Explaining variation in state unintended pregnancy rates in the United States

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Background

Estimates of unintended pregnancy in the United States at the national-level have been available for many years, by using data on pregnancy intentions from the National Survey of Family Growth (NSFG) combined with national numbers of births and abortions. However, comparable estimates for states have not been available and it has remained unknown whether rates in individual states generally follow the national patterns or the even the degree to which they might differ.

Until recently, the ability to classify births as having originated from intended or unintended pregnancies has been possible for a limited number of states. However, as of 2007, 37 states had joined the Pregnancy Risk Assessment Monitoring System (PRAMS). PRAMS is a population-based surveillance project of the Centers for Disease Control and Prevention (CDC) and individual state health departments that collects state-specific, population-based data on maternal attitudes (including pregnancy intention) and experiences before, during, and shortly after a birth. In addition, seven states have instituted their own PRAMS-like surveys. These newly available data on births, combined with the most complete state-level data on abortions, allows for the first time the calculation of state-specific estimates of unintended pregnancy for all 50 states.[1] These new estimates show wide variation among the states in levels of unintended pregnancy. The aim of this paper will be to identify the factors underlying these state differences in unintended pregnancy rates.

Our preliminary analyses show that variation in unintended pregnancy rates among the states is strongly influenced by the differing distributions of age, race and ethnicity. Discrepancies in unintended pregnancy by age, race and ethnicity have been evident at the national level for some time. Between the early 1980s and the mid-1990s, the United States national unintended pregnancy rate fell nearly 20%,[2] but between 1994 and 2001 the level remained unchanged.[3] Racial disparities persisted during the same time period. In both 1994 and in 2001, Hispanic women were twice as likely as white women to have an unintended pregnancy, while black women were nearly three times as likely as white women to do so.[4]

In this paper, we examine how racial and ethnic composition of the states affects variation in rates of unintended pregnancy as well as the effects of other characteristics of the state's population, specifically distributions of age and marital status, socioeconomic characteristics of the state, and patterns of contraceptive use.

Data and Methods

Intention Status:

In this analysis, a pregnancy is defined as unintended if the woman reported either that the pregnancy was mistimed (i.e., she had wanted to become pregnant, but at a later date) or that she had not wanted to become pregnant then or at any time in the future. Conversely, intended pregnancies are those that occurred when the woman had wanted to become pregnant either at that time or sooner.

Many in the field have highlighted the inadequacy of this traditional measure of pregnancy intentions and the need for more nuanced measures.[5] For example, a pregnancy classified as "unintended" may have been unexpected and unplanned, but not necessarily unwelcomed or unwanted. In addition, mistimed pregnancies may have occurred only a little too soon or they may be much too soon. However, while other research and data collection is underway to refine these measures, the PRAMS data available for this analysis include only the more limited, traditional measure of intention status.

Unintended Pregnancy Rates:

The unintended pregnancy rate for a state is defined as the number of unintended pregnancies to residents of the state divided by the number of women aged 15–44 in the state. Population denominators by age, race and ethnic group in each state are based on the states' population estimates, calculated by the National Center for Health Statistics and the U.S. Census Bureau.[6] The estimates of unintended pregnancy rates we used for this analysis are for 2006. Methodological details f the calculation of the unintended pregnancy rates and the data used is available elsewhere.[7]

Explanatory Variables:

The state-level variables we include in our analysis as explanatory factors come from a number of different sources, all of which were required to be able to provide state-specific data. State-level population distributions in 2006 for race, ethnicity, age, and marital status come from the Census and the National Center for Health Statistics. The 2006 American Community Survey provides measures of income discrepancies (Gini coefficients and shares of income by quintile) and poverty status. Patterns of contraceptive use among residents of the state are from the Behavioral Risk Factors Surveillance System (2004; the 2006 survey did not include questions on contraceptive use in all states).

Analyses

As the first step in our analysis, we examine the correlations among potential factors as well as with the state unintended pregnancy rates. We will then extend the analysis to multivariate regressions to determine which factors have the strongest association, after controlling for other factors. It is possible that the analysis will include multiple models, explicating the effects of specific types of explanatory variables, rather than a single model including all factors. In this

way, we hope to address the relative impact of state demographics, socioeconomic characteristics of the population, and contraceptive use patterns.

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[6] National Center for Health Statistics, *Postcensal estimates of the resident population of the United States for July 1, 2000-July 1, 2008, by year, county, age, bridged race, Hispanic origin, and sex (Vintage 2008)*, Centers for Disease Control and Prevention and the US Census Bureau, 2010, <http://www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2008>, accessed September 13, 2010.

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