Challenges and Options in Rural Healthcare
June 21, 2006

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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
Tonight We Discuss

- Population Change
- Health Workforce
- Hospital Finance and Capital
- Technology
- Quality of Care
- Options/Solutions

Demographics
Demographic Issues

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

- 1990-2000  47 of 53 counties lost population

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

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

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

Demographic Issues

- 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
Persons Ages 65 and Older as a Percent of the Total Population in North Dakota by County: 2000
Source: U.S. Census Bureau, Census 2000
Persons Ages 65 and Older as a Percent of the Total Population in North Dakota by County: 2020


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Economics
Healthcare Economic Linkage

1. Employment Impacts
   • Rural hospitals are often the 2nd or 3rd 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
   - Healthcare 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

Gross State Product by Industry in North Dakota: 1979 and 2001

*Source: U.S. Bureau of Economic Analysis*
Workforce

Health Professions

- **Primary Care**

  - 81% of ND counties are entirely or at least partially a HPSA/MUA for physicians.
  
  - From 1992-2005, there was an average 18 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, but now there is an increase.
Health Professions

- **Primary Care**
  - Nationally, only 11% of U.S. Physicians practice in rural areas. In ND, 32% of physicians practice in rural (15,000 population or less)
  
  - Of 125 Schools of Medicine, the UNDSMHS ranks 7th in the percentage of medical graduates selecting a family practice residency from 1991-2003

Health Professions

- **Nursing**
  - RN vacancy rate was 11% in 2005, 9% in 2004, and 7% in 2003.

  - LPN vacancy rate was 5% in 2005, 2004, and 2003.

  - The turnover rate for RNs in 2005 was 20%, for LPNs it was 21%.
Health Professions

• Nursing
  - Nationally, RNs have an average salary of $48,240 and in ND the average salary is $38,100. Nationally, LPNs receive $31,490 (2005) and in ND they receive $22,915 (2005).
  - Nationally the average age of an RN is 45 and in ND it is 44. Only 15% of ND RNs are 30 or younger.
  - Nationally, about 23% of nurses work part-time whereas in ND 44% work part-time.
  - In 2005, RNs in rural ND had incomes 17% lower than urban ND RNs.

• Emergency Medical Services (EMS)
  - Over 90% of EMS personnel are volunteers
  - 48% of rural EMTs are women compared to only 19% of urban EMS
  - Average age of rural EMT is 41 compared to 33 for urban
  - Growing state concern that more rural ambulance units will close
  - CRH study found 62% of EMS units saying recruitment was a serious problem and 32% said retention was a serious problem
Health Professions

• Mental Health
  ➢ 94% of ND counties are entirely or partially designated as a shortage area
  ➢ ND ranks 13th in suicide – all ages
  ➢ ND ranks 2nd in suicide for 10-14 year olds
  ➢ ND ranks 6th in suicide for 15-19 year olds
  ➢ While 5.5% of population is American Indian, 11.2% of suicide from 1994-2003 were American Indian

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
Hospitals

CAH and Flex Program

**Purpose:** CAH CEO attitudes toward rural health issues and the role of CAH designation and the Flex Program in addressing issues.

**Process:** Mailed survey to 30 CAHs.

**Focus:** Hospital demographics, hospital infrastructure, rural health issues facing hospitals, impact of CAH and Flex, network relationships.
Hospital Demographics:
How would you characterize your organization?

- Stand alone acute care
- Acute care w/primary care clinic
- Acute care w/LTC
- Acute care, primary care & LTC

Number of Beds

- <10
- 11 to 15
- 16 to 20
- 21 to 25
Hospital Demographics:
Affiliate With More Than One Hospital/Health System

- Yes: 50%
- No: 42%
- No Response: 8%

Hospital Demographics:
Affiliation Partners

- Urban: 52%
- Rural: 8%
- Both: 28%
Hospital Demographics:

“Over the next 24 months my hospital will…”

<table>
<thead>
<tr>
<th>Option</th>
<th>1998</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>De-certify as CAH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add LTC</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Eliminate acute care</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Close</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Affiliate with another hospital</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Stay the way we are</td>
<td>54</td>
<td>85</td>
</tr>
</tbody>
</table>

Local Citizens are Aware of our Financial Situation

- Yes: 85%
- No: 4%
- Unsure: 11%
Hospital Demographics:
Hospital Receives County and/or City Tax Support

- Yes: 81%
- No: 15%
- No Response: 4%

Asked: “What is your number one concern today?”

- Reimbursement: 47%
- Workforce: 27%
- Community Support: 7%
- Clinic Relations: 7%
- Population: 3%
- Rules/Reg: 3%
- Aging Plan: 3%
- Technology: 3%
CAH Financial Indicators
2003 Median Values

<table>
<thead>
<tr>
<th>Indicator</th>
<th>ND</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Margin</td>
<td>-2.07%</td>
<td>2.32%</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>-2.30%</td>
<td>5.33%</td>
</tr>
<tr>
<td>Days Cash on Hand</td>
<td>28.03 days</td>
<td>45.34 days</td>
</tr>
<tr>
<td>Days Revenue in Accounts Receivable</td>
<td>59.15 days</td>
<td>60.66 days</td>
</tr>
<tr>
<td>Outpatient Revenues to Total Revenues</td>
<td>52.13%</td>
<td>61.82%</td>
</tr>
<tr>
<td>Medicare Inpatient Payer Mix</td>
<td>86.46%</td>
<td>77.94%</td>
</tr>
<tr>
<td>Medicare Outpatient Payer Mix</td>
<td>43.97%</td>
<td>36.39%</td>
</tr>
<tr>
<td>Medicare Revenue Per Day</td>
<td>$928.00</td>
<td>$1,329.00</td>
</tr>
<tr>
<td>Salaries to Total Expenses</td>
<td>51.85%</td>
<td>46.06%</td>
</tr>
<tr>
<td>Average Age of Plant</td>
<td>14.93 years</td>
<td>11.36 years</td>
</tr>
<tr>
<td>FTEs per Adjusted Occupied Bed</td>
<td>8.54</td>
<td>6.19</td>
</tr>
<tr>
<td>Average Daily Census Acute Beds</td>
<td>1.88</td>
<td>3.12</td>
</tr>
</tbody>
</table>

Rural Hospital Capital Issues

- Most hospitals will need to borrow funds to fix these deficiencies (55%)
- Most hospitals have the ability to borrow funds (81%)
- Hospitals with most difficulty in obtaining loans tend to be:
  - Older (15.1 yr vs. 10.2 yr)
  - Operating losses (90% vs. 29%)
  - Small revenues ($4m/yr vs. $20m/yr)
  - Low volume (0-499 admissions vs. 2,000 +)
Rural Hospital Capital Issues

- 2001 national survey of rural hospitals (Project Hope)
  - 38% reported having deficiencies “that, by law, require renovation or remodeling”
    - Roofs
    - ADA compliance
    - Heating
    - Ventilation/air-conditioning
    - Sprinkler systems
  - Median cost of correcting the deficiencies $1 million

Quality of Care
Quality of Care – North Dakota

• According to Medicare, ND does quite well for:
  ➢ AMI
  ➢ CHF
  ➢ Stroke
  ➢ Pneumonia
  ➢ Immunizations
  ➢ Breast Cancer
  ➢ Diabetes

• ND ranked 4th across set of 22 quality indicators (2001/2002)

Quality of Care – North Dakota

• According to United Health Foundation, ND needs improvement on these:
  ➢ Cholesterol checks (national rate is 72%, ND is 69%)
  ➢ Obesity ranks 31st in prevalence
Quality of Care - Finance

• PPS Hospitals – increase .04% for reporting quality data to Medicare (2 years ago)
• FY07 PPS Hospitals – increase 2.0% for reporting data (out of an update of 3.4%)
• Doesn’t impact CAHs but 45% of CAHs are reporting quality data to hospital compare (38% of ND CAHs)

Quality of Care – Cost Effectiveness

• Nationally, areas where there is higher spending on care for Medicare beneficiaries, but they have poorer health outcomes.
• ND not one of those states.
• Medicare program payments per beneficiary is $4,700 vs. U.S. per person of $6,400.
• ND Medicare recipients receive generally higher quality of care, yet providers being paid less than providers elsewhere.
Care Quality Strengths in Rural Hospitals - Nationally

Presently:
- Pneumonia
- AMI transfer

Potential:
- ED and trauma care
- Transfers

Rural Advantage:
- Less bureaucratic so can change quickly (small size and flexibility)
- Providers know each other and patients
- Networks with tertiaries
- Due to size, easier to monitor and track population outcomes

Quality of Care

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

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


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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

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