## **Obstetric Fistulas in Sub-Saharan Africa**

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## **FOOTNOTES**

- 1. "Adolescent Pregnancy," *World Health Organization*, June 2, 2023, https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy.
- 2. Shishira Sreenivas and Carol DerSarkissian, "What is Comorbidity?" *WebMD*, November 17, 2021, https://www.webmd.com/a-to-z-guides/what-is-comorbidity.
- 3. David Rising, "What Does the 'Global South' Actually Mean?" *Time Magazine*, September 7, 2023, https://time.com/6311526/global-south-what-is-it/.
- 4. "Urinary Incontinence," *Mayo Clinic*, February 9, 2023, https://www.mayoclinic.org/diseases-conditions/urinary-incontinence/symptoms-causes/syc-2035 2808.
- 5. "Neonatal," *Merriam-Webster,.com Dictionary*, Merriam-Webster, accessed October 31, 2023, https://www.merriam-webster.com/dictionary/neonatal. Accessed October 31, 2023.
- 6. "Obstetric Fistula," *United Nations Population Fund*, May 23, 2022, https://www.unfpa.org/obstetric-fistula#readmore-expand.
- Asteray Assmie Ayenew, "Incidence, Causes, and Maternofetal Outcomes of Obstructed Labor in Ethiopia: A Systematic Review and Meta-Analysis," *Reproductive Health* 18, no. 61 (March 10, 2021), https://doi.org/10.1186/s12978-021-01103-0.
- 8. "Medical Terms and Definitions during Pregnancy and Birth," *Better Health Channel*, accessed January 17, 2024, https://www.betterhealth.vic.gov.au/health/servicesandsupport/medical-terms-and-definitions-during-pregnancy-and-birth.
- "Prolonged Labor: Failure to Progress," American Pregnancy Association, https://americanpregnancy.org/healthy-pregnancy/labor-and-birth/prolonged-labor/.
- 10. "Early Pregnancy Loss (Spontaneous Abortion)," *National Library of Medicine*, United States Government, October 12, 2023, https://www.ncbi.nlm.nih.gov/books/NBK560521/.
- 11. "What is Stillbirth?" *Center for Disease Control and Prevention*, September 29, 2022, https://www.cdc.gov/ncbddd/stillbirth/facts.html.
- 12. "Traditional Birth Attendant: A Field Guide to their Training, Evaluation and Articulation with Health Services," *World Health Organization*, Geneva: WHO (1979), 7.
- 13. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem," *The Lancet* 368, no. 9548 (September 2006), https://doi.org/10.1016/S0140-6736(06)69476-2.
- 14. "Prolonged Labor: Failure to Progress," American Pregnancy Association.
- 15. Luwam Semere and Nawal M. Nour, "Obstetric Fistula: Living With Incontinence and Shame," *Reviews in Obstetrics & Gynecology* 1, no. 4 (Fall 2008): 193–197, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2621054/.
- **16.** Lewis Wall, "Obstetric Vesicovaginal fistula as an International Public-Health Problem," *The Lancet* 368, no. 9548 (September 2006), https://doi.org/10.1016/S0140-6736(06)69476-2.
- 17. "Obstetric Fistula," United Nations Population Fund.
- 18. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda," *International Journal of Tropical Disease & Health* 4, no. 3 (2014), https://doi.org/10.9734/IJTDH/2014/7505.
- 19. Eniya K. Lufumpa and Sarah Steele, "Obstetric Fistula: A Narrative Review of the Literature on Preventative Interventions in Sub-Saharan Africa," *African Journal of Reproductive Health* 20, no. 3 (September 2016), https://www.jstor.org/stable/26357121.
- Mayo Clinic Staff, "Vaginal Fistula Care at Mayo Clinic," Mayo Clinic, June 23, 2022, https://www.mayoclinic.org/diseases-conditions/vaginal-fistulas/care-at-mayo-clinic/mac-2035576
  5.

- 21. "Cesarean Section History" *Birth Injury Help Center,* accessed January 17, 2024, https://www.birthinjuryhelpcenter.org/c-section-history.html#:~:text=Although%20the%20%22mod ern%22%20C%2D,trend%20that%20is%20continuing%20today.
- Saifuddin Ahmed and Özge Tunçalp, "Burden of Obstetric Fistula: From Measurement to Action," The Lancet Global Health 3, no. 5 (May 2015): E243-E244, https://doi.org/10.1016/S2214-109X(15)70105-1.
- 23. Lale Say et al., "Global causes of maternal death: a WHO systemic analysis," *The Lancet Global Health* 2, no. 6 (June 2014): E323-E333, https://doi.org/10.1016/S2214-109X(14)70227-X.
- 24. "Maternal Mortality," *World Health Organization*, February 22, 2023, https://www.who.int/en/news-room/fact-sheets/detail/maternal-mortality.
- 25. Henok Kusma et al., "Successful Surgical Closure and Continence Rate of Obstetric Fistula in Africa: Systematic Review and Meta-Analysis," *Global Women's Health* 4 (October 2023), https://doi.org/10.3389/fgwh.2023.1188809.
- Tom J. I. P. Raassen, Emiel G. G. Verdaasdonk, and Mark E. Vierhout, "Prospective Results after First-Time Surgery for Obstetric Fistulas in East African Women," *International Urogynecology Journal and Pelvic Floor Dysfunction* 19, no. 1 (January 2008), 73–79, https://doi.org/10.1007/s00192-007-0389-6.
- 27. "Vaginal Fistula Care at Mayo Clinic," *Mayo Clinic*, June 23, 2022, https://www.mayoclinic.org/diseases-conditions/vaginal-fistulas/care-at-mayo-clinic/mac-2035576 5.
- 28. Patricia E. Bailey et al., "Institutional Maternal and Perinatal Deaths: A Review of 40 Low and Middle-Income Countries," *BMC Pregnancy and Childbirth* 17, no. 295 (September 2017), https://doi.org/10.1186/s12884-017-1479-1.
- 29. Luwam Semere and Nawal M. Nour, "Obstetric Fistula: Living With Incontinence and Shame."
- 30. "Deaths by Sex and Age Group for a Selected Country or Area and Year," WHO Mortality Database, World Health Organization, accessed January 18, 2023, https://platform.who.int/mortality/themes/theme-details/topics/indicator-groups/indicator-group-details/MDB/obstructed-labour#.
- 31. Patricia E. Bailey et al., "Institutional Maternal and Perinatal Deaths: A Review of 40 Low and Middle-Income Countries," *BMC Pregnancy and Childbirth* 17, no. 295 (September 2017), https://doi.org/10.1186/s12884-017-1479-1.
- **32.** "List of Sub-Saharan African Countries," *Africana Collections*, Library of Congress, November 15, 2010, https://www.loc.gov/rr/amed/guide/afr-countrylist.html.
- 33. "Obstetric Fistula," *World Health Organization*, February 19, 2018, https://www.who.int/news-room/facts-in-pictures/detail/10-facts-on-obstetric-fistula.
- 34. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem," *The Lancet* 368, no. 9548 (September 2006), https://doi.org/10.1016/S0140-6736(06)69476-2.
- 35. Habtamu Endashaw Hareru et al., "Variability and Awareness of Obstetric Fistulas among Women of Reproductive Age in Sub-Saharan Africa Countries: A Systematic Review and Meta-Analysis," *Heliyon* 9, no. 8 (July 2023), https://doi.org/10.1016/j.heliyon.2023.e18126.
- 36. Mathieu Maheu-Giroux et al., "Risk Factors for Vaginal Fistula Symptoms in Sub-Saharan Africa: A Pooled Analysis of National Household Survey Data," *BMC Pregnancy and Childbirth* 16, no. 82 (April 2016), https://doi.org/10.1186/s12884-016-0871-6.
- 37. Van Kính Nguyen and Jeffrey W. Eaten, "Trends and Country-Level Variation in Age at First Sex in Sub-Saharan Africa among Birth Cohorts Entering Adulthood between 1985 and 2020," *BMC Public Health* 22 (2022), https://doi.org/10.1186/s12889-022-13451-y.
- 38. "At Current Rates of Reduction, It Will Take over 100 years to End Child Marriage in West and Central Africa," *UNICEF*, October 23, 2017, https://www.unicef.org/press-releases/current-rates-reduction-it-will-take-over-100-years-end-child-marriage-west-and#:~:text=West%20and%20Central%20Africa%20includes,Mali%3B%20Burkina%20Faso%20and%20Guinea.
- Dessalegn Y. Melesse et al., "Inequalities in Early Marriage, Childbearing, and Sexual Debut among Adolescents in Sub-Saharan Africa," *Reproductive Health* 18 (2021), https://doi.org/10.1186/s12978-021-01125-8
- 40. Mathieu Maheu-Giroux et al., "Risk Factors for Vaginal Fistula Symptoms in Sub-Saharan Africa,"

- **41.** "Adolescent Pregnancy," *World Health Organization*, June 2, 2023, https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy.
- 42. Ataklti Gebretsadik Woldegebriel et al., "Factors Associated with Obstetric Fistula among Reproductive Age Women in Ethiopia: A Community-Based Case-Control Study," *Reproductive Health* 20, no. 1 (2023), https://doi.org/10.1186/s12978-023-01622-y.
- 43. Kathryn Reid, "Untying the Knot: 10 Worst Places for Child Marriage," *World Vision*, July 6, 2018, https://www.worldvision.org/child-protection-news-stories/10-worst-places-child-marriage.
- 44. "At Current Rates of Reduction, It Will Take over 100 years to End Child Marriage in West and Central Africa," *UNICEF*, October 23, 2017, https://www.unicef.org/press-releases/current-rates-reduction-it-will-take-over-100-years-end-child-marriage-west-and#:~:text=West%20and%20Central%20Africa%20includes,Mali%3B%20Burkina%20Faso%20and%20Guinea.
- **45.** "Child Marriage is a Violation of Human Rights, But is All Too Common," *UNICEF DATA*, June 2023, https://data.unicef.org/topic/child-protection/child-marriage/.
- 46. Ibid.
- 47. Henry V. Doctor, Sangwani Nkhana-Salimu, and Maryam Abdulsalam-Anibilowo, "Health Facility Delivery in Sub-Saharan Africa: Successes, Challenges, and Implications for the 2030 Development Agenda," *BMC Public Health* 18 (2018), https://doi.org/10.1186/s12889-018-5695-z.
- **48.** Eniya K. Lufumpa and Sarah Steele, "Obstetric Fistula: A Narrative Review of the Literature on Preventative Interventions in Sub-Saharan Africa."
- 49. Eniya K. Lufumpa, Lucy Doos, and Antje Lindenmayer, "Barriers and Facilitators to Preventative Interventions for the Development of Obstetric Fistulas among Women in Sub-Saharan Africa: A Systematic Review," BMC Pregnancy and Childbirth 18 (2018), https://doi.org/10.1186/s12884-018-1787-0.
- 50. Michael Boah, Abraham B. Mahama, and Emmanuel A. Ayamga, "They Receive Antenatal Care at Health Facilities, Yet Do Not Deliver There: Predictors of Health Facility Delivery by Women in Rural Ghana," BMC Pregnancy and Childbirth 18 (2018), https://doi.org/10.1186/s12884-018-1749-6.
- Aristide Romaric Bado et al., "Factors Associated With Home Births in Benin and Mali: Evidence From the Recent Demographic and Health Surveys," Frontiers in Reproductive Health 4 (2022), https://doi.org/10.3389/frph.2022.808070.
- 52. Koku Sisay Tamirat et al., "Determinants of Adverse Birth Outcomes in Sub-Saharan Africa: Analysis of Recent Demographic and Health Surveys," *BMC Public Health* 21, no. 1 (June 2021), https://doi.org/10.1186/s12889-021-11113-z.
- 53. Winifred Dotse-Gborgbortsi, et al., "Distance is "A Big Problem": A g=Geographic Analysis of Reported and Modelled Proximity to Maternal Health Services in Ghana," *BMC Pregnancy and Childbirth* 22 (2022), https://doi.org/10.1186/s12884-022-04998-0
- 54. Oghenebrume Wariri et al., "The Influence of Travel Time to Health Facilities on Stillbirths: A Geospatial Case-Control Analysis of Facility-Based Data in Gombe, Nigeria," *PLoS One* 16, no. 1 (2021), https://doi.org/10.1371/journal.pone.0245297.
- 55. Eniya K. Lufumpa and Sarah Steele, "Obstetric Fistula: A Narrative Review of the Literature on Preventative Interventions in Sub-Saharan Africa," *African Journal of Reproductive Health* 20, no. 3 (September 2016): 118–126, https://doi.org/10.29063/ajrh2016/v20i3.16.
- **56.** Cody Cichowitz et al., "Delays Contributing to the Development and Repair of Obstetric Fistula in Northern Tanzania," *International Urogynecology Journal* 29, no. 3 (March 2018): 397–405, https://www.doi.org/10.1007/s00192-017-3416-2.
- 57. Joseph Niyitegeka et al., "Longer Travel Time to District Hospital Worsen Neonatal Outcomes: A Retrospective Cross-Sectional Study of the Effect of Delays in Receiving Emergency Cesarean Section in Rwanda," *BMC Pregnancy and Childbirth* 17, no. 242 (July 2017), https://doi.org/10.1186/s12884-017-1426-1.
- 58. Josephine Changole, VIva Combs Thorsen, and Ursula Kafulafula, "A Road to Obstetric Fistulas in Malawi: Capturing Women's Perspectives through a Framework of Three Delays," *International Journal of Women's Health* 10 (November 2018): 699–713, https://doi.org/10.2147/IJWH.S171610.
- **59.** "Self-Care Interventions for Health," *World Health Organization,* June 30, 2022, https://www.who.int/news-room/fact-sheets/detail/self-care-health-interventions.

- 60. "Institutional Births %," *World Health Organization*, accessed January 18, 2024, https://www.who.int/data/gho/indicator-metadata-registry/imr-details/institutional-birth.
- 61. "Africa," *International Decade for Action 'Water for Life' 2005-2015,* United Nations Department on Economic and Social Affairs, accessed January 18, 2024, https://www.un.org/waterforlifedecade/africa.shtml.
- 62. Berhan Tsegaye and Andargachew Kassa, "Prevalence of Adverse Birth Outcomes and Associated Factors among Women who Delivered in Hawassa Town Government Health Institutions, South Ethiopia, in 2017," *Reproductive Health* 15 (2018), https://doi.org/10.1186/s12978-018-0631-3.
- 63. Harminder Guliani, Ardeshir Sepehri, and John Serieux, "Determinants of Prenatal Care Use: Evidence from 32 Low-Income Countries across Asia, Sub-Saharan Africa and Latin America," Health Policy and Planning 29, no. 5 (August 2014): 589–602, https://doi.org/10.1093/heapol/czt045.
- 64. World Health Organization, *Monitoring Emergency Obstetric Care: A Handbook* (Geneva, Switzerland: World Health Organization 2009), 10–11, https://www.who.int/publications/i/item/978924154773.
- 65. A. Paxton et al., "Global Patterns in Availability of Emergency Obstetric Care," *International Journal of Gynecology and Obstetrics* 93, no. 3 (2006): 300–307, https://doi.org/10.1016/j.ijgo.2006.01.030
- 66. A. Paxton et al., "Global Patterns in Availability of Emergency Obstetric Care," *International Journal of Gynaecology and Obstetrics: The Official Organ of the International Federation of Gynaecology and Obstetrics* 93, no. 3 (2006): 300–307, https://doi.org/10.1016/j.ijgo.2006.01.030.
- 67. Aduragbemi Banke-Thomas, Kikelomo Wright, and Linsey Collins, "Assessing Geographical Distribution and Accessibility of Emergency Obstetric Care in Sub-Saharan Africa: A Systematic Review," *Journal of Global Health* 9, no. 1 (2019), https://doi.org/10.7189/jogh.09.010414.
- 68. Eniya K. Lufumpa and Sarah Steele, "Obstetric Fistula: A Narrative Review of the Literature on Preventative Interventions in Sub-Saharan Africa."
- 69. Lydia Aziato and Cephas N. Omenyo, "Initiation of Traditional Birth Attendants and their Traditional and Spiritual Practices during Childbirth in Ghana," *BMC Pregnancy and Childbirth* 18, no. 64 (2018), https://doi.org/10.1186/s12884-018-1691-7.
- 70. Tensae Mekonnen et al., "Trends and Predictors of the Use of Unskilled Birth Attendants among Ethiopian Mothers from 2000 to 2016," *Sexual & Reproductive Healthcare* 28, no. 100594 (June 2021), https://doi.org/10.1016/j.srhc.2021.100594.
- 71. Aimee Brighton et al., "Perceptions of Prenatal and Obstetric Care in Sub-Saharan Africa," *International Journal of Gynecology and Obstetrics* 120, no. 3 (December 2012), https://doi.org/10.1016/j.ijgo.2012.09.017
- 72. Aimee Brighton et al., "Perceptions of Prenatal and Obstetric Care in Sub-Saharan Africa."
- 73. Meghan A. Bohren et al., "The Mistreatment of Women during Childbirth in Health Facilities Globally: A Mixed-Methods Systematic Review," *PLoS Medicine* 12, no. 6 (2015), https://doi.org/10.1371/journal.pmed.1001847.
- 74. Aimee Brighton et al., "Perceptions of Prenatal and Obstetric Care in Sub-Saharan Africa."
- 75. Zemenu Yohannes Kassa, Berhan Tsegaye, and Abebaw Abeje, "Disrespect and Abuse of Women during the Process of Childbirth at Health Facilities in Sub-Saharan Africa: A Systematic Review and Meta-Analysis," *BMC International Health and Human Rights* 20, no. 23 (2020), https://doi.org/10.1186/s12914-020-00242-y.
- 76. Innocent I. Okafor, Emmanuel O. Ugwu, and Samuel N. Obi, "Disrespect and Abuse during Facility-Based Childbirth in a Low-Income Country," *International Journal of Gynecology and Obstetrics* 128, no. 2 (February 2015): 110–113, https://doi.org/10.1016/j.ijgo.2014.08.015.
- 77. Gebresilasea Gendisha Ukke, Mekdes Kondale Gurare, and Wanzahun Godana Boynito, "Disrespect and Abuse of Women during Childbirth in Public Health Facilities in Arba Miche Town, South Ethiopia A Cross-Sectional Study," *PLoS One* 14, no. 4 (April 2019), https://doi.org/10.1371/journal.pone.0205545.
- 78. L. Keri, D. Kaye, and K. Sibylle, "Referral Practices and Perceived Barriers to Timely Obstetric Care among Ugandan Traditional Birth Attendants (TBA)," *African Health Sciences* 10, no. 1 (March 2010), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2895798/.

- **79.** Ibid.
- **80.** Ibid.
- 81. Ibid.
- Changole et al., "A Road to Obstetric Fistula in Malawi."
- 83. "Obstetric Fistula," World Health Organization.
- 84. Changole et al., "A Road to Obstetric Fistula in Malawi."
- **85.** "New Global Targets to Prevent Maternal Deaths," *World Health Organization* (October 5, 2021), https://www.who.int/news/item/05-10-2021-new-global-targets-to-prevent-maternal-deaths.
- 86. Tina Miller and Helen Smith, "Establishing Partnerships with Traditional Birth Attendants for Improved Maternal and Newborn Health: A Review of Factors Influencing Implementation," *BMC Pregnancy and Childbirth* 17 (2017), https://doi.org/10.1186/s12884-017-1534-y.
- 87. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem," *Lancet*, (September 2006): 1201–1209, https://doi.org/10.1016/S0140-6736(06)69476-2.
- 88. G. M. Kassa et al., "Prevalence and Determinants of Adolescent Pregnancy in Africa: A Systematic Review and Meta-analysis," *Reproductive Health* 15 (November 2018), https://doi.org/10.1186/s12978-018-0640-2.
- 89. Sanni Yaya, Emmanuel Kolawole, and Ghose Bishwajit, "Prevalence of Child Marriage and its Impact on Fertility Outcomes in 34 Sub-Saharan Countries," *BMC International Health and Human Rights* 19 (2019), https://doi.org/10.1186/s12914-019-0219-1.
- Van Kính Nguyen and Jeffrey W. Eaten, "Trends and Country-Level Variation in Age at First Sex in Sub-Saharan Africa among Birth Cohorts entering Adulthood between 1985 and 2020," BMC Public Health 22 (2022), https://doi.org/10.1186/s12889-022-13451-y.
- 91. Dessalegn Y. Melesse, et al., "Inequalities in Early Marriage, Childbearing and Sexual Debut among Adolescents in Sub-Saharan Africa," *Reproductive Health* 18 (2021), https://doi.org/10.1186/s12978-021-01125-8.
- 92. Mathieu Maheu-Giroux et al., "Risk Factors for Vaginal Fistula Symptoms in Sub-Saharan Africa."
- 93. Fahmida Shirin Papri et al., "Adolescent Pregnancy: Risk Factors, Outcome and Prevention," *Chattagram Maa-O-Shishu Hospital Medical College Journal* 15, no. 1 (January 2016), https://doi.org/10.3329/cmoshmcj.v15i1.28764.
- 94. Fahmida Shirin Papri et al., "Adolescent Pregnancy: Risk Factors, Outcome and Prevention."
- 95. Pierre Marie Tebeu et al., "Risk Factors for Obstetric Fistula: A Clinical Review," *International Urogynecology Journal* 23 (2012), https://doi.org/10.1007/s00192-011-1622-x.
- 96. Sahak Mahbooba, Oniba Saiqal, and Mohibullah Salih, "The Teenage Pregnancy on Obstetric Fistula among Women in Fistula Center at Malalai Hospital, Kabul Afghanistan: A Cross-Sectional Study," *Technium Social Sciences Journal* 20, no. 1 (2021), https://doi.org/10.47577/tssj.v20i1.3346.
- 97. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem."
- 98. Nawal M. Nour, "Health Consequences of Child Marriage in Africa," *Emerging Infectious Diseases* 12, no. 11 (November 2006): 1644–1649, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3372345/.
- 99. Mathieu Maheu-Giroux et al., "Risk factors for vaginal fistula symptoms in Sub-Saharan Africa."
- **100.** Berhan Tsegaye and Andargachew Kassa, "Prevalence of Adverse Birth Outcomes and Associated Factors among Women who Delivered in Hawassa Town Government Health Institutions, South Ethiopia, in 2017."
- 101. Monica Akinyi Magadi, Alfred O. Agwanda, and Francis O. Obare, "A Comparative Analysis of the Use of Maternal Health Services between Teenagers and Older Mothers in Sub-Saharan Africa: Evidence from Demographics and Health Surveys (DHS)," *Social Sciences and Medicine* 64, no. 6 (March 2007): 1311–1325, https://doi.org/10.1016/j.socscimed.2006.11.004.
- 102. Mansai Kumar et al., "Adolescent Pregnancy and Challenges in Kenyan Context: Perspectives from Multiple Community Stakeholders," *Global Social Welfare* 5 (2018): 11–27, https://doi.org/10.1007/s40609-017-0102-8.
- 103. Monica Akinyi Magadi, Alfred O. Agwanda, and Francis O. Obare, "A Comparative Analysis of the Use of Maternal Health Services between Teenagers and Older Mothers in Sub-Saharan Africa: Evidence from Demographics and Health Surveys (DHS)."
- 104. Ibid.

- **105.** Eugene Budu et al., "Early Age at First Childbirth and Skilled Birth Attendance during Delivery among Young Women in Sub-Saharan Africa," *BMC Pregnancy and Childbirth* 21, no. 1 (2021), https://doi.org/10.1186/s12884-021-04280-9.
- 106. Theresa Azonima Irinyenikan et al., "Adolescent Experiences of Mistreatment during Childbirth in Health Facilities: Secondary Analysis of a Community-Based Survey in Four Countries," *BMJ Global Health* 20, no. 1 (2020), https://doi.org/10.1136/bmjgh-2021-007954.
- 107. Ibid.
- 108. Meghan A. Bohren et al., "How Women are Treated during Facility-Based Childbirth in Four Countries: A Cross-Sectional Study with Labour Observations and Community-Based Surveys," The Lancet 394, no. 10210 (November 2019), https://doi.org/10.1016/S0140-6736(19)31992-0.
- 109. Nathali Gunawardena, Arone Wondwossen Fantaye, and Sanni Yaya, "Predictors of Pregnancy among Young People in Sub-Saharan Africa: A Systematic Review and Narrative Synthesis," *BMJ Global Health* 4, (2019): 1–8, https://doi.org/10.1136/bmjgh-2019-001499.
- 110. Eugene Budu et al., "Early Age at First Childbirth and Skilled Birth Attendance during Delivery among Young Women in sub-Saharan Africa."
- 111. Monica Akinyi Magadi, Alfred O. Agwanda, and Francis O. Obare, "A Comparative Analysis of the Use of Maternal Health Services between Teenagers and Older Mothers in Sub-Saharan Africa: Evidence from Demographics and Health Surveys (DHS)."
- 112. Liliana Carvajal et al., "Basic Maternal Healthcare Coverage among Adolescents in 22 Sub-Saharan African Countries with High Adolescent Birth Rate," *Journal of Global Health* 10, no. 2 (2020), https://doi.org/10.7189%2Fjogh.10.021401/
- 113. Eugene Budu et al., "Early Age at First Childbirth and Skilled Birth Attendance during Delivery among Young Women in Sub-Saharan Africa."
- **114.** "Obstetric Fistula," *World Health Organization*, February 19, 2018, https://www.who.int/news-room/facts-in-pictures/detail/10-facts-on-obstetric-fistula.
- 115. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda," *International Journal of Tropical Disease & Health* 4, no. 3 (2014), https://doi.org/10.9734/IJTDH/2014/7505.
- 116. Ibid.
- 117. Bekana Fekecha Hurissa, Zewdie Birhanu Koricha, and Lelisa Sena Dadi, "Challenges and Coping Mechanisms among Women Living with Unrepaired Obstetric Fistula in Ethiopia: A Phenomenological Study," *PLoS One* 17, no. 9 (September 2022), https://doi.org/10.1371/journal.pone.0275318.
- 118. Justus Kafunjo Barageine et al., "' I Am Alone and Isolated': A Qualitative Study of Experiences of Women Living with Genital Fistula in Uganda," *BMC Women's Health* 15, no. 73 (2015), https://doi.org/10.1186/s12905-015-0232-z.
- 119. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."
- 120. Justus Kafunjo Barageine et al., "' I Am Alone and Isolated': A Qualitative Study of Experiences of Women Living with Genital Fistula in Uganda."
- **121.** Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."
- 122. Janne L. Gjerde et al., "Silently Waiting to Heal: Experiences among Women Living with Urinary Incontinence in Northwest Ethiopia," *International Urogynecology Journal* 24 (2013), https://doi.org/10.1007/s00192-012-1951-4.
- 123. Bekana Fekecha Hurissa, Zewdie Birhanu Koricha, and Lelisa Sena Dadi, "Challenges and Coping Mechanisms among Women Living with Unrepaired Obstetric Fistula in Ethiopia: A Phenomenological Study."
- 124. Lydia Babatunde Bulndi, Deborah Ireson, Esther Adama, and Sara Bayes, "Sub-Saharan African Women's Views and Experiences of Risk Factors for Obstetric Fistula: A Qualitative Systematic Review," *BMC Pregnancy and Childbirth* 22 (2022) https://doi.org/10.1186/s12884-022-05013-2.
- 125. Justus Kafunjo Barageine et al., "' I Am Alone and Isolated': A Qualitative Study of Experiences of Women Living with Genital Fistula in Uganda."
- 126. Lilian T. Mselle and Thecla W. Kohi, "Living with Constant Leaking of Urine and Odor: Thematic Analysis of Socio-Cultural Experiences of Women Affected by Obstetric Fistula in Rural Tanzania," *BMC Women's Health* 15, no. 107 (2015), https://doi.org/10.1186/s12905-015-0267-1.

- 127. Dawn M. Knopp et al., "Fertility Outcomes Following Obstetric Fistula Repair: A Prospective Cohort Study," *Reproductive Health* 14, no. 1 (2017), https://doi.org/10.1186/s12978-017-0415-1.
- 128. Ibid.
- **129.** Ameyo Ayoko Ketevi et al., "Life Experience of Women with Obstetric Fistula in Togo," *Open Access Library Journal* 8, no. 3 (2021): 1–8, https://doi.org/10.4236/oalib.1106968.
- **130.** Laura B. Drew et al., "Long-Term Outcomes for Women after Obstetric Fistula Repair in Lilongwe, Malawi: A Qualitative study," *BMC Pregnancy and Childbirth* 16, no. 2 (2016), https://doi.org/10.1186/s12884-015-0755-1.
- 131. Andrea L. Wilson et al., "Fertility and Pregnancy Outcomes among Women with Obstetric Fistulas in Rural Malawi," *International Journal of Gynaecology and Obstetrics: The Official Organ of the International Federation of Gynaecology and Obstetrics* 113, no. 3 (2011): 196–198, https://doi.org/10.1016/j.ijgo.2011.01.006.
- **132.** Laura B. Drew et al., "Long-Term Outcomes for Women after Obstetric Fistula Repair in Lilongwe, Malawi: A Qualitative Study."
- 133. Andrea L. Wilson et al., "Fertility and Pregnancy Outcomes among Women with Obstetric Fistulas in Rural Malawi."
- **134.** Lilian T. Mselle and Thecla W. Kohi, "Living with Constant Leaking of Urine and Odour: Thematic Analysis of Socio-Cultural Experiences of Women Affected by Obstetric Fistula in Rural Tanzania."
- **135.** Laura B. Drew et al., "Long-Term Outcomes for Women after Obstetric Fistula Repair in Lilongwe, Malawi: A Qualitative Study."
- 136. Ibid.
- 137. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."
- 138. Justus Kafunjo Barageine et al., "' I Am Alone and Isolated': A Qualitative Study of Experiences of Women Living with Genital Fistula in Uganda."
- 139. Lilian T. Mselle and Thecla W. Kohi, "Living with Constant Leaking of Urine and Odor: Thematic Analysis of Socio-Cultural Experiences of Women Affected by Obstetric Fistula in Rural Tanzania."
- 140. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem."
- **141.** A. O. Fehintola et al., "Birth and Sorrow: The Medio-Social Consequences of Obstetric Fistulas in Ilesha, Nigeria," *Tropical Journal of Obstetrics and Gynaecology* 36, no. 3 (2019): 442–447, https://doi.org/10.4103/TJOG.TJOG 32 19.
- 142. Mulu Muleta et al., "Health and Social Problems Encountered by Treated and Untreated Obstetric Fistula Patients in Rural Ethiopia," *Journal of Obstetrics and Gynecology Canada* 30, no. 1 (2008). https://doi.org/10.1016/S1701-2163(16)32712-8.
- 143. Lilian T. Mselle and Thecla W. Kohi, "Living with Constant Leaking of Urine and Odour: Thematic Analysis of Socio-Cultural Experiences of Women Affected by Obstetric Fistula in Rural Tanzania."
- 144. Janne L. Gjerde et al., "Silently Waiting to Heal: Experiences among Women Living with Urinary Incontinence in Northwest Ethiopia."
- 145. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."
- 146. Mulu Muleta et al., "Health and Social Problems Encountered by Treated and Untreated Obstetric Fistula Patients in Rural Ethiopia."
- 147. Anne M. Khisa and Isaac K. Nyamongo, "Still Living with Fistula: An Exploratory Study of the Experience of Women with Obstetric Fistula Following Corrective Surgery in West Pokot, Kenya," Reproductive Health Matters 20, no. 40 (2012), 59–66, http://www.jstor.org/stable/41714978.
- 148. David Nwoba Nweke and Monday Nwite Igwe, "Psychosocial Experiences of Subjects with Vesicovaginal Fistula: A Qualitative Study," *Global Journal of Medicine and Public Health* 6, no.1 (2017): 1–8.
- 149. Lilian T. Mselle and Thecla W. Kohi, "Living with Constant Leaking of Urine and Odour: Thematic Analysis of Socio-Cultural Experiences of Women Affected by Obstetric Fistula in Rural Tanzania."
- **150.** Anne M. Khisa and Isaac K. Nyamongo, "Still Living with Fistula: An Exploratory Study of the Experience of Women with Obstetric Fistula Following Corrective Surgery in West Pokot, Kenya."

- **151.** Josephine Changole, Viva Combs Thorsen and Ursula Kafulafula, "I Am a Person but I Am Not a Person: Experiences of Women Living with Obstetric Fistula in the Central Region of Malawi," *BMC Pregnancy and Childbirth* 17, no. 433 (2017), https://doi.org/10.1186/s12884-017-1604-1.
- **152.** Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."
- 153. Josephine Changole, Viva Combs Thorsen and Ursula Kafulafula, "I Am a Person but I Am Not a Person: Experiences of Women Living with Obstetric Fistula in the Central Region of Malawi."
- **154.** Janne L. Gjerde et al., "Silently Waiting to Heal: Experiences among Women Living with Urinary Incontinence in Northwest Ethiopia."
- 155. Wallelign Aleminew, Bezawit Mulat, and Kegnie Shitu, "Awareness of Obstetric Fistula and its Associated Factors among Reproductive-Age Women in Ethiopia: A Multilevel Analysis of Ethiopian Demographic and Health Survey Data: A Cross-Sectional Study," *BMJ Open* 12, no. 11 (2021), https://doi.org/10.1136/bmjopen-2021-053221.
- **156.** Janne L. Gjerde et al., "Silently Waiting to Heal: Experiences among Women Living with Urinary Incontinence in Northwest Ethiopia."
- 157. Vandana Tripathi, Elly Arnoff, and Pooja Sripad, "Removing Barriers to Fistula Care: Applying Appreciative Inquiry to Improve Access to Screening and Treatment in Nigeria and Uganda," Health Care for Women International 41, no. 5 (2020): 584–599, https://doi.org/10.1080/07399332.2019.1638924.
- 158. Debrework Tesgera Bashah, Abebaw Gebeyehu Worku, and Mezgebu Yitayal Mengistu, "Consequences of Obstetric Fistula in Sub-Sahara African Countries from Patients' Perspective: A Systematic Review of Qualitative Studies," *BMC Women's Health* 18, no. 1 (2018), https://doi.org/10.1186/s12905-018-0605-1.
- **159.** Justus Kafunjo Barageine et al., "' I Am Alone and Isolated': A Qualitative Study of Experiences of Women Living with Genital Fistula in Uganda."
- 160. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem."
- **161.** Prudence P. Mwini-Nyaledzigbor, Alice A. Agana, and F. Beryl Pilkington, "Lived Experiences of Ghanaian Women with Obstetric Fistula," *Health Care for Women International* 34, no. 6 (2013): 440-460, https://doi.org/10.1080/07399332.2012.755981.
- 162. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."
- **163.** Mulu Muleta et al., "Health and Social Problems Encountered by Treated and Untreated Obstetric Fistula Patients in Rural Ethiopia."
- 164. Emmanuel Kelechi Nwala et al., "Exploring Awareness of Obstetric Fistula in Eastern and Northern Nigeria: Perceived Causes, Symptoms, and Availability of Treatment Services," *Global Health and Research Policy* 7 (2022), https://doi.org/10.1186/s41256-022-00264-0.
- **165.** Nassar Kasamba, Dan K. Kaye, and Scovia N. Mbalinda, "Community Awareness about Risk Factors, Presentation, and Prevention and Obstetric Fistula in Nabitovu Village, Iganga District, Uganda," *BMC Pregnancy and Childbirth* 13 (2013), https://doi.org/10.1186/1471-2393-13-229.
- 166. Ibid.
- **167.** Mulu Muleta et al., "Health and Social Problems Encountered by Treated and Untreated Obstetric Fistula Patients in Rural Ethiopia."
- 168. Ibid.
- **169.** Janne L. Gjerde et al., "Silently Waiting to Heal: Experiences among Women Living with Urinary Incontinence in Northwest Ethiopia."
- 170. Ibid.
- 171. Yenenesh Tadasse Gebresilase, "A Qualitative Study of the Experience of Obstetric Fistula Survivors in Addis Ababa, Ethiopia," *International Journal of Women's Health* 6 (2014): 1033-1043, https://doi.org/10.2147/IJWH.S68382.
- 172. Sarah M. Wilson et al., "Psychological Symptoms Among Obstetric Fistula Patients Compared to Gynecology Outpatients in Tanzania," *International Journal of Behavioral Medicine* 22, no. 5 (2015): 605–613, https://doi.org/10.1007/s12529-015-9466-2.
- 173. "Obstetric Fistula," *United Nations Population Fund*.
- 174. Joan Kabayambi et al., "Living with Obstetric Fistula: Perceived Causes, Challenges and Coping Strategies among Women Attending the Fistula Clinic at Mulago Hospital, Uganda."

- 175. Mary Lake Polan, Ambereen Sleemi, Mulu Muleta Bedane et al., "Obstetric Fistula," in *Essential Surgery: Disease Control Priorities*, ed. H. T. Debas et al., (Washington DC: International Bank for Reconstruction and Development, 2015), https://www.ncbi.nlm.nih.gov/books/NBK333495/#.
- 176. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem."
- 177. Tom J. I. P. Raassen, Emiel G. G. Verdaasdonk and Mark E. Vierhout, "Prospective Results after First-Time Surgery for Obstetric Fistulas in East African Women."
- 178. "What You Need to Know about Stillbirths," *UNICEF*, January 10, 2023, https://www.unicef.org/stories/what-you-need-to-know-about-stillbirths.
- 179. Christy Burden et al., "From Grief, Guilt Pain and Stigma to Hope and Pride A Systematic Review and Meta-Analysis of Mixed-Method Research of the Psychosocial Impact of Stillbirth," BMC Pregnancy and Childbirth 16 (2016), https://doi.org/10.1186/s12884-016-0800-8.
- **180.** Juliet Kiguli, "Stillbirths in Sub-Saharan Africa: Unspoken Grief," *The Lancet* 387, no. 10018 (January 2016): E16–E18, https://doi.org/10.1016/S0140-6736(15)01171-X.
- **181.** Ibid.
- **182.** Ifunanya Roseline Nduka et al., "The Psychosocial Impact of Obstetric Fistula and Available Support for Women Residing in Nigeria: A Systematic Review."
- **183.** Laura B. Drew et al., "Long-Term Outcomes for Women after Obstetric Fistula Repair in Lilongwe, Malawi: A Qualitative Study."
- **184.** Ibid.
- 185. Ibid.
- **186.** Josephine Changole, Viva Combs Thorsen and Ursula Kafulafula, "I Am a Person but I Am Not a Person: Experiences of Women Living with Obstetric Fistula in the Central Region of Malawi."
- 187. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem."
- **188.** Ibid.
- 189. Berhan Tsegaye and Andargachew Kassa, "Prevalence of Adverse Birth Outcomes and Associated Factors among Women who Delivered in Hawassa Town Government Health Institutions, South Ethiopia, in 2017."
- **190.** Koku Sisay Tamirat et al., "Determinants of Adverse Birth Outcomes in Sub-Saharan Africa: Analysis of Recent Demographic and Health Surveys."
- 191. Tahereh Tayebi, Shahnaz Turk Zahrani, and Rezaali Mohammadpour, "Relationship between Adequacy of Prenatal Care Utilization Index and Pregnancy Outcomes," *Iranian Journal of Nursing and Midwifery Research* 18, no. 5 (Sep–Oct 2013): 360–366, https://www.ncbi.nlm.nih.gov/pmc/articles/pmc3877457/.
- 192. Henok Kusma et al., "Successful Surgical Closure and Continence Rate of Obstetric Fistula in Africa: Systematic Review and Meta-Analysis," *Global Women's Health* 4 (October 2023), https://doi.org/10.3389/fawh.2023.1188809.
- 193. Tom J. I. P. Raassen, Emiel G. G. Verdaasdonk, and Mark E. Vierhout, "Prospective Results After First-Time Surgery for Obstetric Fistulas in East African Women," *International Urogynecology Journal and Pelvic Floor Dysfunction* 19, no. 1 (January 2008): 73–79, https://doi.org/10.1007/s00192-007-0389-6.
- 194. United Nations Population Fund, Engender Health, *Obstetric Fistula Needs Assessment: Findings from Nine African Countries* (New York City: UNFPA, 2003), 8.
- 195. Mathieu Maheu-Giroux et al., "Risk Factors for Vaginal Fistula Symptoms in Sub-Saharan Africa: A Pooled Analysis of National Household Survey Data."
- **196.** "Our Work, Maternal & Child Health," *FAME*, accessed January 18, 2024, https://fameafrica.org/maternalchildhealth.
- 197. "Our Work," FAME, accessed January 18, 2024, https://fameafrica.org/famework.
- 198. "Our Work, Community Outreach," FAME, accessed January 18, 2024, https://fameafrica.org/outreach.
- 199. "Our Work Maternal & Child Health," *FAME*, accessed January 18, 2024, https://fameafrica.org/maternalchildhealth.
- 200. Lewis Wall, "Obstetric Vesicovaginal Fistula as an International Public-Health Problem."
- 201. Oghenebrume Wariri et al., "The Influence of Travel Time to Health Facilities on Stillbirths: A Geospatial Case-Control Analysis of Facility-Based Data in Gombe, Nigeria."

- 202. Joseph Niyitegeka et al., "Longer Travel Time to District Hospital Worsen Neonatal Outcomes: A Retrospective Cross-Sectional Study of the Effect of Delays in Receiving Emergency Cesarean Section in Rwanda."
- 203. Tom J. I. P. Raassen, Emiel G. G. Verdaasdonk, and Mark E. Vierhout, "Prospective Results After First-Time Surgery for Obstetric Fistulas in East African Women."
- 204. Luke Sproule, "Why Are There Fewer Teen Mothers in Northern Ireland?" *BBC*, October 23, 2021, https://www.bbc.com/news/uk-northern-ireland-59001641.
- **205.** Laura Lindberg, John Santelli, and Sheila Davis, "Understanding the Decline in Adolescent Fertility in the United States, 2007–2012," *Journal of Adolescent Health* 59, no. 5 (2016): 577–583, https://doi.org/10.1016/j.jadohealth.2016.06.024.
- 206. "World Family Planning 2020 Highlights," *Population Division, United Nations Department of Economic and Social Affairs,* September 2020, https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2020/Sep/unpd\_world\_family\_planning\_2020\_10\_key\_messages.pdf.
- 207. Keri, Kaye, and Sibylle, "Referral Practices and Perceived Barriers to Timely Obstetric Care among Ugandan Traditional Birth Attendants (TBA)."
- 208. Samson Gebremedhin and Anteneh Asefa, "Treatment-Seeking for Vaginal Fistula in Sub-Saharan Africa," *PLoS One* 14, no. 11 (2019), https://doi.org/10.1371/journal.pone.0216763.
- 209. Habtamu Endashaw Hareru et al., "Variability and Awareness of Obstetric Fistulas among Women of Reproductive Age in Sub-Saharan Africa Countries: A Systematic Review and Meta-Analysis," *Heliyon* 9, no. 8 (July 2023), https://doi.org/10.1016/j.heliyon.2023.e18126.