

Synergy/ORO Informatics new feature supports researchers in measuring healthcare disparities through Deprivation Indices

Thanks to a collaborative effort between informatics groups including the Analytics Institute and the eDH Epic4Research (E4R) team, we now have geographic social determinants of health (SDOH) linked to a patient's current address. The new indicators, available in both the data warehouse and the Clarity database, are as follows:

- **Area Deprivation Index (ADI)** – Mapped at the neighborhood level, the ADI includes indicators that compare individual neighborhoods to other neighborhoods in the state (by decile) and other neighborhoods throughout the country (percentile). For more information about the ADI, researchers can visit <https://www.neighborhoodatlas.medicine.wisc.edu/>
- **Social Deprivation Index (SDI)** – A weighted composite measure (between 0 – 100) incorporating seven geographic characteristics collected in the American Community Survey (ACS): percent living in poverty, percent with less than 12 years of education, percent single-parent households, percent living in rented housing units, percent living in overcrowded housing units, percent of households without a car, and percent of non-employed adults under 65 years of age. For more information about the SDI, researchers can visit <https://www.graham-center.org/maps-data-tools/social-deprivation-index.html>
- **Social Vulnerability Index (SVI)** – A composite measure based on 4 themes of social vulnerability comprised of 16 data elements: socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation. Each census tract receives a ranking on the 4 themes in addition to an overall ranking. This index is often used by the CDC to target resources during national disasters. However, because of the socioeconomic factors used to calculate it, it can be used to assess health care equity when juxtaposed with disease burden, screening rates, or resource utilization. For more information about the SVI, researchers can visit https://www.atsdr.cdc.gov/placeandhealth/svi/documentation/SVI_documentation_2020.html
- **NOTE: Rural Urban Commuting Areas (RUCA)** scores have been available to researchers for some time in both the data warehouse and the Clarity database, and we wanted to remind researchers that they can use this score in conjunction with the indices above. RUCA maps at the zip code level. For more information about RUCA, researchers can visit [Rural-Urban Commuting Area \(RUCA\) codes – WWAMI RHRC \(uw.edu\)](#)

Images plotted using the three new indices are shown below (*in all 3 plots, dark red indicates highest deprivation and/or greatest vulnerability*)

