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## Effects of Legislation Regulating Abortion in Arizona





### **Abstract**

#### Introduction

Abortion is a common and safe procedure in the United States, the regulation of which varies by state. Since 2011, hundreds of state-level abortion restrictions have been enacted by legislatures across the country. This study describes the effects of two such regulations enacted in 2011 in Arizona, (A.R.S.) 36-2153 and 36-2155, that imposed a 24-hour waiting period requiring two separate in-person clinic visits before obtaining an abortion and banned advanced practice clinicians such as physician assistants, nurse practitioners, and nurse midwives from inducing medication abortions by prescribing mifepristone.

#### Materials and Methods

We conducted a pre–post study to describe the effect of Arizona's scope of practice law on abortion provision by county. Using publicly available data, we compared patterns of abortion provision in 2009 and 2010 (before the laws) with 2012 and 2013. Our primary objective was to compare the proportion of abortions performed with medication by prescription of mifepristone (versus abortions performed surgically, known as aspiration abortions) before and after the laws were enacted. Our secondary objectives were to report the number of counties that lost an abortion provider and the change in the proportion of abortions performed before 14 weeks' gestation of pregnancy after the enactment of the laws.

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After enactment of the laws, the proportion of Arizona's 15 counties with abortion clinics decreased from 33% to 13%. Over this time, the proportion of abortions performed with medication in Arizona decreased by 17.4% (95% CI, 16.6%-18.3%; p = .0002), from 47.6% to 30.2%. Similarly, the proportion of abortions performed before 14 weeks' gestation in Arizona decreased by 3.3% (95% CI, 2.8%-3.8%; p = .0002) after the enactment of these laws.

### Discussion

The proportion of abortions performed with medication and the proportion of abortion performed before 14 weeks' gestation in Arizona were negatively affected by the enactment of these laws. These findings are not explained by national temporal trends in abortion, because the proportion of abortions performed with medication increased and early abortions remained stable over the same time period in the United States as a whole.

#### Conclusions

Proponents of laws restricting the provision of abortion such as these claim to improve the safety of abortion, but they actually seem to decrease access to abortion, as defined by the number of counties with abortion providers, and subsequently lead to delays in abortion. These data should inform future policies by providing an example of how such laws affect women seeking abortion.

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## References

1. Abortions discontinued at 7 locations in Arizona. (2011). Tucson.com. Available: http://tucson.com/news/science/health-med-fit/abortions-discontinued-at-locations-inarizona/article 86710884-2258-54bf-8bf7-d51d6d5788e9.html. Accessed: July 3, 2017.

View in Article ^ Google Scholar

Bartlett L.A. • Berg C.J. • Shulman H.B. • Zane S.B. • Green C.A. • Whitehead S. • 2. Atrash H.K.

Risk factors for legal induced abortion-related mortality in the United States.

Obstetrics and Gynecology. 2004; 103: 729-737

View in Article ^

Scopus (272) • PubMed • Crossref • Google Scholar

3. Gerdts C. • Dobkin L. • Foster D.G. • Schwarz E.B.

Side effects, physical health consequences, and mortality associated with abortion and birth after an unwanted pregnancy.

Women's Health Issues. 2016; 26: 55-59

View in Article ^

Scopus (28) • PubMed • Abstract • Full Text • Full Text PDF • Google Scholar

Goldman M.B. • Occhiuto J.S. • Peterson L.E. • Zapka J.G. • Palmer R.H. 4.

Physician assistants as providers of surgically induced abortion services.

American Journal of Public Health. 2004; 94: 1352-1357

View in Article ^

Scopus (46) • PubMed • Crossref • Google Scholar

5. Grossman D. • Baum S. • Fuentes L. • White K. • Hopkins K. • Stevenson A. • Potter J.E.

lange in abortion services after implementation of a restrictive law in Texa

ontraception. 2014; 90: 496-501

View in Article ^

Scopus (69) • PubMed • Abstract • Full Text • Full Text PDF • Google Scholar

6. Henderson J.T. • Hwang A.C. • Harper C.C. • Stewart F.H.

Safety of mifepristone abortions in clinical use.

Contraception. 2005; 72: 175-178

View in Article ∧

Scopus (53) • PubMed • Abstract • Full Text • Full Text PDF • Google Scholar

7. Hendricks L.

Abortion services resume at new planned parenthood clinic in flagstaff.

Arizona Daily Sun. 2014; (Available:) (Accessed: July 3, 2017)

http://azdailysun.com/news/local/abortion-services-resume-at-new-planned-parenthood-clinic-in-flagstaff/article 9da0f2d8-9864-11e3-ae56-0019bb2963f4.html

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8. Henshaw R.C. • Naji S.A. • Russell I.T. • Templeton A.A.

Comparison of medical abortion with surgical vacuum aspiration: women's preferences and acceptability of treatment.

British Medical Journal (Clinical Research Ed.). 1993; **307**: 714-717

View in Article ∧

PubMed • Crossref • Google Scholar

9. Jatlaoui T.C. • Ewing A. • Mandel M.G. • Simmons K.B. • Suchdev D.B. • Jamieson D.J. • Pazol K.

Abortion surveillance - United States, 2013.

Morbidity and Mortality Weekly Report. 2016; 65: 1-44

View in Article ^

PubMed • Google Scholar



10. Jones R.K. • Jerman J.

Abortion incidence and service availability in the United States, 2014: Abortion incidence and service availability in the United States, 2014.

Perspectives on Sexual and Reproductive Health. 2017; 49: 17-27

View in Article ∧

Scopus (141) • PubMed • Crossref • Google Scholar

11. Joyce T. • Kaestner R.

The impact of Mississippi's mandatory delay law on the timing of abortion.

Family Planning Perspectives. 2000; 32: 4-13

View in Article ∧

PubMed • Crossref • Google Scholar

12. Joyce T.J. • Henshaw S.K. • Dennis A. • Finer L.B. • Blanchard K.

The impact of state mandatory counseling and waiting period laws on abortion.

A literature review. 2009; (Available:

https://www.guttmacher.org/sites/default/files/pdfs/pubs/MandatoryCounseling.pdf. Accessed: July 3, 2017.)

View in Article ^

Google Scholar

13. Karasek D. • Roberts S.C. • Weitz T.A.

Abortion patients' experience and perceptions of waiting periods: Survey evidence before Arizona's two-visit 24-hour mandatory waiting period law.

Womens Health Issues. 2016; 26: 60-66

View in Article ∧

Scopus (18) • PubMed • Abstract • Full Text • Full Text PDF • Google Scholar

14. Roberts S.C. • Gould H. • Kimport K. • Weitz T.A. • Foster D.G.

Out-of-pocket costs and insurance coverage for abortion in the United States.

omens Health Issues. 2014; 24: e211-218

View in Article ^

Scopus (40) • PubMed • Abstract • Full Text • Full Text PDF • Google Scholar

Roberts S.C. • Turok D.K. • Belusa E. • Combellick S. • Upadhyay U.D.
 Utah's 72-hour waiting period for abortion: Experiences among a clinic-based sample of women.

Perspective on Sexual and Reproductive Health. 2016; 48: 179-187

View in Article ∧

Scopus (25) • PubMed • Crossref • Google Scholar

16. State facts about abortion; Arizona. (2017). Available: <a href="http://www.guttmacher.org/fact-sheet/state-facts-about-abortion-arizona">http://www.guttmacher.org/fact-sheet/state-facts-about-abortion-arizona</a>. Accessed: July 3, 2017.

View in Article ^

Google Scholar

17. Upadhyay U.D. • Johns N.E. • Combellick S.L. • Kohn J.E. • Keder L.M. • Roberts S.C.

Comparison of outcomes before and after Ohio's law mandating use of the FDA-approved protocol for medication abortion: A retrospective cohort study.

PLoS Medicine. 2016; 13: e1002110

https://doi.org/10.1371/journal.pmed.1002110

View in Article ^

Scopus (9) • PubMed • Crossref • Google Scholar

18. Warriner I.K. • Meirik O. • Hoffman M. • Morroni C. • Harries J. • My Huong N.T. • Seuc A.H.

Rates of complication in first-trimester manual vacuum aspiration abortion done by doctors and mid-level providers in South Africa and Vietnam: A randomised controlled equivalence trial.

Lancet (London, England). 2006; 368: 1965-1972



Scopus (98) • PubMed • Abstract • Full Text • Full Text PDF • Google Scholar

19. Weitz T.A. ◆ Taylor D. ◆ Desai S. ◆ Upadhyay U.D. ◆ Waldman J. ◆ Battistelli M.F. ◆ Drey E.A.

Safety of aspiration abortion performed by nurse practitioners, certified nurse midwives, and physician assistants under a California legal waiver.

American Journal of Public Health. 2013; 103: 454-461

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Scopus (72) • PubMed • Crossref • Google Scholar

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