Fertility trends and prenatal care utilization in Southern Nevada, 2010-2013

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Abstract

Objective
This report presents recent trends relating to fertility and prenatal care usage in Southern Nevada for available data years from 2010 through 2013.

Data and methods
Data from a number of sources (preliminary from 2011 onwards), including live birth, fetal death, and abortion records, were used to develop rate estimates.

Main results
Fertility rates continued the downward trend between 2010 and 2013. The teen birth rate saw the largest decline. Nonetheless, for about 20% (357) of the 1,863 teens aged 15-19 who gave birth in 2013, it was at least the second time. Of the 2,648 teen pregnancies that ended in 2012, 78.1% ended in live births, 21.1% in induced abortions, and 0.8% in fetal deaths. In general, younger mothers were less likely to utilize health services.

Abbreviations
NHB: non-Hispanic black
NHW: non-Hispanic white

Fertility trends generally reflect those in socio-economic conditions, and are indicative of demographic transitions. Sustained high birth rates can increase the needs for family and educational programs, service delivery and economic opportunities, whereas low birth rates contribute to the pressures of population aging. As such, tracking trends in fertility and birth rates is essential in planning for the current and future needs of multiple generations.

Birth rates in Clark County have fallen considerably over the past decade. The 2013 birth rate was 12.7 per 1,000 residential population, according to preliminary live birth registration data, a decline of 6.7% from the rate in 2010 (13.6). From 2010 to 2013, birth rates showed a nonsignificant increase in non-Hispanic black (NHB) women, and generally declined for all other races (Figure 1). The total fertility rate (TFR)—which estimates the number of babies a woman could expect to have, on average, during her lifetime if she experienced current age-specific birth rates throughout her reproductive life—was down 5.7% from 1.93 to 1.82 babies per woman between 2010 and 2013. Similar to the changes in birth rates, TFRs decreased among Hispanic (from 2.3 to 2.07), non-Hispanic white (NHW) (1.66 to 1.57), Asian (1.47 to 1.42), and Native American (1.24 to 1.22) women, and increased among NHB women (2.04 to 2.10) in 2010-13.

The general fertility rate declined 5.5% from 64.8 to 61.2 per 1,000 women aged 15-44 over the same period, with varying trends among age groups. The teen birth rate saw the

largest decline (23.9%) from 38.8 to 29.5 per 1,000 teenage women aged 15-19, dropping significantly for Hispanic (from 55.5 to 40.6), NHB (54.4 to 40.9), NHW (20.6 to 16.1) teens, and nonsignificantly for Asian teens (14.1 to 10.3) (Figure 2). Nonetheless, about 20% (357) of the 1,863 births to teens aged 15-19 in 2013 were repeat births. While birth rates in 2013 for women aged 20-24 (88.0) and 25-29 (100.4) were 8.5% and 6.2% lower than in 2010 (96.5 and 107.0), respectively, rates for women aged 30-34 (88.3) and 35-44 (27.8) remained essentially unchanged (86.3 and 28.3 in 2010, respectively). In 2013, Asians and Hispanics had the highest birth rates in the age group 35-44 (31.8 and 30.9 respectively), followed by NHBs (24.7), NHWs (24.6), and Native Americans (23.0).

There were 2,648 teen pregnancies (42.6 pregnancies per 1,000 teenage women aged 15-19) that ended in 2012, compared with 2,831 (45.8) in 2011 and 3,178 (50.0) in 2010. Of these pregnancies, 78.1% (2,069) ended in live births, 21.1% (558) in induced abortions, and 0.8% (21) in fetal deaths. Except for a slight uptick in the proportion of teen pregnancies that ended in fetal death (higher in 2012 [0.8%] than in 2011 [0.6%] and 2010 [0.4%]), there were no marked changes in the percentage distribution of teen pregnancy outcomes between 2010 and 2012. On the other hand, the teen abortion rate in 2012 was 9.0 abortions per 1,000 women aged 15-19, down from 2010 (11.0). In 2010-12, teenage women under age 20 accounted for 11.8% of all abortions

Definitions

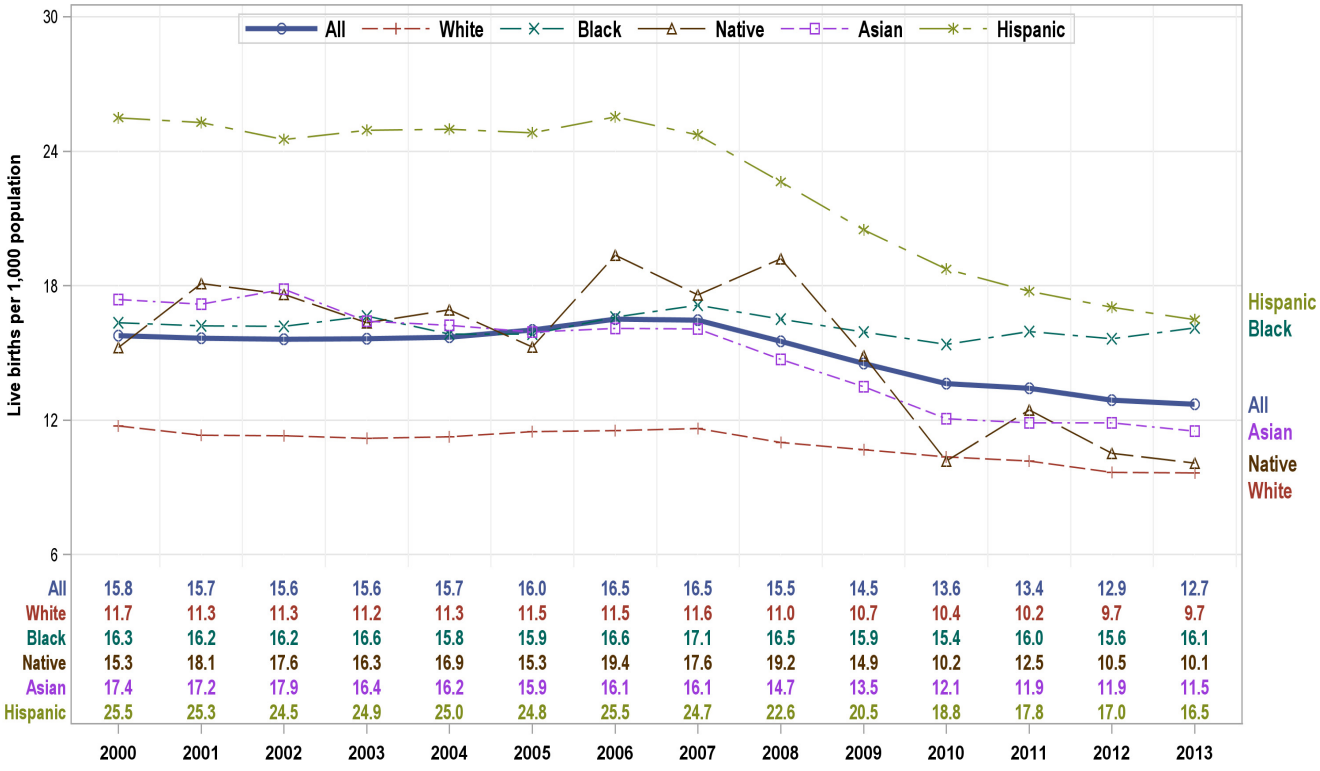
Birth rate = $\frac{\text{Number of live births}}{\text{Total population}} \times 1{,}000$

Teen pregnancy rate = $\frac{\text{Number of teen live births, fetal deaths and abortions}}{\text{Number of teenage females}} \times 1{,}000$

Total fertility rate = $\sum_{\text{age groups}}$ age-specific fertility × 5
where age-specific fertility = $\frac{\text{Number of live births in 5-year age groups}}{\text{Number of females in 5-year age groups}}$

General fertility rate = $\frac{\text{Number of live births (regardless of maternal age)}}{\text{Number of females aged 15-44 years}} \times 1{,}000$

Figure 1. Crude and maternal race/ethnicity-specific birth rates, Clark County-NV, 2000-13



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
All	15.8	15.7	15.6	15.6	15.7	16.0	16.5	16.5	15.5	14.5	13.6	13.4	12.9	12.7
White	11.7	11.3	11.3	11.2	11.3	11.5	11.5	11.6	11.0	10.7	10.4	10.2	9.7	9.7
Black	16.3	16.2	16.2	16.6	15.8	15.9	16.6	17.1	16.5	15.9	15.4	16.0	15.6	16.1
Native	15.3	18.1	17.6	16.3	16.9	15.3	19.4	17.6	19.2	14.9	10.2	12.5	10.5	10.1
Asian	17.4	17.2	17.9	16.4	16.2	15.9	16.1	16.1	14.7	13.5	12.1	11.9	11.9	11.5
Hispanic	25.5	25.3	24.5	24.9	25.0	24.8	25.5	24.7	22.6	20.5	18.8	17.8	17.0	16.5

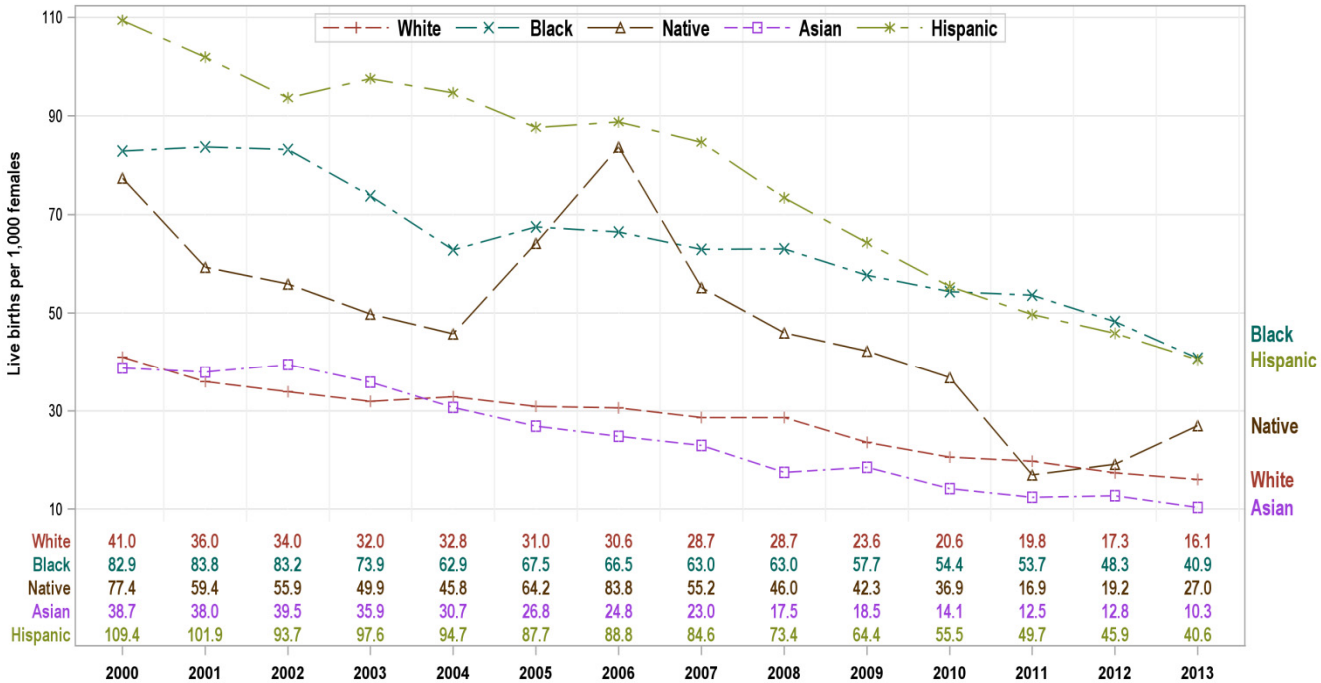
Source: Birth certificate files (preliminary for 2011 onwards); restricted to mothers residing in Clark County.
Note: Bridged-race intercensal 2000-2009 series and vintage 2012 postcensal annual age-sex-race proportions (for 2010-2012) applied to vintage 2013 postcensal population totals (for 2010-2013) as denominators.

performed, compared with 8.7% of live births. Given the adverse health and socio-economic outcomes often associated with teenage motherhood (e.g. increased likelihood of low birth weight and feto-infant mortality, medical risks for both the mother and her child,[1] loss of educational or occupational opportunities), reducing teen pregnancies remains a public health imperative. To help target preventive services and programs, teen pregnancies and repeat births were further tracked by geographic location (residential zip code) using available vital records and abortion data (Appendix A-Maps 1-2).

Prenatal care access and utilization play an important part in reducing perinatal mortality, neonatal morbidity and other preventable health problems. The percentage of women reported to begin prenatal care in the first trimester of pregnancy reached 70.3% in 2013, up from 67.8% in 2010. This compares with the Healthy People 2020 target of 77.9%.[2] Still, there were major disparities in the level of prenatal care utilization among age groups: about one-half of mothers under 20 years of age and less than two-thirds of those aged 20-24 began prenatal care visits in the first trimester in 2013, compared with much higher levels among those aged 25-29 (73.8%), 30-34 (77.3%), and 35 years or more (74.9%). The overall trends in prenatal care utilization were generally replicated among race/ethnicities, with the proportion of mothers starting care in the first trimester increasing 6-7% for Hispanics (from 58.0% to 61.3%) and NHBs (58.4% to 62.3%), and less appreciably for NHWs (80.1% to 81.3%), Asians (76.7% to 77.5%) and Natives (61.9% to 62.8%). In Clark County, the incidence of delayed or no prenatal care was relatively high in the low income neighborhoods (Appendix A-Map 3).

Increases in prenatal care utilization notwithstanding, continued progress in improving birth outcomes may require highly targeted interventions as well as broad-based intersectoral policies that enhance family support services, reproductive social capital, and community building.

Figure 2. Race/ethnicity-specific teen birth rates among females aged 15-19 years, Clark County-NV, 2000-13



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
White	41.0	36.0	34.0	32.0	32.8	31.0	30.6	28.7	28.7	23.6	20.6	19.8	17.3	16.1
Black	82.9	83.8	83.2	73.9	62.9	67.5	66.5	63.0	63.0	57.7	54.4	53.7	48.3	40.9
Native	77.4	59.4	55.9	49.9	45.8	64.2	83.8	55.2	46.0	42.3	36.9	16.9	19.2	27.0
Asian	38.7	38.0	39.5	35.9	30.7	26.8	24.8	23.0	17.5	18.5	14.1	12.5	12.8	10.3
Hispanic	109.4	101.9	93.7	97.6	94.7	87.7	88.8	84.6	73.4	64.4	55.5	49.7	45.9	40.6

Source: Birth certificate files (preliminary for 2011 onwards); restricted to mothers residing in Clark County.
Note: Bridged-race intercensal 2000-2009 series and vintage 2012 postcensal annual age-sex-race proportions (for 2010-2012) applied to vintage 2013 postcensal population totals (for 2010-2013) as denominators.

Acknowledgements

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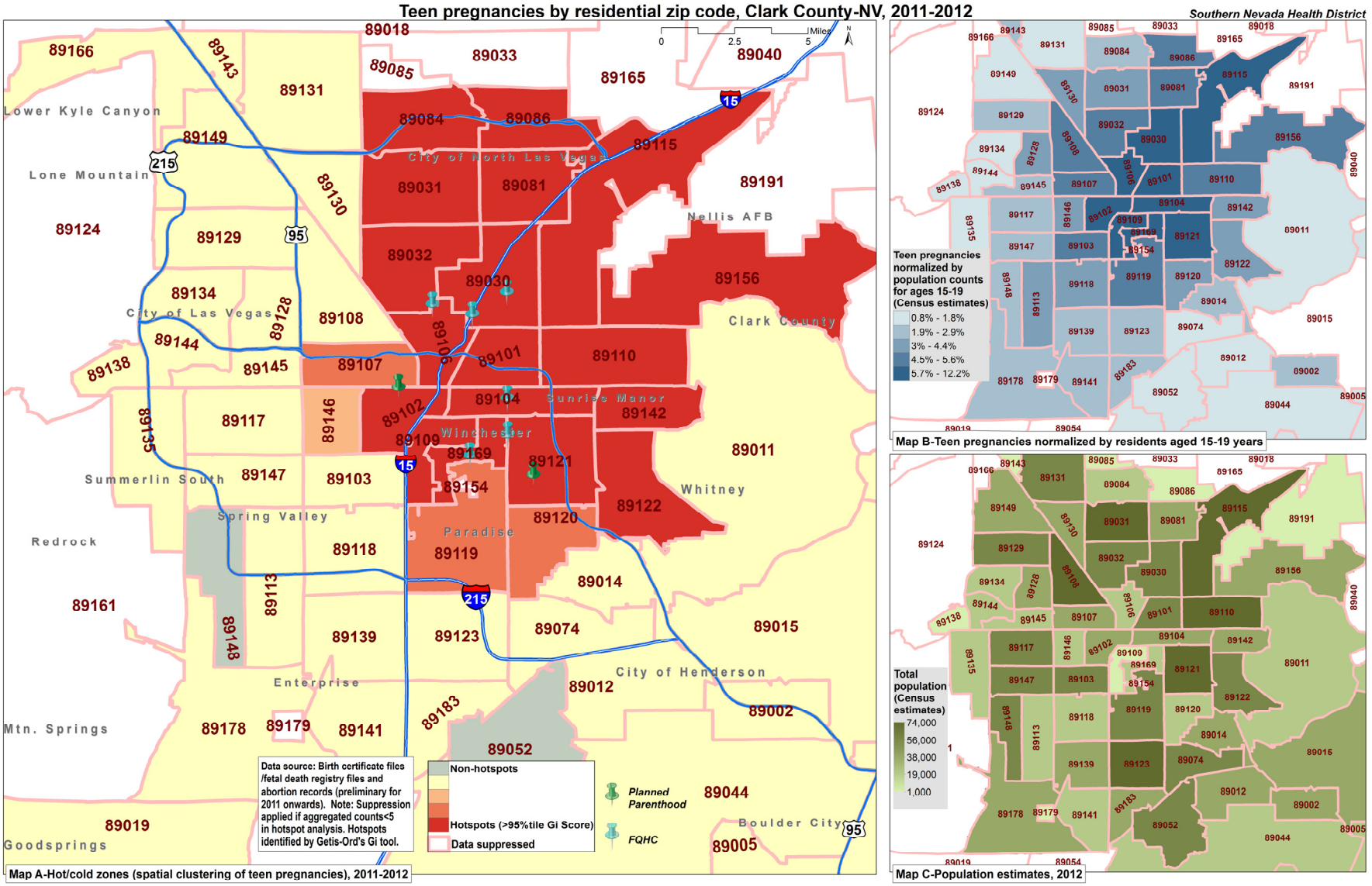
References:

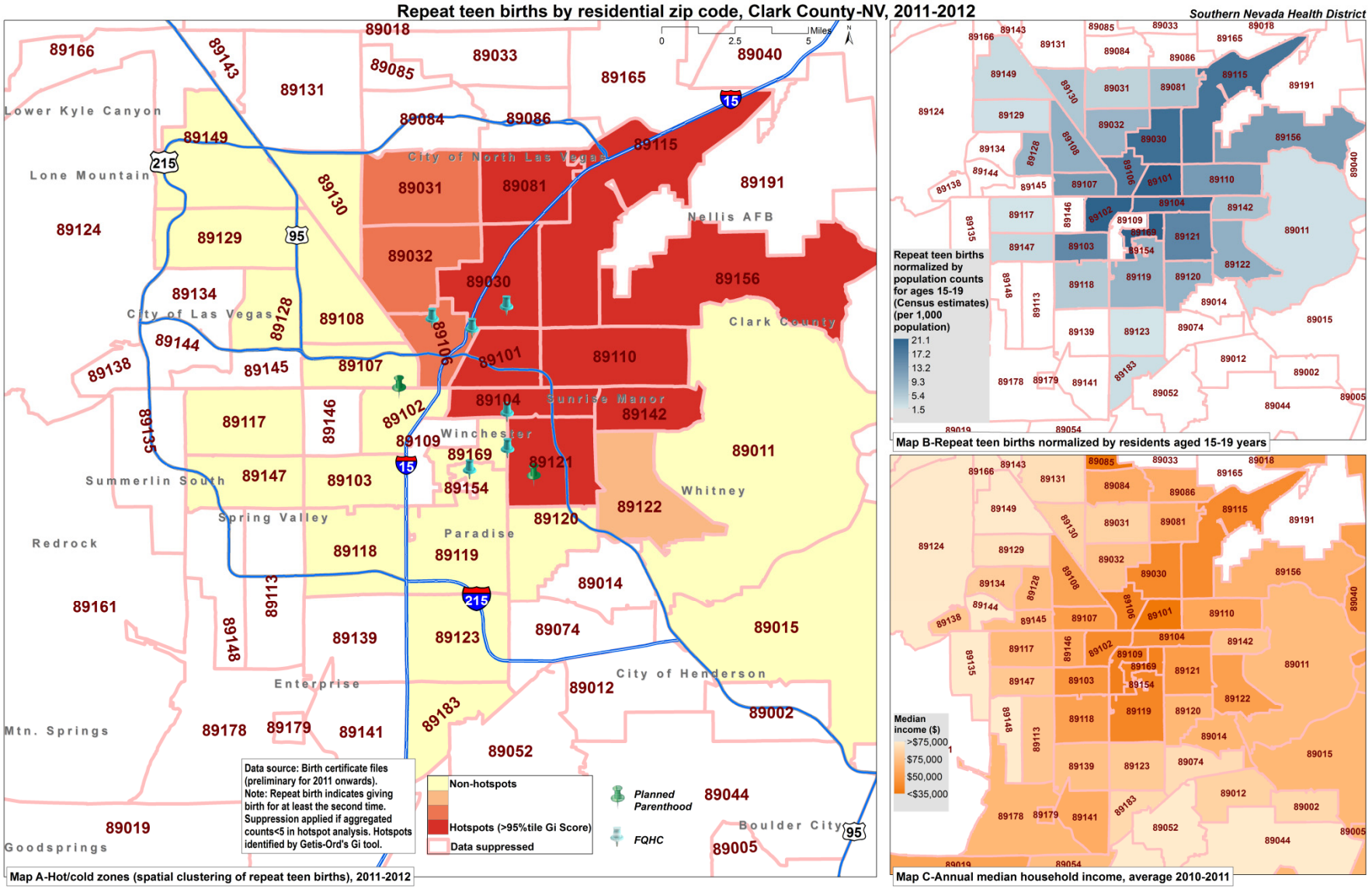
1. McIntyre P. (World Health Organization). Pregnant adolescents: Delivering on global promises of hope. Geneva: WHO; 2006.

2. U.S. Department of Health and Human Services. Healthy People 2020 summary of objectives: Maternal, infant and child health. Available at http://www.healthypeople.gov/2020/topicsobjectives2020/pdfs/MaternalChildHealth.pdf.

Appendix A. Map 1



Map 2

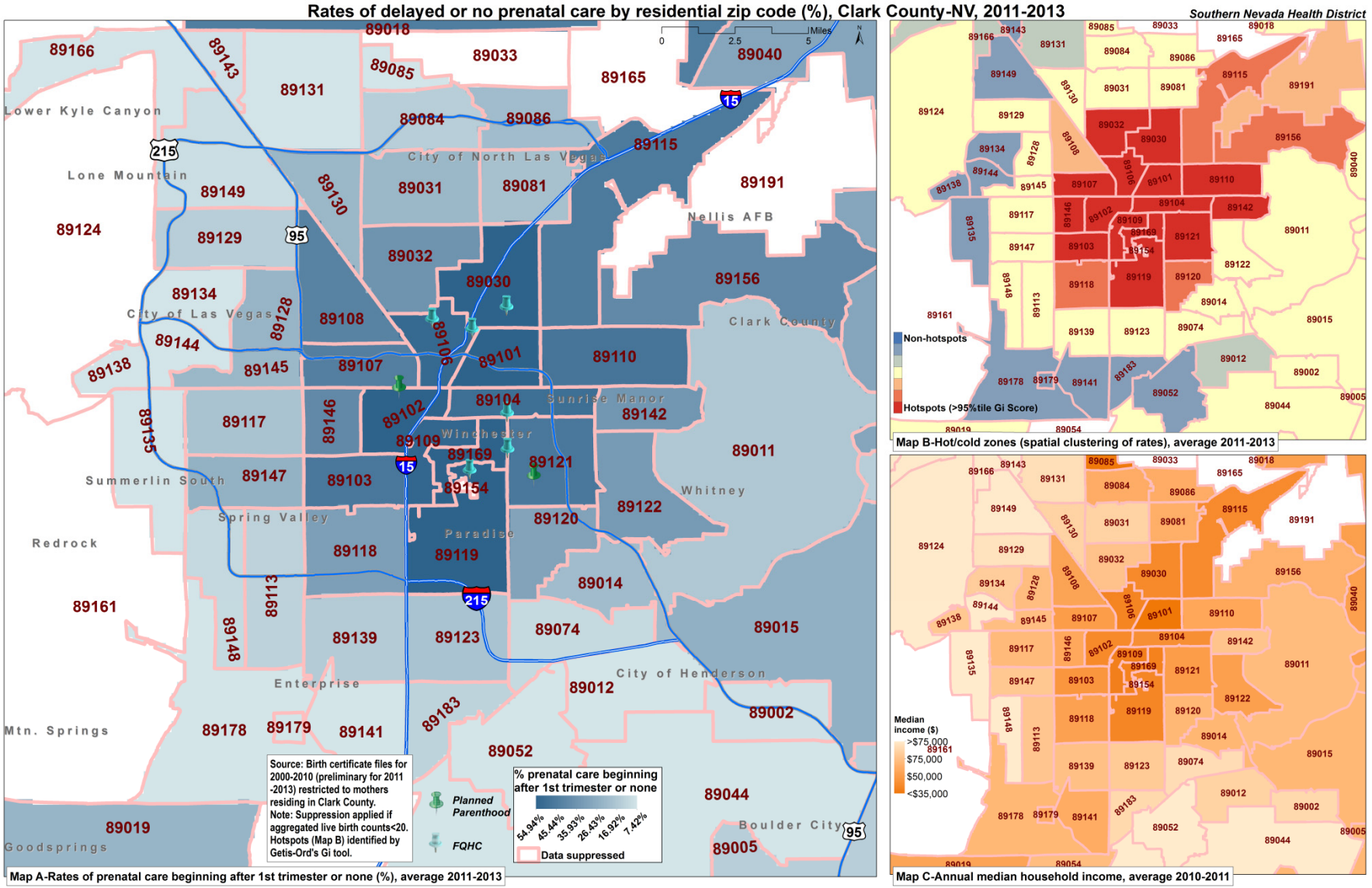


Map A-Hot/cold zones (spatial clustering of repeat teen births), 2011-2012

Map B-Repeat teen births normalized by residents aged 15-19 years

Map C-Annual median household income, average 2010-2011

Map 3


Rates of delayed or no prenatal care by residential zip code (%), Clark County-NV, 2011-2013
Southern Nevada Health District
Miles
0
2.5
5
Lower Kyle Canyon
Lone Mountain
City of North Las Vegas
Nellis AFB
City of Las Vegas
Clark County
Sunrise Manor
Winchester
Summerlin South
Spring Valley
Paradise
Whitney
Redrock
Enterprise
City of Henderson
Mtn. Springs
Boulder City
Goodsprings
89018
89166
89143
89131
89085
89033
89165
89040
89084
89086
89115
89191
89149
89130
89031
89081
89124
89129
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89156
89134
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89135
89117
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89104
89142
89109
89169
89121
89011
89147
89103
89154
89122
89120
89118
89119
89014
89161
89113
89148
89139
89123
89074
89015
89012
89183
89002
89178
89179
89141
89052
89044
89019
89005
95
215
15
Source: Birth certificate files for 2000-2010 (preliminary for 2011 -2013) restricted to mothers residing in Clark County.
Note: Suppression applied if aggregated live birth counts<20.
Hotspots (Map B) identified by Getis-Ord's Gi tool.
Planned Parenthood
FQHC
% prenatal care beginning after 1st trimester or none
54.94%
45.44%
35.93%
26.43%
16.92%
7.42%
Data suppressed
Map A-Rates of prenatal care beginning after 1st trimester or none (%), average 2011-2013
Non-hotspots
Hotspots (>95%tile Gi Score)
Map B-Hot/cold zones (spatial clustering of rates), average 2011-2013
Median income ($)
>$75,000
$75,000
$50,000
<$35,000
Map C-Annual median household income, average 2010-2011