Medical School Expansion, Primary Care, And Policy: Engaging Primary Care Educators In Evidence-based Advocacy

Andrew Bazemore
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Amy McGaha
Hope Wittenburg

The Robert Graham Center: Policy Studies in Family Medicine and Primary Care
www.graham-center.org
Need to build Primary Care Capacity
Now

- So, with a higher per capita GDP, fewer uninsured and less rural-urban separation, Massachusetts has struggled mightily to guarantee comprehensive primary care access for its population

- Why?
National Trends for Physician Workforce

- National workforce trends
- Updates on School expansion, residency expansion
Primary Care Workforce

- 97,752 family physicians/general practitioners
  - 1 for every 3,081 persons
- 92,257 general internists
  - 1 per 2,443 adults
- 48,930 general pediatricians
  - 1 for 1,548 children and adolescents
- 238,939 primary care physicians
  - 1 for every 1,260 persons
Physician Specialties to Population Ratio 1980-2006
(Physicians per 100,000 persons)
Is it a Primary Care Shortage?

Problems:

- Distribution
  - Still concentrated in desirable areas
  - Relative shortage in underserved and rural areas
  - True for physicians, NPs, and PAs

- Scope
  - Primary care physicians performing non-primary care tasks to remain solvent
What lies ahead: Will there be a Primary Care Shortage?

- What’s to come:
  - Substantial decline in US student interest
  - Increased reliance on international students
  - Increased interest in specialization and alternative careers
  - Contraction of training programs
  - Majority of PAs now subspecialize; NPs?

- Current physician expansion effort not promoting primary care
Erosion of Primary Care Training Capacity
Status check: Family Medicine

Family Medicine Positions March, 2008

Filled by US Graduates
Reliance on International Medical Graduates

Change in Number of IMGs in Training 2002-2006

- Decline in interest among US graduates
- Growth of subspecialty positions

Source: JAMA Medical Education Issues, Ed Salsberg, AAMC
Proportion of third-year internal medical residents becoming subspecialists or hospitalists is growing.

Note: MedPAC June 2008

Student Interest

- General Internal Medicine: 2.0%
- Med/Peds: 2.7%
- Family Medicine: 4.9%
- General Pediatrics: 11.7%
- Total: 21.3%

K. E. Hauer et al. Choices Regarding Internal Medicine Factors Associated With Medical Students' Career JAMA. 2008;300(10):1154-1164
Primary care losing ground: GME

- Between 2002 and 2007
  - Residency positions grew +7.9%
  - Subspecialty positions grew +24.7%
  - Primary care positions grew +2.3%
  - Family Medicine positions fell -2.8%

  However… the estimated number of graduates going on to practice primary care fell 15% (from 28.1% to 23.8%)

Medical Student Debt, Primary Care Career Choice, and Service
Background

- Medical student debt is very high
  - Out of proportion to other professions
  - Growing faster than physician income
  - Mean: more than $130,000
  - One in four 2008 U.S. medical school graduates will have more than $200,000 in educational debt

- No clear relationship between debt and specialty choice in studies to date
Hypotheses:

- Students with high debt will be...
  - Less likely to choose primary care specialties
  - Less likely to serve in Federally Qualified Community Health Center or rural locations
  - More likely to serve in National Health Service Corps
- Effect of debt would be stronger as debt levels increased
## Results: Debt and Primary Care

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Results: Debt and Primary Care

Relative Risk of Choosing Primary Care

Reference variable: no educational debt

* statistically significant difference from reference
+ statistically significant difference from each other
Results: Debt and Family Medicine

Relative Risk of Choosing Family Medicine

Reference variable: no educational debt
*statistically significant different from reference
Results: Debt and Other Outcomes

Students with any level of debt were

More likely to practice in a Federally Qualified Health Center or Rural Health Center
  - Effect disappears after controlling for obligating scholarships

Equally likely to practice in a Health Professions Shortage Area or Medically Underserved Area

More likely to practice in a rural area

Much more likely to practice in National Health Service Corps
  - Scholarship recipients tend to have low levels of debt
  - Physicians accepting loan repayment tend to have high debt
Results: Debt and Rural Practice

Relative Risk of Rural Practice

Reference variable: no educational debt
*statistically significant difference from reference
Students who choose primary care, family medicine, and rural practice have more debt.

Why?

- Parents’ income strongest predictor of medical school debt
- Students from lower income families more likely to choose primary care and family medicine
- Not able to control for socioeconomic status in this study
- Positive effect of debt on primary care disappears above $200K – especially among public school students
- Positive effect of debt on rural practice disappears above $250K
Our subjects’ debt levels are lower than today.

Number of Physicians Evaluated by Debt Level

Reference variable: no educational debt

* statistically significant difference from reference
+ statistically significant difference from each other
All debt effects were small compared to effect of the **Physician Payment Gap**.
Effect of Physician Payment Gap on Relative Risk of the Outcome

All differences are statistically significant.
Conclusions

- Debt up to $200-250,000 has a modest positive effect of likelihood of choosing family medicine, primary care, or rural practice.
- This effect may be related to socioeconomic status, which could not be measured.
- Effect of very high debt needs more study.
- Effect of physician payment gap on specialty choices is much more powerful.
Question: Is the effect of debt just due to scholarship obligations?

- Answer: Partly.
- Having debt has an independent positive effect on the likelihood of choosing family medicine or primary care, and practicing in a rural area, regardless of obligating scholarships.
- The effect of debt on practicing in a Rural Health Center or Federally Qualified Health Center disappears after controlling for obligating scholarships.
Macy Report: Return on Investment

Bob Phillips MD MSPH

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Income Disparity affects Choice
True in 1989, true now
Is that a surprise?

Progress of the Physician Payment Gap

- **Diagnostic Radiology**
- **Orthopedic Surgery**
- **Primary Care**
- **Family Medicine**

Year:
- 1979
- 1981
- 1983
- 1985
- 1987
- 1989
- 1991
- 1993
- 1995
- 1997
- 1999
- 2001
- 2003

Annual Income:
- $0
- $50,000
- $100,000
- $150,000
- $200,000
- $250,000
- $300,000
- $350,000
- $400,000
- $450,000
Unintended Consequences of Resource Based-Relative Value Scale Reimbursement

“Medicine’s generalist base is disappearing as a consequence of the reimbursement system crafted to save it – the RBRVS”

1 Goodson JD. Unintended Consequences of Resource Based-Relative Value Scale Reimbursement. JAMA. 2007;298:19:2308-10
Market doesn’t absolve Schools

- Income gap – 0.5 odds of choosing Primary Care
- Preliminary results Macy Foundation Study:
  - Rural birth – 2.5 x odds of rural practice
    2 x odds of Family medicine
  - Public Medical School
    2 x odds of FM and Rural
  - National Health Service Corps
    4 x odds of being in an FQHC
  - Interest in Serving Underserved
    3 x odds of being in an FQHC
    x odds of Rural Health Center
  - Inner City, Rural and Primary Care Clerkships and Electives Matter

Factors Affecting Medical Student and Resident Career Choices.
Graham Center 2009. Funded by the Josiah Macy Jr. Foundation
Medical Schools can choose and train students to produce

• More Primary Care
• More Rural Access
• More Access for Underserved

Despite the Market
STFM, AFMAA & Advocacy on behalf of the primary care pipeline

Hope Wittenburg
Director of Government Relations, STFM

The Robert Graham Center: Policy Studies in Family Medicine and Primary Care
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Also working for you - AFMAA

- Advocating educational issues on a federal level
- Coalition of
  - STFM
  - NAPCRG
  - ADFM
  - AFMRD
- Staff of 1.5
- Advocacy Power rests in the membership
RGC & AFMAA

- Collaborating to expand both group’s mission to advance primary care through policy change
- Information that enhances grassroots advocacy is a shared goal
The Role of the AAFP Medical Education Division

Amy McGaha, MD
Assistant Director, Medical Education
AAFP

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Entry of US Medical School Graduates Into Family Medicine Residencies: 2007–2008 and 3-year Summary

Amy L. McGaha, MD; Gordon T. Schmittling, MS; Ashley D. DeVilbiss; Perry A. Pugno, MD, MPH, CPE

This is the 27th report prepared by the American Academy of Family Physicians (AAFP) on the percentage of each US medical school’s graduates entering family medicine residency programs. Approximately 8.3% of the 16,300 graduates of US medical schools between July 2006 and June 2007 were first-year family medicine residents in 2007, compared with 8.5% in 2006 and 8.4% in 2005. Medical school graduates from publicly funded medical schools were more likely to be first-year family medicine residents in October 2007 than were residents from privately funded schools, 10.0% compared with 5.6%. The West North Central and the Mountain regions reported the highest percentage of medical school graduates who were first-year residents in family medicine programs in October 2007 at 12.2% and 11.9%, respectively; the New England and Middle Atlantic regions reported the lowest percentages at 5.5% and 4.7%, respectively. Nearly half of the medical school graduates (46.5%) entering a family medicine residency program as first-year residents in October 2007 entered a program in the same state where they graduated from medical school. The percentages for each medical school have varied substantially from year to year since the AAFP began reporting this information. This article reports the average percentage for each medical school for the last 3 years. Also reported are the number and percentage of graduates from colleges of osteopathic medicine who entered Accreditation Council for Graduate Medical Education-accredited family medicine residency programs, based on estimates provided by the American Association of Colleges of Osteopathic Medicine.

(Fam Med 2008;40(8):551-62)
Graham Center tools & resources for medical education advocacy

Andrew Bazemore
Assistant Director
Robert Graham Center

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**Director’s Corner**

Visits to family physicians constitute more than 22 percent of all outpatient patient visits -- 250 million visits annually -- but family physicians receive just 0.22 percent of NIH research dollars. Family medicine’s substantial clinical presence means family physicians should be instrumental in helping to bridge the chasm between medical knowledge and actual clinical care toward improved population health. So what’s the problem with research translation?

*Read the full report: Off the Roadmap? Family Medicine’s Grant Funding and Committee Representation at NIH*

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**The Robert Graham Center exists to...**

Improve individual and population health by enhancing the delivery of primary care.

The Center aims to achieve this mission through the generation or synthesis of evidence that brings a family medicine and primary care perspective to health policy deliberations from the local to international level.

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**Who we are**
How can the Graham Center help?

Director's Corner

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Let’s visit the new website
Ensuring access to a modern, Medical Home: The role for a primary care extension program in health reform

As momentum builds for health reform legislation in the 111th Congress, calls to rebuild the crumbling primary care infrastructure in the United States are reaching receptive ears, with public and private advisory groups including the Medicare Payment Advisory Commission and the National Business Group on Health recommending increased payments for primary care. New investment in primary care is necessary, but not sufficient to create modernized, high performing primary care medical homes unless joined to a strategy for disseminating and implementing innovations and best practices. As the family medicine TransforMED program and other efforts in practice improvement have found, to successfully redesign practices requires knowledge transfer, performance feedback, facilitation, and HIT support provided by individuals with whom practices have established trusting relationships over time. The farming community learned these principles a century ago. Primary care practices are very much like the small farms of that era which were geographically dispersed, poorly resourced for change, and inefficient in adopting new techniques or technology, but vital to the nation’s well being. Practicing physicians need something akin to the agricultural extension agent which was so transformative for farming.

Health reform legislation should include establishment of a nationwide Primary Care Cooperative Extension Service, modeled after the US Department of Agriculture’s Cooperative State Research, Education, and Extension Service which so successfully accelerated farm transformation. Similar to the USDA program, a new Primary Care Extension Program would establish partnerships between community-based primary care clinicians and university-based centers of excellence to facilitate practice redesign, adoption of team-based care models, shared care management resources, workforce development, and other activities. County-based health extension organizations would support primary care clinicians in the same manner that the agricultural model assists family farmers, providing infrastructure for local learning communities and practice transformation. Successful progenitors of primary care extension programs exist in several states and demonstrate the promise of taking a Primary Care Extension Program to scale nationwide.

For more information:

- Ensuring Access to a Modern, Medical Home: The Role for a Primary Care Extension Program in Health Reform
- Primary Care Extension Agent Concept Diagram [1-page PDF, About PDFs]
- The Oklahoma Physicians Resource/Research Network (OKPRN)
- The Center for Excellence in Primary Care, the University of California, San Francisco
- Community Care of North Carolina
- The New Mexico Health Extension Regional Offices (HEROs)
- TransforMED
- Improving Primary Care: Strategies and Tools for a Better Practice
One-pagers, publications, monographs
The Medical Home: Growing evidence to support a new approach to primary care.

Thomas C. Rosenthal MD
University at Buffalo
Department of Family Medicine

Journal of the American Board of Family Medicine

“The better the primary care, the greater the cost savings, the better the health outcomes, and the greater the reduction in health and health care disparities”. 1
Data Tables, Annotated Slides, and Maps
The Robert Graham Center Update

A compendium of slides for public use that includes original and adapted analyses and commentary from the staff of the Robert Graham Center.

The Robert Graham Center Update -- PDF Version
(47-page PDF file; About PDFs)

The Robert Graham Center Update -- Powerpoint Version
(47-page Powerpoint file; About Downloading)

July 2008
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Maps

Maps offer an excellent way to communicate complex information. Academy members told us that our initial maps opened doors with policy-makers, who found them visually compelling conversation synopses of difficult issues. We have responded to these comments, and are pleased to offer here our latest in a series of map collections. We believe these maps will be valuable resources for members and advocates at the local level as well as at the national level. These include the theoretical impact of removing family physicians from the country, and the graduate ‘footprint’ of residency programs on their communities.

If you wish to create your own customized maps, please visit HealthLandscape.org

Family Medicine Residency Footprint Maps
Closing Family Medicine Residency Programs Footprint Maps
Primary Care Health Professional Shortage Area Maps
Primary Care Health Professional Shortage Area Maps After Withdrawal of Family Physicians
Please e-mail the Graham Center (policy@aafp.org) with questions.
Georgia

FAMILY MEDICINE RESIDENCY FOOTPRINT MAPS

Southwest Georgia Family Medicine Residency Program
Morehouse Family Practice Residency Program
Emory Family And Preventive Medicine
Medical College Of Georgia Family Practice Residency
Satilla Regional Family Practice Residency
Columbus Family Practice
Medical Center Of Central Georgia
Atlanta Medical Center Family Medicine Residency Program
Floyd Family Practice Residency Program
Savannah Family Medicine Residency Program
USA-Fort Benning Family Practice Residency Program
U.S. Army-Fort Gordon Family Medicine Residency Program

CLOSING FAMILY MEDICINE RESIDENCY PROGRAMS FOOTPRINT MAPS

Mercer Family Medicine Residency Fact Sheet

PRIMARY CARE HEALTH PROFESSIONAL SHORTAGE AREA MAPS

Georgia

PRIMARY CARE HEALTH PROFESSIONAL SHORTAGE AREA MAPS AFTER WITHDRAWAL OF FAMILY PHYSICIANS

Georgia
SAVANNAH FAMILY MEDICINE RESIDENCY PROGRAM FACT SHEET

Practice Locations

Footprint

Legend
- Savannah Family Medicine Residency Program
- Location of Graduates (n=96)

Legend
- Savannah Family Medicine Residency Program
- County in Footprint (n=41)

Graduate Practice Characteristics: 96 Graduates

<table>
<thead>
<tr>
<th>Practicing in Georgia</th>
<th>Graduates Practicing in HPSA’s*</th>
<th>Graduates Practicing in Georgia HPSA’s</th>
<th>Graduates Practicing in Rural Areas</th>
<th>Graduates Practicing in Rural Georgia</th>
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<tbody>
<tr>
<td>45 (47%)</td>
<td>24 (25%)</td>
<td>5 (5%)</td>
<td>17 (18%)</td>
<td>8 (8%)</td>
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</table>
Community HealthView

Community HealthView gives researchers and policymakers the ability to create custom maps and tables of health in their communities—depicting populations at risk, health outcomes, and the distribution of health interventions. It currently houses health-related data from Greater Cincinnati, the State of Ohio, and the nation.

Primary Care Atlas

The Primary Care Atlas maps Health Professional Shortage Areas (HPSAs), Medicare Physician Scarcity Areas (PSAs), the impact of your residency program graduates on your region, the distribution of physicians by specialty (primary care and other), and populations.

Health Center Mapping Tool

The Health Center Mapping Tool turns your Community Health Center or clinic's data into maps of the patients you serve, the core neighborhoods that comprise your service area, and areas with the densest concentrations of your patients. Also, map U.S. Census data to find populations of interest to you.

HealthLandscape is an interactive web atlas that allows health professionals, policy makers, academic researchers and planners to combine, analyze and display information in ways that promote understanding and improvement of health and healthcare.

Sample patient distribution map 8 in Washington, DC.
Maps provide a way to explore variation in Colorado’s physician distribution (Physician per 10,000) - Specialty by Specialty (PC then ALL then FM)
CU's 4000+ graduates physician ambassadors blanket Western urban corridors.

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<thead>
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<th>COUNTY</th>
<th>GRADUATES</th>
<th>STATE</th>
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<td>Boulder</td>
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<td>Salt Lake</td>
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Concentrations along the FRUC, in Western Slope
Other Schools with Footprint in Colorado (collaborators?)

- Nebraska
- New Mexico

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<th>State</th>
<th>Access Ranking</th>
<th>Net Donation, 91-01</th>
<th>Supply/Demand, 91-01</th>
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Mississippi Family Physicians and Primary Care HPSA

This map shows the locations of family physicians in the state of Mississippi over a county map displaying federally designated primary care health professional shortage areas (HPSA). Primary care HPSAs are counties or portions of counties in the United States with the lowest ratio of primary care physicians to population. As seen on the preceding page and in this map, the impact of family physicians spreads across Mississippi. Policies that positively impact recruitment and retention of family physicians within Mississippi will not only contribute to an increase in the availability and provision of quality health care.
Other recent work that may be of interest
A. Grant Funding

The Bad News:

NIH
46,700 GRANTS
$20,000M

FM
154 grants
$45M

0.3% grants
0.2% dollars
B. Committee Membership

The Bad News:

NIH
295 committees*, 5,464 members

FM
19 committees
21 members

6.4% committees
0.4% members
DataWatch

Usual Source Of Care: An Important Source Of Variation In Health Care Spending

Robert L. Phillips, Martey S. Dodoo, Larry A. Green, George E. Fryer, Andrew W. Bazemore, Kristin I. McCoy and Stephen M. Petterson

Health care spending varies in unexplained ways, and physicians’ behavior is thought to explain much of the variation. We studied the spending effects of having different usual sources of care, focusing on variations associated with the type of facility or physician specialty. Based on analyses of data from the 2001-2004 Medical Expenditure Panel Surveys, we found significant differences in annual spending, especially for adults. Use of and spending for subspecialists were similar to those for general internists, and both were significantly higher than those for family physicians. Variation in spending might be the result of training differences among primary care specialties.
AFMAA Advocacy

Means:
- Policy development by volunteer leaders
- Professional lobbyist
- Grassroots contacts and relationships

Methods:
- Communication of policy-relevant data to key policy makers

Advocacy Power rests in the membership – NOT the professional lobbyist
Making the most of your data

- Local Data brings the message home to policymakers.
  - Turning data into a compelling picture allows a story to be told in a common language.
  - It supplies a high-impact communication that allows for a common vision.
  - A common vision between policy maker and constituent garners support for action.
Questions & Discussion