Public Participatory GIS (PPGIS) and Community-Based Participatory Research (CBPR) Used to Evaluate Health Care Accessibility in New Mexico

An Intervention Design Project – PH 221, Spring 2026

More Information – https://www.unm.edu/~lspear/health_gis_additional.html

SDOH

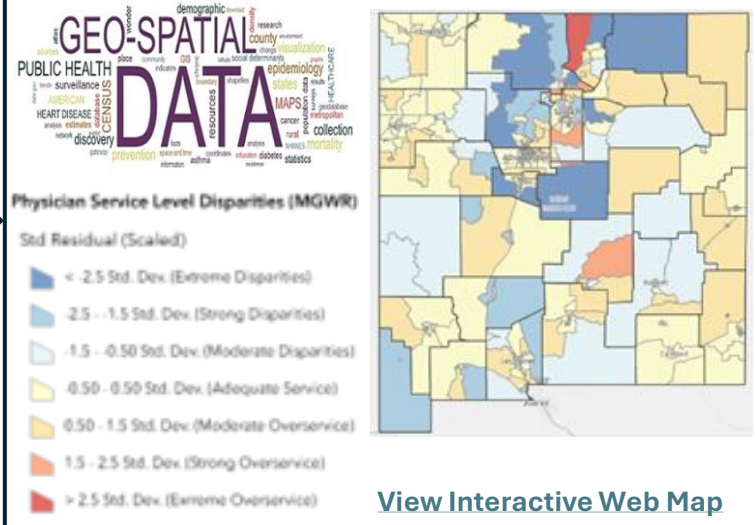
Goals:

- Improve accessibility (geographic & economic) to primary care services and facilities for all community members.
- Measure relative levels of social disparities among communities.
- Promote interdisciplinary (multi-theoretical) research and community cooperation for good policy development.

Census Tract Data from the ACS and NPI

- Insurance coverage from the Health Care Access and Quality domain plus NPI primary care physician locations.
- Composite index of selected indicators from the other four domains.

PPGIS & CBPR



View Interactive Web Map

State and university public health and GIS professionals cooperating with community members

- Gravity models (1S & 2SFCA) to
- measure geographic accessibility
- Multiscale geographically weighted regression (MGWR) to statistically compare geographic accessibility and insurance coverage with a SDOH composite index.

SEM and SEF

Constructs and Ecological Influences:

Community -> Access to health care & local health advisors.
Policy/Societal -> Data-driven information for policymakers.
Organizational -> Cooperation (state-university-pub.-priv.)
Interpersonal -> Communication about health issues.
Individual -> Knowledge & self-efficacy about health issues.

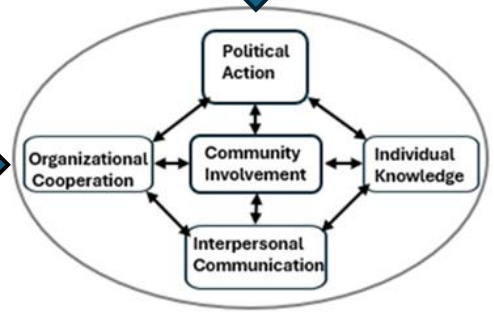
Identification of the relative disparities among communities (census tracts)

- Create various data-driven maps and tables.
- These informative maps and tables can be used to help community members and coalitions to understand the allocation of health resources and their accessibility in comparison to other communities.
- This information can be used by communities and policymakers to cooperatively design appropriate interventions composed of funding for facilities, more health professionals, and affordable health insurance.

Potential Results

- Data-driven information for policymakers.
- Better accessibility to healthcare providers in communities.
- Increased cooperation among state, university, public, and private organizations.
- More communication about health issues and healthcare services between friends and family members.
- Improved behavior (knowledge & skills) related to affordability of health insurance benefits for all individuals.

Improved health and well-being for all people in New Mexico by 2030



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