. She is cofounder of the US-accredited National Midwifery Institute and author/instructor of Heart & Hands Coursework (see https://nationalmidwiferyinstitute.com).

Padma Dolma, DNB, MD, MBBS, is Chief Obstetrician at Sonam Norbu Memorial Hospital (SNMH) in Leh, Ladakh, India, where she has worked since 2005. She has conducted research on maternal and newborn health in Ladakh since 2006, including ongoing collaborations with researchers from the University College London and Rochester University on high-altitude pregnancy outcomes, newborn and pedi-

atric survival rates, and perinatal health. She has worked with Kim Gutschow since 2006, and they have jointly presented their research on birth outcomes and maternal survival in Ladakh at international conferences in Rome (2007), Leh, Ladakh, India (2011), and Heidelberg, Germany (2012), as well as coauthored a chapter in *Global Health: A Challenge for Interdisciplinary Research* (2012) called "Global Policies and Local Implementation: Maternal Mortality in Rural India."

Helen Dresner Barnes, MSc, RM, BMedSci, Lecturer in Midwifery, University of Bradford, West Yorkshire, UK, practiced in an award-winning caseload midwifery team for 15 years before moving on to the University of Bradford as a Midwifery Lecturer. She has published articles in AIMS, *Midwifery Matters*, *The Practising Midwife*, *Essentially MIDIRS*, and the *Journal of Child Language*. For the last 10 years, Helen has focused on developing knowledge and clinical skills in breech, organizing two successful international breech conferences in the UK in 2014 and 2017. In 2016, her team won a national award from the UK Royal College of Midwives for their collaborative, multidisciplinary breech service.

Bria Dunham, PhD, MPH, CPH, Department of Health Sciences, Boston University, Boston, Massachusetts, USA, is a Clinical Assistant Professor and Program Director of Health Science at Boston University and an Affiliate Faculty in Women's, Gender, and Sexuality Studies. Her scholarly work integrates evolutionary and humanized understandings of childbirth with the aim of improving psychosocial outcomes for pregnant persons.

Sandhya Gautam, MA, is Project Coordinator, JEEVA Project, and also serves as Consultant, Centre for Health and Social Justice New Delhi, India. She worked with the grassroots-level organization in Himachal Pradesh (1994–2007) on Women's Reproductive Health and Rights, and presently she is with the Centre for Health and Social Justice, New Delhi. She coordinates the National Alliance for Maternal Health and Human Rights (NAMHHR) and is a member of CommonHealth—a network working on maternal health, neonatal health, and safe abortion issues. She is one of the JEEVA Shepherds, and since 2008 she has supervised the JEEVA Research Project as Project Coordinator. She is from Nahan in the Sirmaur District of Himachal Pradesh.

Ricardo Gómez, MD, is a Chilean obstetrician, father, university teacher, researcher, and social communicator in educational platforms. He directs the Center for Perinatal Diagnosis and Research (Pontificia Universidad Católica de Chile) at La Florida Hospital and is Head of Maternal Fetal Medicine and Women´s Ultrasound in Santa María Clinic, Santiago, Chile.

Spalchen Gonbo, MD, MBBS, DCH, is the Chief Pediatrician at Sonam Norbu Memorial Hospital (SNMH) in India where he has worked since 2005. He has an MBBS in Pediatrics and Neonatology from Jammu Medical College, has received advanced training in newborn resuscitation at AIMMS since 2009, and has collabo-

rated with researchers from Rochester University on newborn survival and neonatal outcomes at SNMH since 2009. Together with Dr. Padma, he has been responsible for developing the SNCU (Special Newborn Care Unit) at Leh's Sonam Norbu Memorial Hospital since 2006.

Sara Hall, MSN, WHNP-BC, is a Women's Health Nurse Practitioner at a private family planning clinic in Massachusetts. Her scholarly and clinical interests include contraception counseling, normal physiologic childbirth, breastfeeding, trauma-informed care, and promotion of bodily autonomy in health care.

Jessica Hawkins, BA, is a medical student at the University of California, Berkeley–University of California, San Francisco Joint Medical Program. She has worked with the Maya Health Alliance, a nongovernmental organization in Guatemala, on health systems research and women's health programs since 2016. She is affiliated with the Center for Research in Indigenous Health, Wuqu' Kawoq–Maya Health Alliance, Tecpán, Guatemala.

Anita Hedditch is a midwife and Breech Team Lead at Oxford Radcliffe Hospitals NHS Foundation Trust, Oxford, England**.** As an intrapartum midwife for 26 years, Hedditch performs and teaches ECV (extra cephalic version) and has developed a midwifery team that supports breech birth, focusing on upright positions and collaborative care with obstetricians. The team members work to local guidelines that have been developed from expert training and local experience and collect detailed information of each birth, which is pooled to inform safety and for ongoing learning. Her role has provided opportunities to speak at conferences and teach within the UK setting and abroad. She has also supported an obstetric unit in Germany in breech birth provision and is an assessor in their yearly mandatory training.

Tsipy Ivry, MA, BSc, PhD, is senior lecturer and chair of the graduate program in medical and psychological anthropology in the Anthropology Department, University of Haifa, Israel. She is author of a comparative ethnography, *Embodying Culture: Pregnancy in Japan and Israel* (2010). Since 2006, she has studied the intersections of religion and reproductive biomedicine, particularly related to rabbinically mediated assisted conception and post-diagnostic decisions. Her most recent work explores pregnancy and childbirth following the March 11, 2011, disasters in Eastern Japan. Her research is funded by Israeli Science Foundation grants and recently by a Japan Foundation fellowship.

Celeste Jerez, BA, PhD, is Professor in Social Anthropology at the University of Buenos Aires (UBA), Argentina. Her dissertation was on childbirth activism against obstetric violence in Buenos Aires (2015). She is also a PhD Fellow in Anthropology, with a workplace at the Research Institute for Gender Studies, School of Philosophy and Liberal Arts, UBA. She is part of a teaching team on Feminist Anthropology (UBA) and a research project affiliated with the groups "Gender and Emotions in Political Participation" (UBACyT Project), "Gender and Public Policies program"

(IESCODE–UNPAZ), and "Gender, (In)Equalities and Rights in Tension" (CLACSO Working Group). She has published articles in national and international journals. Her current research topic addresses feminist anthropology, emotions, health providers, and attention to sexual and reproductive health in the Buenos Aires suburbs.

Vijaya Krishnan, CPM, DPT, LCCE, FACCE, is a Certified Professional Midwife and the cofounder of The Sanctum, Natural Birth Center in Hyderabad, India, which has pioneered a unique Collaborative Model of Care. With a doctorate in physical therapy, she has also created a wide array of wellness programs for women throughout their reproductive cycle. She is the Program Director for the Healthy Mother Lamaze Accredited Childbirth Educator Program, which trains Lamaze educators all over India. She has been awarded the "Lifetime Achievement Award for Service to MotherBaby" by Midwifery Today.

Gonzalo Leiva is a Chilean midwife who holds a master's in Health Administration. He works at the Center for Perinatal Diagnosis and Research, Faculty of Medicine, Pontificia Universidad Católica de Chile, and in the maternity unit of La Florida Hospital in the city of Santiago. This maternity unit has implemented the successful "Safe Model of Personalized Childbirth" which is recognized as a pillar and example of safe delivery and respectful care within the country. He is an activist on respectful birth and a founding member and director of the Chilean Observatory of Obstetric Violence.

Robin Lim, CPM, is a Filipino American midwife, mother, grandmother, author, and founder and Executive Board Director of *Yayasan Bumi Sehat*, a nonprofit organization in Indonesia. Lim also serves on the board of Bumi–Wadah, Philippines. Her passion is Human Rights in Childbirth. She constructed the Bumi Sehat birth and health-care center in Ubud, Bali, which has recently moved into a new building built with the funds from her 2011 CNN Hero of the Year Award. Her work has also taken her into the heart of disaster zones following earthquakes in Indonesia, Haiti, and Nepal; the super typhoon Haiyan in the Philippines; the volcanic eruptions in Bali; and the tsunami that devastated Aceh, where Bumi Sehat still supports a community health clinic and birth center. Bumi Sehat has also completed the construction of the Angel Hiromi Childbirth Center in Sentani, Papua. http://iburobin.com.

George Little, MD, is Active Emeritus Professor of Pediatrics and of Obstetrics and Gynecology, Geisel School of Medicine at Dartmouth in Hanover, New Hampshire. He is Emeritus Chair of Maternal and Child Health (MCH) at the Dartmouth–Hitchcock Medical Center, a Fellow of the American Academy of Pediatrics from which he received the Virginia Apgar Award, and an Honorary Fellow of the American College of Obstetrics and Gynecology. His academic career focuses on clinical and systems neonatology, including a global focus that empha-

sizes Africa, the Middle East, and the Balkans. He is a recognized educator and author and is coeditor of *Religion and Ethics in the Neonatal Intensive Care Unit* (Oxford 2019).

J. M. López, **PhD**, is a medical anthropologist specializing in sexual, reproductive, and maternal health matters and the design and ethics of collaborative ethnography. They are a Lecturer in Society and Health at the School of Pharmacy and Medical Sciences, University of Bradford, Bradford, UK. Their broader research interests lie in family life, intimate relationships, and life course in societies or populations affected by violence and/or conflict. Dr López's research region is principally, though not exclusive to, Mexico and the UK.

Alison Lucas-Danch, MPH, MSW, is a trained infant–parent psychotherapist who has specialized specifically in reproductive mental health care. Her research has focused on improving perinatal health equity within systems-level program planning and evaluation. Recently, she has worked in the 0–3-year field, again with the lens of reducing disparities in pregnancy and early childhood, with the overall goal of promoting equitable beginnings of life for each child.

Boris Martinez, MD, is a resident physician in the Department of Internal Medicine at Saint Peter's University Hospital in New Brunswick, New Jersey. He has extensive experience as a Kaqchikel Maya-, Spanish-, and English-speaking physician in underserved communities in his native Guatemala and New Jersey. Dr. Martínez has spearheaded community-based research in nutrition, early childhood development, maternal health, and health systems with Maya Health Alliance, a nongovernmental organization in Guatemala, since 2014. He is affiliated with the Center for Research in Indigenous Health, Wuqu' Kawooq | Maya Health Alliance, Tecpán, Guatemala.

Monica R. McLemore, **PhD, MPH, RN, FAAN**, School of Nursing, University of California, San Francisco (UCSF), is a tenured associate professor in the Family Health Care Nursing Department, an affiliated scientist with Advancing New Standards in Reproductive Health, and a member of the Bixby Center for Global Reproductive Health. She retired from clinical practice as a public health and staff nurse after a 28-year clinical nursing career. Her research program is focused on understanding reproductive health and justice. She has published 56 peer-reviewed articles and various Op-Eds and commentaries. She is the recipient of numerous awards and was inducted into the American Academy of Nursing in October, 2019.

Mary McCauley, BScMedSci, MBChB, MRCOG, PhD, is Academic Clinical Lecturer, Centre of Maternal and Newborn Health, Liverpool School of Tropical Medicine, and obstetrician and gynecologist at Liverpool Women's Hospital, UK. She specializes in implementation research to improve health outcomes during and after pregnancy for mothers and babies living in low-resource settings.

Kathleen Lorne McDougall, PhD, is an independent scholar. Her birth study was completed while she was a member of the Anthropology of the First 1000 Days research cluster at the University of Cape Town, South Africa. She was a postdoctoral fellow in Anthropology at the University of Cape Town and is also a graduate of the University of Cape Town.

Christine H. Morton, PhD, is a medical sociologist at Stanford University School of Medicine in California, whose qualitative and mixed-methods research on maternal and neonatal health has informed clinical quality improvement practices and policies in California and the USA. She is the author of *Birth Ambassadors: Doulas and the Re-Emergence of Woman-Supported Childbirth in America* (2014) and founder of ReproNetwork.org in 1998—an international listserv with over 600 subscribers, mostly social scientists and medical practitioners interested in reproductive/maternal practices, policies, and ideologies.

Vicki Penwell, CPM, LM, MS, MA, is the founder and Executive Director of Mercy In Action Vineyard, Inc., responsible for the safe delivery of more than 15,500 births in the Philippines since 1991, at no cost to the parents, and with outcomes four times better than the Philippines national average. She also serves as Executive Director of the Mercy In Action College of Midwifery, a 4-year Bachelor of Science midwifery college accredited by MEAC in the USA. Vicki holds a master's degree in Midwifery and another master's degree in Intercultural Studies from the Philippines. Vicki lives with her husband of 41 years in Olongapo, Philippines, where she and her team care for the poorest of the poor. She continues to travel and teach midwifery around the world, as well as to attend births and respond to disasters as needed.

Kathleen H. Pine, PhD, is an Assistant Professor in the College of Health Solutions at Arizona State University in Phoenix. Her research, much of which examines health information technology and childbirth and data practices in health care, bridges human-centered computing, organization studies, and science and technology studies. Her research has been published in venues including the *Academy of Management Journal*, ACM CHI, PACMHCI, and the *International Journal of Medical Informatics*.

Imrana Qadeer, PhD, is a well-known public health expert. She is a Distinguished Professor with the Council for Social Development, New Delhi, India. For 35 years she served as Professor at the Centre for Social Medicine and Community Health (CSMCH), Jawaharlal Nehru University, New Delhi, and was a JP Naik Fellow at the CWDS. She has also served as lead editor for four collections, the latest of which is *Universalising Healthcare in India: From Care to Coverage*. She is currently a member of the ICMR's Scientific Advisory Board and also worked with the Ministry of Health and Family Welfare, the Planning Commission, Population Commission, and the advisory and monitoring bodies for the National Rural Health Mission. She is part of the JEEVA Collective that opposes the banning of *dais*' work

in India and advocates for their recognition as community-level maternity and newborn care providers.

Peter Rohloff, MD, PhD, is an Assistant Professor in the Department of Global Health Equity at Brigham and Women's Hospital and at Harvard Medical School in Boston, Massachusetts. Dr. Rohloff is an internist, pediatrician, and global health researcher with expertise in noncommunicable and chronic disease program development, childhood undernutrition, health disparities in indigenous populations, pediatric disabilities and rare diseases in developing countries, and Mayan languages and culture. He completed his medical education and graduate studies in parasitology at the University of Illinois in Urbana–Champaign and his residency in internal medicine and pediatrics at Brigham and Women's Hospital and Boston Children's Hospital. He founded the nongovernmental organization Maya Health Alliance in Guatemala in 2006 and serves as the organization's Chief Medical Officer. He is affiliated with the Center for Research in Indigenous Health, Wuqu' Kawoq–Maya Health Alliance, Tecpán, Guatemala.

Bijoya Roy, PhD, is Assistant Professor, Public Health and Gender Studies, Centre for Women's Development Studies, New Delhi, India, with an interdisciplinary background in Food and Nutrition, Social Work, and Public Health. Her research, teaching, and writing include public–private partnerships in health care, commercialization of health care, childbirth practices and medicalization, midwifery practices, and women's health-care workforce and research methodology. She served as the editor of the *Indian Journal of Gender Studies*' Special Issue on *Gender and Commercialisation of Health Care* and in 2020 was selected as Shepherd to the JEEVA Collective (Birthing Study Collective). She currently serves as member for the Institutional Ethics Committee, Public Health Resource Network, New Delhi.

Mira Sadgopal, MD, MBBS, worked as a doctor and rural development worker in Madhya Pradesh, India (1974–1989), where she related with *dais* among village women. After joining the Medico Friend Circle, she became active in the women's health movement. In 1986 she cofounded the Lok Swasthya Parampara Samvardhan Samithi (LSPSS). In 1992 she was elected Ashoka Fellow for work in Fertility Awareness Education. In 1999 she cofounded the Tathapi Trust for Women and Health Resource Development (www.tathapi.org) in Pune. She founded the JEEVA initiative in 2007. She lives in Nandurbar, Maharashtra, India, and serves as Principal Investigator, JEEVA Project, and health activist, Managing Trustee, Tathapi Trust, Pune, India.

Michelle Sadler, PhD, is a Chilean medical anthropologist who currently works at the Faculty of Liberal Arts, Universidad Adolfo Ibáñez, Chile. She is director of the Chilean Observatory of Obstetric Violence and member of the Medical Anthropology Research Center at Universitat Rovira i Virgili, Tarragona, Spain. She has 20 years of experience researching childbirth models in Chile, has assessed policies towards

respectful maternity care, and has led civil society organizations that seek to promote change in maternity-related issues.

Arlene Samen is founder and President of One Heart Worldwide. She has been a nurse practitioner in maternal fetal medicine for over three decades. In 1997, she met His Holiness the Dalai Lama, who asked her to take her expertise and help women and children dying in childbirth in Tibet. Since that time, she has dedicated her life to serving pregnant women living in remote parts of the world. She has received many awards, including being named a CNN Hero, a Ranier Arnhold Fellow through the Mulago Foundation, and a participant in the Skoll World Forum.

Elly Teman, PhD, is a senior lecturer in cultural and medical anthropology at the Department of Behavioral Sciences at Ruppin Academic Center in Israel. Her research in the anthropology of reproduction has focused on women's experiences of surrogacy and prenatal testing. Elly is the award-winning author of an ethnography on gestational surrogacy in Israel entitled *Birthing a Mother: The Surrogate Body and the Pregnant Self* (2010). Her publications have appeared in *Social Science and Medicine*, *Medical Anthropology Quarterly*, *Culture*, *Medicine and Psychiatry*, and elsewhere. These publications include articles on surrogacy policy, on the experiences of gestational surrogates and intended mothers, and on religious Jewish women's reproductive lives.

Janell Tryon received her MPH in Health and Social Behavior from the University of California, Berkeley, and is a first-year doctoral student with the Department of English at the University of Massachusetts, Amherst. She has worked as a community-based researcher for NYC's Department of Health and Mental Hygiene, the San Francisco Community Health Center, and the San Francisco Department of Public Health, advocating for people living with HIV, people who use drugs, and people experiencing homelessness. Janell has also worked in the field of reproductive justice and conducted research at Luna Maya Birth Center in Chiapas, Mexico, during which time she coauthored the work presented in this volume.

Nynke van den Broek, PhD, FRCOG, DTM&H, MBBS, Centre for Maternal and Newborn Health, Liverpool School of Tropical Medicine, Liverpool, UK, is an Obstetrician-Gynaecologist trained in Tropical Medicine with recognized international expertise in global health and development. Working through effective links with governments and international partners to promote health of vulnerable populations in low- and middle-income settings, Nynke has designed, sourced funding for, and implemented programs that aim to improve access to, availability, and quality of health care for women and children through high-quality research and technical assistance.

List of Acronyms

AAP	American Academy of Pediatrics
ANM	Auxiliary Nurse Midwife
ACOG	American College of Obstetrics and Gynecology
BEmOC	Basic Emergency Obstetric Care
CDC	Centers for Disease Control and Prevention
CEmOC	Comprehensive Emergency Obstetric Care
CPAP	Continuous Positive Airway Pressure
CPMs	Certified Professional Midwives
EFM	Electronic Fetal Monitoring
EMDR	Eye Movement Desensitization and Reprocessing
EmOC	Emergency Obstetric Care
ENC	Essential Newborn Care
ECEB	Essential Care for Every Baby
ECSB	Essential Care for Small Babies
FIGO	International Federation of Gynecology and Obstetrics
GDA	Global Development Alliance
HBB	Helping Babies Breathe
HBS	Home Birth Summit
HIC	High-Income Countries
ICI	International Childbirth Initiative
ILCOR	International Liaison Committee on Resuscitation
KMC	Kangaroo Mother Care
LBW	Low Birthweight
LMIC	Low- and Middle-Income Countries
MAWS	Midwives Alliance of Washington State
MEAC	Midwifery Education Accreditation Council
MMR	Maternal Mortality Ratio (maternal deaths/100,000 live births)
NOS	Network of Safety
NR	Neonatal Resuscitation
NMR	Neonatal Mortality Ratio (neonatal deaths/1000 live births)
NRP	Neonatal Resuscitation Program

OOH	Out-of-Hospital
PPV	Positive Pressure Ventilation
QI	Quality Improvement
RART	Right Amount at the Right Time
SC	Scheduled Caste
SDG	Sustainable Development Goals
SGA	Small for Gestational Age
SSC	Skin-to-Skin Care
ST	Scheduled Tribe
TLTL	Too Little Too Late
TMTS	To Much Too Soon
WHO	World Health Organization

Chapter 1
Introduction: Sustainable Birth in Disruptive Times

Kim Gutschow and Robbie Davis-Floyd

Our volume addresses the ongoing crisis in maternity care in language that calls to mind a brief manifesto on sexual and reproductive health and justice in these disruptive times:

> Only when public health responses to COVID-19 leverage intersectional, human-rights centered frameworks, transdisciplinary science-driven theories and methods, and community-driven approaches, will they sufficiently prevent complex health and social adversities for women, girls, and vulnerable populations. (Hall et al. 2020: 1176)

While this statement was composed in response to the raging COVID-19 pandemic, it applies as much to our volume. Our volume is *intersectional*, for we illustrate how different social hierarchies—of wealth, sexism, racism—intersect to produce suffering and harm for women, newborns, and providers across the globe. We adopt a *human rights framework* as every chapter shows, implicitly or explicitly, that women's rights are human rights, that marginalized communities suffer the most when human rights are denied, or that human rights in healthcare are on a collision course with the privatization of health care. Our volume is *transdisciplinary* because our 50 authors include a range of researchers with clinical, academic, and policy expertise, including midwives, nurses, obstetricians, pediatricians, neonatologists, medical anthropologists, sociologists, public health researchers, social workers, activists, and policy makers. Our volume is *science-driven*, as it builds upon and reflects the recent scientific consensus on maternal and newborn health that we outline below.

The original version of this chapter was revised. The correction to this chapter is available at https://doi.org/10.1007/978-3-030-54775-2_21

K. Gutschow (✉)
Department of Anthropology and Religion, Williams College, Williamstown, MA, USA
e-mail: Kim.Gutschow@williams.edu

R. Davis-Floyd
Department of Anthropology, University of Texas Austin, Austin, TX, USA
e-mail: davis-floyd@outlook.com

K. Gutschow et al. (eds.), *Sustainable Birth in Disruptive Times*, Global Maternal and Child Health, https://doi.org/10.1007/978-3-030-54775-2_1

Last but not least, our approach is *community-driven*, as we provide models of birth or maternity care that are based in local and participatory knowledges and practices.

The COVID-19 crisis reveals preexisting dysfunctionalities in maternity care that we address. Even more importantly, the disruptions of COVID-19 offer a turning point where practices can be shifted in dramatic ways that address long-standing problems and concerns. We know that hospitals are major sites of contagion, and yet for nearly 50 years, global health experts have advocated for hospital-based births across the world rather than advocating for a mix of sites including hospitals, maternity care clinics, freestanding birth centers, and home births. Similarly, the broad push for obstetric care in the twentieth century (Davis-Floyd and Cheney 2019; Devries et al. 2001; Berry 2010, Wendland 2010) has systematically sidelined midwives. Yet the recognition that midwifery care can avert 80% of the maternal and newborn deaths and stillbirths across the globe (Homer 2014) with higher-quality care and lower cost than existing obstetric models of care deserves our attention in this era of scarcity and disruption.

It is now obvious that a more decentralized approach to birth—involving freestanding birth centers or primary care clinics, home settings, and midwifery care for low-risk women with access to higher level facilities where needed—produces better outcomes and is more cost effective and woman-centered. In large world regions, such as sub-Saharan Africa and South Asia, only 57% and 72% of all births, respectively, are facility based. In most countries, there are large rural-urban and wealth disparities in maternal outcomes that midwifery care can address more sustainably than obstetric care, given the shortage of obstetricians and the high costs of training them and having them unnecessarily attend low-risk births (Homer 2014; UNICEF 2020).

Across the globe, in high-income countries (HIC) as well as low- and middle-income countries (LMIC), training midwives and promoting out-of-hospital (OOH) births at freestanding birth clinics or at home is more sustainable and feasible than hiring obstetricians and building costly hospitals. In sub-Saharan Africa alone, it was estimated that 300,000 more midwives would be needed by 2035 just to achieve 75% skilled attendance at birth (Hoope-Bender et al. 2014). This volume emphasizes innovative, resilient, and sustainable models of maternity care that can flourish amidst scarcity and disruption. It overturns conventional policies about maternity care that have become as pervasive as they are ineffective. It considers why lean, flexible midwifery-based models of care are needed now more than ever before.

1.1 Sustainability and Disruption

We privilege *sustainability* and *disruption* to highlight two rather different but coexisting social trends. We define *sustainable* as characterized by improving outcomes for mothers and newborns while lowering costs in human and financial terms. In accord with the focus on sustainability reflected in the Sustainable Development Goals (SDGs), we understand as sustainable *those solutions that can be scaled up or across similar settings while adapting to local cultural contexts in ways that*

preserve an ecological balance between mothers, newborns, families, and providers. Our order of importance is intentional: mothers' and newborns' rights and health come first, followed by the health and needs of families and providers (see our Appendix on the foundational principles of the International Childbirth Initiative or ICI). Many of our essays focus on providers' rights and protocols, as we recognize that most healthcare settings privilege the authority of providers over mothers or their families (Davis-Floyd 2018). The maternity care models described in this volume are sustainable because they respond to and work with the ongoing social disruptions caused by shifting and intersectional dynamics of income, gender, sex, race, and power, as well as climate change, political conflict, and migration in many locations.

Each chapter in our volume explicitly addresses *sustainability* via a different paradigm or model of care. Sustainability can mean the ability to be scaled up or across a variety of settings from home to hospital as in our chapters on Nepal, India, Guatemala, or Mexico or across different cultural contexts such as in our chapters on Nepal, South Africa, and the United States. Sustainability should mean holistic and humanistic care that centers women's needs and agency while mitigating provider burnout. Sustainability can imply lean and flexible maternity care that can be set up or shifted quickly when disasters or pandemics destroy or disable healthcare institutions as illustrated in Chap. 19 and during the COVID-19 pandemic (Davis-Floyd et al. 2020). Sustainability can mean adapting care so that midwives and obstetricians collaborate rather than compete, as demonstrated in Chap. 3 on sustainable breech care, Chap. 4 on sustainable transfers of care in the United States, Chaps. 5 and 14 on midwives and obstetricians collaborating in the Netherlands and India, and Chaps. 9 and 10 that describe innovative hospitals incorporating humanistic care and midwifery care in Chile and Argentina.

Sustainability should mean adopting practices that conserve costs, eliminate interventions, reduce redundancies in care, and recognize the knowledge and skill of midwives in supporting women's health and rights. Sustainability can mean a model of doula care created by and for women of color that reduces interventions, helps women of color combat racism in hospitals, and provides employment to previously incarcerated women and women of color as illustrated in our chapter on innovative models of doula care in California, USA. Sustainability can mean improving provider skills or shifting provider practices through stakeholder participation and input, as illustrated in our chapters on India, the United States, South Africa, Argentina, and Guatemala. Sustainability can mean metrics that slowly shift maternity care in the United States towards evidence-based practices, thereby reducing iatrogenic harm and cutting costs in the United States, which has some of the highest maternity care costs and some of the worst maternal and neonatal outcomes in high-income countries (HIC) (WHO et al. 2015; UNICEF 2019). Sustainability can mean overcoming discrimination against indigenous women, women of color, and low-caste women via the provision of compassionate, skilled, and community-based care—as illustrated in our chapters on the United States, India, Mexico, Guatemala, South Africa, Nepal, Indonesia, and the Philippines. Sustainability can mean a femifocal model of care that emphasizes reproductive rights, women's and