Beyond the individual: The roles of social and structural contexts in HIV prevention and HIV acquisition in the United States

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## Abstract

The present dissertation leverages the utility of analyzing a variety of secondary data sources (i.e., HIV behavioral intervention data, HIV surveillance data, United States Census data, and social media data) to explore relationships between qualities of social and structural environments and conditions and HIV-related outcomes via a social-ecological approach. Advances in HIV outcomes for vulnerable, high-risk populations, e.g., African-American/Black gay, same gender loving, bisexual, and other men who have sex with men (BMSM), have been stymied by social and behavioral scientists' tendency to primarily call upon individual-behavioral factors to explain the elevated rates of HIV observed within BMSM communities. This dissertation employs a broader analytical lens, which extends beyond the individual-behavioral level, to explore relationships between social and structural variables with HIV acquisition and other key HIV-related outcomes among BMSM (Studies 1 and 2).

This dissertation also capitalizes on the strengths of social media data to garner insights about the general public's understandings of, and attitudes toward, extant HIV prevention tools. Location-based social media data (e.g., data from Twitter) are used to link attitudes toward HIV prevention tools that are expressed in social media contexts with various social and structural characteristics of the geographic locations from where the media content originates (Study 3).

The results of the three studies indicate that there are real HIV prevention, risk, and acquisition considerations for social- and structural-level variables, such that factors at these levels have significant main and interactive associations with key HIV prevention, HIV risk behavior, and HIV acquisition variables. Taken together, the results of the three studies indicate that HIV prevention and care strategies should not treat HIV as an independent social problem, separate from other social ills. Instead, future interventions must be multi-level in nature, with goals of positive behavioral as well as social and structural

change. Multi-level interventions may have greater, and more sustained impacts on HIV epidemics for members of key, marginalized groups. Considering individuals "at risk" for HIV based not only on their behavior but also on social and structural-level factors like the state of the HIV epidemic in that area, accessibility of relevant health services, and neighborhood poverty may more directly address root causes of concentrated HIV disease in key populations (e.g., BMSM), and ultimately aid in effectively ending epidemics.