

# **Family Medicine's Future: The Patient-Centered Medical Home**

**Family Medicine Roadmap  
61<sup>st</sup> Annual Scientific Assembly  
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## **Family Medicine's Future**

- **U.S. Healthcare Vital Statistics**
- **The Case for Primary Care**
  - **Access**
  - **Outcomes**
  - **Value**
- **People do better with primary care**
- **Two key concepts**

Rosenthal TG. The medical home: growing evidence to support a new approach to primary care. JABFM 2008; 21:427-440.

Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Milbank Quar 2005;83:457-502.

## **Family Medicine's Future**

Thesis: More effective, efficient, and equitable health care requires:

- Universal coverage.
- A medical home for all Americans, centered in a healing relationship with a trusted primary care physician.

## **The Challenge**

- **Effective**
- **Efficient**
- **Equitable**

**Effective**

## Mortality Outcomes

- Primary care physicians: 1 per 10,000 (20%) more primary care physicians *decreases* mortality by 40 per 100,000 (5% fewer deaths).
- Family Physicians: 1 per 10,000 (33%) more family physicians results *decreases* mortality by 70 per 100,000 (9% fewer deaths).
- Specialists: 1 per 10,000 (8%) more specialists *increases* mortality by 16 per 100,000 (2% more deaths).

Shi. J Am Board Fam Pract 2003;16:412-22.

## Indonesia Infant Mortality

	<u>1996-1997</u>	<u>1997-1998</u>	<u>1998-1999</u>	<u>1999-2000</u>
Primary care*	10.3	9.6	8.5	8.2
Hospital*	4.1	4.1	4.6	5.3
Infant Mortality	70% improvement in all provinces 1990-1996		14% worsening in 22 of 28 provinces	

\*constant Indonesian rupiah per capita, in billions

Simms et al. Lancet 2003;361:1382-5.

**Efficient**

**Personal physician:  
primary care vs specialist**

- 33% lower cost of care
- 19% less likely to die

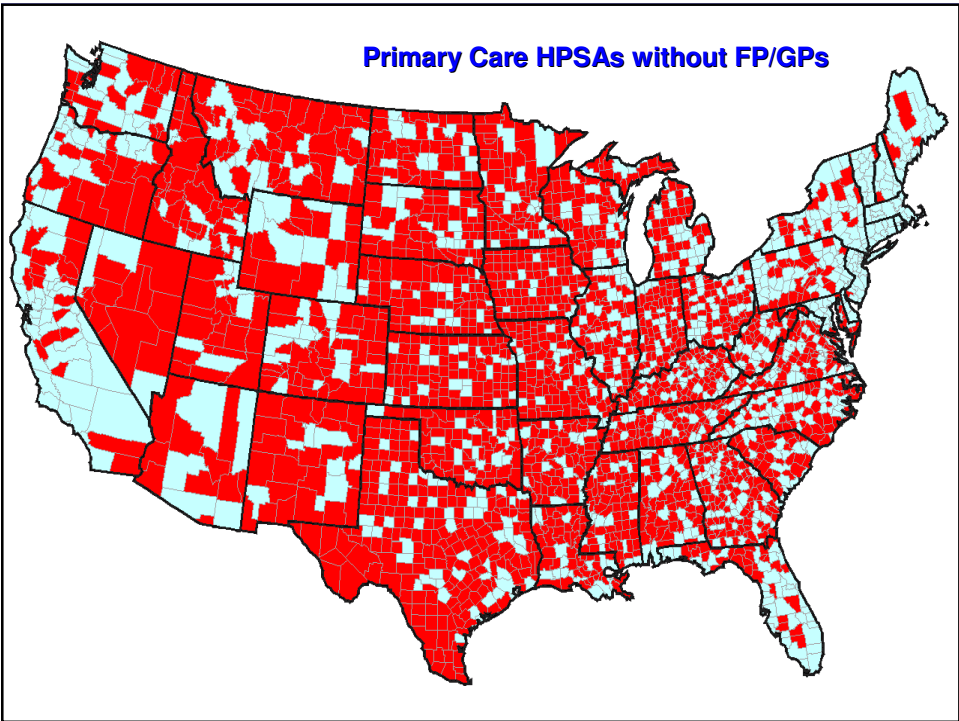
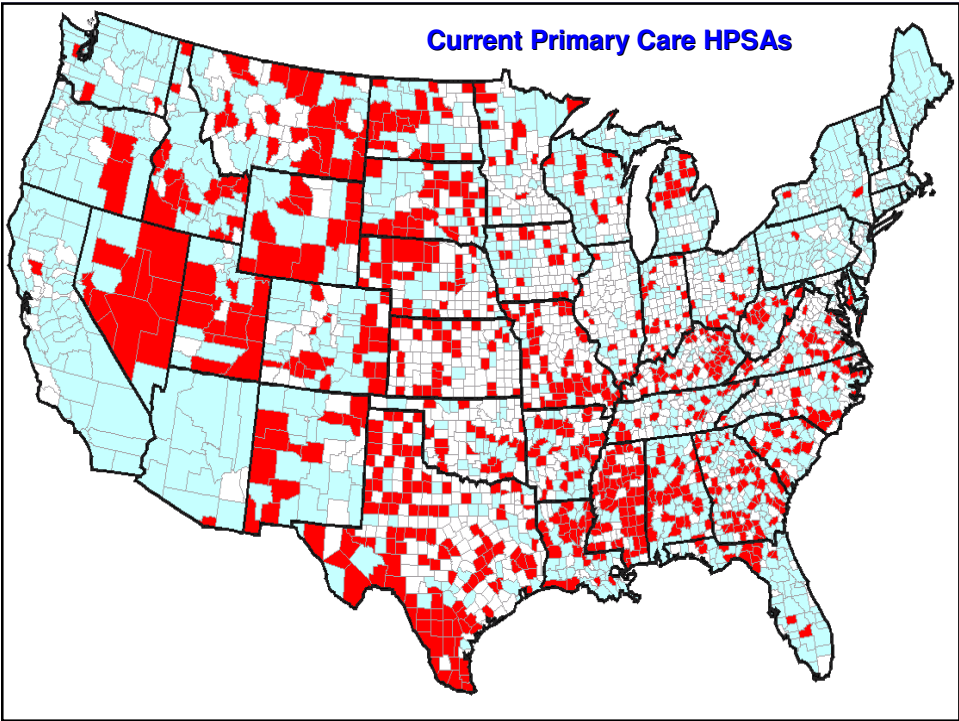
Frank et al. J Fam Pract 1998;47:105-9

## **Increasing physicians 1 per 10,000 population**

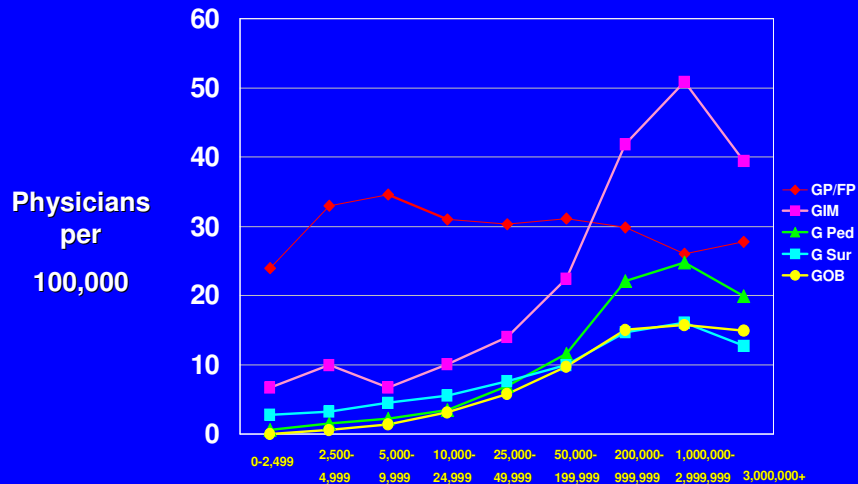
- **Specialists**
  - Decrease 9 states in quality
  - Increase costs \$526/beneficiary
- **Primary care**
  - Increase 10 states in quality
  - Decrease costs \$684/beneficiary

Baicker et al. Health Affairs 2004;W4:184-197

**Equitable**



## Physicians per 100,000 Population (2000)



Colwill JW, Cultice J. [www.cogme.gov/00\\_8726.pdf](http://www.cogme.gov/00_8726.pdf)

## Equity effects of primary care

- Improves self-rated health
- Reduces disparities
- Reduces effects of income inequality

Starfield B et al. *Milbank Quar* 2005;83:457-502

**If Primary Care is so good, then  
why do things feel so bad?**

## **U.S. Healthcare System**

**1,300 payers<sup>1</sup>**

**4,919 hospitals<sup>2</sup>**

**764,000 physicians<sup>3</sup>**

**3,119,000 nurses<sup>4</sup>**

**302,000,000 people<sup>5</sup>**

<sup>1</sup><http://www.ahip.org/>

<sup>2</sup><http://www.aha.org/aha/research-and-trends/health-and-hospital-trends/2006.html>

<sup>3</sup><http://bhpr.hrsa.gov/healthworkforce/reports/behindnprojections/2.htm>

<sup>4</sup>Dionne M, Moore J, Armstrong D, and Martiniano R. *The United States Health Workforce Profile*. Rensselaer, NY: Center for Health Workforce Studies, School of Public Health, SUNY Albany. October 2006. <http://chws.albany.edu>.

<sup>5</sup><http://www.census.gov/>

## U.S. Healthcare System 2007

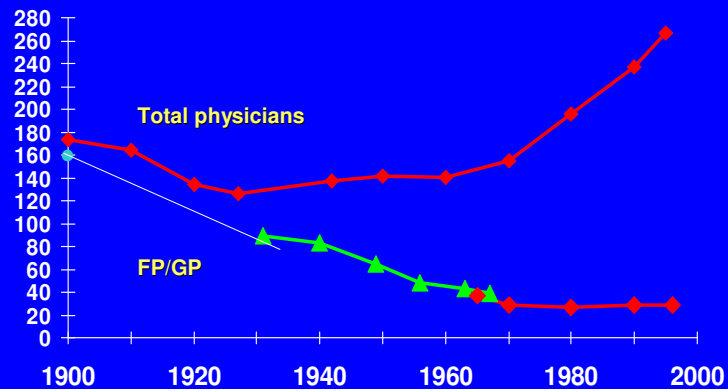
- National Health Expenditures (NHE)<sup>1</sup>
  - 16.2% of GDP (Switzerland 11%); largest sector
  - \$2,262 billion
  - \$7,498 NHE per capita
- 1 in 4 without any or enough insurance<sup>2</sup>
- 2000 World Health Report<sup>3</sup>: ranked 37<sup>th</sup>

<sup>1</sup><http://content.healthaffairs.org/cgi/content/abstract/hlthaff.26.2.w242v1>

<sup>2</sup><http://www.census.gov/prod/2006pubs/p60-231.pdf>

<sup>3</sup>[http://www.who.int/whr/2000/en/whr00\\_en.pdf](http://www.who.int/whr/2000/en/whr00_en.pdf)

### Total Physicians and FP/GP per 100,000 Population



Colwill JW, Cultice J. [www.cogme.gov/00\\_8726.pdf](http://www.cogme.gov/00_8726.pdf)

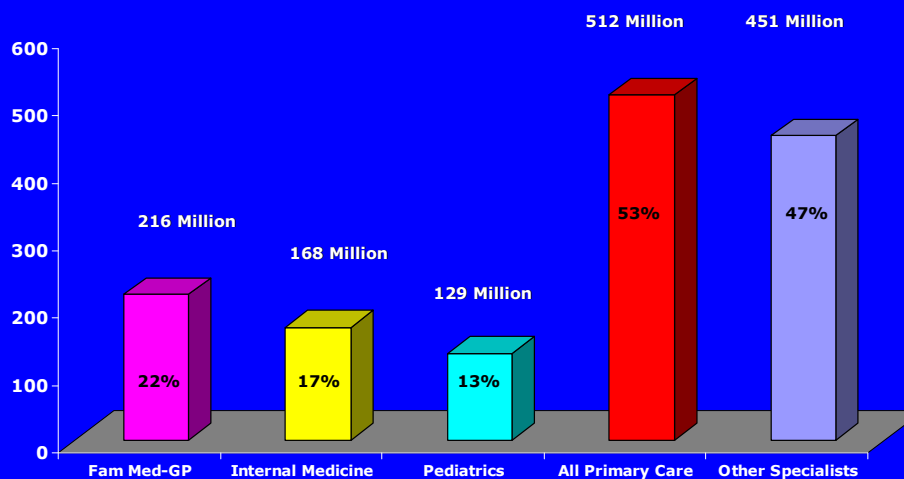
## Healthcare services

U.S., 2005

Physician office visits	963,617,000
Emergency dept visits	115,223,000
Hospital outpatient dept visits	90,393,000
Hospital discharges	34,667,000

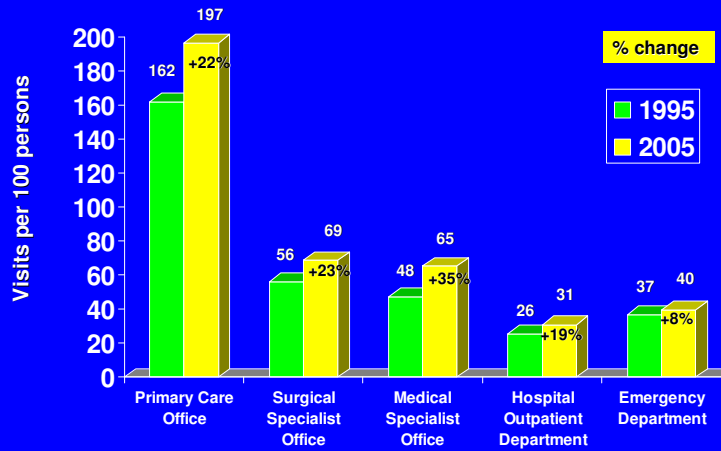
Source: National Ambulatory Medical Care Survey, 2005  
<http://www.cdc.gov/nchs/data/ad/ad387.pdf>

## U.S. Physician Office Visits 2005<sup>1</sup>



<sup>1</sup>Excludes anesthesiology, pathology & radiology.  
 4/30/2009 12:58 PM  
 Source: <http://www.cdc.gov/nchs/data/ad/ad387.pdf>

## Visit rates by setting type: United States, 1995 and 2005



Sources: National Ambulatory Medical Care Survey and National Hospital Ambulatory Care Survey. <http://www.cdc.gov/nchs/data/ad/ad388.pdf>

## Family Physician Activity, 2006

### Visits per week

<u>Office</u>	<u>Hospital</u>	<u>NH</u>	<u>Home</u>	<u>Total</u>
84.4	8.3	2.8	0.4	95.9

### Patients supervised

<u>NH</u>	<u>Home Health</u>	<u>Hospice</u>	<u>Total</u>
9.4	5.7	2.3	17.4

Total contacts:      110-130 patients/day

Source: <http://www.aafp.org/online/en/home/aboutus/specialty/facts/5.html>

## Time Requirements

- 10.6 hrs/day – chronic conditions<sup>1, 2</sup>
- 7.4 hrs/day – preventive services<sup>3</sup>
- Patient agenda?
- Acute care?
- Administrative issues?

1. Østbye T. *Ann Famed Med* 2005; 3:209-214.
2. Tsai et al. *Am J Man Care* 2005;11:478-88.
3. Yarnall KHS. *AJPH* 2003;43:635-641.
4. Bodenheimer T. *NEJM* 2006;355:861-864.

## Complexity

- Average visit: 1.4 – 8 problems
- Diagnoses: top 25 = 60% total

Stange KC, et al. *J Fam Pract* 1998;46(5):363-8.

## **Resources**

**Payments to primary care = 6-8%  
of total health care spending.**

Goroll A, et al. JGIM 2007;22:410-5.

**People do better  
with primary care.**

**Starfield B, Shi L, Grover A, Macinko J.  
The Effects of Specialist Supply on Populations'  
Health: Assessing the Evidence.**

<http://content.healthaffairs.org/cgi/content/full/hlthaff.w5.97/DC1>

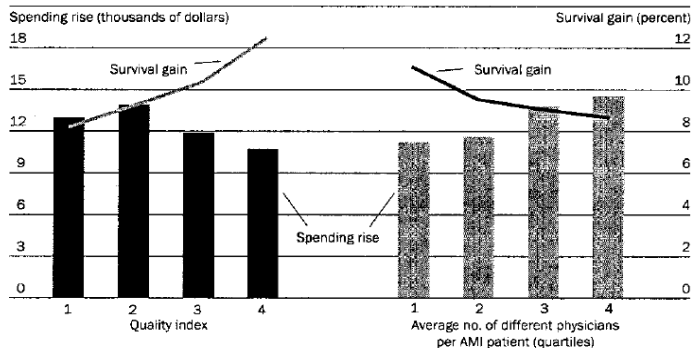
## Why do people worse with specialists?

- Outside area of expertise:  
CAP, AMI, CHF, UGI bleed<sup>1</sup>
- Late stage diagnosis of breast<sup>2</sup>  
or colorectal<sup>3</sup> cancer
- Excessive utilization<sup>4</sup>
- Handoff or communication errors<sup>5</sup>

1. Weingarten et al. Arch Int Med 2002;162:527-532.
2. Ferrante et al. J Am Board Fam Pract 2000;13:408-414.
3. Rotezheim et al. J Fam Pract 1999;48:850-858.
4. Greenfield et al. JAMA 1992;367:1024-1030.
5. Skinner et al. Health Affairs 2006;25:w34-w37.

### EXHIBIT 5

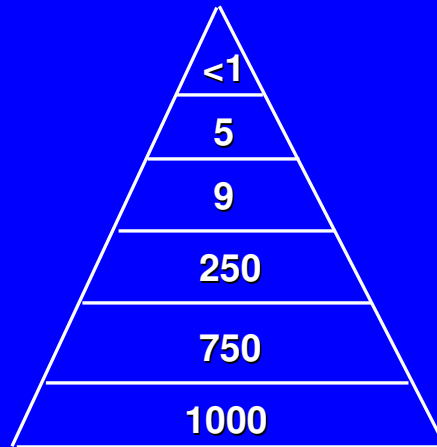
#### Association Of Regional Quality Of Care For Acute Myocardial Infarction (AMI) And Average Number Of Physicians Per AMI Patient (Quartiles) With Changes In Survival And Spending, 1986-2002



SOURCE: Authors' calculations using Medicare claims data.

NOTE: Bars denote spending rise (in thousands of dollars), and lines show percentage increase in number of AMI patients surviving to one year.

## Pyramid of Care



Information taken from White KL, et al. N Engl J Med 1961;265:885-92 and Green LR, et al. N Engl J Med 2001;344:2021-25.

## How good is the evidence?

**Design:** Review of all original clinical research in 3 major general clinical journal or high-impact specialty journals from 1990-2003 that were cited more than 1000 times.

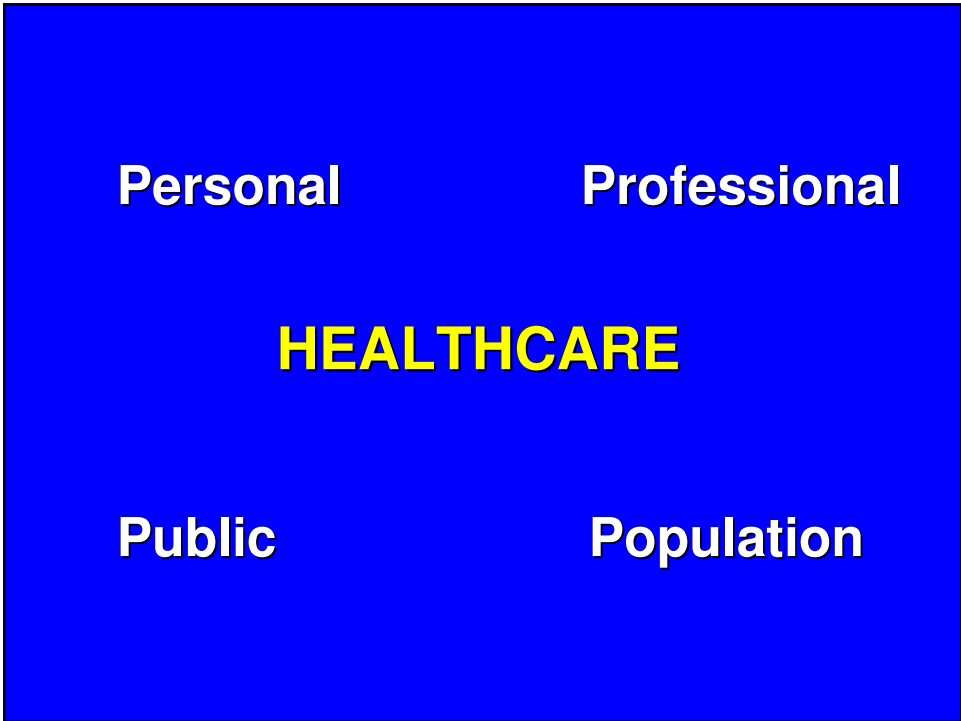
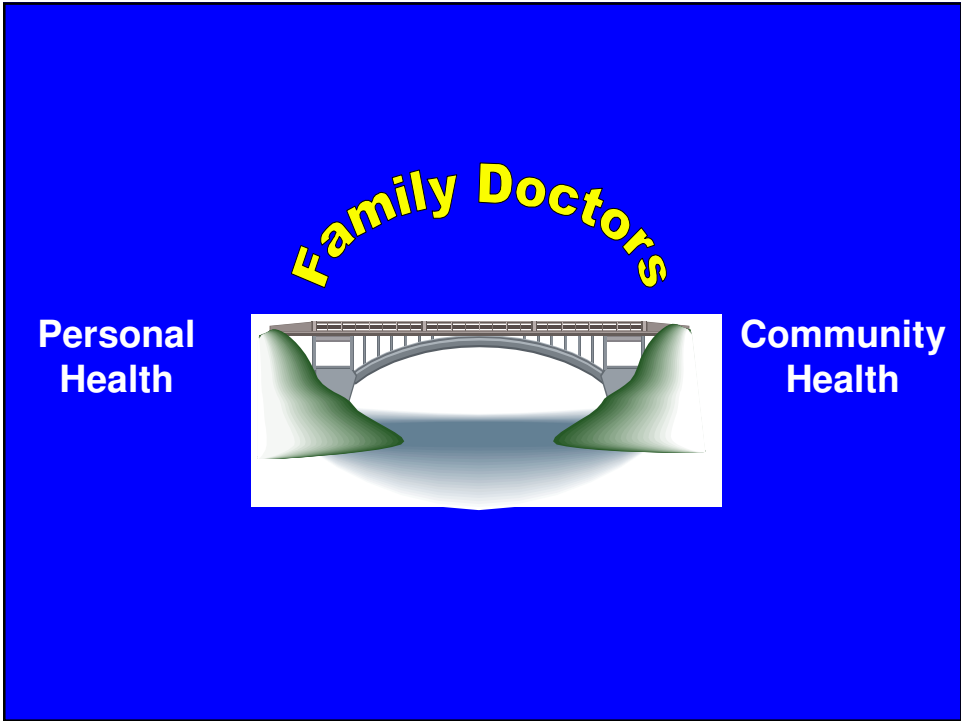
**Results:** Of 49 highly cited studies, 45 claimed that the intervention was effective.

- 7 (16%) contradicted by subsequent studies
- 7 (16%) found effects stronger than those of subsequent studies
- 20 (44%) were replicated
- 11 (24%) remained largely unchallenged

Source: Ioannidis JPA. JAMA 2005;294:218-228.

# Why do people do better with Family Physicians?





**If Primary Care is so good, then  
why do things feel so bad?**

## **US Healthcare System**

- **Power**
- **Prestige**
- **Profits**
- **Publicity**

## **Future of Primary Care Initiatives**

- **American Academy of Pediatricians: Future of Pediatric Education (FOPE), 2000**
- **Future of Family Medicine Project, 2002-2003**
- **Society of General Internal Medicine: Future of General Internal Medicine, 2003**
- **American College of Physicians: The Impending Collapse of Primary Care Medicine and Its Implications for the State of the Nation's Health Care, January 2006**
- **SOAR International Colloquium, Toronto September 2006**

## **Global examples**

- **Australia – practice standards**
- **Canada – practice networks**
- **Netherlands – guidelines**
- **New Zealand – IT networks**
- **Norway – 3-tiered payments**
- **UK – Quality Outcomes Framework**
- **US – Medical Home**

## **U.S. Primary Care Initiatives**

- **Community Care of North Carolina  
2005-6: \$250 million; 750,000 MA<sup>1</sup>**
- **Patient Centered Primary Care  
Collaborative<sup>2</sup>**

1. Arvantes J, "North Carolina seeks expansion of primary care program," *AAFP News Now* (8 Aug 2007).  
2. [www.pcpcc.net](http://www.pcpcc.net).

## **PCPCC**

The current American health system contains substantial inefficiencies. Among them is an over-reliance of American patients on specialized practitioners. This leads to excessive and inefficient cost structures that reward duplicate x-rays, unnecessary tests, multiple consultations with differing specialists, and other ancillary procedures.

Meanwhile, as specialist fees and salaries increase, those of primary care practitioners decline. But the primary care physician has the ability and inclination to consider the holistic health condition of his patients. It is widely agreed upon in the health industry that recipients of primary care live longer, healthier lives.

## PCPCC Members

- AAFP
- AAP
- ABMS
- ACP
- AOA
- AARP
- Aetna
- BCBSA
- CIGNA
- Humana
- United Healthcare
- Wellpoint
- Caterpillar
- Delphi
- ERIC
- FedEx
- General Mills
- General Motors
- IBM
- NBGH
- PBGH
- SEIU
- US Steel
- Xerox

## Patient-Centered Medical Home (PCMH)

- 1967** American Academy of Pediatrics [www.aap.org](http://www.aap.org)
- 2004** American Academy of Family Physicians [www.aafp.org](http://www.aafp.org)  
- Future of Family Medicine [www.futurefamilymed.org](http://www.futurefamilymed.org)
- 2005** TransforMED, LLC [www.transformed.com](http://www.transformed.com)  
- National Demonstration Project: 36 practices  
- Medical Home IQ  
- P4-Preparing the Personal Physician for Practice: 14 residencies
- 2006** American College of Physicians [www.acponline.org](http://www.acponline.org)
- 2007** Patient-Centered Prim. Care Collaborative [www.pcpcc.net](http://www.pcpcc.net)  
Joint Principles of the Patient-Centered Medical Home  
<http://www.medicalhomeinfo.org/joint%20Statement.pdf>  
NCQA – Physician Practice Connections PCMH  
(PPC- PCMH) Recognition Program [www.ncqa.org](http://www.ncqa.org)

# Elements of PCMH

- Advanced/open access scheduling
- Online appointments
- Electronic health record
- Group visits
- E-visits
- Web-based information
- Chronic disease management
- Team approach
- Clinical practice guideline software
- Outcomes analysis
- Blended payment

<b>NCQA PPC-PCMH Content and Scoring</b>																			
<b>Standard 1: Access and Communication</b> <i>A. Has written standards for patient access and patient communication**</i> <i>B. Uses data to show it meets its standards for patient access and communication**</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> <tr><td style="text-align: right;">5</td><td></td></tr> <tr><td style="text-align: right;">9</td><td></td></tr> </table>	Pts		4		5		9											
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<b>Standard 2: Patient Tracking and Registry Functions</b> <i>A. Uses data system for basic patient information (mostly non-clinical data)</i> <i>B. Has clinical data system with clinical data in searchable data fields</i> <i>C. Uses the clinical data system</i> <i>D. Uses paper or electronic-based charting tools to organize clinical information**</i> <i>E. Uses data to identify important diagnoses and conditions in practice**</i> <i>F. Generates lists of patients and reminds patients and clinicians of services needed (population management)</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">2</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">6</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">21</td><td></td></tr> </table>	Pts		2		3		3		6		4		3		21			
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<b>Standard 3: Care Management</b> <i>A. Adopts and implements evidence-based guidelines for three conditions **</i> <i>B. Generates reminders about preventive services for clinicians</i> <i>C. Uses non-physician staff to manage patient care</i> <i>D. Conducts care management, including care plans, assessing progress, addressing barriers</i> <i>E. Coordinates care/follow-up for patients who receive care in inpatient and outpatient facilities</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">5</td><td></td></tr> <tr><td style="text-align: right;">5</td><td></td></tr> <tr><td style="text-align: right;">20</td><td></td></tr> </table>	Pts		3		4		3		5		5		20					
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<b>Standard 4: Patient Self-Management Support</b> <i>A. Assesses language preference and other communication barriers</i> <i>B. Actively supports patient self-management**</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">2</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> <tr><td style="text-align: right;">6</td><td></td></tr> </table>	Pts		2		4		6											
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<b>Standard 5: Electronic Prescribing</b> <i>A. Uses electronic system to write prescriptions</i> <i>B. Has electronic prescription writer with safety checks</i> <i>C. Has electronic prescription writer with cost checks</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">2</td><td></td></tr> <tr><td style="text-align: right;">8</td><td></td></tr> </table>	Pts		3		3		2		8									
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<b>Standard 6: Test Tracking</b> <i>A. Tracks tests and identifies abnormal results systematically**</i> <i>B. Uses electronic systems to order and retrieve tests and flag duplicate tests</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">7</td><td></td></tr> <tr><td style="text-align: right;">6</td><td></td></tr> <tr><td style="text-align: right;">13</td><td></td></tr> </table>	Pts		7		6		13											
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<b>Standard 7: Referral Tracking</b> <i>A. Tracks referrals using paper-based or electronic system**</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">PT</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> </table>	PT		4		4													
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<b>Standard 8: Performance Reporting and Improvement</b> <i>A. Measures clinical and/or service performance by physician or across the practice**</i> <i>B. Survey of patients' care experience</i> <i>C. Reports performance across the practice or by physician **</i> <i>D. Sets goals and takes action to improve performance</i> <i>E. Produces reports using standardized measures</i> <i>F. Transmits reports with standardized measures electronically to external entities</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">7</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">3</td><td></td></tr> <tr><td style="text-align: right;">2</td><td></td></tr> <tr><td style="text-align: right;">1</td><td></td></tr> <tr><td style="text-align: right;">15</td><td></td></tr> </table>	Pts		3		7		3		3		3		2		1		15	
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<b>Standard 9: Advanced Electronic Communications</b> <i>A. Availability of Interactive Website</i> <i>B. Electronic Patient Identification</i> <i>C. Electronic Care Management Support</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: right;">Pts</td><td></td></tr> <tr><td style="text-align: right;">1</td><td></td></tr> <tr><td style="text-align: right;">2</td><td></td></tr> <tr><td style="text-align: right;">1</td><td></td></tr> <tr><td style="text-align: right;">4</td><td></td></tr> </table>	Pts		1		2		1		4									
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**Level 1 = 25-49 points; Level 2 = 50-74 points; Level 3 = 75-100 points.**  
**Level 1 must score 50% in 5 of 10, and Levels 2 & 3 must score 50% in all 10, of *\*\*Must Pass Elements\*\****

## **Limits of PCMH**

- Patients like concept, but don't get name
- Specific elements not proven
- Care fragmentation across PHC team
- Focus on tasks and not relationships
- Behavioral/mental health
- Prevention
- Community engagement

## **Two Key Concepts**

- Practice redesign
- Disruptive innovation

## **Practice Redesign**

- **Rapid cycle design**
- **Waste**
- **Flow**
- **Convenient access**

## **Disruptive Innovation**

- **Internet; email**
- **Information as commodity**
- **Simpler technology**
- **Smarter users**

It's the

**RELATIONSHIP,**

Stupid!

