TIMELY IMMUNIZATION SERIES COMPLETION AMONG CHILDREN OF IMMIGRANTS

Childhood immunizations are one of the most common and basic measures of preventative health care in the United States today. According to the Center for Disease Control and Prevention, 74.8% of preschool aged children were up-to-date on physician recommended combined vaccination series in 2002. Although childhood immunization coverage in the United States has steadily increased in recent years, inequality in immunization receipt among children of racial and ethnic minority groups continues to undermine national efforts to eliminate disparities in children's health (Wood et al. 1995, Findley, Irigoyen, and Schulman 1999, Herrera, Zhao, and Klevens 2001, Chu, Barker, and Smith 2004). It is possible that these disparities may worsen over time as recent immigration trends have contributed to increasing racial and ethnic diversity among children in the United States. The proposed research seeks to examine timely completion of recommended immunization series among children of foreign-born parents compared to children of U.S.-born parents. Specifically, I seek to examine timely immunization completion among children by parental nativity status, citizenship status, and duration of residence in the United States.

Prior literature on childhood immunizations has focused on estimating coverage among foreign-born children (Findley et al. 1999, Strine et al. 2002). While approximately 20 percent of children are children of immigrants, there are relatively few foreign-born children in the United States; most are U.S.-born. Only 3% of children in the United States are foreign-born, yet 16% are native-born children of at least one

foreign-born parent (unpublished Passel). Additionally, infants and children do not have control over their own immunization status. Because it is the parent's responsibility to ensure that their children receive all appropriate vaccinations, it may be more meaningful to examine immunization status of *all* children of immigrants rather than just foreign-born children of immigrants. Therefore, the proposed research will examine timely immunization series completion while including both immigrant children *and* native-born children of immigrants. No prior research has taken into account both the nativity and citizenship status of the child's parents.

Finally, this study will present some evaluation of health care policy during a time of post-welfare reform. Recent changes in welfare have had a dramatic effect on the expanding immigrant population. Although I will not be able to make definitive conclusions about the effects of welfare reform, this study will provide insight as to how children of immigrants are faring with regards to basic preventative health care. This research will attempt to identify the effects of parental nativity, citizenship, and residential duration on timely and delayed immunization completion while aiming to inform health care providers and public health policy makers who have committed to "leave no child behind".

I propose three potentially complementary hypotheses based on the findings of previous literature:

Composition Hypothesis (H1) – I expect that children of immigrants will have lower levels of timely completion compared to children of natives because immigrants tend to belong to minority groups, live in larger families and have lower levels of education. Previous research indicates that all of these characteristics are related to lower

levels of immunization coverage and increased delay. This hypothesis implies that any nativity differences in timely completion will diminish after taking into account demographic and socioeconomic variables.

Accessibility Hypothesis (H2) - Since health insurance coverage is associated with immunization status, I expect to find lower levels of timely completion among children without health insurance coverage. Because immigrants have additional legal barriers to accessing health care, the effect of not having health insurance may be greater among children of non-citizen immigrants. This hypothesis implies that controlling for health system factors and insurance coverage may explain any remaining nativity and citizenship differentials in timely completion and delay after accounting for basic demographic and socioeconomic factors.

Residential Duration Hypothesis (H3) – Among children of immigrants, I expect that children whose parents have resided in the United States for longer periods of time will have higher levels of timely completion. Research has shown that immigrants who have resided in the United States for longer periods of time are more likely to have health insurance and are generally more assimilated into American society. These immigrants may be more accustomed to the U.S. public health care system and may also be familiar with childhood immunization requirements. Therefore, this hypothesis implies that the effects of nativity will remain even after controlling for demographic, socioeconomic, and health system variables. An alternative idea extends from segmented assimilation theory (Portes and Zhou 1993), which poses that only some immigrant groups experience better outcomes with time in the United States while other disadvantaged immigrant groups actually experience poorer outcomes. It is possible that children of immigrants

may experience variable levels of timely completion based on parental residential duration.

This investigation will use the combined 2000-2003 National Health Interview Surveys (NHIS). The dependent variable, *timely completion,* is defined by whether or not the child completed the combined 4:3:1:3:3 series (4 doses of Diphtheria, Pertussis, and Tetanus, 3 doses of Polio vaccine, 1 dose of Measles, Mumps, and Rubella, 3 doses of *Haemeophilus influenza* type B vaccine, and 3 doses of Hepatitis B vaccine) by 18 months of age. The latest date that the 4th DTP, 3rd IPV, 1st MMR, 3rd Hib, or 3rd Hep B dose was administered indicates the completion of the combined vaccination series. Logistic regression will be used to model the combined 4:3:1:3:3 series completion by 18 months of age. Results will be presented as odds ratios to determine the relative odds of timely completion among children of immigrants compared children of natives while controlling for other socio-demographic and health system factors.