Factors Impacting the Rural Health Delivery System

Presented to:
OT511 Service Delivery System

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Brad Gibbens – Associate Director for Community Development and Policy

Connecting resources and knowledge to strengthen the health of people in rural communities.

Center for Rural Health

- Established in 1980, at the University of North Dakota School of Medicine and Health Sciences in Grand Forks, ND
- Focuses on:
  - Education, Training, & Resource Awareness
  - Community Development & Technical Assistance
  - Native American Health
  - Rural Health Workforce
  - Rural Health Research
  - Rural Health Policy
- Web site: http://medicine.nodak.edu/crh
Rural Health Issues

- Social culture
- Demographics
- Economics
- Workforce
- Hospitals
- Quality
- Technology

Social Culture
### Comparative Rural and Urban Strengths and Weaknesses

**Rural**

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

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>More stable economy</td>
<td>Availability of resources</td>
</tr>
<tr>
<td>Availability of professionals</td>
<td>Growing and diverse population</td>
</tr>
<tr>
<td>Change is natural</td>
<td></td>
</tr>
</tbody>
</table>

**Weaknesses:**
- Skewed population demographics
- Lack of cohesiveness
- Fluctuating economy
- Resistance to change
- Shortage of professionals
- Lack of resources

### Change in the Rural Environment

**Environmental Impacts**
- Demographics
- Economic Conditions
- Political Process
- Workforce
- Finance
- Health Organizations
- Culture and Attitude

**Action**
- Planning and Assessment
- Education
- Community Forums
- Task Force Development
- Collaboration
- Advocacy
- Program Development
- Integration of Health Care with Community and Economic Development
- Hospital Diversification

**Source:** Brad Gibbens, Associate Director  
UND Center for Rural Health
Change Isn’t Easy

“Everything that can be invented, has been invented”

“Who the hell wants to hear actors talk”
- Harry Warner of Warner Brothers

“That little black box will never amount to anything”
- Louie B. Meyer, MGM

“Americans can always be relied upon to do the right thing, after they have exhausted all the other possibilities”
- Sir Winston Churchill

Jonathan Swift once said:

“Vision is the art of seeing things invisible”
Rural Culture: Attitudes Towards Change

1. Change is natural
2. Resistance to change
   a. Threat to established order, way of life
   b. Better an old problem than a new opportunity
   c. Demographics and economic base
   d. Community rivalry
3. Agrarian Fatalism

4. Overcoming our Natural Resistance
   a. Accept yet gently challenge rural attitude toward change
      ✓ rural school consolidation
      ✓ humor
   b. Change Agents
   c. Education of Community
   d. Education of Providers
   e. Experience – seeing is believing
Community Cooperation

“We are seeing greater cooperation between communities in the education field and in healthcare. The times are forcing those of us in small towns to work together, to find common ground.” We’ve competed for years in basketball and football but now people are realizing what is good for one town can be good for its neighbor.

This started to evolve first in education with school consolidation – painful at times, but necessary because we now see the benefit of sharing classes, sharing teachers. We’re seeing this in healthcare now. Sharing and cooperative effort is banding together for the common good.”

Les Wietstock
CFO, West River Regional Medical Center
Hettinger, ND
Phone interview, February - 1996

Demographics
Demographic Issues

- Revised population – 634,366 (July, 2004 Estimate)

- 1990-2000 population
  47 of 53 counties lost population

- 1990-2000
  48 of 53 counties saw a decline in the number of youth

- Median age in 1960 was 26.2 and in 2000 it was 36.2

- 2000-2004
  47 lost population; however, only 2 over 10 percent loss

People 65 and older accounted for 12.3% of ND population in 1980 but 14.7% in 2000

Elderly growth is not ubiquitous
- 1990-2000, 39 counties saw a decline in the number of county residents 65 and older
- Counties that equal or exceed state average (14.7%), 35 experienced a decline in the number of people 65 and older

The state’s birth rate has declined every year since 1982
Economic and Demographic Impacts

A population that is:
- Smaller
- Older
- Poorer

Rural Health Impacts:
- Smaller markets
- Greater dependence on Medicare population
- Greater difficulty in recruiting and retaining health professionals
- Smaller tax base
- Greater number of people without health insurance or with limited insurance
- More chronic health conditions
North Dakota Frontier Counties

36 of 53 North Dakota Counties designated as Frontier
(less than 6 persons per square mile) Based on 2000 Census

Combined Rural Counties that Equal Cass County
1990-2000

The combined population of the 35 pink counties (122,066) approximately equals the population of Cass County (123,138)
### National Conditions

**A glance at rural and urban America**

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of U.S. population</td>
<td>20%</td>
<td>80%</td>
</tr>
<tr>
<td>Population aged 65 and older</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>Population that is white</td>
<td>83%</td>
<td>69%</td>
</tr>
<tr>
<td>Private insurance</td>
<td>64%</td>
<td>69%</td>
</tr>
<tr>
<td>Medicare beneficiaries</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>Medicare hospital payment to cost ratio</td>
<td>90%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: NRHA web page*

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### National Conditions

**The 1990’s witnessed certain population shifts.**

- From 1990-2000, 70% of rural counties increased population.
- About 87% of these counties derived some or all of their increase from in-migration of metro residents.
- From 1990-2000, 2.2 million more people moved from the city to the county, than the reverse.
- Significant rural decline continues in the Great Plains and other disadvantaged rural areas (mining and agriculture counties had the greatest relative declines in the pace of growth).

*Source: Charles Fluharty - RUPRI*
MN, ND, SD Conditions

- During the 1990’s 70% of rural counties gained population

  - MN 71% of Counties (62/87)
  - SD 52% of Counties (34/66)
  - ND 12% of Counties (6/53)

Source: US Census

High School Graduates
North Dakota, 1980-2010
Children Under 18 in North Dakota
1910 to 2000

Distribution of the Elderly: 2000
Percentage of Persons 65 Years and Older
Economics

The Healthcare Economic Linkage

1. Employment Impacts
2. Attracting/Retaining Local Residents
3. Attracting/Retaining Business
4. Generating Investment Funds
5. Enhancing Local Leadership Capacity

Source: Cordes, 1996
Healthcare Economic Linkage

1. **Employment Impacts**
   - Rural hospitals are often the 2\textsuperscript{nd} or 3\textsuperscript{rd} largest employer
   - Rural health employment: 10 percent of direct employment and 15 percent of direct and secondary employment
   - A single rural physician can generate more than five jobs and over $232,000 in additional income each year in a rural community (NHSC)
   - Multiplier effect: Each rural health dollar rolls over in the rural community 1.5 times
   - Insurance, Medicare, Medicaid: Stays local or leakage

2. **Attracting/Retaining Local Residents**
   - Jobs attract people – people attract jobs.
   - Health services act as economic anchor
   - Retirees
Healthcare Economic Linkage

3. Attracting/Retaining Business
   - Educated workforce
   - Employable spouse
   - Health care provides services to businesses (screenings, occupational health programs)
   - Adds to quality of life

Healthcare Economic Linkage

4. Generating Investment Funds
   - Labor intensive: Wages and salaries
     (ND- rural hospitals, 86 employees and $2.2 million in payroll)
   - Cash and short-term investment in local banks
   - Local investment: Loans for businesses
Healthcare Economic Linkage

5. Enhancing Local Leadership Capacity
   - Local government
   - Faith sector
   - Civic organizations
   - Economic development
   - Source of new knowledge and resources

Workforce
Health Professions

• Primary Care
  ➢ 89% of ND counties are entirely or at least partially a HPSA/MUA for physicians.
  
  ➢ From 1992-2002, there was an average 16 physician vacancies per year for primary care physicians, particularly family practice.
  
  ➢ ND vacancy rate started dropping in 1994 and 1996 due to the Conrad 30 program.

Health Professions

• Primary Care
  ➢ Nationally, only 11% of U.S. Physicians practice in rural areas. In ND, 17% of physicians practice in rural (15,000 population or less)
  
  ➢ Of 125 Schools of Medicine, the UNDMSHS ranks 7th in the percentage of medical graduates selecting a family practice residency from 1991-2001.
Health Professions

• Nursing

➢ In 2002, 14 counties in ND had over 10 RNs per 1,000 people and 27 counties had less than 8 RNs per 1,000 people. National data indicate an average of 7.82 RNs per 1,000 people.

➢ Nationally, about 23% of nurses work part-time whereas in ND 44% work part-time.

Health Professions

• Nursing

➢ Nationally, RNs have an average salary of $48,240 and in ND the average salary is $41,760. Nationally, LPNs receive $31,490 and in ND they receive $26,540.

➢ Nationally the average age of an RN is 45 and in ND it is 44. Only 15% of ND RNs are 30 or younger.

➢ 12 ND counties have a nurse vacancy rate of 6% or more indicating some level of shortage.
Health Professions

• What Is Working
  ➢ Community/health facility leadership
    ✓ R/R Task Force
    ✓ Grow Your Own
    ✓ Meetings with Health Education Programs

  ➢ Federal Policy
    ✓ Conrad State 30 Program
    ✓ NHSC
    ✓ Rural Health Clinic Act
    ✓ Title VII and Title VIII

Health Professions

• What Is Working
  ➢ State Policy
    ✓ State Loan Repayment

  ➢ Interdisciplinary Training
    ✓ CRISTAL
    ✓ SEARCH
Hospital Demographics:
How would you characterize your organization?

<table>
<thead>
<tr>
<th>Category</th>
<th>1998</th>
<th>2005</th>
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<tbody>
<tr>
<td>Stand alone acute care</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Acute care w/primary care clinic</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Acute care w/LTC</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Acute care, primary care &amp; LTC</td>
<td>46</td>
<td>50</td>
</tr>
</tbody>
</table>
Hospital Demographics
Number of Beds

<table>
<thead>
<tr>
<th>Number of Beds</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>66%</td>
</tr>
<tr>
<td>11 to 15</td>
<td>15%</td>
</tr>
<tr>
<td>16 to 20</td>
<td>15%</td>
</tr>
<tr>
<td>21 to 25</td>
<td>4%</td>
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</tbody>
</table>

Hospital Demographics
Affiliate With More Than One Hospital/Health System

<table>
<thead>
<tr>
<th>Affiliate Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50%</td>
</tr>
<tr>
<td>No</td>
<td>42%</td>
</tr>
<tr>
<td>No Response</td>
<td>8%</td>
</tr>
</tbody>
</table>
CAH and Flex Program

Hospital Demographics (CAH Provider Composition)
The average CAH has the following (based on median scores):

- 2 - Primary Care Physicians
- 1 - Physician Assistant
- 1 - Nurse Practitioner
- 1 - Certified Nurse Anesthetist
- 9.5 - RN
- 6 - LPN
- 2 - Laboratory Services
- 2.97 - Radiology
- 1 - Occupational Therapy
- 1.93 - Physical Therapy
- 2.4 - Other therapy
- 0.8 - Pharmacy
- 1 - Paramedic
- 1 - Mental/Social Health
- 3 - Administration
- 3 - Health Information

The median number of employees in a CAH is 67.2
Issues Facing Rural Hospitals

Highest "Severe Problem" score was BCBSND reimbursement at 54.2%
Asked: “What is your number one concern today?”

- Reimbursement: 47%
- Workforce: 27%
- Community Support: 7%
- Clinic Relations: 7%
- Population: 3%
- Rules/Regs: 3%
- Aging Plan: 3%
- Technology: 3%

Impact of CAH Conversion and Flex Program

- Access to Flex Grants: Positive 88.4%, Neutral 11.5%
- Impact of Flex Grants: Positive 88.4%, Neutral 11.5%
- Financial Reimbursement: Positive 76.9%, Negative 19.2%
- Network w/rural hospitals: Positive 69.2%, Neutral 30.8%
- Address Quality: Positive 65.4%, Neutral 30.8%
Impact of CAH Conversion and Flex Program

Quality of Care
Quality of Care

- IOM “Quality through Collaboration”
  - Health and Healthcare in Rural Communities
  - Quality Improvement
  - Human Resources
  - Finance
  - Information and Communication Technology

Technology
Technology

- Increase in medical knowledge
- Life expectancy
- Chronic conditions
- ICT in a rural setting
  - Home and community
  - Healthcare settings
  - Population health

Grants
Rural Health Outreach Grants

- Network of 3 independent organizations
- Up to $150,000 (yr 1), $125,000 (yr 2), and $104,000 (yr 3)
- Focus on service development

- 21 Funded Grants in North Dakota
  - EMS
  - Mental Health
  - Wellness
  - Chronic disease management
  - Mobile health clinic
  - Discount medication access
  - Elder and Alzheimer’s care, education, and training
  - Diabetes education and training
  - Distance learning for nursing education
  - School nursing
Network Development Grants

- Formal network of 3 or more entities
- Up to $200,000/yr for up to 3 years
- Focus is on developing the formal organizational operations of the network

Strategies
Strategies for Rural Health System Survival

1. Community Involvement and Support
2. Strategic Planning and Marketing
3. Diversification and Redefinition of Services
4. Progressive Healthcare Leadership
5. Collaboration – Provider to Provider, Community to Community
6. Emphasis on Quality
7. Advocacy and Involvement

Principles of Rural Health Adaptation

1. Changes must fit with local conditions
   a. No one solution fits every community
   b. Consider unique circumstances
   c. Local citizens must be involved in the planning process
   d. Local control is essential for community pride and support of the new system

2. Providers must consider regionalization
   a. Cooperation over competition

3. Need a macro not micro focus
   a. Look at entire health system not just the hospital
   b. Cooperative arrangement of human and health services
   c. Move beyond acute care needs: long-term, out-patient, preventative, and rehabilitation

Principles of Rural Health Adaptation

4. Providers must consider alternative configurations for offering access to physician services
   a. Physician shortages means physicians simply cannot be available in all communities that seek such services
   b. Regionalization of physician services
   c. Greater use of mid-level practitioners

5. Greater emphasis on transportation and telecommunication
   a. Facilitate greater access to care during a period of threatened access


The Future of Rural Health

1. Continued Struggles with Demographics and Economics
2. Continued Provider Integration
3. Continued Work Force Issues but Greater Collaboration between Provider Groups
4. Continued Technological Revolution
5. Regional Approach to Health Care
6. Federal Health Policy will Continue to Help and Hinder Rural Health
For more information contact:

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