

# Trends in Abortion Incidence and Availability in North Carolina, 1980–2013

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**Objectives:** Abortion incidence has declined nationally during the last decade. In recent years, many states, including North Carolina, have passed legislation related to the provision of abortion services. Despite the changing political environment, there is no comprehensive analysis on past and current trends related to unintended pregnancy and abortion in North Carolina.

**Methods:** This study is a secondary analysis of vital registration data made publicly available by the North Carolina State Center for Health Statistics. Birth and induced abortion records were obtained for the years 1980 to 2013. We describe abortion incidence and demographic characteristics of women obtaining abortions over time.

**Results:** The number of North Carolina abortions declined 36% between 1980 and 2013. The abortion ratio declined from 26/100 pregnancies (live births and abortions) in 1980 to just 14/100 in 2013. These ratios, however, vary across demographic subgroups. In 2013, the abortion ratio was more than 2 times greater for non-Hispanic black women than non-Hispanic white women (22 and 9, respectively). Among non-Hispanic black and Hispanic women, the abortion ratio is greater among women with a previous pregnancy as compared with women in their first pregnancy. For non-Hispanic white women, the abortion ratios are similar for first and higher-order pregnancies.

**Conclusions:** Trends in North Carolina are similar to national trends; however, detailed analyses by race/ethnicity, age, and parity demonstrate important distinctions among abortion patients over time in the

state. We discuss these trends in relation to policy changes and increased access to effective contraceptives.

**Key Words:** abortion, access, contraception, North Carolina, trends

Reduction of the incidence of unintended pregnancy and universal access to reproductive health services for men and women are national goals of the United States as part of the Healthy People 2020 initiative.<sup>1</sup> In 2011, 45% of all pregnancies in the United States were unintended, and 40% of these pregnancies ended in abortion.<sup>2,3</sup> After reaching a peak number of induced abortions performed annually in 1990, the numbers and rates of abortions have continued to decline steadily across the nation.<sup>4,5</sup> Between 2008 and 2011, there was a 4% decline in the total number of abortion providers in the United States and a 1% decline in the number of abortion clinics.<sup>5</sup> In the last few decades, the demographic characteristics of US women who obtain abortions also have changed significantly, with the greatest declines among non-Hispanic white women.

One likely explanation for the declines observed at the national level relates to increased access to and use of more effective contraception.<sup>3</sup> In particular, in 1999 emergency contraception became available, offering women a method to avoid pregnancy if used within 72 hours of unprotected sex. Furthermore, in 2000, a levonorgestrel-releasing intrauterine device, Mirena (Bayer, Leverkusen, Germany), became available, increasing women's access to more effective methods of long-acting reversible contraception. In 2006, an etonogestrel-releasing subdermal contraceptive implant, Nexplanon (Merck & Co, Kenilworth, NJ), became available. Also, in the mid-1990s to 2000s, many states began to participate in a Medicaid Family Planning Waiver program that allowed expanded access to contraceptive services

## Key Points

- Abortion rates and ratios in North Carolina declined significantly from 1980 to 2013.
- A clear relation between declines in abortion rates and restrictive policy cannot be established.
- Understanding which women may have the most limited access to contraception and abortion at the state level can inform policies to improve availability of these services.

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A.G.B. has received compensation from the National Institutes of Health. S.P.M. is Director and R.T. is Director of Demography at the Carolina Population Center. K.P. has received compensation from the Urban Institute. The remaining authors did not report any financial relationships or conflicts of interest.

Accepted April 25, 2017.

0038-4348/0-2000/110-714

DOI: 10.14423/SMJ.0000000000000726

for women who otherwise may not qualify for Medicaid. These changes in contraceptive access and availability may have had an impact on unintended pregnancy and the need for abortion.

Like much of the southern US, North Carolina has experienced a decline in the abortion ratio<sup>6</sup> (ie, the number of abortions per 100 pregnancies ending in abortion or live birth); however, 54% of all pregnancies in North Carolina were estimated to be unintended in 2010, substantially higher than the national estimate at the time (45%). A little more than one-fourth of these pregnancies were estimated to end in abortion, a proportion that is lower than the national average.<sup>7</sup> These two statistics suggest a substantially higher rate of unintended births in North Carolina.

In recent years North Carolina has passed legislation related to the provision of abortion services. These laws include mandatory counseling 72 hours before undergoing an abortion, mandatory ultrasound as part of state-mandated counseling, mandatory parental consent for abortions for minors, special rights for medical professionals to refuse to provide services, restrictions on the use of state funds to pay for abortions in low-income women, exclusion of abortion coverage in the state health insurance program and by private insurers participating in the state health exchange under the Patient Protection and Affordable Care Act (PL 111–148), and targeted regulations governing abortion clinics that do not apply to other medical providers.<sup>8–10</sup> In contrast to policies that aim to reduce access to abortion services, one related policy was enacted to increase access to contraception and possibly reduce the need for abortion. In 2005, the North Carolina Medicaid Be Smart Family Planning program expanded family planning services to women and men up to 195% of the poverty level, but this program has been underutilized.<sup>11</sup>

Given the national decline in abortion incidence; widening ethnic differences in the use of abortion services nationally; and increased legislation of abortion services in many states, including North Carolina, the present study aims to examine and describe trends in abortions by demographic characteristics and access to services in the state of North Carolina between 1980 and 2013. This information is relevant for understanding gaps in reproductive health services for women of varying demographic backgrounds, provides a detailed background against which to assess restrictive legislation, and more generally provides descriptions of abortion levels and trends in a national and state environment that is increasingly hostile to abortion providers and services.

## Methods

Birth and induced abortion vital registration data are publicly available from the North Carolina State Center for Health Statistics.<sup>12</sup> Because abortion is a reportable event, all abortion providers are required to complete the abortion reporting form for any procedures they provide. This form includes information on the county in which the abortion took place, the county of the woman's residence, her age, parity, education, race and

ethnicity, marital status, and type of procedure performed. The vital registration (births) data have information similar to the abortion form but also include more information on the characteristics of the woman. This study is a secondary analysis of data obtained from North Carolina State Center for Health Statistics for abortions and births from 1980 to 2013, the most recent year available for both datasets. This secondary analysis includes 4,640,185 records from girls and women aged 11 to 54 years across 34 years, from 1980 to 2013; 977,432 records are from the state abortion database; and 3,662,753 records are from the state live-births database. For this analysis, we focus on girls and women who were aged 15 to 54 years, dropping the small number of girls aged 11 to 14 years from the study sample. We merged both datasets to calculate abortion ratios. For 1980, 1990, 2000, and 2010, the abortion rate was calculated as the number of abortions per 1000 girls and women aged 15 to 54 years. The number of girls and women aged 15 to 54 years was obtained from decennial census figures.

We provide descriptive analyses of the number of abortions and the abortion ratios by key demographic characteristics. The demographic factors examined were based on information available on the abortion reporting form as well as on the birth certificate. Available variables included year of either the abortion or the live birth and the woman's age at the time of the event. Race/ethnicity of the woman was available; we constructed four groups for analysis: white (non-Hispanic), black (non-Hispanic), other (non-Hispanic), and Hispanic. The option to choose Hispanic ethnicity in abortion records was not available until 1993. For the years before 1993, we used the race reported by the individual (white, black, other). Marital status was included on both records; however, unknown marital status was disproportionately reported in the abortion records. As such, for this characteristic, only abortion ratios for women with a known marital status (married or unmarried) were calculated. Educational attainment, which included less than high school, high school diploma or equivalent, some college, Bachelor of Arts/Bachelor of Science, Master of Arts/Master of Science, more (Master's and doctoral degrees/other advanced degrees), and unknown was measured on both records. In 2010 educational attainment was not collected on the birth records. Analyses for the 2010 abortion ratio disaggregated by education used data from 2011. Finally, we included information on the woman's number of pregnancies, including the current pregnancy, at the time of the abortion.

Information on the county in which the abortion procedure took place was used to determine access to abortion services. Counties in which at least one abortion was performed in a given year were identified as having access to abortion services.

Descriptive analyses were performed to examine the number of abortions performed in the state of North Carolina, as well as any change over time in the demographic characteristics of women who seek abortion. The trends are presented graphically, with information on key events presented that may affect abortion access and contraceptive availability in the state. Maps of

county-level access to abortion services and abortion rates were produced for 1980, 1990, 2000, and 2010 to visualize the spatial distribution of access to abortion services and the abortion rate in North Carolina counties over time.

## Results

### Abortion Incidence

In North Carolina the number of abortions and the abortion ratio declined between 1980 and 2013, with some periods showing a sharper decline than others. In 2013 there were a little more

than 19,000 abortions reported, and the abortion ratio was 14/100 pregnancies (live births and abortions), the lowest since 1980 (Table 1). Fig. 1 shows the decline in the abortion ratio, from approximately 26/100 pregnancies in 1980 to 14/100 in 2013; no clear decline follows any new policy or available contraception.

### Differential Trends in Abortion

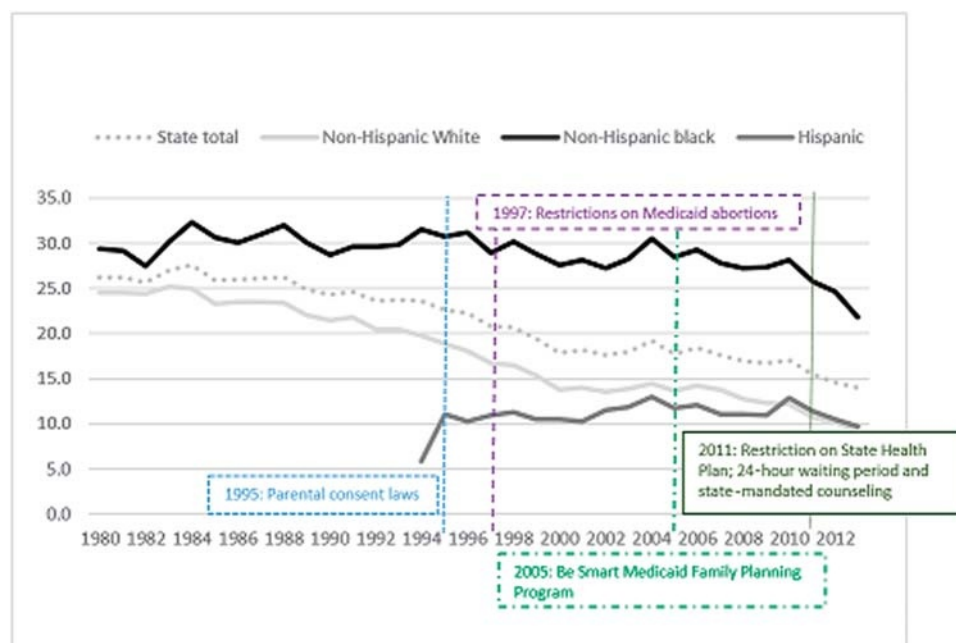
Table 2 shows trends (1980–2013) in the abortion percentage by age, race/ethnicity, marital status, educational attainment, and parity. Table 3 shows trends in the abortion ratios over time, by this same set of characteristics.

**Table 1. Number of abortions and abortion ratio in North Carolina by race/ethnicity, 1980–2013**

Year	State total		Non-Hispanic White		Non-Hispanic Black		Hispanic	
	No. <sup>a</sup>	Ratio <sup>b</sup>	No. <sup>a</sup>	Ratio <sup>b</sup>	No. <sup>a</sup>	Ratio <sup>b</sup>	No. <sup>a</sup>	Ratio <sup>b</sup>
1980	30.0	26.2	18.6	24.5	10.4	29.4		
1981	29.8	26.3	18.5	24.6	10.2	29.1		
1982	29.7	25.7	18.8	24.5	9.6	27.4		
1983	31.1	27.0	19.4	25.2	10.4	30.2		
1984	32.7	27.5	19.8	25.0	11.6	32.4		
1985	31.2	25.9	18.8	23.3	11.1	30.7		
1986	31.6	26.0	19.0	23.5	11.2	30.0		
1987	33.1	26.1	19.6	23.5	12.1	31.0		
1988	34.7	26.3	20.1	23.4	13.3	32.0		
1989	33.8	24.9	19.2	22.0	12.9	30.1		
1990	33.5	24.3	19.0	21.5	12.4	28.7		
1991	33.4	24.6	18.8	21.8	12.8	29.6		
1992	32.1	23.6	17.6	20.5	12.7	29.6		
1993	31.5	23.7	17.1	20.4	12.5	29.8	0.0	0.0
1994	31.3	23.6	16.6	19.8	12.8	31.5	0.2	5.8
1995	29.5	22.5	15.6	18.8	11.9	30.7	0.5	11.1
1996	29.9	22.3	15.1	18.1	12.3	31.2	0.6	10.3
1997	28.0	20.7	13.8	16.7	11.1	28.9	0.9	11.0
1998	29.0	20.6	14.1	16.5	12.2	30.2	1.0	11.3
1999	27.5	19.5	13.0	15.4	11.5	28.8	1.1	10.4
2000	26.2	17.9	11.8	13.7	11.1	27.5	1.5	10.5
2001	26.2	18.2	11.6	14.0	11.1	28.2	1.7	10.3
2002	25.1	17.6	11.0	13.5	10.2	27.2	2.0	11.5
2003	25.9	18.0	11.3	13.9	10.6	28.2	2.2	11.9
2004	28.5	19.2	11.9	14.4	12.0	30.5	2.6	13.0
2005	26.6	17.8	11.1	13.7	11.2	28.4	2.6	11.7
2006	28.7	18.4	11.8	14.2	12.3	29.3	2.9	12.0
2007	28.0	17.6	11.6	13.8	11.8	27.8	2.8	11.1
2008	26.7	16.9	10.5	12.7	11.6	27.2	2.7	11.1
2009	25.4	16.7	9.8	12.3	11.4	27.4	2.5	11.0
2010	25.2	17.1	9.5	12.2	11.3	28.1	2.8	12.8
2011	21.9	15.4	8.1	10.8	9.9	25.8	2.4	11.4
2012	20.4	14.5	7.6	10.2	9.3	24.6	2.1	10.4
2013	19.3	13.9	6.8	9.3	8.1	21.8	1.9	9.7

<sup>a</sup>In thousands.

<sup>b</sup>Number of abortions per 100 pregnancies ending in abortion and live birth; ratio is based on births occurring during the reported year.



**Fig. 1.** The abortion ratio from 1980–2013, by race and ethnicity, with regard to state policies and availability of contraception.

### ***Race and Ethnicity***

As the racial and ethnic composition of North Carolina has changed through the years, so have the characteristics of women obtaining abortions. In 1980 most procedures (62%) were obtained by white women and black women made up the rest. Data for Hispanic women were not available as a separate category until 1993. By 2013 a greater percentage of abortions was obtained by black women (42%); the percentage among white women declined (to 35%), with other non-Hispanic women (13%) and Hispanic women (10%) contributing the remainder.

The decline in the abortion ratio has been more pronounced among white women than black women. In 1980, black women reported approximately 30,100 pregnancies; this declined to 22/100 in 2013. Among white women the abortion ratio declined from 25/100 pregnancies in 1980 to approximately 9/100 in 2013. Meanwhile, the abortion ratio for Hispanic women has been fairly constant since 1995 and is similar to the abortion ratio of non-Hispanic white women (Table 1, Fig. 1).

### ***Age***

The average age of women seeking abortions in North Carolina is shifting upward. In 2013, more than half of all abortions (58%) were obtained by women aged 25 years or older, followed by women 20 to 24 years old (31%), girls 18 to 19 years old (7%), and girls younger than 18 years of age (3%; Table 2). This is a shift from 1980, when younger women made up a greater percentage of abortion seekers and each of these age categories made up approximately one-third of abortions. Trends in abortion ratios by age differed across racial/ethnic groups. For

non-Hispanic white women, the largest decline is among women younger than 20 years (Table 3).

### ***Education***

The educational attainment of women seeking abortions increased from 1980 to 2013 (Table 2). Women with less than a high school degree represented >23% of women obtaining abortions in 1980, but declined to 12% by 2013. Women with only a high school diploma represented the largest share of women obtaining abortions (30% in 2013 and 33% in 1980; Table 3).

### ***Prior Pregnancies, Births, and Terminations***

In 1980 most abortions (59%) were obtained by women with no prior births. By 2000 only approximately 40% of women obtaining an abortion reported no prior births; this proportion has been fairly stable since the early 2000s. The majority (70%) of girls and women obtaining an abortion in 1980 had no prior terminations. By 2013 a little less than 50% of the girls and women obtaining an abortion had no prior terminations. Among women obtaining abortions in 2013, more than three-fourths had had at least two pregnancies including the current pregnancy.

### ***Geographic Availability of Abortion Services***

There are 100 counties in North Carolina. The number of counties in which abortions were performed has declined steadily since 1980 (Fig. 2). In 1980 at least one abortion was reported in two-thirds of the counties. By 1990 the number decreased to 38 counties and further declined to 18 in 2000. By 2010 only 11 counties reported that at least one abortion was

**Table 2. Percentage distribution of abortions by women's characteristics for selected years, 1980–2013**

	1980	1985	1990	1995	2000	2005	2010	2013
Age, y								
< 18	15.1	14.8	11.0	9.9	6.2	5.9	4.9	3.3
18–19	18.3	15.8	15.4	12.3	10.8	9.9	9.2	7.3
20–24	36.1	34.7	34.4	34.6	33.6	32.3	32.4	31.1
≥ 25	30.5	34.8	39.1	43.3	49.4	52.0	53.6	58.3
Race/ethnicity <sup>a</sup>								
Non-Hispanic white	62.0	60.2	56.9	52.7	45.0	41.8	37.7	35.0
Non-Hispanic black	34.6	35.8	37.0	40.3	42.3	42.0	44.9	41.8
Hispanic	—	—	—	1.8	5.6	9.8	10.9	9.8
Other non-Hispanic	3.4	4.0	6.1	5.2	7.1	6.4	6.5	13.4
Marital status <sup>b</sup>								
Married	28.0	24.5	23.6	17.8	22.1	21.3	19.2	18.2
Unmarried	70.0	71.5	73.4	60.4	71.9	74.8	76.5	75.4
Unknown	2.1	4.0	3.0	21.8	6.0	3.9	4.4	6.4
Educational attainment								
< HS	23.4	17.7	12.9	12.5	15.1	15.6	14.9	12.0
High school	32.6	34.7	40.7	26.5	33.0	31.6	32.8	30.0
Some college	20.6	19.2	17.5	19.5	27.4	27.9	27.2	27.5
BA/BS	7.6	9.2	10.1	6.3	9.5	9.8	9.6	10.6
≥ MA	1.6	2.3	2.3	2.1	3.3	4.7	6.5	7.4
Unknown	14.3	17.0	16.4	33.1	11.7	10.5	9.0	12.6
Total no. previous pregnancies (including this pregnancy)								
1	45.4	44.0	38.1	34.5	30.8	31.2	29.5	23.6
≥ 2	54.6	56.0	61.9	65.5	69.2	68.8	70.5	76.4
No. prior births (still living)								
0	58.8	58.1	51.8	49.9	39.3	38.9	37.5	37.2
1	21.5	23.1	26.9	27.4	30.7	28.4	28.2	27.9
≥ 2	19.8	18.9	21.3	22.7	30.0	32.7	34.4	34.9
No. prior terminations								
0	70.5	64.9	60.9	56.5	57.3	55.3	54.1	48.4
1	22.5	24.1	26.0	27.5	24.8	24.7	24.7	28.5
≥ 2	7.0	11.0	13.2	16.0	18.0	20.1	21.3	23.2
Total no. women	30,021	31,171	33,454	29,547	26,199	26,604	25,200	19,285

BA/BS, Bachelor of Arts/Science; HS, high school; MA, Master of Arts.

<sup>a</sup>Other non-Hispanic includes Asian, American Indian, other, and unknown; data for Hispanic ethnicity in abortion records were not available until 1993.

<sup>b</sup>Unmarried includes never married, divorced, and widowed; married includes married and separated.

performed. These changes imply an 83% decrease in the number of counties in which abortions were performed between 1980 and 2010, leaving many areas without a nearby service provider.

Figure 3 demonstrates the change in the abortion rate (number of abortions per 1000 girls and women aged 15–54 years of age) for each county from 1980 to 2010; this information is based on the county where the woman lives as reported in the abortion reporting form. In 1980, 28% of counties had an abortion rate <10; 38% of counties had an abortion rate of 10 to 15; 18% had a rate of 15 to 20; and 16% had a rate of ≥20. The decline in the abortion rate in North Carolina is clear by 2010. Nearly the entire western region and the northeast part of the

state had an abortion rate of <5, whereas only 2% of all counties had a rate of 15 to 20.

## Discussion

With this study, we identify trends in abortion rates and ratios in North Carolina. Across the South, abortion rates and ratios have been decreasing during the last few decades, but to our knowledge, no studies have looked in-depth at state-level trends in the region. These detailed state-level analyses can be used to identify needs that may not be apparent on a national or regional scale. Notably, abortion ratios in all race/ethnicity, age, education, marital status, and parity categories declined since 1980,



**Table 3. Abortion ratios by women's characteristics for selected years among non-Hispanic white (white) and non-Hispanic black (black), and Hispanic women, 1980–2010**

	1980		1990		2000			2010		
	White	Black	White	Black	White	Black	Hispanic	White	Black	Hispanic
Age, y										
< 18	47.5	34.1	42.2	30.8	27.5	23.0	6.4	23.4	30.0	11.8
18–19	38.7	31.6	35.1	29.5	22.1	24.5	9.7	18.7	25.3	15.6
20–24	25.3	29.3	25.1	29.4	18.5	27.9	10.5	16.5	27.2	13.7
≥ 25	16.1	26.7	15.0	27.3	10.2	28.7	11.1	9.6	29.1	12.2
Marital status <sup>a</sup>										
Married	9.5	15.7	7.9	16.3	4.7	14.8	6.3	4.2	14.6	7.6
Unmarried	77.8	39.5	58.2	33.4	37.1	31.4	14.0	27.7	31.1	15.4
Educational attainment <sup>b</sup>										
< HS	22.4	21.8	15.9	14.8	14.8	15.1	7.2	11.9	17.5	6.8
High school	19.5	25.3	22.1	26.3	14.6	26.0	11.2	15.1	29.9	13.2
Some college	28.3	38.8	19.1	29.7	15.9	32.3	16.0	10.6	21.9	12.7
BA/BS	19.9	35.2	16.1	40.2	7.6	28.5	9.7	5.9	23.4	6.0
≥ MA	12.2	24.4	11.3	31.2	5.6	23.5	5.4	7.8	32.2	13.1
Unknown <sup>c</sup>	2729	1345	2928	2152	1076	1139	253	499	756	499
Total no. pregnancies (including this one)										
1	27.1	27.4	22.1	25.7	12.3	19.1	6.5	10.3	18.5	8.1
≥ 2	20.2	28.6	18.4	26.2	11.3	23.4	10.2	10.5	25.0	11.4

BA/BS, Bachelor of Arts/Science; HS, high school; MA, Master of Arts.

<sup>a</sup>Unmarried includes never married, divorced, and widowed; married includes married and separated.

<sup>b</sup>Educational attainment was not included in the birth record data for 2010; therefore, abortion ratios shown for this year used data from 2011, which are similar to 2010, for both births and abortions.

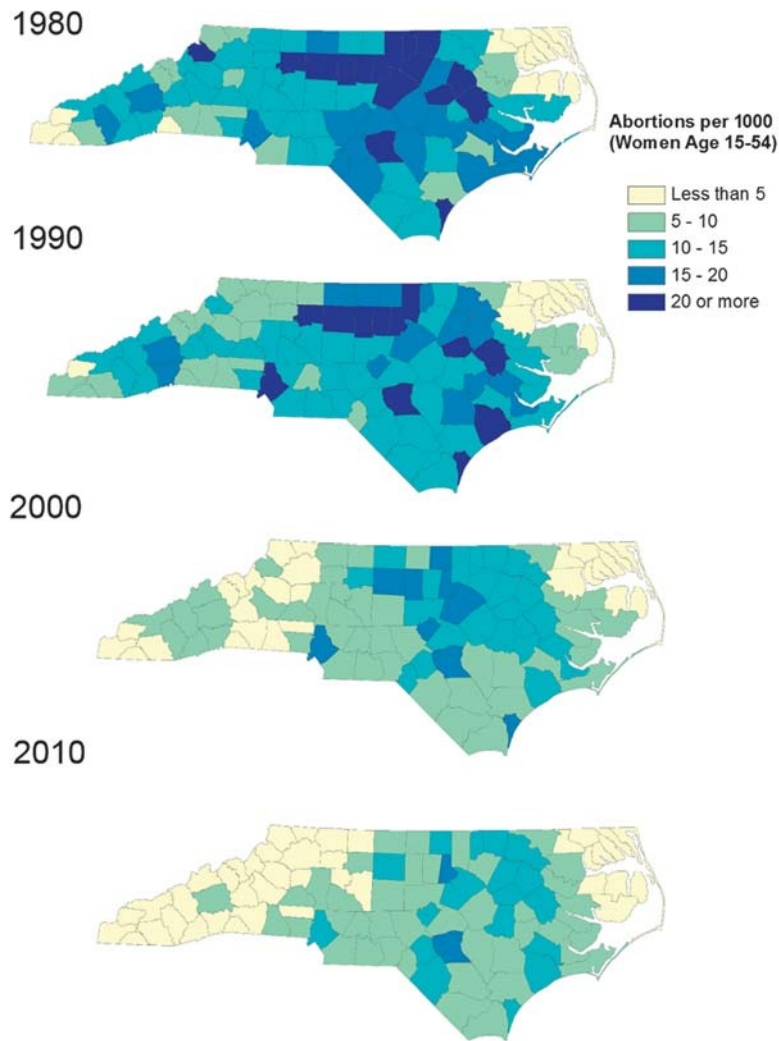
<sup>c</sup>Unknown educational attainment was reported sporadically through the years; therefore, the number of women with unknown educational attainment who received an abortion is shown here rather than the ratio.

but the largest declines are seen in the non-Hispanic white population. As found at the national level, abortions are more common among women who are older and already have children.<sup>13</sup> We also found that the geographic provision of abortion services in North Carolina has declined significantly during the 30-year period, with fewer counties where abortion procedures took place as well as lower abortion rates in the same counties over time, particularly in rural areas. This mirrors national trends.<sup>14–18</sup>

It is difficult to ascertain whether decreases in abortion reflect declining access to abortion services over time or are a reflection of improved access to contraception, especially among the youngest women and women with no prior live births. Despite viewing the trends over time in relation to external policies such as changes in abortion laws and the introduction of new contraceptives and medication abortion, this secondary data analysis cannot directly link the changes in the abortion ratio patterns to changes in state-level policies. Abortion ratios and rates were declining in North Carolina before implementation of restrictive legislation on mandatory counseling and a 24-hour waiting period and restrictions on abortion coverage in state-provided private health insurance (implemented in 2011). Similarly, we did not observe changes in trends that coincided directly with the introduction of the program or the nationwide introduction of

medical abortion and long-acting reversible contraceptives. The overall decline in pregnancy and abortion rates may reflect the gradual introduction of these methods, however. Previous studies examining the effectiveness of long-acting reversible contraceptive methods have demonstrated reductions in unintended pregnancies that lead to reduced recourse to abortion.<sup>19,20</sup> Other studies have demonstrated that declines in rates of abortion have been observed in both states with more restrictive as well as those with less restrictive abortion policies.<sup>4,16</sup> The declines observed over time are likely related to multiple economic and cultural factors, including increased access to and use of effective, long-acting contraception for women of all ages, as well as some of the policies implemented that make access to abortion more difficult (eg, parental consent laws in 1995) or have led to reduced access by the closing of abortion providers.<sup>2</sup>

This analysis has some limitations. Although North Carolina is a state with mandatory abortion reporting, and clinics providing abortions are audited by the North Carolina State Department of Health and Human Services to ensure compliance, the quality of data cannot be verified, and some underreporting may occur. The mandatory reporting form requires basic demographic information, including age, parity, and education level, but does not include other salient demographic factors such as



**Fig. 2. Number of counties in North Carolina performing abortions, 1980–2010.**

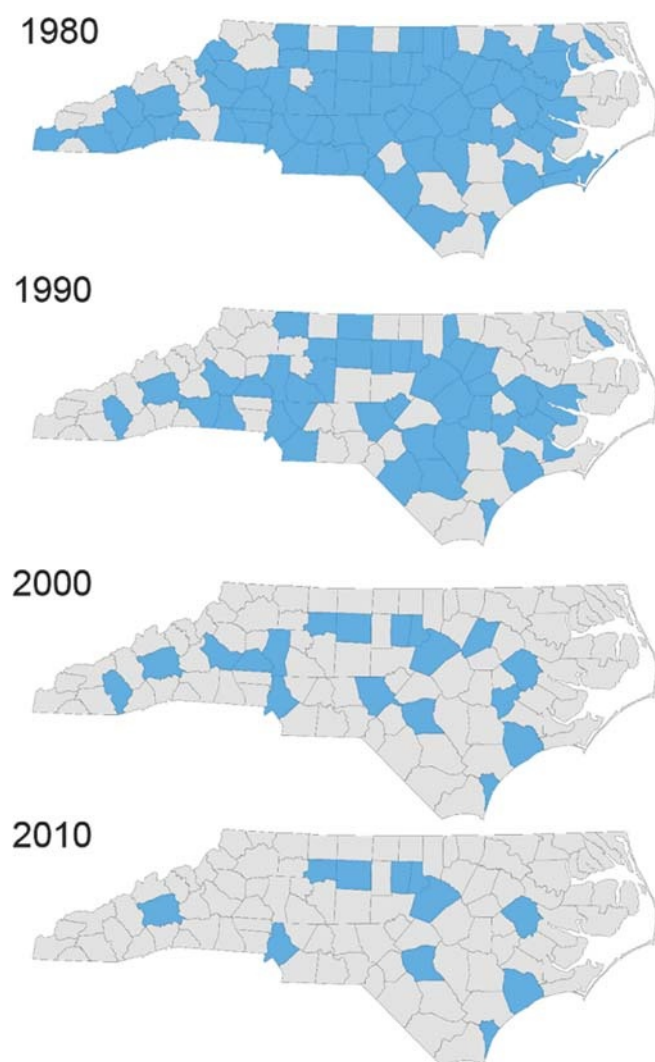
employment status, insurance status, or income level. Nationally, the Guttmacher Institute undertakes a supplemental study to capture abortion underreporting and additional demographic factors, both in states with and without mandatory reporting.<sup>3</sup> Implementing a supplemental study was beyond the scope of this secondary analysis project. With secondary data from birth certificates and abortion reporting forms, it is not possible to correct these data problems. Finally, an important limitation of this analysis is that women who live in counties with limited access to abortion may go out of state to seek abortion services. This could explain the low abortion rates in the western and northeastern parts of the state, from which women may travel to Virginia or Georgia for abortion. If this is the case, then we may be underrepresenting North Carolina abortion ratios and rates for some (or all) parts of the state.

The limitations of the dataset make it difficult to characterize associations among poverty, insurance status, employment status, and abortion. Prior research has demonstrated that most women (75%) seeking abortion are low income or poor, and this

has increased substantially since 2008, when only 42% of women seeking abortions were poor or low income.<sup>13</sup> Economic hardship may well play a significant role in the decline in both birth and abortion rates, in North Carolina and across the United States. Our analysis was not able to capture the role that poverty may have played in changing demographic trends, although North Carolina has poverty rates similar to the national average, with the exception of women of Hispanic ethnicity who have a higher rate of poverty in North Carolina than in the United States.<sup>21</sup> Notably, in this study differences in the declines by race/ethnicity have not been equal. This may reflect poorer access to preventive services such as contraception among non-Hispanic blacks and Hispanics in the state, as well as higher poverty levels in these groups.

## Conclusions

Understanding the factors that influence abortion rates can lead to better policies for women's health. Declines in abortion ratios observed in North Carolina likely reflect a combination of factors



**Fig. 3. Abortion rate (number of abortions per 1000 girls and women aged 15–54 y) by decade in North Carolina, 1980–2010.**

that influence reduction of pregnancy rates overall.<sup>6,18</sup> Our analyses suggest that women who are older, have already had a pregnancy, and belong to ethnic minority groups may have the most unintended pregnancies, based on their higher abortion ratios, and may benefit most from increased access to contraception. Alternatively, women who are non-Hispanic white may be having more difficulty obtaining abortions and thus could be traveling to other states to undergo abortions or continuing unwanted pregnancies because of a lack of access to abortion.<sup>22</sup> Access to contraception may be driving the reduction in abortion rates in some demographic groups, but not others.<sup>7</sup>

To support the goal of reducing unintended pregnancy as part of the Healthy People 2020 campaign, program managers, policy makers, and healthcare workers need to ensure that all women have access to contraceptive and reproductive health services, including abortion. This study provides a baseline of the demographic trends in North Carolina that can be used for

comparison as new policies are introduced that affect access to contraception and abortion in North Carolina and may provide a useful template for other states in the South.

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