Supply and Demand of Health Care Workers in Minnesota

Speaker: Teri Fritsma
Wednesday, March 8, 2017
2:35 – 3:20 p.m.
Teri Fritsma

Teri Fritsma is a senior research analyst for the Minnesota Department of Health. With a small team of workforce analysts, she collects and analyzes data on health care workers and has a special interest in mental health and primary care professionals. Before coming to MDH, Teri was a labor market analyst at the Minnesota State Colleges and University system and the Department of Employment and Economic Development. She finds the health care workforce endlessly fascinating — and far more challenging — to study than any other economic sector! She has an MA and Ph.D. in sociology from the University of Iowa.
Supply and Demand of Health Care Workers in Minnesota

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Minnesota Department of Health
Office of Rural Health and Primary Care

About MDH’s Health Workforce Analysis Unit

Division of Health Policy, Office of Rural Health and Primary Care
We collect data on licensed providers*:

- How many, where, and how much they work
- Demographics
- Education / career laddering
- Career plans
- Work satisfaction
- Use of telemedicine and EHRs
- Team-based care

*Physicians, PAs, Nurses, Mental Health, Oral Health, and some Allied Health providers.

For today:

- The rural health workforce challenge
- Labor supply and demand in key occupations
- Possible solutions?
The rural health workforce challenge

Recruitment can be difficult

Older population = greater need for health services (and an aging workforce)

Lower wages in rural areas for most health occupations

“There isn’t a shortage, there’s a maldistribution.”

Rural-Urban Definitions ("RUCA")

- Urban
- Micropolitan / Large Rural
- Small Town / Small Rural
- Rural
Number of people per provider by RUCA
Physicians and Mid-Levels

Physicians and Physician Assistants

- Urban
- Micropolitan / Large Rural
- Small Town / Small Rural
- Rural or Isolated

Physicians

- Urban: 266
- Micropolitan / Large Rural: 480
- Small Town / Small Rural: 642
- Rural or Isolated: 199

Physician Assistants

- Urban: 1,922
- Micropolitan / Large Rural: 2,206
- Small Town / Small Rural: 3,689
- Rural or Isolated: 3,359

APRNs

- Urban: 955
- Micropolitan / Large Rural: 1,425
- Small Town / Small Rural: 1,486
- Rural or Isolated: 3,442

Source: MDH geocoding and analysis of Board of Medical Practice business address data. Physician data is from January 2017. PA data is from July 2016.

Number of people per provider by RUCA
RNs and LPNs

RNs

- Urban: 64
- Micropolitan / Large Rural: 77
- Small Town / Small Rural: 82
- Rural or Isolated: 83

LPNs

- Urban: 259
- Micropolitan / Large Rural: 129
- Small Town / Small Rural: 125
- Rural or Isolated: 118

Source: MDH geocoding and analysis of Board of Nursing address data.
In many rural counties, 20% of residents are age 65+.

Source: Minnesota Compass, Analyzing U.S. Census Data.

Rural physicians and PAs are older than urban ones

Source: MDH’s analysis of MN Board of Medical Practice and Board of Nursing data.
AGE

Physician retirements

33% of rural physicians plan to leave the workforce within 5 years.

(Compared to 16% of urban physicians)

Source: MDH Physician Workforce Survey, 2016

WAGES

Average weekly wages in hospitals, by region (all employees)

Source:
Minnesota Department of Employment and Economic Development, 2nd Quarter 2016
All rural areas face shortages. But where should we be *most* concerned?

### Number of people per provider in rural Minnesota (by Region and Provider)

<table>
<thead>
<tr>
<th>Rural Region*</th>
<th>Physicians</th>
<th>PAs</th>
<th>APRNs</th>
<th>RNs</th>
<th>LPNs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Central</td>
<td>1,500</td>
<td>4,300</td>
<td>4,300</td>
<td>95</td>
<td>130</td>
</tr>
<tr>
<td>Rural Northeast</td>
<td>1,100</td>
<td>10,300</td>
<td>2,400</td>
<td>81</td>
<td>140</td>
</tr>
<tr>
<td>Rural Northwest</td>
<td>2,700</td>
<td>4,900</td>
<td>3,900</td>
<td>86</td>
<td>110</td>
</tr>
<tr>
<td>Rural Southeast</td>
<td>2,500</td>
<td>6,100</td>
<td>2,800</td>
<td>66</td>
<td>140</td>
</tr>
<tr>
<td>Rural Southwest</td>
<td>1,900</td>
<td>6,500</td>
<td>3,100</td>
<td>78</td>
<td>120</td>
</tr>
<tr>
<td>ALL RURAL AREAS OF MINNESOTA</td>
<td>1,900</td>
<td>5,500</td>
<td>3,400</td>
<td>82</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: MDH’s analysis of licensing boards’ business address data. Pink-shaded boxes represent the condition when the population-to-provider ratio in that region is larger than the same ratio for all rural areas of the state.

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**For today:**

1. The rural health workforce challenge
2. Labor supply and demand in key occupations
3. Possible solutions?
GENERAL CONTEXT:
Minnesota’s labor market is only getting tighter

Projected job growth and projected labor force growth

Source: MN State Demographer’s Office and the MN Department of Employment and Economic Development.

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Selected direct care staff (except CNAs):

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Statewide Vacancies Due to Growth &amp; Turnover*</th>
<th>Wage Offer*</th>
<th>Projected Annual Openings Due to Growth &amp; Turnover**</th>
<th>Number of College Graduates in MN, 2013-2014 (γ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Health Aides</td>
<td>1,446</td>
<td>$12.02</td>
<td>1,619</td>
<td></td>
</tr>
<tr>
<td>Medical Assistants</td>
<td>383</td>
<td>$13.65</td>
<td>333</td>
<td>959</td>
</tr>
<tr>
<td>Pharmacy Aides</td>
<td>12</td>
<td>$9.76</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Phlebotomists</td>
<td>37</td>
<td>$12.57</td>
<td>75</td>
<td>105</td>
</tr>
<tr>
<td>Psychiatric Aides</td>
<td>339</td>
<td>$12.79</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Retail Sales Clerks</td>
<td>5,825</td>
<td>$10.70</td>
<td>3,530</td>
<td></td>
</tr>
<tr>
<td>Minnesota, Total</td>
<td>97,580</td>
<td>$14.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: *Department of Employment and Economic Development Job Vacancy Program; **Employment Projections Program, and (γ) the Integrated Post-secondary Education Data System (IPEDS)
NURSING
Nurses are the backbone of the hospital and health care workforce.

120,600 Total hospital employment (2015)

33,800 RNs and APRNs
8,000 Nursing Assistants
4,200 LPNs
3,700 Janitors and Housekeepers
≈1,000 each Physicians; Medical Assistants; Physical, Respiratory Therapists; Pharmacists, EMTs, Medical Transcriptionists

Source: Minnesota Department of Employment and Economic Development Staffing Patterns

NURSING
Supply and Demand of MN Nurses

Statewide Projected Annual Openings
Number of MN Graduates in 2013-2014

Nursing Assistants 1,863 1,863
LPNs 2,013 2,013
AA and BA-prepared Registered Nurses 2,217 2,217
MS and PhD-prepared Registered Nurses 3,906 3,906

Sources: MN Department of Employment and Economic Development Employment Projections and the Integrated Postsecondary Data System (IPEDS)
NURSING

But on the ground, we’re hearing about nursing shortages. Why?

- Maybe demand models don’t account for the quick increases in access due to expanded coverage and an aging population?
- Inpatient nursing is now competing with outpatient settings for supply.
- Is there a mismatch between what hospitals need and what educators are producing? (Experience, certain types of clinical specialties, etc.?)
- Younger LPNs and RNs leaving the workforce, not wanting as many hours, or moving up the career ladder to more advanced roles?

Source: Erin Fraher, PhD, “Workforce Planning in a Rapidly Changing Healthcare System.”

PHYSICIANS

Number of MN Physicians with Selected Specialties, by RUCA

<table>
<thead>
<tr>
<th>GENERAL Specialty</th>
<th>Urban</th>
<th>Micropolitan / Large Rural</th>
<th>Small Town / Small Rural</th>
<th>Rural or Isolated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>1,766</td>
<td>355</td>
<td>306</td>
<td>150</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>1681</td>
<td>133</td>
<td>48</td>
<td>13</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>276</td>
<td>38</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>747</td>
<td>57</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>340</td>
<td>38</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>General Surgery</td>
<td>250</td>
<td>53</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>Subspecialties or Mixed Specialties</td>
<td>1601</td>
<td>148</td>
<td>30</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: MDH analysis of MN Board of Medical Practice data, January 2017.
**PHYSICIANS**

“How often do you provide care that a different specialist might otherwise offer if they were available/accessible?”

<table>
<thead>
<tr>
<th>Location</th>
<th>Never</th>
<th>Occasionally</th>
<th>Frequently</th>
<th>All the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural or Isolated</td>
<td>10%</td>
<td>32%</td>
<td>41%</td>
<td>16%</td>
</tr>
<tr>
<td>Small Town / Small Rural</td>
<td>18%</td>
<td>39%</td>
<td>35%</td>
<td>8%</td>
</tr>
<tr>
<td>Micropolitan / Large Rural</td>
<td>28%</td>
<td>40%</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td>Urban</td>
<td>39%</td>
<td>38%</td>
<td>16%</td>
<td>6%</td>
</tr>
</tbody>
</table>

*Source: MDH Physician Workforce Survey, 2016*

**PHYSICIANS**

Mental health services are the biggest gap across the state, from urban to rural areas.

63 percent of rural physicians say they have to fill gaps in mental health services “frequently” or “all the time.”

Other big gaps: pediatric and OB/GYN services.

Orthopedics, dermatology, addiction medicine, and oral health also mentioned.

*Source: MDH Physician Workforce Survey, 2016*
For today:

- The rural health workforce challenge
- Labor supply and demand in key occupations
- Possible solutions?

A few (!) state investments aimed at helping

**MDH**
- Loan Forgiveness Expansion
- Primary Care Residency Expansion Grant
- Rural Family Medicine Residency Grant
- International Medical Graduate (IMG) program
- Home & Community Based Services Scholarship program
- Summer Health Care Internship Program
- MERC (Medical Education Research Costs)

**Healthforce Minnesota**
- Scrubs Camp
- Mental Health Workforce Summit & Legislation
- Minnesota Clinical Laboratory Workgroup

**DHS**
- DHS Direct Care Workforce Summit
Loan Forgiveness Expansion

• In 2015, the Legislature added $2.5 million to the state’s Loan Forgiveness program and created eligibility for three new professional categories:
  
  • Mental Health Professionals (Urban and Rural)
  • Dental Therapists (Rural)
  • Public Health Nurses (Rural)

• Participants apply on their own behalf and secure their own employment. They must agree to practice in an eligible geographic area for a minimum of three years with an optional fourth year.

The next funding cycle opens November 1st!

Loan Forgiveness Expansion: Results

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016A</th>
<th>2016B</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Rural Pharmacist</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Dentist</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nurse Faculty</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>PAs &amp; APRNs (Midlevels)</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Nurse in Nursing Homes</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Public Health Nurse</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Dental Therapists / Advanced Dental Therapists</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Mental Health Professionals</td>
<td>4</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban Mental Health Professionals</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Participants</td>
<td>14</td>
<td>18</td>
<td>62</td>
<td>89</td>
</tr>
<tr>
<td># of Applications</td>
<td>53</td>
<td>51</td>
<td>117</td>
<td>234</td>
</tr>
</tbody>
</table>

$2.5M increase in program funding; new professions added
Loan Forgiveness Expansion: Results

- Pays 50% of the cost for high school or college interns in health care and long-term care facilities.
- Administered by MHA on behalf of MDH.
- Areas of employment or observation:
  - Radiology
  - Laboratory
  - Nutrition/Dietary Services
  - Business office
  - Pharmacy
  - Inpatient Care
  - Respiratory Therapy
  - Chaplaincy
  - Social Services

Summer Health Care Internship Program

- Pays 50% of the cost for high school or college interns in health care and long-term care facilities.
- Administered by MHA on behalf of MDH.
- Areas of employment or observation:
Summer Health Care Internship Program:
Number of Students Served, 2009-2015

Any Minnesota hospital, clinic, nursing facility, home care provider or adult day programs can participate. The Employer Application is due by Friday, April 14.

Minnesota Clinical Laboratory Group
“Addressing a Critical Shortage of Facilities for Training”

Higher-than-average growth projected for both Clinical Laboratory Scientists and Clinical Laboratory Technician occupations.

Programs have expanded to meet the demand, but opportunities for clinical placement have become scarce. Innovations currently under discussion include:

• Shortening clinical education time
• Use of simulation for a portion or all of the clinical education
• Reframing the entry-level expectations of employers
• Utilization of additional clinical sites

Any laboratory educators or professionals are invited to join the conversation! Contact HealthForce director Valerie DeFor at vdefor@winona.edu.
RETENTION
Career Satisfaction among Physicians
“How satisfied have you been with your career in the last 12 months?”

<table>
<thead>
<tr>
<th>Rural or Isolated</th>
<th>Very satisfied</th>
<th>Somewhat satisfied</th>
<th>Somewhat dissatisfied</th>
<th>Very dissatisfied</th>
<th>&lt; 3% in all regions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42%</td>
<td>50%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small Town / Small Rural</td>
<td>40%</td>
<td>50%</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micropolitan / Large Rural</td>
<td>40%</td>
<td>50%</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>49%</td>
<td>46%</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: MDH Physician Workforce Survey, 2016

RETENTION
Work and Career Satisfaction among Physicians
“If you plan to leave the field within the next five years, why?”

- To retire: 83%
- Because of burnout or dissatisfaction: 9%
- To pursue a different career: 3%
- For family or personal reasons: 2%
- To pursue training in order to advance: 1%
- For some other reason: 1%

This is 288 physicians!

Much less costly to retain than train and recruit new providers!

Source: MDH Physician Workforce Survey, 2016
FINAL THOUGHT

If you have found the data in this presentation useful, please...

• Thank a licensed provider, who took the time to complete our survey;
  
  &

• Thank any health licensing board, who partnered with us to make this data collection possible!

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