

Community Need Index

Methodology and Source Notes

Overview

Not-for-profit and community-based health systems have long considered community need a core component of their mission of service to local communities. While specific initiatives designed to address health disparities vary across local communities (outreach to migrant farm workers, asthma programs for inner city children, etc), the need to prioritize and effectively distribute hospital resources is a common thread among all providers.

Given the increased transparency of hospital operations (quality report cards, financial disclosures, etc.), community benefit efforts need to become increasingly strategic and targeted in order to illustrate to a variety of audiences how specific programs have been designed and developed. While local community needs assessments will always play a central role in this process, they are often voluminous, difficult to communicate, and may lack necessary qualitative and statistical justification for choosing specific communities as having the “greatest need”.

Because of such challenges, Dignity Health and Truven Health jointly developed a Community Need Index (“CNI”) in 2004 to assist in the process of gathering vital socio-economic factors in the community. The CNI is strongly linked to variations in community healthcare needs and is a strong indicator of a community’s demand for various healthcare services.

Based on a wide array of demographic and economic statistics, the CNI provides a score for every populated ZIP code in the United States on a scale of 1.0 to 5.0. A score of 1.0 indicates a ZIP code with the least need, while a score of 5.0 represents a ZIP code with the most need. The CNI should be used as part of your larger community need assessment, and can help pinpoint specific areas that have greater need than others. The CNI should be shared with your community partners and used to justify grants or resource allocations for community initiatives.

Methodology

The CNI score is an average of five different barrier scores that measure various socio-economic indicators of each community using the 2014 source data. The five barriers are listed below along with the individual 2014 statistics that are analyzed for each barrier. These barriers, and the statistics that comprise them, were carefully chosen and tested individually by both Dignity Health and Truven Health:

1. Income Barrier

- Percentage of households below poverty line, with head of household age 65 or more
- Percentage of families with children under 18 below poverty line
- Percentage of single female-headed families with children under 18 below poverty line

2. **Cultural Barrier**

- Percentage of population that is minority (including Hispanic ethnicity)
- Percentage of population over age 5 that speaks English poorly or not at all

3. **Education Barrier**

- Percentage of population over 25 without a high school diploma

4. **Insurance Barrier**

- Percentage of population in the labor force, aged 16 or more, without employment
- Percentage of population without health insurance

5. **Housing Barrier**

- Percentage of households renting their home

Every populated ZIP code in the United States is assigned a barrier score of 1,2,3,4, or 5 depending upon the ZIP code national rank (quintile). A score of 1 represents the lowest rank nationally for the statistics listed, while a score of 5 indicates the highest rank nationally. For example, ZIP codes that score a 1 for the Education Barrier contain highly educated populations; ZIP codes with a score of 5 have a very small percentage of high school graduates.

For the two barriers with only one statistic each (education and housing), Truven Health used only the single statistic listed to calculate the barrier score. For the three barriers with more than one component statistic (income, cultural and insurance), Truven Health analyzed the variation and contribution of each statistics for its barrier; Truven Health then weighted each component statistic appropriately when calculating the barrier score.

Once each ZIP code is assigned its barrier scores from 1 to 5, all five barrier scores for each ZIP code are averaged together to yield the CNI score. Each of the five barrier scores receives equal weight (20% each) in the CNI score. A score of 1.0 indicates a ZIP code with the least need, while a score of 5.0 represents a ZIP code with the most need.

Data Sources

- 2014 Demographic Data, The Nielsen Company
- 2014 Poverty Data, The Nielsen Company
- 2014 Insurance Coverage Estimates, Truven Health Analytics

Applications and Caveats

- CNI scores are not calculated for non-populated ZIP codes. These include such areas as national parks, public spaces, post office boxes and large unoccupied buildings.
- CNI scores for ZIP codes with small populations (especially less than 100 people) may be less accurate. This is due to the fact that the sample of respondents to the 2010 census is too small to provide accurate statistics for such ZIP codes. This issue is mitigated by either eliminating such ZIP codes from your analysis completely, or by making sure that low population ZIP codes are combined with other surrounding high population ZIP codes using the weighted average technique described above.