Health in Rural Massachusetts

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Health Professions Students

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Rural Massachusetts

Mass. often thought of as urban because dense concentration of people in metro Boston/eastern cities,

BUT...

- Nearly 800,000 people (12%) live in 54% of state's landmass classified as rural (Census Bur).
- Nearly half MA towns rural (46%) by a federal definition.
- Rural does not necessarily mean “extreme remoteness,” or even “Western Mass.”
- There are many, many rural definitions !!
- Key factors used:
  - population size, population density, distance to core cities
From the Berkshires to the Islands

- Massachusetts’ rural communities are diverse geographically, economically, and culturally.

- Rural Mass. communities stretch from
  - **Western Mass** - river valleys, hill towns, and forested mountains
  - **Central Mass** - scenic pastures, forests, small towns
  - **Southeast and Coastal** - seashores and Island communities
“When you see one rural area you have seen one rural area.”

- Some similar characteristic needs, challenges, and strengths as a group.

- Always have to look at each rural area so you do not mask needs or challenges for particular rural parts of the state.
Rural Appropriate Models

For models of care & program models...

“Rural is not just small urban!”

From the Berkshires... to the Islands.
Rural Massachusetts

Rural People
- Possess a strong sense of community and place
- Know each other, listen to each other, and work together to benefit the community

Rural Communities
- Rich history of creativity and ingenuity in addressing local problems
- Great places for healthcare collaboration and innovation
Rural Massachusetts

Rural Healthcare

- More patient-centered
- Providers have the opportunity to provide broader range of services
- Get to know their patients in a fuller way

Rural Healthcare Organizations

- Sources of innovation, ingenuity, and resourcefulness
- Reach beyond geographic boundaries
- Deliver quality care – *Rural leads in quality!*
- Economic foundation of communities
Rural hospitals are often the economic foundation of their communities.

Every $1.00 spent generates $2.20 for the local economy!
Key Challenge for Rural Healthcare

Lower population density **AND** greater distances

- Population smaller and spread out... program fixed costs can be higher per person served

- Lower volume...but need to maintain quality and good accessibility

- Need supply of providers and allied/support staff that like the lifestyle and the community based, connected practice style
Population Decline

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Barnstable</td>
<td>222,230</td>
<td>215,888</td>
<td>-6,342</td>
<td>-2.85%</td>
</tr>
<tr>
<td>Berkshire</td>
<td>134,953</td>
<td>131,219</td>
<td>-3,734</td>
<td>-2.77%</td>
</tr>
<tr>
<td>Bristol</td>
<td>534,678</td>
<td>548,285</td>
<td>13,607</td>
<td>2.54%</td>
</tr>
<tr>
<td>Dukes</td>
<td>14,987</td>
<td>16,535</td>
<td>1,548</td>
<td>10.33%</td>
</tr>
<tr>
<td>Essex</td>
<td>723,419</td>
<td>743,159</td>
<td>19,740</td>
<td>2.73%</td>
</tr>
<tr>
<td>Franklin</td>
<td>71,535</td>
<td>71,372</td>
<td>-163</td>
<td>-0.23%</td>
</tr>
<tr>
<td>Hampden</td>
<td>456,228</td>
<td>463,490</td>
<td>7,262</td>
<td>1.59%</td>
</tr>
<tr>
<td>Hampshire</td>
<td>152,251</td>
<td>158,080</td>
<td>5,829</td>
<td>3.83%</td>
</tr>
<tr>
<td>Middlesex</td>
<td>1,465,396</td>
<td>1,503,085</td>
<td>37,689</td>
<td>2.57%</td>
</tr>
<tr>
<td>Nantucket</td>
<td>9,520</td>
<td>10,172</td>
<td>652</td>
<td>6.85%</td>
</tr>
<tr>
<td>Norfolk</td>
<td>650,308</td>
<td>670,850</td>
<td>20,542</td>
<td>3.16%</td>
</tr>
<tr>
<td>Plymouth</td>
<td>472,822</td>
<td>494,919</td>
<td>22,097</td>
<td>4.67%</td>
</tr>
<tr>
<td>Suffolk</td>
<td>689,807</td>
<td>722,023</td>
<td>32,216</td>
<td>4.67%</td>
</tr>
<tr>
<td>Worcester</td>
<td>750,963</td>
<td>798,552</td>
<td>47,589</td>
<td>6.34%</td>
</tr>
</tbody>
</table>

The 3 counties that experienced a population decrease are predominately RURAL counties.
Geographic Barriers to Care for Rural MA

- Low population densities
- Longer distances
- Mountains, hills, oceans, winding country roads, longer distances, lack of public transportation
- Patchwork quilt of small towns
- Lack of inexpensive and fast telecommunications, (broadband, high speed internet, cell phone)
- Cultural differences

Further isolate rural communities from more centralized or regionalized state programs
Economic & Broadband Service Status Map, Massachusetts
Broadband Institute, Oct. 2011
Middlesex County has nearly *twice* as many general practice physicians as Barnstable, Berkshire, Dukes, Franklin and Nantucket counties combined and *six times* as many physicians with a specialty in psychiatry.

<table>
<thead>
<tr>
<th>Geography</th>
<th>Year</th>
<th>Licensed Physicians with Speciality: Psychiatry: Count</th>
<th>People per Physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middlesex County</td>
<td>2009</td>
<td>610</td>
<td>2,464</td>
</tr>
<tr>
<td>Rural Counties</td>
<td>2009</td>
<td>106</td>
<td>4,200</td>
</tr>
<tr>
<td>Massachusetts Total</td>
<td>2009</td>
<td>1,773</td>
<td>3,693</td>
</tr>
</tbody>
</table>
Western Mass. EMS Organizations

92% survey response rate

Service Level
(Some recent improvements toward increase in paramedic level respondents)

- 39% of respondents - Basic Level Only
- 18% of respondents - Intermediate Level is highest level
- 43% of respondents - Paramedic Level

Personnel Status

- 49% respondents have paid staff
- 22% of respondents have a mix of paid and volunteer staff
- 27% of respondents have volunteer staff

Western Mass EMS Council Recruitment and Retention Survey, Spring 2006
Rural MA Socioeconomic Challenges

- Incomes lower
- Rely heavily on tourism, service, agricultural, and fishing economies
- Some rural towns are former small mill towns where the mill has closed or greatly downsized
- Higher proportion of self-employed, family workers, and small businesses; with fewer benefits.
- Number of persons in rural areas with advanced education lower than the state average
Health Disparities in Rural MA

- Many of our rural counties experience higher rates of injuries, chronic disease, teen pregnancy, smoking, and substance abuse than the state as a whole.

- The health outcomes of rural communities vary greatly across communities; the health issues of one rural county may not be a health issue at all in a different rural county.

- Lack of access to general and specialty healthcare services, mental health, and oral health services due to healthcare professional shortages.

- Can be a real culture clash when “regionalization” happens and an urban “expert” organization goes in to serve a rural community. “home grown” vs. “expert from outside”
## Chronic Disease

### Chronic Disease Indicators

Crude rates per 100,000 people

<table>
<thead>
<tr>
<th></th>
<th>Berkshire</th>
<th>Dukes</th>
<th>Nantucket</th>
<th>Franklin</th>
<th>Barnstable</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total deaths (all causes)</td>
<td>749.1</td>
<td>701.4</td>
<td>903.1</td>
<td>711.7</td>
<td>618.2</td>
<td>699.1</td>
</tr>
<tr>
<td>Total cancer deaths</td>
<td>173.1</td>
<td>205.3</td>
<td>216.8</td>
<td>190.4</td>
<td>170.8</td>
<td>177.4</td>
</tr>
<tr>
<td>Lung cancer deaths</td>
<td>49.2</td>
<td>62</td>
<td>56.2</td>
<td>63.5</td>
<td>43.3</td>
<td>49.4</td>
</tr>
<tr>
<td>Breast cancer deaths</td>
<td>24.8</td>
<td>15.3</td>
<td>43.7</td>
<td>20.7</td>
<td>23.7</td>
<td>21.2</td>
</tr>
<tr>
<td>Cardiovascular disease deaths</td>
<td>228.4</td>
<td>210.3</td>
<td>331.7</td>
<td>226</td>
<td>187.4</td>
<td>210.9</td>
</tr>
</tbody>
</table>

2008 Mortality (Vital Records) ICD-10 based
### Behavioral Health (MassChip)

#### Injury Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Berkshire</th>
<th>Dukes</th>
<th>Nantucket</th>
<th>Franklin</th>
<th>Barnstable</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicle related injury deaths</td>
<td>7.6</td>
<td>6.4</td>
<td>0</td>
<td>8.3</td>
<td>5.3</td>
<td>5.8</td>
</tr>
<tr>
<td>Suicide</td>
<td>11.4</td>
<td>12.8</td>
<td>9.9</td>
<td>6.9</td>
<td>14.6</td>
<td>7.7</td>
</tr>
</tbody>
</table>

#### Substance Abuse Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Berkshire</th>
<th>Dukes</th>
<th>Nantucket</th>
<th>Franklin</th>
<th>Barnstable</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissions to DPH funded treatment</td>
<td>2193.8</td>
<td>1704.6</td>
<td>584.5</td>
<td>1342.3</td>
<td>2281.6</td>
<td>1589.9</td>
</tr>
<tr>
<td>Injection drug user admissions to DPH</td>
<td>378.1</td>
<td>358.9</td>
<td>NA</td>
<td>172.6</td>
<td>606.2</td>
<td>619.5</td>
</tr>
<tr>
<td>Alcohol and other drug related hospital</td>
<td>1011.6</td>
<td>173</td>
<td>178.3</td>
<td>308</td>
<td>243.7</td>
<td>345.6</td>
</tr>
</tbody>
</table>
People-Per-Dentist Ratio

30% of cities/towns in Massachusetts don’t have enough dentists to care for the people who live there.

Legend
People per Dentist by City/Town
- 1 - 1500
- 1501 - 4000
- 4001 - 5000
- 5001 - 11260
- No Dentists

More than 50% of cities/towns in Massachusetts have no dentist that accepts MassHealth.

The majority of MassHealth dentists are clustered in urban areas.

Publicly Financed Care

- Rural population is more dependent on publicly-funded health services, as are the providers.

- High proportion of elderly population; Medicare is payer of major importance.

Higher % of elderly Age 65+ (Census 2010)

- **Statewide urban & rural** 14%
- **Barnstable County** 25%
- **Berkshire County** 19%
- **Dukes County** 16%
- **Franklin County** 15%
- **Nantucket County** 12%
In **Berkshire County**, 54% of pregnant women rely on **publicly financed prenatal care** compared to 35% **statewide**.
State Office of Rural Health

- Funding
  - Federal Office of Rural Health Policy/HRSA
  - MDPH state matching funds
  - Leverage other state, federal, private sources through partnerships and collaborations

- Builds partnerships to improve access to health services, build better systems of care, and improve health status in rural communities.
MA SORH
Federal Grants

HRSA/Federal Office of Rural Health Policy

State Office of Rural Health Program

Core Functions

- Collection and dissemination of information
- Leadership and coordination of rural health resources and activities statewide
- Provision of technical assistance
- Encourage recruitment and retention of health professionals in rural areas
- Participate in strengthening state, local, and federal partnerships
- Rural voice within state government
SORH Initiatives This Year

- 2nd Annual National Rural Health Day
- Reshaping advocacy and awareness efforts
- Reshaping Advisory Council
- Info dissemination, education, and networking
- New England Rural Health RoundTable
- Healthcare workforce pipeline, recruitment, and retention
- Safety net healthcare providers and rural health system development
- Evidenced based elder health programs
- Veterans health services
MA SORH
Federal Grants

Massachusetts Rural Hospital Flexibility Program

**MA and National Health Reform Priorities**

- Hospital operational and financial improvement
- Quality improvement and patient safety initiatives
- Coordinated and integrated systems of care - health systems development and community engagement
- Critical Access Hospital designation and support
- Data reporting, HIT, and telemedicine
- Emergency Medical Services....QI, integration, workforce
Small Rural Hospital Improvement Program

Subcontracts Support Health Reform Initiatives

- Prospective payment systems
- Bundled payments - new payment systems
- Value based purchasing - data reporting and quality improvement
- Accountable Care Organizations - collaborative systems development and alignment
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