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

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Rural Health Needs

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

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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

	Rural Practice
3 Factors	45%
2 Factors	33%
1 Factor	21%
0 Factors	12%
National rate	11%

National Match Rates

	NRMP Match 2012	
Family Medicine	11.3%	
Medicine (Categorical)	22.8%	1.3% (Primary)
Pediatrics (Categorical)	10.7%	0.3% (Primary)
Surgery (Categorical)	5.0%	

Impact of Specialty Planning at Matriculation

Rabinowitz 2012

Specialty	Rural Practice
Family Medicine	29.4%
General Surgery, Psychiatry, Emergency Medicine, General internal Medicine, Medical Subspecialties	19.6%
General Pediatrics, Surgical Subspecialties, Hospital specialties, Ob/Gyn	14.0%

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

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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

Program	Percent of Grads in Rural Practice			Percent in FM	Percent in PC
	Non-SMSA	<50,000	<25,000		
PSAP	34%	76%	68%	52%	63%
WWAMI	23%				61%
RPAP	59%	79%	68%	64%	74%
U of MN Du		54%	41%	52%	
UPP		50%		41%	
Mercer				36%	64%
RMED				69%	

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

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Comprehensive Rural Program Outcomes

Specialty	Rural	Urban	Total
Family Medicine	556	225	781 (50.4%)
General IM and Peds	82	68	150 (9.7%)
Non-primary care	341	279	620 (40.0%)
Total	979 (63.1%)	572 (36.9%)	1551 (100.0%)

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

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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

Graduates	No. (%) of RP Graduates	No. (%) of IMGs
RP grads in direct patient care	956 (100)	6474 (100)
Rural family physicians	376 (39.3)	254 (3.9)
Rural primary care physicians	433 (45.3)	768 (11.9)

Success Factors to Consider

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

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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

Bibliography

- AM Last Page: Truths about the rural physician supply. Rabinowitz. Acad Med. 2011;86
- Graham Center Policy One-Pager. Comprehensive medical school rural programs produce rural family physicians.
- Phillips RL, Starfield B. Editorial. Why does a U.S. primar care phhsician workforce crisis matter: Amer Fam Phys. August 1 2004.
- Rabinowitz HK, Diamond JJ, Markham FW, Santana AJ. The relationship between matriculating medical students' planned specialties and eventual rural practice outcomes. Acad Med. 2012;87:1086-1090
- Rabinowitz HK, Diamond JJ, Markham GW, Santana AJ. The relationship between entering medical students' backgrounds and career plans and their rural practice outcomes three decades later. Acad Med. 2012;87:493-497.
- Rabinowitz HK, Petterson S, Boulger JG, Hunsaker ML, Markham FW, Diamond JJ, Bazemore A, Phillips RL. Comprehensive medical school rural programs produce rural family physicians. Graham Center Policy One-Pager. Amer Fam Phys, 2011.
- Rabinowitz HK, Diamond JJ, Markham FW, Santana AJ. Increasing the supply of rural family physicians: Recent outcomes from Jefferson Medical College's Physician Shortage Area Program (PSAP). Acad Med. 2011;86:264-269
- Rabinowitz HK, Diamond JJ, Markham FW, Wortman JR. Medical school programs to increase the rural physician supply: A systematic review and projected impact of widespread replication. Acad Med. 2008;83:235-243
- Rabinowitz HK, Petterson S, Boulger JG, Hunsaker ML, Diamond JJ, Markham FW, Bazemore A, Phillips RL. Medical school rural programs: A comparison with international medical graduates in addressing state-level rural family physician and primary care supply. Acad Med. 2012;87:488-492