Rural Medical Education

Governor Daugaard’s Primary Care Task Force
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Why Rural Medical Education?

• The health of rural communities is at risk
• Fewer health professionals are choosing rural practice and primary care
• Successful programs exist
• Government support is needed
• Regional collaboration makes sense
Rural Health Needs

- Aging population
- Increasingly diverse population
- Increasing cost and decreasing access
- Aging retiring physician workforce
- Increasing chronic disease
- Injuries and stabilization/transfer

Facts

- 20 percent of population lives in rural communities
- 9 percent of physicians practice rural
- 3% of current medical students plan rural practice
- Rural areas have <60% if the per capita generalists compared with urban areas
- 58 percent of rural physicians are family physicians
What do we know about what works?

Impact of Three Factors
Rabinowitz 2012

- Growing up in a rural area
- Planning to practice in a rural area
- Planning to practice family medicine

<table>
<thead>
<tr>
<th></th>
<th>Rural Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Factors</td>
<td>45%</td>
</tr>
<tr>
<td>2 Factors</td>
<td>33%</td>
</tr>
<tr>
<td>1 Factor</td>
<td>21%</td>
</tr>
<tr>
<td>0 Factors</td>
<td>12%</td>
</tr>
<tr>
<td>National rate</td>
<td>11%</td>
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### National Match Rates

<table>
<thead>
<tr>
<th>Specialty</th>
<th>NRMP Match 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>11.3%</td>
</tr>
<tr>
<td>Medicine (Categorical)</td>
<td>22.8%</td>
</tr>
<tr>
<td>(Primary)</td>
<td>1.3%</td>
</tr>
<tr>
<td>Pediatrics (Categorical)</td>
<td>10.7%</td>
</tr>
<tr>
<td>(Primary)</td>
<td>0.3%</td>
</tr>
<tr>
<td>Surgery (Categorical)</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

### Impact of Specialty Planning at Matriculation

Rabinowitz 2012

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Rural Practice</th>
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<tbody>
<tr>
<td>Family Medicine</td>
<td>29.4%</td>
</tr>
<tr>
<td>General Surgery, Psychiatry, Emergency Medicine, General internal Medicine, Medical Subspecialties</td>
<td>19.6%</td>
</tr>
<tr>
<td>General Pediatrics, Surgical Subspecialties, Hospital specialties, Ob/Gyn</td>
<td>14.0%</td>
</tr>
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</table>
Why is Primary Care Important?
Phillips and Starfield, 2004

Based on two decades of research
- Reduced all-cause mortality, cardiovascular and pulmonary mortality
- Less use of emergency rooms and hospitals
- Better preventive care
- Better detection of breast cancer, reduced incidence and mortality from colon and cervical cancer
- Fewer tests, higher patient satisfaction, less medication use, lower care-related costs
- Reduced health disparities

Comprehensive Medical School Rural Programs Rabinowitz et al. 2008

A systematic review of the literature shows:
- 53% to 64% rural practice outcomes
- Rural retention rates of 79% to 87%
- Academic performance shown to be similar to peers
Comprehensive Rural Programs

- A defined cohort of students
- AND
- A focused rural admissions process and a rural curriculum
- OR
- An extended rural clinical curriculum

Medical Schools with Rural Mission
Rabinowitz 2000

<table>
<thead>
<tr>
<th>Program</th>
<th>Percent of Grads in Rural Practice</th>
<th>Percent in FM</th>
<th>Percent in PC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-SMSA</td>
<td>&lt;50,000</td>
<td>&lt;25,000</td>
</tr>
<tr>
<td>PSAP</td>
<td>34%</td>
<td>76%</td>
<td>68%</td>
</tr>
<tr>
<td>WWAMI</td>
<td>23%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPAP</td>
<td>59%</td>
<td>79%</td>
<td>68%</td>
</tr>
<tr>
<td>U of MN Du</td>
<td>54%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>UPP</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercer</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>RMED</td>
<td></td>
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Success Stories

- Minnesota – Rural Physician Associate Program (RPAP), Duluth Campus
- Pennsylvania – Jefferson’s Physician Shortage Area Program (PSAP)
- Illinois – Rockford’s Rural Medical Education (RMED)
- Michigan State – Upper Peninsula Program (UPP)
- New York – RMED at SUNY Upstate

Comprehensive Rural Program Outcomes

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Rural</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>556</td>
<td>225</td>
<td>781 (50.4%)</td>
</tr>
<tr>
<td>General IM and Peds</td>
<td>82</td>
<td>68</td>
<td>150 (9.7%)</td>
</tr>
<tr>
<td>Non-primary care</td>
<td>341</td>
<td>279</td>
<td>620 (40.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>979 (63.1%)</td>
<td>572 (36.9%)</td>
<td>1551 (100.0%)</td>
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AMA Physician Masterfile
Graham Center Policy One-Pager 2011
Three programs – Jefferson Medical College’s Physician Shortage Area Program, University of Minnesota Duluth Campus, University of Illinois College of Medicine at Rockford’s Rural Medical Education Program
Rural Physician Associate Program
University of Minnesota Medical School

- 1971 – 2012 1055 in practice
- 76% primary care
- 65% in family medicine
- 64% practice in Minnesota – 671 physicians
- Of those, 61% are in rural practice – 409 physicians

Minnesota’s RPAP – since 1971

- >1400 grads
- 40 third year students per year, 110 communities
- 9 months in a rural community with a primary preceptor
- 24 weeks of required rotations
- Communities of 1000 to 30,000 population
- Simulation orientation
- Online curriculum
- Community visits
- Community health assessment project
Modeled after RPAP

- North Dakota’s ROME program
- SUNY Upstate’s RMED program
- Many others

Jefferson’s PSAP since 1974

- Family Medicine faculty advisor and first year clinical mentor for longitudinal experience
- Big Sib – sophomore PSAP student
- Paid summer research in family medicine summer after first year
- At least one required clerkship in smaller community
- At least one fourth year rotation
- Priority for 4th year Outpatient Subinternship in rural community
Rockford’s RMED since 1993

- >200 students
- Seminars, field trips and computer-based assignments on rural health care and community oriented primary care (COPC) in the first three years
- 16 week rural preceptorship in fourth year
- COPC research project

3 Rural Program Grads Practicing in RP State Compared with IMGs Practicing in RP States
Rabinowitz et al. 2012

<table>
<thead>
<tr>
<th>Graduates</th>
<th>No. (%) of RP Graduates</th>
<th>No. (%) of IMGs</th>
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<tbody>
<tr>
<td>RP grads in direct patient care</td>
<td>956 (100)</td>
<td>6474 (100)</td>
</tr>
<tr>
<td>Rural family physicians</td>
<td>376 (39.3)</td>
<td>254 (3.9)</td>
</tr>
<tr>
<td>Rural primary care physicians</td>
<td>433 (45.3)</td>
<td>768 (11.9)</td>
</tr>
</tbody>
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Success Factors to Consider

- ***Recruitment
- Retention
- Pipeline development
- Financial incentives

Success Factors for Rural Medical Education

- Longitudinal integrated clerkships – continuity of care
- Rural physician mentors – lifestyle and leadership
- Interprofessional education – part of the team
- Community engagement – public health and impact
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