The Social Vulnerability Index (SVI) refers to the “resilience of communities when confronted by external stresses on human health, such as natural or human-caused disasters, or disease outbreaks. Reducing social vulnerabilities can decrease both human suffering and economic loss.”

The SVI is derived from U.S. Census data at the tract level consisting of 16 different measures grouped into four (4) major themes: Socioeconomic Status, Household Composition, Race / Ethnicity / Language, and Housing / Transportation. The Bureau of Public Health Preparedness and Emergency Response also utilizes Centers for Medicare and Medicaid Services (CMS) emPOWER data.

From the perspective of planning for responses, the information may be best leveraged to anticipate the needs of the affected population; to include integrating vulnerability-specific mitigation and operational strategies into planning; and to advocate for and to prioritize beforehand unaccounted unique impacts of vulnerable populations during response and recovery.

Because who is “vulnerable,” or “more vulnerable,” is dependent on the nature of the hazard, for preparedness and response planning, distinct categories are more useful than an aggregated numeric index. For example, in a flooding scenario, individuals in electric beds, wheel chairs, and motorized scooters present as “more vulnerable” due to lack of mobility and inability to self-evacuate.

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1 Agency for Toxic Substances and Disease Registry. The Social Vulnerability Index (SVI). [https://svi.cdc.gov](https://svi.cdc.gov)
How do we leverage SVI and emPOWER data?

While it is difficult to prove definitive correlations between social vulnerabilities and disparity of impacts from specific hazards / threats, we can infer “likely outcomes” from empirical and experiential knowledge as well as draw from other disciplines.

For example, Hansen, et al., described the increase in hospital admissions of dialysis patients during significant heat events.\(^2\) We can use this information to design messaging and outreach before, response priorities during, and recovery activities after major heat events specific to those receiving services for dialysis. Using the map to the right, the highest numbers of dialysis patients are in the southern community areas and as such, we may target those communities with preparedness, response, and recovery efforts.

A second example is to map the location of designated Medical Countermeasure Points of Dispensing (POD) against that of varying vulnerabilities to determine the likelihood of that POD needing additional support. A POD within a neighborhood with high numbers of residents receiving home health care may benefit from additional clinical staff who can address health complications.

Contributing to Health Equity

The Chicago Department of Public Health is committed to achieving health equity, ensuring every resident has the opportunity and resources they need to get and stay healthy.

The Preparedness Program focuses on post-disaster response activities with the emphasis on preserving health and designed to serve the entire population. Our preparation is premised on “total population” as the types of disasters often have impacted and likely to impact whole populations.

We incorporate health equity concepts into thoughtful and purposeful planning and response by integrating social vulnerabilities into the planning process, identifying the hazard and vulnerability specific impacts, and developing specific activities to ensure equitable response and recovery.

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