State’s evidence on enhancing Primary Care

Andrew Bazemore MD, MPH
Director, Robert Graham Center
NGA Panel
Primary Care Physician Mapper

Quickly visualize the distribution of primary care physicians across the United States to identify workforce gaps and overlaps. Search by area or specialty, and create custom physician-to-population ratio maps.

THE ROBERT GRAHAM CENTER exists to...

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

The Center aims to achieve this vision 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 levels.

WHAT'S NEW

- Projecting US Primary Care Physician Workforce Needs: 2010-2025 (11/10/2012) (Articles)
- Improving America’s Health Requires Community-Level Solutions: Folsom Revisited (08/01/2012) (One-Pagers)
- The percentage of family physicians attending to women's gender-specific health needs is declining (07/01/2012) (Articles)
- Measures of social deprivation that predict health care access and need within a rational area of primary care service delivery (07/01/2012) (Articles)
- A re-emerging political space for linking person and community through primary health care (06/01/2012) (Articles)

DIRECTOR’S CORNER

As the Graham Center enters a
Starfield (and many others), 2005 Milbank:

- Systems built around primary care have
  - Lower costs
  - Higher quality
  - Broader access
Changing Primary Care Teams – the organizational players

• Providers
  – Physician
  – Non physician providers
  – Allied Health

• Delivery Site
  – Medical Homes
  – Medical Neighborhoods

• Community Stakeholders
  – Communities of Solution, Problemsheads
# The Providers

## Table 1. U.S. primary care workforce by provider type, 2010

<table>
<thead>
<tr>
<th>Primary care provider</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>208,807</td>
</tr>
<tr>
<td>Nurse practitioners</td>
<td>55,625</td>
</tr>
<tr>
<td>Physician assistants</td>
<td>30,402</td>
</tr>
<tr>
<td>Total</td>
<td>294,834</td>
</tr>
</tbody>
</table>

## Table 2. Geographic distribution of healthcare professionals, 2010

<table>
<thead>
<tr>
<th>Geography</th>
<th>All specialties</th>
<th>Primary care</th>
<th>U.S. population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP</td>
<td>PA</td>
<td>Physicians</td>
</tr>
<tr>
<td>Urban</td>
<td>84.4%</td>
<td>84.4%</td>
<td>89.0%</td>
</tr>
<tr>
<td>Large rural</td>
<td>8.6%</td>
<td>8.8%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Small rural</td>
<td>3.9%</td>
<td>3.8%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Remote rural/frontier</td>
<td>2.6%</td>
<td>3.0%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

**Note:** Data derived from analysis of National Provider Identifier file, November, 2010; U.S. Census Bureau Population Estimate, 2008. Rural and urban designations are taken from the Rural-urban classification scheme that uses standard Census Bureau definitions in combination with work commuting information to characterize rural and urban status and relationships of populations = 10,000-50,000; small rural populations = 2,500 – 9,999; and remote rural/frontier populations = less than 2,500 people. For more information, go to: [http://depts.washington.edu/rrsweb/Software Help](http://depts.washington.edu/rrsweb/Software Help) and [http://depts.washington.edu/rrsweb/ruca-uses.php](http://depts.washington.edu/rrsweb/ruca-uses.php).

AHRQ Publication No. 12-P001-4-EF
Current as of January 2012

**Internet Citation:**
Background

Projecting US Primary Care Physician Workforce Needs: 2010-2025

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ABSTRACT

PURPOSE We sought to project the number of primary care physicians required to meet US health care utilization needs through 2025 after passage of the Affordable Care Act.

METHODS In this projection of workforce needs, we used the Medical Expenditure Panel Survey to calculate the use of office-based primary care in 2008. We used US Census Bureau projections to account for demographic changes and the American Medical Association’s Masterfile to calculate the number of primary care physicians and determine the number of visits per physician. The main outcomes were the projected number of primary care visits through 2025 and the number of primary care physicians needed to conduct those visits.

RESULTS Driven by population growth and aging, the total number of visits to primary care physicians is projected to increase from 462 million in 2008 to 565 million in 2025. After incorporating insurance expansion, the United States will require nearly 52,000 additional primary care physicians by 2025. Population growth will be the largest driver, accounting for 33,000 additional physicians, while 10,000 additional physicians will be needed to accommodate population aging. Insurance expansion will require more than 8,000 additional physicians, a 3% increase in the current workforce.

CONCLUSIONS Population growth will be the greatest driver of expected increases in primary care utilization. Aging and insurance expansion will also contribute to utilization, but to a smaller extent.

### Table 2. Projected Primary Care Physician Need Under Various Conditions by Year

<table>
<thead>
<tr>
<th>Condition</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>209,662</td>
<td>209,662</td>
<td>209,662</td>
<td>209,662</td>
</tr>
<tr>
<td>Aging of population</td>
<td>–</td>
<td>2,693</td>
<td>6,264</td>
<td>9,894</td>
</tr>
<tr>
<td>Population growth</td>
<td>–</td>
<td>11,201</td>
<td>21,952</td>
<td>32,852</td>
</tr>
<tr>
<td>ACA coverage</td>
<td>–</td>
<td>7,104</td>
<td>8,097</td>
<td>8,279</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>209,662</td>
<td>230,660</td>
<td>245,975</td>
<td>260,687</td>
</tr>
</tbody>
</table>

*ACA = Affordable Care Act.*
Uninsurance Rates by Age and Gender

Uninsurance Rates, by Age and Gender

Data: Medical Expenditure Panel Survey, 2008
PC Visits by Age and Gender

Primary Care Visits, by Age and Gender

Data: Medical Expenditure Panel Survey, 2008
## States Requiring the Fewest Pc Physicians

<table>
<thead>
<tr>
<th></th>
<th>name</th>
<th>pc_adjusted</th>
<th>new_phys</th>
<th>% increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vermont</td>
<td>602</td>
<td>12</td>
<td>2.04</td>
</tr>
<tr>
<td>2.</td>
<td>North Dakota</td>
<td>488</td>
<td>12</td>
<td>2.53</td>
</tr>
<tr>
<td>3.</td>
<td>Wyoming</td>
<td>361</td>
<td>14</td>
<td>3.95</td>
</tr>
<tr>
<td>4.</td>
<td>Delaware</td>
<td>625</td>
<td>16</td>
<td>2.51</td>
</tr>
<tr>
<td>5.</td>
<td>District of Columbia</td>
<td>886</td>
<td>18</td>
<td>1.98</td>
</tr>
<tr>
<td>6.</td>
<td>South Dakota</td>
<td>586</td>
<td>18</td>
<td>3.11</td>
</tr>
<tr>
<td>7.</td>
<td>Hawaii</td>
<td>1114</td>
<td>21</td>
<td>1.86</td>
</tr>
<tr>
<td>8.</td>
<td>Rhode Island</td>
<td>851</td>
<td>24</td>
<td>2.85</td>
</tr>
<tr>
<td>9.</td>
<td>New Hampshire</td>
<td>1113</td>
<td>30</td>
<td>2.69</td>
</tr>
<tr>
<td>10.</td>
<td>Montana</td>
<td>684</td>
<td>31</td>
<td>4.60</td>
</tr>
</tbody>
</table>
## States Requiring the Most PC Physicians

<table>
<thead>
<tr>
<th></th>
<th>name</th>
<th>pc_adjusted</th>
<th>new_phys</th>
<th>% increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.</td>
<td>Michigan</td>
<td>6997</td>
<td>203</td>
<td>2.91</td>
</tr>
<tr>
<td>42.</td>
<td>New Jersey</td>
<td>6195</td>
<td>207</td>
<td>3.34</td>
</tr>
<tr>
<td>43.</td>
<td>Pennsylvania</td>
<td>9116</td>
<td>219</td>
<td>2.40</td>
</tr>
<tr>
<td>44.</td>
<td>Ohio</td>
<td>7716</td>
<td>234</td>
<td>3.03</td>
</tr>
<tr>
<td>45.</td>
<td>North Carolina</td>
<td>6035</td>
<td>254</td>
<td>4.20</td>
</tr>
<tr>
<td>46.</td>
<td>Georgia</td>
<td>5612</td>
<td>289</td>
<td>5.16</td>
</tr>
<tr>
<td>47.</td>
<td>Illinois</td>
<td>8948</td>
<td>306</td>
<td>3.42</td>
</tr>
<tr>
<td>48.</td>
<td>New York</td>
<td>14472</td>
<td>423</td>
<td>2.92</td>
</tr>
<tr>
<td>49.</td>
<td>Florida</td>
<td>12277</td>
<td>691</td>
<td>5.63</td>
</tr>
<tr>
<td>50.</td>
<td>Texas</td>
<td>13485</td>
<td>908</td>
<td>6.73</td>
</tr>
<tr>
<td>51.</td>
<td>California</td>
<td>25139</td>
<td>1232</td>
<td>4.90</td>
</tr>
</tbody>
</table>
# Rhode Island Projections

## Table 17. Projected Primary Care Physicians Need for Rhode Island by Year

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of PC visits</td>
<td>1,713,371</td>
<td>1,769,153</td>
<td>1,828,239</td>
<td>1,871,042</td>
</tr>
<tr>
<td>Average number of PC visits</td>
<td>1.61</td>
<td>1.63</td>
<td>1.66</td>
<td>1.69</td>
</tr>
<tr>
<td>Estimated RI Population</td>
<td>1,121,758</td>
<td>1,139,543</td>
<td>1,154,230</td>
<td>1,157,855</td>
</tr>
<tr>
<td>Estimated Population/Provider Ratio</td>
<td>1251.42</td>
<td>1231.18</td>
<td>1206.75</td>
<td>1182.84</td>
</tr>
<tr>
<td>Required PC Physicians</td>
<td>944</td>
<td>974</td>
<td>1004</td>
<td>1025</td>
</tr>
<tr>
<td>Baseline</td>
<td>896</td>
<td>896</td>
<td>896</td>
<td>896</td>
</tr>
<tr>
<td>Increase due to Aging</td>
<td>0</td>
<td>15</td>
<td>34</td>
<td>54</td>
</tr>
<tr>
<td>Increase due to Population Growth</td>
<td>0</td>
<td>14</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Increase due to ACA Coverage</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>46</td>
</tr>
</tbody>
</table>
Physician Assistants/Nurse Practitioners

Nurse practitioners by specialty
- Primary Care: 48%
- Subspecialty Care: 52%

Physician assistants by specialty
- Primary Care: 57%
- Subspecialty Care: 43%
Physician Assistants/Nurse Practitioners
Educational Reform

• Social Accountability
  – States deserve ROI
  – Variability is incredible in outputs

• Medical Schools expanding rapidly
  – Fiscal interests (Market) may compete with Societal Interests (Policy)

• GME Reform looms
The Delivery Sites
PCPCC Co-Sponsors Fifth National Medical Home Summit

The National Medical Home Summit
A Leading Forum on Developing and Implementing Patient- and Family-Centered Medical Homes


Announcements

NCQA Annual Policy Conference - Dec 5

TransforMED & Phytel Webinar: "Comprehensive" Primary Care and "Full-Scope" Primary Care - Dec 6

NCQA Webinar: Managing Change in the Practice – Dec 6

PCPCC Webinar: Innovations in Adolescent Health

Thursday Call Agenda

NOVEMBER 29, 2012
Medical Home Week in Review: News & Call Agenda, Nov. 29

News

DECEMBER 3, 2012
PCPCC in the News: Modern Physician - Primary-care
Accountable Care Organizations & Patient Centered Medical Homes

- An ACO is “a set of physicians and hospitals that accept joint responsibility for the quality of care and the cost of care received by the ACO’s panel of patients”.

- MedPAC regards medical homes as building blocks of effective ACOs.

Accountable care organizations (ACOs) seek to have providers to think of themselves as a group with a common patient population, care delivery goals, and performance metrics, rather than as discrete entities.

- financial incentives for broad cost containment and quality performance across multiple sites of care.

PCMH needs the ACO

Because the PCMH...

- Often lacks capital to invest in new models of care
- Has little direct leverage over other providers and offers no direct incentives to work collaboratively or integrate care
- Other providers don’t want their incomes to fall due to reductions in referrals or admissions

ACO Needs the PCMH

Because the ACO...

• will not succeed without a strong foundation of high-performing primary care

• Is limited by a shortage of primary care capacity and outdated infrastructure of most primary care practices

• could accelerate savings and quality through investment in the PCMH model
Accountable Care Organization

- group of providers responsible for the health care of a group of people
- alignment of incentives and accountability of providers across the continuum of care
Accountable Care Organization

- Group of providers responsible for the health care of a group of people
- Alignment of incentives and accountability of providers across the continuum of care
January 2011
Improved (medical home) scores associated with significant decreases in
- **total** ($2,378/person, 4.4%) costs
- **outpatient** ($1,282/person, 3.5%) costs
- For patients with 11 or more prescriptions

Higher functioning PCMHs may lead to reduced costs among the most complex and costly patients

Very important linkage—An ACO may need to support/invest in primary care to get to more fully functional PCMH in order to realize best outcomes

**Relationship of Clinic Medical Home Scores to Health Care Costs.**
Flottemesch TJ, Fontaine P, Asche Se, Solberg LI
Evaluation of Medicaid Managed Care program with a PCMH focus

- IHC, primary care case management PCMH
- YHC, PCMH + intensive disease management
- Together cover nearly 2 million patients
<table>
<thead>
<tr>
<th></th>
<th>Medicaid Costs</th>
<th>IHC Costs</th>
<th>YHP Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic services</td>
<td>26.07%</td>
<td>31.88%</td>
<td>20.84%</td>
</tr>
<tr>
<td>Durable medical Equipment</td>
<td>8.69%</td>
<td>39.96%</td>
<td>44.66%</td>
</tr>
<tr>
<td>Inpatient services</td>
<td>-32.78%</td>
<td>-31.25%</td>
<td>-27.59%</td>
</tr>
<tr>
<td>Outpatient Hospital Services</td>
<td>-0.38%</td>
<td>-6.76%</td>
<td>4.17%</td>
</tr>
<tr>
<td>Physicians services</td>
<td>-6.85%</td>
<td>-8.44%</td>
<td>-6.27%</td>
</tr>
<tr>
<td>Pharmacy services</td>
<td>-9.98%</td>
<td>-4.82%</td>
<td>-5.14%</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>-18.39%</strong></td>
<td><strong>-9.18%</strong></td>
<td><strong>-14.25%</strong></td>
</tr>
<tr>
<td>Quality Measure</td>
<td>Year</td>
<td>Percent appropriately treated</td>
<td>Percent Change</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>------</td>
<td>--------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Diabetes annual Hemoglobin A1c</td>
<td>2006</td>
<td>41.1%</td>
<td>92.0%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>78.9%</td>
<td></td>
</tr>
<tr>
<td>Annual well child visit</td>
<td>2006</td>
<td>65.5%</td>
<td>36.6%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>89.5%</td>
<td></td>
</tr>
<tr>
<td>CAD with annual lipid profile</td>
<td>2006</td>
<td>22.8%</td>
<td>198.6%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>68.1%</td>
<td></td>
</tr>
<tr>
<td>Mammogram (&gt;40 yo, last 2 years)</td>
<td>2006</td>
<td>8.1%</td>
<td>226.1%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>26.3%</td>
<td></td>
</tr>
<tr>
<td>Asthma control medication</td>
<td>2006</td>
<td>70.9%</td>
<td>-7.2%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>65.8%</td>
<td></td>
</tr>
<tr>
<td>Cervical cancer screen (&gt;18 yo, last 3 years)</td>
<td>2006</td>
<td>6.9%</td>
<td>213.9%</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>21.8%</td>
<td></td>
</tr>
</tbody>
</table>
Evidence: Medical Home, Accountable Care

- UC San Francisco and Patient Centered Primary Care Collaborative updated their evidence November, 2010
  Kevin Grumbach (UCSF)    Paul Grundy (IBM)

Outcomes of Implementing Patient Centered Medical Home Interventions: A Review of the Evidence from Prospective Evaluation Studies in the United States

http://www.pcpcc.net/content/pcmh-outcome-evidence-quality
Integrated Health System PCMH/ACO experiments

- 7%+ reduction in total costs (entire cost of primary care for Medicare!!)
- 16%-24% reduction in hospital admissions
- 30-40% reduction in emergency department
- Geisinger, Group Health Cooperative, HealthPartners

- Most of these in just 2-5 years!
• Insurance experiments
  – 30%+ reductions in hospitalizations, ER visits vs controls
  – Up to 50% reduction in cost growth vs controls
  – North Carolina Medicaid estimates saving nearly $1 billion in just 6 years
• Johns Hopkins Guided Care PCMH Model
  – 24% reduction in total hospital inpatient days,
  – 15% fewer ER visits
  – 37% decrease in skilled nursing facility days
  – Annual net savings of $75,000 per nurse care coordinator (Medicare)

• Genesee Health Plan (Michigan)
  – 50% decrease in emergency department visits
  – 15% fewer inpatient hospitalizations

• Erie County PCMH Model
  – Estimated savings of $1 million for every 1,000 enrollees
For-profit primary care clinic network of 23 practices in San Antonio, TX partnered with a Medicare Managed Care Plan. First identified as having unusually high quality measures as part of a practice-based research network.
Case Study Of A Primary Care Accountable Care Organization

WellMed, Medical Management, Inc

AHRQ Task Order: SNOCAP-USA (University of Colorado, Robert Graham Center) HHSA290200710008
WellMed Financials

After the insurance company takes a share off the top, ~ $1000-$1200 per person per month flows to WellMed

- **Typical CMS benefit**: $665 pmpm
- **Enhanced benefits (value added)**: $20 pmpm
- **Disease Management, etc**:
- **Overhead & Profit**: Approx. $400 pmpm
- **Provider Bonus Program**: $50 pmpm

$100 pmpm

**Primary care cap**

About 10% of total to primary care (30-40% more than straight Medicare)
Practice setting

• Lots of space
  – In primary care trend is downsizing footprint
  – Big community space for exercise classes, computer classes, nutrition/cooking classes

• Podiatry, Rheumatology, Dermatology rotate through (Now hiring Cardiology)

• Free orthopedic shoes fitted onsite
Teams With Defined Roles

- Med Assistants do most data entry
- Health Coaches
  - Call patients next day to reinforce care plan
  - Meet with patients (clinic, home, phone) to do behavior change, mental health, care plan
- Two Disease Mgmt programs for COPD, DM, CHF, CAD—A “complex care” team manages the most fragile, high cost patients intensely
Teams Continued...

- Inpatient
  - Their own case managers and hospitalists (their culture, their plan)
  - Interventions for specific conditions—national award for model Knee Replacement protocol

- Nursing home teams led by NPs
Teams Continued...

• Very low turnover compared to market
• Grow their own—able MAs trained and mentored into higher roles
• Starting an MA school
  — cut usual cost in half (more diversity)
  — Train to their model
• Two week orientation for new physicians + pairing with best clinicians for shadowing and mentoring
## Utilization

<table>
<thead>
<tr>
<th></th>
<th>Texas Region Medicare</th>
<th>WellMed</th>
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<tbody>
<tr>
<td></td>
<td>2006</td>
<td>2008</td>
</tr>
<tr>
<td>ER visit rates (%)</td>
<td>28.1</td>
<td>17.8</td>
</tr>
<tr>
<td>Hospitalization rates (%)</td>
<td>22.1</td>
<td>14.4</td>
</tr>
<tr>
<td>Re-hospitalization rates (30 days) (%)</td>
<td>19.9</td>
<td>13.9</td>
</tr>
<tr>
<td>Hospital Bed-Days/1000</td>
<td>2559</td>
<td>1002</td>
</tr>
</tbody>
</table>
Adjusted Death Rate per 1000

- **Texas Age-adjusted mortality rate, 65-74**
- **Texas Age-adjusted mortality rate, 75+**
- **WellMed Age/Gender/adjusted rate 65-74**
- **WellMed Age/Gender/adjusted rate 75+**
Is WellMed the future?

• Mortality rate 50% lower; Bed days 60% lower
• Improving preventive care with IT systems that monitor and manage patient population
• Average physician panel size < 500, backed by robust teams and disease management
• Up to 140% income bonus 2010 (100% financial, 40% quality) $260k-$550k for a primary care physician
• Main hospital partner has 11% margins on WellMed patients (costs lowered more than revenue, similar to Geisinger-7%)
Communities of Solution
The Data: NC Health Information Portal

The North Carolina Community Health Information Portal (NC-HIP) is a catalyst to stimulate informed conversation and choices about the health and healthcare in our communities and in doing so, to cultivate healthy communities for everyone.

Note: This tool has been optimized for viewing in a recent version of Windows Internet Explorer or Firefox. If you are running any other browser or older versions, you may encounter problems with certain sections of the website.

If you are trying to access the password protected portal, please login here.

Select a topic. Roll over a topic to see a brief description.
Lessons from other countries

• UK/Spain: Primary Care Trusts
  – Focus on primary care and populations is associated with reduced disparities—still experimenting with both primary care and geography of accountability but they move money to do it

• Australia/New Zealand: “Medicare Locals” & PHCOs
  – Creating geographic accountability, detailing & integrating PC physician/team with community resources
Accountable to whom?

Statistics are people with the tears wiped off

--Sir Austin Bradford Hill (1897-1991), Pioneer of the randomized clinical trial
Keep pursuing Truth

“Reason is six-sevenths of Treason”

Thurber