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Policy Matters

The Health and Social Service Needs of Pregnant Women Who Consider but Do Not Have Abortions

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ABSTRACT

Purpose: States have enacted an increasing number of policies restricting access to abortion. As a result, some women are unable to obtain an abortion and instead continue their pregnancies. These women may have particular needs that would bring them to the attention of public health programs.

Methods: Pregnant women entering prenatal care completed a self-administered survey and structured interview at four prenatal facilities in Louisiana and Maryland ($N = 586$). Participants reported their pregnancy intentions, whether they had considered abortion, and their reasons for not having an abortion (e.g., personal reasons, policy barriers to care). Participants completed up to 13 items indicating their service needs; an index was created by summing across nine common items. Data were analyzed through descriptive statistics, bivariate analyses, and multivariable regression models that controlled for sociodemographic characteristics.

Results: On average, women reported 2.99 service needs. The most common needs were WIC (93%), food stamps (85%), dental care (59%), and housing assistance (53%). In multivariable analyses, women who considered abortion but did not face a policy barrier reported greater service needs compared to women who did not consider abortion (3.45 vs. 2.82; $b = 0.64$; 95% confidence interval, 0.25–1.04). Women reporting a policy barrier to abortion reported the highest service needs (3.95) of all groups, although differences were not statistically significant possibly owing to sample size.

Conclusions: Pregnant women who consider abortion before entering prenatal care have considerable health and social service needs. Public health programs that serve women and children should consider the specific needs of women who seek abortions.

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Nearly one-half of all pregnancies in the United States are unintended, whether unwanted or mistimed (Finer & Zolna, 2016). Abortion is a common outcome for women experiencing

unintended pregnancies. An estimated 4 in 10 unintended pregnancies (42%) end in abortion (Finer & Zolna, 2016), and approximately one-quarter of women will have an abortion during their reproductive lifespans (Jones & Jerman, 2017).

In recent years, states have enacted an increasing number of policies affecting access to and the provision of abortion (Nash, Gold, Mohammed, Ansari-Thomas, & Cappello, 2018). Between 2011 and 2017, more than 400 new abortion policies were enacted by legislatures across the United States (Nash et al., 2018). Research has found that some of these restrictions—specifically 20-week gestation bans and admitting privileges laws—have resulted in some women being unable to obtain abortions and instead carrying pregnancies to term (Grossman et al., 2014; Henshaw, Joyce, Dennue, Finer, & Blanchard, 2009; Upadhyay,

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Weitz, Jones, Barar, & Foster, 2014). Research from the prospective Turnaway Study, which followed women after receiving or being denied an abortion, found that those who continued their pregnancies experienced more violence from the man involved in the pregnancy (Roberts et al., 2014), greater immediate anxiety (Biggs, Upadhyay, McCulloch, & Foster, 2017), more serious physical health complications (Gerdtz, Dobkin, Foster, & Schwarz, 2016), and greater economic insecurity (Foster, Biggs, Ralph, et al., 2018b) relative to those women who received abortions. Women denied abortion also do not stop their problematic alcohol use, drug use, and tobacco use (Roberts, Foster, Gould, & Biggs, 2018a). The children born to women after denial of an abortion were more likely to live in homes without enough money for basic living expenses (Foster, Biggs, Raifman, et al., 2018a). Accordingly, it is likely that women who continue unintended pregnancies after considering abortion will come to the attention of public health programs and professionals as they seek services to support themselves and their families.

Meeting the health and social service needs of women and their families has been a hallmark of public health work for many decades. The Title V Maternal and Child Health Services Block Grant authorizing legislation, enacted in 1935, includes as one of its purposes the assurance of access to quality services, with a specific emphasis on the needs of populations with lower incomes and limited access to care. Ensuring linkages to needed services has been highlighted as an Essential Public Health Service (Centers for Disease Control and Prevention, 2014), and linking women and children to health and other services has specifically been detailed as a critical function under this framework (Dievler, Grason, & Guyer, 1997). To meet these goals, public health professionals need to understand the service needs of women who experience unintended pregnancies, especially those who are unable to have an abortion owing to a policy-related barrier to care.

The current analysis is drawn from a large cross-sectional study of pregnant women in two states, Maryland and Louisiana, as they entered prenatal care. Previously (Roberts, 2018b), we found that approximately 3 in 10 women had considered having an abortion at some point during their pregnancy before entering prenatal care. Among these women, the most common reasons for not having an abortion were personal (i.e., related to her own preferences). A subset of women, however, reported a policy-related barrier (e.g., lack of insurance coverage, gestational limits) that kept them from having a wanted abortion. In this analysis, we examine the self-reported health and social service needs of women as they entered prenatal care in these two states. We look at the needs of different subsets of women, including those who reported unintended pregnancies, those who considered abortion, and those who reported a policy-related barrier to abortion care. We deliberately focus on the needs reported by women themselves—rather than provider diagnoses or screenings—as an indication of their self-expressed concerns for themselves and their families.

Methods

Study Design

The study methods have been described in detail elsewhere (Roberts, 2018b). Between June 2015 and June 2017, we recruited English- and Spanish-speaking women ages 18 and older presenting for their first prenatal visit at four university-affiliated prenatal care facilities in Southern Louisiana and Baltimore, Maryland. These locations were selected to meet the aims of the

larger study because of their similar demographic profiles in terms of race/ethnicity, poverty, and birth rate, but different state-level abortion policies and access. Louisiana has enacted multiple policies restricting provision of abortion (including mandatory waiting periods and ultrasound examinations, parental involvement law, a 20-week ban, and lack of state funding to pay for abortion for low-income women), whereas Maryland has one (a parental involvement law [Guttmacher Institute, 2019](#)).

At each facility, an onsite research coordinator approached eligible women about the study and invited them to participate. After providing written consent, participants completed a self-administered iPad survey (10–15 minutes) followed by a brief structured interview (5–15 minutes) conducted by the research coordinator. Four percent of participants chose to complete the survey and interview in Spanish. Women received a \$30 gift card for their participation in the survey and brief interview. The institutional review boards of the University of California, San Francisco, and Louisiana State University approved the study protocol; the University of Maryland relied on the approval of the University of California, San Francisco institutional review board.

Measures

On the iPad survey, participants were asked their intentions to become pregnant (completing the six-item London Measure of Unplanned Pregnancy [LMUP]; [Barrett, Smith, & Wellings, 2004](#)). On both the survey and the brief structured interview, participants were asked if they had considered abortion at any point during their pregnancy. During the interview, those who had considered abortion were asked an open-ended question about their reasons for not having an abortion. These responses were coded independently by two researchers and categorized as personal reason, interpersonal reason, interaction with clinic or provider, and policy reason. Responses could fall into more than one category. The process of categorizing these responses is detailed elsewhere ([Roberts, Kimport, et al., 2018b](#)).

Other survey variables included demographic and socioeconomic characteristics (age, race/ethnicity, education, employment status, insurance status, public assistance in the last 12 months, housing and food insecurity in the last 12 months) and pregnancy-related factors (gestation based on last menstrual period, prior pregnancy, birth, and abortion).

During the brief interview, participants were asked whether they would like to receive, do not want or need, or have already received health and social services during this pregnancy. Participants in Louisiana were asked about nine services. Participants in Maryland were asked about these same nine services, plus an additional five services based on the interest of local co-investigators. Specifically, interviews in both states asked about WIC, food stamps/SNAP, housing assistance, home visits, mental health services, pregnancy options counseling, substance use treatment, intimate partner violence counseling/shelter, and other services. Interviews in Maryland also asked about dental care, transportation assistance, child care, job counseling, and smoking cessation. An index of self-determined health and social service needs was created by summing across the nine common items if the participant indicated she would like to receive or had already received the service during this pregnancy.

Analyses

We first summarized women's health and social service needs across all 13 items. We used χ^2 and Fisher's exact tests to

assess bivariate differences by state for the nine common items and the *t*-test to assess differences by state for the nine-item index. We then examined the bivariate relationship between each of the nine items and whether women reported 1) their pregnancy was unplanned/ambivalent, 2) they had considered abortion, and 3) they encountered a policy-related barrier to abortion. To obtain *p* values that accounted for our study design, we used simple logistic regression models that clustered standard errors (using Stata's [StataCorp, College Station, TX] *vce* cluster command) to account for nonindependent observations within recruitment facility.

We created a single categorical variable indicating consideration of and barriers to abortion. Women were categorized as having not considered abortion during their pregnancy, having considered abortion and not reporting a policy barrier, or having considered abortion and reporting a policy barrier. Using a bivariate regression model, we predicted the nine-item service needs index by this variable. Then, in a multivariable model, we controlled for demographic and socioeconomic factors (age, race/ethnicity, highest level of education, and employment status). We explored the distribution of the nine-item index to determine the most appropriate modeling approach. Although the index is a count of needs, it does not meet other Poisson assumptions (e.g., having no natural upper bound, independent item responses). The distribution of responses was close to normally distributed (mean, 2.99; median, 3) with a slight skew (0.25). As such, we chose the ordinary least squares model, and clustered standard errors by recruitment facility. We used Stata version 15 software for all analyses.

Results

Sample Description

The sample included 586 women who completed the self-administered survey and in-clinic interview. Participants ranged in age from 18 to 44 years (mean, 27.0; standard deviation [SD], 5.6). Eighty percent had been pregnant before, 69% had given birth, and 28% had previously had an abortion. Most (72%) were entering prenatal care in their first trimester of pregnancy; 5% were entering in the third trimester. Many reported a history of socioeconomic challenges. Approximately one-half of participants were unemployed (49%) and reported food insecurity (47%) in the past year, and 30% reported housing insecurity in the past year. The majority reported health insurance coverage through Medicaid (75%), and an additional 15% were uninsured (Table 1).

Pregnancy Intentions, Considering Abortion, and Barriers to Care

Most women entering prenatal care reported that they had not planned to become pregnant. The mean LMUP score was 7.0 (SD, 2.9), and most women's pregnancies were categorized as unplanned (10%; LMUP scores 0–3) or ambivalent (63%; LMUP scores 4–9). As previously reported (Roberts, 2018b), approximately 30% reported on the survey or during the interview that they had considered having an abortion, even briefly, during their pregnancy. Among women who had considered abortion, the most common reasons for not having an abortion were personal—that is, related to her own preferences for the pregnancy (76% of those who considered abortion). Nineteen women (11% of those who considered abortion) reported that they did not have an abortion owing to a policy-related barrier to care, including gestational limits, multiple visit requirements, lack of

Table 1

Description of the Sample of Pregnant Women at the First Prenatal Visit (*N* = 586)

Variable	<i>n</i> (%) or Mean ± SD
State	
Louisiana	282 (48)
Maryland	304 (52)
Age, years	27.0 ± 5.6
Race/ethnicity	
Black or African American	461 (79)
Hispanic/Latina	55 (9)
White	45 (8)
Other/multiple	24 (4)
Highest level of education	
Less than high school	120 (20)
Completed high school or GED	286 (49)
Some or completed college	179 (31)
Employment	
Employed full time	176 (30)
Employed part time	122 (21)
Unemployed	285 (49)
Health insurance status	
Medicaid	432 (75)
Uninsured	88 (15)
Employment/self/other	58 (10)
Public assistance in last 12 months	431 (75)
Housing insecurity in last 12 months	172 (30)
Food insecurity in last 12 months	271 (47)
Prior pregnancy	467 (80)
Prior birth	401 (69)
Prior abortion	165 (28)
Trimester entered prenatal care	
First	417 (72)
Second	130 (22)
Third	31 (5)
Gestation of pregnancy, weeks	11.3 ± 8.1

insurance coverage or money to pay for the abortion, and lack of local services.

Health and Social Service Needs

On the nine-item index of health and social service needs (range, 0–9), women reported an average of 2.99 service needs (SD, 1.45; median, 3). Nearly all women (95%) reported having received or wanting to receive at least one of the nine services. The most commonly reported needs were for WIC (93%), food stamps/SNAP (85%), dental care (59%), and housing assistance (53%). The mean number of health and social service needs was greater in Louisiana than Maryland (3.15 vs. 2.85; *p* = .013). Women in Louisiana were significantly more likely to report needing housing assistance, pregnancy options counseling, and intimate partner violence counseling/shelter than women in Maryland (*p* < .05; Table 2).

As shown in Table 3, women whose pregnancies were unplanned/ambivalent were more likely to report that they needed food stamps/SNAP, mental health services, and pregnancy options counseling than those with planned pregnancies (*p* < .05). Women who considered abortion were more likely to report needing food stamps/SNAP, home visits, mental health services, pregnancy options counseling, and substance use treatment (*p* < .05). Women who faced a policy barrier to abortion were more likely to report needing pregnancy options counseling, substance use treatment, and intimate partner violence counseling/shelter than women who had not faced a barrier (*p* < .05).

The mean number of service needs was lowest for women who had not considered abortion (2.82; SD, 1.37), higher for

Table 2

Percent of Women Who Would Like to Receive or Have Received Health and Social Services During This Pregnancy, among all Women and by State

Service Need	Full Sample (N = 586)	Louisiana (n = 282)	Maryland (n = 304)	p Value
WIC	93	92	94	NS
Food stamps/SNAP	85	84	85	NS
Dental care*	59	N/A	59	–
Housing assistance	53	59	48	.011
Transportation assistance*	35	N/A	35	–
Child care*	33	N/A	33	–
Home visits	25	29	22	NS
Job counseling*	24	N/A	24	–
Mental health services	21	19	23	NS
Pregnancy options counseling	12	18	6	<.001
Quit smoking*	12	N/A	12	–
Substance use treatment	4	5	2	NS
Other	4	4	3	NS
IPV counseling/shelter	3	4	1	.040
Mean Service Needs Index (9 items)	2.99	3.15	2.85	.013

Abbreviations: IPV, intimate partner violence; N/A, not available because item asked in Maryland only; NS, not statistically significant at $p < .05$ level.Note: Differences by state assessed using χ^2 tests for most dichotomous outcomes, Fisher's exact test for IPV counseling/shelter owing to small cell size, and t-test for index.

* Job counseling, transportation assistance, quit smoking, dental care, and child care were asked among women in Maryland only. These items were not included in the 9-item index.

those who considered abortion but did not report a policy barrier to care (3.45; SD, 1.41), and highest for those who considered abortion and reported a policy barrier to care (3.95; SD, 1.61). In the unadjusted model, women who considered abortion and did not report a policy barrier reported more service needs relative to those who did not consider abortion ($b = 0.68$; 95% confidence interval, 0.42–0.94; $p = .004$). The difference in needs was not significant for women who faced a policy barrier relative to those who did not consider abortion ($p = .114$). The same pattern was found after controlling for demographic and socioeconomic factors in the multivariable model. In the adjusted model, women who considered abortion and did not report a policy barrier reported more service needs relative to those who did not consider abortion ($b = 0.64$; 95% confidence interval, 0.25–1.04; $p = .014$). The difference in needs was not significant for women who faced a policy barrier relative to those who did not consider abortion ($p = .145$; Table 4).

Table 3

Percent of Women Who Would Like to Receive or Have Received Health and Social Services During This Pregnancy, among all Women and by Pregnancy Intentions, Considered Abortion, and Faced a Policy-Related Barrier to Abortion

Service Need	Full Sample (N = 586)	Unplanned or Ambivalent Pregnancy			Considered Abortion During Pregnancy			Faced a Policy-Related Barrier to Abortion		
		Yes (n = 425)	No (n = 157)	p Value	Yes (n = 182)	No (n = 401)	p Value	Yes (n = 19)	No (n = 547)	p Value
WIC	93	94	92	NS	94	94	NS	95	96	NS
Food stamps/SNAP	85	87	80	<.001	91	82	.002	100	87	*
Housing assistance	53	55	50	NS	59	51	NS	79	54	NS
Home visits	25	25	25	NS	30	23	.002	32	26	NS
Mental health services	21	22	17	.026	31	17	<.001	32	21	NS
Pregnancy options	12	14	6	.010	20	8	<.001	26	12	<.001
Substance use treatment	4	4	2	NS	7	2	.001	11	3	<.001
Other	4	3	4	NS	5	3	NS	5	4	NS
IPV counseling/shelter	3	3	2	NS	4	2	NS	16	2	.002

Abbreviations: IPV, intimate partner violence; NS, not statistically significant at the $p < .05$ level.Note: The p values are based on models with standard errors clustered by recruitment facility.* No p value because independent variable predicts outcome perfectly.

Discussion

Upon entry into prenatal care, pregnant women reported a range of unmet health and social service needs, with more than one-half expressing the need for WIC, food stamps, dental care, and housing assistance and more than one-fifth wanting help with transportation, child care, job counseling, home visiting, and mental health care. Like many women in the United States (Finer & Zolna, 2016), most women in this study had not planned to become pregnant and approximately 3 in 10 considered having abortion before entering prenatal care (Roberts, Kimport, et al., 2018b). Among these women, the need for services is even greater. Needs seem to be especially high among women who face policy barriers that keep them from a wanted abortion; however, these differences were not statistically significant in this study, potentially owing to the small sample size.

These results are not entirely surprising. The needs reported by our participants reflect the socioeconomic realities of women who experience unintended pregnancy, whether they continue their pregnancy or have an abortion. Rates of unintended pregnancy are notably higher among women living below the federal poverty level and those without a high school education (Finer & Zolna, 2016). Women recognize the potential economic consequences of having a child, listing financial concerns as a primary reason for having an abortion (Biggs, Gould, & Foster, 2013; Kirkman, Rowe, Hardiman, Mallett, & Rosenthal, 2009). Being denied a wanted abortion exacerbates the challenges that women face, including greater likelihood of economic hardships. Five years after being denied an abortion, women are less likely to be employed, more likely to rely on public assistance, and more likely to be living in poverty relative to comparable women who have an abortion (Foster, Biggs, Ralph, et al., 2018b). It is understandable that women who enter prenatal care report needing varied health and social services.

Our finding that women who reported a policy barrier to abortion were more likely to report need for pregnancy options counseling, substance use treatment, and intimate partner violence counseling/shelter is also consistent with prior research. As part of our larger study, we found that, although most women are certain of their decision to continue their pregnancy upon entering prenatal care, there is a subset who are uncertain and wish to discuss their options with their prenatal care provider (Berglas, Williams, Mark, & Roberts, 2018b). Intimate partner violence is a known reason that some women decide to terminate their pregnancy, expressing concern that they would be tied to an abusive partner and that their child would be exposed to violence (Biggs et al., 2013; Chibber, Biggs,

Table 4
Predictors of the Health and Social Service Needs Index among Women Entering Prenatal Care by Consideration of and Barriers to Abortion

Variable	n	Mean (SD)	Bivariate Analysis			Multivariable Analysis ^a		
			Coefficient	95% CI	p Value	Coefficient	95% CI	p Value
Did not consider abortion (ref.)	401	2.82 (1.37)	–	–	–	–	–	–
Considered abortion and did not report policy barrier	158	3.45 (1.41)	0.68	0.42 to 0.94	.004	0.64	0.25 to 1.04	.014
Considered abortion and reported policy barrier	19	3.95 (1.61)	1.04	–0.45 to 2.53	.114	0.86	–0.53 to 2.25	.145

Abbreviations: CI, confidence interval; SD, standard deviation.

Note: Bivariate and multivariable models use clustered standard errors to account for nonindependent observations within recruitment facility. Differences between second and third categories are not statistically significant in either model.

^a Multivariable models control for age, race/ethnicity, highest of level of education, employment status, and state.

Roberts, & Foster, 2014; Kirkman et al., 2009). This plays out in actuality: partner violence decreases over time for women who have an abortion compared with those who are denied and continue their pregnancies (Roberts et al., 2014). Other analyses have shown that women who continue unintended pregnancies after being denied abortions reduce some, but not all, of their substance use. Preexisting tobacco and drug use behaviors, as well as problematic alcohol use behaviors, continue during and after pregnancy, indicating an ongoing need for treatment and support (Roberts, Foster, et al., 2018a). With these data, it is not clear if experiencing partner violence or substance use is the reason that some women cannot overcome a policy barrier when they seek an abortion, or a reason women sought abortion. However, it is clear that these women's perceived needs for services are considerable if they carry an unintended pregnancy to term.

We also note that women's self-report of their health and social service needs matches other indications of need. In a sample of women in which three-quarters have received public assistance in the past year and nearly one-half report food insecurity, one would expect to identify substantial service needs. This finding suggests pregnant women may be accurate reporters of their own needs. Formal diagnoses or screening may not be necessary to direct women to services; women can just be asked directly about their needs.

From a broader perspective, it is important to consider the likely bidirectional relationship of these findings. Most women reported personal reasons for ultimately not having an abortion, but it seems possible, if not likely, that the high social and financial needs of these women was a factor in their initial consideration of abortion. In efforts to meet the needs of women, it is important to both decrease barriers for those who are seeking a desired abortion, as well as improve access to needed services for women who are considering abortion solely because of financial burdens or other unmet social needs. Additionally, because the overwhelming majority of these women had unintended pregnancies, the need for access to high-quality contraceptive services and supplies cannot be overstated.

Implications for Practice and/or Policy

States are increasingly enacting policies that create barriers to abortion for women, including policies that mandate gestational age limits, multiple clinic visits, waiting periods, and non-evidence-based facility requirements (Guttmacher Institute, 2018). To the extent that these policies keep women from having an abortion, they risk furthering adverse consequences for women and their children. This, in and of itself, is relevant for public health professionals concerned about the health and well-being of the women and families they serve.

More directly relevant is the greater need for health and social services among women who consider abortion, especially those

who are unable to obtain wanted abortions. For decades, the public health community has worked to improve the health and well-being of women and children, and a key strategy to that end has been identifying unmet needs and supporting linkages to services. In a time of increasing policy restrictions on abortion, it is important to consider the role of public health in supporting women with unintended pregnancies who seek abortion. The findings from this study suggest that public health professionals and programs may need to specifically consider the service needs of pregnant women living in states where access to abortion is limited. Should the policy landscape become more restrictive—whether the Supreme Court overturns *Roe v. Wade* or based on ongoing trends at the state level—health departments may be tasked with serving a greater number of women in need. Public health programs may need to seek additional resources and advocate for additional funding to support their efforts to link women to health and social services.

The public health community may also need to look upstream at the policies and structures that lead to these heightened needs. At the state and local levels, health departments could consider policies that ease the burden on pregnant women who choose to terminate unintended pregnancies. Although most state and local health departments only become involved with abortion as required by law, there are innovative examples of health department work that may be used as best practices (Berglas, Johns, Rosenzweig, Hunter, & Roberts, 2018a). Governmental public health agencies have been involved in abortion-related activities for many decades, and can continue to do so guided by core public health and social justice principles (Roberts, Fuentes, Berglas, & Dennis, 2017; Verbiest, Malin, Drummonds, & Kotelchuck, 2016).

Study Limitations

This study has limitations to consider. First, participants' reports of their health and social service needs, pregnancy intentions, and consideration of abortion may be underreported owing to stigma (Jagannathan, 2001; Rice et al., 2017). The fact that more than 30% of the sample reported having considered abortion is a positive indication that our study procedures encouraged women to disclose. Second, some results may not have been statistically significant owing to sample size. Although the overall study sample was large, the number who reported a policy-related barrier to care ($n = 19$) was limited. Some needs appeared to be greater for women who reported a barrier (e.g., mental health services, housing assistance), and a larger sample would have clarified whether these differences were statistically significant. An expanded study would bring greater confidence to these conclusions.

Third, our understanding of women's health and social service needs is limited by the items that we included on the survey. For example, we did not ask survey participants about their physical health needs. During in-depth follow-up interviews

with a subset of participants, some women reported complex medical needs both related and unrelated to their pregnancies (see also Kimport, Kriz, & Roberts, 2018). We expect, therefore, that our survey results are an undercount of these women's actual health and social service needs as they enter prenatal care. Finally, this study was conducted at four university-affiliated prenatal clinics in two states, and women in the study sample were predominantly African American, low income, and living in urban communities. We recognize that our findings may not be generalizable to other geographic areas with different population demographics or availability of services.

Conclusions

This study's findings indicate that many pregnant women have considerable unmet needs for health and social services upon entering prenatal care. Unintended pregnancy is common in the United States, and many women consider having an abortion at some point during their pregnancies. Living in a state that restricts access to or provision of abortion increases the likelihood that a woman will not be able to obtain a wanted abortion, and thus will face other needs throughout and beyond her pregnancy. Public health programs and professionals should keep in mind the potential impacts of abortion policies and ensure the availability of services to meet the health and social service needs of pregnant women.

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References

- Barrett, G., Smith, S. C., & Wellings, K. (2004). Conceptualisation, development, and evaluation of a measure of unplanned pregnancy. *Journal of Epidemiology and Community Health*, 58(5), 426–433.
- Berglas, N. F., Johns, N. E., Rosenzweig, C., Hunter, L. A., & Roberts, S. C. M. (2018a). State and local health department activities related to abortion: A web site content analysis. *Journal of Public Health Management and Practice*, 24(3), 255–262.
- Berglas, N. F., Williams, V., Mark, K., & Roberts, S. C. M. (2018b). Should prenatal care providers offer pregnancy options counseling? *BMC Pregnancy and Childbirth*, 18(1), 384.
- Biggs, M. A., Gould, H., & Foster, D. G. (2013). Understanding why women seek abortions in the US. *BMC Womens Health*, 13, 29.
- Biggs, M. A., Upadhyay, U. D., McCulloch, C. E., & Foster, D. G. (2017). Women's mental health and well-being 5 years after receiving or being denied an abortion: A prospective, longitudinal cohort study. *JAMA Psychiatry*, 74(2), 169–178.
- Centers for Disease Control and Prevention. (2014). The 10 essential public health services: An overview. Available: <https://www.cdc.gov/publichealthgateway/publichealthservices/pdf/essential-phs.pdf>. Accessed: July 3, 2019.
- Chibber, K. S., Biggs, M. A., Roberts, S. C. M., & Foster, D. G. (2014). The role of intimate partners in women's reasons for seeking abortion. *Womens Health Issues*, 24(1), e131–e138.
- Dieveler, A., Grason, H. A., & Guyer, B. (1997). MCH functions framework: A guide to the role of government in maternal and child health in the 21st century. *Maternal and Child Health Journal*, 1(1), 5–13.
- Finer, L. B., & Zolna, M. R. (2016). Declines in unintended pregnancy in the United States, 2008–2011. *New England Journal of Medicine*, 374(9), 843–852.
- Foster, D. G., Biggs, M. A., Raifman, S., Gipson, J., Kimport, K., & Rocca, C. H. (2018a). Comparison of health, development, maternal bonding, and poverty among children born after denial of abortion vs after pregnancies subsequent to an abortion. *JAMA Pediatrics*, 172(11), 1053–1060.
- Foster, D. G., Biggs, M. A., Ralph, L., Gerdts, C., Roberts, S. C. M., & Glymour, M. M. (2018b). Socioeconomic outcomes of women who receive and women who are denied wanted abortions in the United States. *American Journal of Public Health*, 108(3), 407–413.
- Gerdts, C., Dobkin, L., Foster, D. G., & Schwarz, E. B. (2016). Side effects, physical health consequences, and mortality associated with abortion and birth after an unwanted pregnancy. *Womens Health Issues*, 26(1), 55–59.
- Grossman, D., Baum, S., Fuentes, L., White, K., Hopkins, K., Stevenson, A., & Potter, J. E. (2014). Change in abortion services after implementation of a restrictive law in Texas. *Contraception*, 90(5), 496–501.
- Guttmacher Institute. (2019). An overview of abortion laws. New York: Guttmacher Institute. Available: <https://www.guttmacher.org/state-policy/explore/overview-abortion-laws>. Accessed: July 3, 2019.
- Henshaw, S. K., Joyce, T. J., Dennue, A., Finer, L. B., & Blanchard, K. (2009). *Restrictions on Medicaid funding for abortions: A literature review*. New York: Guttmacher Institute. Available: <https://www.guttmacher.org/report/restrictions-medicaid-funding-abortion-literature-review>. Accessed: July 3, 2019.
- Jagannathan, R. (2001). Relying on surveys to understand abortion behavior: Some cautionary evidence. *American Journal of Public Health*, 91(11), 1825–1831.
- Jones, R. K., & Jerman, J. (2017). Abortion incidence and service availability in the United States, 2014. *Perspectives on Sexual and Reproductive Health*, 49(1), 17–27.
- Kimport, K., Kriz, R., & Roberts, S. C. M. (2018). The prevalence and impacts of crisis pregnancy center visits among a population of pregnant women. *Contraception*, 98(1), 69–73.
- Kirkman, M., Rowe, H., Hardiman, A., Mallett, S., & Rosenthal, D. (2009). Reasons women give for abortion: A review of the literature. *Archives of Womens Mental Health*, 12(6), 365–378.
- Nash, E., Gold, R. B., Mohammed, L., Ansari-Thomas, Z., & Cappello, O. (2018). *Policy trends in the states, 2017*. New York: Guttmacher Institute. Available: <https://www.guttmacher.org/article/2018/01/policy-trends-states-2017>. Accessed: July 3, 2019.
- Rice, W. S., Turan, B., Stringer, K. L., Helova, A., White, K., Cockrill, K., & Turan, J. M. (2017). Norms and stigma regarding pregnancy decisions during an unintended pregnancy: Development and predictors of scales among young women in the U.S. South. *PLoS One*, 12(3), e0174210.
- Roberts, S. C. M., Biggs, M. A., Chibber, K. S., Gould, H., Rocca, C. H., & Foster, D. G. (2014). Risk of violence from the man involved in the pregnancy after receiving or being denied an abortion. *BMC Medicine*, 12, 144.
- Roberts, S. C. M., Fuentes, L., Berglas, N. F., & Dennis, A. J. (2017). A 21st-century public health approach to abortion. *American Journal of Public Health*, 107(12), 1878–1882.
- Roberts, S. C. M., Foster, D. G., Gould, H., & Biggs, M. A. (2018a). Changes in alcohol, tobacco, and other drug use over five years after receiving versus being denied a pregnancy termination. *Journal of Studies on Alcohol and Drugs*, 79(2), 293–301.
- Roberts, S. C. M., Kimport, K., Kriz, R., Holl, J., Mark, K., & Williams, V. (2018b). Consideration of and reasons for not obtaining abortion among women entering prenatal care in Southern Louisiana and Baltimore, Maryland. *Sexuality Research and Social Policy*.
- Upadhyay, U. D., Weitz, T. A., Jones, R. K., Barar, R. E., & Foster, D. G. (2014). Denial of abortion because of provider gestational age limits in the United States. *American Journal of Public Health*, 104(9), 1687–1694.
- Verbiest, S., Malin, C. K., Drummonds, M., & Kotelchuck, M. (2016). Catalyzing a reproductive health and social justice movement. *Maternal and Child Health Journal*, 20(4), 741–748.

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