

HHS Public Access

Author manuscript *Contraception.* Author manuscript; available in PMC 2020 July 01.

Published in final edited form as:

Contraception. 2019 July ; 100(1): 1-4. doi:10.1016/j.contraception.2019.02.005.

Challenging Unintended Pregnancy as an Indicator of Reproductive Autonomy

Joseph E. Potter^{a,b}, Amanda Jean Stevenson^{a,c}, Kate Coleman-Minahan^{a,d}, Kristine Hopkins^{a,b}, Kari White^{a,e}, Sarah E. Baum^{a,f}, Daniel Grossman^{a,g}

^a Texas Policy Evaluation Project, 305 E. 23rd Street, Stop G1800, Austin, TX, 78712

^bPopulation Research Center and the Department of Sociology, University of Texas at Austin, 305 E. 23rd Street, Stop G1800, Austin, TX, 78712

^{c.}Department of Sociology, University of Colorado Boulder, UCB 327 Ketchum 195, Boulder, CO, 80309

^{d.}University of Colorado College of Nursing, 13120 East 19th Avenue, Aurora, CO, 80045

^e Department of Health Care Organization and Policy, School of Public Health, University of Alabama at Birmingham, 1720 2nd Ave South RPHB 320, Birmingham, AL, 35294

^{f.}Ibis Reproductive Health, 1330 Broadway Suite 1100, Oakland, CA, 94612

^g Advancing New Standards in Reproductive Health (ANSIRH), Bixby Center for Global Reproductive Health, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, 1330 Broadway Suite 1100, Oakland, CA, 94612

Commentary

For many years most of us in the Society of Family Planning and the wider reproductive health community have relied on the number of unintended pregnancies as a justification for our research and as a rationale for the subsidy, expansion, or improvement of family planning services. We regularly draw on estimates of the proportion of all pregnancies that are unintended to show that there is a problem in need of a solution, and the papers that have provided these estimates are among the most cited in our field [1–4]. In the most recent, Finer and Zolna give two reasons for the centrality of unintended pregnancy: The first is that it is an indicator for a central aspect of reproductive autonomy: "the extent to which women and couples can determine freely whether and when they have children." [3] The second is a public health justification relative to the poorer outcomes of live births that are unintended, rather than unintended pregnancies per se. The purpose of this commentary is to challenge the first of these two justifications, and to argue that we should replace unintended

Conflicts of Interest: none

Corresponding author: Joseph E Potter, Population Research Center, 305 E. 23rd Street, Stop G1800, Austin, TX 78712-1699. Phone (512) 471-8341; Fax (512) 471-4886; joe@prc.utexas.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

pregnancy with other measures better aligned with reproductive autonomy. While reproductive autonomy encompasses the power to freely make the many choices relevant to reproduction, including those related to sexuality and parenting, as family planning scholars our competence and our professional responsibility includes – at minimum – assessing and influencing the degree to which people may freely access and elect from among the various means of controlling their fertility.

We contend that by treating high levels of unintended pregnancy as the problem motivating our scholarship, our field reinforces a conception of abortions as health system failures, valorizes more effective contraceptive methods regardless of women's desires, and contributes to the stigmatization of fertility among already-marginalized groups. Recognizing that few family planning scholars would want to promote such ideas and that unintended pregnancy is a problematic measure, we urge our community to stop relying on this indicator and to instead develop others that more accurately measure the degree of autonomy in choices regarding contraception and abortion.

Problems with unintended pregnancy

Our reliance on unintended pregnancies continues in spite of widespread recognition that this index suffers from conceptual flaws and difficulties of measurement [5]. The foremost conceptual problem is that the index sums abortions and unintended births as as if they were equivalent adverse outcomes. A good way to see the impact of this flaw is through the lens of the Turnaway Study [6], which recruited women seeking abortion care whose gestational age at presentation was just below and just above the gestational age limit at their facility. Consider two women from the study who had identical prior reproductive histories: one who obtained an abortion and the other who was denied an abortion and carried her pregnancy to term. The number of unintended pregnancies is the same for both women and the proportion of their pregnancies that are unintended is identical, but the woman who obtained an abortion exercised greater reproductive autonomy than the woman who was unable to access her wanted abortion. This false equivalence undermines the reproductive autonomy of women who obtain an abortion, and of populations in which abortion is an accepted, legitimate, and accessible means of fertility control.

Another way to see the problem with treating abortions as failures of autonomy is to look at Turkey and Eastern European countries, the region of the world that Bearak et al. have identified as experiencing the greatest decline in unintended pregnancy. In this region, at quite low fertility rates, there was a pronounced shift away from withdrawal toward oral contraception [7,8]. This resulted in a substantial decline in abortion and thus in total unintended pregnancies, but changes in unintended pregnancies cannot identify what portion of this shift corresponds to a change in reproductive autonomy. Certainly, there was a large change in the means of fertility control, but abortion may have been an acceptable outcome for some of the women who had them before the change. Treating this decline in unintended pregnancy as a positive public health outcome assumes that avoiding abortions is paramount, an assumption that we see as rooted in and contributing to abortion stigma.

Another long-recognized conceptual problem with the formulation of unintended pregnancy is the binary classification of live births into those that are "intended" and those that are

"unintended" (unwanted or mistimed). It has been noted that the nature and meaning of unwanted and mistimed pregnancies are quite different and should not be lumped together [9]. Furthermore, many have argued that intention likely represents a continuum, rather than a sharp divide [10,11], and that the continuum could incorporate both affective and planning dimensions [12,13], as well as conflicted desire about having a baby [14]. Moreover, apparent inconsistencies in the data regarding contraceptive failures and pregnancy intentions, and between prospective and retrospective reporting of the latter have underscored concerns about the indicator's measurement and its meaning in women's lives [13,15,16].

The challenges of measurement, and of properly taking measurement error into account when presenting estimates of the index are complicated by the fact that the two main components of unintended pregnancies, unintended births and induced abortions, almost always come from different sources, and are subject to different kinds of measurement error, which may bias comparisons across place and across time when access to abortion is unequal. In reviewing recently published estimates of unintended pregnancy across US states [17], Stevenson and Potter identify the impact that differential completeness in the reporting of unintended births and abortions could have on comparisons of unintended pregnancy among U.S. states [18]. The non-comparability of sources is even more pronounced in countries and states that lack complete vital registration of abortion [19,20]. A key function of public health indicators is to permit comparisons across place and across time, so biases in comparisons are a substantial limitation on the usefulness of unintended pregnancy as an indicator.

A final drawback of our field's treating a heterogeneous class of pregnancies as wholly adverse outcomes is the common inference that they could be averted by greater use of highly effective methods of contraception. This inference, in concert with our field's frequent assumption that women are using contraceptive methods that they freely chose fuels narratives that implicitly highlight women's failures rather than those of the health care systems on which they depend. The pathway is often the decomposition of unintended pregnancies into those due to contraceptive misuse or failure and those due to nonuse of contraception [19,21]. A sentence such as: "Approximately half of unintended pregnancies result from non-use of contraception, and half result from inconsistent or incorrect use and contraceptive failure" [22,23] commonly follows a sentence regarding the incidence of unintended pregnancy in a population. This decomposition positions contraceptive use and method selection as the causes of unintended pregnancy. And because the decision to contracept and method selection are assumed to be freely undertaken, the blame for unintended pregnancy is thus situated squarely on women. Holding women accountable in this way elides structural or institutional forces that shape their access to reproductive health services. This, in turn, contributes to the stigmatization of fertility among women who experience greater incidence of unintended pregnancy, including teens and women of color [24,25].

The focus on individual responsibility becomes more explicit when it enters the policy realm. In a series of papers, op-eds, a book, and via widespread quotations in media outlets Isabel Sawhill and colleagues describe women who have unintended births as "drifting" into

parenthood and thereby damaging their own life prospects and those of their children, a situation that they say may be improved by stronger social censure of unplanned parenthood and the widespread use of LARC devices. In a New York Times op-ed [26], Sawhill writes:

"If we combine an updated social norm with greater reliance on the most effective forms of birth control, we can transform drifters into planners and improve children's life prospects."

Leaving aside the debate over the causal effect of an unintended birth on subsequent life course outcomes, the fact that the author describes the use of LARC devices as a policy-level pathway from a nation of "drifters" to "planners" highlights the potency and consequence of unintended pregnancy as a construct. Rather than serving as an indicator of the inadequacy of access to reproductive healthcare services and reproductive autonomy, here unintended pregnancy is employed as a justification for stricter social norms and the widespread use of a specific class of devices without regard to women's desires [27].

What to measure instead of unintended pregnancy?

If we are concerned about reproductive autonomy, what should we measure instead of the incidence of unintended pregnancies? Among the components of reproductive autonomy are free elections of family planning methods including abortion, and the power to freely negotiate and engage in sexual activity [28,29]. At a minimum, the provision of family planning services intersects with reproductive autonomy by shaping women's access to and knowledge of contraception and abortion care. As scientists concerned with family planning, our challenge is to measure the degree to which these services enhance or constrain reproductive autonomy.

Measuring access to contraception—Financial, geographic, legal and other barriers to contraceptive use have received considerable attention in our field. Groups such as the Guttmacher Institute, Ibis Reproductive Health, and Power to Decide are working toward creating an empirically-based index of contraceptive access based on barriers and facilitators to care. But missing from discussions of institutional barriers are people's own assessments of whether they are receiving the contraceptive care they desire. Measuring what people want in comparison with what they get could shed light on reproductive autonomy.

Unfortunately, from their inception to the present day, large-scale fertility surveys only ask about contraceptive use. By not also asking about contraceptive preferences, this design presumes that a woman's current contraceptive method is both freely chosen and preferred over all other methods. Thus, to assess whether women are getting the contraceptive care that they desire, we propose that new questions be added to nationally representative samples such as the NSFG in the U.S. and the Demographic and Health Surveys undertaken in other countries.

In our work in Brazil and Texas, we have found that asking women about their contraceptive preferences yields large discrepancies between the method they want to use and the method that they are actually using. For example, among women who wanted no more children and delivered in public hospitals in Brazil, 60% wanted to be sterilized immediately following delivery, but only 12% had the procedure [30]. In our most recent study of postpartum

contraception carried out in six Texas cities, 53% (77% when the question was followed by probes) wanted to be using a highly effective method at six months postpartum compared to 39% actually using one [31]. Among Texas community college students, 21% wanted to be using an IUD or implant but less than half (9%) were [32].

Asking about contraceptive preferences can also yield information about regret or coercion regarding sterilization, or inadequate access to care for women who wish to have an IUD or implant removed, or who want to change one long-acting device for another. The disjuncture between women's preferences and their contraceptive method use points to a way to bring the focus back to women's lived experiences. For example, if the concern is strictly with unintended pregnancy, a woman who grudgingly uses oral contraceptives or condoms has the same outcome as a woman who happily use these methods, as long as both manage to not get pregnant. Analogously, a woman who uses an IUD or implant because she wants one and a woman who uses the device because of provider bias are both measured as successfully avoiding unintended pregnancy [33]. These equivalences mask a variety of health care system failures that deserve our attention, and which can be revealed by asking about preferences.

Measuring access to abortion—Meaningful indicators of abortion access have not received as much attention as those for contraception. Certainly, there has been work on barriers to access, much of it focused on distance from a clinic [34]. However, Upadhyay has argued that models of abortion access in the U.S. need to extend beyond measuring an individual's distance from a high-volume clinic to incorporate institutional prohibitions, restrictions on the types of qualified providers, reimbursement rates from public and private insurance (where available), access to medication abortion, and telemedicine [35]. And, while it has occasionally been possible to show a relationship between changes in barriers and changes in the incidence of abortion [36,37], ideally one would want to know the annual proportion of women seeking abortion who are prevented from obtaining one. But this is inherently difficult to measure. We need to build on research that explores asking prenatal care patients about attempts to obtain abortion [38][39].

Measures of abortion delay may be useful indicators of obstacles to abortion access. In a 2014 survey in Texas, we asked abortion patients if they obtained their procedure later than they would have preferred [40]. Overall 45% said they did, and there was no difference between those whose nearest clinic had closed since 2013 and those whose nearest clinic in 2013 remained open. This measure, however, does not distinguish between personal reasons for delay, such as late recognition of pregnancy or difficulty deciding about the abortion, and other reasons that may be more directly related to access.

Delays in obtaining abortion care may also be assessed at the community or population levels. At the community level, measures of wait time to obtain an appointment at an abortion facility may be a useful measure of congestion, as was demonstrated in Texas as facilities closed in 2013 [41]. At a population level, tracking changes in the proportion of abortions performed in the second trimester or median gestational age at the time of the procedure may also be useful. In Texas, the proportion of abortions performed in the second trimester increased after the closure of clinics in 2013–14 [42], while this proportion

decreased in Iowa with the expansion of sites providing medication abortion by telemedicine [43].

From a public health perspective, measures that capture inability to obtain a wanted abortion or delays in obtaining abortion are more meaningful than simply incorporating all abortions into a measure of unintended pregnancy. Childbirth after being unable to obtain a wanted abortion is associated with an increased risk of morbidity and mortality compared to abortion [44], as well as increased risks of poor socioeconomic outcomes [45]. Second-trimester abortion also is associated with an increased risk of complications compared to first-trimester abortion [46,47]. Both of these measures make more sense than simply incorporating any abortion, which generally is very safe [48], into a measure of unintended pregnancy if the goal is to assess public health.

Conclusion

Two key benefits would be realized were we to justify our work based on expanding reproductive autonomy rather than on reducing unintended pregnancy. First, we would no longer treat abortion as a failure, but rather as a reproductive option to which all women should have access. Second, we would shift the responsibility for achieving greater reproductive autonomy off the shoulders of women, and onto the systems responsible for providing their reproductive health care. This, in turn, would change the incentives for healthcare providers, policy evaluators, and lawmakers away from public health interventions aimed at altering women's behavior, and align them more directly with the goal of increasing reproductive autonomy. Additionally, this would help lessen the stigmatization of fertility among young women, poor women, and women of color.

Changing the indicators upon which we defend the importance of our work and services would be hard. At a minimum, it would require including new questions in state and nationally representative surveys and the development of comprehensive indices of access to both contraception and abortion. However, congruence among our mission, theories, and research methodologies is the foundation of our integrity. It is well past time to abandon unintended pregnancy, an index that we do not measure well and which sends the wrong signals.

Role of the funding source:

This commentary arose from the authors' work on the Texas Policy Evaluation Project, which was supported by a grant from the Susan Thompson Buffett Foundation and a center grant from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) (P2CHD042849) awarded to the Population Research Center at the University of Texas at Austin. Additionally, Stevenson and Coleman-Minahan were supported by an NICHD center grant to the University of Colorado Population Center (2P2CHD066613-06), and White by an NICHD Research Career Development Award (K01 HD079563). These funders played no role in the writing of the commentary; and in the decision to submit it for publication.

REFERENCES

- Finer LB, Zolna MR. Unintended pregnancy in the United States: Incidence and disparities, 2006. Contraception 2011;84:478–85. [PubMed: 22018121]
- [2]. Henshaw SK. Unintended Pregnancy in the United States. Fam Plann Perspect 1998;30:24–9 & 46. [PubMed: 9494812]

- [3]. Finer LB, Zolna MR. Declines in Unintended Pregnancy in the United States, 2008–2011.N Engl J Med 2016;374:843–52. doi:10.1056/NEJMsa1506575. [PubMed: 26962904]
- [4]. Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. Perspect Sex Reprod Health 2006;38:90–6. doi:10.1363/psrh.38.090.06. [PubMed: 16772190]
- [5]. Dehlendorf C, Reed R, Fox E, Seidman D, Hall C, Steinauer J. Ensuring our research reflects our values: The role of family planning research in advancing reproductive autonomy. Contraception 2018;98:4–7. doi:10.1016/j.contraception.2018.03.015. [PubMed: 29545022]
- [6]. ANSIRH. Turnaway Study n.d https://www.ansirh.org/research/turnaway-study (accessed February 27, 2018).
- [7]. Santow G. Coitus Interruptus in the Twentieth Century. Popul Dev Rev 1993;19:767–92.doi: 10.2307/2938413.
- [8]. Bearak J, Popinchalk A, Alkema L, Sedgh G. Global, regional, and subregional trends in unintended pregnancy and its outcomes from 1990 to 2014: estimates from a Bayesian hierarchical model. Lancet Glob Health 2018;6:e380–9. doi:10.1016/S2214-109X(18)30029-9.
 [PubMed: 29519649]
- [9]. Santelli J, Rochat R, Hatfield-Timajchy K, Gilbert BC, Curtis K, Cabral R, et al. The measurement and meaning of unintended pregnancy. Perspect Sex Reprod Health 2003;35:94–101. [PubMed: 12729139]
- [10]. Rocca CH, Ralph LJ, Wilson M, Gould H, Foster DG. Psychometric Evaluation of an Instrument to Measure Prospective Pregnancy Preferences: The Desire to Avoid Pregnancy Scale. Med Care 2019;57:152–8. doi:10.1097/MLR.000000000001048. [PubMed: 30550399]
- [11]. Barrett G. Conceptualisation, development, and evaluation of a measure of unplanned pregnancy. J Epidemiol Community Health 2004;58:426–33. doi:10.1136/jech.2003.014787. [PubMed: 15082745]
- [12]. Bachrach CA, Newcomer S. Intended pregnancies and unintended pregnancies: distinct categories or opposite ends of a continuum? Fam Plann Perspect 1999;31:251–2. [PubMed: 10723654]
- [13]. Aiken ARA, Borrero S, Callegari LS, Dehlendorf C. Rethinking the Pregnancy Planning Paradigm: Unintended Conceptions or Unrepresentative Concepts? Perspect Sex Reprod Health 2016;48:147–51. doi:10.1363/48e10316. [PubMed: 27513444]
- [14]. Higgins JA, Popkin RA, Santelli JS. Pregnancy Ambivalence and Contraceptive Use Among Young Adults in the United States. Perspect Sex Reprod Health 2012;44:236–43. doi: 10.1363/4423612. [PubMed: 23231331]
- [15]. Trussell J, Vaughan B, Stanford J. Are all contraceptive failures unintended pregnancies? evidence from the 1995 National Survey of Family Growth. Fam Plann Perspect 1999;31:246. doi:10.2307/2991573. [PubMed: 10723650]
- [16]. Rackin H, Morgan SP. Prospective versus retrospective measurement of unwanted fertility: Strengths, weaknesses, and inconsistencies assessed for a cohort of US women. Demogr Res 2018;39:61–94. doi:10.4054/DemRes.2018.39.3. [PubMed: 31827372]
- [17]. Kost K, Finer LB, Singh S. Variation in State Unintended Pregnancy Rates In the United States. Perspect Sex Reprod Health 2012;44:57–64. doi:10.1363/4405712. [PubMed: 22405153]
- [18]. Stevenson AJ, Potter JE. Abortion access and state variation in observed unintended pregnancy. Contraception 2015;92:227–33. doi:10.1016/j.contraception.2015.04.003. [PubMed: 25869632]
- [19]. Bankole A, Adewole IF, Hussain R, Awolude O, Singh S, Akinyemi JO. The Incidence of Abortion in Nigeria. Int Perspect Sex Reprod Health 2015;41:170–81. doi:10.1363/intsexrephea. 41.4.0170. [PubMed: 26871725]
- [20]. Singh S, Sedgh G, Hussain R. Unintended Pregnancy: Worldwide Levels, Trends, and Outcomes. Stud Fam Plann 2010;41:241–50. doi:10.1111/j.1728-4465.2010.00250.x. [PubMed: 21465725]
- [21]. Frost JJ, Singh S, Finer LB. Factors associated with contraceptive use and nonuse, United States, 2004. Perspect Sex Reprod Health 2007;39:90–9. doi:10.1363/3909007. [PubMed: 17565622]
- [22]. Mosher W, Jones J, Abma J. Nonuse of contraception among women at risk of unintended pregnancy in the United States. Contraception 2015;92:170–6. doi:10.1016/j.contraception. 2015.05.004. [PubMed: 25998937]

- [23]. Peipert JF, Madden T, Allsworth JE, Secura GM. Preventing Unintended Pregnancies by Providing No-Cost Contraception. Obstet Gynecol 2012;120:1291–7. [PubMed: 23168752]
- [24]. Morse JE, Ramesh S, Jackson A. Reassessing Unintended Pregnancy: Toward a Patient-centered Approach to Family Planning. Obstet Gynecol Clin North Am 2017;44:27–40. doi:10.1016/j.ogc. 2016.10.003. [PubMed: 28160891]
- [25]. Gomez AM, Wapman M. Under (implicit) pressure: young Black and Latina women's perceptions of contraceptive care. Contraception 2017;96:221–6. doi:10.1016/j.contraception. 2017.07.007. [PubMed: 28756187]
- [26]. Sawhill Isabel. Beyond Marriage. N Y Times 2014.
- [27]. Gomez AM, Fuentes L, Allina A. Women or LARC First? Reproductive Autonomy And the Promotion of Long-Acting Reversible Contraceptive Methods. Perspect Sex Reprod Health 2014;46:171–5. doi:10.1363/46e1614. [PubMed: 24861029]
- [28]. Upadhyay UD, Dworkin SL, Weitz TA, Foster DG. Development and validation of a reproductive autonomy scale. Stud Fam Plann 2014;45:19–41. [PubMed: 24615573]
- [29]. Purdy L. Women's reproductive autonomy: medicalisation and beyond. J Med Ethics 2006;32:287–91. doi:10.1136/jme.2004.013193. [PubMed: 16648280]
- [30]. Potter JE, Perpetuo IH, Berquo E, Hopkins K, Leal OF, de Carvalho Formiga MC, et al. Frustrated demand for postpartum female sterilization in Brazil. Contraception 2003;67:385–90. doi:S0010782403000398 [pii]. [PubMed: 12742562]
- [31]. Potter JE, Coleman-Minahan K, White K, Powers DA, Dillaway C, Stevenson AJ, et al. Contraception after delivery among publicly insured women in Texas. Obstet Gynecol 2017;130:393–402. [PubMed: 28697112]
- [32]. Hopkins K, Hubert C, Coleman-Minahan K, Stevenson AJ, White K, Grossman D, et al. Unmet demand for short-acting hormonal and long-acting reversible contraception among community college students in Texas. J Am Coll Health 2018;0:1–9. doi:10.1080/07448481.2018.1431901.
- [33]. Gilliam ML. Beyond Coercion: Let Us Grapple With Bias. Obstet Gynecol 2015;126:915–6.[PubMed: 26444119]
- [34]. Bearak JM, Burke KL, Jones RK. Disparities and change over time in distance women would need to travel to have an abortion in the USA: a spatial analysis. Lancet Public Health 2017;2:e493–500. doi:10.1016/S2468-2667(17)30158-5. [PubMed: 29253373]
- [35]. Upadhyay UD. Innovative models are needed for equitable abortion access in the USA. Lancet Public Health 2017;2:e484–5. doi:10.1016/S2468-2667(17)30181-0. [PubMed: 29253369]
- [36]. Joyce T. The Supply-Side Economics of Abortion. N Engl J Med 2011;365:1466–9. doi:10.1056/ NEJMp1109889. [PubMed: 22010912]
- [37]. Grossman D, White K, Hopkins K, Potter JE. Change in Distance to Nearest Facility and Abortion in Texas, 2012 to 2014. JAMA 2017;317:437–9. doi:10.1001/jama.2016.17026. [PubMed: 28114666]
- [38]. Kimport K, Kriz R, Roberts SCM. The prevalence and impacts of crisis pregnancy center visits among a population of pregnant women. Contraception 2018. doi:10.1016/j.contraception. 2018.02.016.
- [39]. Roberts SCM, Kimport K, Kriz R, Holl J, Mark K, Williams V. Consideration of and Reasons for Not Obtaining Abortion Among Women Entering Prenatal Care in Southern Louisiana and Baltimore, Maryland. Sex Res Soc Policy 2018. doi:10.1007/s13178-018-0359-4.
- [40]. Gerdts C, Fuentes L, Grossman D, White K, Keefe-Oates B, Baum S, et al. The impact of clinic closures on women obtaining abortion services after implementation of a restrictive law in Texas. Am J Public Health 2016;106:857–64. [PubMed: 26985603]
- [41]. Texas Policy Evaluation Project. Abortion wait times in Texas: the shrinking capacity of facilities and the potential impact of closing non-ASC clinics. Austin, TX: Texas Policy Evaluation Project; 2015.
- [42]. Grossman D. The Use of Public Health Evidence in Whole Woman's Health v Hellerstedt. JAMA Intern Med 2017;177:155–6. doi:10.1001/jamainternmed.2016.6839. [PubMed: 27820613]
- [43]. Grossman DA, Grindlay K, Buchacker T, Potter JE, Schmertmann CP. Changes in Service Delivery Patterns After Introduction of Telemedicine Provision of Medical Abortion in Iowa. Am J Public Health 2012;103:73–8. doi:10.2105/AJPH.2012.301097. [PubMed: 23153158]

- [44]. Gerdts C, Dobkin L, Foster DG, Schwarz EB. Side Effects, Physical Health Consequences, and Mortality Associated with Abortion and Birth after an Unwanted Pregnancy. Womens Health Issues 2016;26:55–9. doi:10.1016/j.whi.2015.10.001. [PubMed: 26576470]
- [45]. Foster DG, Biggs MA, Ralph L, Gerdts C, Roberts S, Glymour MM. Socioeconomic Outcomes of Women Who Receive and Women Who Are Denied Wanted Abortions in the United States. Am J Public Health 2018;108:407–13. doi:10.2105/AJPH.2017.304247. [PubMed: 29345993]
- [46]. Zane S, Creanga AA, Berg CJ, Pazol K, Suchdev DB, Jamieson DJ, et al. Abortion-Related Mortality in the United States 1998–2010. Obstet Gynecol 2015;126:258–65. doi:10.1097/AOG. 000000000000945. [PubMed: 26241413]
- [47]. Upadhyay UD, Desai S, Zlidar V, Weitz TA, Grossman D, Anderson P, et al. Incidence of emergency department visits and complications after abortion. Obstet Gynecol 2015;125:175–83.
 [PubMed: 25560122]
- [48]. National Academies of Sciences, Engineering, and Medicine. The Safety and Quality of Abortion Care in the United States. Washington, D.C.: National Academies Press; 2018. doi: 10.17226/24950.