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Thesis

## **How the Affordable Care Act Impacted Women's Health**

### *Introduction*

Most people have had to go to the doctor at some point in their lives to get medication. Some obtain prescription medications for little or no cost, while others have to sacrifice a meal or two just to feel better. The passing of the Affordable Care Act was intended to help those who struggle to obtain these medications, and offer some relief when purchasing, by providing them with basic insurance coverage. Basic health insurance coverage can reduce out of pocket costs for many prescription medications. This leads to the question, "How did the passing of the Affordable Care Act affect women's health in regards to getting contraceptives and other aspects of fertility." I believe that after the passing of the ACA, the use of contraceptives will increase, proving that women were able to gain better access to contraceptives. This question is interesting because many women take prescription medications such as contraceptives and still have a hard time getting them. If access to prescriptions like contraceptives were easier to obtain for women after the passing of the Affordable Care Act, then the Affordable Care Act would have a positive impact on women's health in the United States.

This topic is relevant to the current struggles that women are facing. Under the Trump Administration, there is a push to turn back provisions of the ACA, many surrounding women's health (Chaloub, 2018). Changing provisions created by the ACA could mean thousands of women would be unable to continue receiving their contraceptives because they would no longer be covered by their insurance. Understanding the impact the ACA had on women's health, if any at all, is significant to understanding if more policy is needed, or if the ACA was sufficient.

### Background and Literature Review

The Affordable Care Act, also known as Obamacare, was signed into law in March 2010. The main goal of the ACA was to provide health insurance coverage to millions of uninsured Americans (Kenton, 2010). The ACA also extended Medicaid eligibility and prevented health insurance companies from denying someone coverage because of preexisting health conditions. The ACA also made health insurance companies provide access to a list of essential health benefits with little to no cost to the customer. One of those essential health benefits was family planning, which covered contraceptives (Kenton 2010). The ACA helped millions of Americans obtain health coverage but helped millions of women obtain prescription contraceptives who previously could not afford them.

In the late 1990s, before the passing of the ACA, 29 states had mandates on whether or not contraceptives were covered. Within these states, if insurance covered prescription drugs, then it had to cover prescription contraceptives (Raissian and Lopoo, 2014). When the ACA was passed, it required most health insurance plans to offer more preventive healthcare services to women with no cost-sharing, a concept that previous literature has also concluded (Raissian and Lopoo, 2014). Although states already mandated insurance companies to provide access to contraceptives for women, the provisions of the ACA would allow more prescription contraceptives to be covered while reducing the overall cost women were responsible for.

Raissian and Lopoo, 2014 collected data about contraceptive use and preventive health service which came from the National Survey of Family Growth, that they used for their research. This website will be beneficial to look at in the future for collecting data for this project. The data was collected over time from, 1995, 2002, and 2006-2010, which is when the surveys were given. The surveys asked women questions about what method of contraceptive

they used and were able to select up to four options. They were also asked if they used other forms of preventive health services. Demographics were the last questions asked on the survey, including religious affiliation, income status, education, race, and marital status. This project will deploy a similar regression analysis but will focus on abortion rates and fertility rates as an indicator of whether more contraceptives were used after the passing of the ACA.

These results will be important to consider when choosing variables for my regression and support the results I come up with. The health insurance mandates were not statistically significant in the contraceptive use of women with high education levels. For low-income women, the mandate increased the use of oral contraceptives and other hormonal methods (Raissian and Lopoo, 2014). Women with low income and low educational attainments seemed to benefit from the provisions of the ACA more than women who came from high-income households and had higher educational attainment. Including educational attainment as a variable in my research project will be important to limit bias and may be able to show more statistically significant results than if the variable was not included.

To have an advantage over an opponent in sports means that not only can you play the game better, but you must understand the game better. The same can be said for the ACA. For the ACA to truly be effective, Barcellos et al, 2014, explained how preparing an individual for new implications of the ACA could positively impact their life. If more people are aware of how the Affordable Care Act can improve their health, then more people would take advantage of the ACA, especially if it means women can obtain free or low-cost contraceptives. For the ACA to be successful, individuals need to understand what kind of insurance is necessary for their medical success, as well as what they can afford. This study recruited 6,000 individuals, age 18 and over who agreed to take an online survey (Barcellos et al, 2014). The survey asked questions

regarding knowledge about the ACA, health insurance literacy, expected changes in healthcare, and subjective knowledge. The survey also asked questions about sociodemographic factors such as immigration status, income status, and marital status.

The results were not surprising given the motivations for the study. 75% of the respondents answered “don’t know” to standardized questions about the ACA. 40% of the respondents incorrectly answered a series of true-false questions about whether under the ACA a firm must provide health coverage for all (Barcellos et al, 2014). The study found that many women were unaware that their current health insurance guaranteed them access to women’s health services under new provisions enacted under ACA (Barcellos et al, 214). Being unprepared for the ACA led to services for women going unused and many left thinking there were no viable options to receive prescription contraceptives (Barcellos et al, 2014). This was one of the big provisions of the ACA, to give access to low or no-cost prescription contraceptives for women.

Cartwright-Smith and Rosenbaum (2012) touch on some important factors that I will consider outside factors to my research project. The ACA requires any insurance, whether it be privately through an employer like Hartwick, or publicly through Medicare or Medicaid to cover prescription contraceptives for little or no cost to women (Cartwright-Smith and Rosenbaum, 2012). But some individual groups and states felt that this was a violation of their constitutional rights. One group that felt the ACA impacted their rights were religious employers or those who had religious connections. In 2011, the Health Resources and Services Administration amended a previous document that did not give a clear definition of what a religious employer was. This amendment stated a religious employer was “one that (1) has the inculcations of religious values as its purpose (2) primarily employs persons who share its religious tenets, (3) primarily serves

persons who share its religious tenets, and (4) is a nonprofit organization under [Certain sections of the Internal Revenue Code] (Cartwright-Smith and Rosenbaum, 2012). This was a big change to the ACA, which opened the door for other states and groups to claim the ACA violated their constitutional rights.

It is important moving forward to understand that there were women who did not have access to contraceptives before or after the ACA was enacted. There is potential for women who do not have access to contraceptives because of religious affiliations or because of employers with such affiliations that can pull the results in a negative way. Understanding that religion is a potential bias within my research will help to be able to eliminate this bias when finding data. This article also helped me to find states that passed provisions on the ACA. I was able to create a set of data called optin or optout. The optout variable represented states that had created some kind of constitutional provision that blocked parts of the ACA. The optin variable represents states that did not pass any kind of provision. Although the article specifically talked about religious groups, I think looking at states is a better indicator of any bias that would be unaccounted for if only looking at national data.

Besides understanding what the ACA can do for you, it is also important to understand what can happen if the government or other organizations decide to reverse aspects of the ACA. Gomez and Arcara explore how a potential cut in funding within the ACA could affect the cost of contraceptives for women state by state. Under the ACA, women who were privately insured were able to share the cost of their contraceptives, decreasing the out of pocket cost for these prescriptions. (Gomez and Arcara, 2018). In 2017, the federal government filed interim rules that severely cut back on the contraceptive coverage mandate which was included in the ACA. Data collected from a separate study referenced in the article stated that only 4% of women with

private insurance, through a large employer, who were using oral contraceptives paid an out-of-pocket cost. 13% of women who used other methods of contraceptives paid out of pocket cost, a 58% decrease from before the ACA (Gomez and Arcara, 2018). But with these new cuts, the cost of contraceptives could change increase drastically, making it nearly impossible for some to afford these prescriptions.

Gomez and Arcara leveraged a survey to women ages 15-39 asking about how they felt with the current Republican Administration, whether or not they were worried about the possible repeals of the ACA and whether or not they thought they would have to pay more out-of-pocket costs for their current contraceptives. This survey was interesting because not only did it judge their feelings about the ACA and contraceptives, it also could gauge where the women were on the political scale. The study found that there was no difference in expectations of contraceptives access and costs, overall, when comparing the results state to state. But, women who typically leaned more Democratic were more worried about the out of pocket costs they could endure if parts of the ACA were repealed (Gomez and Acara, 2018). These results are important to understand because it shows that there is some kind of state to state variation, which I may also find in my research.

Not only did the ACA provide access to low or no-cost prescription contraceptives, but it also provided access to other types of family care and planning for women. Kozhimannil, Jou, Gjerdingen and McGovern explore how the Affordable Care Act gave nursing mothers the right to be able to breastfeed and have ample time to do so in their place of work. The study was done by employing a survey to 2,400 women who gave birth in U.S. hospitals between July 2011 and June 2012, with a follow-up survey about their postpartum experience from January 2013 through April 2013 (Kozhimannil et al, 2014). The survey contained questions about workplace

accommodations for nursing mothers and past breastfeeding experiences. The surveys also asked about sociodemographic factors, such as marital status, insurance coverage, and family income.

The study found that only 59% of women who returned to work had adequate resources and access to breastfeeding resources at their workplace. Even though the ACA requires employers to have private and safe spaces for new mothers to be able to nurse while at work (Kozhimannil et al, 2014). The surveys also found that women who had access to adequate resources were more likely to return to work and breastfeed for longer than 6months. I found this study to be relevant to my project because this is a service woman did not have access to before the ACA. It shows that the ACA did not just help women get prescription contraceptives but helped them when transitioning back to work and into motherhood. If women can return to work, then they are more likely to receive promotions or other kinds of opportunities, compared to if they were forced to stay at home. For many, the ACA was uncharted territory, with many implications that were new, leading to many benefits of the ACA going untouched. Being able to understand what the ACA did for women, and what it could do for women will be important to understanding if the ACA were in fact effective in improving women's health.

As previously stated, in 2012, the ACA made it a requirement that private health insurance plans cover prescription contraceptives with no consumer sharing cost. Becker (2018) used data from a national survey to study the effects of insurance claims linked to short-term contraceptive methods and long-term contraceptive methods.

With the passing of the ACA and the requirements by health insurance plans, the use of short-term contraceptive methods increased by 4.8 percent and the use of long-term contraceptive methods increased by 15.8 percent (Becker, 2018). This is an important finding to note because it again shows a direct correlation between the passing of the ACA and women's

access to contraceptives. Another important finding to note is in 2013, the number of privately insured women who used some sort of contraceptives, increase by 2.95 percentage points, or 6.57 percent (Becker, 2018). From these findings, it can be concluded that the passing of the ACA had some sort of positive impact on women's health, regarding their access to prescription contraceptives. The information in this study may support my results when exploring the effects of women's health and contraceptive use, before and after the passing of the ACA.

One of the biggest limitations for women to receive prescription contraceptives they need is cost. As previously mentioned, the ACA was intended to eliminate these costs and provide low or no-cost options of prescription contraceptives to women. Fahey (2013) explored the cost of different contraceptive methods. This is important to understanding the decisions women have to make regarding their methods of contraceptives, even after the ACA. Fahey states there are two forms of contraceptives, long-acting reversible contraceptives (LARC) and short-acting reversible contraceptives (Fahey, 2013). 34.2% of women who use contraceptives use these short-term methods such as the hormone pill, patch, or rings and 8.5% of women use LARC, which include IUDs and implants (Fahey, 2013). The journal states that the initial costs of these LARC are often higher than those of the short-term methods, but show to be more effective over 5 years, as compared to short-term methods.

For women, the cost to enter the market with a LARC is often a factor that influences their decision when choosing a contraceptive method. Under the ACA, women should have an equal opportunity to receive contraceptives. This study found that there are other factors that influence women's access to contraceptives that have nothing to do with the ACA. Family support, historical background, type of insurance, type of doctor and price all play a significant role in the availability and use of contraceptives. Being able to look at the factors that influence

women's access to contraceptives is what my hypothesis and research are motivated by. The ability for women to have access to prescription contraceptives is something no woman should have and not have to worry about.

Another factor that can prevent women from using contraceptives is their effectiveness. Atkins and Bradford (2014), explored how access to effective contraceptives influenced women's contraceptive use. The article claims that since 1998, more than half the states have passed legislation requiring insurers that cover prescription drugs to cover prescription contraceptives as well (Atkins and Bradford, 2014). This is interesting because this study claims that access for women was changing before the passing of the ACA. This kind of contradicts the previous article by Cartwright-Smith and Rosenbaum, 2012, when referring to religious groups attempting to limit prescription contraceptives. As well as the states that decided to pass legislation that limited provisions of the ACA. The study collected information on states' contraceptive policies and use between 1998 and 2010. The study found that insured women who lived in a state with a contraceptive coverage law were 5% more likely than women who lived in states without these laws to use a method of contraceptives. But this result agrees with other information I collected based on states that opted in or out of the ACA. This result could later support information that I find within my research. This research was done solely before the passing of the ACA which will be a good indicator if the ACA had any impact on women's access to contraceptives.

It is important to understand completely how the ACA impacted women's health by exploring data before and after the passing of the ACA. Campbell and Shore-Sheppard did a large, comprehensive, comparative case study on health coverage for individuals at the state level before during and after the passing of the ACA. One important finding for my research was

that before the ACA, private insurance could be obtained either through a group, like an employer or in the nongroup market. In 2009, only 9% of individuals younger than sixty-five who had private insurance directly purchased it (Campbell and Shore-Sheppard, 2020). The private nongroup market suffered for many reasons including the overall cost to the individual, lack of access to insurance for those with pre-existing health conditions and limited choices. Employer-sponsored insurance (ESI) did not have these same obstacles and in 2009, 73% of individuals under sixty-five were insured through ESI. The passing of the ACA was not intended to reduce those who were covered under ESI, but it addresses the problems that came from the private insurance market (Campbell and Shore-Sheppard, 2020).

This study is important to understand how the passing of the ACA impacted women because it shows how difficult it was to obtain insurance through anything besides your employer. Their study cited many data sources that can be used to collect data for the project. The U.S. Census Bureau shows data of those who were insured through ESI or private insurance. What we know from previous research is employers can influence whether a woman has access to contraceptives. So, the difficult circumstances that individuals had to endure to obtain health insurance, probably made access to contraceptives for women extremely difficult to get. This study will act as a guide to show those who had insurance through employers or private before the ACA passed, and what their contraceptive use looked like.

Another indicator that the ACA improved access to prescription contraceptives are trends in fertility rates. Joelle Abramowitz (2017) examines the effect the Affordable Care Act had on fertility and related outcomes. One hypothesis of the study expects that with expanding health care to young adults, fertility rates will decrease due to contraceptive options expanding as well as pregnancy, birth and infant related care expanding. (Abramowitz, 2017). In 2012, 30% of

adults ages 19-64 reported having trouble paying for their medical bills, while 43% reported not seeking medical care because of the cost (Abramowitz, 2017). From previous studies and articles related to my research, this statistic is not surprising.

Before the passing of the ACA, young adults had the lowest rates of insurance coverage, which led to limits for some individuals on what healthcare services they could receive (Abramowitz, 2017). With the passing of the ACA, a provision was passed which requires insurers that cover dependents to cover them until they turn 26, regardless of their marital status, student's status, or if they have children. Preliminary results found that this expansion of health insurance to young adults has had a positive effect on family planning outcomes such as contraceptive use and abortion rates.

The data necessary for this study included individual coverage and fertility outcomes before and after the provision. Also, the feelings of people before and after the provision would benefit this study more as the author pointed out (Abramowitz, 2017). The data used was pooled from 2008-2010 and 2012-2013, leaving a 1-year gap to show how the ACA-dependent coverage mandate increased or decreased the probability of a young adult giving birth. Abortion rates were also used during this same time, and split into ages 15-19, 20-24, and 25-29. The results of this study show that before the ACA the abortion rate was 12.9% for ages 15-19, 27.9 percent for ages 20-24 and 21% for ages 25-29. After the passing of the ACA, each age group's abortion rate decreased, the most significant decrease was found in the 20-24 age group, which went from 27.9 % to 22.5 % (Abramowitz, 2013). I plan on using the results from this study as a guide to the results I find in my research. A decrease in the abortion rate is a good indicator that contraceptive use increased after the passing of the ACA.

### Theoretical Expectations

Based on the literature, I believe that after the passing of the ACA, the use of contraceptives will increase, proving that women were able to gain better access to contraceptives. I also believe that the price women must pay for contraceptives after the passing of the ACA will decrease as compared to before under many of the provisions created by the ACA. Other factors that may show that women had better access to contraceptives after the ACA are a decrease in abortion and fertility rates across the states. In Republican or conservative states, I expect to find the steepest increase in the use of contraceptives after the passing of the ACA because of its universal coverage.

### Methods

To test my hypothesis, I plan on running a linear regression to show if there was any statistical significance to contraceptive use, birth rates, abortion rates health insurance coverage, educational attainment and income for women to see if the passing of the ACA affected their contraceptive use. To run the regression, I plan on using STATA. I used the U.S. Census Bureau to collect state-level data on the number of births from 2010-2019, median household income for years 2010-2019 for women, health insurance coverage for women between 2010-2019, number of abortions between 2010-2019, marital status between 2010-2019, population between 2010-2019 and whether or not a state opted to make some kind of constitutional change to the implementation of the Affordable Care Act in their state (optout), or if they accepted everything given from the ACA with no changes made (optin). Below you can see the variable name that I used in STATA when running my regression.

Variable	Description
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<i>medinc</i>	The median income for women between 2010-2019 in any given state
<i>hc</i>	Women covered by some type of health insurance, years 2010-2019, by state.
<i>frate</i> <i>(fert/pop)</i>	Fertility Rate which was found by dividing the variable fert (number of births) by pop (total population) for the years 2010-2019 by each state.
<i>arate</i> <i>(numabor/pop)</i>	Abortion Rate which was found by dividing the variable numabor (number of abortions) b pop (total population) for the years 2010-2019 by each state.
<i>aca</i>	Before 2014 aca is equal to 0, after 2014 aca is equal to 1.
<i>acaoptout</i>	A state equal to 0 means that did not optout of any part of the ACA. States that are equal to one have both opted out and the ACA has been completely phased in

I also decided to look at simple line graphs to show how the number of abortions in the United States changed after the passing of the ACA. I did the same for contraceptive use, based on the types of contraceptives used in the United States. This was more to show visual changes that the ACA could have had on these variables.

## Results

The question that I have been exploring throughout my project is how did the passing of the Affordable Care Act impact women's health. There are many aspects to women's health, but I focused primarily on contraceptive use. I also explored how abortion rates and birth rates changed after the ACA as an indicator of increased contraceptive use and to show that women had better access to family planning services.

When running my linear regression, the results were similar to the previous literature. Below you can see my regressions results when looking at how the ACA impacted fertility rates. In order to get to these results my equation was  $Frate = \beta_{acaoptout} + \beta_{hc} + \beta_{medinc} + \beta_{marstat} + \beta_{aca}$ . The results of this regression were surprising to me. The results show that if a state opted out of the Affordable Care Act in any way, then the fertility rate would increase by .00034 percent. Although at first, this was surprising, after thinking about why these results were like this is made sense. States that wanted to block provisions of the ACA, were making it more difficult for women to obtain prescription contraceptives and other services guaranteed by the ACA. So, it is only logical that fertility rates increased in those states that opted out of the ACA. But the passing of the ACA overall led to a .0103 percent decrease in the fertility rate. This is similar to the results found in Abramowitz, 2017, which looked primarily at different age groups but showed a decrease in fertility rates. So overall, the ACA led to a decrease in fertility rates but led to an increase in states that opted out of the ACA.

```
. regress frate acaoptout hc medinc marstat aca
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Source	SS	df	MS	Number of obs	=	510
Model	.014125655	5	.002825131	F(5, 504)	=	18.58
Residual	.07663737	504	.000152058	Prob > F	=	0.0000
				R-squared	=	0.1556
				Adj R-squared	=	0.1473
Total	.090763025	509	.000178316	Root MSE	=	.01233

frate	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
acaoptout	.0003387	.0014523	0.23	0.816	-.0025146 .0031919
hc	-1.04e-10	2.17e-10	-0.48	0.633	-5.30e-10 3.23e-10
medinc	2.74e-07	5.62e-08	4.87	0.000	1.63e-07 3.84e-07
marstat	9.96e-10	2.65e-10	3.75	0.000	4.75e-10 1.52e-09
aca	-.0103089	.0014494	-7.11	0.000	-.0131564 -.0074613
_cons	.2245325	.0030738	73.05	0.000	.2184933 .2305716

Next, I looked at how the ACA affected abortion rates. Below you can see the results from this regression. The regression equation I used was  $Arate = \beta_{acaoptout} + \beta_{hc} + \beta_{medinc} + \beta_{marstat} + \beta_{aca}$ . After seeing the results from the fertility rate equation, I thought the abortion rate would lead to similar results. But, if a state opted out of the ACA, the abortion rate decreased by .00042 percent. While the ACA decreased the abortion rate by .00035 percent. This result is not surprising either, but it is surprising that in States that had some kind of provision blocking the ACA, the abortion rate still decreased. I think this is important to show how effective the ACA was in granting women better access to prescription medication. Although the result was far less than 1 percent, these values still decreased, which Abramowitz, 2017 also found when breaking down specific age groups.

```
regress arate acaoptout hc medinc marstat aca
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Source	SS	df	MS	Number of obs	=	387
Model	.00015175	5	.00003035	F(5, 381)	=	38.54
Residual	.000299998	381	7.8740e-07	Prob > F	=	0.0000
Total	.000451747	386	1.1703e-06	R-squared	=	0.3359
				Adj R-squared	=	0.3272
				Root MSE	=	.00089

arate	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
acaoptout	-.0004248	.0001293	-3.29	0.001	-.000679 - .0001706
hc	5.71e-12	1.98e-11	0.29	0.773	-3.33e-11 4.47e-11
medinc	3.88e-08	5.35e-09	7.26	0.000	2.83e-08 4.94e-08
marstat	1.87e-10	2.50e-11	7.46	0.000	1.38e-10 2.36e-10
aca	-.0003521	.0001181	-2.98	0.003	-.0005843 -.0001198
_cons	-.0001865	.000283	-0.66	0.510	-.000743 .00037

Because I used state level data, I also ran a regression using state level fixed effects. State level fixed effects compare each state to itself before or after the ACA was implemented. Because some states passed legislation that limited implications enacted in the ACA, this time of regression allows for those changes to be noted and compared, and takes away state variation, leading to a more accurate result. Below you can see the results from running the state fixed effects with abortion rate. As you can see below, when we look at the state level fixed effects, we can see that when the ACA was passed it led to a .00021 percent decrease in the abortion rate in states. So even though some states opted out of provisions of the ACA, when passed, the ACA

still led to a decrease in abortion rates. I think this is significant in showing just how widespread the impact of the ACA was. For states that felt the ACA was a violation of their constitutional rights, it still allowed women to access health services they needed and should be able to get.

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xi: regress arate hc medinc marstat aca I.State
State      _IState_1-51      (_IState_1 for State==Alabama omitted)

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Source	SS	df	MS	Number of obs	=	387
Model	.000403052	54	7.4639e-06	F(54, 332)	=	50.89
Residual	.000048695	332	1.4667e-07	Prob > F	=	0.0000
				R-squared	=	0.8922
				Adj R-squared	=	0.8747
Total	.000451747	386	1.1703e-06	Root MSE	=	.00038

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
arate					
hc	9.00e-13	9.03e-12	0.10	0.921	-1.69e-11 1.87e-11
medinc	3.92e-09	6.20e-09	0.63	0.528	-8.28e-09 1.61e-08
marstat	-6.95e-10	2.38e-10	-2.92	0.004	-1.16e-09 -2.27e-10
aca	-.0002119	.0000575	-3.69	0.000	-.000325 -.0000989
_IState_2	-.0009581	.0005099	-1.88	0.061	-.0019612 .0000449
_IState_3	.0007178	.0002474	2.90	0.004	.0002312 .0012045
_IState_4	-.0009302	.0002759	-3.37	0.001	-.0014729 -.0003875
_IState_5	.0117921	.0033099	3.56	0.000	.005281 .0183032

Finally, I looked at state level fixed effects for fertility rate. Below you can see that when the ACA was implemented, it led to a .0052 percent decrease in the fertility rate. This decrease was more noticeable when running it as fixed effects, which shows evidence that the ACA affected some states more drastically than others. An overall decrease in the fertility rate can be an indicator that contraceptive use increased, and in some states, this increase was more significant than in others. Fertility rates include many different variables, one of them being the number of births. Assuming an increase in contraceptive use is a leading indicator of a decrease in births, it can be concluded that the ACA led to an increase in contraceptive use, which lead to a decrease in fertility rates across all 50 states.

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xi: regress frate hc medinc marstat aca I.State
.State      _IState_1-51      (_IState_1 for State==Alabama omitted)

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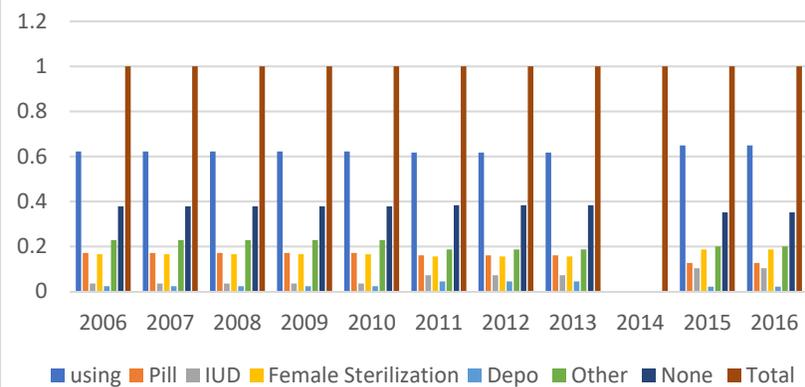
Source	SS	df	MS	Number of obs	=	510
Model	.087709308	54	.001624246	F(54, 455)	=	242.01
Residual	.003053717	455	6.7115e-06	Prob > F	=	0.0000
				R-squared	=	0.9664
Total	.090763025	509	.000178316	Adj R-squared	=	0.9624
				Root MSE	=	.00259

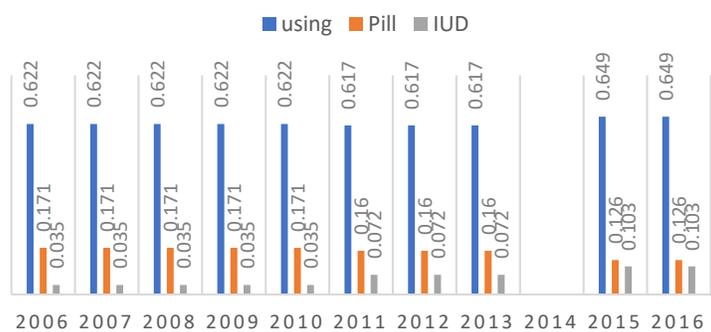
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
frate					
hc	-6.19e-12	4.72e-11	-0.13	0.896	-9.89e-11 8.65e-11
medinc	-2.51e-07	2.43e-08	-10.32	0.000	-2.99e-07 -2.03e-07
marstat	7.19e-10	1.03e-09	0.70	0.486	-1.31e-09 2.75e-09
aca	-.0051803	.0003318	-15.61	0.000	-.0058324 -.0045283
_IState_2	.0063595	.0023464	2.71	0.007	.0017484 .0109706
_IState_3	-.0052695	.0013607	-3.87	0.000	-.0079435 -.0025956
_IState_4	-.0058869	.0014499	-4.06	0.000	-.0087362 -.0030376
_IState_5	.0041076	.0141635	0.29	0.772	-.0237265 .0319416

Below you can see a bar graph on contraceptive use over time. I used data from multiple different websites to create this set of data. The ACA was passed in 2010, with all the implications being phased in by 2014. Most of the women's health implications came in late 2011 and early 2012. I was unable to find data for the year 2014, which is why there is a gap in the chart. In 2006-2010, 62.2% of women were using some form of contraceptives while 37.8% were not. On the chart you can see the different types of contraceptives I included, as well as a total of 1 to equal 100%. Between 2011-2013 the number of women using contraceptives decreased slightly compared to 2009 and 2010. Here are two plausible explanations for this interesting result. The first being that with the phases of the ACA having to be implicated, some women faced a period where they were uninsured or were changing between insurers and their prescriptions were not being covered. Another is that after the recession of 2008, there was a lot of uncertainty among individuals, as to what was going to happen in the future. By 2011 and 2012, there was an indication that things were going to get better, so women could have felt more comfortable starting a family, or continuing to have children, therefore stopping contraceptive use. It is important to look at how prescription contraceptive use changed because part of the ACA allowed women to obtain prescription contraceptives for little or no cost to them. Below, you can see percentages for the birth control pill and IUD use. These are two of the most common prescription contraceptives on the market today. The birth control pill is a common short-term form of contraceptive and the IUD a long-term contraceptive as seen in the literature (Fahey, 2013). Before the passing of the ACA, more women used the birth control pill, as it was a cheaper option due to the sheer cost of birth control. After 2010, and the passing of the ACA, we can see that IUD use increased, suggesting that the ACA made it easier and more cost-efficient for women to get long-term birth control.

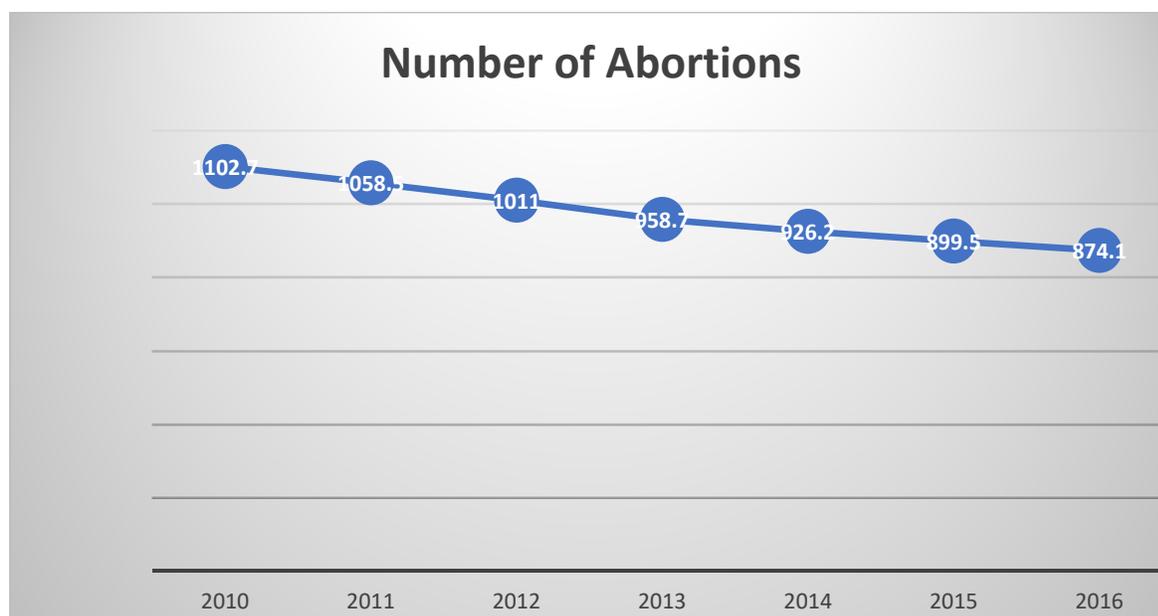
## Contraceptive Use



## BIRTH CONTROL PILL AND IUD USE



The next variable that I looked at was abortion rates. As stated in the literature, if more women have access to methods of contraceptives, there should be a decrease in the number of abortions (Abramowitz, 2017). When women and young adults have better access to family planning tools, such as contraceptives, there tends to be a decrease in the number of abortions. My results agreed with the literature. As you can see from the graph below, from 2010-2016, the number of abortions nationwide decreased. This again is a good indication that the passing of the ACA allowed women to have better access to contraceptives, and other educational tools surrounding pregnancies.



### Discussion

My results conform with the literature, although not as perfectly as I expected. There is some change to the level of contraceptive use, and the number of abortions, but the passing of the ACA was intended to make access to prescription birth control methods easier and more affordable for women. With this, a steeper increase in the number of women taking prescription birth controls like the pill or IUD, should increase drastically overtime. Where those that are not prescription, most of which are contained in the “other” category should have decreased drastically. Some states put restrictions on parts of the ACA and the implications that came with it, which may be seen when looking at state level data. Some states could have less access to prescription medication, compared to other states because of these implications that were passed.

One thing that could make my project better is time. I have struggled with finding the necessary data, which I think if I had more time, could find other ways to collect data that I am missing. It is hard to find data on contraceptive use, which could be because of privacy laws. Surveying women would be a way to collect more data on contractive use. I could travel state to state and ask a certain number of women if they take prescription birth control. I would have to find women who started taking these prescriptions before the passing of the ACA and continued after to see if their costs went down, or if their state made it more difficult for them to obtain the prescription. With more time I think I would be able to find more answers to the questions that I asked and be able to gather a better understanding of how the ACA impacted women’s health.

### Conclusion

The passing of the Affordable Care Act was something that not only impacted women but every individual in the United States. But the impact that the ACA had on women’s health was

significant. My main research question was how the passing of the Affordable Care Act impacted women's health specifically access to prescription contraceptives. Much of the previous literature supported my findings, being that the passing of the ACA increased the use of contraceptives, decreased the number of abortions, and overall had a positive impact on women's health outcomes. As previously stated, more time and more access to different data and research techniques could have improved this research project. But, the findings from my research shows how important it is to keep improving aspects of women's health and continue to fight for all women to have access to medications that can improve the health of women and their children. The findings show a gradual increase in contraceptive use as well as a slight decrease in abortion rates. Continued improvement to women's health, could impact these numbers even more and increase the use of contraceptives for women. Overall, the ACA positively impacted women's health care outcomes and will continue to help thousands of women every day.

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