

2010 Military Health System Conference

Return on Investment (ROI) in Primary Care: Best Practices for Increasing Value

Sharing Knowledge: Achieving Breakthrough Performance

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Return on Investment (ROI) in Primary Care

Best Practices for Increasing Value



Disclaimer

The views and assertions contained herein are those of the authors and do not necessarily reflect the opinions of the University of Washington, Group Health Cooperative, Department of the Army, the JTF CAPMED, or the Department of Defense.

Return on Investment (ROI) in Primary Care

Best Practices for Increasing Value



■ Objectives

1. Review evidence of ROI associated with the Patient-Centered Medical Home (PCMH) primary care model
 - Findings related to all 4 of the Quadruple Aims
2. List key components of a ROI business plan and a Joint enrollment capacity model



Session Overview



- Agenda
 - The value of primary care
 - The Patient-Centered Medical Home (PCMH)
 - National PCMH demonstrations
 - Case study: the Group Health PCMH
 - Implications for assessing ROI of PCMH and other primary care redesign initiatives
 - Implementing PCMH in a Joint environment
 - Facilitated discussion/Q&A

Background



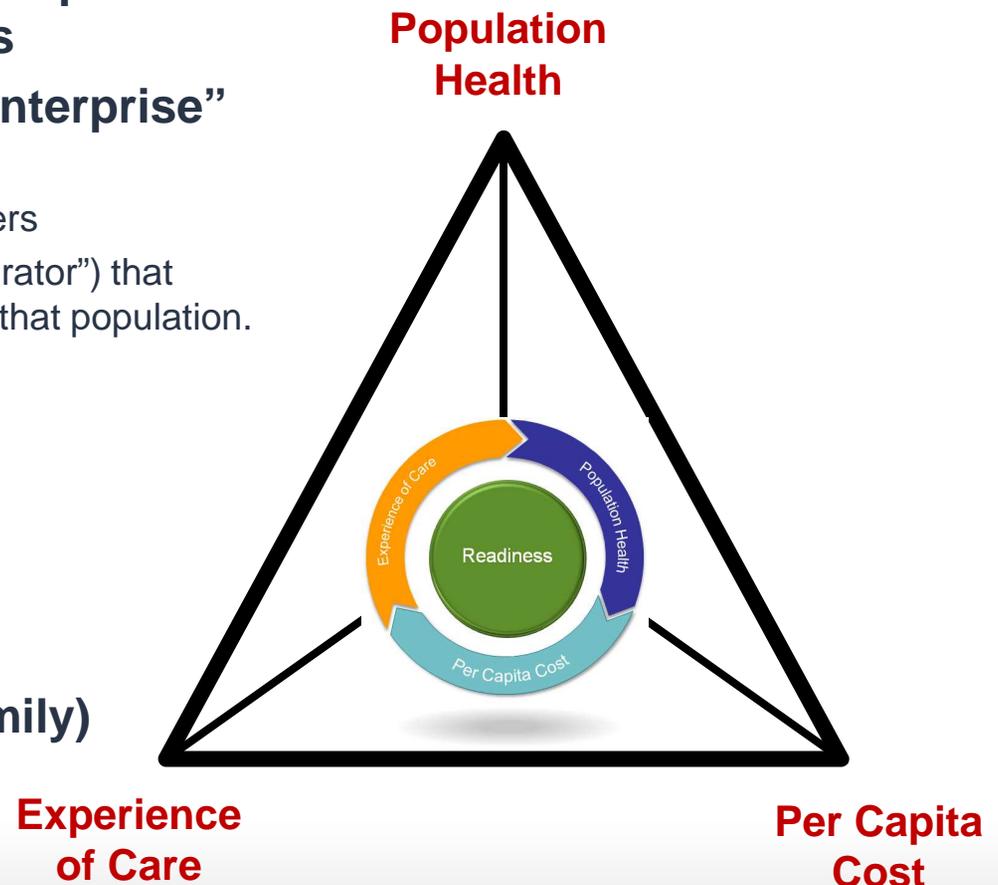
- May/Aug 2009 – Review and Analysis (R&A)
 - Services present PCMH best practices
 - Leadership requests a common set of PCMH measures
 - Services present PCMH performance (e.g., access, continuity, quality, satisfaction, ER visits)
 - Leadership endorses development of common PCMH standards
- June 2009 – MHS PCMH Tiger Team
- Sep 2009 – MHS Medical Home Summit
 - HA/TMA, Services, JTF CapMed, and others (e.g. NCQA) convene for the Inaugural Tri-Service Medical Home Summit
 - PCMH standards and measures recommended
- Sep 2009 – PCMH Policy
 - ASD(HA) releases “Policy Memorandum Implementation of the PCMH Model of Primary Care in MTFs” by Ms Embry
 - Policy references attributes/criteria (i.e., standards) and measures of effectiveness (measures) for PCMH

The MHS-JTF (Triple+1) Quadruple Aim



"A world-class region, anchored by a world-class Medical Center." -- The Honorable Gordon England, Deputy Secretary of Defense

- Improving U.S. health care system requires simultaneous pursuit of **FOUR** aims
- **Preconditions for the Triple Aim "Enterprise"**
 1. The enrollment of an identified population
 2. A commitment to universality for its members
 3. The existence of an organization (an "integrator") that accepts responsibility for all three aims for that population.
- **Integrator role = five components**
 1. Partnership with individuals and families
 2. Redesign of primary care
 3. Population health management
 4. Financial management
 5. Macro system integration
- **Add Readiness (Individual and Family)**



JTF CAPMED Priorities/ Principles and ROI



▪ JTF CAPMED PRIORITIES

- Casualty Care
- Caring for the Caregivers
- Be Ready Now
- *Regional Healthcare Delivery*
- *Common Standards and Processes*



▪ JTF CAPMED GUIDING PRINCIPLES

- Mission Focus
- *Serving Our People*
- *Leadership*
- *Accountability*
- *Interoperability*



Return on Investment in Primary Care: Best Practices for Increasing Value



- Redesign of care delivery around primary care yields an excellent return on investment
 - Improved quality of care, patient experiences, care coordination, and access
 - Reduced utilization of emergency department and inpatient services = savings in total costs
- The Patient-Centered Medical Home is emerging as a “best practice” redesign model

Return on Investment (ROI) in Primary Care

Best Practices for Increasing Value



- **Geisinger Health System ProvenHealth Navigator PCMH Model**
 - 14% reduction in total admissions, 9% reduction in total medical costs
 - Est. \$3.7 million net savings for ROI of greater than 2 to 1
- **Johns Hopkins Guided Care PCMH Model**
 - 24% reduction in total hospital days, 15% fewer ER visits, 37% decrease in skilled nursing facility days
 - Annual net Medicare savings of \$1364 per patient
- **Note that, if we get this right, some services have less workload, throughput, 'income,' need for manpower = (*Ripple Effect?*)**

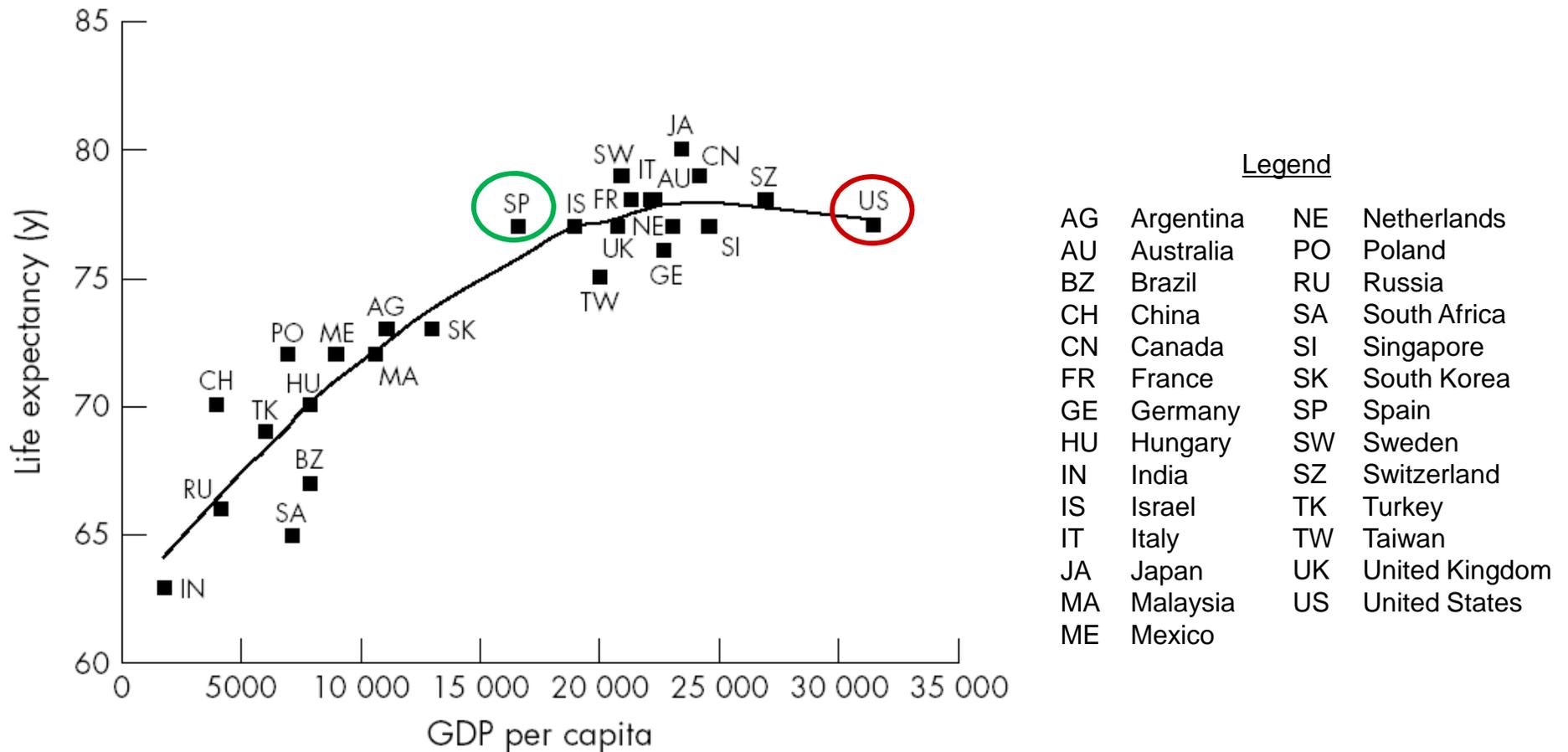
The Value of Primary Care (2)



	Health Expenditures AVG US\$ PP (2003)	Health Expenditures as %GDP (2003)	Life Expectancy (2005)	Infant Mortality (2005)
Australia	\$2,686	8.6	80.9	5.0
Canada	\$3,058	9.6	80.4	5.4
France	\$2,988	10.9	80.2	3.2
Germany	\$3,090	10.8	79.4	3.9
New Zealand	\$1,856	8.0	79.4	5.0
Sweden	\$2,841	9.4	80.6	2.4
UK	\$2,259	7.7	79.1	5.1
USA	\$5,686	15.1	77.8	6.9

Source: OECD data vetted and compiled from multiple publications by Group Health Research Institute staff.

The Value of Primary Care



Source: Economist Intelligence Unit. Healthcare International. 4th quarter 1999. London, UK. Graph courtesy of Rob Reid, MD, PhD

The Value of Primary Care (3)



- Improved efficiency [*QuadAim-PerCapCost*]
 - Areas with higher primary care supply have lower total costs
- Better outcomes [*QuadAim-PopHealth*]
 - Better health outcomes in areas with higher primary care supply
 - Defining attributes of primary care are associated with better outcomes

Starfield et al. Milbank Quarterly 2005;83: 457-501

Dartmouth Atlas of Health Care www.dartmouthatlas.org

Defining Attributes of Primary Care



- **Accessibility**
 - ability to “get in the door” for new problems
- **Continuity**
 - long-term relationships independent of disease
- **Comprehensiveness**
 - ability to respond to common issues
- **Coordination**
 - integration w/other care providers/sites

The Patient-Centered Medical Home



The Patient-Centered Medical Home

Principles That Enhance Cost Efficiencies



- Joint Principles of PCMH, 2007
 - Proposed by AAFP, AAP, ACP, AOA
 - Re-emphasize core attributes of primary care
 - Access to a personal physician + the “3 C’s”
 - System supports for chronic care
 - Info systems, self-mgmt support, care redesign
 - Leverage healthcare information technologies
 - EMR’s/EHR’s, patient portals, registries, reminders & alerts and other clinical decision support
 - Supportive payment methods

National PCMH Demonstrations/ Pilots



Patient-Centered Primary Care Collaborative: A Compilation of Demonstration Projects 2009

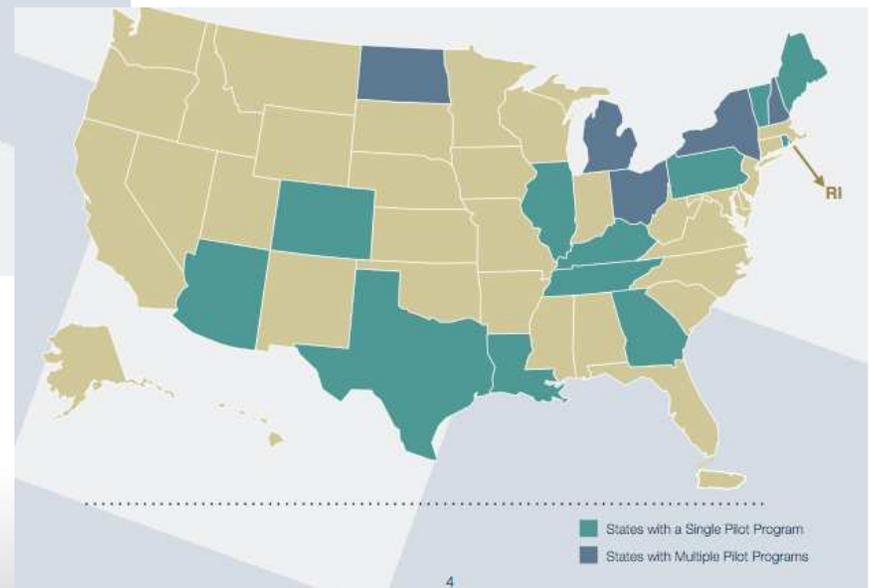
PCMH Pilot Map

UnitedHealth Group PCMH Demonstration Program (AZ)	CDPHP Patient-Centered Medical Home Pilot (NY)
Colorado Multi-Stakeholder Multi-State PCMH Pilot (CO)	EmblemHealth Medical Home High Value Network Project (NY)
Wellstar Health System (GA)	New York Hudson Valley p4p/Medical Home Project (NY)
Quality Quest Medical Home (IL)	Cincinnati Medical Home Pilot Initiative (OH)
Louisiana Health Care Quality Forum Medical Home Initiative (LA)	Greater Cincinnati Aligning Forces for Quality Medical Home Pilot (OH)
Maine Multi-Payer Patient-Centered Medical Home Pilot (ME)	Southeastern Pennsylvania Rollout of the Chronic Care Initiative (PA)
Aligning PCMH Stakeholders in Michigan (MI)	Rhode Island Chronic Care Sustainability Initiative (CSI-RI) (RI)
Blue Cross Blue Shield of Michigan – Physician Group Incentive Program (PGIP) (MI)	Memphis Multi-Payer Patient-Centered Medical Home (TN)
CIGNA and Dartmouth-Hitchcock Patient-Centered Medical Home Pilot (NH)	Texas Patient-Centered Medical Home Demonstration Project (TX)
NH Multi-Stakeholder Medical Home Pilot (NH)	Patient-Centered Medical Home – Vermont (VT)
Patient-Centered Medical Home – Diabetes Management (ND)	
MediQhome Quality Project: Patient-Centered Advanced Medical Home Quality Improvement Initiative (ND)	

- Many different arrangements
- Safety-net practices
 - Small and large independent practices
 - Rural and urban
 - Partnerships with states, insurers (single & multiple), medical associations, IPAs

- 27 underway in 21 states, more planned for most states

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National PCMH Demonstrations/ Pilots (2)



- PCPCC published results from 8 PCMH demonstration evaluation studies (Q4 2009)
 - Care quality improved (all studies) *QA-PH*
 - ER utilization decreased (all studies) *QA-PCC*
 - Inpatient admissions decreased (all studies) *QA-PCC*
 - Cost of care neutral and/or reduced, depending on time horizon (all studies) *QA-PCC*

(Source: Grumbach K, Bodenheimer T, Grundy P, PCPCC *Proof in Practice*, 2009)

Case Study: the Group Health Cooperative PCMH



- **GHC:** a consumer-governed NFP integrated healthcare system in the Pacific NW caring for 580,000 enrollees
 - Prepaid model \$2B+ revenue/26 owned clinics/patients “paneled” to a salaried PCP
- **PCMH intervention piloted 2007-2009**
 - 1 clinic/8 MD’s/11,000 patients
 - 6 months planning prior to 1/1/07 pilot go-live
 - Intervention heavily leveraged existing healthcare information technologies (HIT)
- **JOA has 284,686 enrollees (455,989 eligibles)**

Case Study: the Group Health Cooperative PCMH (2)



- Qualitative findings from Year 1 study of provider experience with the PCMH pilot
 - Providers reported delivering better care across full continuum of preventive-chronic-acute-palliative
 - Stronger connections to patients & colleagues
 - Supportive work environment
 - Proactive information seeking and information sharing
 - Improved job satisfaction/reversal of burnout trends
- Note: GHC's healthcare information technology (HIT) infrastructure was key for achieving all of these effects

Case Study: the Group Health Cooperative PCMH (3)



- “I'm finally able to do everything that I learned (primary care) docs are supposed to do...and even more than I thought I could do.”
- “We all know this is the right way to do medicine... focused on our patients, making sure that the service and quality of care is always there.”
- “Now I'll ask, 'Is there anything else? What about your preventive screening?' ”
- “Visits are much more productive. It's time that's better spent...and there's less rework later.”

-Group Health PCPs

Case Study: the Group Health Cooperative PCMH (4)

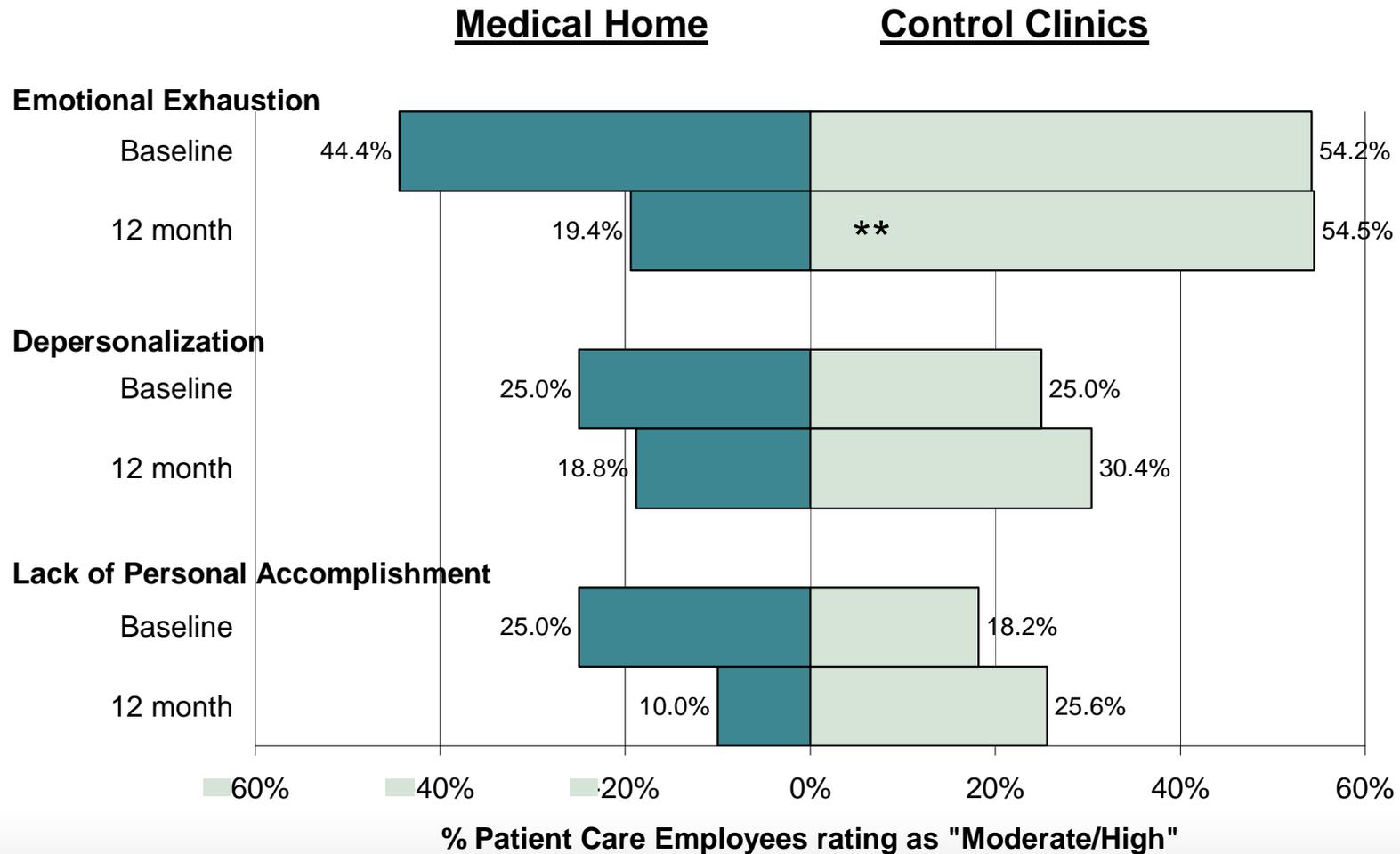


- Quantitative findings from Year 1 evaluation
 - ER visits decreased by 29%
 - Ambulatory-sensitive hospital admissions decreased 11%
 - Patient experience improved (6 of 7 scales)
 - MD and staff burnout reduced
 - Quality measures improved
 - Pilot investment offset 100% (PCMH model cost-neutral compared to usual care)

Case Study: the Group Health Cooperative PCMH (5)



Medical Workforce Readiness



Case Study: the Group Health Cooperative PCMH (5)



- Conclusions about the Group Health PCMH evaluation findings related to Quadruple Aims
 - Consistent with national evidence on primary care's desirable effects on population health and per-capita cost
 - Desirable effects on both patient experience and provider job satisfaction & retention (i.e., medical workforce readiness)

Implications for GHC ROI Assessment



- Stratify patient populations (chronic D+/D-)
- Choose measures of:
 - Continuity
 - Coordination
 - Comprehensiveness of services from PCP
 - Utilization of ER, hospital, specialist services
 - Total costs of care
 - Patient experience (satisfaction, access)
 - Provider experience (satisfaction, retention)
 - Quality (proximal outcome measures)

MHS PCMH Measures Aligned w/ Quadruple Aim



• Experience of Care

- Satisfaction with Provider Communication
- Satisfaction with Access
 - % of Time MTF Enrollee Sees Their PCM
 - Appointment Booking Efficiency
 - Time to 3rd Available Appointment
 - Leakage to the Network

- *Beneficiary Trust
- *Patient Activation
- *Staff Satisfaction

• Population Health

- HEDIS Quality Index
- Healthy Behaviors
- *Adherence to Evidence Based Guidelines
- *Quality of Life / Functional Status
- *Safety

• Readiness

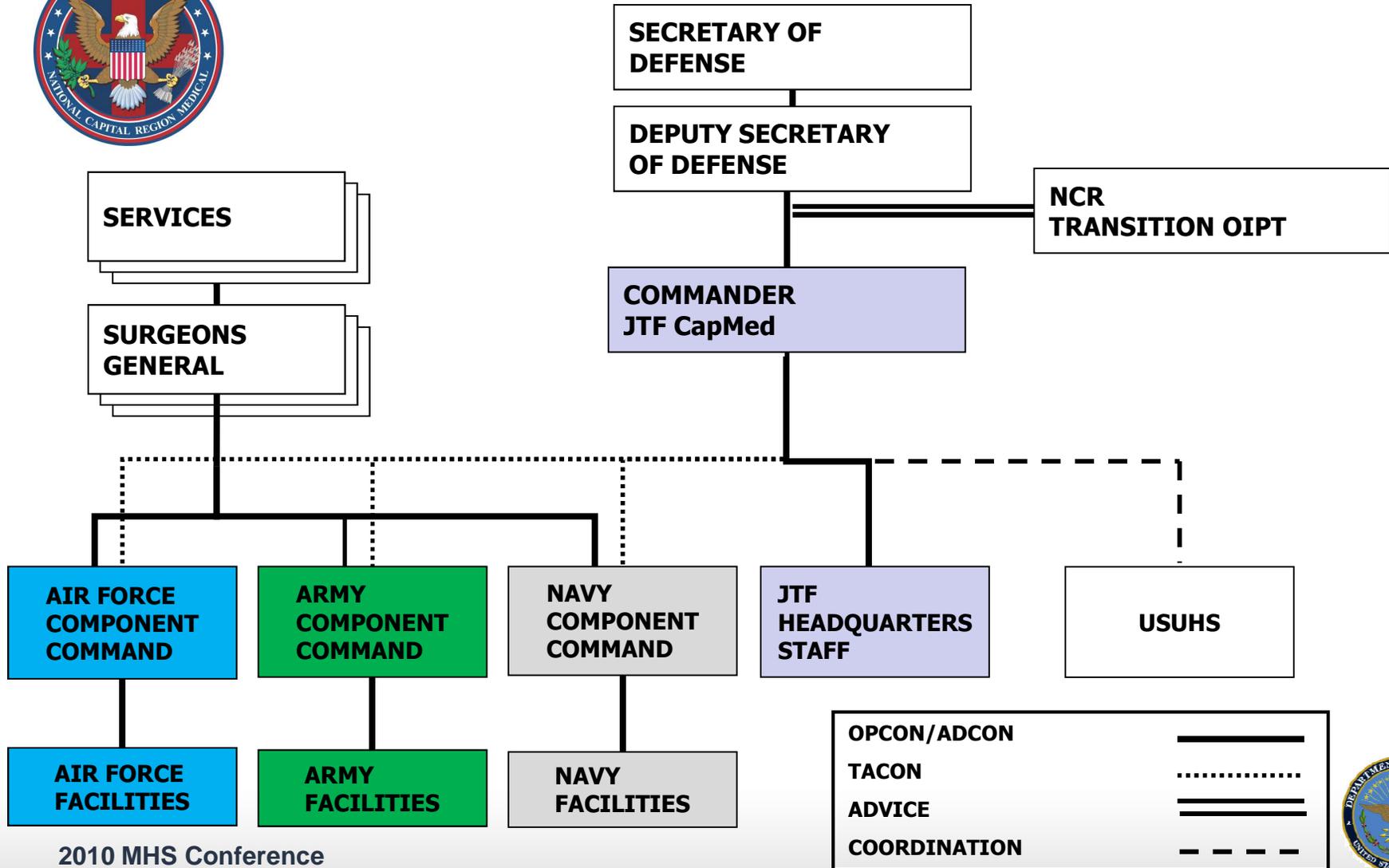
- Deployment Limiting Conditions
- Complexity of Care (Case Mix)
 - Stratify patient populations (chronic D+/D-)
- *Practice at Top of License
- *Resiliency
- *Staff Skills Currency

• Per Capita Cost

- PMPM Expense
- Emergency Room Visits
- PC Visits PMPY
- Specialty Care Visits PMPY
- *Cost per Episode of Care

*Measure requiring development and testing

JTF CAPMED Joint Business Plan/ Relationships

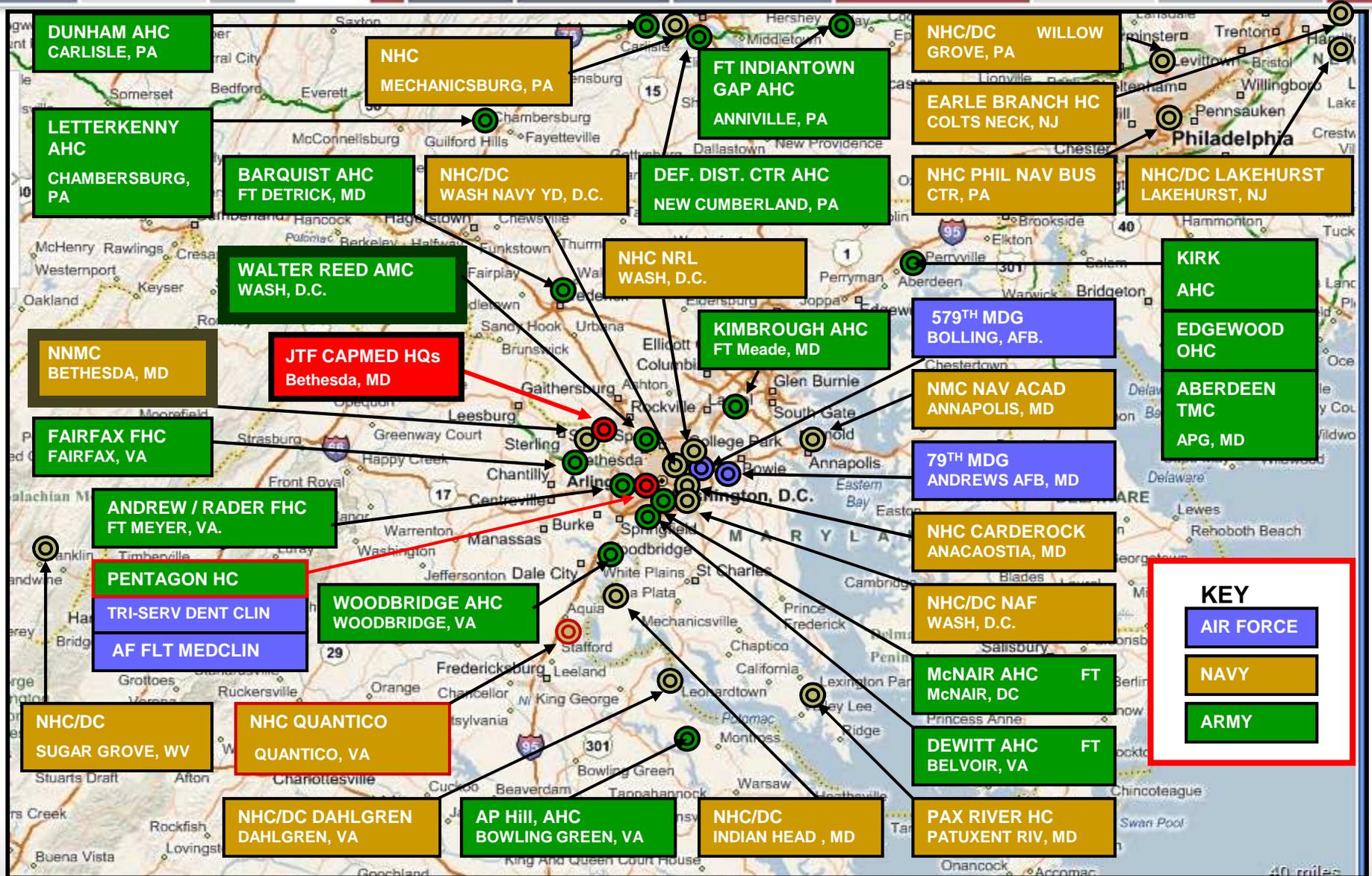


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JTF CAPMED Joint Operating Area (JOA)

284,686 TRICARE Prime Enrollees



PCMH – Joint Planning Principles With Culture (Behavior) Change!



- Comprehensive primary care for children, youth and adults in health care setting facilitating partnerships between individual patient, physician, and family
 - Physician directed team medical practice
 - Whole person (family) orientation
 - Enhanced access to continuous care
 - Coordinated (integrated) care across all elements of complex health care system
 - Quality, safety, advocacy are hallmarks

Joint Enrollment Capacity Model (JECM) Healthcare Integration and Optimization



1. Population-Based Enrollment by Patient Location (Live/Work)

- *“What is the current and future demand or need in what locations?”*

2. Primary Care Enrollment Capacity

- *“What capacity or supply do we need in what locations to meet the current and future demand in primary and specialty care services?”*

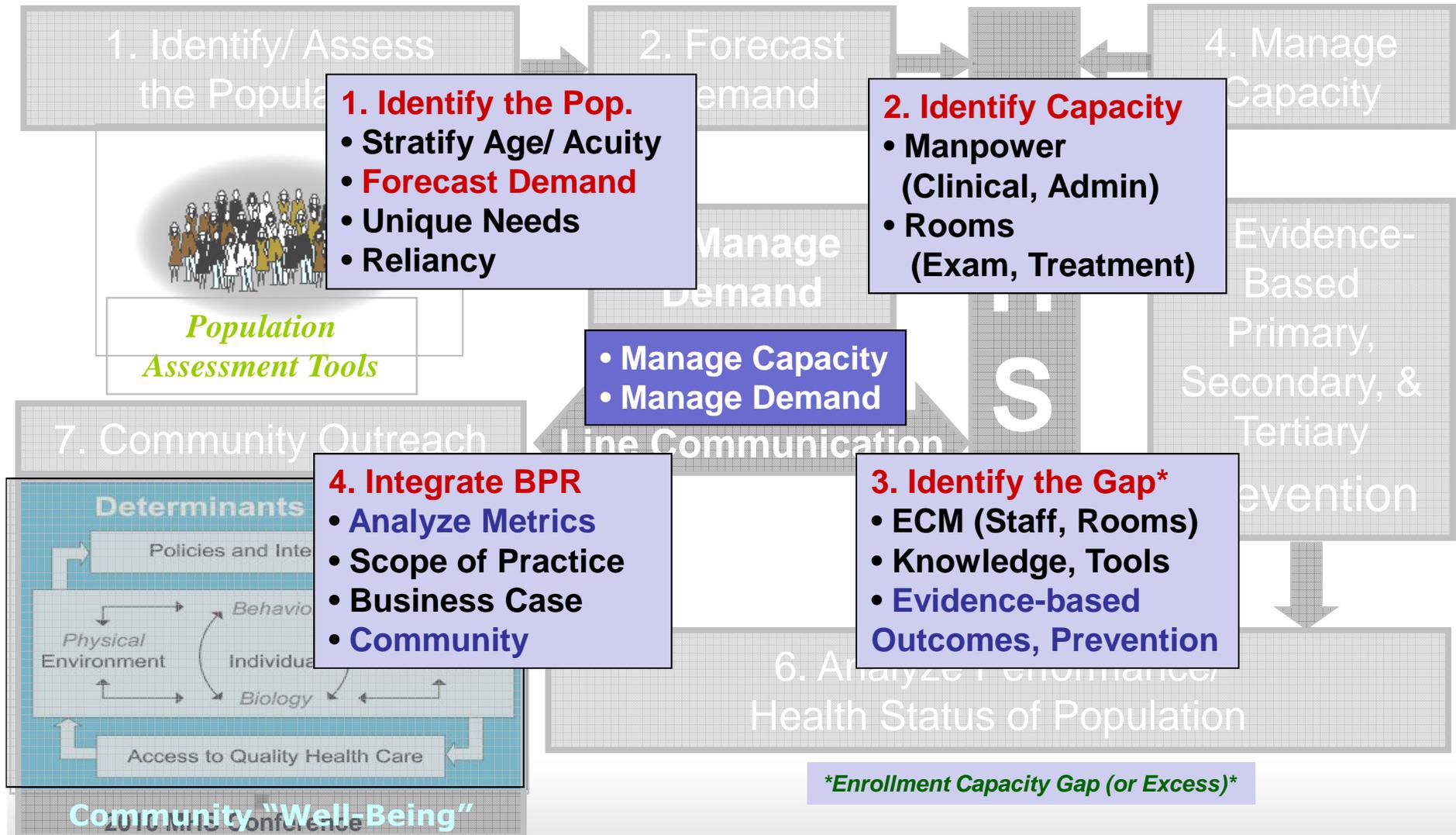
3. Enrollment Capacity Gap (Shift)...by Service, MTF

- *“What is the current excess or deficiency in required capacity*

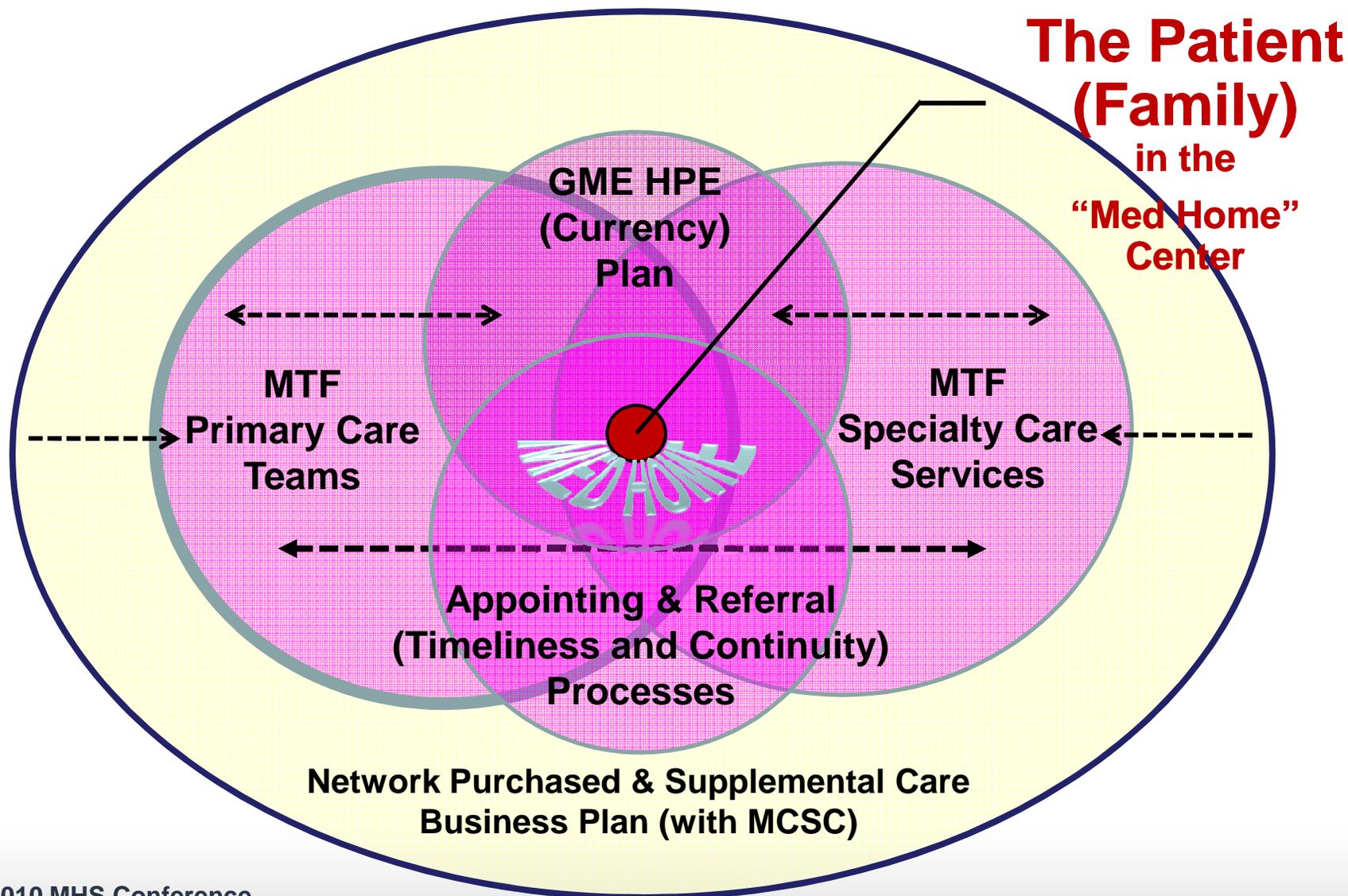
4. Business Process Reengineering/ (Re)Training/ Skill Sets

- *“What actions are needed to move us to integration success?”*

Four Operational Steps Determine the Business Plan



JOA Enrollment Strategy and Plan Inclusive and Integrated



Provider Team Capacity Optimization by FTEs



Population Factor (1200?) earns minimum number of provider FTEs.

- ✓ 1.0 FTE of Primary Care Provider needs*
 - ✓ 0.5 RN
- ✓ 2.0 LPN/NA/MEDIC/CORPSMAN
 - ✓ 0.5 Med Clerk

*per Medical Group Management Association (MGMA)
and OTSG Consultants review

Ensure Exam Room 2.0, Treatment Room 0.25, Team Room 1.0

PRIMARY CARE CLINIC EXAMPLE							
PCMs	Asgd/ Hired	FTEs	SUPPORT STAFF	Asgd/ Hired	FTEs	SPT Staff Ratio	Gap
MD	19	16.75	RN	5	4.5	0.2	-9.6
PA	7	6.5	91W/LPN/ LVN/NA	64	57	2.0	6.2
NPs	6	5	Med Clerk	11	9.9	0.4	-4.2
Total	32	28.25	Total	80	71.4	2.5	-7.7

Staff Req'd: $28.25 \times 2.8 = 79.1$ FTEs (Need 10 FTEs of RNs, 4 Med Clerks)

Add Behavioral Health 0.25, Case Manager 0.5, Manager 0.25

Metric Trends Example

What Do We Expect With Optimized Clinic Teams



- The optimized PCMH is NOT a 'fee-for-service' operation!
Use caution when setting up your outcome parameters!

	•PC EXPECT	•SC	2006	2007	% Change
RVUs	•~	•~	2,838,774	3,058,720	7.7%
Encounters	•DOWN	•DN	2,886,139	2,902,620	0.6%
RWPs	•~	•~	28,458	29,379	3.2%
Bed Days	•DOWN	•DN	116,250	120,461	3.6%
Dispositions	•DOWN	•DN	25,132	24,779	-1.4%
Scripts Provided	•DOWN	•~	4,227,712	4,147,995	-1.9%

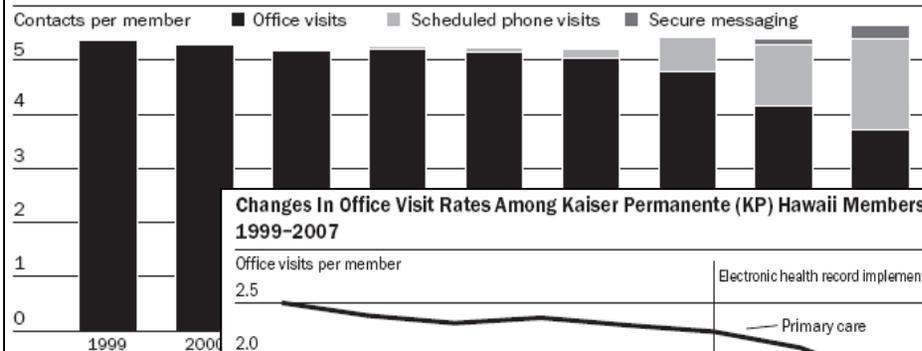
- Note that, if we get this right, some services have *less* workload, throughput, 'income,' need for manpower = (*Ripple Effect?*)

PCMH - Beginning with the End in Mind Collaboration of Best Practices

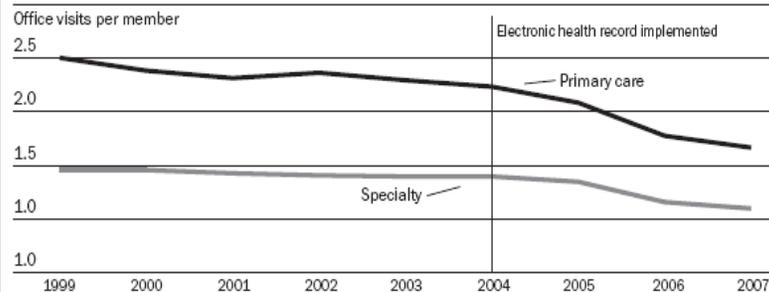


- With standards and measures we can:
 - Conduct validated studies on medical homes
 - Better understand true impact of PCMH on Quadruple Aim (i.e. our ROI on Medical Home)
 - Communicate results to stakeholders

Distribution Of Patient Contacts Over Time Among Kaiser Permanente (KP) Hawaii Members, 1999–2007



Changes In Office Visit Rates Among Kaiser Permanente (KP) Hawaii Members, 1999–2007



SOURCE: Authors' analysis using data from the Kaiser Permanente Hawaii Data Warehouse and secure messaging database.

SOURCE: Authors' analysis using data from the Kaiser Permanente Hawaii Data Warehouse and secure messaging database.

MANAGERIAL

Patient-Centered Medical Home Demonstration: A Prospective, Quasi-Experimental, Before and After Evaluation

Robert J. Reid, MD, PhD; Paul A. Fishman, PhD; Onchee Yu, MS; Tyler R. Ross, MA;
James T. Tufano, MHA, PhD; Michael P. Soman, MD, MPH; and Eric B. Larson, MD, MPH

Improving the delivery of primary care is high on the healthcare reform agenda in the United States and other industrialized nations. Evidence shows that when health systems emphasize primary care, patients achieve better outcomes at lower cost.¹ Compared with other countries, US healthcare costs significantly more² and has large gaps in coverage, wide variation in quality, and poorer patient experiences.³ Primary care physicians leave the workforce sooner than specialists⁴ and complain of a hectic work environment,^{5,6} and fewer medical trainees choose primary care careers.⁷

The patient-centered medical home (PCMH), a new model of primary care, is widely regarded as a potential solution to these problems.^{8,9} This model of practice redesign emphasizes the core attributes of primary care (access, longitudinal relationships, comprehensiveness, and coordination), promotes the chronic care model, maximizes the use of advanced information technology, and aligns reimbursement methods with improved patient access and outcomes.¹⁰ Despite growing enthusiasm and desire that the PCMH be fast-tracked, more information on its performance is needed.¹¹ Based on early experiences from a national demonstration project, Nursing and colleagues caution that "whole-practice transformation is required, even in highly motivated practices, along with significant resource investment."¹² We describe a multifaceted PCMH demonstration at Group Health Cooperative, a large, nonprofit integrated delivery system, and the changes observed in its first year.

Background: A patient-centered medical home (PCMH) demonstration was undertaken at 1 healthcare system, with the goals of improving patient experience, lessening staff burnout, improving quality, and reducing downstream costs. Five design principles guided development of the PCMH changes to staffing, scheduling, point-of-care, outreach, and management.

Objective: To report differences in patient experience, staff burnout, quality, utilization, and costs in the first year of the PCMH demonstration. **Study Design:** Prospective before and after evaluation.

Methods: Baseline (2006) and 12-month (2007) measures were compared. Patient and staff experiences were measured using surveys from a random sample of patients and all staff at the PCMH and 2 control clinics. Automated data were used to measure and compare change components, quality, utilization, and costs for PCMH enrollees versus enrollees at 19 other clinics. Analyses included multi-variate regressions for the different outcomes to account for baseline case mix.

Results: After adjusting for baseline, PCMH patients reported higher ratings than controls on 6 of 7 patient experience scales. For staff burnout, 80% of PCMH staff reported high emotional exhaustion at 12 months compared with 30% of controls, despite similar rates at baseline. PCMH

Change Component	PCMH Clinic (n = 8094)		19 Other Clinics (n = 228,510)		Comparison of Processes of Care at 12 Months Between PCMH and 19 Other Clinics*
	Baseline Adjusted Rate (SE)	12-Month Adjusted Rate (SE)	Baseline Adjusted Rate (SE)	12-Month Adjusted Rate (SE)	
E-mail and telephone contacts (per patient per year)[†]					Adjusted Ratio
Secure e-mail threads	0.83 (0.02)	2.25 (0.03)	0.70 (0.004)	1.16 (0.01)	1.94*
Telephone encounters	2.07 (0.02)	2.76 (0.03)	1.93 (0.01)	2.47 (0.01)	1.12*
Consulting nurse calls	0.95 (0.01)	1.04 (0.02)	0.83 (0.003)	1.16 (0.004)	0.90*
Care processes (% of patients per year)[‡]	Baseline Adjusted % (SE)	12-Month Adjusted % (SE)	Baseline Adjusted % (SE)	12-Month Adjusted % (SE)	Adjusted Relative Risk
Group visit attendance	0.02 (0.01)	0.28 (0.04)	0.02 (0.01)	0.07 (0.01)	5.90*
Self-management support workshop enrollment	0.02 (0.01)	0.08 (0.02)	0.02 (0.01)	0.04 (0.01)	2.16*
Health risk assessment completion	0.82 (0.09)	25.4 (0.47)	1.79 (0.04)	5.70 (0.05)	4.53*
Previsit outreach (well-care visits only) [§]	6.37 (1.89)	31.2 (3.64)	0.88 (0.17)	2.77 (0.28)	9.83*
Emergency/urgent care follow-up*	22.6 (1.73)	55.1 (2.24)	24.4 (0.59)	29.3 (0.57)	1.89*
Continuity of Care Index[¶]					
≥0.33	69.0 (1.13)	68.4 (1.13)	65.2 (0.24)	62.8 (0.24)	1.09*
≥0.66	23.3 (1.04)	26.8 (1.08)	26.6 (0.22)	24.9 (0.22)	1.09**

Patient Centered Medical Home (PCMH) Guide Guide-Process Coordinator - Dr. John Kugler

Finalized Guide by 31 May 2010



LtCol Regina Julian/Ms. Megan Jakub
Population Health and Medical Management
Office of the Chief Medical Officer (TMA)

Questions/ Comments?



- PCMH implementation challenges
- Relevance of concepts to military Joint enrollment capacity model
- Business plan specifics
- Convincing leadership (ourselves?)



BACK UP SLIDES



The Patient-Centered Medical Home Concept



“The **medical home** is a point of **access** to health care that is organized around the patient’s needs built on a **relationship** between a patient and a physician. It is a primary health care base capable of providing 90% of health needs but also **coordinating** specialty referrals and ancillary services. The medical home is a source of **first contact care** and **comprehensive care**... It is a place where they get to know you.”

(Grumbach & Bodenheimer JAMA 2002;288:889-893.)

NCQA - Source of PCMH Standards



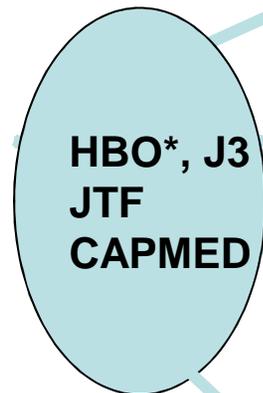
National Committee for Quality Assurance

- Physician Practice Connections Patient-Centered Medical Home (PPC-PCMH) Standards
 - Becoming the de facto standard -- over 400 sites and 4,300 physicians; Medicare, Pennsylvania, Vermont, Maine initiatives
- Tied to formal certification process
 - 9 standards with 30 elements
 - 10 must-pass elements and 3 achievement levels (i.e. Level 1, Level 2, Level 3)
 - Overall PPC-PCMH score positively correlated with higher clinical performance (diabetes, cardio vascular disease, Solberg, 2008)

JOINT Business Plan Metrics



- MHS Insight
- M2
- CHCS
- DOD beneficiary surveys
- CHCS
- MHSPHP



Quality Measures
(Hedis, Oryx)

Productivity
(RVU, RWP)

Access to Care
(Acute, Routine,
Wellness, Specialty
Standards)

Satisfaction
(Patient and Employee)

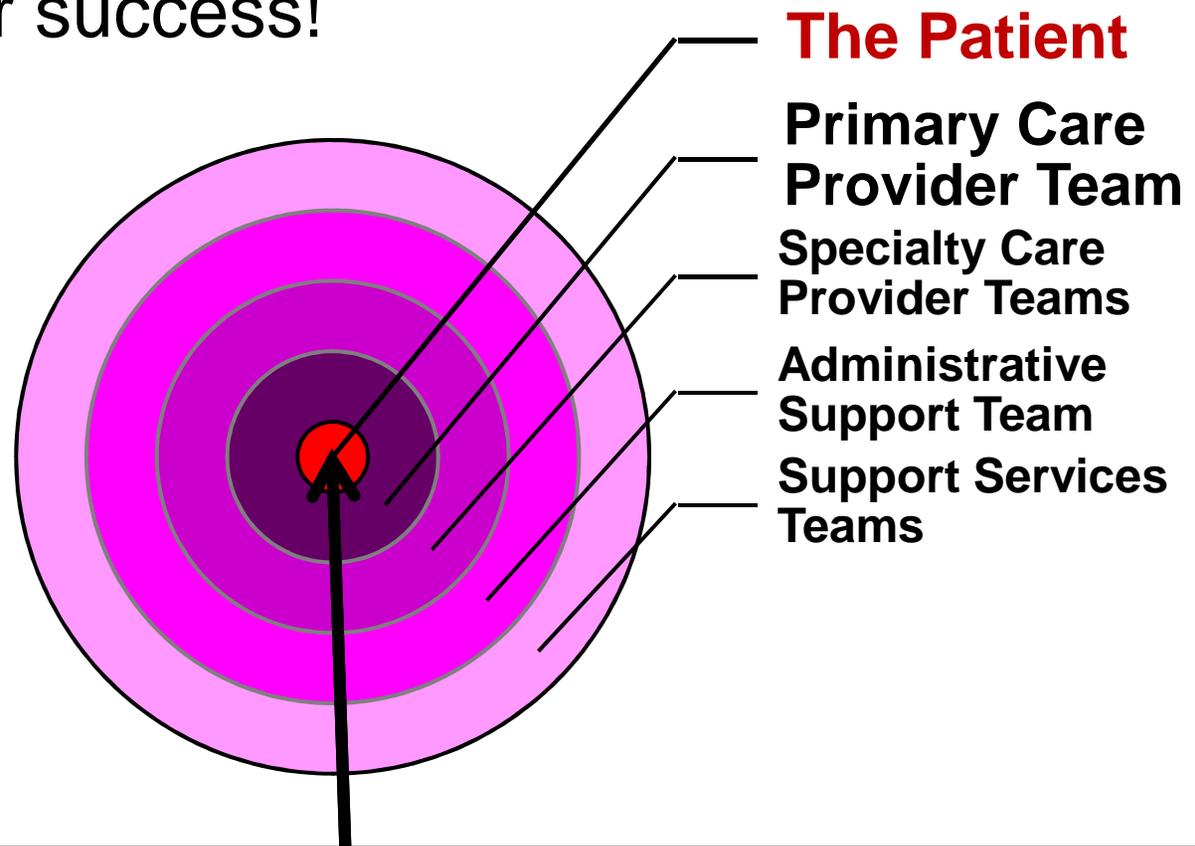
- **New metrics?**
 - Missed work hours
 - Employee satisfaction

**HBO- Healthcare Business Operation Cell, J3, JTF CAPMED*

Service Mentality Focused on the Patient/Family and Employer ('Line')



Set teams up for success!



Requires Ownership, Knowledge, and Service Mentality!

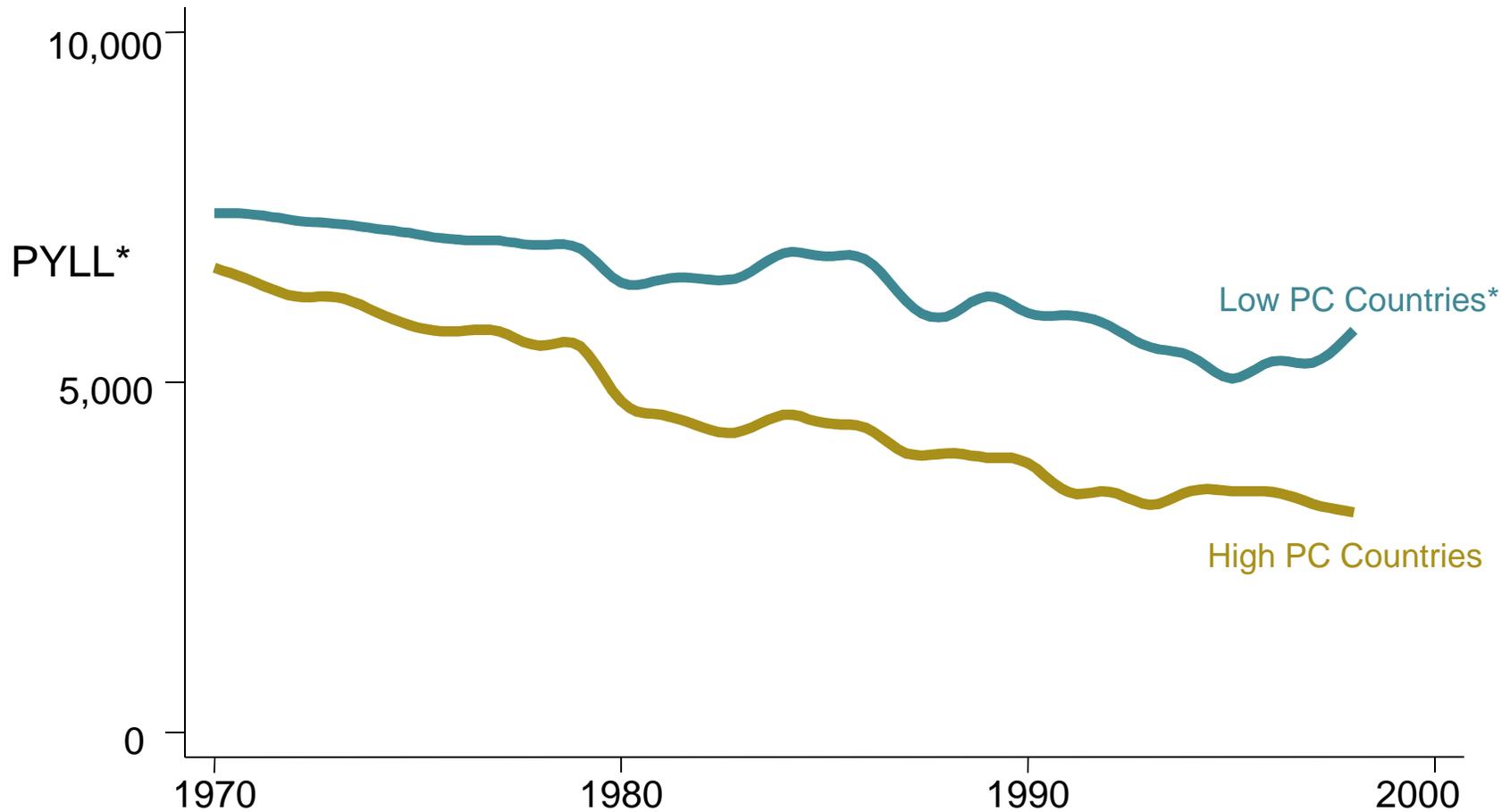
2010 MHS Conference **Our employees are our "center of gravity"!**

Implementing a PCMH Business Plan Payment Based On...



- Value of patient-centered care management
- Pay for care coordination
- Adoption of health information technology for quality improvement
- Provision of enhanced communication access (secure e-mail, telephone consultation)
- Recognize value of remote monitoring
- Allow for separate fee-for-service payments for face-to-face visits
- Recognize case mix differences in the practice
- Share in savings from reduced hospitalizations
- Pay for achieving measurable and continuous quality improvements

The Value of Primary Care (PC)



*potential year of life lost
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(Macinko et al, Health Serv Res 2003; 38:831-65.)