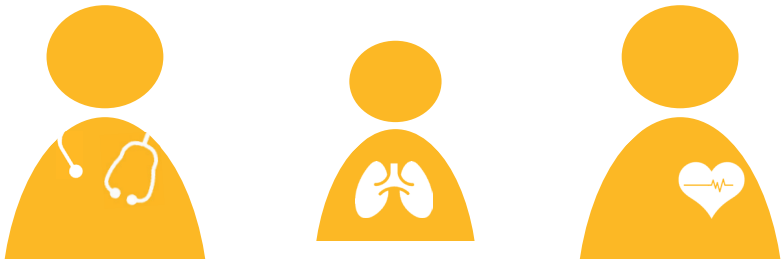
RURAL

Health Awareness for Rural Communities: Creating data driven solutions



Introduction

The Colorado Rural Health Center (CRHC) has collected data on all 47 rural and frontier counties measuring over 100 population health indicators. This information was aggregated into a data bank - Health Awareness for Rural Communities (HARC) - to be used both internally for CRHC use and available to CRHC members and nonmembers for use in infographs, research, grant applications, strategic planning sessions, and to provide a longitudinal look at population health.

It is important to fully realize the common adage that "when you've seen one rural community, you've seen one rural community." HARC is the first data bank created to solely examine the dynamics of rural and frontier counties in Colorado. This issue paper serves as an introduction to the type of data available from HARC and the various possibilities for its application.

CRHC serves as the designated State Office of Rural Health and is one of only three offices in the country that is structured as a non-profit organization. CRHC also also serves as the state's rural health association.

The organization has maintained its mission of information, linkages, tools, and education to support rural healthcare across Colorado since 1991.

Colorado Rural Health Center
The State Office of Rural Health

HARC Data Bank
Health Awareness for Rural Communities

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The Problem

The following vignettes illustrate the various situations where the HARC data bank would be an indispensable resource.

A rural hospital has gathered its board of directors to identify how to improve the overall health of their community. They know more services are needed, but they lack the necessary data to identify where to diversify.

A local foundation is in the process of identifying priority areas for their next funding cycle. They know they want to focus on the health of rural communities, but they need statistics identifying the highest needs in rural areas, while excluding urban outliers.

A small clinic in rural Colorado needs more staff. Their clinical personnel are unable to meet the demands of their patient case-loads, but the administration does not know the area's population growth projections, including specific demographics.

A national public health research firm is interested in studying the effects of preventive medicine impacts in rural settings. They choose Colorado as a research site because of our innovative insurance marketplace and Medicaid expansion. They need to know if any data has already been collected focusing on specific preventive indicators in the state's rural areas.

Supporting Evidence

"Ideally, health practitioners always incorporate scientific evidence in making management decisions, developing policies, and implementing programs. However, in reality, these decisions often are based on short-term demands rather than long-term study, and policies and programs are developed frequently around anecdotal evidence."[1]

"Innovative methods for mining big data are transforming the way science is done. [Health experts] are excited by the potential of hypothesis-generating (rather than hypothesis-driven) science, providing important new questions to answer."[2]

"Assessment is a core function of public health; however, standard community health assessments often remain within the boundaries of the traditional public health system and rarely elicit public discussion and community-wide action."[3]

"Effective health policies and allocation of public health resources can substantially improve public health. An objective of public health practitioners and researchers is to identify key metrics that would help improve effective policies and terminate poor ones."[4]

State of Rural Colroado

Rural Colorado's population is expected to grow by 4.7 percent by 2018. The 45 to 64 population is expected to expand by 4.6 percent during the same time period, yet the population over 65 will grow by 24.8 percent.

To further complicate the situation, based on current trends, emergency department visits will increase by 6.2 percent, exceeding the working population's capacity for handling the need.

With the aging population growing, rural Colorado has maintained 34.9 skilled nursing facility beds per 1,000 elderly individuals, versus the state's average of 33.5. Rural Colorado, however, makes up 73 percent of the state's landmass, making access to these services difficult for recipients of care and their families.

It's important to fully realize the common adage that "when you've seen one rural community, you've seen one rural community." We can aggregate the data on statewide levels and drill down to rural and regional levels, yet our state's communities are distinctly unique from county to county. Based on County Health Rankings calculations, where a compilation of social

determinants and health outcome indicators are compared, giving each county a "rank," rural Colorado communities have the top outcomes in the state (Pitkin county) and the worst (Huerfano county).

To continue the debate of why rural Colorado is unique, water fluoridation rates vary across the state. While the state's water fluoridation average is 73.6 percent, rural counties range from zero to 100 percent in areas like Summit and Washington counties.

It is interesting to track the amount of periodontal disease in rural areas along with their dentist rates. For instance in one area that has 39 dentists per 1,000 people with 100 percent of their water being fluoridated, the rate of periodontal disease is 15.5 percent. While in another rural area of the state where the dentist rate is one per 1,000 residents with all water being fluoridated, the periodontal disease rate is 52.6 percent. This indicates multiple disparities and overlapping factors in Colorado's rural healthcare environment.

Basic Solution

The hospital board of directors convening to discuss their current and future services must use data to evaluate their community's needs now and tomorrow, evaluate the services offered by neighboring hospitals including outmigration rates, and they must compile this data in a format that allows them to see all factors together.

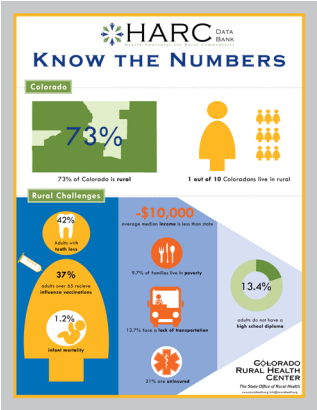
The foundation determining funding priorities must access data that focuses solely on the health factors in rural areas that represent the long-term issues rather than the anecdotal evidence. The foundation must be able to review the data at a statewide, regional, and community level to identify the highest needs aligning with their mission.

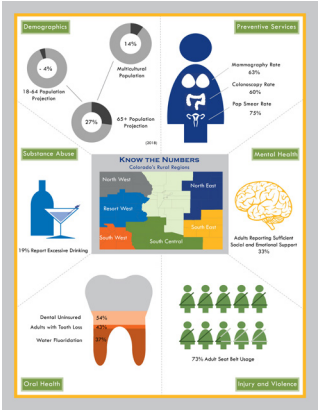
The small rural clinic must be able to make data-driven decisions about their future hiring to maintain their sustainability into the future years. They need to be able to use the data to identify their population now and projections while also being able to identify the community's largest health factors that their clinic addresses.

The research firm needs to be able to identify data mining sources to reduce duplication of data collection. They need to evaluate whether the data has already been collected to reduce their labor while focusing on the goals of their research. The research firm will benefit by partnering with organizations that have mined the rural healthcare data of Colorado.

HARC Solution

The Colorado Rural Health Center (CRHC) has created a solution to address the multiple audiences interested in rural health data. Through the HARC data bank, users can view population health data from multiple angles with the guidance from CRHC staff. With an intimate understanding of rural Colorado and the healthcare landscape, CRHC is excited to complement our services with a quantitative viewpoint. Staff are dedicated to helping those interested in population health data navigate their needs and create a customized product.





Contact us for a list of data types available, including demographics, health indicators and findings. Whether needed for a presentation, raw analysis, infographic, or highly customized report CRHC and the HARC data bank can help.

Sources:
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