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USING NATURAL EXPERIMENTS TO ANALYZE THE IMPACT OF STATE LEGISLATION ON THE INCIDENCE OF ABORTION

Michael J. New
University of Alabama

A number of academic studies find that various types of state level pro-life legislation reduce the incidence of abortion. However, in these states, it is possible that changes in values and mores, and not the legislation itself, might be responsible for these abortion declines. Indeed, since the enactment of pro-life legislation is not a random occurrence, the analysis of these laws might be biased by what social scientists call "endogeneity problems." In this study, I address these endogeneity problems through a series of natural experiments. I compare abortion trends in states that enacted pro-life legislation to abortion trends in states where pro-life laws were passed, but later nullified by a judge. All states passing pro-life laws should have experienced similar changes in values, however, the policy changed only in those states where the law took effect. Overall, the results contribute to the body of academic literature which finds that pro-life legislation reduces state abortion rates.

In recent years, there has been a substantial amount of discussion about whether or not "pro-life" legislation[1] actually reduces the incidence of abortion. In fact, in recent elections, commentators have questioned whether the objectives of the pro-life movement were being advanced by the election of candidates who supported pro-life laws. In October 2004, Mark Roche, the Dean of the College of Arts and Letters at Notre Dame, argued in a *New York Times* editorial that the abortion rate increased under President Reagan, but fell during the administration of a pro-choice President, Bill Clinton.[2] Also, ethicist Glen Harold Stassen argued that abortions had actually increased in the first few years of George W. Bush's Presidency.[3] However, a number of pro-lifers questioned the reliability of Stassen's data.[4]

This dialogue continued into the 2008 election. Doug Kmiec, a pro-lifer who served as the head of the Office of Legal Counsel during the Reagan administration, endorsed Democratic Presidential nominee Barack Obama. In a *Los Angeles Times* editorial, Kmiec argued that Republican efforts to overturn *Roe v. Wade* had not saved a single child.[5] Additionally, many Obama supporters, including Kmiec, touted an August 2008 study released by Catholics in Alliance for the Common

Good that found that welfare spending resulted in significant declines in the abortion rate.[6] However, a revised version of the study found that the effects of welfare spending were more modest than previously argued.[7]

It is true that the election of pro-life candidates has not resulted in a reversal of *Roe v. Wade*. However, when the Supreme Court reconsidered *Roe vs. Wade* in their 1992 *Casey v. Planned Parenthood of Southeastern Pennsylvania* decision, they found constitutional a number of the laws contained in Pennsylvania's Abortion Control Act, including a waiting period and an informed-consent provision.[8] This decision gave state legislators more freedom to regulate abortion.[9] This decision, coupled with the success of pro-life candidates at the state level, led to an increase in the amount of state-level pro-life legislation that was enacted during the 1990s. Indeed, more states passed informed- consent laws, waiting periods, and parental involvement laws.[10] Furthermore, the number of abortions performed in the United States dropped by approximately 18 percent between 1990 and 1999.[11]

However, correlation is not the same thing as causation. We must acknowledge that other factors may have contributed to this decline and ask the question, "what impact has all of this pro-life legislation had?" Now a considerable amount of research has analyzed the effects of state public funding restrictions on abortion. Among studies that analyze abortion trends in multiple states, there exists a broad consensus that state restrictions on public funding of abortions through Medicaid reduce abortion rates.[12]

Some case studies also provide evidence that public funding restrictions reduce the incidence of abortion. One study analyzed North Carolina's unique provisions for publicly funding abortion. Instead of funding abortions through Medicaid, North Carolina reimbursed abortion providers through a state abortion fund, which at times ran out of money. Their results indicate that these funding shortfalls resulted in both statistically significant reductions abortion rates and statistically significant increases in birthrates among low income women in North Carolina.[13] Another study found that Medicaid recipients have a higher incidence of abortion in states where abortion is publicly funded by Medicaid.[14]

Similarly, a number of studies have found that parental involvement laws reduce the number of abortions being performed on minors within the boundaries of a given state. Studies using time-series cross-sectional data find that parental involvement laws reduce in-state minor abortion rates anywhere from 13 percent to 19 percent.[15] Additionally, case studies which have analyzed specific parental involvement laws in Massachusetts, Indiana, Minnesota, Missouri, and

Texas all find that these laws are correlated with declines in in-state abortion rates.[16] Furthermore, additional research on minor abortion trends in Massachusetts and Texas indicates that the in-state abortion declines significantly exceed any increases in the number of minors seeking abortions in nearby states.[17]

Now, there has been less academic research on the effects of informed-consent laws. Informed-consent laws were given constitutional protection in the Supreme Court's *Casey v. Planned Parenthood* decision in 1992. They provide women seeking abortions with information about public and private sources of support, fetal development, and potential health risks. However, a policy study I authored for the Heritage Foundation, which analyzed abortion data from both the Center for Disease Control (CDC) and the Alan Guttmacher Institute (AGI), found that informed-consent laws reduced the incidence of abortion.[18] A subsequent study I authored for the Family Research Council in 2008 found statistical evidence that informed consent laws reduced minor abortion rates.[19]

Nonetheless, one shortcoming common to all of these studies is the fact that the enactment of pro-life legislation is not a random occurrence. States enacting pro-life laws might be systematically different from other states. For instance, it is possible that the states that are passing pro-life legislation are also the states that are becoming more conservative or religious. Indeed, it is possible that these changes in values and mores, not the legislation itself, might be responsible for these abortion declines. This potentially biases the findings of these studies. Social scientists refer to such problems as "endogeneity problems." Since running randomized experiments is typically not feasible for social scientists, resolving these problems is often difficult.

However, pro-life laws which have been nullified by state judiciaries present a unique opportunity to address these endogeneity problems. These nullified laws create a nice set of natural experiments. Presumably, all states that pass pro-life legislation are undergoing similar changes in values and mores. However, in some states, the legislation took effect (enacted-legislation states), and in other states, the legislation was nullified (nullified-legislation states). Comparing abortion rates in nullified-legislation states to abortion rates in enacted-legislation states effectively holds constant any changes in values and provides better insights into the effectiveness of pro-life legislation.

Overall, this research finds enacted legislation results in statistically significant reductions in both abortion rates and abortion ratios. Nullified legislation has little effect. This provides evidence that pro-life legislation is causing abortion declines. Furthermore, any value

shifts correlated with the passage of pro-life laws has little impact on the incidence of abortion. This contributes to the body of research which finds that state-level pro-life legislation is able to reduce the incidence of abortion. It also provides additional support for the idea that pro-life legislation was partly responsible for abortion rate decline in the United States during the 1990s.

Background

During the 1990s, there was a substantial amount of pro-life activity at the state level. For instance:

> In 1992,[20] virtually no states were enforcing informed-consent laws.[21] By 2000, 27 states had informed-consent laws in effect.[22]
>
> In 1992, no states had banned or restricted partial-birth abortion. By 2000, 12 states had bans or restrictions in effect.[23]
>
> In 1992, only 20 states were enforcing parental-involvement statutes.[24] By 2000, 32 states were enforcing these laws.[25]

This paper asks what impact has all of this legislation had? Much of the academic literature that examines the impact of state abortion policy focuses on parental-involvement legislation and the extent to which states fund abortion through Medicaid. Again, most studies argue that parental-involvement laws, public-funding restrictions, and informed-consent laws, reduce the number of abortions that take place within the boundaries of a given state.[26]

Endogeneity Problems

However, some observers might question whether the legislation is actually causing these declines. The passage of pro-life laws is not something that occurs randomly. Indeed, it is possible that the states that are passing this type of legislation are also the states that are becoming more religious or conservative and that these shifts in values, not the legislation itself, are causing the abortion declines.

Addressing these sorts of endogeneity problems presents challenges for social scientists. Generally speaking, unlike researchers in the hard sciences, social scientists cannot test their theories through experimentation. Instead, social scientists must observe social phenomena and make the best inferences that they can.

However, in this case, these endogeneity problems can be addressed through a series of natural experiments. In many states, legislators have passed pro-life legislation only to have it subsequently nullified by the judiciary. If the passage of pro-life legislation reflects a shift in values, then it seems reasonable to assume that all of the states that passed pro-life legislation experienced a similar shift in values. However, in some states, the legislation took effect, whereas in other states, it was nullified by the judiciary.

If value shifts are responsible for the abortion declines, then abortion declines in enacted-legislation states should be similar to declines in nullified-legislation states. However, if the legislation is having an effect, then enacted-legislation states would have significantly larger abortion declines than nullified-legislation states. Therefore, comparing the declines in enacted-legislation states with declines in nullified-legislation states can provide further insights into the effectiveness of pro-life legislation.

Table 1: Recent Judicial Nullifications Of Parental-Involvement Laws[27]

State	**Dates**
Georgia:	July 1987 to September 1991
Minnesota:	November 1986 to October 1990
Mississippi:	July 1986 to July 1993
South Dakota:	July 1993 to July 1997
Tennessee:	October 1989 to February 1992
Tennessee:	July 1996 to July 1999

Table 2: Recent Judicial Nullifications Of Informed-Consent Laws[28]

State	**Dates**
Indiana:	1995-2003
Michigan:	1995-1999

Since the mid 1980s, there have been at least six occasions when judges have blocked or delayed the enactment of parental-involvement laws (see Table 3) and at least two occasions when judicial rulings prevented informed-consent laws from going into effect (see Table 4). By running a series of regressions, it is possible to compare the impact of enacted legislation to the impact of nullified legislation.

Methodology

Comparing abortion trends in states where pro-life laws were enacted to states where pro-life laws were nullified, involves the use of regression analysis. Regression analysis is well suited to this type of research. There are a number of factors that can influence state abortion trends. These include the strength of the economy, demographics, and legislation. Regression analysis allows researchers to separately analyze the effects of each of these different factors on the incidence of abortion. This way, better insights can be obtained about the effects of different types of pro-life legislation.

Separate regressions were run on two dependent variables that measure the incidence of abortion. The first dependent variable is the state abortion ratio: the number of abortions per 1,000 births. This provides a measure of the fraction of conceptions that end up in abortion.

The second dependent variable is the state abortion rate: the number of abortions per 1,000 women between the ages of 15 and 44. This measures the percentage of women of childbearing age who obtain abortions. The data on both state abortion rates and state abortion ratios was obtained from the Centers for Disease Control and Prevention (CDC). Data from nearly every state from every year from 1985 to 1999 was analyzed in this study. More information about the data can be found in Appendix B.

A variety of economic and demographic factors were held constant. To capture the impact of the economy, each state's annual per capita personal income growth was included in the regression model. Also, three separate variables measuring the percentage of women of childbearing age[29] between the ages of 15 to 19, 20 to 25, and 25 to 29 were included as well. Younger women facing unexpected pregnancies might be more likely to seek abortions than their older counterparts. As a result, holding other factors constant, relatively higher percentages of younger women might lead to increases in the incidence of abortion.

The racial composition of women of childbearing age was held constant as well. Specifically, four additional variables were included in the model. These variables measured the percentage of women between the ages of 15 to 44 who identified themselves as Black, Hispanic, Asian, or Native American, respectively.

Finally, a fertility variable measuring the number of births per thousand women between the ages of 15 and 44 was also included. This variable measures the number of pregnancies that occurred. Fewer pregnancies would result in fewer abortions. Similarly, if the fertility variable is low, it might indicate that a higher proportion of pregnancies are planned, which would also result in fewer abortions.

To examine the impact of different types of state pro-life legislation that deal directly with access to abortion, four separate variables were included in the regression analysis to indicate the presence or absence of each of four types of legislation. A listing of the states that adopted these various pro-life laws can be found in Appendices, C, D, E, and F.

First is the presence of a parental-involvement requirement.[30] Parental involvement requirements require minors to notify or receive consent from one or both parents before receiving an abortion.

Second is whether or not a state restricts Medicaid funding of therapeutic abortions. Most states will fund abortions through Medicaid when the pregnancy is the result of rape. Similarly, most states fund abortions that are necessary to preserve the life of the mother. However, states differ as to whether they fund abortions that are deemed therapeutic in nature.

Third is whether or not a state has an informed-consent statute. Informed-consent statutes differ from state to state, but they all require women seeking abortions to receive information about the abortion procedure. This can include information about fetal development, any health risks involved with obtaining an abortion, or public and private support for single mothers.

Fourth is whether a state has a ban on partial-birth abortions. The Supreme Court struck down all state level partial-birth abortion bans in *Stenberg v. Carhart* in 2000. However, partial-birth abortion bans were upheld in 12 states between 1996 and 2000.

Table 3: Data Sources

Variable	Source
State Abortion Rate	Centers for Disease Control and Prevention
State Abortion Ratio	Centers for Disease Control and Prevention
Per Capita Personal Income Growth	Bureau of Economic Analysis
Percentage of women of childbearing age who are between the ages of 15 to 19	U.S. Census Bureau
Percentage of women of childbearing age who are between the ages of 20 to 24	U.S. Census Bureau
Percentage of women of childbearing age who are between the ages of 25 to 29	U.S. Census Bureau
Racial demographics by state	U.S. Census Bureau
Partial Birth Abortion Ban	*Who Decides?* (various years)[31]
Informed Consent Law	*Who Decides?* (various years)
Parental Consent Law	Merz, Jackson, Kellerman, and *Who Decides?* (various years)
Medicaid Funding of Abortions	Merz, Jackson, Kellerman, and *Who Decides?* (various years)

Finally, to examine the impact of nullified legislation, two additional independent variables were added. The first dependent variable indicated states where the judiciary nullified a parental involvement law. The second independent variable indicated states where the judiciary nullified an informed consent law. By comparing enacted-legislation states to the nullified- legislation states, better insights can be obtained into the impact of pro-life legislation.

The regression analysis uses a fixed effects model[32] in which separate indicator variables are included for every state and year. The data is weighted by state population and a standard AR1 correction is used for autocorrelation. The complete regression results are in Appendix A. The comparisons between nullified and enacted legislation can be found in Table 4 and Table 5.

Table 4: The Impact of Informed-Consent Laws

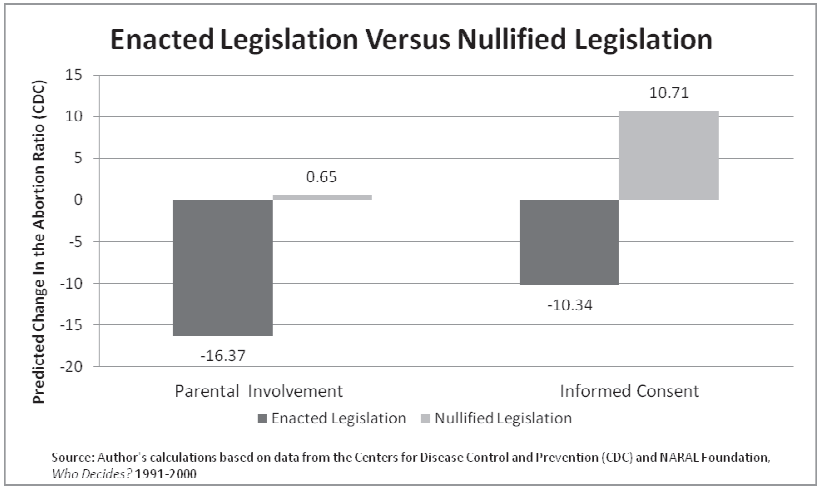
	Enacted	Nullified	Difference
Abortion Ratio (CDC)	-10.34	10.71	21.05*
Abortion Rate (CDC)	-0.86	0.38	1.24*

*significant at 10 percent level
Note: The complete regression results can be found in Appendix A.
Sources: Author's calculations based on data from Centers for Disease Control and Prevention (CDC) and NARAL Foundation, *Who Decides?* 1991-2000

Table 5: The Impact of Parental-Involvement Laws

	Enacted	Nullified	Difference
Abortion Ratio (CDC)	-16.37	0.65	17.02*
Abortion Rate (CDC)	-1.15	-0.02	1.13*

*significant at 10 percent level
Note: The complete regression results can be found in Appendix A.
Sources: Author's calculations based on data from Centers for Disease Control and Prevention (CDC) and NARAL Foundation, *Who Decides?* 1991-2000



Discussion

Overall, the findings indicate that enacted pro-life laws result in statistically significant declines in both the abortion rate and the abortion ratio. Conversely, nullified laws only have a marginal effect on the incidence of abortion. This provides very solid evidence that the actual enactment of pro-life legislation is responsible for reductions in abortion rates. Other factors that happen to be correlated with the passage of legislation, only appear to have a slight effect on the incidence of abortion.

In, particular, Table 4 shows that, when an informed-consent law takes effect, the regression model predicts that the abortion ratio decreases by 10.34 abortions for every thousand live births and the abortion rate decreases by 0.86 abortions per thousand women between the ages of 15 and 44. Nullified-legislation states experience increases in both the abortion rate and ratio. More importantly, the difference between nullified-legislation states and enacted-legislation states achieves statistical significance.

Similarly, Table 5 indicates that when a parental-involvement law is enacted, the abortion rate decreases by 16.37 abortions for every thousand live births and the abortion rate decreases by 1.15 abortions for every thousand women between the ages of 15 to 44. Parental-involvement laws that are nullified by the judiciary result in a marginal increase in the abortion rate and a marginal decline in the abortion ratio. Once again, the difference between enforced laws and nullified laws reaches conventional standards of statistical significance.

The full regression results (see Appendix A) also indicate that Medicaid-funding restrictions also result in reductions in the incidence of abortion. However, in this case, comparisons between enacted-legislation states and nullified-legislation states cannot be drawn. This is because no instance of judicial nullifications of state Medicaid funding restrictions could be identified. However, the other results clearly indicate that any value shifts correlated with the passage of legislation only have a minimal effect on the incidence of abortion. It therefore seems likely that that the abortion declines associated Medicaid-funding restrictions were caused by the legislation itself and not by any outside factors correlated with the passage of the legislation.

Conclusion

The number of abortions that were performed increased throughout the 1970s and the 1980s.[33] However, during the 1990s the number of legal abortions declined by 18.4 percent between 1990 and 1999.[34] There are a number of different reasons for this decline. However, one factor that cannot be overlooked is the impact of state level pro-life legislation. By the end of the decade, more states had adopted parental-involvement laws, informed-consent requirements, and partial-birth abortion bans.[35]

A number of academic and policy studies find that there is a correlation between the passage of pro-life legislation and a reduction in the incidence of abortion. However, some have argued that changes in values or mores in states that have passed such legislation may be responsible for these abortion declines. By comparing states that enacted legislation to states that nullified legislation, this study is able to address these endogeneity problems.

This study analyzes six states where parental-involvement laws were nullified and two states where informed-consent laws were nullified. The regression findings indicate that enacted legislation results in statistically significant declines in the incidence of abortion, while nullified laws have little impact. This shows with greater certainty that state level pro-life legislation has been able to reduce the incidence of abortion.

Appendix A: Regression Results: Analyzing the Natural Experiments

Technique: Generalized Least Squares with state and year indicator variables, Corrected for AR1 autocorrelation. Data weighted by state population.

Variable	Model 1 Abortion Ratio	Model 2 Abortion Rate
Data Source	CDC	CDC
Income Growth	-1.65 (1.04)	-0.15** (0.08)
Percent Black	13.41** (6.39)	1.03** (0.45)
Percent Native American	-0.32 (3.21)	0.17 (0.22)
Percent Hispanic	9.56*** (3.52)	0.41 (0.26)
Percent Asian	-29.54*** (8.53)	-1.87*** (0.63)
Percent 15-19	-7.16* (4.25)	-0.32 (0.31)
Percent 20-24	2.30 (3.38)	0.20 (0.24)
Percent 25-29	2.19 (4.50)	0.07 (0.33)
Fertility Rate	-3.40*** (0.94)	0.19** (0.09)
Nullified Parental-Involvement Law	-0.65 (8.34)	-0.02 (0.60)
Parental-Involvement Law	-16.37** (7.01)	-1.15** (0.50)

Variable	Model 1 Abortion Ratio	Model 2 Abortion Rate
Nullified	10.71	-0.38
Informed Consent	(8.53)	(0.64)
Informed Consent	-10.34**	-0.86**
	(6.41)	(0.48)
Medicaid Funding Restrictions	-31.94***	-2.26***
	(8.31)	(0.61)
Partial Birth Abortion Ban	-10.91	-1.36**
	(9.44)	(0.68)
Number of Obsservations	649	649
R squared	.968	.971

*significant at the 10 percent level;
**significant at the 5 percent level;
***significant at the 1 percent level

Note: Standard errors in parentheses. Data includes all states, except for Alaska and Kansas 1985-1999 inclusive. Selected data points from other states were omitted due to unreported data or irregularities with how the data were collected. See Appendix B for more details.

Appendix B

Information on Abortion Data Received from the CDC

Some data is missing or omitted for the following reasons:

1) Failure to Report Data on the Incidence of Abortion
The following states did not report any abortion data to the Centers for Disease Control and Prevention in 1998 and 1999: Alaska, California, New Hampshire, Oklahoma

2) Data Intentionally Omitted by Researcher
Data from Alaska is omitted because of data collection problems. Data from Kansas is omitted as well. For every year between 1992 and 1999, the Centers for Disease Control and Prevention reports that over 40 percent of the abortions in Kansas are performed on out-of-state residents. This is by far the highest figure for any state. Furthermore, according to the Centers for Disease Control and Prevention, the abortion rate in Kansas jumped an astounding 69 percent between 1991 and 1999. This is likely because Kansas strengthened its abortion reporting requirements in 1995. Furthermore, the Kansas Department of Health and Environment acknowledges that the increase in reported abortions in the early 1990s may reflect "an increase in the number of abortion providers voluntarily reporting data."

3) Data Omitted Due to Change in the Data Collection Mechanism: 1985-1999

Alabama	1985-1990
Illinois	1985-1987
Iowa	1985-1997
Kentucky	1985-1986
New Hampshire	1985-1997
Oklahoma	1985-1997
West Virginia	1985-1999

Appendix C: States with Parental-Involvement Laws 1981-2000

Alabama	September 23, 1987 – 2000
Arkansas	March 1, 1989 – 2000
Arizona	July 21, 1982 – 1985
Connecticut	October 1, 1990 – 1998
Delaware	1996 – 2000
Georgia	September 1991 – 2000
Idaho	1996 – 2000
Indiana	September 1984 – 2000
Iowa	1997 – 2000
Kansas	July 1, 1992 – 2000
Kentucky	July 15, 1994 – 2000
Louisiana	November 18, 1981 – 2000
Maine	September 30, 1989 – 2000
Maryland	December 3, 1992 – 2000
Massachusetts	April 15, 1981 – 2000
Michigan	March 28, 1991 – August 5, 1992
	March 31, 1993- 2000
Minnesota	August 1, 1981 – November 6, 1986
	October, 1990 – 2000
Mississippi	May 26, 1993 – 2000
Missouri	June 15, 1983 – November 4, 1983
	August 7, 1985 – 2000
Nebraska	September 6, 1991 – 2000
North Carolina	1996 – 2000
North Dakota	March 31, 1981 – 2000
Ohio	October 1990 –2000
Pennsylvania	March 20, 1994 – 2000
Rhode Island	September 1, 1982 – 2000
South Carolina	May 26, 1990 – 2000
South Dakota	1998 – 2000
Tennessee	November 19, 1992 – 1996, 1999
Texas	2000
Utah	January 1, 1981 – 2000
Virginia	1998 – 2000
West Virginia	May 23, 1984 – 2000
Wisconsin	July 1, 1992 – 2000
Wyoming	June 8, 1989 - 2000

Appendix D: States where Medicaid pays for Therapeutic Abortions 1981-2000[36]

State	Year
Alaska	January 1, 1981 – 1998, 2000
California	January 1, 1981 – 2000
Colorado	January 1, 1981 – June 4, 1985
Connecticut	January 1, 1981 – February 15, 1981 October 9, 1981 – 2000
District of Columbia	January 1, 1981 – October 1, 1988 October 29, 1993 – 1997
Georgia	January 1, 1981 – March 15, 1981
Hawaii	January 1, 1981 – 2000
Idaho	1995 – 1998
Illinois	December 2, 1994 – 1998
Maryland	January 1, 1981 – 1997, 1999 – 2000
Massachusetts	January 1, 1981 – 2000
Michigan	January 1, 1981 – December 12, 1988
Minnesota	1995 – 2000
Montana	1996 – 2000
New Jersey	January 1, 1981 – 2000
New Mexico	December 1, 1994 – 1995 1999 – 2000
New York	January 1, 1981 – 2000

North Carolina	January 1, 1981 – 1995
Oregon	January 1, 1981 – 2000
Pennsylvania	January 1, 1981 – February 15, 1985
Vermont	September 28, 1984 – 2000
Washington	January 1, 1981 – 2000
West Virginia	January 1, 1981 – 2000

Appendix E: States with Informed-Consent Laws 1981-2000[37]

State	Year
Alabama	1992 – 2000
California	1993 – 2000
Connecticut	1993 – 2000
Delaware	1992 – 2000
Florida	1992 – 1997
Idaho	1992 – 2000
Illinois	1993 – 1994
Kansas	1993 – 2000
Kentucky	1992 – 2000
Louisiana	1992 – 2000
Maine	1995 – 2000
Massachusetts	1992 – 2000
Michigan	October 26, 1998 – February 1,1999 September 15, 1999 – 2000
Minnesota	1993 – 2000
Mississippi	1993 – 2000
Montana	1992 – 1995
Nebraska	1992 – 2000
Nevada	1992 – 2000
North Dakota	1995 – 2000

Ohio	1992 – 1993, 1995 – 2000
Pennsylvania	1992 – 2000
Rhode Island	1992 – 2000
South Carolina	1993 – 2000
South Dakota	1992 – 2000
Tennessee	1992 – 2000
Texas	1993 – 1995
Utah	1992 – 2000
Virginia	1992 – 2000
Wisconsin	1992 – 1996, 1999 – 2000

Appendix F: States with Partial-Birth Abortion Bans 1981-2000[39]

State	Years
Alabama[40]	1998 – 2000
Georgia[41]	1998 – 2000
Indiana	1998 – 2000
Kansas	1999 – 2000
Mississippi	1998 – 2000
Nebraska[42]	1997
North Dakota	2000
Oklahoma	1999 – 2000
South Carolina	1998 – 2000
South Dakota	1998 – 2000
Tennessee	1998 – 2000
Utah	1997 – 2000
Virginia[43]	1999 – 2000

Notes

1. Both legislation intended to reduce the number of abortions and those who support such legislation are often called "pro-life." This widely accepted term is used throughout this study.
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19. Michael J. New, "The Effect of Parental Involvement Laws on The Incidence of Abortion Among Minors," Family Research Council, Insight, September 24, 2008.
20. Prior to 1992, courts struck down most informed-consent laws; however, a few fairly weak laws remained in effect.
21. NARAL Foundation, *Who Decides?* 1992, p. 9.
22. NARAL Foundation, *Who Decides?* 2000, p. 125.
23. Ibid.
24. NARAL Foundation, *Who Decides?* 1992, p. 9.
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26. Haas-Wilson, "The Impact of State Abortion Restrictions on Minors' Demand for Abortions," pp. 140–158; Haas-Wilson, "The Economic Impact of State Policy Restrictions on Abortion," pp. 498–511; Donovan, 259–267; Blank, George, and London., 513-553; Ohsfeldt and Gohman, pp. 65–76; Matthews, Ribar, and Wilhelm, pp. 52-60; Medoff, pp.481-493; Cook, Parnell, Moore, and Pagnini, "The Effects of Short Term Variation in Abortion Funding on Pregnancy Outcomes," pp. 241-257; Jones, Darroch, and Henshaw, "Patterns in the Socioeconomic Characteristics of Women Obtaining Abortions in 2000-2001," pp. 226-235; New, "The Effect of Pro-Life Legislation on the Incidence of Abortion Among Minors," pp. 185-215; Cartoof and Klerman, pp. 397-400; Ellertson, pp. 1367-1374; Rogers, Boruch, Storms, and DeMoya, pp. 294-298; Joyce, Kaestner, and Colman, pp. 1031-1038; Blum, Resnick, and Stark, pp. 619-620; New, "Analyzing the Effects of State Legislation on the Incidence of Abortion During the 1990s,"; and New, "The Effect of Parental Involvement Laws on The Incidence of Abortion Among Minors."
27. Data obtained from Jon Merz, Catherine Jackson, and Jacob Klerman, "A Review of Abortion Policy: Legality, Medicaid Funding, and Parental Involvement, 1967-1994." *Women's Rights Law Reporter* 17, no. 1 (1995): 12-57; and *Who Decides?* (Washington, D.C.: NARAL Foundation, (various years)).
28. Data obtained from *Who Decides?* (Washington, D.C.: NARAL Foundation, (various years)) and Michigan Right to Life, "Informed Consent for Abortion," at http://www.rtl.org/html/legislation/prolifeleg/summaries/InfCons.html (December 8, 2008).

29. In this paper, women between the ages of 15 and 44 are considered to be of childbearing age.
30. Both parental-consent and parental-notification statutes are considered parental-involvement requirements.
31. Up until relatively recently, NARAL was the only organization that tracked state level pro-life legislation on an annual basis. Even though their data is collected and published with a clear pro-abortion policy purpose, I consider it reliable because their data on legislation is fairly consistent with the data released by pro-life groups
32. A fixed-effect model allows examination of the intrastate effects of pro-life legislation. By holding the individual states constant, the regression compares the abortion rate before legislation was passed to the abortion rate after legislation was passed and determines whether the differences are statistically significant.
33. Elam-Evans *et al.,* "Abortion Surveillance."
34. Centers for Disease Control and Prevention, *Morbidity and Mortality Weekly Report*, Vol. 42 (December 17, 1993), pp. 34–35, and Elam-Evans *et al.,* "Abortion Surveillance." Calculation by author.
35. NARAL Foundation, *Who Decides?* 1992, pp. 125–127, and *Who Decides?* 2000, pp. 125–127.
36. Data obtained from Jon Merz, Catherine Jackson, and Jacob Klerman, "A Review of Abortion Policy: Legality, Medicaid Funding, and Parental Involvement, 1967-1994." *Women's Rights Law Reporter* 17, no. 1 (1995), pp. 12-57; *Who Decides?* 1992 (Washington, D.C.: NARAL Foundation, (various years)).
37. Data obtained from *Who Decides?* 1992 (Washington, D.C.: NARAL Foundation, (various years)).
38. Information obtained from Michigan Right to Life website http://www.rtl.org/html/legislation/woman_t_right_to_know.html
39. Data obtained from *Who Decides?* (Washington, D.C.: NARAL Foundation, (various years)).
40. A Judge in Alabama ruled that partial-birth abortions are allowed if they are necessary to save the life of the mother.
41. A Judge in Georgia ruled that partial-birth abortions are allowed if they are necessary to save the life of the mother.
42. A Judge in Nebraska ruled that partial-birth abortions are allowed if they are necessary to save the life of the mother.
43. A Judge in Virginia ruled that partial-birth abortions are allowed if they are necessary to save the life of the mother.