Center *for* Rural Health

The Changing Nature of Rural Health: Population Health and Health Reform

International Rural Nursing Conference

July 20, 2016

Rapid City, SD

Presented by Brad Gibbens, Deputy Director and Assistant Professor

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The University of North Dakota
School of Medicine & Health Sciences

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- 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

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The Importance of Values

Ultimately our values guide our perceptions toward health and our definition of health and what it is, our attitudes about the health care system, our view of the importance of "community", and the development of public health policy. Our values shape how we see change and how accepting we are of change.

"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

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What is this whole "community thing" and how does it relate to rural health?

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What Is Rural Health?

- Rural health focuses on **population health** for an area ("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 **health 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

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Stutsman County

Rural and Urban Strengths and Weaknesses

Rural	Urban
Strengths •Strong informal support network •Fundraising •Cohesive •Established interdependence •Collaboration	**Strengths** •More stable/diversified economy •Availability of resources •Availability of professionals •Growing and diverse population •Change is natural
Weaknesses •Skewed population demographics •Fluctuating economy •Resistance to change •Shortage of professionals •Lack of resources •Over-tapped staff	**Weaknesses** •Lack of cohesiveness •Limited informal support •Competition among providers •Competition for fundraising •More contentious-fractions •Less sense of "community"

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Why is Community Engagement Important to Rural Health

- **Health care providers and organizations cannot operate in isolation.**
- **Even more important as we implement health reform – new payment models – movement from volume payments to value based payments as more and more providers are assessed and reimbursed on outcomes and patient satisfaction.**
- **Community members input on needs, issues, and solutions more critical than ever – community involvement in finding solutions (CHNA) that reflect their needs – community ownership not just the health providers.**
- **Building local leadership and local capacity – think of the next generation of community leadership.**
- **Communication – listening to the community – educating the community.**
- **Simple answer: You need to be engaged because you need to survive.**

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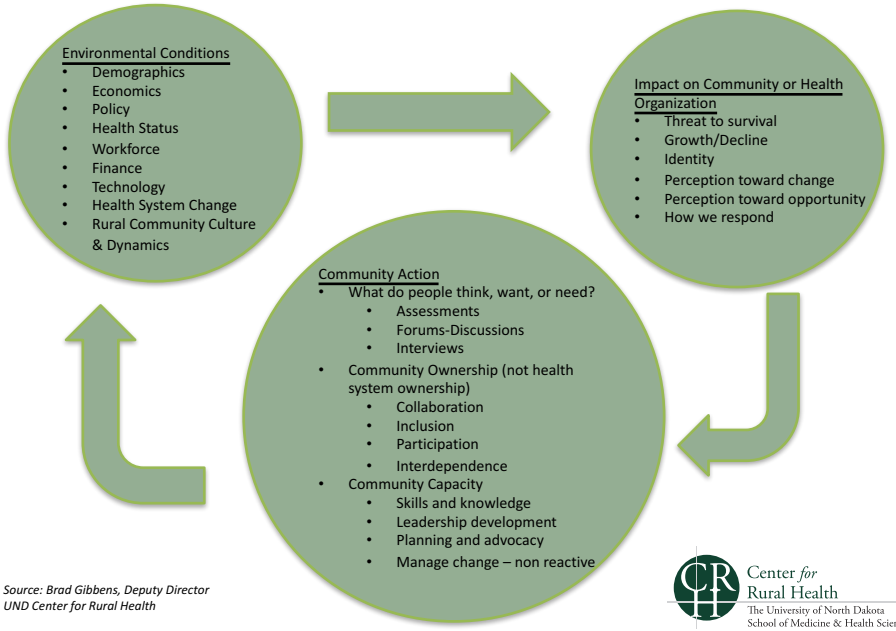
Rural Community Health Equity Model



Source: Brad Gibbens, Deputy Director UND Center for Rural Health

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

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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?

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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*

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Social Determinants

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."

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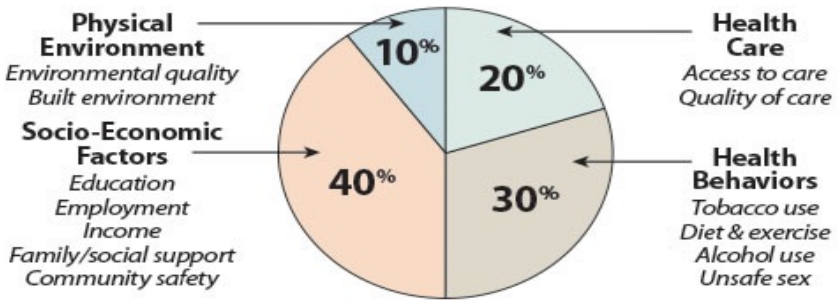
Social Determinants of Health

Population Health



Source: Authors' analysis and adaption from the University of Wisconsin Population Health Institute's *County Health Rankings* model ©2010, http://www.countyhealthrankings.org/about-project/background

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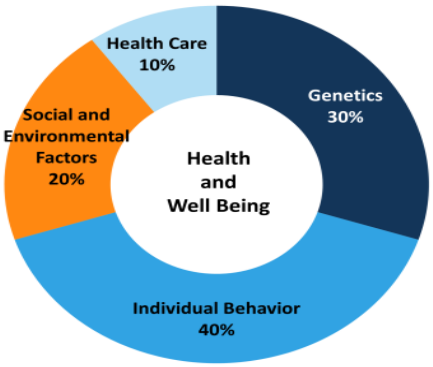
Figure 1

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.

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Social Determinants of Rural Health

Rural residents tend to be poorer than urban residents

- Average median household income is $45,482 for rural counties ($55,855 for urban counties) (2014)
- The average percentage of children living (ages 0-17) in poverty is 28.7% in rural counties (23.1% urban) (2014)

Rural residents' educational attainment (2009-2013) - Averaged across counties

- 16.5% have < high school education (14.7% urban)
- 36.3% have only a high school diploma (31.9% urban)
- 17.4% have a Bachelor's degree or higher (24% urban)

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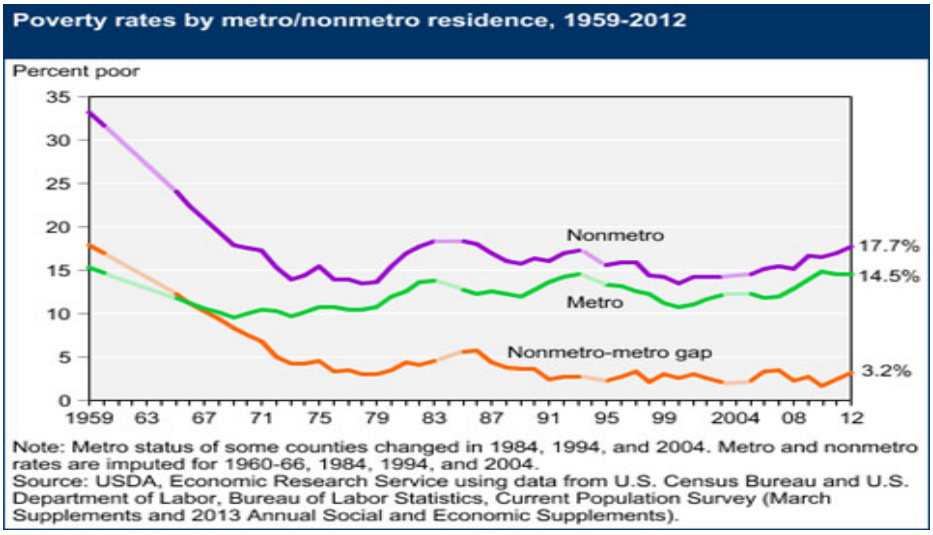

Source: Poverty Overview, USDA Economic Research Service

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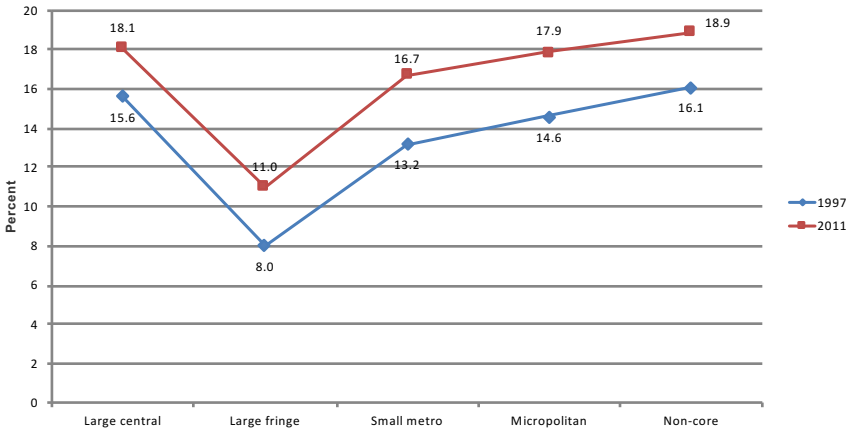
Population: Poverty

Population in poverty by rurality



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Annual Median Earnings, Age 25 and Older, by Education Level

Source: Table B20004, 2010-2014 American Community Survey 5-Year Estimates

	Rural	Nation as a Whole
All education levels	$33,646	$36,034
Less than high school graduate	21,150	19,954
High school graduate	29,062	27,868
Some college or associate's degree	33,353	33,988
Bachelor's degree	46,437	50,515
Graduate or professional degree	59,660	66,944

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Social Determinants Impact on Access to Health Care

- Poverty, income, and employment status contribute to:
  - Health insurance coverage
  - The ability to pay out-of-pocket costs such as co-pays and prescription drug costs
  - Time off work to go to an appointment
  - A means of transportation to visit a healthcare provider
- The skills to effectively communicate with healthcare providers
- An expectation that they will receive quality care, whatever their race/ethnicity or income level.

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Mortality

- Cause-specific mortality is often higher in rural counties than urban counties
- Risk factors contribute to high mortality rates in rural areas
  - Smoking
  - Obesity
  - Physical inactivity
- High mortality rates and risk factors are a reflection of the physical and social environment in which people live and work

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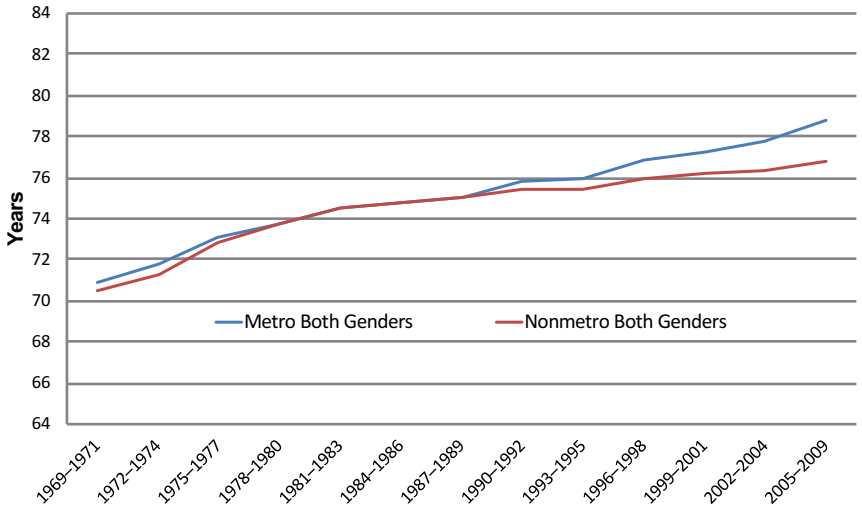
Life Expectancy at Birth in Metro and Nonmetro Areas, 1969-2009



Source: Singh and Siahpush, Widening Rural-Urban Disparities in Life Expectancy, U.S., 1969-2009. American Journal of Preventive Medicine, 2014; 46(2):e19-e29.

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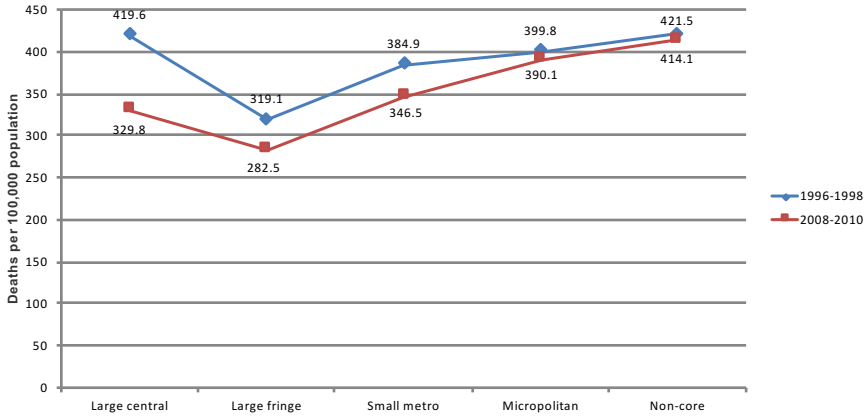
Mortality: Working-Age Adults

Death rates for all causes among persons 25-64 years of age by rurality



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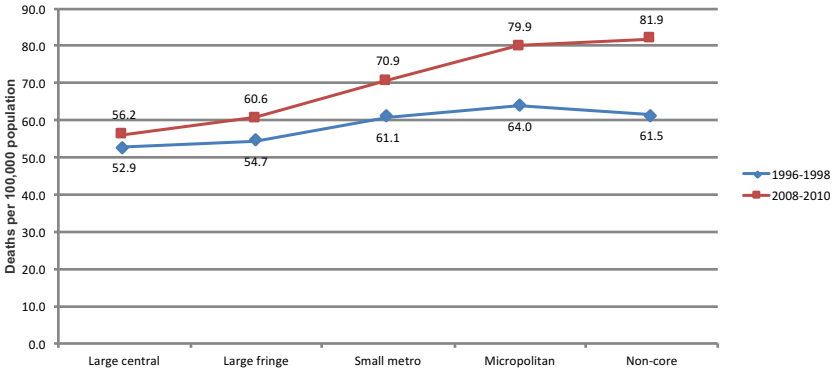
Mortality: Chronic Obstructive Pulmonary Diseases

Death rates for chronic obstructive pulmonary diseases among persons 20 years of age and over by rurality



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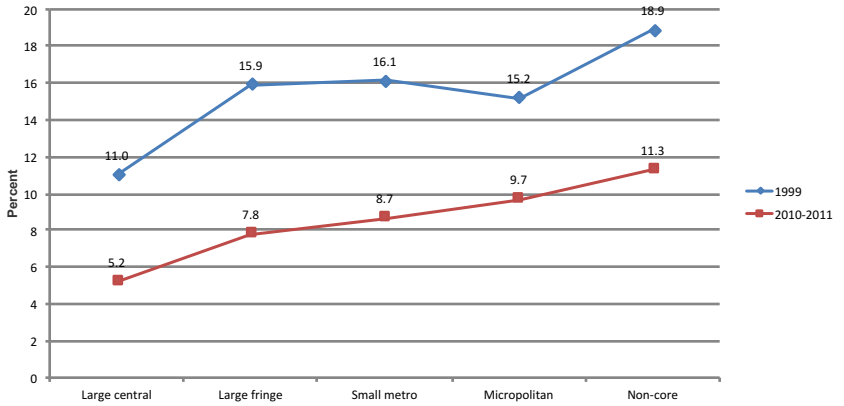
Risk Factors: Adolescent Smoking

Cigarette smoking in the past month among adolescents 12-17 years of age by rurality



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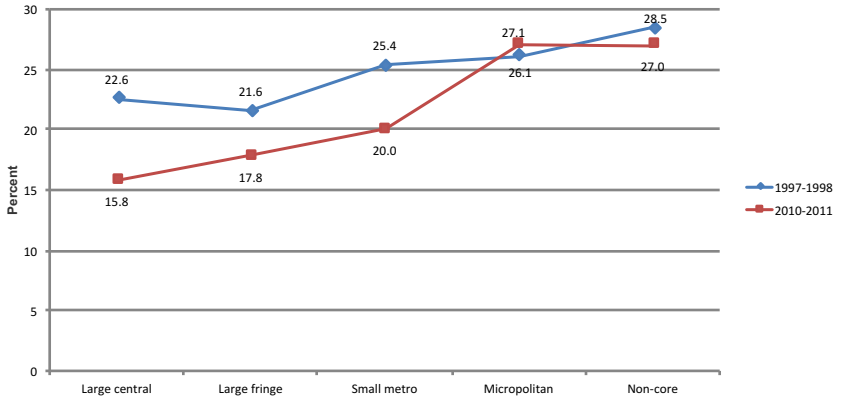
Risk Factors: Adult Smoking

Cigarette smoking among persons 18 years of age and older by rurality



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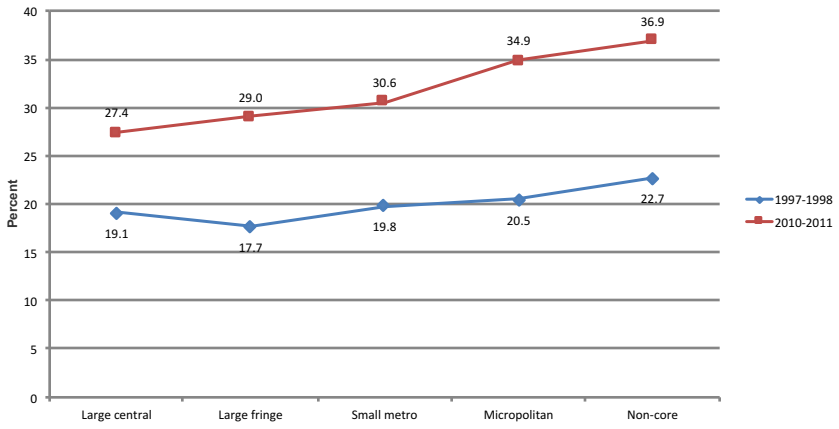
Risk Factors: Obesity

Obesity among persons 18 years of age and older by rurality



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Ok, I get the rural and community angle, and I get the population health and determinants of health *but* where does health reform come into this picture?

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The **35,000 Foot View of the ACA and Rural Health**

Insurance Access

- About 2/3 of rural without insurance in a state without Medicaid Expansion.
- Almost 8 million uninsured rural Americans (under 65) and another10 million uninsured in urban areas have insurance now.
- Higher percentage of rural uninsured (44%) would be eligible for Medicaid Expansion than urban (39%).

Health Care System Access – Nursing Workforce

- Projected impact of 15 million to 26 million additional primary care visits annually requiring 4,300 to 7,200 additional primary care physicians.
- Since ACA added nationwide 4,500 nursing positions.
- Change in system – change in location of care – more demand for nurses in care coordination, case management, and community health care (public health).

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The **35,000 Foot View of the ACA and Rural Health**

Health Care System Access - Nursing Workforce

- Increased funding for **National Health Service Corps** including more resources for loan repayment, half-time service, and teaching to count for service commitment (20%).
- Increased funding for nursing workforce development including **retention funding**.
- New efforts to attract **military veterans into nursing** (Veteran's Bachelor of Science Degree in Nursing).
- Title VIII **Nurse Loan Repayment and Scholarship Programs** – add LR for agreeing to serve at least 2 years as a faculty member.
- Title VIII **Nursing Student Loan Program** – (started in 1964), ACA to updated loan amount.
- Title VIII **Nursing Workforce Diversity Grants** – disadvantaged and underrepresented in nursing.
- Title VIII **Nurse Faculty Loan Program** – increased yearly amount.
- Title VIII **Training for Direct Care Workers** – long term or chronic care setting – serve for at least 2 years – education to partner with nursing home or other LTC provider.
- **Geriatric Nursing Career Incentives** – doctorate, agree to teach for minimum of 5 years.
- Public Health Workforce – LRP – HHS repay up to 1/3 of loans – agree to work in PH agency for at least 3 years.

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The **35,000 Foot View of the ACA and Rural Health**

- **3 Aims** – better health, better care, **lowered cost curve**
  - Health care inflation – health costs rising at lowest rate in nearly 50 years. Per enrollee spending rose 5.2% from 2000-2007, and 1.4% 2010-2014 for private insurance. For Medicare during these periods it was 5.5% and -1.0%; Medicaid it was 0.4% and -0.6%. Still accounts for 17% of GDP, though.
  - CBO revised downward long term cost of ACA coverage provisions by about 1/3 as Marketplace premiums were 15% lower than projected.
  - CBO revised downward projected Medicare and Medicaid spending in 2020 by $197 billion. Through FY 14 Medicare/Medicaid costs were $142 billion less than projected.
  - Federal deficit reduction - $109 **billion** 2013-2022; estimated $1.6 **trillion** from 2023-2032.

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The 35,000 Foot View of the ACA and Rural Health

- **3 Aims** – **better health, better care**, lowered cost curve.
  - Since 2010, **rate of patient harm** has declined by 17% (1.3 million avoided patient harms such as infections and medication errors and an estimated 50,000 avoided deaths.) $ savings was $12 billion
  - **Readmission rates** – 150,000 avoided readmissions from 2012-2013.
  - APM – **Alternative Payment Models** "volume to value" – CMMI- link medical and health outcomes to payments (value), not simply payment for a service (volume).
    - **Accountable Care Organizations (ACO)** – 424 ACO serving 7.8 million Medicare beneficiaries – Pioneer ACO or Medicare Shared Savings Program. National Rural Accountable Care Consortium (ND has 5 rural hospitals).
    - **Bundled Payment models** – 1 payment per 1 episode -over 6,000 hospitals.
    - **PCMH** –care coordination based on primary care – elements of PMPM FSS
    - **Pay for Performance (P4P)** – pay based on pre-determined quality measures.
    - **MACRA – Medicare Access and CHIP Reauthorization Act** – physicians 5% annual lump sum payment for participating in a qualified APM

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Community Benefit

- **Language conversion** (conceptualization changes) – moving population health, outcomes, and determinants of health into the language of the Affordable Care Act and making it more relevant to the hospital or other segments in the health care delivery system
- Program or activities that provide treatment and/or promote health in **response to an identified community need**. Key criteria:
  - Generates a low or negative margin (financial performance measurement)
  - Responds to needs of special populations (e.g., uninsured)
  - Supplies a service/program that would likely be discontinued if it were based on financial criteria
  - Responds to public health needs but you first need to identify them
  - Involves education or research that improves overall community health

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Community Benefit- Program and Activities

- **Community Benefit Services Categories**
  - **Community health improvement services**
    - **Community health education**, **community based clinical services** (screenings, health fairs, free clinics) **health care support services** (enrollment in public programs, trans.)
  - **Health professional education**
    - **Physicians/medical students/residents, nurses/nursing students, other health professionals** (internships and residency training, job shadowing and mentoring, scholarships/loan repayment, and in-service programming)
  - **Subsidized health services**
    - **Services provided to the community that are not expected to be self sustaining** (hospital outpatient services, emergency and trauma, women's and children's services, behavioral health, outpatient palliative care, subsidized continuing care, and renal dialysis services)

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Community Benefit- Program and Activities

- **Research**
  - **Involved in clinical research** (unreimbursed/unfunded costs of studies on therapeutic protocol) and community health research (studies on health issues for vulnerable populations and research studies on innovative health care delivery models)
- **Financial and in-kind contributions**
  - **Cash donations, grants, in-kind donations, and cost of fund-raising for community programs** (contributions and/or matching funds to not-for-profit organizations, event sponsorship, meeting space for non-profit organizations and groups, and services of hospital grant writer to assist local health agencies)

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Community Benefit- Program and Activities

- **Community building activities (community health improvement services) – IRS says do not generate inpatient or outpatient bills)**
  - **Physical environment** –interventions to improve community health (community vegetable gardens or walking trails); Support system and workforce enhancement (recruitment of providers for medically underserved areas); Leadership development for community members (advocacy training for community members); Coalition building(disaster preparedness committees); and community health improvement advocacy

- **Community benefit operations**
  - **Community health needs assessments** – also community benefit planning and administration – activities associated with fundraising or grant writing for community programs

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Community Benefit Examples that Show the Connection to Population Health

St. Francis Memorial Hospital (San Francisco) – gang ridden Tenderloin district – "**Corner Captains**" mothers of school children patrol area watching out for the children – part of **Safe Passage initiative** of **Tenderloin Health Improvement Partnership** funded by hospital – targeting social determinants of health such as violence, poverty, hunger, education, nutrition, and housing

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Community Benefit Examples that Show Connection to Population Health

Adventist Health System – increased spending on health and wellness programs by 14% - example placing full time community health workers in ED to provide care-management to patients to improve heath and lower inappropriate use of the ED – charity care has decreased by over 5% of gross patient service revenue.

Dignity Health (San Francisco) – awarded social innovations grant to Silicon Valley entrepreneurs who seek to tackle community health improvement in low-income neighborhoods

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Community Benefit Examples that Show Connection to Population Health

Other Examples:

- Lifestyle education – focusing on self-care, early detection, and disease management
- Targeted resources to "at risk" populations such as domestic abuse, chemical dependency, mental illness, HIV, and socio-economic disadvantage
- Grant assistance to community non-profit agencies addressing community health
- Internship for students working with low income patients – connect with services

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What are Some Important Rural Health Issues? (CHNA)

- **Health care workforce shortages** **(28 of 39)**
- **Obesity and physical inactivity** **(16 of 39)**
- **Mental health (inc. substance abuse)** **(15)**
- **Chronic disease management** **(12)**
- **Higher costs of health care for consumers** **(11)**
- **Financial viability of the hospital** **(10)**
- **Aging population services** **(9)**
- **Excessive drinking** **(7)**
- **Uninsured adults** **(6)**
- **Maintaining EMS** **(6)**
- **Emphasis on wellness, education, & prevention** **(6)**
- **Access to needed equipment/facility update** **(6)**
- **Marketing and promotion of hospital services** **(5)**
- **Violence, traffic safety, elevated rate of adult smoking, lack of community collaboration, and cancer tied with (3) – lack of day care/housing (2)**

Source: CHNA conducted 2011-2013 (39 of 41 ND hospitals)

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North Dakota CAHs and Community Benefit

- **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
  - Chronic Disease Mgmt. monitor program
  - Target fitness and exercise to elderly (stretching and movement)
  - Step competitions (pedometers)

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North Dakota CAHs and Community Benefit

- **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 Recruitment & Retention committee with representatives from community – school, bank, business, realtor, church, local govt., younger people
  - Create a promotional video
  - Work with Center for Rural Health workforce specialist and AHEC

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North Dakota CAHs and Community Benefit

- **Mental health**
  - Develop mental health screenings in schools
  - Support groups
  - Work with UND MSW, counseling, and psychology programs for student interns
  - Tele-mental health

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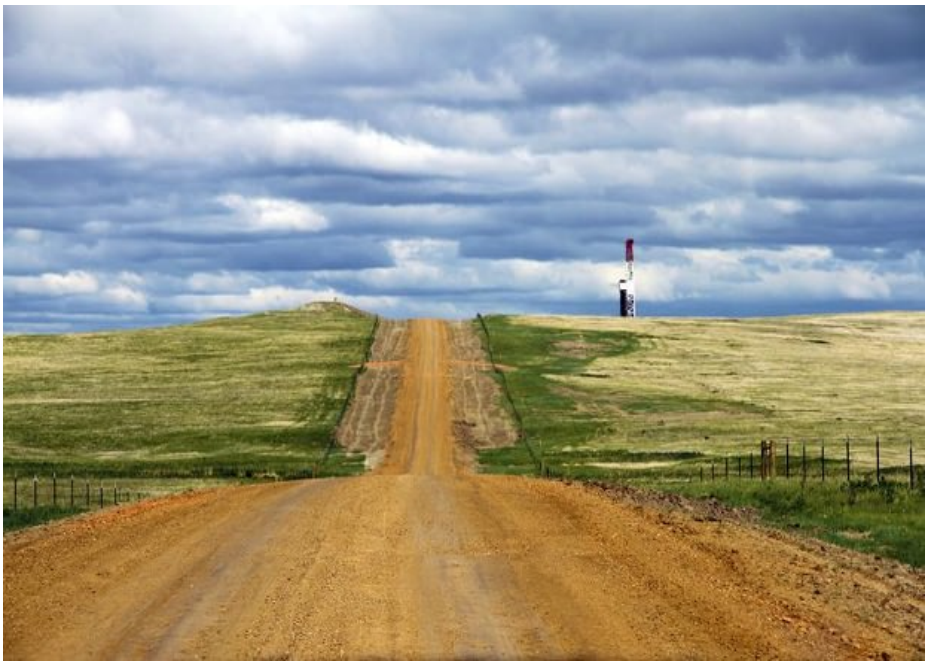

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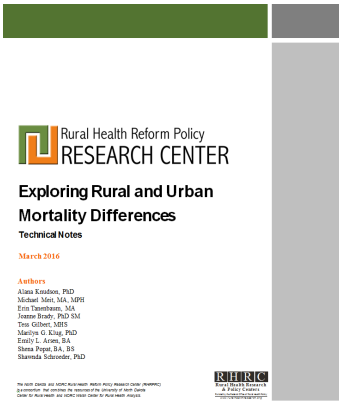
Exploring Rural and Urban Mortality Differences



https://ruralhealth.und.edu/projects/health-reform-policy-research-center/rural-urban-mortality

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- Exploring Rural and Urban Mortality Differences by HHS Region (color) | (black & white)
  A slide deck that serves as an offline and printable version of the Online Tool: Index for Mortality Rates. It contains 81 figures from the Online Tool displaying mortality rate indices by age group, rural-urban status, HHS region, and sex (only for populations 15 years of age and older). Data are presented for the top 10 leading causes of death as reported by the Centers of Disease Control and Prevention. Figures display standardized differences between urban, rural, and national death rates. Results draw upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER.
- Mapping Rural and Urban Mortality Differences by HHS Region (color) | (black & white)
  A slide deck that serves as an offline and printable version of the Online Tool: Mortality Rates among Persons. It contains 80 figures from the Online Tool mapping mortality rates by age group, rural-urban status, HHS region, and sex (only for populations 15 years of age and older). Data are presented for the top 10 leading causes of death as reported by the Centers of Disease Control and Prevention. Results draw upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER.
- Exploring Rural and Urban Mortality Differences in the Appalachian Region (color) | (black & white)
  A slide deck that serves as an offline and printable version of the Online Tool: Index for Mortality Rates in the Appalachian Region. It contains 9 figures from the Online Tool displaying mortality rate indices by age group, rural-urban status, and sex (only for populations 15 years of age and older) within the Appalachian Region. Data are presented for the top 10 national leading causes of death as reported by the Centers of Disease Control and Prevention. Figures display standardized differences between urban, rural, and national death rates. Results draw upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER.
- Exploring Rural and Urban Mortality Differences in the Delta Region (color) | (black & white)
  A slide deck that serves as an offline and printable version of the Online Tool: Index for Mortality Rates in the Delta Region. It contains 9 figures from the Online Tool displaying mortality rate indices by age group, rural-urban status, and sex (only for populations 15 years of age and older) within the Delta Region. Data are presented for the top 10 national leading causes of death as reported by the Centers of Disease Control and Prevention. Figures display standardized differences between urban, rural, and national death rates. Results draw upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER.

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User Guides and Technical Notes

- Users Guide for Graph Interaction
  Index for Mortality Rates by Cause Related to the National Rate among Persons by Age, Region, and Rural-Urban Status: United States, 2011-2013 Online Tool
  This user's guide demonstrates ways to display graphs of mortality rate indices by Health and Human Services (HHS) region, cause of death, age, and rural-urban status. Graphs can be created dynamically for 10 mortalities or for a single mortality. Figures display standardized differences between urban, rural, and national death rates. Results draw upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER based on the top 10 leading causes of death as reported by the Centers of Disease Control and Prevention.
- Users Guide for Map Interaction
  Mortality Rates among Persons by Cause of Death, Age, and Rural-Urban Status: United States, 2011-2013 Online Tool
  This user's guide demonstrates ways to view maps of mortality rates from the Top 10 Causes of Mortality as reported by the Centers of Disease Control and Prevention. This document guides users to create dynamic maps for a single cause of mortality by Health and Human Services (HHS) region, cause of death, age, and rural-urban status. Results draw upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER.
- Technical Notes: Exploring Rural and Urban Mortality Differences
  Review technical notes related to the study's methods and data analyses. This study examines the impact of rurality on mortality and explores regional differences in mortality rates. The study used a quantitative analysis approach drawing upon the data available from the National Vital Statistics System (NVSS) at CDC WONDER for the top 10 leading causes of death as reported by the Centers of Disease Control and Prevention.

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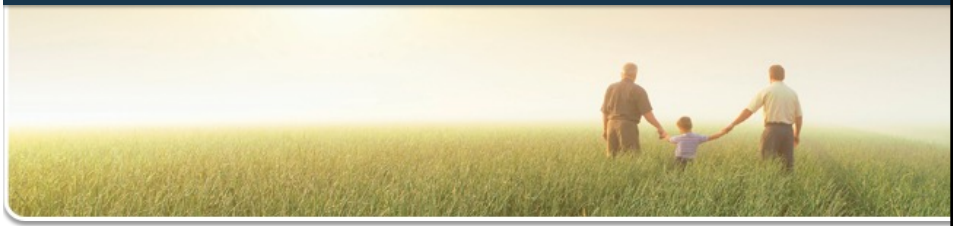

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