Introduction: Social determinants of health (SDOH) are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life risks and outcomes. In addition to the more material attributes of “place,” the patterns of social engagement and sense of security and well-being are also affected by where people live. Resources that enhance quality of life can have a significant influence on population health outcomes (Healthy People 2020). The Nebraska Collaborative Improvement & Innovation Network (CoIIN) Social Determinants of Health (SDOH) Team has been working in the SDOH Learning Network of the nationwide Infant Mortality CoIIN since 2015. The aim of the SDOH Learning Network is to build state and local capacity to influence SDOH.

The mapping of risk and protective factors is identified as a strategy for guiding policy, program, and community decisions. In Nebraska, mapping of risk and protective factors at the county level is a way to engage individuals and groups in conversations about population health not limited to individual behavior. In this way, conversations about equity can be guided by the variations in the conditions and circumstances in which we live.

The NE SDOH COIIN Team seeks to use maps to tell a story portraying social and environmental aspects of access to health care. Four maps are included: A1 Lack of health insurance and locations of essential available facilities (Federally Qualified Health Centers - FQHCs) and critical access hospitals; A2 Mental Health Professional availability; A3 Registered Nurse availability and A4 Physician availability.

Maps: (Full-sized maps are available in the Appendix section)
The Significance We See:

A1: Insurance coverage is critical to health care access in the current environment. Health insurance coverage was considered the protective factor, but the team found the risk factor of being uninsured to align more logically with the placement of Federally-Qualified Health Centers and Critical Access Hospitals as a “health care safety net.” The key message is that the safety net is limited in a largely rural state when considering distances to travel along with lack of insurance coverage.

A2: The availability of mental health professionals is a current topic in our rural, underresourced state. In light of evidence of increasing mental health needs in the population, from early identification and intervention for childhood behavior issues, to youth suicide and depression, binge drinking, and more, the team sees significance in showing the geographic variability in the distribution of this workforce.

A3: The distribution of Registered Nurses in the state was assessed as a resource for staffing critical access hospitals, nursing home care for an aging and disabled population, leading community-based care teams in the management of chronic disease, evidence-based home visiting, and other home-based health services.

A4: The distribution of physicians and mid-level health professionals (advance practice registered nurses and physician assistants) is telling of the capacity and sustainability of the primacy health care system.

NOTE: Our team became interested in locations and availability of WIC nutrition programs, high quality early childhood care and education, and Meals on Wheels. System-level changes discussed include strengthened organizational relationships and networks, use of telehealth, behavioral health integrated into Managed Care contracts, and community systems building in the area of early childhood mental health and parent support.

Suggested Questions for Discussion:

- To what extent do you think access to health care is a function of transportation availability?
- What is the average distance people travel in your area to obtain health care? Dental care? Mental Health or Behavioral Health Services?
- What other health-supporting services do you think are important to well-being of families or older community members in your area?
Limitations of the Maps:

- Small populations, for example of very young children in rural counties, limit our ability to display data in map form by county.
- Medicaid information would be relevant to understanding health insurance coverage, yet is not shown here.

Unexpected Insights from the Maps:

Considering Access through the lens of life course development and social determinants of health led us to see the topic more broadly than health care. In addition to Access as a function of insurance, facilities, and workforce, the team began to see Access as a function of disparate economic development geographically, available transportation, and income eligibility. Discussions about Access enlarged to include internet access, food access, access to high quality early education services, and distances. The team began to see more nuanced aspects of “the population,” and discussed the significance of the maps if interpreted specific population groups based on age, race, or disability.

Recommendations - Using this Information

- In your community, where is access a concern or a priority? It may be health care, or it may be food assistance, a public library, or other priority you already know in your community. Are there ways access to this resource has a positive impact on health and well-being?
- Our team considered access in terms of facilities, workforce, and insurance. Are there other measures for access that are meaningful in your location?
- Are there particular groups in your community whose needs are not being served by the present level of resources in your community?
APPENDIX 1: A1 Covered Health Insurance and location of FQHCs, by county

Percent of Residents Under 65 Years of Age Without Health Insurance and Location of Federally Qualified Health Centers (FQHCs) and Critical Access Hospitals (CAH) by County, 2014, Nebraska

Legend
- Hospitals, CAH
- FQHC

Percent Without Health Insurance
- No Data
- 1% - 10%
- 11% - 13%
- 14% - 16%
- 17% - 20%

Source: County Health Rankings and Roadmaps (www.countyhealthrankings.org).
The measure is the percentage of the population under 65 years of age that has no health insurance coverage converted to show the percentage of the population currently with insurance of health coverage plan of any type. The FQHC’s are state and federally funded sites.

Map updated by DHSS GIS 5/2017
APPENDIX 2: A2 Number of Mental Health Providers / 10,000 people, by county

The Number of Mental Health Providers (MHP) per 10,000 Population by County, 2016, Nebraska

Legend
MHP's per 10,000 Pop.
- No Data
- 1 - 10
- 11 - 18
- 19 - 27
- 28 - 49

Source: Data is from the Robert Woods Johnson’s County Health Rankings and the National Provider Identification data file. Mental health providers include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advance practice nurses specializing in mental health care.
APPENDIX 4: A4 Physician availability

Physician, Physician Assistant, Nurse Practitioner with a specialty of Family Medicine - 2017

Primary Practice Location

Physicians (713) and Physician Assistants and Nurse Practitioners (612) for a total of 1325 with a specialty of Family Medicine. This is the most predominant primary care specialty serving in Nebraska.

Source: Health Professions Tracking Service, Office of Community and Rural Health
Last Updated: March 2017
Location: X:\Rural Health Intern\HPTS Data

Cartography: Thomas Rauner, DHHS Primary Care Office Director
thomas.rauner@nebraska.gov, 402-471-0148