Exploring the Correlations between Health and Community Socioeconomic Status in Chicago

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Methodology

Our analysis includes health outcomes that are influenced by one's environment, including: infant mortality, low birth weight, prenatal care, preterm births, lead screening, lead poisoning, teen birth, firearm-related casualties, cancers, diabetes, stroke, tuberculosis.

The socioeconomic variables included in the analysis relate to housing, income and education, workforce, racial and ethnic composition and 'climate', and include:

Housing

- Percent of the population living in crowded housing
- Percent of vacant units
- Percent of owner-occupied housing

Income and Education

- Percent of the over-25 population with a high-school diploma
- Percent of the over-25 population with a bachelor's degree
- Percent of families in poverty
- Per capita income

Employment

- Labor force participation
- Unemployment rates
- Self-employment in non-incorporated business rates

Racial and Ethnic Composition

- Percent of the population that is African American
- Percent of the population that is Hispanic
- Percent of the population that is foreign born

Climate

- Crime rates
- 311 Service call intensity rates
- Home mortgage and small business lending volumes
- Presence of financial institutions
- Business counts

The first level of analysis correlates the socioeconomic data with health outcomes (e.g., how strongly, positively or negatively do unemployment levels correlate with the incidence of diabetes?).

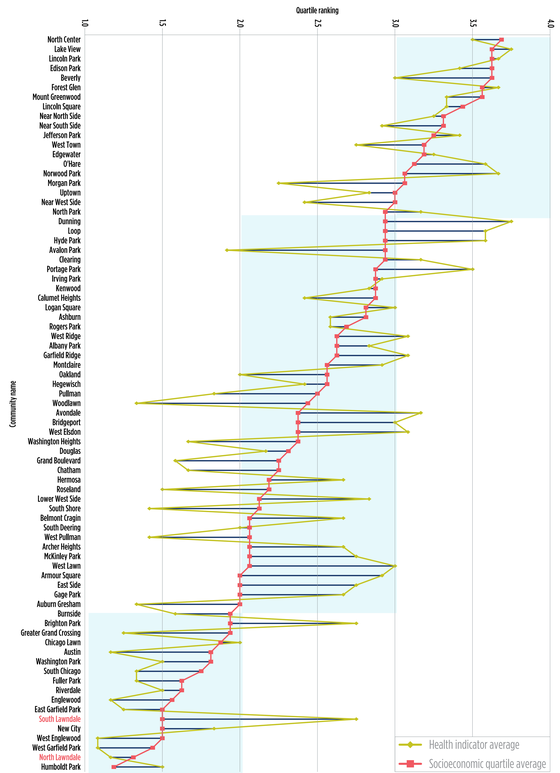
Then, both the community-level SES and health outcomes are sorted into quartiles. With this organization, we explore the extent to which health outcomes improve or deteriorate with various isolated SE factors related to income, employment, race and ethnicity and housing.

Next, Chicago's are indexed communities by SES quartile outcomes with the corresponding health quartile outcome to provide a simple illustration of whether health outcomes improve as SES status improves, and vice versa.

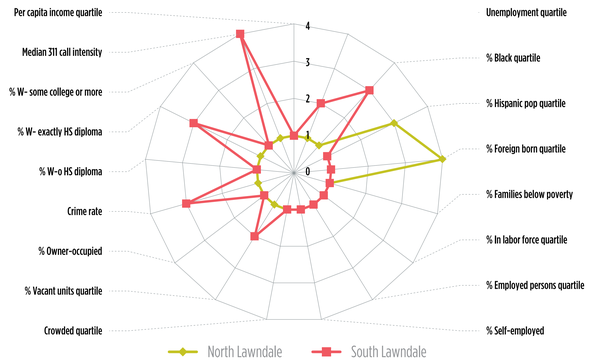
Returning to the hypothesis that community SES determines individual health outcomes, we look for communities that disprove this hypothesis by outperforming their SES quartile by at least one in terms of health quartile. Finding two contiguous communities that have different health outcomes, we conducted field interviews with community development and health practitioners in those communities.

Much research demonstrates that where you live – and the socioeconomic conditions present in that place – determine individual-level health outcomes. Based on the premise that individual stressors tend to aggregate themselves into communities with poor socioeconomic status (SES), leads to the conclusion that "where you live determines how long you live." As former Federal Reserve Chairman Bernanke stated: "factors such as educational attainment, income, access to healthy food, and the safety of a neighborhood tend to correlate with individual health outcomes in that neighborhood." These factors are referred to as the social determinants of health. Using community level data available through the City of Chicago Data Portal as well as aggregated census tract level economic data compiled by the Federal Reserve Bank of Chicago, we explored community-level SES conditions and corresponding health outcomes in Chicago's 77 communities to derive a localized perspective on a commonly accepted hypothesis that the socioeconomic conditions of a place contribute to the health outcomes of residents.

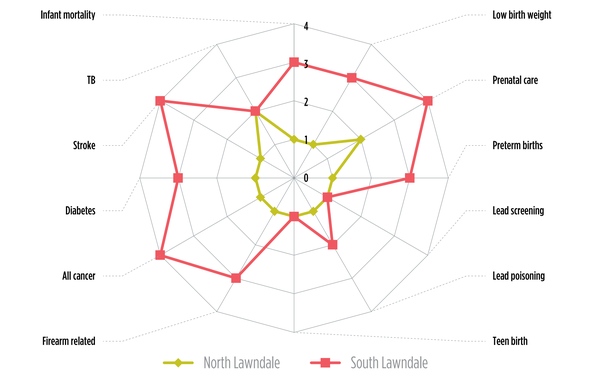
Community Index



Socioeconomic indicator quartiles: North and South Lawndale



Health indicator quartiles: North and South Lawndale



Summary of Findings

Without being able to determine causality, strong correlations exist between the socioeconomic characteristics of a place and health outcomes of residents in Chicago's communities.

*Positive correlations between ethnicity and foreign born status and health are particularly strong.
*Employment and labor force participation are correlated with positive health outcomes, as are occupied units and home ownership.

*There exist positive correlations between health outcomes and economic activity, as measured by home mortgage and small business lending, as well as the presence of financial institutions and self-employed residents.

*Race, poverty, vacancies and unemployment are all strongly and negatively correlated with health outcomes.

*The quartile analyses concur with the correlation results and but reflect that while health outcomes do improve with higher SES, this is not true in all places, nor are all improvements consistent.

*Health outcomes appear to improve most steadily with increases in labor force participation and employment. Further the racial and ethnic composition of a community appears to play a strong role in the health outcomes experienced by the residents of that community which either steadily improve or deteriorate with changing demographic compositions.

Results from other SES variables (owner-occupied units, vacancies, poverty, per capita income and crime) would seem to indicate that interventions in the lowest SES communities have significant impact in terms of health outcomes which becomes muted or even reversed in the highest SES communities.

From these results, one could hypothesize that connectivity – to a cultural network, to a job, or at least to the labor force, or within a community with a stable housing market – results in positive health outcomes. Conversely, isolation (either real or perceived) – aggregated across a place – that results from concentrated poverty, unemployment, race, and vacancies -- correlates strongly with negative health outcomes.

Implications

The results of our analysis would seem to indicate that the socioeconomic conditions of a place interact strongly with the health outcomes of residents, especially in LMI communities. However, low socioeconomic standing is not a prescription for poor health outcomes, as demonstrated by the case of South Lawndale. Nevertheless, being aware of the correlations that exist between socioeconomic interventions and health outcomes presents opportunities for community development and community health practitioners, alike.

With deep experience in workforce development, community development practitioners play an important role in connecting individuals to the labor market an important corollary with positive health outcomes. The community development field is also well-versed in stabilizing housing markets, as well as in providing early childhood development opportunities. However, addressing the health issues associated with racial concentration would appear to require further exploration and engagement.

The thought that community development interventions – such as those that connect people to jobs, those that create community networks and systems and those that empower people within their communities – may have positive measurable health outcomes is becoming mainstream. Positive correlations between levels of HMDA lending and small business activity and health outcomes provide further indication of the importance of vibrant community resources, including access to credit and financial institutions.

Increasing numbers of successful collaborations across the health and community development field abound, most frequently in the realm of access to healthy food, green space and early childhood development, although new initiatives make the link between stable housing and health, as well.

With aligned understanding should come aligned implementation. However, linking these interventions in a holistic approach that recognizes the connection between investments in stable employment, housing and education and positive health outcomes is challenging. This requires defining common goals, objectives and measurement tools; coalescing funding streams and reporting processes; as well as coordinating timelines and expectations regarding change and impact.