



Medical Home Renovations: A Patient-centered Medical Home Case Study



Stephen Tarnoff MD, Associate Medical Director, Group Health Cooperative
Right Care Initiative “University of Best Practices” Luncheon Series
UCSD Scripps Seaside Forum; La Jolla, California July 11, 2011





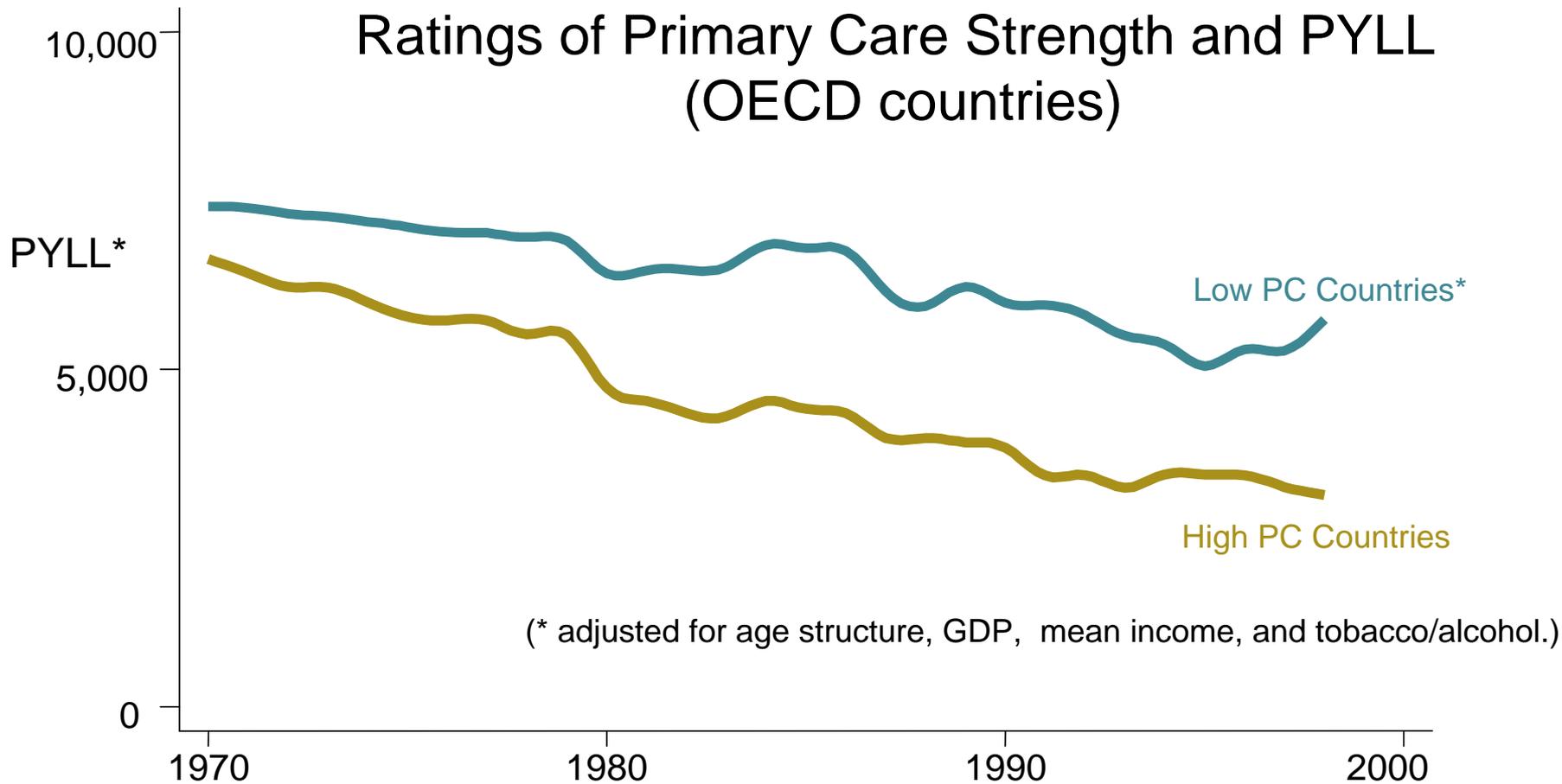
Medical Home Renovations...

- **Revitalizing primary care: the medical home imperative**
- **The Patient-centered Medical Home: An Evolving Definition**
- **Medical Home Transformation: the Group Health Experience**
- **Spreading the Medical Home using Lean**





The Importance of Primary Care



(Macinko et al, Health Serv Res 2003; 38:831-65.)



The burning platform of primary care

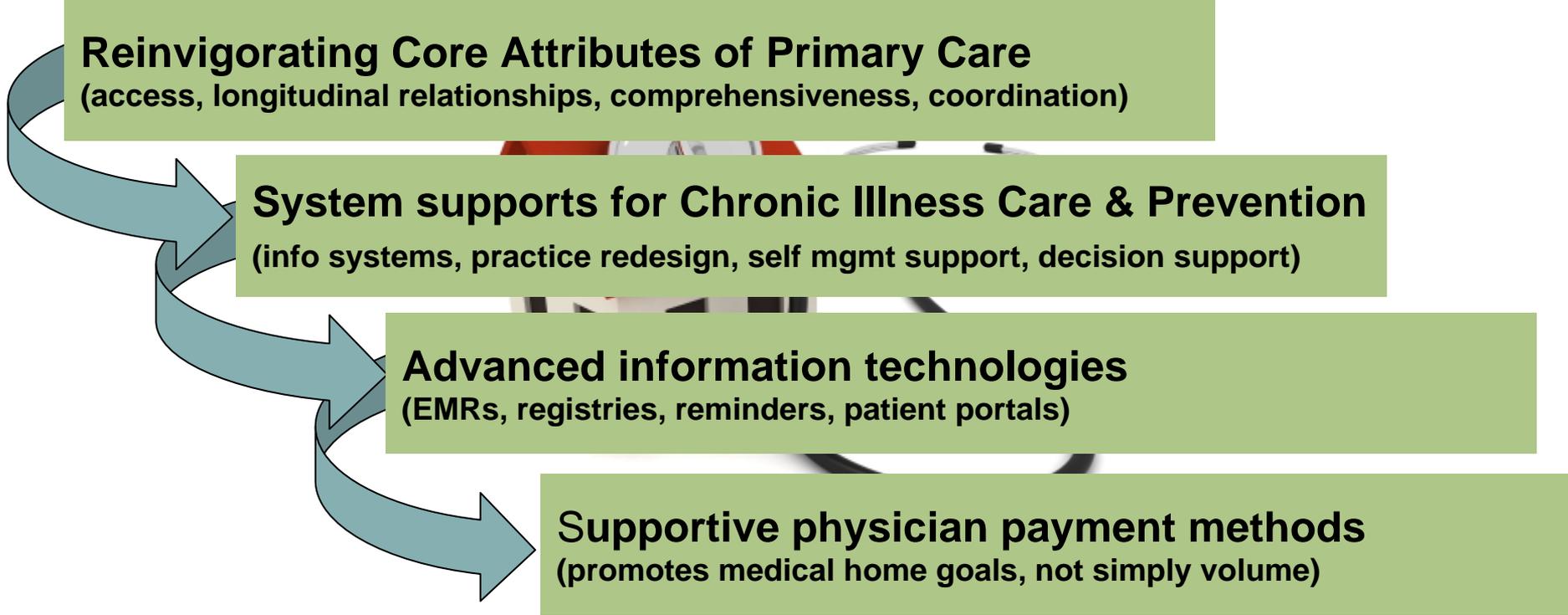
- **Access to primary care difficult for many, particularly disadvantaged**
- **Quality of care remains mediocre with many gaps**
- **Payment systems are antiquated. Many functions are unrewarded**
- **Evidence-base has become unmanageable for individual physicians**
- **Primary care is an unattractive career choice. Burnout common**





Joint Principles of Patient-Centered Medical Home 2007 (ACP, AAFP, AAP, AOA)

- 1. Personal physician**
- 2. Physician directed medical practice**
- 3. Whole person oriented**
- 4. Care is integrated & coordinated**
- 5. Assures quality & safety**
- 6. Enhanced access**
- 7. Payment Reform**



Reinvigorating Core Attributes of Primary Care
(access, longitudinal relationships, comprehensiveness, coordination)

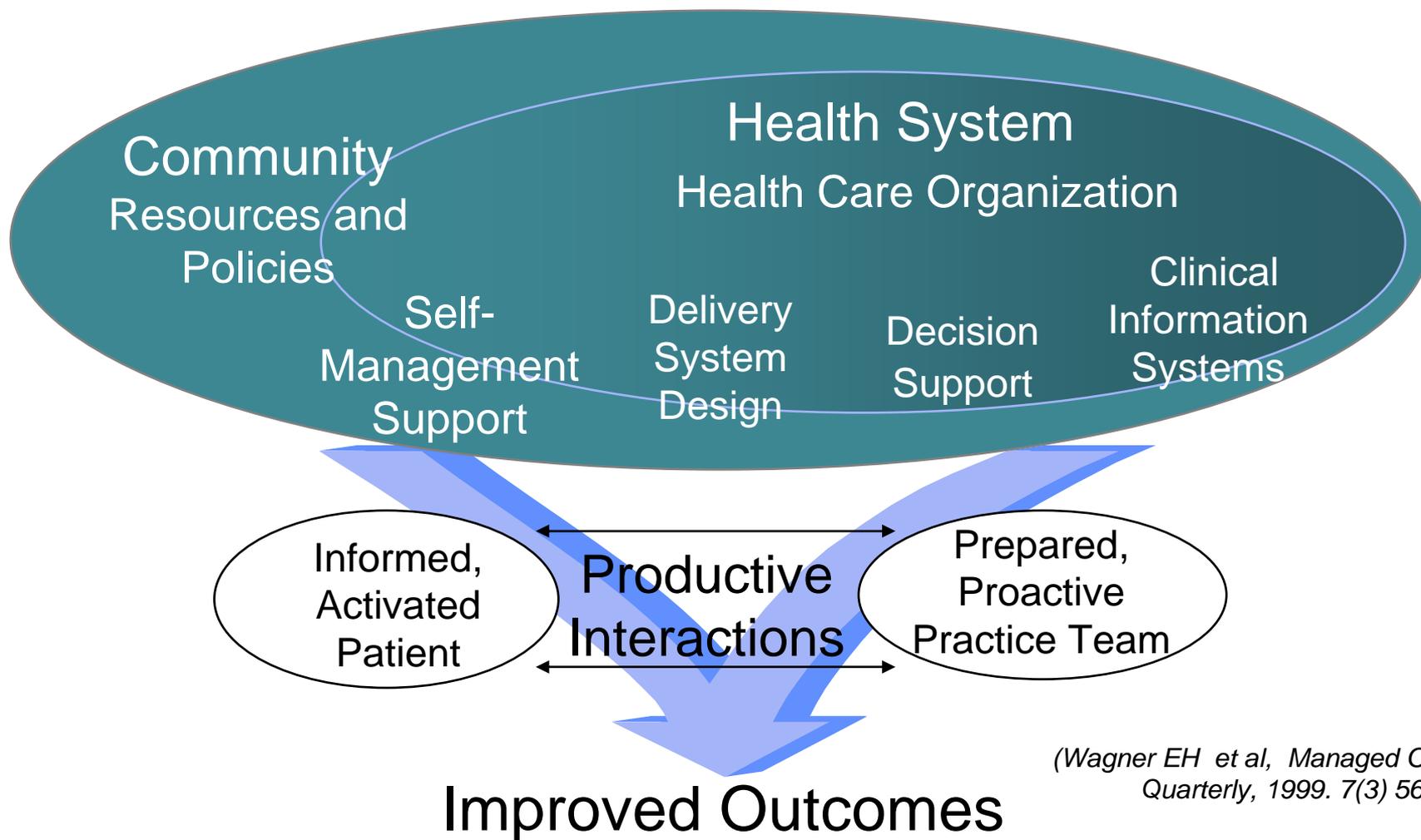
System supports for Chronic Illness Care & Prevention
(info systems, practice redesign, self mgmt support, decision support)

Advanced information technologies
(EMRs, registries, reminders, patient portals)

Supportive physician payment methods
(promotes medical home goals, not simply volume)



The Chronic Care Model (CCM)



(Wagner EH et al, Managed Care Quarterly, 1999. 7(3) 56-66)



Group Health's Medical Home Experiment





About Group Health...

- Integrated health insurance & delivery system
- Founded in 1946
- Consumer governed, non-profit
- Membership: 628,000 Staff: 9,390
- Revenues (2008): \$2.8 billion

- Multispecialty Group Practice
 - 26 primary care medical centers
 - 6 specialty units, 1 maternity hospital
 - 960 physicians
- Contracted network
 - > 9,000 practitioners, 39 hospitals

- Group Health Research Institute
 - 32 investigators
 - 235 active grants, \$34 million (2008)





A little history....

- **Since its origin, Group Health organized around primary care**

Defined practice populations
Specialty care gatekeeping

Multi-disciplinary teams
Salaried physicians

- **In 2000s multiple reforms to improve access, efficiency, productivity**

“Advanced access”
Leaner primary care teams
RVU-based productivity incentives

Same-day appointing
Direct specialty access

- **\$40 million invested in electronic clinical information systems**

System-wide EMR
Patient portal with secure messaging & lab results access
Decision support tools, reminders & alerts

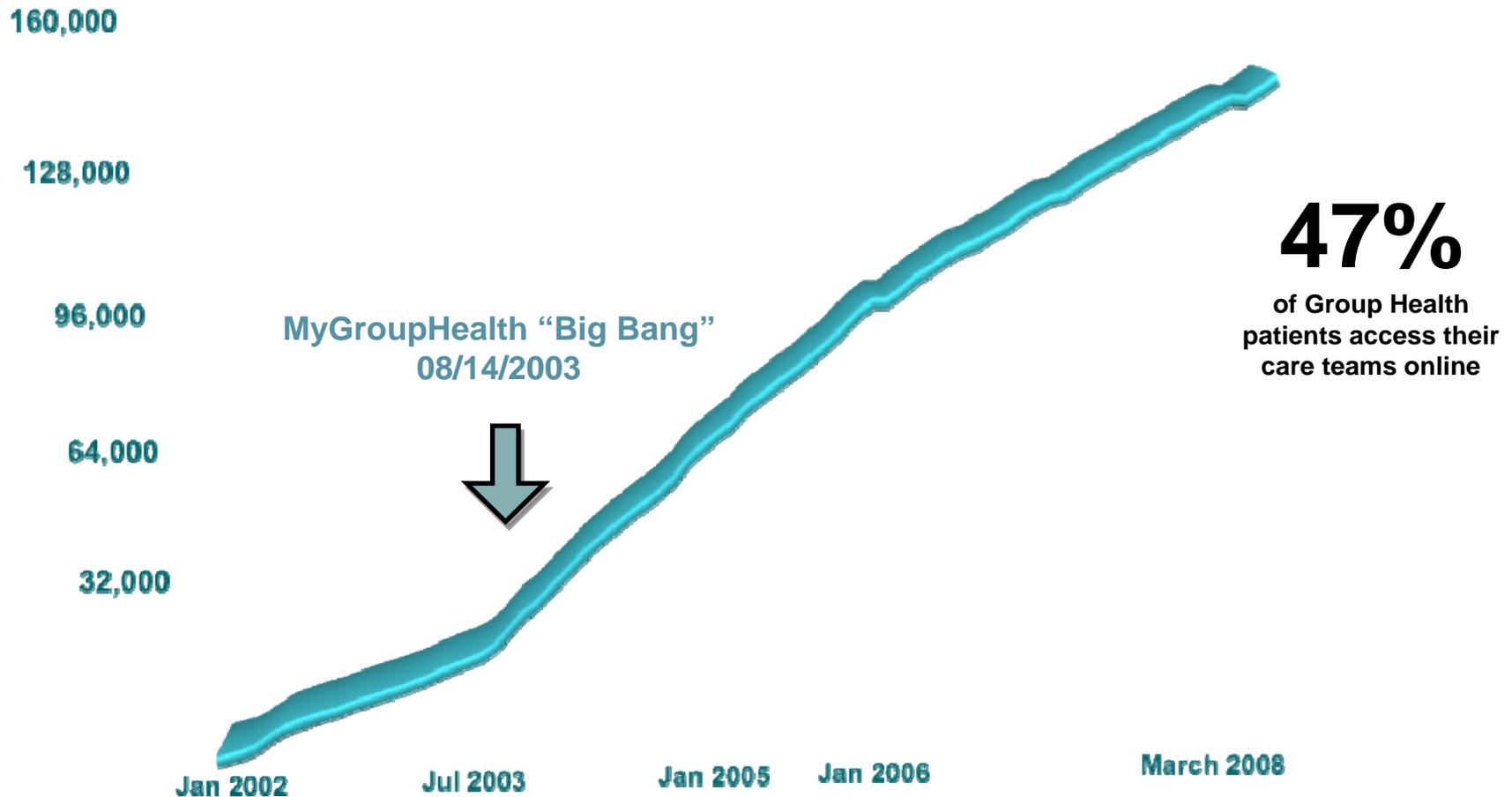
(Ralston et al, Med Care Res Rev. 2009;66:703-24.)



MyGroupHealth adoption



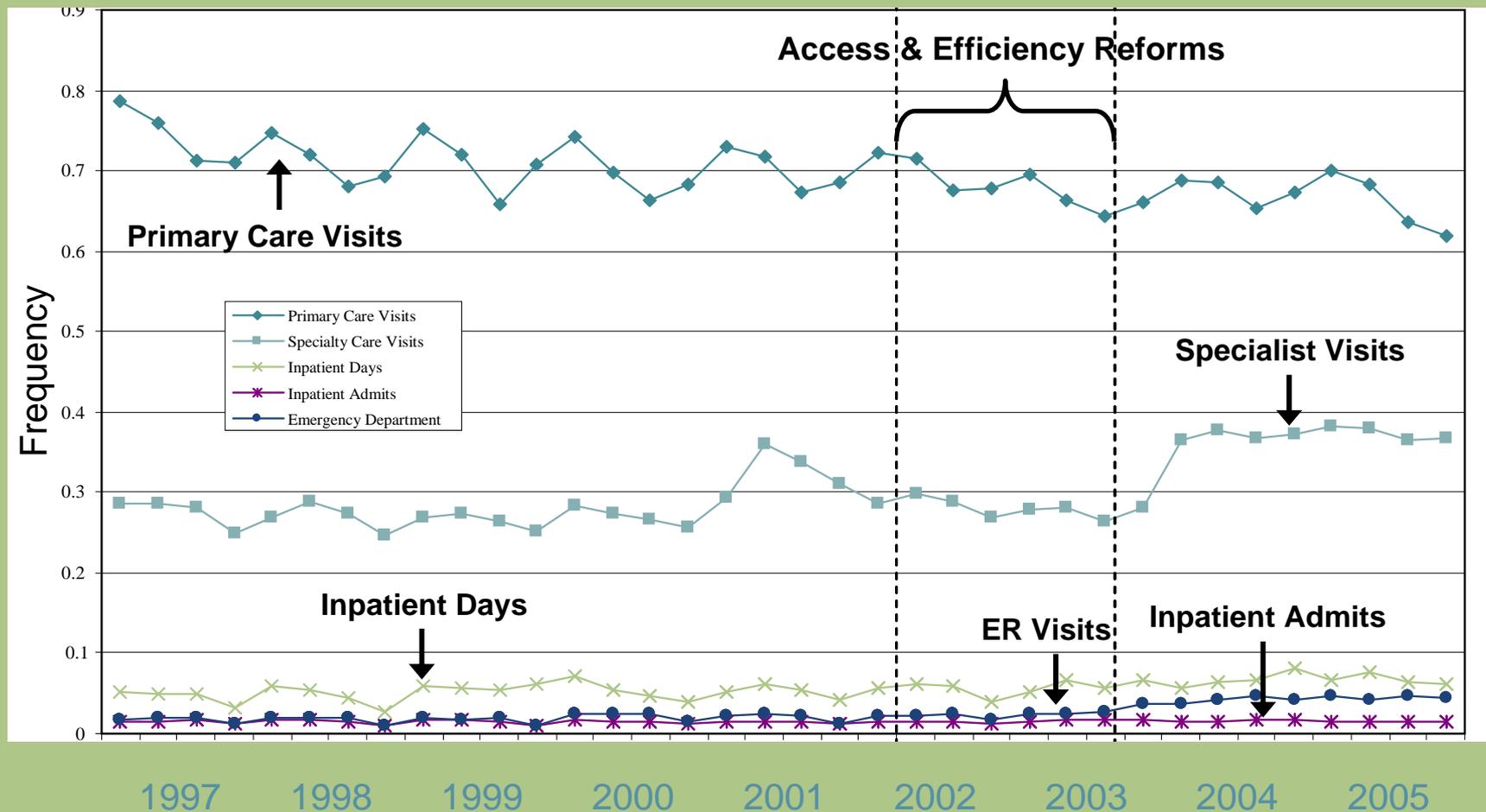
150,394 Enhanced Services Members as of March 24, 2008





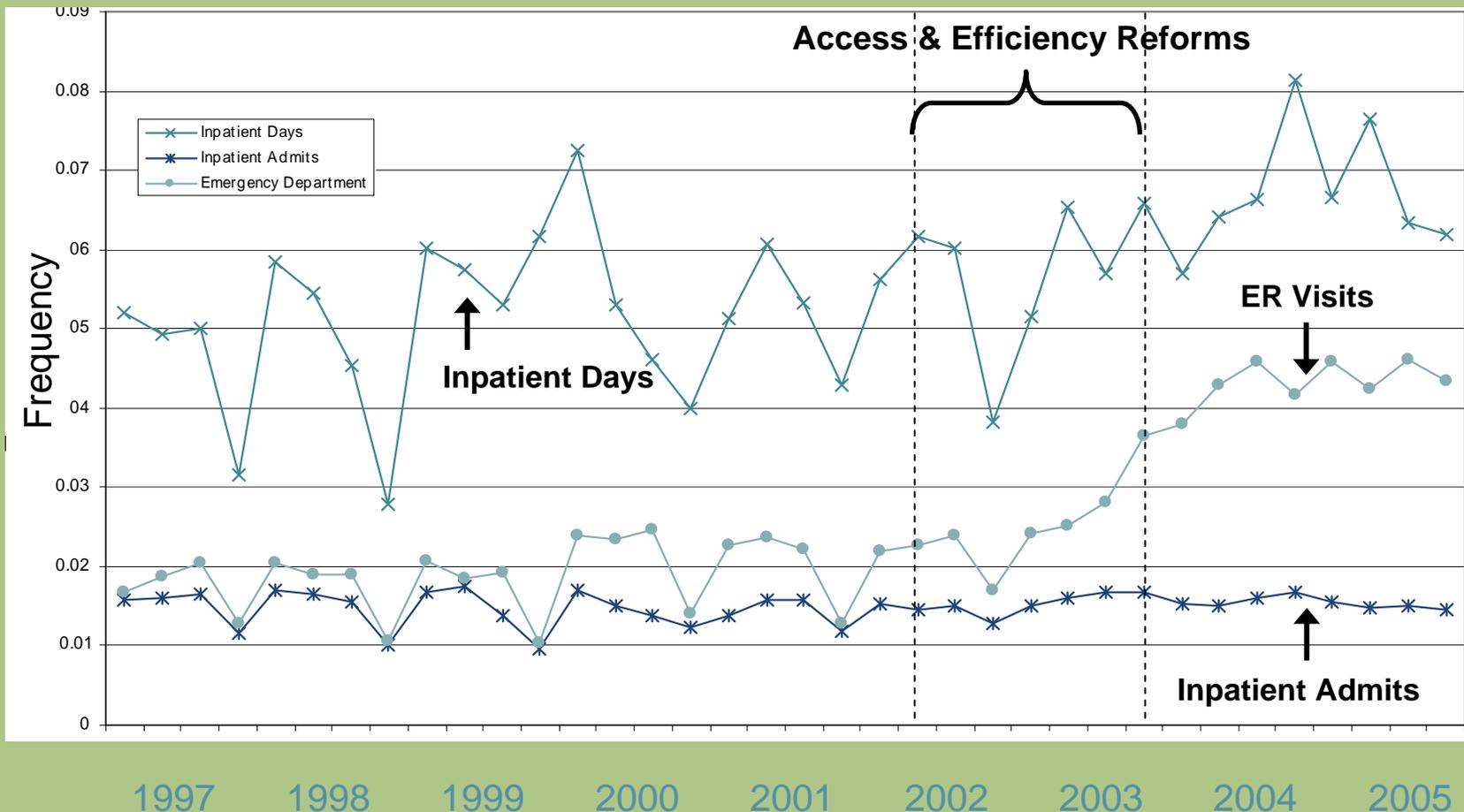
The medical home imperative

Utilization Trends 1997-2005 by Quarter

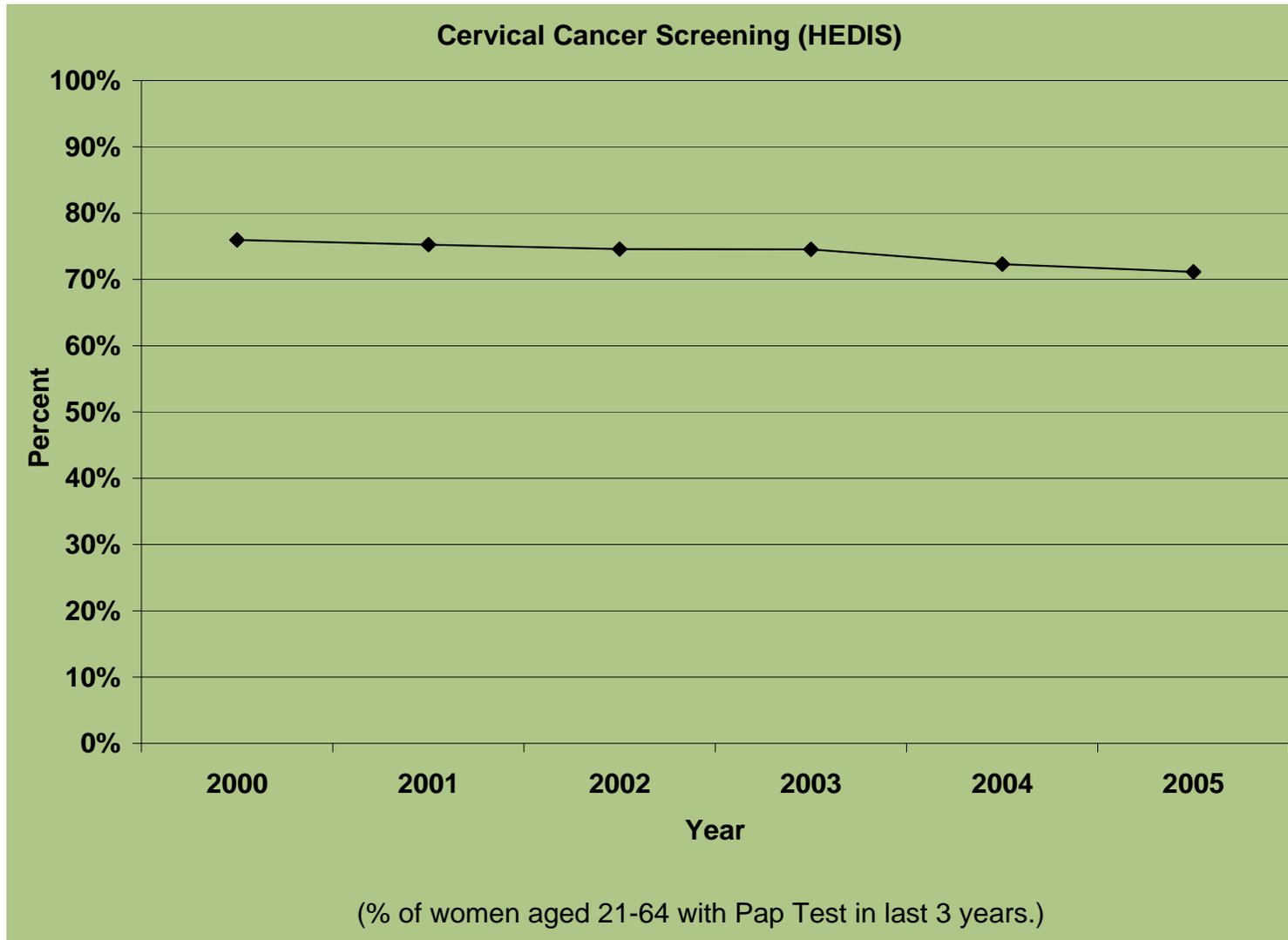


The medical home imperative

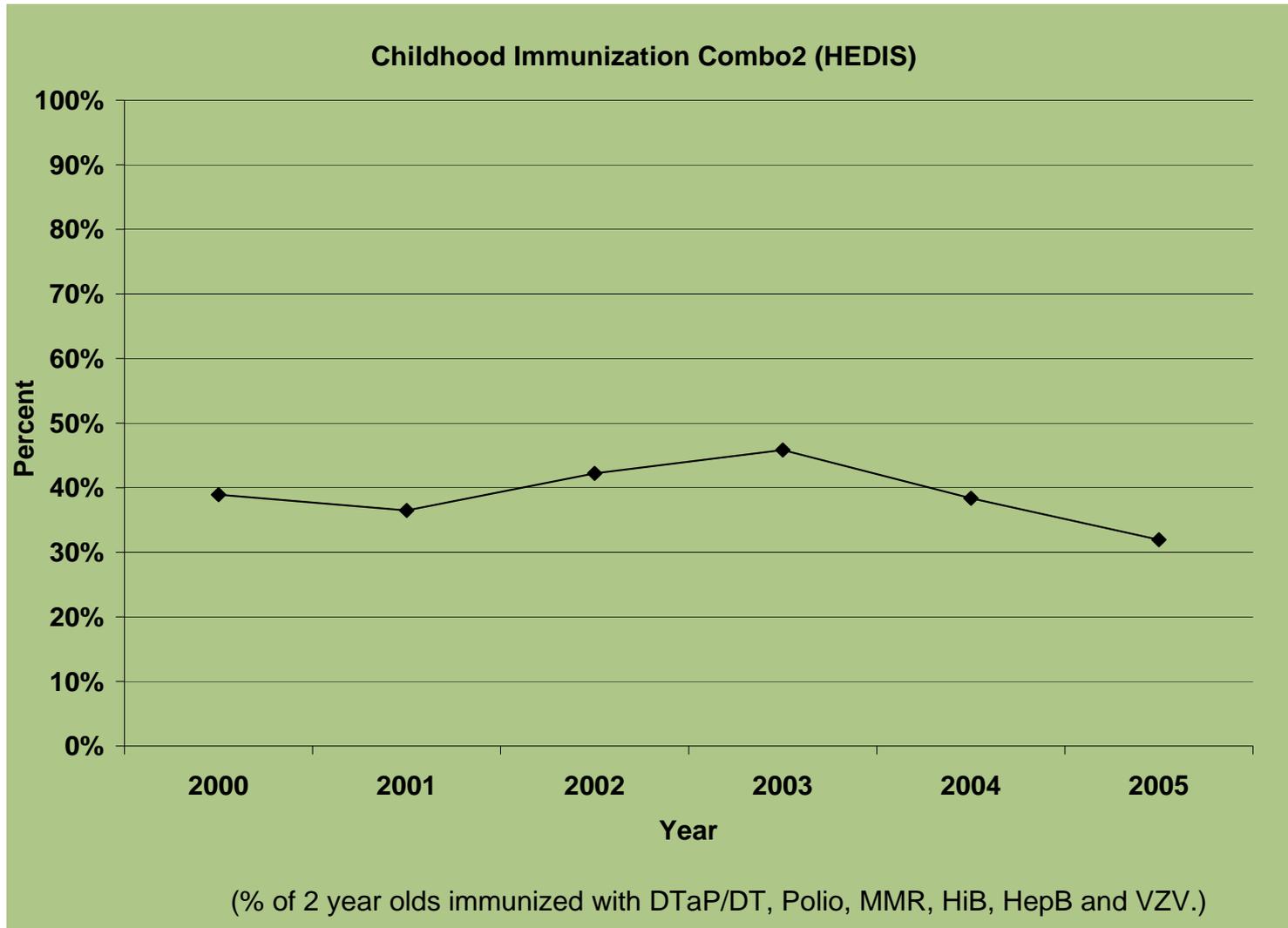
Inpatient & ER Utilization Trends 1997-2005 by Quarter



Effectiveness of care



Effectiveness of care



Increasing primary care physician burnout

“...the way in which [care] is structured, it has shifted such an increased amount of work onto primary care that it is **not sustainable** ... I’m actually looking to get out of primary care because I can no longer work at this pace.”

“ The **burnout rate** among my colleagues is **huge** ... those of us that have managed to retain some semblance of balance do it by almost unacceptable levels of compromise, either for ourselves or what we define as good enough care.”

(Tufano et al, JGIM 2008;23:1778-83)

Looming primary care workforce crisis

- Many MD positions remained unfilled
- Shift to part-time practice
- Primary care MDs retiring earlier than specialists
- Most common reason for employment separation: **high workload**



The medical home imperative



There has to be a
better way!



Medical Home Design Principles (2006)

✓ The **relationship** between the primary care clinician & patient is at our core; the entire delivery system will orient to promote & sustain.

✓ The primary care clinician will be a leader of the clinical team, responsible for **coordination** of services, and together with patients will create **collaborative care plans**.

✓ Care will be **proactive** and **comprehensive**. Patients will be **actively informed** and encouraged to participate.

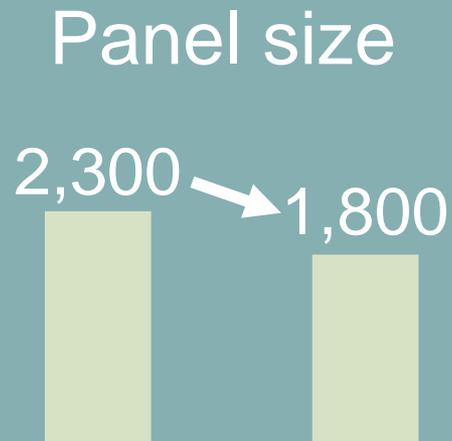
✓ **Access** will be centered on patients needs, be available by various modes, and **maximize the use of technology**.

✓ Our clinical and business systems are aligned to achieve the most **efficient, satisfying** and **effective** experiences.

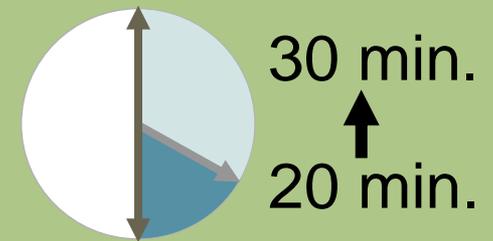


Revitalizing primary care

PCMH
design:



Appointments



Clinical teams



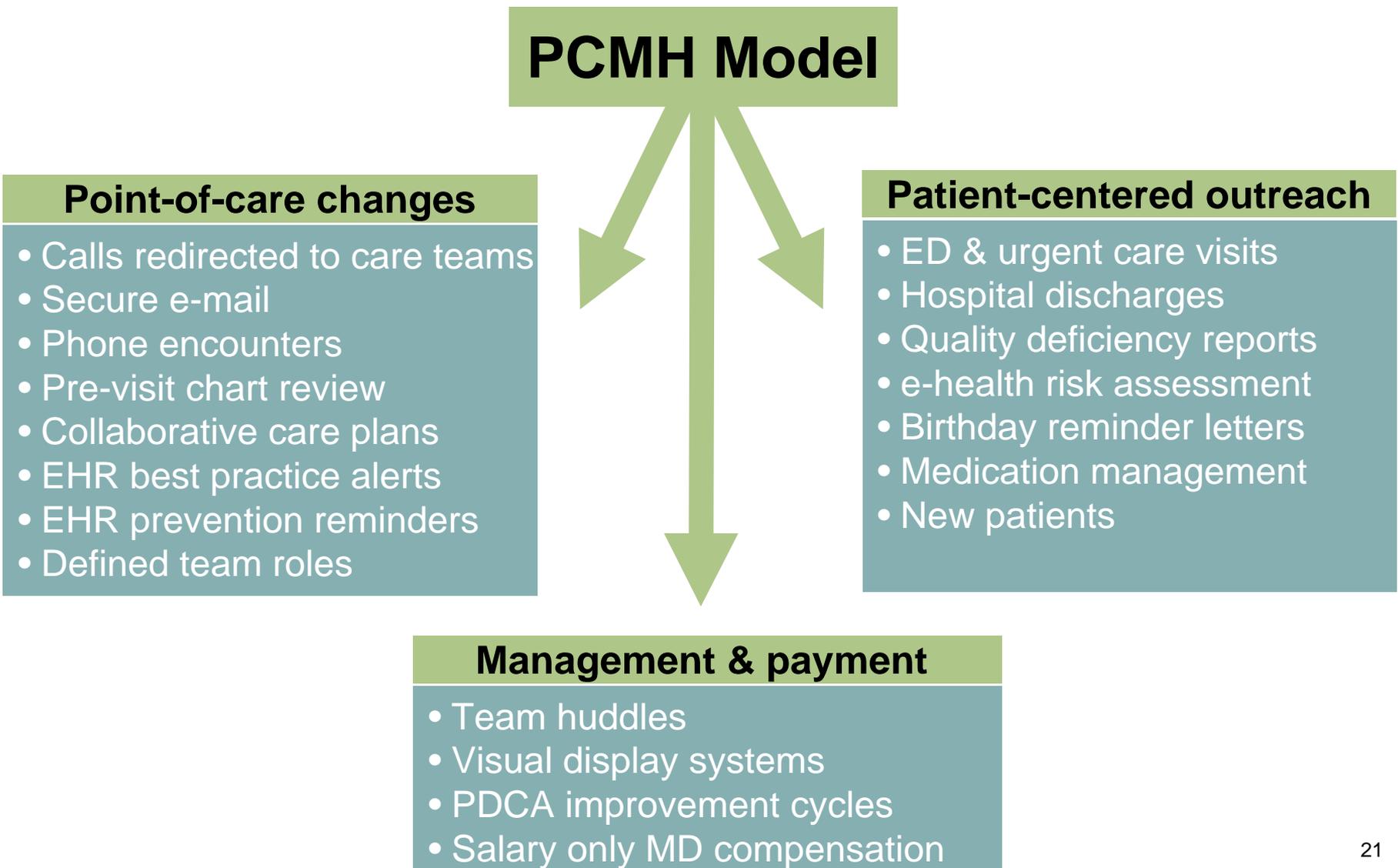
Desktop time



E-technology



PCMH Model



```
graph TD; A[PCMH Model] --> B[Point-of-care changes]; A --> C[Patient-centered outreach]; A --> D[Management & payment];
```

Point-of-care changes

- Calls redirected to care teams
- Secure e-mail
- Phone encounters
- Pre-visit chart review
- Collaborative care plans
- EHR best practice alerts
- EHR prevention reminders
- Defined team roles

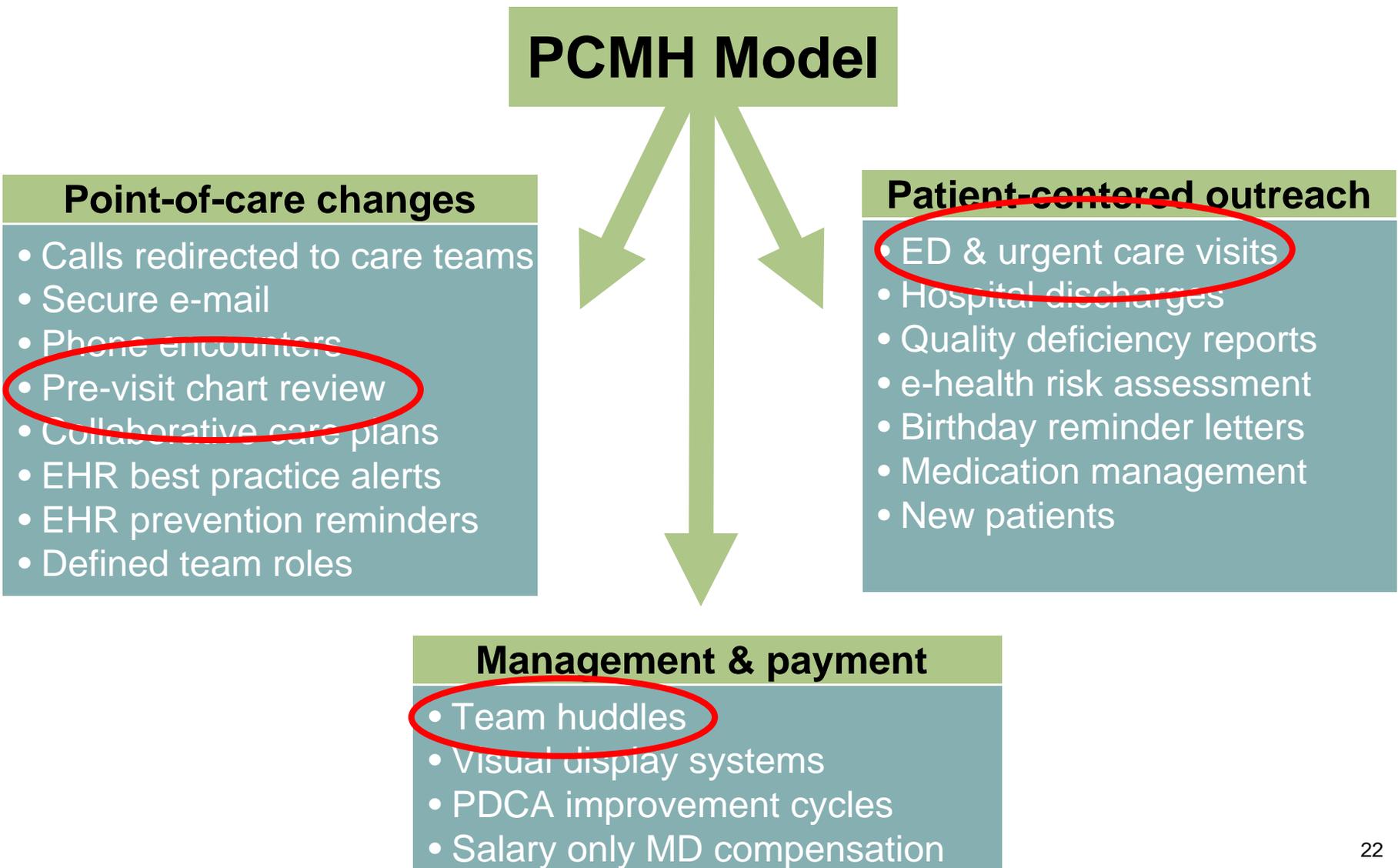
Patient-centered outreach

- ED & urgent care visits
- Hospital discharges
- Quality deficiency reports
- e-health risk assessment
- Birthday reminder letters
- Medication management
- New patients

Management & payment

- Team huddles
- Visual display systems
- PDCA improvement cycles
- Salary only MD compensation

PCMH Model



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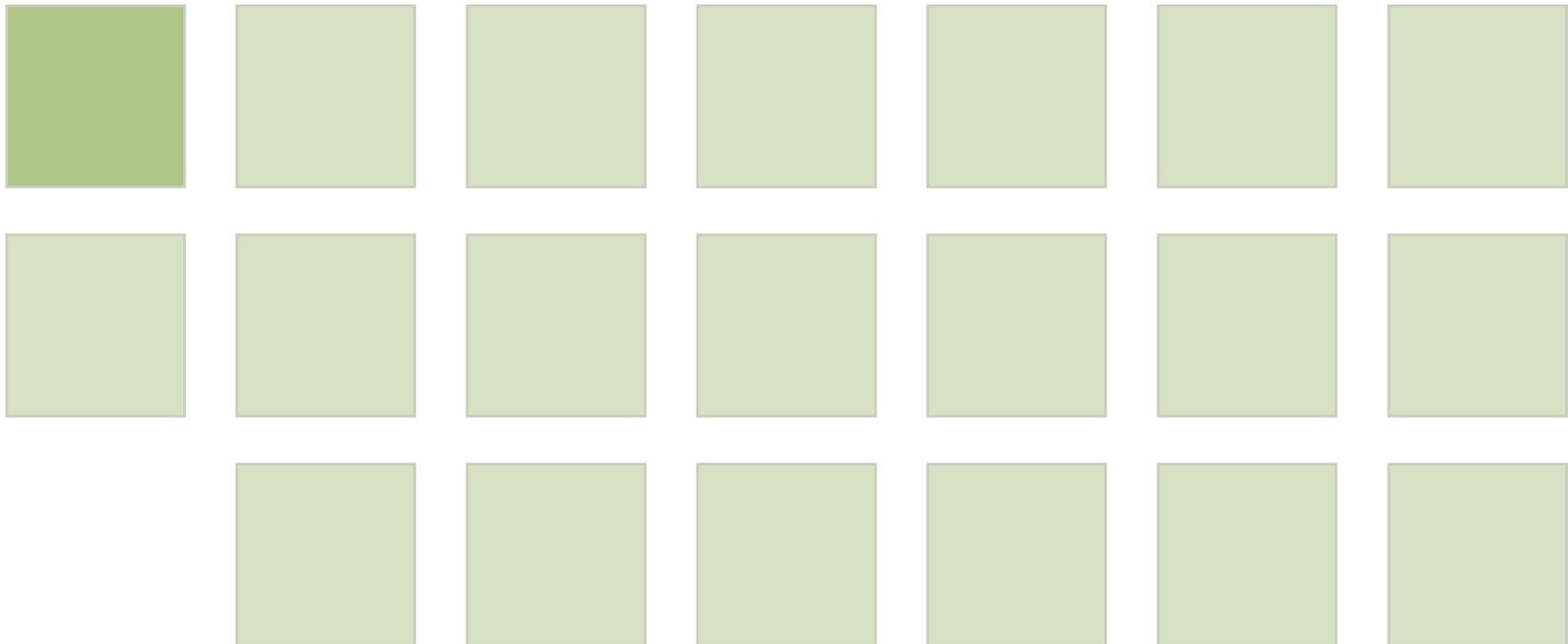
Management & payment

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- Salary only MD compensation



Medical home pilot evaluation

Group Health Research Institute conducted a 2 yr prospective, before-and-after evaluation comparing the pilot with 19 other Group Health clinics in western Washington State





Medical home pilot evaluation

Evaluation
measures:



Patient
experience



Staff
burnout



Quality



Utilization



Cost



MEDICAL HOMES: A SOLUTION?

By Robert J. Reid, Katie Coleman, Eric A. Johnson, Paul A. Fishman, Clarissa Hsu, Michael P. Soman, Claire E. Trescott, Michael Erikson, and Eric B. Larson

The Group Health Medical Home At Year Two: Cost Savings, Higher Patient Satisfaction, And Less Burnout For Providers

DOI: 10.1371/journal.p2010.018
HEALTH AFFAIRS 29,
NO. 5 (2010): 835-843
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The People-to-People Health
Foundation, Inc.

ABSTRACT As the patient-centered medical home model emerges as a vehicle to improve the quality of health care and to control costs, the experience of Seattle-based Group Health Cooperative with its medical home pilot takes on added importance. This paper examines the effect of the medical home prototype on patients' experiences, quality, burnout of clinicians, and total costs at twenty-one to twenty-four months after implementation. The results show improvements in patients' experience, quality, and clinician burnout through two years. Compared to other Group Health clinics, patients in the medical home experienced 29 percent fewer emergency visits and 6 percent fewer hospitalizations. We estimate total savings of \$10.3 per patient per month twenty-one months into the pilot. We offer an operational blueprint and policy recommendations for adoption in other health care settings.

The patient-centered medical home has emerged rapidly as the main policy vehicle to reinvigorate U.S. primary care. The widely endorsed 2007 joint principles of the patient-centered medical home, developed by a coalition of professional organizations, emphasize the attributes of primary care. These include access to care, long-term relationships with health care providers, and comprehensiveness and coordination of care. The principles also embrace a health professional team orientation grounded in quality improvement.

staffing, key electronic health record features and optimal methods for transformation to this new practice model.

Several questions about medical homes remain unanswered. These include how quickly the anticipated improvements emerge and how operational definitions apply to practices with different settings, patient mixes, and cultures.

Since 2006, Group Health Cooperative, a nonprofit, consumer-governed, integrated health insurance and care delivery system based in Seattle, Washington, has pioneered a medical home redesign that relies on its existing electronic health record technology. The one-year

Robert J. Reid, MD, PhD

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 medical trainees choose primary care careers.⁴

The patient-centered medical home (PCMH), a new model of primary care, is widely regarded as a potential solution to these problems.⁵ 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.⁶ Despite growing enthusiasm and desire that the PCMH be fast-tracked, more information on its performance is needed.⁷ Based on early experiences that "whole-practice transformation is required, even in highly motivated practices, along with significant resource investment."⁸ 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 a health care system, with the goals of improving patient experience, lowering 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, outreach, and management.

Study Design: Prospective before and after evaluation.

Methods: Baseline (2006) and 12-month (2007) measures were compared. Patient and staff experience 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 in patient, quality, utilization, and costs for PCMH versus control clinics at 12 other clinics. Analyses included multivariate 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, 10% of PCMH staff reported high emotional exhaustion at 12 months compared with 30% of controls, despite similar rates at baseline. PCMH patients also had gains in composite quality of care, despite similar rates at baseline. Between 1.2% and 1.6% greater than those of other patients, PCMH patients used more e-mail, phone, and specialist visits, but fewer emergency services. At 12 months, there were no significant differences in overall costs.

Conclusions: A PCMH redesign can be associated with improvements in patient experience, staff burnout, and quality without increasing

COMMENTARY

The Patient-Centered Medical Home Movement Why Now?

Eric B. Larson, MD, MPH
Robert Reid, MD, PhD

in primary care. However, according to the Institute of Medicine's (IOM's) "Quality Chasm" reports,¹ US care is increasingly fragmented and moving away from the traditional model of primary care and chronic care management, with evidence of their effectiveness.

Integrated delivery systems—termed "accountable care organizations"² and credited with providing better, less fragmented care—are often challenged to deliver high-quality, affordable primary care. Group Health Cooperative, a Seattle-based nonprofit health insurance and care organization that has always been primary care-focused, is an example. In response to market forces and patient demand for ready access to physicians and other clinicians, a problem in traditionally managed care organizations, Group Health in 2002 initiated a primary care redesign. Elements included open access to specialists, and an e-mail record with a secure Web site that enabled patients to e-mail their physicians and view their records. The redesign also established new standards and reimbursement changes for primary care physicians.

As a result of this initiative met patient expectations for improved and increased clinicians' productivity, patient satisfaction, and improved. Moreover, primary care clinicians reported less dramatic negative effects on their quality of life, physicians to work harder and faster, realistic demands and made primary care more attractive, many physicians either reentered the workforce (so-called clinical full-time early). Thus, even in an integrated delivery system such as the Chronic Care Model, the redesign was not being realized.

In another step in primary care redesign, we selected a prototype clinic as a test site to evaluate the value of the patient-

Reid RJ et al, Health Affairs 2010;29(5):835-43
Larson EB et al, JAMA 2010; 306(16):1644-45
Reid RJ et al, Am J Manag Care 2009;15(9):e71-87



Selected change components

Year 1: 94% more emails, 12% more phone consultations, 10% fewer calls to consulting nurse

Year 2: Significant changes persisted

	Year 1	Year 2
Secure email messages	↑	↑
Telephone encounters	↑	↑
Consulting nurse calls	↓	↓

Compared to controls:



Medical Home significantly higher



Medical Home significantly lower



Difference not significant



Patient experience

Significantly higher scores for patients at Medical Home Clinic

	Year 1	Year 2
Quality of patient-doctor interactions	↑	↑
Shared decision making	↑	↔
Coordination of care	↑	↑
Access	↑	↑
Helpfulness of office staff	↔	↔
Patient activation/involvement	↑	↑
Goal setting/tailoring	↑	↑

Compared to controls:



Medical Home significantly higher



Medical Home significantly lower



Difference not significant



Quality of care

Composite quality gains significantly greater for patients at Medical Home clinic across 22 indicators

Mean difference of changes between pilot and control clinics	Year 1	Year 2
100% performance	↑	↑
75% performance	↑	↑
50% performance	↑	↑

Compared to controls:



Medical Home significantly higher



Medical Home significantly lower



Difference not significant

Quality Awards and Recognition

Group Health ranks **top 48th** in the nation in the National Committee for Quality Assurance's (NCQA) Health Insurance Plan Rankings 2010-11-Private. We're up 28 positions from 2009-2010. Group Health is **ranked highest in its service area in Washington.**



Group Health is in the **top five percent** of Medicare plans nationally, according to the NCQA's Health Insurance Plan Rankings 2010-11-Medicare. Group Health is the **11th highest ranked** Medicare plan, and this marks the third year we've been among the **top 15 plans** in the country.



NCQA awarded all 26 clinic locations of Group Health Medical Centers its **highest recognition status** for Physician Practice Connections®-**Patient Centered Medical Home**™



Group Health Medical Centers earned **more "above average" ratings than 76 other medical groups** in the Puget Sound Health Alliance's 2010 Community Checkup.

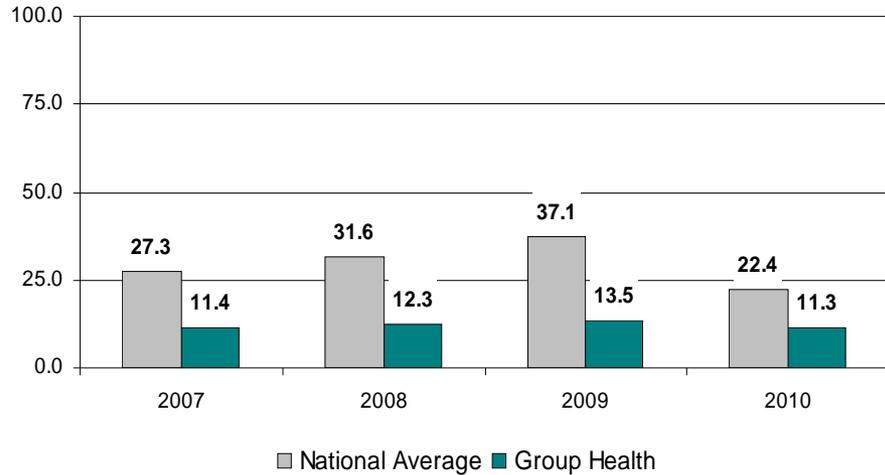


Group Health HMO Medicare received **4 out of 5 stars** on Medicare Five-Star Quality Rating System in 2010.

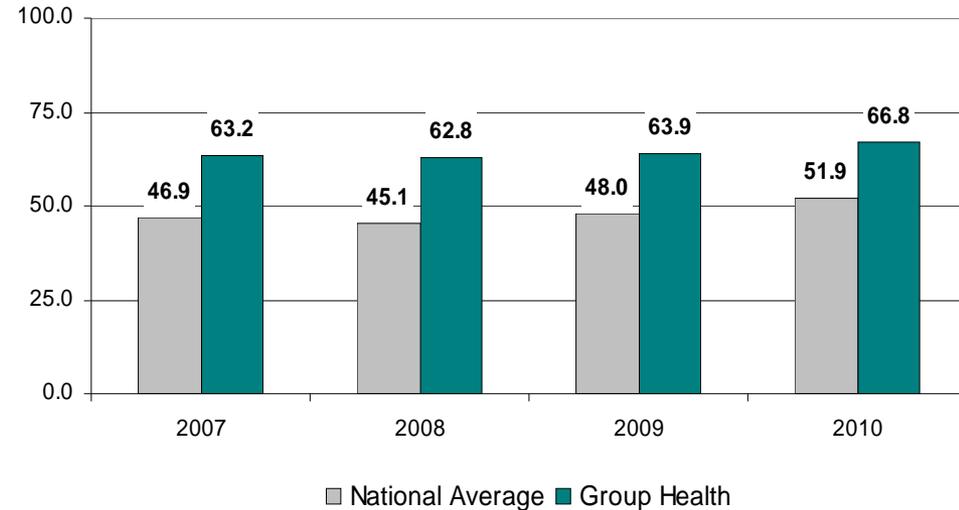


HEDIS Clinical Outcomes--Diabetes

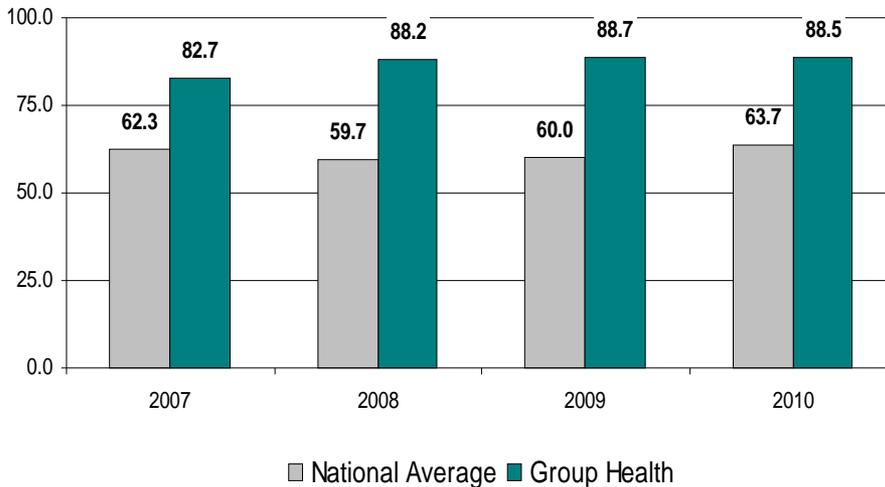
Medicare Comprehensive Diabetes Care-Poor HbA1c Control
****LOWER NUMBER is BETTER PERFORMANCE****



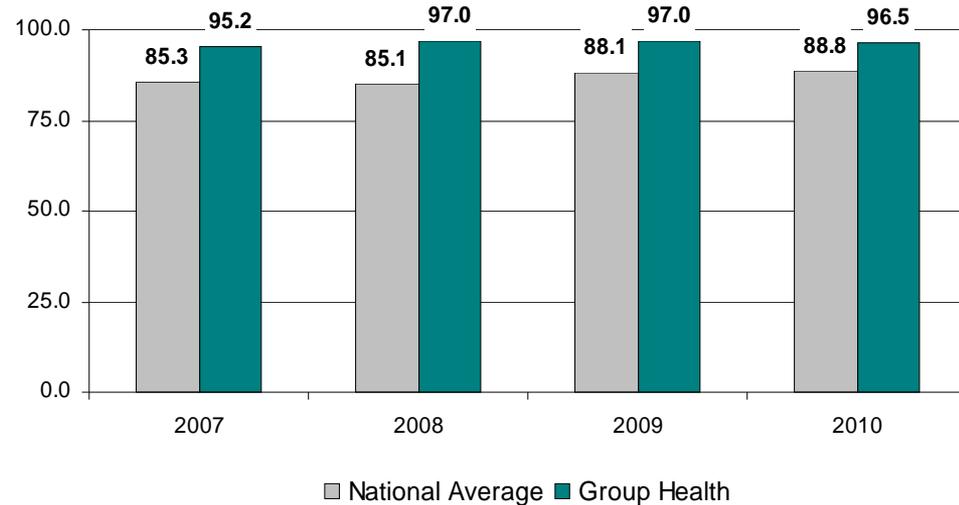
Medicare Comprehensive Diabetes Care-LDL-C Controlled (LDL-C<100mg/dL)



Medicare Comprehensive Diabetes Care-Eye Exams



Medicare Comprehensive Diabetes Care-Medical Attention for Nephropathy

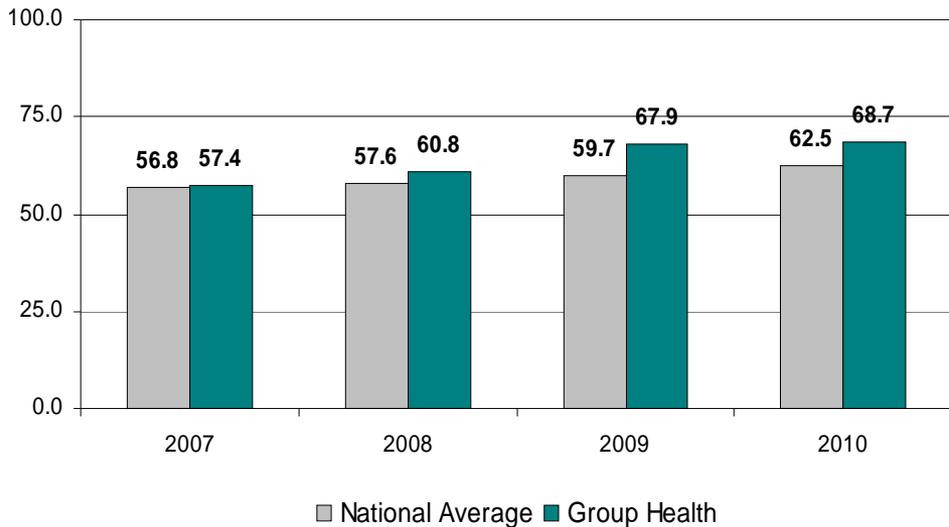


HEDIS Clinical Outcomes--Cardiovascular

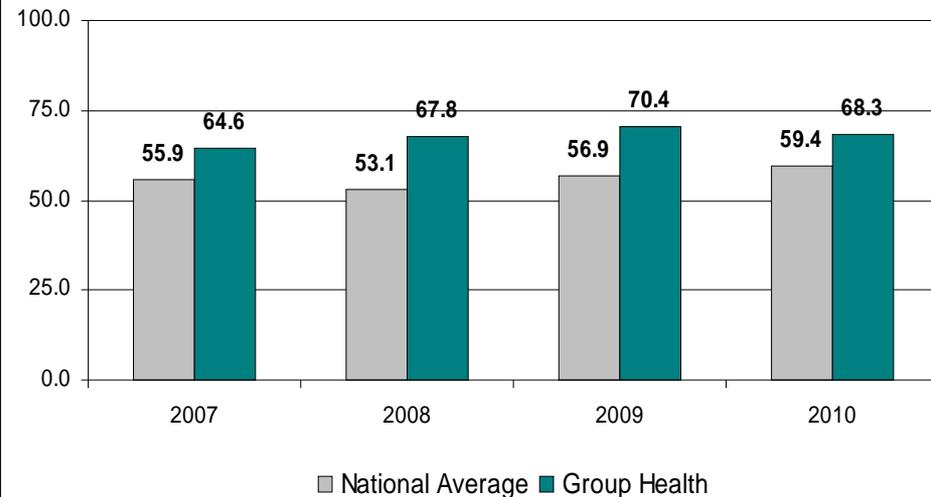


GroupHealth.

Medicare Controlling High Blood Pressure



Medicare Cholesterol Management for Patients with Cardiovascular Conditions LDL-C Control (<100mg/dL)





Staff burnout

Year 1: Marked improvement in burnout levels at Medical Home

Year 2: Continued better scores at Medical Home; controls slightly worse

	Year 1	Year 2
Emotional exhaustion	↓	↓
Depersonalization	↔	↔
Lack of personal accomplishment	↔	↔

Compared to controls:



Medical Home significantly higher



Medical Home significantly lower



Difference not significant



Utilization

Year 1: 29% fewer ER visits, 11% fewer preventable hospitalizations, 6% fewer but longer in-person visits

Year 2: Significant changes persisted

	Year 1	Year 2
Primary care visits (in person)	↓	↓
Emergency/urgent care use	↓	↓
Preventable hospitalizations	↓	↓
Total hospitalizations	↔	↓

Compared to controls:



Medical Home significantly higher



Medical Home significantly lower



Difference not significant



Costs

Year 1: No significant difference in total costs between Medical Home and control clinics.

Year 2: Significant utilization changes persisted. Lower patient care costs approached stat significance (~\$10 PMPM; $p=0.08$)

	Year 1	Year 2
Primary care costs	↑	↑
Emergency/urgent care costs	↓	↓
Hospitalization costs	↔	↓
Total PMPM	↔	↔

Compared to controls: ↑ Medical Home significantly higher ↓ Medical Home significantly lower ↔ Difference not significant



Our learnings so far

It is possible to improve outcomes, lessen burnout, and reduce costs but:

- Investments in primary care are critical
- Requires fundamental change that is not easy.
- Physicians & care teams need to “own” the changes
- Including patient voices helps ground your efforts
- IT must be embedded in team workflows
- Capable & aggressive management





Our learnings so far

- **Financing**: investments made need to align with savings recouped
- **Reimbursement**: payments need to reward medical home activities & outcomes, not just volume
- **Education**: new skills needed (team work, quality improvement, behavioral medicine, virtual medicine)
- **IT**: meaningful use needs to incorporate patient perspectives



Spreading the Medical Home: Linking the Pilot Design to Lean





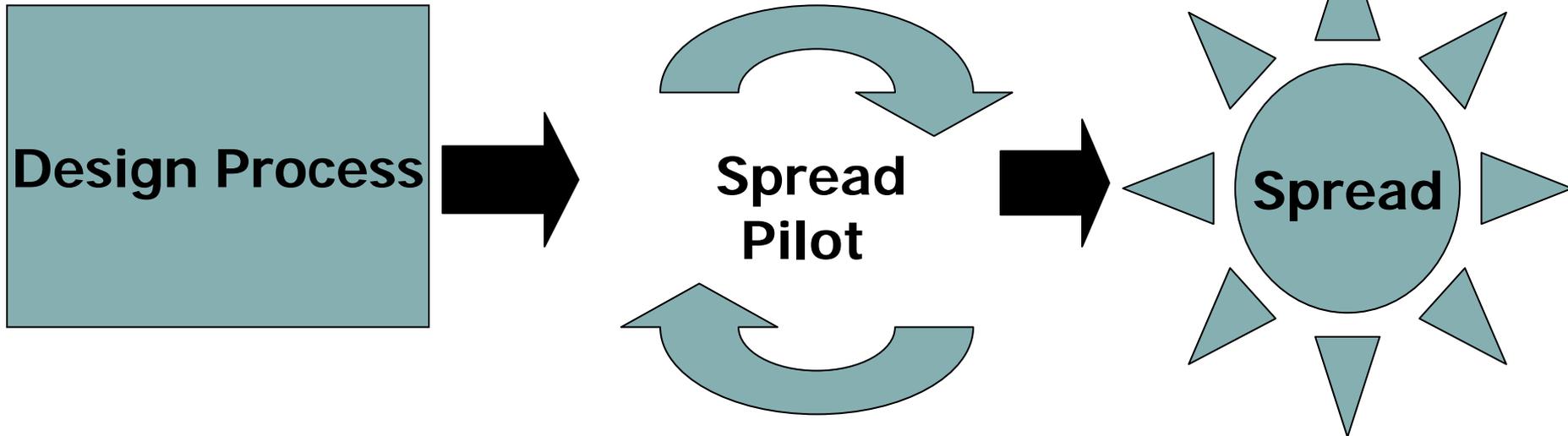
Based on pilot results, Group Health decided to invest \$40 million and “spread” the medical home to 25 other clinics.

But new questions emerged:

- **What were the key components of the redesign?**
- **Can they be generalized?**
- **Can similar benefits accrue when clinics don't invent the work?**
- **What techniques & tools should we use to spread?**



How Was Medical Home Spread?



- RPIW's
- Dissected pilot experience
- Designed standard work by engaging frontline teams

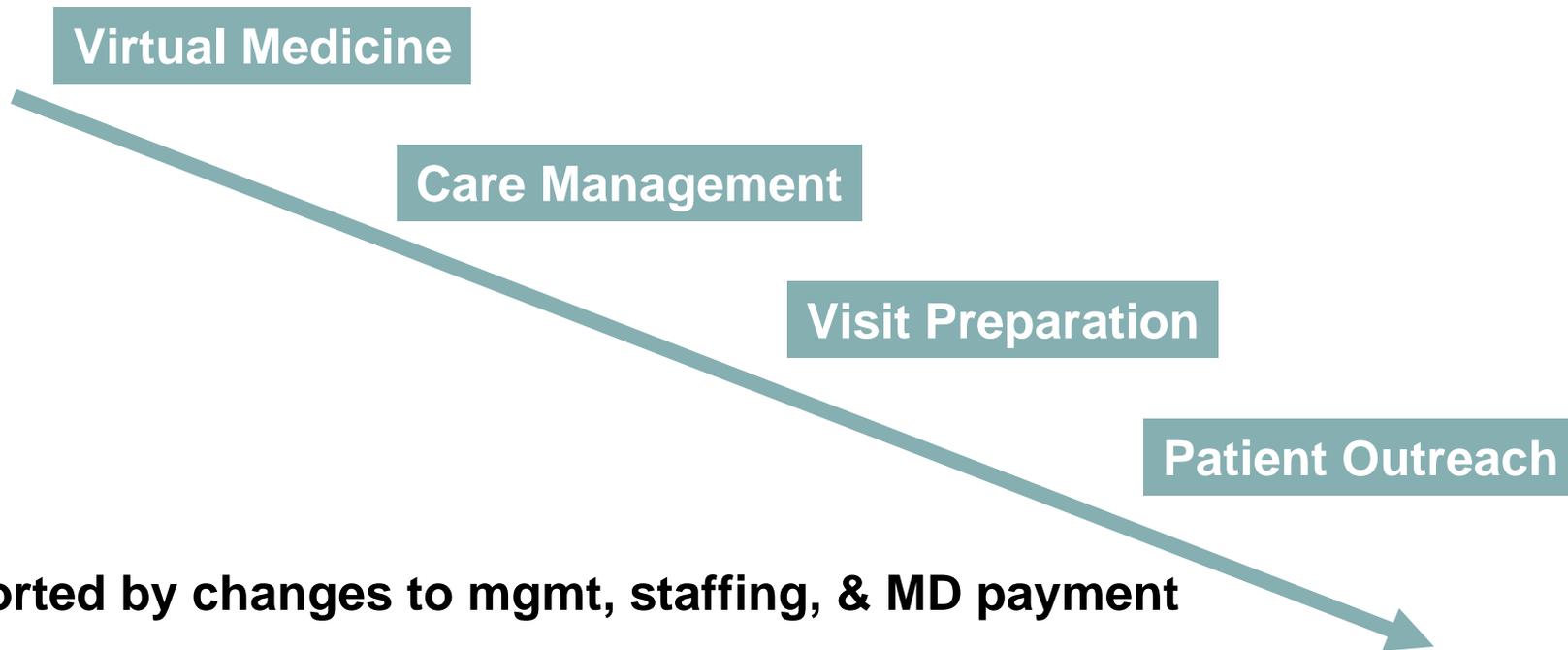
- Testing and improving the standard work elements at 3 other clinics
- Learning best practices to help future clinics with spread

- Each element rolled out across clinics (10 wks)
- Each element implemented before the next started

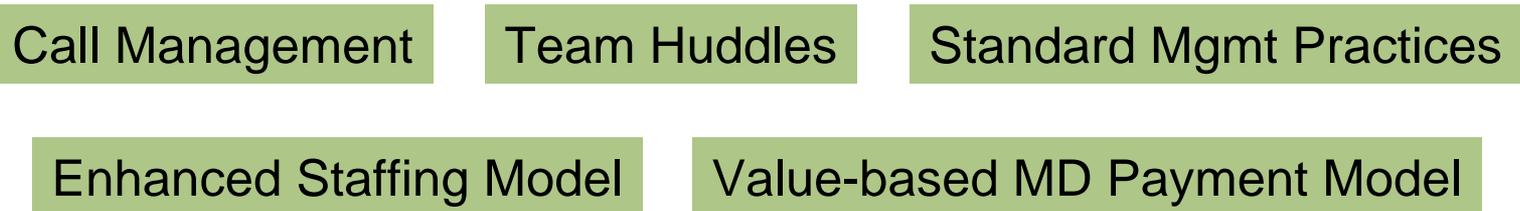


Spreading the medical home

1. Staged spread of practice change modules



2. Supported by changes to mgmt, staffing, & MD payment



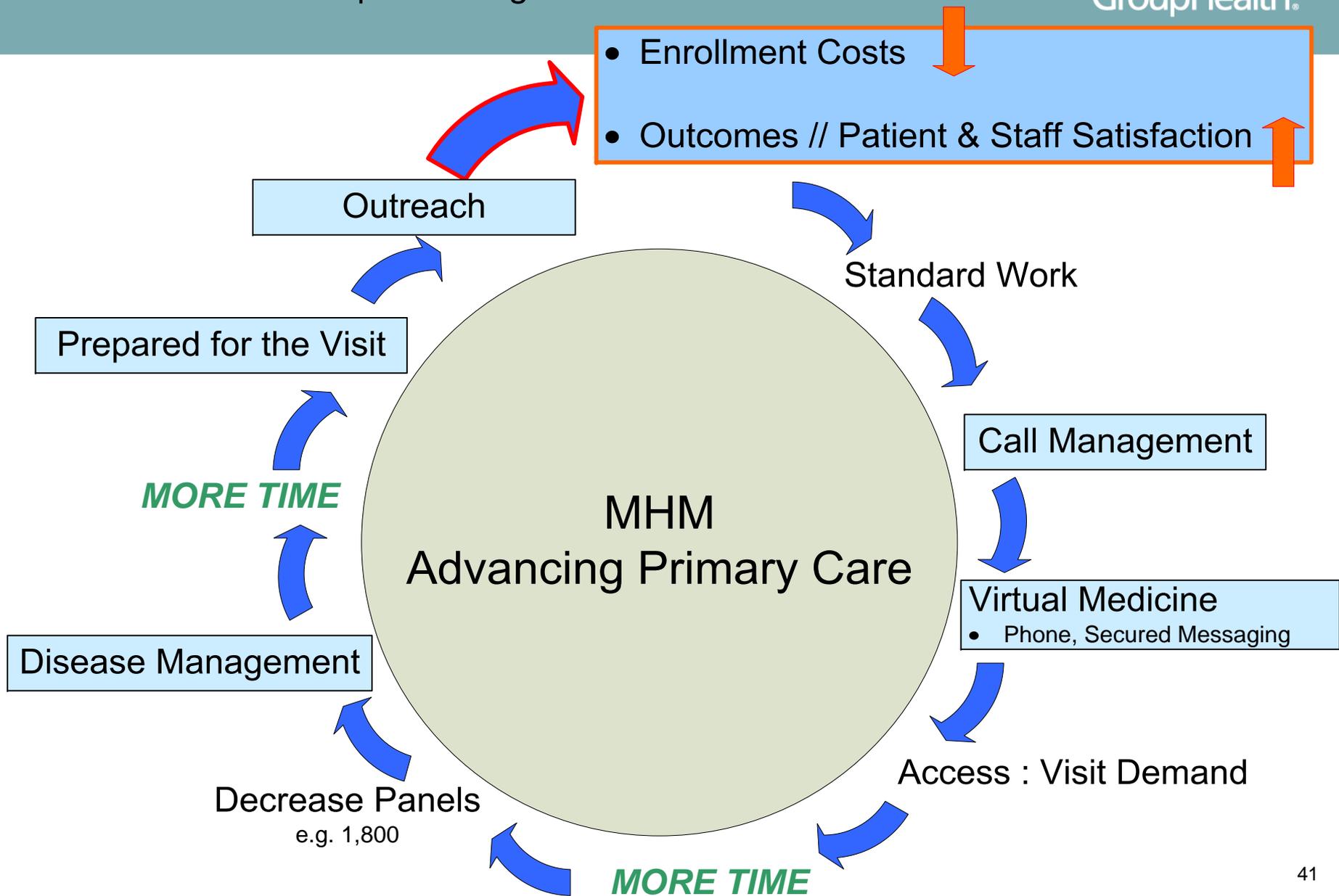
Standardization & Spread using LEAN Techniques & Tools

AFFORDABLE EXCELLENCE

Implementing the Medical Home Value Stream



- Enrollment Costs
- Outcomes // Patient & Staff Satisfaction





Medical Home staffing

Per 10,000 Enrollees		Work Elements
Physician	5.6 FTE	Medical management virtual medicine, care plans for chronic disease
PA/NP	1.5 FTE	Acute access, care plan support, prepared visit
RN	1.2 FTE	Chronic disease management for acute and unstable, transition management (inpatient/SNF)
LPN	2.0 FTE	Incoming, outgoing advice; ED/UCC follow-up
MA	5.6 FTE	Visit preparation, in visit, post visit follow-up, addresses prevention and treatment care gaps
Pharmacist	1.0 FTE	High risk, complex medication management , medication education, medication reconciliation

- All outreach by any member of the team is comprehensive. For example: pharmacist call regarding medications address prevention care gaps (cancer screening).



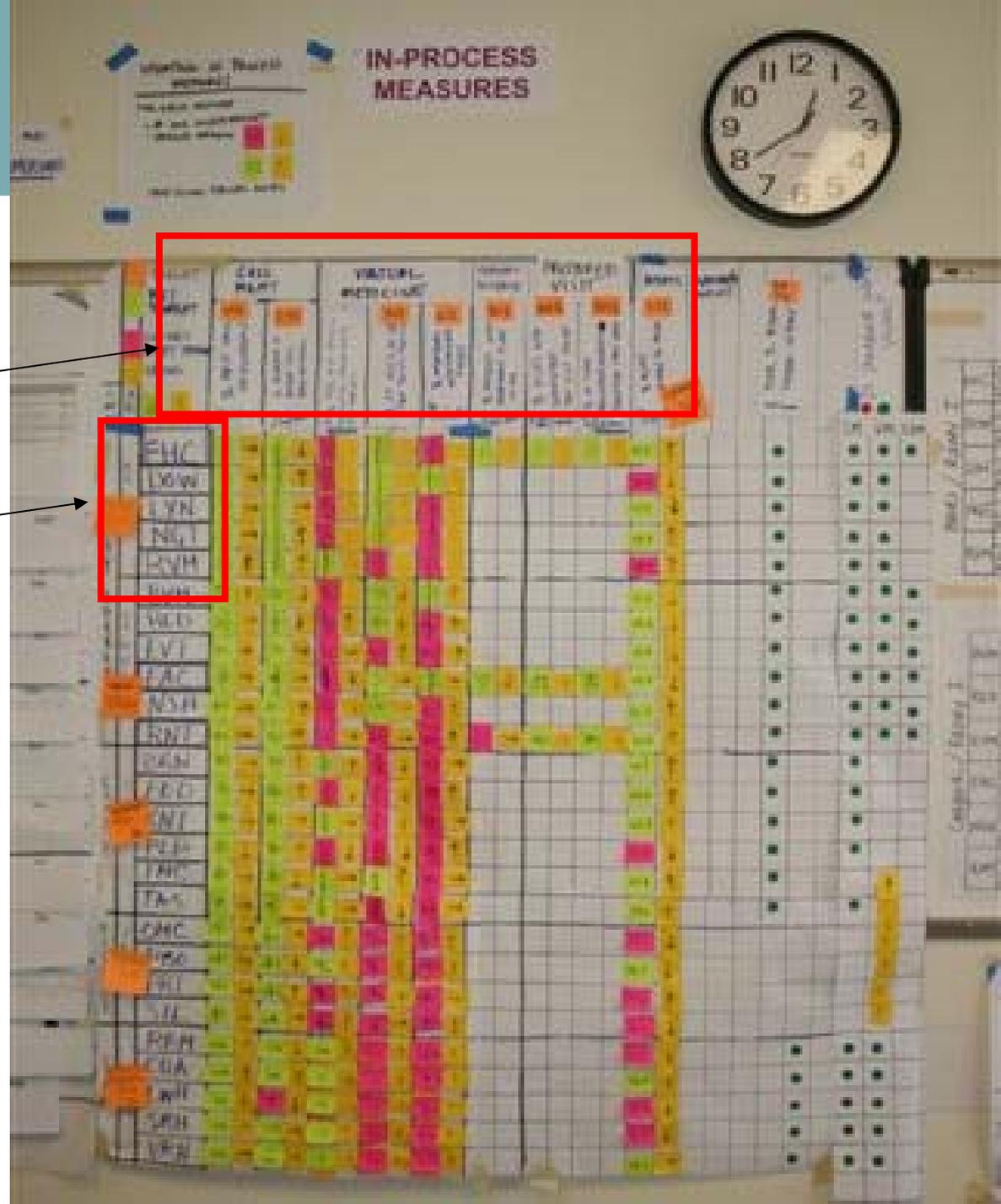
In Process Measures



In Process Measures by clinic and element

By element

By clinic





In Process Measures

As of Sept. 22, 2009

Reinventing Primary Care - Group Health Medical Home Model

		Call Management		Virtual Medicine		Chronic Disease Management		Prepared for Visit		Outreach Workcell		Access		
		1st Call Resolution Target: 65%	% Decrease In Patient Call Back Msgs Target: ≥ 50%	# of MDs with 1 or more phone visits Per session	# of MDs at 30% for Secure Messaging	% Members w/Enhanced Access Target: 65%	# of MDs Completing 1 Tx Plan Per 2 Sessions	# of MDs w/Completed Pre-Visit Prep Target: 100%	# of MDS at 80% - Addressing Identified Care Needs	ED/UC - #Completed/#Assigned Target: 90%	ED/UC - % Complete Target: 90%	Combined - #Completed/#Assigned (incl. ED/UC)	Combined - % Completed (Incl. ED/UC) Target: 90%	% Access Within 36 Hours Target: 37%
	BVU	90%	100%	3/3	1/3	68%	2/3	89%	9/9	61/61	100%			41%
	BRN	100%	76%	5/7	6/7	50%	8/8	96%	8/9	88/104	86%	88%		31%
	CDA	80%	74%	2/3	0/3	47%	1/3							43%
	DOW	80%	91%	4/6	6/6	71%	3/6	100%	6/6	40/41	98%			27%
	EVT	70%	100%	8/9	7/9	49%	5/10	100%	7/10	17/24	74%			29%
	FAC	70%	90%	10/10	7/8	70%	3/7	100%	9/9	108/108	100%	268/280	96%	43%
	FED	80%	81%	no data	3/7	50%	6/7	100%	7/7	73/75	97%		98%	39%
	FHC	90%	69%	21/24	21/24	64%	19/22	100%	16/17	227/227	100%	428/454	94%	31%
	KNT	80%	91%	5/5	4/5	54%	3/5	100%	4/5					31%
	LWH	70%	57%	5/9	7/9	45%	3/9							32%
	LYN	70%	93%	6/7	7/7	50%	6/7	100%	7/7	12/14	86%			27%
	NGT	90%	82%	12/18	15/18	57%	7/18							27%
	NSH	80%	90%	6/6	5/5	59%	1/6	100%	6/6	61/62	98%			42%



Closing the gaps....



AHRQ R18 Grant – Mixed Methods Evaluation

Quantitative Component

- 60 month interrupted time series design
- Effect of PCMH transformation on cost, quality & staffing

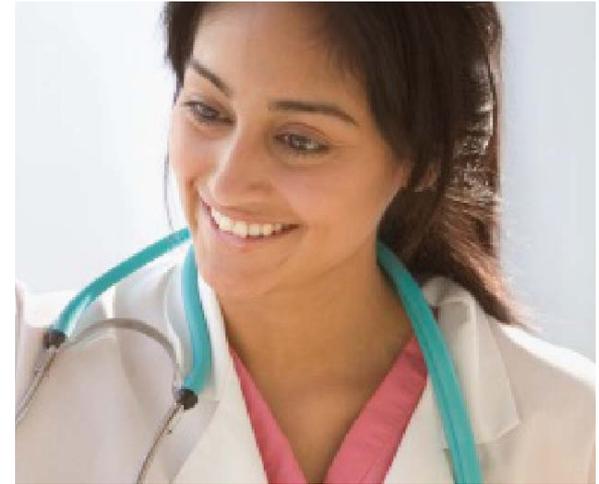


Qualitative Study

- Staff & leader interviews, direct observation & patient focus groups
- Organizational & contextual effects on PCMH transformation
- Effect of PCMH transformation on patient experiences



Thank you!!
Steve Tarnoff
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org





- 1. What aspects of medical home model is your organization considering adopting?**
- 2. What are the main barriers to adoption?**
- 3. What do you see are the key drivers of improved BP, lipid and A1c control that are incorporated in the medical home model?**