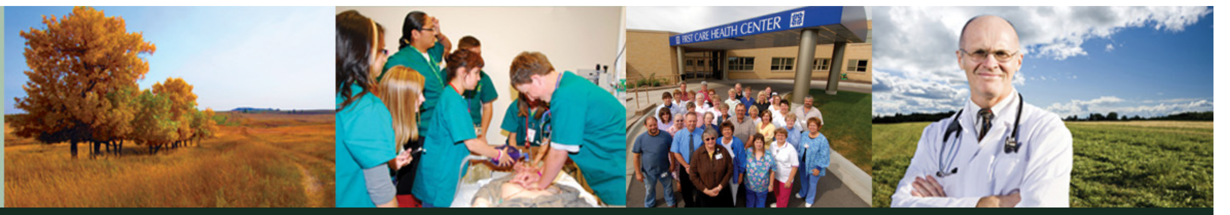
Center *for* Rural Health



Population Health and Health Value in a Rural Context

Nursing 830 Clinical Applications

March 20, 2024

NDSU School of Nursing (Fargo and Bismarck)

Presented by Brad Gibbens, Acting Director and Assistant Professor

- Established in 1980, at The University of North Dakota (UND) School of Medicine and Health Sciences in Grand Forks, ND
- One of the country's most experienced state rural health offices
- UND Center of Excellence in Research, Scholarship, and Creative Activity
- Home to seven national programs
- Recipient of the UND Award for Departmental Excellence in Research

Focus on

- Educating and Informing
- Policy
- Research and Evaluation
- Working with Communities
- American Indians
- Health Workforce
- Hospitals and Facilities

The Importance of Values

Ultimately our values guide our perceptions toward health, health care, our view of the importance of "community", and the development of public health policy

"It is not what we have that will make us a great nation, it is how we decide to use it"

Theodore Roosevelt

"Vision is the art of seeing things invisible"

Jonathan Swift

"Americans can always be relied upon to do the right thing…after they have exhausted all the other possibilities"

Sir Winston Churchill

What is this whole “community thing” and rural health?

Why should rural areas matter to you?

Rural areas are not only the source of much of our food, drinking water, energy production, and outdoor recreation, one in five Americans—including a disproportionate number of veterans and active-duty service members—live there, making the study of the health needs and challenges of rural Americans essential to us all.

NORC Walsh Center for Rural Health Analysis

What Is Rural Health?

- Rural health focuses on **population health** ("community") and improving overall **health status** for rural community members
- Rural health relies on **infrastructure** – the organizations, resources, providers, health professionals, staff, and other elements of a health delivery system working to improve population health (the **rural health delivery system**)
- Rural health ***is not*** **urban health** in a rural or frontier area
- Rural health focuses on **heath equity and fairness**
- Rural health is very **community focused and driven** – interdependent and collaborative
- Rural health is inclusive of **community sectors** – 1) health and human services, 2) business and economics, 3) education, 4) faith based, and 5) local government

Stutsman County

Rural and Urban Strengths and Weaknesses

Rural

Strengths
- Strong informal support network
- Fundraising
- Cohesive
- Established interdependence
- Collaboration

Weaknesses
- Skewed population demographics
- Fluctuating economy
- Resistance to change
- Shortage of professionals
- Lack of resources
- Over-tapped staff

Urban

Strengths
- More stable/diversified economy
- Availability of resources
- Availability of professionals
- Growing and diverse population
- Change is natural

Weaknesses
- Lack of cohesiveness
- Limited informal support
- Competition among providers
- Competition for fundraising
- More contentious-fractions
- Less sense of "community"

What is population health and how does this relate to social determinants of health?

Population Health

"Health outcomes of a group of individuals, including the distribution of such outcomes within the group."(Kindig, *What is Population Health?*)

- Groups can be based on geography, race, ethnicity, age, language, or other arrangements of people
- Focus – Health Outcomes (what is changed, what are the impacts, what results?)
- What determines the outcomes (determinants of health)?
- What are the public policies and the interventions that can improve the outcomes?

Health Equity

- "Attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities." (Healthy People 2020)
- Equity is aspirational and it relates to previous discussion on our personal and societal values. (e.g. health care as a right)
- To achieve some level of equity we must first address disparities.

Health Disparity

- "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion." (Healthy People 2020)
- Social Determinants of Health are factors to consider.
- We work to address SDOH to address disparity so as to achieve health equity and to improve population health (very simple ☺).

Factors Contributing to Health

Outside Health Care System	Related to the Health Care System	
Societal Factors	Care Delivery	Regulatory Environment
• Food Safety • Health food availability • Housing conditions • Neighborhood violence • Open space and parks/recreation availability • Genetic inheritance • Disease prevalence • Income levels • Poverty rates • Geographic location • Unemployment rate • Uninsured/underinsured rate • Median age • Sex • Race/ethnicity • Pharmacy availability • Care-seeking behaviors • Health literacy • Patience choice • Morbidity rates • Transportation availability	• Quality of care • Efficiency • Access • Physician training • Health IT system availability • Distance to and number of hospitals, primary and urgent care centers, retail clinics, etc. • Provider supply (MDs, RNs, etc.) • Physician mix (primary versus specialty care) • Payer contracts • Physician employment and payment structure • Disease management • Populations subgroup disparity • Advanced technology availability • Care integration and coordination • Behavioral health availability • Cultural and linguistic access	• Medicare payment rates and policies • Medicare and Medicaid care delivery innovation • CON regulation • Medicaid/CHIP policies (payment rates, eligibility) • Implementation of ACA • Local coverage determinations (LCDs) • Other local, state, and federal laws that impact the way health care is delivered and which treatments are provided

Source: Hospital Research Education Trust, *Managing Population Health, The Role of the Hospital, AHA, 2012*

Social Determinants of Health
(Sometimes called Drivers of Health)

World Health Organization definition:

"the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics."

Multiple concepts involved in health equity

- Ability to achieve the best possible level of health or live one's healthiest life
- Absence of health and health care disparities
- Elimination of challenges that cause inequities, such as poverty and discrimination
- Access to opportunities that promote health, including health care and fair employment

→ Thrive Rural Framework: Foundational Element
https://www.aspeninstitute.org/publications/the-thrive-rural-framework-foundational-element/

10%

HEALTH CARE

(e.g., access to and quality of care, insurance status)

10%

PHYSICAL ENVIRONMENT

(e.g., place of residence, exposure to toxic substances, built environment such as buildings and transporation systems, natural environment such as plants and weather)

40%

SOCIAL & ECONOMIC FACTORS

(e.g., discrimination, income, education level, marital status and economic factors)

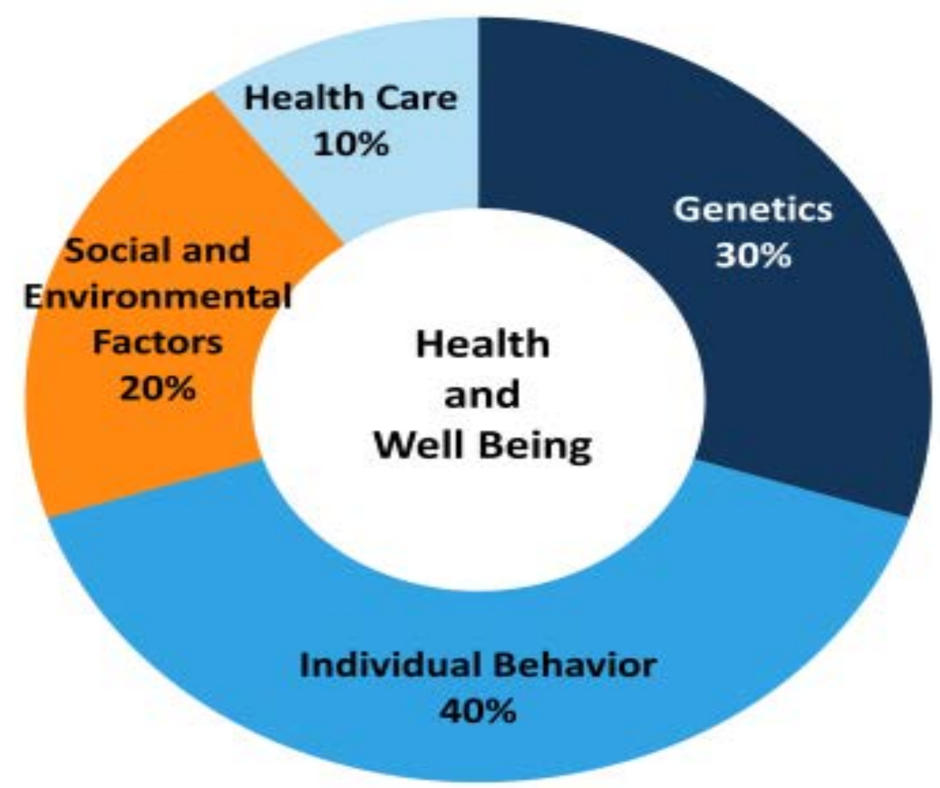
40%

HEALTH BEHAVIORS

(e.g., eating habits, alcohol or substance use, hygiene, unprotected sex, smoking)

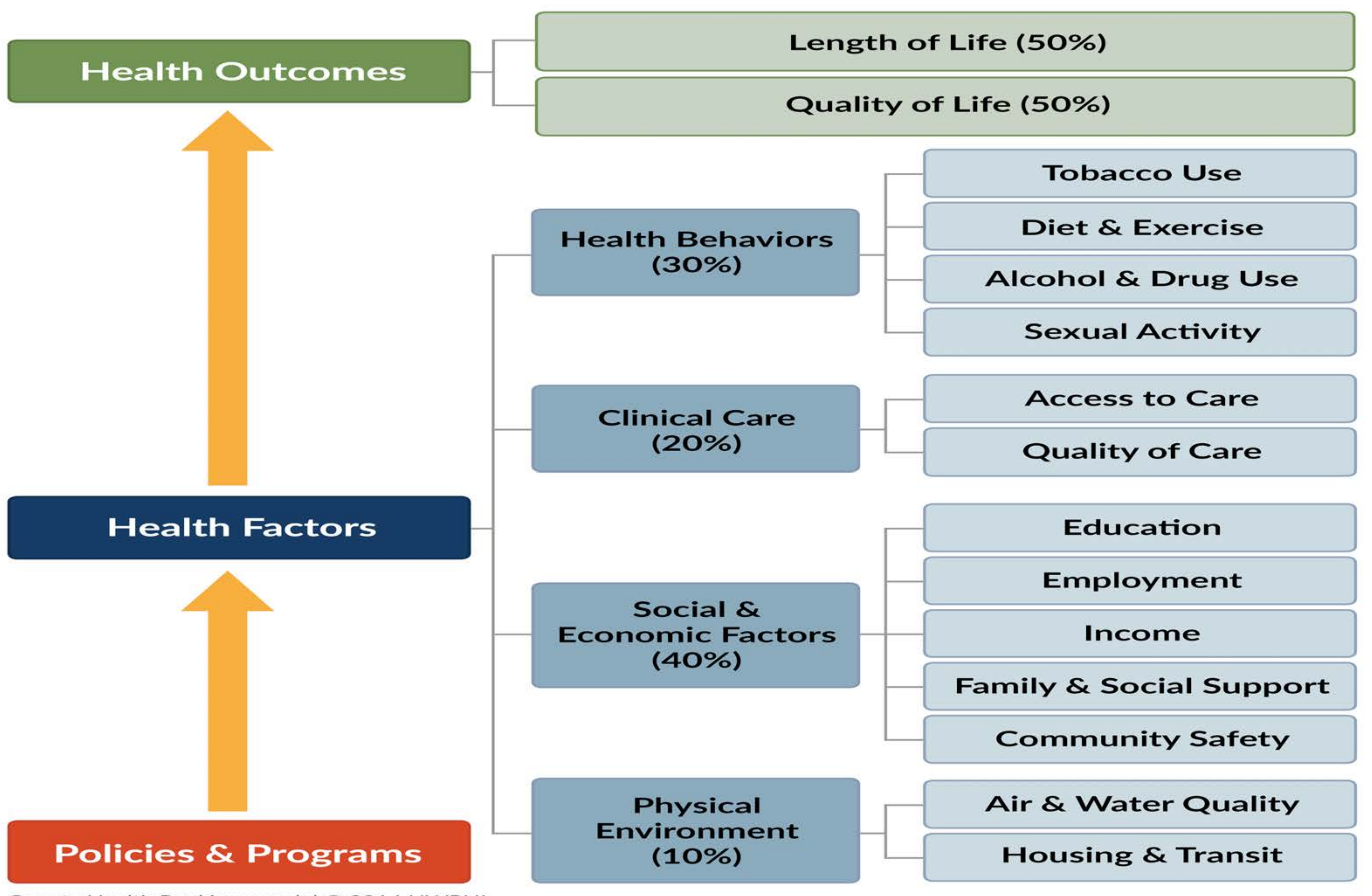
Figure 1

Impact of Different Factors on Risk of Premature Death



SOURCE: Schroeder, SA. (2007). We Can Do Better — Improving the Health of the American People. *NEJM*. 357:1221-8.

County Health Rankings Model



The Goal:
Health Equity
The Progress:
Health Disparities
The Strategy:
SDOH
We
are
her
e

Population Health and Public Policy

Population Health in the Affordable Care Act (2010)

- Provisions to expand insurance coverage by improving access to the health care delivery system (Medicaid expansions, state insurance exchanges “Marketplace”, support for community health centers, NHSC, safety net)
- Improving the quality of the care delivered (National Strategy for Quality Improvement, **CMS Center for Medicare and Medicaid Innovation**, and establishment of the Patient-Centered Outcomes Research Institute)

Population Health in the Affordable Care Act

- **CMS Innovation Center** – development and testing of innovative health care payment and service delivery models (better care, better health, and lowered costs through improvements in the health system)
  - **Alternative Payment Models**
    - This is **value based (VBC)** or movement from "volume to value" not solely FFS but care and payment based on outcomes/value (care coordination, annual wellness visits AWV).
    - Accountable Care Organizations (ACO)- Shared Savings is most common- 23 independent CAHs in ND (RRHVN in a CIN) – ***Nationally 1/3 of all 1350 CAHs in an ACO. (ND 65% of CAHs)***
    - MACRA and MIPS (system change an alternative payment models – clinicians).
    - Continuous change and evolution since 2014.
      - ✓ A range of ACO models and shifts to consolidation.
      - ✓ Yet a new rural ACO model in 2024.
    - Simultaneous focus on increase quality and lowering cost.
- **BCBSND Blue Alliance**
- **CPC+ (26 rural clinics in a medical home model)**

Population Health Impacted by 2021 Infrastructure Act

- $1.2 trillion – physical infrastructure that can improve population health
- “Once in a generation investment…think long term”
- Focus
  - Clean drinking water – replace lead water pipes
  - Roads and bridges
  - Air quality
  - Plug orphan oil wells
  - High speed internet –broadband – telehealth access
  - Electric transmission –invest in a clean energy power grid

Population Health Impacted by 2022 Inflation Act

- Lower prescription costs – Medicare –cap of $2,000 yearly.
- Insulin cost capped at $35 a month (Medicare) and no deductible.
- Medicare can negotiate prices with drug manufacturers.
- Lower health insurance costs in Marketplace. Caps on out of pocket costs
- Reduce carbon emissions by 40 percent.
- Reduce deficit – minimum large business tax.

Population Health Impacted by 2022 Omnibus Budget Act

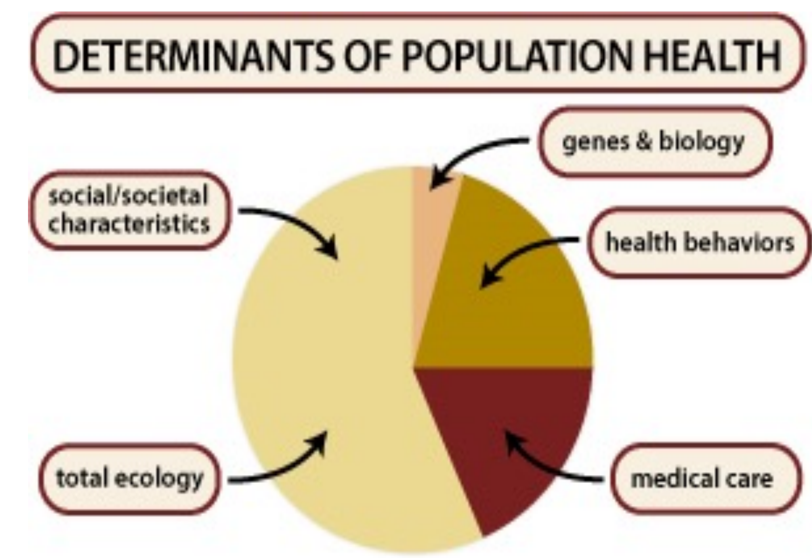
- $1.7 Trillion Package (including health impacts)

- Telehealth extension.
- APM (Alternative Payment Model) Bonus- expand value payments which include population health.
- Nursing and Allied Health Education payment.
- Extends funding for CHIP.
- Extends coverage for children under Medicaid and CHIP.
- Improves Medicare mental health services.

Population Health Provides the Best Definitional Framework

It focuses on measurable outcomes from multiple sectors

- Clinical outcomes
- Education levels
- Poverty rates
- Environmental factors



Creating a holistic picture of a community's health

Rural ND and Value Based Care (Structural Changes for Population Health)

- **North Dakota Rural Health Value (ND RHV)**
  - CDC Health Equity funds –CRH over $3 million -5 projects.
  - Volume to Value is one – 2022-2023.
  - ND RHV – U of. IA, Stratis Health, HealthPoint Health – 1 year project.
  - 5 CAHs intensive, all 37 overview, Environmental Scan, Community Engagement, modeling of ND CAH data on various value models.
  - 2024 focus on public health and statewide stakeholders.
- **Rough Rider High Value Network.**
  - 23 CAHs – independent (will grow)
  - Non-Profit.
  - Maintain independence and autonomy but work as a network.
  - Shared services –new services difficult for one hospital to establish on own.
  - Joint purchasing.
  - Develop value-products/process, prepare for contracts
  - Population health focus – improve health, better care, lower cost

Rural ND and Value Based Care (Structural Changes for Population Health)

- **Path to Value (National Rural Health Resource Center –Duluth, MN)**
  - 7 ND CAHs
    - Education on VBC –determine issues, strategy, community engagement
    - Carrington -Mental health screenings
    - Cavalier –Diabetes care management, ED visits, and AWV
    - Cooperstown –Chronic Care Management and AWV
    - McVille –Dementia screening (partner with public health)
    - Rolla –Colorectal cancer and home care champion
    - Stanley –Mental health/behavioral health/SUD
    - Wishek –Diabetes and AWV

- **Rural Healthcare Provider Transition Project**
  - National effort work with 5 CAHs a year
  - ND access to education
  - National Advisory Council

Social and Economic Factors of SDOH

U.S. rural and urban poverty and unemployment rates, 2000–21

Poverty and unemployment rate (percent)

20
18
16
14
12
10
8
6
4
2
0

Rural poverty
Urban poverty

15.4%
12.3%

Rural unemployment
Urban unemployment

5.4%
4.7%

2000 2003 2006 2009 2012 2015 2018 2021

Note: Rural/urban status is based on 2013 county nonmetro/metro delineations as determined by the Office of Management and Budget.
Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census (poverty) and U.S. Department of Labor, Bureau of Labor Statistics (unemployment).

U.S. employment in metro and nonmetro areas, 2007–22

Percent of 2007 employment (2007=100)

120
115
110
105
100
95
90
85
80

2007 2010 2013 2016 2019 2022

Metro

Nonmetro

Note: Employment is based on annual average total employment by county, summarized by metro and nonmetro status based on the 2013 definition of metropolitan counties, as determined by the U.S. Office of Management and Budget.
Source: USDA, Economic Research Service using data from the U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics program (April 21, 2023 release).

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U.S. unemployment rates for the prime-working-age population (ages 25 to 54) in metro and nonmetro areas by race/ethnicity, 2007 and 2019–22

Percent

2007 2019 2020 2021 2022

14
12
10
8
6
4
2
0

White | Black or African American | Hispanic or Latino

Metro | Nonmetro | Metro | Nonmetro | Metro | Nonmetro

Note: Metro and nonmetro designations for 2007 are based on the 2003 definition of metropolitan counties; designations for 2019, 2020, 2021, and 2022 are based on the 2013 definition, as determined by the U.S. Office of Management and Budget.
Source: USDA, Economic Research Service using data from the U.S. Bureau of Labor Statistics, Current Population Survey.

High and persistent poverty rates in U.S. rural counties, 2019

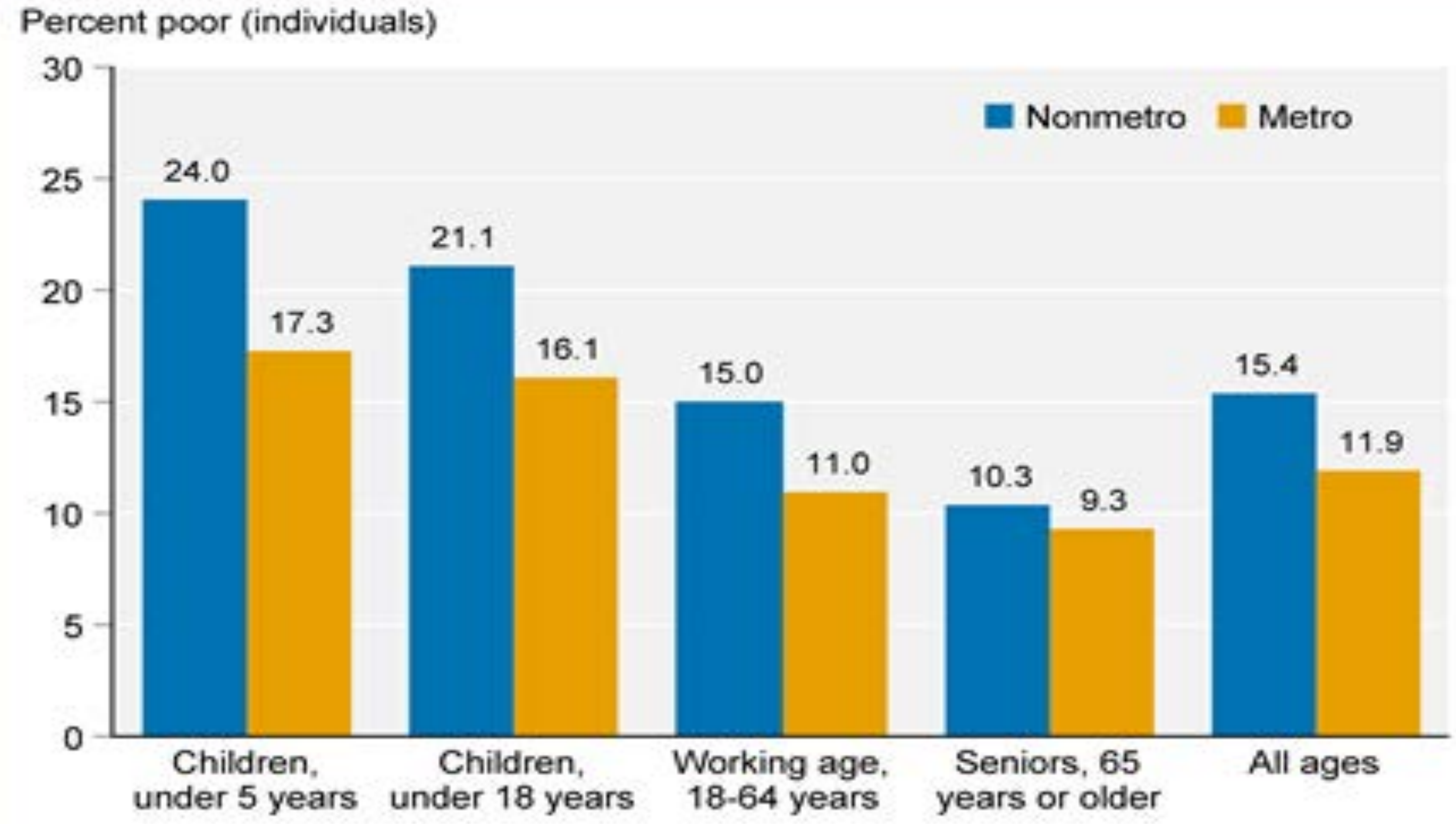
Rural (nonmetro) counties with high and persistent poverty rates

Other rural (nonmetro) counties

Metro counties

Notes: **High and persistent poverty county** = county designated as persistent poverty (over the 30-year period ending with 2007-11) in the USDA, Economic Research Service County Typology Codes 2015 edition and high poverty in the current period (2015-2019). Nonmetro (rural) status determined by 2013 metropolitan area designations from the U.S. Office of Management and Budget.

Source: USDA, Economic Research Service using 1980, 1990, and 2000 decennial census data and American Community Survey 5-year estimates for 2007-2011 and 2015-2019.


Poverty rates by age group and metro/nonmetro residence, 2019
Percent poor (individuals)
30
25
20
15
10
5
0
Nonmetro
Metro
24.0
17.3
21.1
16.1
15.0
11.0
10.3
9.3
15.4
11.9
Children, under 5 years
Children, under 18 years
Working age, 18-64 years
Seniors, 65 years or older
All ages
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census, annual American Community Survey, 2019.

SDOH for Rural American Indian and Alaska Natives

- **Rural American Indian/Alaska Native (AI/AN) populations experience both personal and community disadvantages**. In 2016, rural AI/AN were:
  - More likely to live in poverty (29%) than their rural white peers (10%).
  - More likely to live in counties falling into the highest quartile in the US for the proportion of households in poverty (61% or rural AI/AN rural residents versus 46% of rural white residents).
  - More likely to live in persistent poverty counties (37%) of rural AI/AN versus 9% of rural white residents).
  - Rural AI/AN adults were much more likely to live in counties where > 16% of the population lacked health insurance (55% versus 19%).
  - Rural AI/AN age adjusted mortality rates were higher than those of white residents.
  - Prevalence of self reported poor/fair health was 23% for AI/AN versus 16% for white residents.
  - Higher obesity – 35% vs. 31%.
  - (Source: *Rural and Minority Health Research Center, University of South Carolina, July 2019).*

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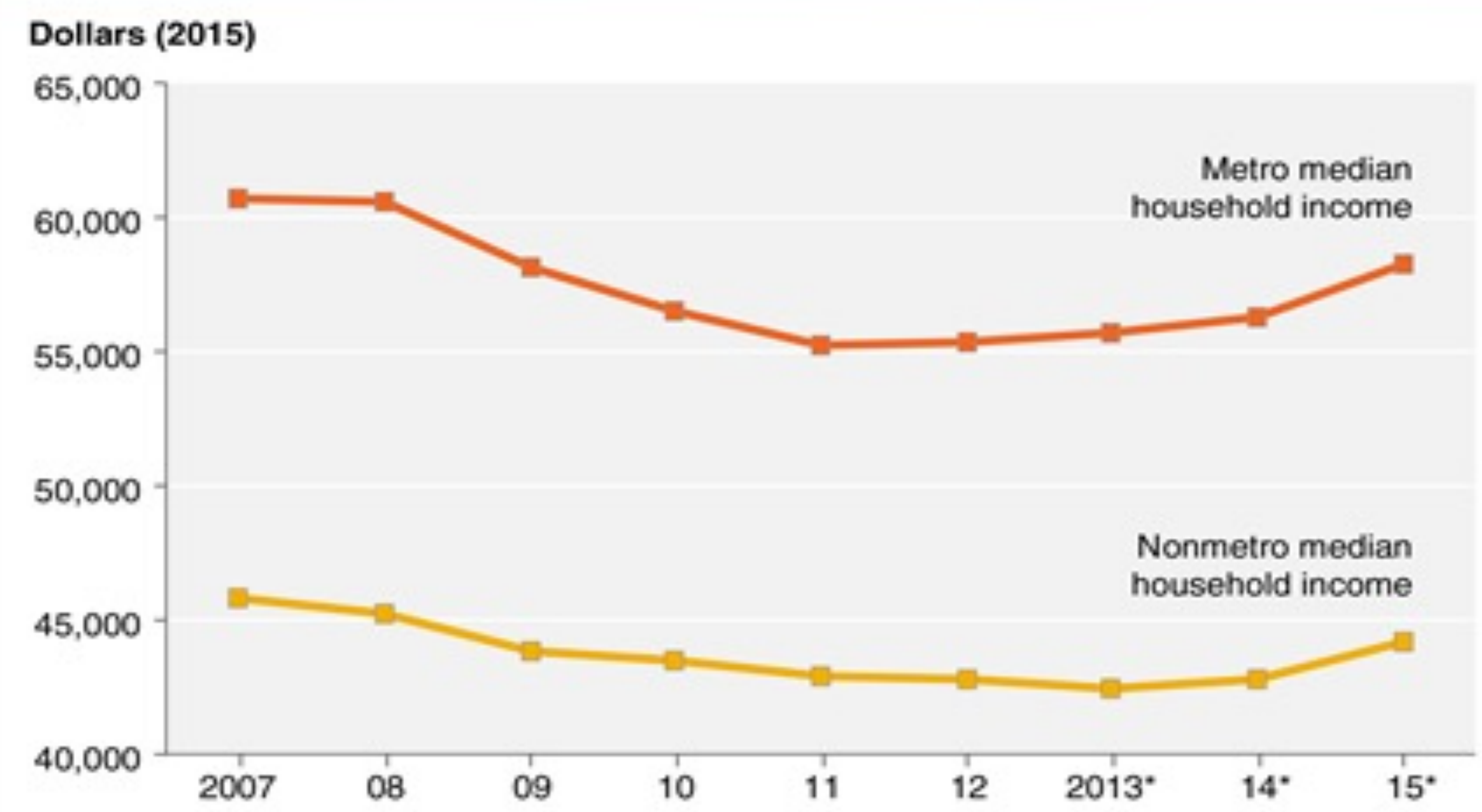
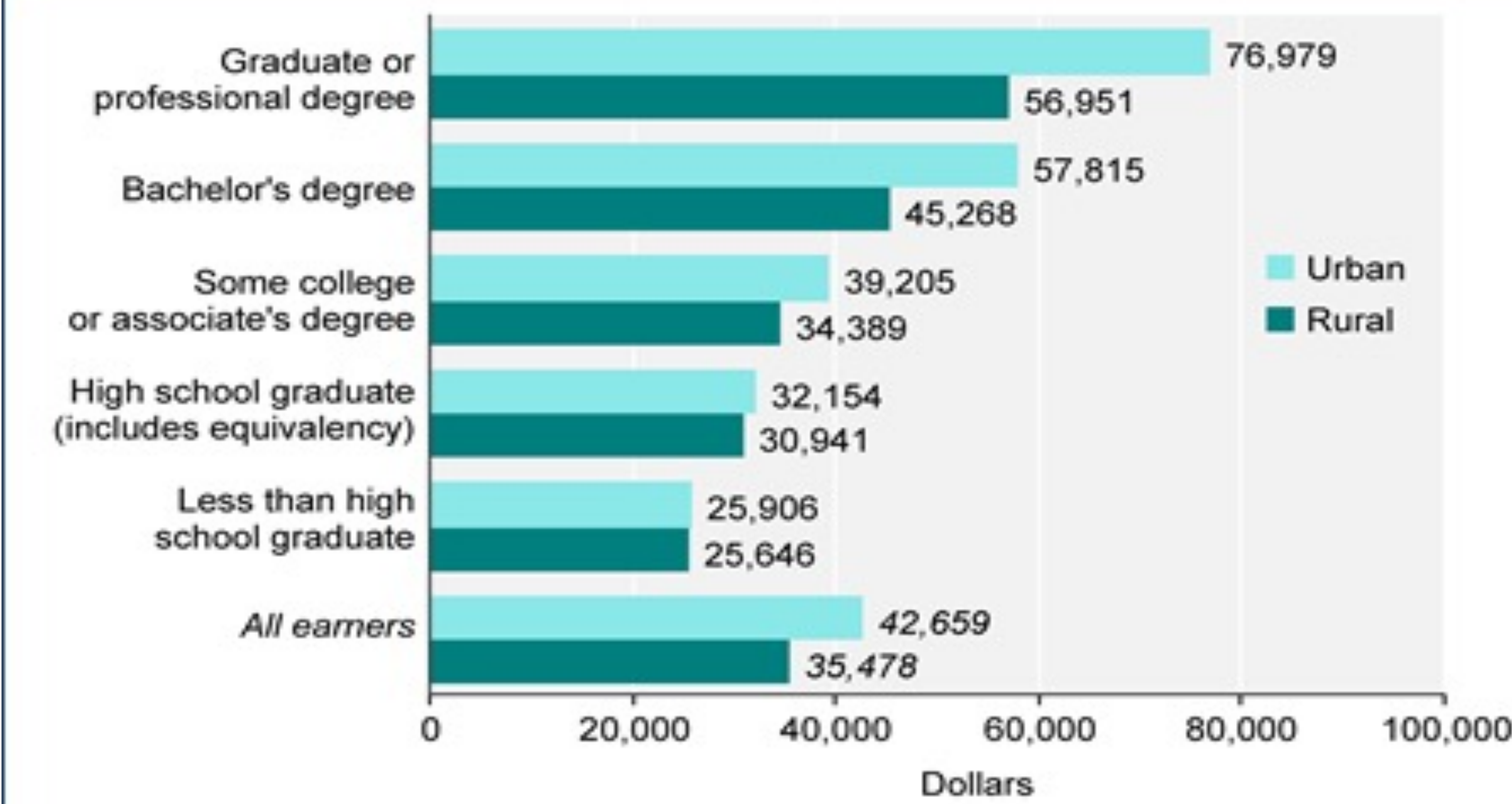
RAILROAD
CROSSING


Real median household income (in 2015 dollars) by location, 2007-15
Dollars (2015)
65,000
60,000
55,000
50,000
45,000
40,000
Metro median household income
Nonmetro median household income
2007
08
09
10
11
12
2013*
14*
15*
*The OMB definition of metro areas changed in 2013, which moved some counties from nonmetro to metro status. This reduced the number of nonmetro households from 19.4 million in 2012 to 17.7 million in 2013.
Source: USDA, Economic Research Service using data from the U.S. Census Bureau, American Community Survey.


U.S. median earnings in rural and urban areas by educational attainment, 2019
Graduate or professional degree
76,979
56,951
Bachelor's degree
57,815
45,268
Some college or associate's degree
39,205
34,389
High school graduate (includes equivalency)
32,154
30,941
Less than high school graduate
25,906
25,646
All earners
42,659
35,478
Urban
Rural
0
20,000
40,000
60,000
80,000
100,000
Dollars
Note: Median earnings in 2019 dollars for all earners 25 and older. Urban and rural status is determined by Office of Management and Budget's 2018 metropolitan area definitions.
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census, 2019 American Community Survey.

Health Care Factors on SDOH

General Observations on the Health Care System

- Most people give too much credit to health care/clinical care when thinking of their health and not realizing it is likely 10-20% of health status.
- US spends more on health care than any other country at about $4.6 Trillion a year in 2023 ($12,900 per capita vs. Germany, $6,700; France, $5,500; Canada, $5,400; United Kingdom, $5,200; and Japan, $4,700. (2020 data). (Source Commonwealth Fund
- 18% of US GDP – Germany, 11%; Canada, 11%, and GB, 10%.
- We spend more yet health outcomes are lower.
    - Lower life expectancy with the US at 78.6 years and Switzerland at 83.6 years. (Varies by race). American Indian is about 73 years.
    - US has highest chronic disease burden.
    - US has highest suicide rate.
    - US has highest rates of obesity.
    - US residents visit medical providers less frequently.
    - US second highest rate of hospitalization for hypertension and diabetes.

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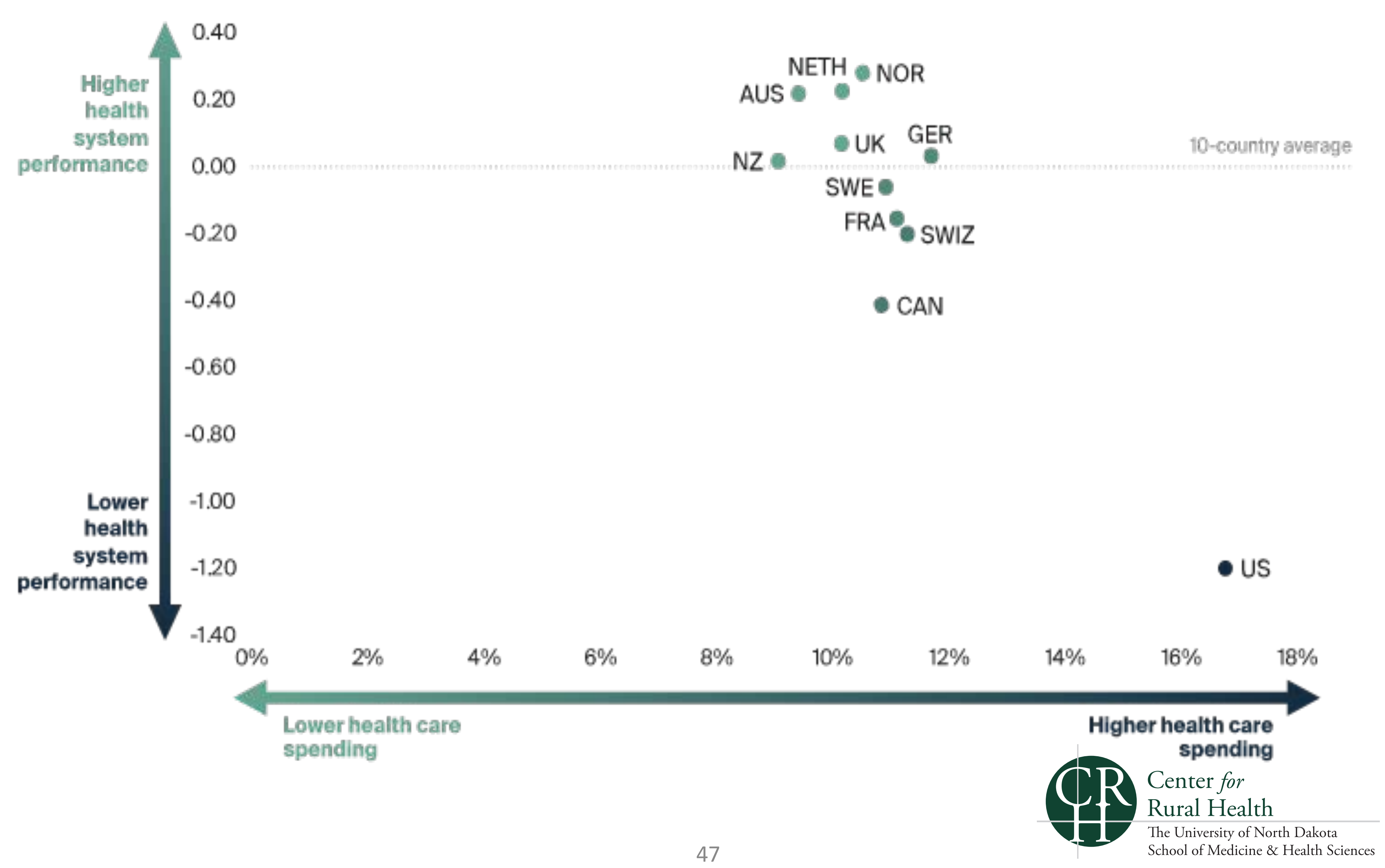
Health Care System Performance Compared to Spending (August 2021 Commonwealth Fund)



Health Behavior Factors on SDOH

General Observations on Rural Health Behaviors

- **Health behaviors include activities** like physical activity, diet and nutrition, social engagement, safety, avoiding tobacco and other harmful substances, and other actions that contribute to general health and quality of life (Determinants of Health in Rural Communities, Henning-Smith).
- Rural have **limited access to healthy food** and fewer opportunities to be physically active compared to urban.
- Rural residents **higher rates of smoking, higher risk jobs, higher sedentary life style, and lower rates of maintaining healthy body weight** (Henning-Smith).
- Can lead to **greater rates of obesity**, high blood pressure, diabetes, and cancer.
- Can lead to **higher rates of poor health outcomes and mortality** (Henning-Smith).
- Consider how socio-economic, physical, and heath care **all influence health behaviors.**

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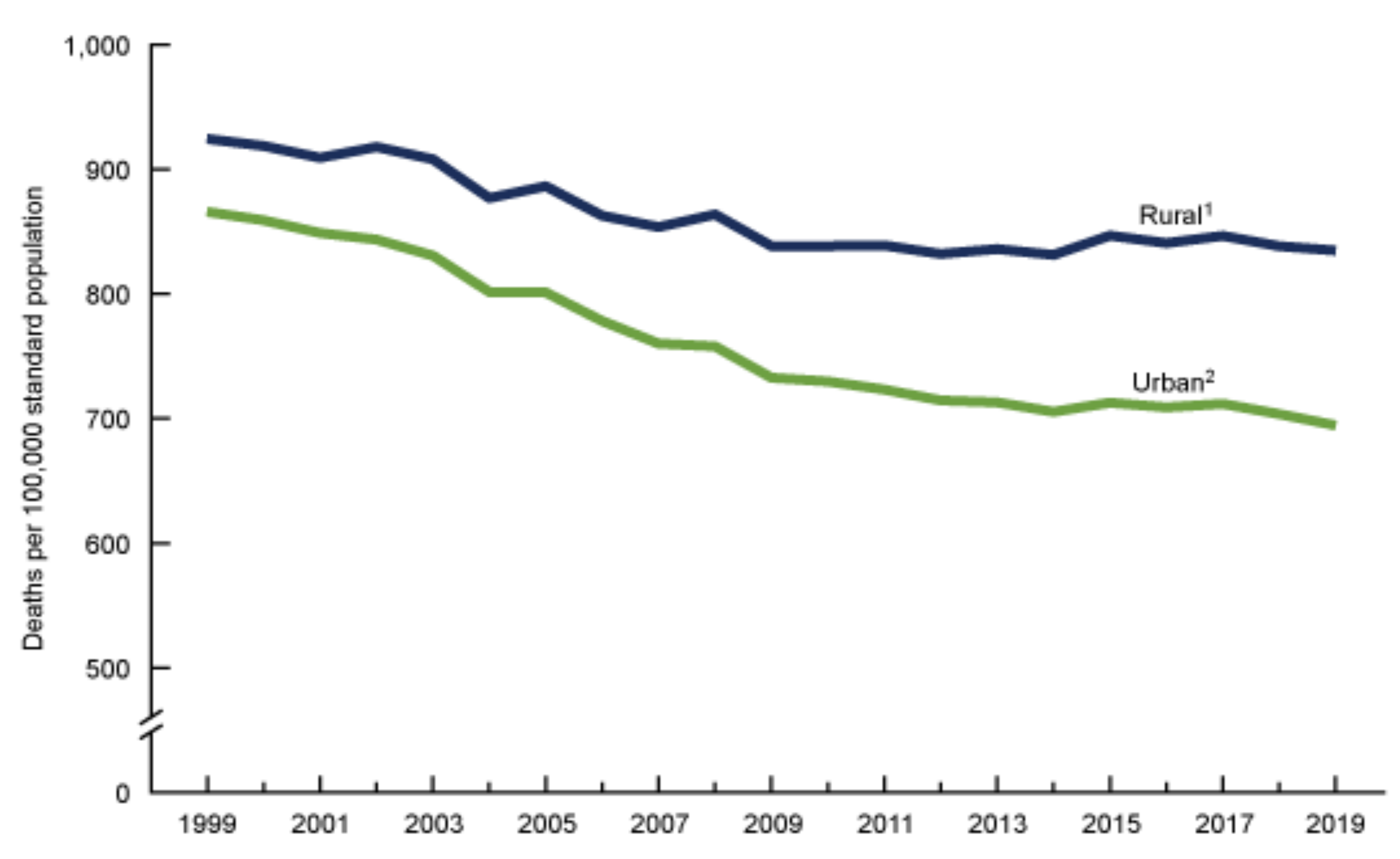
Age-adjusted death rates, by urban-rural classification: United States, 1999–2019



Ok, I get the rural and community angle, and I get the population health and determinants of health but how do rural communities and providers respond to issues?

nicefunny.com
OPPORTUNITY

AD-DIVIDE COUNTY COURT HOUSE-1917

Health Issues According to Rural North Dakotans 2023

- **CRH Community Health Needs Assessment Process (CHNA)** in 2021-2023 conducted with rural hospitals and many public health units (required under ACA for non-profit)
- All 36 CAHs reporting
- Top 2-5 ranked community health issues -152 needs ranked (4.2 per CHNA) -26 categories
- **Issues**
  - Mental Health — 31 of 36 CAH communities (was 30)
  - Substance Abuse — 18 of 36 CAH communities (was 30)
  - Attracting and retaining young families — 17*
  - Having enough child daycare services — 15*
  - Availability of resources elders in their homes — 8*
  - Not enough exercise/not enough places — 5*
  - Not enough jobs with livable wages — 5
  - **Not enough healthcare staff in general — 4 ** (new)**
  - Affordable Housing — 4
  - **Access to healthcare — 4** (new)**
  - Ability to retain primary care providers — 4*
  - Transportation — 2 ** (new)
  - Cancer — 2*
  - Obesity — 1*
  - Availability of PC providers including nurses — 1* (was 11)

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Rural ND Addressing Community Health (CHNA)

- **Obesity and physical activity**
  - Community farmer’s market
  - Pilot wellness programs with hospital staff
  - Monthly cooking classes
  - 12 week weight management program
  - Community run and/or walk
  - Community access to school fitness center
  - CDM monitor program
  - Target fitness and exercise to elderly (stretching and movement)
  - Step competitions (pedometers)

Rural ND Addressing Community Health (CHNA)

- **Healthcare workforce**
  - Increase use of social media

- Create community marketing group – hospital, economic development, chamber of commerce
- Support local students, financial support for nursing and medicine, and other health professions
- Create local R & R committee with representatives from community – school, bank, business, realtor, church, younger people
- Create a promotional video
- Work with CRH workforce specialist

Rural ND Addressing Community Health

- **Mental health**
  - Hire mental health nursing specialist in the hospital
  - Develop mental health screenings in schools
  - Connect to “Behavioral Health Bridge” at UNDSMHS and UNDCONPD https://ruralhealth.und.edu/projects/behavioral-health-bridge
  - Support groups
  - Work with university MSW, counseling, and psychology programs for student interns
  - Tele-mental health

Rural ND Addressing Community Health (CHNA)

- **Not Enough Jobs with Livable Wages**
  - Promote jobs in healthcare as they tend to provide high paying jobs. Jobs.net website lists all jobs by North Dakota community
  - Create a liaison between hospital and area economic or jobs development corporation to promote economic impact of healthcare jobs. North Dakota CAHs have an average economic impact of $6.4 million and contribute about 220 jobs to the community
  - Start a local scholarship for health education with understanding recipient returns to the community for service for a specified period of time
  - Focused community dialogue on job growth

Rural ND Addressing Community Health (CHNA)

- **Child Daycare Services**
  - Offer incentives in the form of subsidies for licensed home daycare providers and/or subsidies to employees
  - Promote Child Care Aware of North Dakota as resource to find local child care centers
  - Offer extended Clinic hours, in evenings and weekends, for working parents
  - Offer hospital supported day care for healthcare employees

Customized Assistance

info@ruralhealthinfo.org

1-800-270-1898

Tailored Searches of Funding Sources for Your Project

Foundation Directory Search

Wolf Mountain Prairie

Gateway provides easy and timely access to research conducted by the Rural Health Research Centers

ruralhealthresearch.org

This free online resource connects you to:

- Research and Policy Centers
- Products & Journal Publications
- Fact Sheets
- Policy Briefs
- Research Projects
- Email Alerts
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