Did Infant Health Improve in US Cities the 1990s?

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Extended Abstract

Nationally, rates of low birth weight and preterm birth have been either flat or have increased since 1990. These trends (or lack thereof) were evident within race, as well.[1] Infant health outcomes improved within large U.S. cities, however, among all races, and especially among African-Americans (Figure 1). Infants born to women living in large central cities are at elevated risk of adverse health outcomes relative to those born in suburbs within the same metropolitan areas. The central city disadvantage is especially pronounced among black infants (and black infants born to women living in central cities are at elevated risks relative to their white counterparts).[2] However, during the 1990s, the gaps in rates of low birth weight and preterm birth between center city and suburban black infants declined substantially.[3]

This paper is the first we are aware of to document and investigate these changes in the spatial distribution of infant health risks within metropolitan areas in the 1990s. We explore why the spatial distribution of infant health has changed, using records from the 1990-2001 National Center for Health Statistics (NCHS) Natality files for births to mothers residing in the metropolitan areas with the largest African American populations, as well as data from the 1990 and 2000 Censuses.

As a matter of accounting, the decline in relative center-city risk resulted from declines in the incidence of adverse birth outcomes among blacks living in center cities paired with lesser or

[1] Martin, et al (2005).
[2] Authors' tabulations of the 1990-2001 NCHS Natality Files.
[3] Authors' tabulations of the 1990-2001 NCHS Natality Files.

no improvement in the surrounding suburbs (Figure 2).[4] And in a few suburbs, black infant health appears to have deteriorated.[5]

We consider some hypothetical cases to illustrate possible explanations for these changes, all of which may have contributed to some degree. First, lifestyle and/or health care-related changes may have led to better relative health among a fixed/unchanging population. This type of explanation would be consistent with effects of interventions such as anti-smoking campaigns or expansions in eligibility for Medicaid or SCHIP, since within urban areas, low-income people tend to reside disproportionately in center cities rather than suburbs. Second, the relative socioeconomic status of low-income families in center cities may have improved (Jargowsky 2003) as the result of the strong economy of the 1990s and economic revitalization in many urban centers. (Greater relative socioeconomic status may or may not have improved health-related lifestyle or health care characteristics.) Third, the population composition of center cities may have changed as the result of some combination of migration of high-risk women from the center city into suburbs and migration of low-risk women into center cities. This sort of migration would change the relative demographic and socioeconomic risk for center cities.

We first ascertain that the spatial distribution of demographic and socioeconomic risk shifted favorably for center cities. We next attempt to determine the extent to which migration may have been responsible for this change, and thus changes in the spatial distribution of poor infant health. Jargowsky's (2003) finding that concentrated poverty declined during the 1990s in most cities, but increased in several inner-ring suburbs, suggests that this type of migration may have occurred (see also Galster, 2005). Consistent with the migration hypothesis, the share of

[4] Infant health improved on aggregate in large metropolitan areas, in part because center-city births tend to dominate suburban births among blacks.

[5] The center city-suburban gaps in low birth weight and preterm birth also declined among non-blacks, but this resulted largely from increases in the suburbs rather than improvement in center cities. This will be explored further.

births to black mothers declined in center cities and increased in suburbs in nearly all metropolitan areas studied (though relative fertility rates of these areas may also have changed). However, fertility rate changes are unlikely to provide the entire explanation since, for example, the decline in the share of births to black mothers in Washington, DC resulted importantly from a decline in the city's black population of peak childbearing ages (Korenman, et al. 2004); the black population of the DC suburbs also increased. We will examine changes in the socioeconomic characteristics of mothers of infants in central cities and suburbs to further explore our hypotheses, and supplement analyses of birth records with analyses of Census data to examine population mobility and fertility rates more directly.

Understanding the reasons for the dramatic improvements in indicators of infant health among blacks in large center cities in the 1990s is critical for their interpretation. A key question is: To what extent do these improvements represent true health gains in the population rather than merely the spatial de-concentration of poor infant health. In addition, a deterioration in infant health in some suburbs may be an additional indicator of increasing socioeconomic and health disadvantages of those areas (e.g., Galster 2005). Low birth weight and prematurity are important predictors of infant mortality, and there are long-standing racial disparities in infant health. Reductions in low birth weight and preterm deliveries among center-city blacks may therefore help to lower infant mortality rates and narrow racial health gaps. If, however, black infant health improvements were due largely to the spatial shifting of high-risk women and infants to suburbs (and/or low-risk women and infants to center cities), then the targeting and delivery of interventions to improve infant health may need to be adjusted.

References

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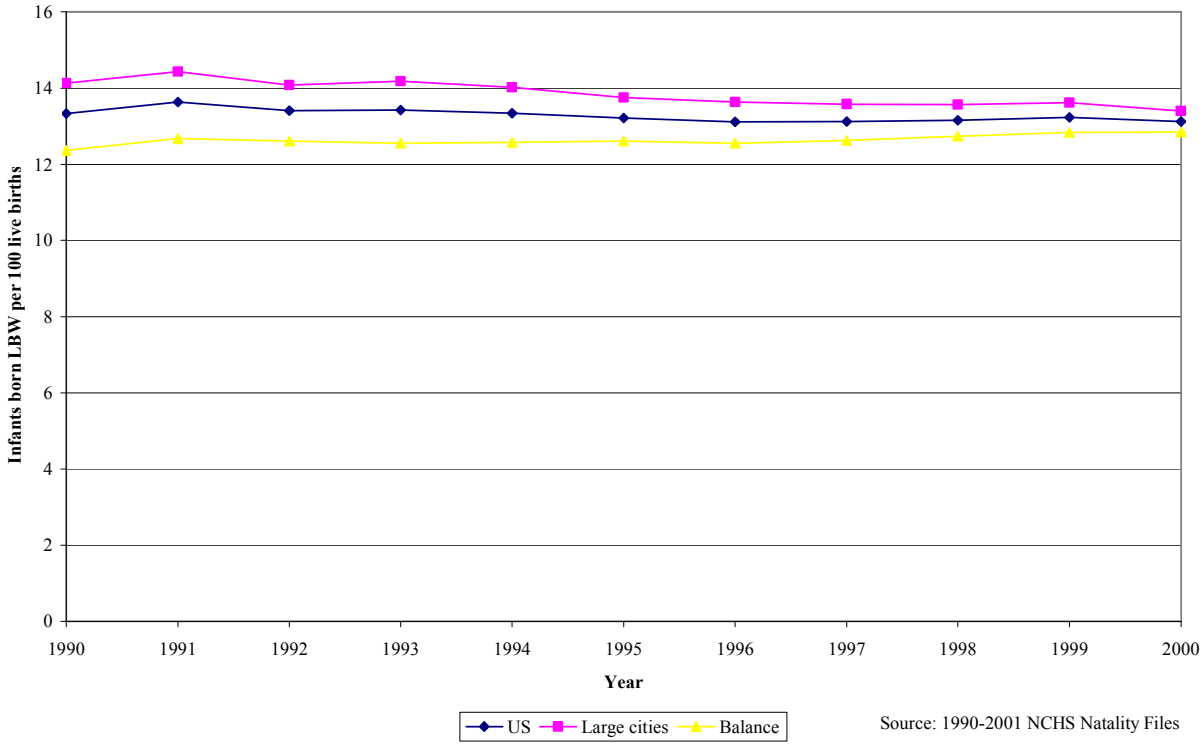
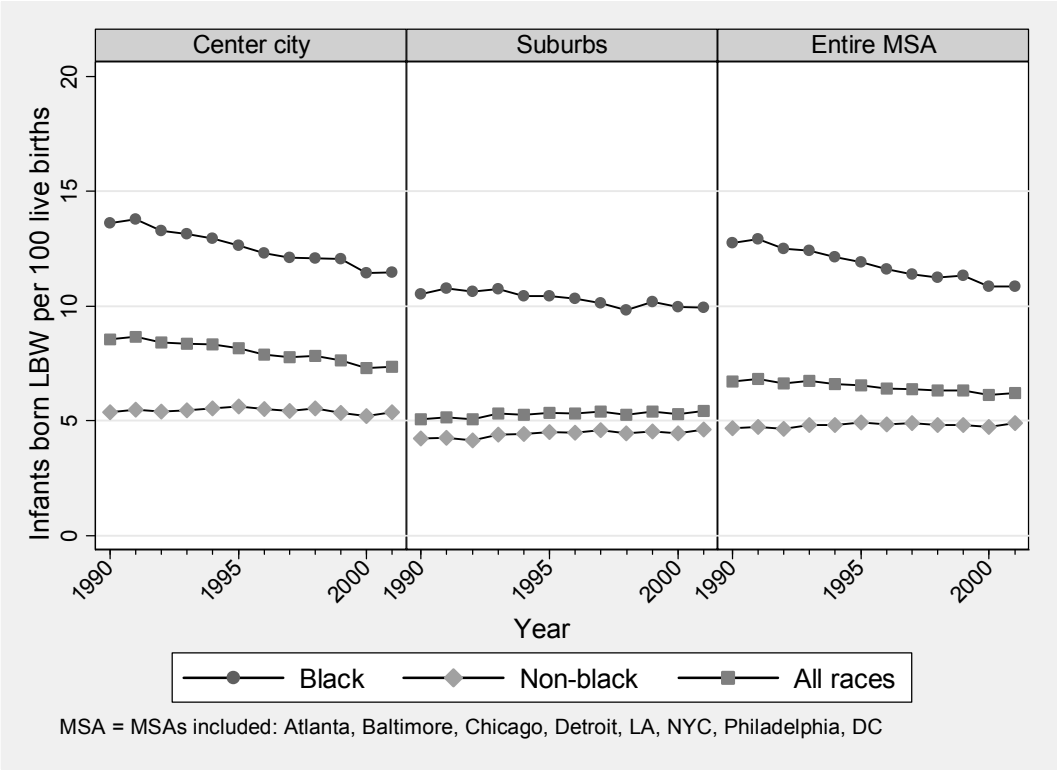
Figure 1. Trend in LBW Among Blacks, 1990-2001



Source: 1990-2001 NCHS Natality Files

Figure 2. Trend in LBW by Race, 1990-2001



Source: 1990-2001 NCHS Natality files.