

LEGAL EPIDEMIOLOGY FOR A CLEARER UNDERSTANDING OF ABORTION LAWS AND THEIR IMPACT

*Patty Skuster**

ABSTRACT

The global abortion field has a murky understanding of the impact of abortion laws. With legal epidemiology, legal and scientific researchers can together produce a clearer view of the relationships between laws and public health outcomes. Scientists study public health with a required degree of rigor, while the global study of abortion laws and how they impact public health outcomes remains less developed. Global abortion researchers tend to focus on the circumstances in which abortion is legal as the independent variable when investigating public health outcomes. Other provisions such as who is authorized to provide abortions—particularly in countries where health care professionals are inaccessible—may have an even greater impact. But gaps in evidence of impact persist.

Legal epidemiology, broadly, and policy surveillance, specifically, offer theories and methods that researchers can apply to the study of the impact of abortion laws on public health outcomes. The World Health Organization took a giant step toward making abortion laws accessible through the Global Abortion Policies Database; policy surveillance would add rigor and enable researchers to study laws over time.

A better global understanding of the relationships between abortion laws and public health outcomes is urgent, as a growing number of people experiencing displacement and an increase in the practice of self-managed abortion complicates the impact of law. With good evidence on the relationships between laws and public health outcomes, people working to improve abortion access can more precisely target their efforts and resources to improve the health and lives of people who have abortions.

TABLE OF CONTENTS

INTRODUCTION.....	918
I. THE IMPORTANCE OF A CLEAR GLOBAL UNDERSTANDING OF THE IMPACT OF ABORTION LAWS.....	919

* Senior Legal Advisor, Technical Innovation and Evidence, Ipas. Email: skusterp@ipas.org. JD, MPP, University of Michigan; Fellow, Temple University Center for Public Health Law Research; Instructor, University of Pennsylvania MPH Program. At Ipas, Skuster researches emerging legal and human rights issues in abortion care, with a current focus on self-managed abortion and the law, legal risk, and public health law research on abortion. This Essay is based on a presentation given at the Center for Public Health Law Research at Temple University Beasley School of Law symposium, *10 Years of Public Health Law Research: Looking Back and Looking Ahead*, in Philadelphia, Pennsylvania, on September 13, 2019. For an overview of the symposium, see Michelle M. Mello, *Peering into Hidden Worlds: The Past and Future of Legal Epidemiology*, 92 TEMP. L. REV. 837 (2020).

II. POLICY SURVEILLANCE FOR A CLEARER UNDERSTANDING OF ABORTION LAWS.....	920
III. CONNECTING THE DOTS BETWEEN ABORTION LAWS AND PUBLIC HEALTH	
OUTCOMES	925
IV. LEGAL EPIDEMIOLOGY CAN ENABLE UNDERSTANDING OF MAJOR SHIFTS IN	
ABORTION CARE.....	926
CONCLUSION.....	928

INTRODUCTION

During the Center for Public Health Law Research symposium, the keynote speaker, Professor Michelle Mello, analogized the development of legal epidemiology to the invention of the microscope. Legal epidemiology enables researchers to “peer[] into [the] hidden worlds” of the relationships between law and public health outcomes.¹ While the field of legal epidemiology has grown over the past ten years, researchers and advocates working at the global level do not widely use its theories and methods to understand and improve access to abortion.² The relationships between abortion laws and public health outcomes are not all hidden worlds for those working globally, but the understanding of those relationships is fuzzy. Global abortion researchers can use the theories and methods of legal epidemiology like a strong pair of eyeglasses—to move toward an understanding of the relationships between abortion laws and public health outcomes that has greater precision and clarity.

Abortion is a common health experience, with a global estimate of thirty-five per one thousand women of reproductive age having abortions annually.³ Though common, the great majority of countries in the world regulate abortion through criminal law⁴ with penalties of imprisonment for people who have abortions and the providers who help them.⁵ Abortion laws have a great impact on public health outcomes associated with abortion. But what abortion laws say and *how* they impact public health outcomes is an area in which we lack a clear understanding.

1. Michelle Mello, Professor of Law, Stanford Law Sch., and Professor of Med., Ctr. for Health Policy/Primary Care and Outcomes Research, Dep’t of Med., Stanford Univ. Sch. of Med., Keynote Address at the Center for Public Health Law Research at Temple University Beasley School of Law Symposium: Peering into Hidden Worlds: The Past and Future of Legal Epidemiology (Sept. 13, 2019), http://www.youtube.com/watch?v=PFq7hC_wqnM&feature=youtu.be [https://perma.cc/YR63-5UWC]. The Foreword to these Essays is based on Professor Mello’s address. See Michelle M. Mello, *Peering into Hidden Worlds: The Past and Future of Legal Epidemiology*, 92 TEMP. L. REV. 837 (2020) [hereinafter Mello, *Foreword*].

2. Mello, *Foreword*, *supra* note 1, at 844–45 (discussing the recent advances in the field of legal epidemiology while acknowledging there is more work to do).

3. Gilda Sedgh et al., *Abortion Incidence Between 1990 and 2014: Global, Regional, and Subregional Levels and Trends*, 388 LANCET 258, 262 (2016).

4. See Marge Berer, *Abortion Law and Policy Around the World: In Search of Decriminalization*, 19 HEALTH & HUM. RTS. J. 13, 16 (2017). One notable exception is Canada, where such a law was struck down in a 1988 Supreme Court decision. *R. v. Morgentaler*, [1988] 1 S.C.R. 30, 79 (Can.).

5. *Law and Policy Guide: Criminality*, CTR. FOR REPROD. RTS., <http://reproductiverights.org/law-and-policy-guide-criminality> [https://perma.cc/7LVQ-J9YN] (last visited May 1, 2020).

This Essay argues that legal epidemiology can move the global abortion field forward toward a clearer view of the world.⁶ This Essay describes how policy surveillance can help legal researchers produce a better understanding of abortion laws worldwide.⁷ Policy surveillance allows for comparisons between countries and regions, identifications of trends, and rigorous studies of the relationships between abortion laws and public health outcomes. This Essay then shows how legal epidemiology can enable a broader understanding of the relationships between abortion laws and public health outcomes.⁸ A clearer understanding of these relationships is urgent, as the impact of abortion laws is complicated by the rising number of people who have abortions in humanitarian settings and the growing practice of self-managed abortion.

I. THE IMPORTANCE OF A CLEAR GLOBAL UNDERSTANDING OF THE IMPACT OF ABORTION LAWS

A clearer understanding of the relationships between abortion laws and public health outcomes at the global level will improve national, evidence-based policymaking. Global authorities make recommendations based on their understanding of national laws and available evidence, and these recommendations influence national-level judges and policymakers.⁹ United Nations (UN) treaty monitoring bodies, committees of experts responsible for monitoring UN human rights treaties, set standards that influence national policymaking.¹⁰ In support of the right to abortion,¹¹ treaty monitoring bodies have issued recommendations to governments that laws must be reformed to allow abortion for certain reasons and to remove punishments for women who undergo abortions.¹² Treaty monitoring bodies have further instructed national governments to remove legal requirements that make abortions more difficult to obtain, including third-party authorization requirements and mandatory waiting periods.¹³ In turn, legislatures and courts have incorporated global recommendations within legislation¹⁴ and court decisions.¹⁵

Treaty monitoring bodies make recommendations based on their understanding of abortion laws as impacting unsafe abortion. The UN Human Rights Committee in its

6. See *infra* Section I.

7. See *infra* Section II.

8. See *infra* Section III.

9. See, e.g., SUSHEELA SINGH ET AL., GUTTMACHER INST., ABORTION WORLDWIDE 2017: UNEVEN PROGRESS AND UNEQUAL ACCESS 41–45 (Jared Rosenberg ed., 2018), http://www.guttmacher.org/sites/default/files/report_pdf/abortion-worldwide-2017.pdf [<https://perma.cc/8MGW-NWZB>].

10. See Johanna B. Fine et al., *The Role of International Human Rights Norms in the Liberalization of Abortion Laws Globally*, 19 HEALTH & HUM. RTS. J. 69, 71 (2017).

11. See Rachel Rebouché, *Abortion Rights as Human Rights*, 25 SOC. & LEGAL STUD. 765, 767 (2016) (“Although still a contentious issue, safe and legal abortion is now a priority for many international human rights actors.”).

12. UNITED NATIONS OFFICE OF THE HIGH COMM’R FOR HUMAN RIGHTS, ABORTION (2015), http://www.ohchr.org/Documents/Issues/Women/WRGS/SexualHealth/INFO_Abortion_WEB.pdf [<https://perma.cc/RH9R-BNKM>].

13. Fine et al., *supra* note 10, at 71.

14. See *id.* at 75–76 (explaining how international and regional human rights norms have been a key tool in influencing countries, such as Spain, Peru, and Rwanda, to liberalize their abortion laws).

15. See, e.g., Rebouché, *supra* note 11, at 772–74.

general comment on the right to life asserted that governments “may not regulate pregnancy or abortion in all other cases in a manner that runs contrary to their duty to ensure that women and girls do not have to resort to unsafe abortions, and they should revise their abortion laws accordingly.”¹⁶ In its general comment on the right to sexual and reproductive health, the UN Committee on Economic, Social and Cultural Rights stated that liberalized abortion laws are necessary to prevent unsafe abortions.¹⁷ Several treaty monitoring bodies link high rates of maternal mortality with illegal abortions and restrictive laws.¹⁸

II. POLICY SURVEILLANCE FOR A CLEARER UNDERSTANDING OF ABORTION LAWS

With a clearer global understanding of abortion laws, treaty monitoring bodies and others working at the global level can make stronger evidence-based recommendations. Through legal epidemiology and methods, and specifically, policy surveillance, legal researchers can lay a more solid foundation from which authorities—and organizations that influence them—can analyze laws and make recommendations. This Section describes global surveys of abortion laws and how policy surveillance is the next step toward an improved understanding of the impact of abortion policy.

Researchers and advocates comparing abortion laws across the globe must manage data from many jurisdictions with an unwieldy amount of law to analyze. Categorization is a common approach to this challenge. Beginning in the 1960s, universities and UN agencies compared national abortion laws by categorizing laws according to the *circumstances in which* abortion is legal in each country.¹⁹ This approach was also taken in several global surveys of abortion laws,²⁰ notably the Center for Reproductive Rights’s

16. Human Rights Comm., General Comment No. 36: Article 6: Right to Life, ¶ 8, U.N. Doc. CCPR/C/GC/36 (Sept. 3, 2019).

17. Comm. on Econ., Soc. and Cultural Rights, General Comment No. 22 (2016) on the Right to Sexual and Reproductive Health (Article 12 of the International Covenant on Economic, Social and Cultural Rights), ¶ 28, U.N. Doc. E/C.12/GC/22 (May 2, 2016).

18. See, e.g., Comm. on Econ., Soc. and Cultural Rights, Concluding Observations on the Combined Third, Fourth, and Fifth Periodic Reports of El Salvador, ¶ 22, U.N. Doc. E/C.12/SLV/CO/3-5 (June 19, 2014); Comm. on the Elimination of Discrimination Against Women, Concluding Observations on the Fourth and Fifth Periodic Reports of Eritrea, ¶¶ 34–35, U.N. Doc. CEDAW/C/ERI/CO/5 (Mar. 12, 2015); Comm. on the Elimination of Discrimination Against Women, Concluding Observations on the Combined Sixth and Seventh Periodic Reports of Ghana, ¶¶ 36–37, U.N. Doc. CEDAW/C/GHA/CO/6-7 (Nov. 14, 2014); Human Rights Comm., Concluding Observations on the Second Periodic Report of Honduras, ¶¶ 16–17, U.N. Doc. CCPR/C/HND/CO/2 (Aug. 22, 2017); Human Rights Comm., Concluding Observations on the Sixth Periodic Report of Chile, ¶ 15, U.N. Doc. CCPR/C/CHL/CO/6 (Aug. 13, 2014); Human Rights Comm., Concluding Observations of the Human Rights Committee: Panama, ¶ 9, U.N. Doc. CCPR/C/PAN/CO/3 (Apr. 17, 2008); see also Comm. Against Torture, Concluding Observations of the Committee Against Torture: Yemen, ¶ 31, U.N. Doc. CAT/C/YEM/CO/2/Rev.1 (May 25, 2010); Comm. on the Rights of the Child, Concluding Observations: Guatemala, ¶¶ 70–71, U.N. Doc. CRC/C/GTM/CO/3-4 (Oct. 25, 2010).

19. Brooke Ronald Johnson Jr et al., *Global Abortion Policies Database: A New Approach to Strengthening Knowledge on Laws, Policies, and Human Rights Standards*, BMC INT’L HEALTH & HUM. RTS., Sept. 12, 2018, at 2, <http://bmcinthealthhumrights.biomedcentral.com/track/pdf/10.1186/s12914-018-0174-2> [<https://perma.cc/Z8AT-FR2V>].

20. See, e.g., Antonella F. Lavelanet et al., *Global Abortion Policies Database: A Descriptive Analysis of the Legal Categories of Lawful Abortion*, BMC INT’L HEALTH & HUM. RTS., Dec. 20, 2018, at 2,

global map of abortion laws.²¹ With color-coding, the abortion law map provides a snapshot of laws around the world on a continuum from “Prohibited Altogether” to “On Request.”²² It also enables a quick understanding of national and regional differences in abortion laws, specifically regarding the possible circumstances in which abortion is legal or illegal.²³ The Guttmacher Institute uses the Center for Reproductive Rights’s categories of abortion laws as a “legality framework” in its analysis of the world’s abortion laws, which is “an important first step to understand the broader picture of where abortion is allowed under the law.”²⁴

Global abortion researchers employ this continuum of circumstances in which abortion is legal to make observations about the relationships between abortion laws and public health outcomes. Abortion researchers have found that reform of restrictive abortion laws may reduce maternal mortality²⁵ and noted the relationship between legality of abortion and abortion safety, as well as public health outcomes more generally.²⁶ On the latter side of the equation—public health outcomes—trained abortion researchers use well-developed methods to conduct empirical research, evaluate qualitative and quantitative studies, model outcomes, and identify limitations, all with an expected high degree of rigor.²⁷ However, in characterizing the other side of the equation—the law—scientists generally limit themselves to categories of circumstances in which abortion is legal on the continuum.²⁸ While making scientific observations about the relationships between abortion laws and public health outcomes, researchers have settled on a legality framework as the “first step to understand the broader picture.”²⁹ As a next step, policy surveillance methods can improve the work of abortion researchers by enabling them to analyze laws with precision, clarity, and rigor.

By relying on categories of the circumstances in which abortion is legal, researchers may neglect characteristics of laws that have a greater impact on abortion care, which limits understanding of how abortion laws affect public health outcomes. For example, in several countries, requirements of who can provide abortion may have more impact on public health outcomes than the circumstances in which abortion is legal. Many

<http://bmcinthealthhumrights.biomedcentral.com/track/pdf/10.1186/s12914-018-0183-1> [https://perma.cc/39L2-P3XG].

21. *The World’s Abortion Laws*, CTR. FOR REPROD. RTS., <http://reproductiverights.org/worldabortionlaws> [https://perma.cc/9B55-QFW7] (last visited May 1, 2020).

22. *Id.*

23. *See id.*

24. SINGH ET AL., *supra* note 9, at 14.

25. Su Mon Latt et al., *Abortion Laws Reform May Reduce Maternal Mortality: An Ecological Study in 162 Countries*, BMC WOMEN’S HEALTH, Jan. 5, 2019, at 5–8, <https://bmcmwomenshealth.biomedcentral.com/track/pdf/10.1186/s12905-018-0705-y> [https://perma.cc/3UDE-UV3L].

26. *See, e.g.*, Bela Ganatra et al., *Global, Regional, and Subregional Classification of Abortions by Safety, 2010–14: Estimates from a Bayesian Hierarchical Model*, 390 LANCET 2372, 2377–81 (2017).

27. *See, e.g.*, Sneha Barot, *The Roadmap to Safe Abortion Worldwide: Lessons from New Global Trends on Incidence, Legality, and Safety*, 21 GUTTMACHER POL’Y REV. 17, 19–20 (2018) (discussing “stigma, legality and high rates of unintended pregnancy” as “three of the most consequential barriers to further progress on reducing unsafe abortion”).

28. *See, e.g.*, SINGH ET AL., *supra* note 9, at 46–49 (explaining that the report uses the Center for Reproductive Rights’s codification system).

29. *Id.* at 14.

countries model their abortion laws on that of the United Kingdom.³⁰ This abortion law allows someone to get an abortion without penalty only after obtaining an opinion of two registered medical practitioners that the abortion is legal.³¹ The national laws of eighty countries also require at least one medical practitioner to be involved with a legal abortion.³² The UN categorizes thirty-five of these countries as developing

30. See REBECCA J. COOK & BERNARD M. DICKENS, *ABORTION LAWS IN COMMONWEALTH COUNTRIES* 5 (1979).

31. Abortion Act 1967, c. 87, § 1(1) (Eng., Wales, Scot.).

32. The following laws were identified through the Center for Public Health Law Research-Ipas project to map abortion laws in over two hundred jurisdictions as the laws apply to self-managed abortion, described in the conclusion of this paper: Law on Interruption of Pregnancy ch. 2, art. 3 (Alb.); [PENAL CODE] art. 304 (Alg.); [PENAL CODE] art. 144, § 2 (Angl.); CÓDIGO PENAL [CÓD. PEN.] [CRIMINAL CODE] art. 85 (Arg.); STRAFGESETZBUCH [STGB] [PENAL CODE] § 97(1) (Austria); Legislative Decree No (7) for 1989, On the Practice of Human Medicine and Dentistry, art. 19 (Bahr.); Medical Termination of Pregnancy Act ch. 44A, § 4(1) (Barb.); CODE PÉNAL [C.PÉN.] art. 350 (Belg.); [CRIMINAL CODE] § 112(1) (Belize); [PENAL CODE] § 160(2)(a) (Bots.); [PENAL CODE] §§ 158, 161 (Brunei); Ordinance No. 2 on Conditions and Procedures for the Artificial Termination of Pregnancy art. 9(1) (Bulg.); [PENAL CODE] art. 511 (Burundi); Law and Regulation on Voluntary Interruption of Pregnancy art. 2 (Cape Verde); [PENAL CODE] art. 80 (Cent. Afr. Rep.); Law No. 21,030, Law on the Depenalization of the Voluntary Interruption of Pregnancy in Three Cases, Septiembre 14, 2017, DIARIO OFICIAL [D.O.] (Chile); [PENAL CODE] art. 121 (Costa Rica); [PENAL CODE] art. 367 (Côte d'Ivoire); Norms for the Voluntary Termination of Pregnancy, art. 3(c) (Cuba); Law Amending the Criminal Code, 2018, § 169A(1) (Cyprus); [PENAL CODE] art. 449 (Djib.); [PENAL CODE] art. 150 (Ecuador); Medical Code of Ethics of 2003, art. 29 (Egypt); Abortion Act 1967, c. 87, § 1(1) (Eng., Wales, Scot.); [PENAL CODE] § 283(1) (Eri.); Law on Pregnancy Termination and Sterilization § 7 (Est.); Crimes Decree 2009, § 234(2) (Fiji); Law on Abortion § 8 (Fin.); STRAFGESETZBUCH [StGB] [PENAL CODE] § 218a (Ger.); POINIKOS KODIKAS [P.K.] [CRIMINAL CODE] art. 304(4) (Greece); [PENAL CODE] ch. III, art. 137 (Guat.); [PENAL CODE] § III, art. 308 (Guinea); Medical Termination of Pregnancy Act 1995, § 5(1) (Guy.); Offenses Against the Person Ordinance, No. 212, (1997) O.H.K., § 47A(1) (H.K.); Law on Counseling and Education on Sex and Childbirth and on Abortions and Sterilization art. 15 (Ice.); Medical Termination of Pregnancy Act, No. 34 of 1971, INDIA CODE (1971); Penal Law, 5737-1977, § 314, LSI (Isr.); Legge 22 maggio 1978, n.194, G.U. Magg. 22, 1978, n.140 (It.); [Maternal Health Act], Act No. 156 of 1948, art. 14, para. 1 (Japan); [PENAL CODE] § 45(2) (Lesotho); [PENAL CODE] § 16.3(2) (Liber.); [PENAL CODE] § 96(4) (Liech.); Abortion Operations Performance of Procedure annex 1, § 1.4 (Lith.); Voluntary Interruption of Pregnancy, art. 12(1) (Lux.); [PENAL CODE] § 312 (Malay.); [CRIMINAL CODE] § 235A (Mauritius); Regulation on Voluntary Interruption of Pregnancy in Safe Conditions § 1(9) (Mold.); Law on the Terms and Procedures for Termination of Pregnancy art. 10 (Montenegro); [PENAL CODE] § I, art. 453 (Morocco); [PENAL CODE] § III, art. 168(1) (Mozam.); Abortion and Sterilization Act 2 of 1975 § 3 (Namib.); Wet afbreking zwangerschap [Termination of Pregnancy Act] 8 februari 2015, Stb. 2015 (Neth.); Crimes Act 1961, § 1874A(4) (N.Z.); Law on Termination of Pregnancy § 3 (Nor.); [PENAL CODE] § 3, art. 144 (Pan.); Act on Family Planning art. 4a(1) (Pol.); [PENAL CODE] ch. 2, art. 142 (Port.); Practice of Physicians, Surgeons, and Dentists art. 17 (Qatar); [PENAL CODE] § 201(6) (Rom.); Organic Law Implementing the Penal Code § 5, art. 165 (Rwanda); [PENAL CODE] § 166(3) (St. Lucia); Crimes Act, 2013 § 114 (Samoa); [PENAL CODE] ch. II, art. 139(1) (São Tomé & Príncipe); Law on Abortion in Health Institutions art. 5 (Serb.); Termination of Pregnancy ch. 236, § 3(1) (Sey.); Termination of Pregnancy Act ch. 324, § 3(1) (Sing.); Act No. 73/1986 Coll. on Artificial Interruption of Pregnancy, as amended by Act No. 419/1991 Coll. § 7 (Slovk.); [Mother and Child Health Act], Act. No. 3824, May 10, 1986, art. 14 (S. Kor.); Law on Sexual and Reproductive Health and Abortion art. 13 (B.O.E. 2010, 55) (Spain); § 1 Abortlag (Svensk författningssamling [SFS] 1974:595) (Swed.); SCHWEIZERISCHES STRAFGESETZBUCH [STGB] [CRIMINAL CODE] Dec. 21, 1937, SR 311, art. 119(1) (Switz.); [CRIMINAL CODE] ch. 3, § 305 (Thai.); [PENAL CODE] art. 141(4) (Timor-Leste); [PENAL CODE] art. 214 (Tunis.); Medical Liability Law (U.A.E.); Law on Legal Interruption of Pregnancy ch. I, art. 3 (Uru.); Order No. 312. On the Approval of Artificial Standards Abortions (Uzb.); [PENAL CODE] ch. IV, art. 435 (Venez.); Termination of Pregnancy Act ch. 304, § 5.3(1) (Zam.); Termination of Pregnancy Act tit. 15, § 5(1) (Zim.).

economies,³³ many of which face low availability of medical doctors.³⁴ Of these, the laws of eight countries are liberal, allowing abortion on broad social or economic grounds or in any circumstance.³⁵ But for people who live in countries with limited availability of medical doctors able to perform the abortion, one can imagine that the medical doctor requirements are likely to be a greater barrier to abortion access than the circumstances in which abortion is legal.³⁶ The attention to circumstances in which abortion is legal as a basis for research may skew the evidence by neglecting to account for the complexities of abortion law.

In 2017, several UN agencies took steps to address the unavailability of complex data and enable a clearer understanding of abortion laws around the world. The Global Abortion Policies Database (GAPD),³⁷ spearheaded by the World Health Organization (WHO), makes multiple provisions in abortion laws accessible and represents a major leap toward precision and accessibility in the study of abortion laws. A main justification of the database is to inform evidence-based policymaking through readily accessible information on countries' existing laws and policies.³⁸ The database makes abortion laws, policies, standards, and guidelines for UN and WHO member states accessible at a global level, including selected subnational and dependency jurisdictions.³⁹ The GAPD categorizes abortion laws but does not confine categories to circumstances in which abortion is legal; in addition, it includes categories related to authorization and service-delivery requirements, conscientious objection, and penalties.⁴⁰ To categorize the laws, the WHO developed a questionnaire that local in-country experts completed, cross-checked, and reviewed.⁴¹

As a next step, for an even clearer, scientific understanding of abortion laws globally, legal researchers can use policy surveillance methods. Professor Scott Burris

33. These thirty-five countries are as follows: Angola, Bahrain, Barbados, Botswana, Brunei, Burundi, Cape Verde, Central African Republic, Chile, Cuba, Côte d'Ivoire, Djibouti, Egypt, Eritrea, Fiji, Guinea, India, Lesotho, Liberia, Malaysia, Mauritius, Morocco, Mozambique, Namibia, Qatar, Rwanda, Samoa, Timor-Leste, São Tomé and Príncipe, Thailand, Tunisia, Uruguay, Venezuela, Zambia, and Zimbabwe. UNITED NATIONS, WORLD ECONOMIC SITUATION AND PROSPECTS 2019, at 170 (2019), http://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2019_BOOK-ANNEX-en.pdf [<https://perma.cc/FM8D-PM5R>].

34. See *Global Health Observatory Data Repository: Medical Doctors*, WORLD HEALTH ORG., http://apps.who.int/gho/data/node.main.HWFGRP_0020?lang=en [<https://perma.cc/BQ5V-FUYC>] (last updated Mar. 14, 2019).

35. See [PENAL CODE] art. 144, § 1 (Angl.); Medical Termination of Pregnancy Act ch. 44A, § 4(3) (Barb.); Law and Regulation on Voluntary Interruption of Pregnancy art. 2 (Cape Verde); [PENAL CODE] § III, art. 168(5) (Mozam.); Organic Law Implementing the Penal Code § 5, art. 165(2) (Rwanda); [PENAL CODE] ch. II, art. 139(1) (São Tomé & Príncipe); [PENAL CODE] art. 214 (Tunis.); Law on Legal Interruption of Pregnancy ch. I, art. 2 (Uru.).

36. No research has examined this question globally, which would be an important legal epidemiology inquiry.

37. *Global Abortion Policies Database*, WORLD HEALTH ORG., <http://abortion-policies.srhr.org/> [<https://perma.cc/36QM-4W3G>] (last visited May 1, 2020).

38. Brooke Ronald Johnson Jr et al., *A Global Database of Abortion Laws, Policies, Health Standards and Guidelines*, 95 BULL. WORLD HEALTH ORG. 542, 542–44 (2017), <https://www.who.int/bulletin/volumes/95/7/17-197442.pdf> [<https://perma.cc/8QZF-QY6X>].

39. Johnson et al., *supra* note 19, at 1.

40. Lavelanet et al., *supra* note 20, at 2.

41. See Johnson et al., *supra* note 19, at 2.

and colleagues identified three ways that policy surveillance addresses the needs of the public health field.⁴² First, policy surveillance creates data suitable for use in rigorous studies that evaluate the impact of law.⁴³ Policy surveillance methods employ redundant coding and final data assurance measures of statistical quality control to ensure reliability and the reporting of error rates.⁴⁴ Policy surveillance methods, which the Center for Public Health Law Research developed, include research protocols that are published along with codebooks to deliver a degree of transparency novel to legal research.⁴⁵

Second, policy surveillance provides readily accessible data about trends in abortion laws and policies over time and across jurisdictions.⁴⁶ It is through this benefit of policy surveillance—data about *trends*—where legal epidemiology *is* like a microscope to the global abortion field, illuminating hidden worlds. Data on the status of abortion laws are available through the GAPD, but information on changes in abortion laws over time is completely inaccessible to researchers.⁴⁷ Policy surveillance tracks changes in law over time, as demonstrated in a map of youth sports traumatic brain injury laws where researchers have ready access to nuanced information on such laws across the country from 2009 to 2017.⁴⁸ Longitudinal data on abortion laws at the global level would open opportunities for researchers interested in identifying trends. For example, empirical researchers could compare changes in public health outcomes before and after the passage of parental consent provisions.

Third, the opportunity to build policy capacity in the public health workforce,⁴⁹ which is a less urgent but important gap that could be filled in the global abortion field. However, policy surveillance for global mapping may miss nuances of local laws or understanding of legal traditions. While the GAPD coders were local lawyers coding their own countries' laws,⁵⁰ policy surveillance researchers may be coding foreign laws that may not be as readily accessible to them. This approach may sacrifice local understanding and introduce bias due to coders' training in only one legal tradition. The need for translation poses additional challenges.

But policy surveillance methods are flexible.⁵¹ Local researchers across the globe could be trained to use common methods for a collective project, or regional researchers could focus on laws from similar legal traditions while contributing to a global dataset. The well-developed and refined methods of legal epidemiology allow for flexibility and greater efficiency in global legal research.⁵²

42. See Scott Burris et al., *Policy Surveillance: A Vital Public Health Practice Comes of Age*, 41 J. HEALTH POL., POL'Y & L. 1151, 1159–62 (2016) [hereinafter Burris et al., *Policy Surveillance*].

43. *Id.* at 1159.

44. SCOTT BURRIS, CTR. FOR PUBLIC HEALTH LAW RESEARCH, BUILDING THE DISCIPLINE OF POLICY SURVEILLANCE: REPORT AND NEXT STEPS FROM AN INTERNATIONAL CONVENING app.2 at 31 (2018).

45. See *id.* at 15.

46. Burris et al., *Policy Surveillance*, *supra* note 42, at 1160.

47. *Id.*

48. Hosea Harvey, *Youth Sports Traumatic Brain Injury Laws*, POL'Y SURVEILLANCE PROGRAM, <http://lawatlas.org/datasets/sc-reboot> [<https://perma.cc/LJ7J-JYXJ>] (last updated July 1, 2017).

49. Burris et al., *Policy Surveillance*, *supra* note 42, at 1162.

50. See Johnson et al., *supra* note 19, at 2.

51. Burris et al., *Policy Surveillance*, *supra* note 42, at 1164.

52. *Id.* at 1164–65.

III. CONNECTING THE DOTS BETWEEN ABORTION LAWS AND PUBLIC HEALTH OUTCOMES

Through policy surveillance, we can gain a clearer view of abortion law, which brings us closer to understanding how this area of law impacts public health outcomes. The field of legal epidemiology more broadly offers abortion researchers theories and methods for a better understanding of this impact.⁵³

While researchers have noted relationships between “restrictive abortion laws” (defined as having fewer circumstances in which abortion is legal), maternal mortality, and abortion safety,⁵⁴ the mechanisms by which restrictive laws lead to unsafe abortion and maternal mortality have yet to be investigated, particularly outside the United States. Researchers may assume a link between restrictive laws and a dearth of trained providers, for example, but this relationship remains murky without empirical evidence of the causal chain of events leading to the poorer health outcomes associated with restrictive laws. Researchers have identified “implementation” and “interpretation” of the law as one piece of the chain,⁵⁵ which, from a human rights perspective, usefully puts the onus on a government to act to improve access to abortion services.⁵⁶ But we can develop theories of how abortion laws affect behavior and environments to pursue a clearer understanding of the impact of the law.⁵⁷

As Professor Burris observed in his response to a review of the literature on drug and alcohol policy research, theory can help global abortion researchers connect a law itself to public health outcomes:

Theories of how policy [influences behavior and environments] help identify effects to measure, suggest the point in time one might expect to see effects, how effects might evolve over time, and what sort of intended and unintended effects should be observed. Theory helps investigators understand the number and kind of intermediate steps that must occur before an effect on health outcomes is expected and shapes the selection of statistical models by

53. Scott Burris et al., *A Transdisciplinary Approach to Public Health Law: The Emerging Practice of Legal Epidemiology*, 37 ANN. REV. PUB. HEALTH 135, 140 (2016) [hereinafter Burris et al., *A Transdisciplinary Approach*] (“The ability of researchers and practitioners to conduct and apply research in [legal epidemiology] is essential for the proper use of law to promote safer environments and behaviors to assure that health agencies have an optimal legal design and that their powers are being wielded effectively.”).

54. Ganatra et al., *supra* note 26, at 2377–80; Latt et al., *supra* note 25, at 5–8; *see also* WORLD HEALTH ORG., SAFE ABORTION: TECHNICAL AND POLICY GUIDANCE FOR HEALTH SYSTEMS 90, 91 fig.4.1 (2d ed. 2012) (ebook), <http://www.ncbi.nlm.nih.gov/books/NBK138197/> [<https://perma.cc/36VM-NSVS>].

55. *See* SINGH ET AL., *supra* note 9, at 15; *id.* at 43–44 (citing Ghazaleh Samandari et al., *Implementation of Legal Abortion in Nepal: A Model for Rapid Scale-Up of High-Quality Care*, BMC REPROD. HEALTH, Apr. 4, 2012, <http://reproductive-health-journal.biomedcentral.com/track/pdf/10.1186/1742-4755-9-7> [<https://perma.cc/VUR9-DM6B>]) (discussing steps Nepal took for an efficient implementation of abortion law reform).

56. *See, e.g.*, Comm. on Econ., Soc. and Cultural Rights, General Comment No. 22, *supra* note 17, ¶ 28 (“The realization of the rights of women and gender equality, both in law and in practice, requires repealing or reforming discriminatory laws, policies and practices in the area of sexual and reproductive health.”).

57. *See* Rachel Rebouché, *A Functionalist Approach to Comparative Abortion Law*, in ABORTION LAW IN TRANSNATIONAL PERSPECTIVE: CASES AND CONTROVERSIES 98, 98–117 (Rebecca J. Cook et al. eds., 2014).

presenting hypothesized distributions of effects across groups, time, and space.⁵⁸

Lawyers and empirical researchers must work together to develop theories to connect the dots from abortion laws to public health outcomes. Legal epidemiology demands collaboration between legal and empirical researchers to break down enduring “cultural, disciplinary, and resource barriers that have prevented the full recognition and optimal role of law in public health.”⁵⁹

An interdisciplinary study of the impact of legal risk could connect some of the dots between abortion laws and public health outcomes. Because abortion is a criminal law in most countries in the world,⁶⁰ people who have an abortion and abortion providers face risk of arrest, criminal prosecution, and imprisonment. People who seek abortion and those who help them are likely influenced by considerations of legal risk. There is some data on abortion providers’ experiences with law enforcement authorities⁶¹ and human rights documentation of people imprisoned for abortion.⁶² However, there is a lack of population-level data on how legal risk shapes abortion outcomes. Cross-disciplinary research designed by lawyers and empirical researchers could help improve our understanding of how criminal abortion laws affect public health outcomes. This improved understanding would enable researchers, advocates, and donors to focus their attention and investment on areas of the law that have the greatest impact.

IV. LEGAL EPIDEMIOLOGY CAN ENABLE UNDERSTANDING OF MAJOR SHIFTS IN ABORTION CARE

Legal epidemiology is of particular use now, as the landscape of abortion undergoes major shifts. The relationships between abortion laws and public health outcomes is more complex, due to an increasing number of people needing abortions who have been displaced and the growth of self-managed abortion outside the formal health care setting.⁶³

58. Scott Burris, *Theory and Methods in Comparative Drug and Alcohol Policy Research: Response to a Review of the Literature*, 41 INT’L J. DRUG POL’Y 126, 130 (2017) (citation omitted).

59. Burris et al., *A Transdisciplinary Approach*, *supra* note 53, at 135.

60. See Berer, *supra* note 4, at 16.

61. IPAS, A PRACTICAL GUIDE FOR PARTNERING WITH POLICE TO IMPROVE ABORTION ACCESS 7–8 (2016).

62. See, e.g., CTR. FOR REPROD. LAW AND POLICY & FORUM FOR WOMEN, LAW, AND DEV., ABORTION IN NEPAL: WOMEN IMPRISONED 59–83 (2002), http://reproductiverights.org/sites/default/files/nepal_2002.pdf [<https://perma.cc/8KW6-V7LW>]; CTR. FOR REPROD. RIGHTS, MARGINALIZED, PERSECUTED, AND IMPRISONED: THE EFFECTS OF EL SALVADOR’S TOTAL CRIMINALIZATION OF ABORTION 50–63 (2014), <http://reproductiverights.org/sites/default/files/documents/El-Salvador-CriminalizationOfAbortion-Report.pdf> [<https://perma.cc/4RQJ-PJ6K>]; GILLIAN KANE, IPAS, WHEN ABORTION IS A CRIME: RWANDA 1–2 (2015), <http://ipas.org/resources/when-abortion-is-a-crime-rwanda> [<https://perma.cc/M3CM-MAQY>]; GILLIAN KANE ET AL., IPAS, WHEN ABORTION IS A CRIME: THE THREAT TO VULNERABLE WOMEN IN LATIN AMERICA 1–2 (3d ed., rev. 2014), <https://ipas.azureedge.net/files/CRIMRPT3E14-WhenAbortionIsACrimeLAC.pdf> [<https://perma.cc/9A6G-RDYJ>].

63. See, e.g., Ilana G. Dzuba et al., *Medical Abortion: A Path to Safe, High-Quality Abortion Care in Latin America and the Caribbean*, 18 EUR. J. CONTRACEPTION & REPROD. HEALTH CARE 441, 441–50 (2013); Paula Rudnicka, *Integrating Rule of Law: New Solutions to the Global Displacement Crisis*, A.B.A. (Aug. 30, 2018), http://www.americanbar.org/groups/international_law/publications/international_law_news/2018/summer/integrating-rule-law-new-solutions-global-displacement-crisis/ [<https://perma.cc/PE5P-E9T3>].

People are experiencing displacement in growing numbers, which lays a context for complex pathways between abortion laws and public health outcomes. Prolonged war and unprecedented natural disasters have catapulted the world into the worst humanitarian crises in recent history⁶⁴—today over 167 million people are in need of humanitarian assistance.⁶⁵ The relationships between abortion laws and public health outcomes for displaced people is complicated, as displaced people face rule of law challenges.⁶⁶ Yet, abortion laws influence abortion care in different ways, including whether international humanitarian agencies are willing to provide it, along with other health care services, and whether local health providers have the skills to provide abortion care.⁶⁷ Because abortion is generally criminalized, we can assume that legal risk may also be a concern to people who seek and provide abortion in humanitarian settings.

The context in which people have abortions is also changing as the number of people having abortions with pills outside a formal health care setting grows. Increasingly, people seeking abortions are obtaining abortifacient medicines directly through pharmacies, drug sellers, and new routes like online sellers or telemedicine services.⁶⁸ For many people, self-managed abortion is a preferred way to end a pregnancy based on their experiences and circumstances.⁶⁹ People may self-manage their abortions in settings where termination services are restricted or access within formal health care facilities is difficult.⁷⁰ With a dearth of health professionals willing and able to provide

64. See United Nations High Comm'r for Refugees, UNHCR Statistics: The World in Numbers, http://popstats.unhcr.org/en/overview#_ga=2.170338787.294888232.1581985414-1969850579.1581985414 [<https://perma.cc/27PL-6N6F>] (last visited May 1, 2020) (identifying the global distribution and population types of the 74.79 million persons of concern in 2018, up from 2.12 million at the end of 1951).

65. See UNITED NATIONS OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS, GLOBAL HUMANITARIAN OVERVIEW 2020, at 28 (2020), https://www.unocha.org/sites/unocha/files/GHO-2020_v9.1.pdf [<https://perma.cc/XJ52-WPNU>].

66. Rudnicka, *supra* note 63.

67. See Therese McGinn & Sara E. Casey, *Why Don't Humanitarian Organizations Provide Safe Abortion Services?*, BMC CONFLICT & HEALTH, Mar. 24, 2016, at 2–4, <https://conflictandhealth.biomedcentral.com/track/pdf/10.1186/s13031-016-0075-8> [<https://perma.cc/Z4C5-LMVF>].

68. See Dzuba et al., *supra* note 63, at 441–50; Katharine Footman et al., *Feasibility of Assessing the Safety and Effectiveness of Menstrual Regulation Medications Purchased from Pharmacies in Bangladesh: A Prospective Cohort Study*, 97 CONTRACEPTION 152, 153 (2018); Rebecca Gomperts et al., *Provision of Medical Abortion Using Telemedicine in Brazil*, 89 CONTRACEPTION 129, 130 (2014); RJ Gomperts et al., *Using Telemedicine for Termination of Pregnancy with Mifepristone and Misoprostol in Settings Where There Is No Access to Safe Services*, 115 BJOG 1171, 1171 (2008); N Kapp et al., *A Research Agenda for Moving Early Medical Pregnancy Termination over the Counter*, 124 BJOG 1646, 1646 (2017); Katherine S. Wilson et al., *Misoprostol Use and Its Impact on Measuring Abortion Incidence and Morbidity*, in *METHODOLOGIES FOR ESTIMATING ABORTION INCIDENCE AND ABORTION-RELATED MORBIDITY: A REVIEW* 191, 191–200 (Susheela Singh et al. eds., 2010) (ebook), <https://www.guttmacher.org/sites/default/files/pdfs/pubs/compilations/IUSSP/abortion-methodologies.pdf> [<https://perma.cc/Q9WJ-CRG9>].

69. See WORLD HEALTH ORG., *MEDICAL MANAGEMENT OF ABORTION* 1–2 (2018), <http://apps.who.int/iris/bitstream/handle/10665/278968/9789241550406-eng.pdf?ua=1> [<https://perma.cc/XNU6-2RAP>].

70. See Robyn K. Sneeringer, *Roles of Pharmacists in Expanding Access to Safe and Effective Medical Abortion in Developing Countries: A Review of the Literature*, 33 J. PUB. HEALTH POL'Y 218, 220–22 (2012).

abortions in certain countries⁷¹ and with certain countries facing shortages of health care workers,⁷² self-managed abortion may be the only accessible option. Even where people have access to high-quality legal abortion services provided by a health care professional, they may choose to self-manage their abortions as a matter of preference.⁷³

WHO-recommended methods of abortion include medical abortion pills (misoprostol alone or misoprostol in combination with mifepristone).⁷⁴ The WHO recommends self-managed abortion for individuals who have “a source of accurate information and access to a health-care provider (should one be needed or wanted at any stage of the process).”⁷⁵ Evidence continues to grow, supporting the fact that people can safely use misoprostol with mifepristone or misoprostol alone without the involvement of a healthcare professional to end a pregnancy.⁷⁶ Data on the prevalence of self-managed abortion are limited, but deaths from unsafe abortions continue to fall, and researchers have attributed this decrease to self-managed abortion with pills.⁷⁷

The impact of abortion laws on public health outcomes becomes more complex when people receive abortion information and medicine from unauthorized individuals who are unlikely to comply with legal requirements. Such abortion seekers and people who help them are likely less influenced by legal requirements than would be authorized providers working within a formal health care facility. Yet laws do have some influence on self-managed abortions and the resultant public health outcomes. People may choose to self-manage their abortions because of a lack of access to authorized providers caused by the criminalization of abortion.⁷⁸ Risk of arrest, harassment, or imprisonment may have an impact on the number of people who seek follow-up care or quality abortion drugs.⁷⁹ Stigma that results from criminalization may also have an impact on the way people self-manage their abortions.⁸⁰ Legal epidemiology can help researchers understand the complex relationships between laws and self-managed abortions.

CONCLUSION

This Essay highlighted the value of legal epidemiology to the global abortion field and aimed to spur legal and empirical researchers to consider using its theories and methods. However, the use of legal epidemiology is already growing among abortion

71. See Wendy Chavkin et al., *Conscientious Objection and Refusal To Provide Reproductive Healthcare: A White Paper Examining Prevalence, Health Consequences, and Policy Responses*, 123 INT’L J. GYNECOLOGY & OBSTETRICS S41, S44 (2013).

72. GLOBAL HEALTH WORKFORCE ALL. & WORLD HEALTH ORG., A UNIVERSAL TRUTH: NO HEALTH WITHOUT A WORKFORCE 20 (2014), http://www.who.int/workforcealliance/knowledge/resources/GHWA-a_universal_truth_report.pdf [<https://perma.cc/WC3A-EKGU>].

73. See WORLD HEALTH ORG., *supra* note 69, at 1–2.

74. Kinga Jelinska & Susan Yanow, *Putting Abortion Pills into Women’s Hands: Realizing the Full Potential of Medical Abortion*, 97 CONTRACEPTION 86, 86 (2018).

75. WORLD HEALTH ORG., *supra* note 69, at 29.

76. *Id.* at 40.

77. See *id.* at vii.

78. See Rebecca J. Cook, *Stigmatized Meanings of Criminal Abortion Law*, in ABORTION LAW IN TRANSNATIONAL PERSPECTIVE: CASES AND CONTROVERSIES, *supra* note 57, at 347, 347–49.

79. *Id.* at 359.

80. See *id.* at 347–69.

researchers and advocates for abortion access. Researchers have created a dataset of state abortion laws in the United States,⁸¹ which can serve as a model for mapping abortion laws in jurisdictions outside the United States (albeit with less accessible legal text).

For the global abortion field, two legal epidemiology projects in process at the time of writing will further establish the utility of legal epidemiology. The Center for Public Health Law Research is currently creating causal models of the relationships between abortion laws and public health outcomes to aid the WHO in its development of evidence-based recommendations on abortion law and policy. And with legal text available through the GAPD, Ipas and the Center for Public Health Law Research have developed a data set and map of abortion laws in over two hundred jurisdictions as the laws apply to self-managed abortion.⁸²

Legal epidemiology methods are timely in global abortion research. More than ever, abortion researchers face great challenges in understanding how abortion laws impact public health outcomes. Legal epidemiology can help test and, in some contexts, correct longstanding assumptions about the relationships between restrictive abortion laws and unsafe abortions. We urgently need good evidence in the face of the growing practice of abortion outside formal health care settings and increasing numbers of displaced people who need abortions. Only with good evidence can global and national authorities make evidence-based recommendations for law and policy. Global organizations and funders working to expand abortion access need better evidence to deploy time and resources more effectively. Legal epidemiology can provide this better evidence and move us toward a better understanding of how laws and policies impact public health outcomes, with great potential for improving the health and lives of people who need abortions.

81. *State Abortion Laws*, POL'Y SURVEILLANCE PROGRAM, <http://lawatlas.org/datasets/abortion-laws> [<https://perma.cc/5Q9Q-8VP8>] (last updated Dec. 1, 2019).

This dataset was created by the Policy Surveillance Program of the Center for Public Health Law Research in collaboration with subject matter experts from the Guttmacher Institute, Resources for Abortion Delivery (RAD), American Civil Liberties Union (ACLU), Center for Reproductive Rights (CRR), National Abortion Federation (NAF), and Planned Parenthood Federation of America (PPFA), who conceptualized and developed the Abortion Law Project.

Id.

82. *Global Abortion Laws Relating to Self-Managed Abortion*, POL'Y SURVEILLANCE PROGRAM, <http://lawatlas.org/datasets/global-medication-abortion-laws> [<https://perma.cc/UL93-RRUB>] (last updated June 1, 2019).