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Disparities in Adolescent Birth Rates in New Mexico, 1990-2009

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In 2009, the U.S. birth rate for teenagers fell to the lowest level recorded since data began being compiled in 1940. State-specific rates for 2009 varied from 16.4 to 64.2, with a national rate of 39.1 births per 1,000 females aged 15-19 years[1]. New Mexico continues to have one of the highest adolescent birth rates in the U.S. with a rate in 2009 of 63.9 births per 1,000 females aged 15-19 years[2].

The high teen birth rate in New Mexico is partially a lingering consequence of elevated birth rates nearly 20 years in the past among demographic groups with a lower average age at first birth. In 1990, American Indian mothers had the lowest median age at first birth in New Mexico (20 years), followed by Hispanics at 21 years, and non-Hispanic Whites at 24 years. As a result, the current teen population has a higher proportion of American Indians and Hispanics than did the teen population of 15-19 years in the past, contributing to the state's persistently high teen birth rate. As a consequence a previous report predicted that the number of births to teenaged women in New Mexico will remain high, the proportion of births to women living in poverty, having less education and depending on public resources will increase in coming years[3].

The first issue addressed in the present report is the extent to which the persistently high teen birth rate in New Mexico can be attributed to the changing racial/ethnic composition of the teen population. Estimates will be provided of what the current rate would be if the teen population in the state had the same racial/ethnic composition in 2009 as it did in 1990.

The second issue addressed in this report is the contribution of poverty-level income to current racial/ethnic disparities in teen birth rates in New Mexico. The analysis will show what the disparities in teen births would be if every racial/ethnic group in the state had the same proportion of the teen population living below the federal poverty level (FPL) as non-Hispanic White teenagers.

Methods

Data on births to adolescents were obtained from the New Mexico Bureau of Vital Records and Health Statistics for the 5-year periods 1990-1994 and 2005-2009. Population estimates for the years 1990-1994 were obtained from the National Center for Health Statistics bridged-race intercensal population estimates and for the years 2005-2009 from the Bureau of Business and Economic Research at the University of New Mexico. Teen birth rates were computed for each of these two calendar-year periods as the number of births per 1,000 females aged 15-19 years. The teen birth rate is composed of race/ethnicity-specific birth rates weighted by the race/ethnicity-specific proportion of the teen population, thus the method of decomposition of rates was used to quantify the contribution of the changing demographic composition of the teen population on the change over time in the teen birth rate[4]. The rate change from 1990-1994 to 2005-2009 was decomposed into a composition effect and a rate effect which sum to the total difference in crude rates over time. The analysis was completed for the state overall, by region, and by county (county-level data not shown here due to space limitations).

For the analysis of the contribution of poverty-level income to racial/ethnic disparities in teen birth rates, the method of decomposition of rates was used. The difference in birth rates between Hispanic teenagers and non-Hispanic White teenagers in 2000-2008 was decomposed into a rate effect and a poverty compositional effect. Similarly the disparity or difference in teen birth rates between American Indian teenagers and non-Hispanic White teenagers was decomposed

into a rate effect and a poverty compositional effect. Because income data are not available on birth certificate records, the New Mexico Pregnancy Risk Assessment and Monitoring System weighted estimates for 2000-2008 provided the numerator to calculate income - and race/ethnicity-specific birth rates for adolescents. Census 2000 counts by poverty-level income and race/ethnicity were used for the denominator.

Results

Demographic Trend

Adolescent fertility rates declined among all race/ethnicity groups over the period from 1990 to 2009 with the sharpest decline among American Indians and African Americans. Over that period, the proportion of the teen population that was non-Hispanic White decreased by 5.5 percentage points, while the proportion that was Hispanic increased by 0.9 percentage points, the proportion that was American Indian increased by 3.5 percentage points, the proportion that was Asian Pacific Islander increased by 0.4% and the proportion that was African American increased by 0.7% (Figure 1). This demographic shift in the race/ethnicity distribution of the adolescent population contributed to the persistence of high teen births rates in the state, but only by a small amount. While the observed teen birth rate in 2005-2009 was 57.3 births per 1,000 females aged 15-19 years, the rate adjusted for the racial/ethnic composition of the teen population was only slightly lower at 55.3. In other words, if the racial/ethnic composition of the female teen population had remained the same as it was in 1990-1994, then the observed teen birth rate in 2005-2009 would have been 55.3 per 1,000.

Regionally, the demographic change in the teen population had the greatest impact on teen birth rates in the Southeast, where the crude birth rate for 2005-09 was 77.4 and the adjusted rate was 73.7 births per 1,000 girls 15-19 years of age, and in Bernalillo County where the fertility rate in 2005-09 would have been 51.2 rather than the observed 53.9 per 1,000 had there been no change in the race/ethnicity distribution of the teen population. The Northwest had the sharpest decline in the fertility rate over time from 84.9 to 50.3, with only a slight adjustment for demographic change to 49.4. The findings by region of the state were similar for high-school-aged adolescents and older adolescents.

Poverty Component

Among the population of females aged 15-19 years, 39% of American Indians, 29% of Hispanics and 17% of Non-Hispanic Whites reside in households with income below the FPL. Table 1 shows income- and race/ethnicity-specific birth rates for high-school-aged adolescents (15-17 years) and older adolescents (18-19 years). The birth rate for girls 15-17 years of age with household incomes below FPL was 103.4 births per 1,000 compared to 15.9 for girls with household incomes above FPL. Among 18-19 year-old teenagers, those residing in households with income below FPL had a rate of 212.5 births per 1,000, compared to 52.1 for those residing in households with income above FPL.

Among those 15-17 years of age, American Indians had an overall birth rate 2.6 times higher than that of Non-Hispanic Whites, however 47% of that racial/ethnic disparity is attributable to the higher proportion of young American Indian teenagers living poverty (Figure 2). If the poverty level for American Indian girls was the same as that for Non-Hispanic White girls, the race/ethnicity disparity of 2.6 would decline by 47% to 1.8. Among Hispanic teenagers aged 15-17 years, the overall birth rate was 3.2 times higher than Non-Hispanic Whites, but only 29% of that large disparity is attributable to the different poverty levels of the Hispanic and Non-Hispanic White populations. The birth rate disparity for Hispanics 15-17 years of age would decline from 3.2 to 2.6 if Hispanic girls had the same poverty distribution as Non-Hispanic Whites.

Among older adolescents 18-19 years of age, compared to Non-Hispanic Whites, the birth rate for American Indians was 2.1 times higher, and the rate for Hispanics was 2.2 times higher. The American Indian disparity would decline by 27% to 1.8 if American Indians had the same poverty level as Non-Hispanic Whites. Similarly, the Hispanic disparity would decline by 21% to 1.9.

Conclusions

Demographic change in the racial/ethnic composition of the teen population has only had a slight upward pull on New Mexico's declining adolescent birth rate over the past 20 years. This effect was most prominent in the Southeast region of the state and in Bernalillo County. These results suggest that effects of demographic change in the teen population is slow and grad-

ual and will not have a significant impact on demand for public services in the near term.

New Mexico's elevated adolescent birth rate has been variably attributed to the high rate of poverty in the state and the racial/ethnic composition. The analysis in this report shows how much of the racial/ethnic disparity in teen births can be attributed to poverty. Among high-school aged adolescents, the magnitude of the disparity is large and the poverty component is substantial for American Indians, but less so for Hispanics. Among older adolescents, the disparity is less and poverty-level income is a smaller component of that disparity. Policy-makers may use these findings to assess which adolescent populations are in greatest need of pregnancy prevention interventions, and where interventions may have the greatest impact.

References

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Table 1. Birth Rates by Maternal Age, Race/ Ethnicity, and Federal Poverty Level (FPL) Income, New Mexico, 2000-2008

	Household Income		
Race/ Ethnicity	**Less than 100% FPL**	**At or above 100% FPL**	**Rate Ratio**
15-17 years of age			
Non-Hispanic White	54.6	9.5	Referent
American Indian	72.4	20.8	2.6
Hispanic	132.9	20.4	3.2
Overall	*103.4*	*15.9*	--
18-19 years of age			
Non-Hispanic White	134.2	34.1	Referent
American Indian	183.4	80.9	2.1
Hispanic	258.8	59.6	2.2
Overall	*212.5*	*52.1*	--

Figure 1. Change over Time in the Race/Ethnicity Distribution of Births and Population of Females 15-19 years of age, New Mexico, 1990-2009

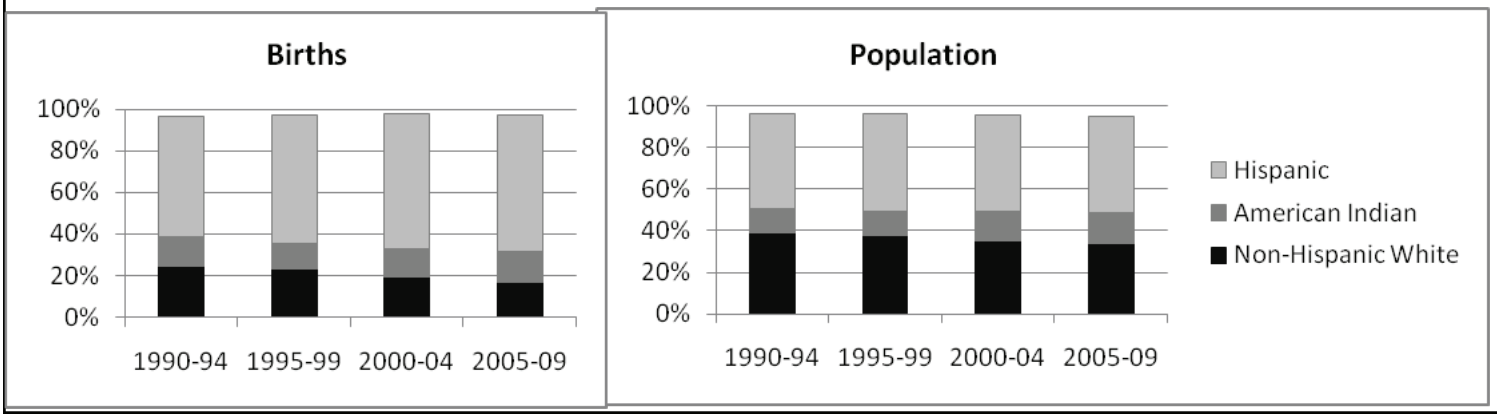

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Figure 2. Proportion of the Race/Ethnicity Disparity in Birth Rate Attributable to Poverty among Females 15-17 years of age, New Mexico 2000-2008