A Foundation for Linking Non-Traditional Data Sources to the National Death Index: Understanding Mortality Risk among Gang Members

The National Research Council and Institute of Medicine documented that, compared to other developed countries, two-thirds of U.S. male disadvantage in life expectancy occurs before age 50. This project examines mortality risk among an understudied and hard-to-reach but exceptionally high-risk subpopulation: gang members. Gangs are street- and youth-oriented groups that share a collective identity and engage in high levels of criminal activity. Over 8% of the U.S. population has a history of gang involvement by their early 20s, and gang members are disproportionately male, black or Latino, and low SES—groups at high-risk for early mortality. Yet there are sound theoretical reasons to expect that gang members may be at lower risk of mortality, as gangs are believed to provide protection and safety to their members in high-risk and typically violent environments. Still, there is established theory anticipating a link between gang membership and homicide risk generally, but also other forms of preventable deaths, such as drug overdose and transport accidents and suicide. Prior studies have reported mortality statistics on gang members, but this work was hindered by small sample sizes of gang members and deaths, often crudely constructed comparison groups (or none at all), and a lack of systematic data collection on mortality, including cause-of-death. Consequently, the extent to which gang members experience risk of premature death, and the causes of death, is unclear.

This paper introduces the foundation for a research agenda aimed at providing a comprehensive and systematic investigation into the U.S. gang membership-mortality association. Derived from law enforcement gang intelligence gathered between 1993 and 2003, we introduce a database composed of 3,154 male gang members from the St. Louis metropolitan area (mean age=20, 90% black). In this paper, we outline the procedures associated with

determining mortality risk based on our construction of Gang Member-Linked Mortality Files (GM-LMFs). First, we introduce a conceptual foundation for anticipating a gang-mortality association generally, and causes-of-death specifically, by drawing on the selection-facilitation-enhancement models outlined by Thornberry and colleagues (1993; 2003). Second, we detail the procedures linking a non-traditional data source with the National Death Index to create the GM-LMFs. Third, we report how we assessed the validity of matches, including drawing upon additional sources of mortality data. Fourth, we describe how we developed comparison groups to determine whether mortality risks among gang members are high, low, or comparable to similarly-situated young people in the St. Louis area. Finally, we report preliminary findings on baseline risk of mortality, including overall and cause-specific mortality risk and years of potential life lost among gang members. Thus, this demonstration project highlights the value of linking gang member records to the National Death Index, and in so doing, provides valuable insights into a heretofore overlooked but important factor—gangs—that informs sex and race/ethnic differences in mortality.