



Washington
**Patient-Centered Medical Home
Collaborative**

A joint project of the Washington State Department of
Health and the Washington Academy of Family Physicians

The Group Health Medical Home Pilot: Primary Care on Roller Skates

Robert Reid MD PhD
Group Health Research Institute

Group Health's Medical Home Imperative



- **Group Health historically organized with a primary care core**
 - Defined primary care populations
 - Team orientation
 - Specialty care "gatekeeping"
 - Salaried physicians
- **System reforms introduced 2002-2005 to improve access & efficiency**
(Ralston et al, Med Care Res & Rev, 2009 ePub ahead of print)
 - "Advanced access" & same-day appointing
 - Leaner primary care teams
 - Direct access to some specialist
 - Physician productivity incentives
 - EMR implementation
 - Patient web-access and secure emailing
- **Improvements seen in efficiency and satisfaction. Reforms resulted in increased demands on primary care with perceptions of a faster "hamster wheel"**
- **Physicians retiring sooner and harder to replace**

The Medical Home Imperative



Physician Perspectives

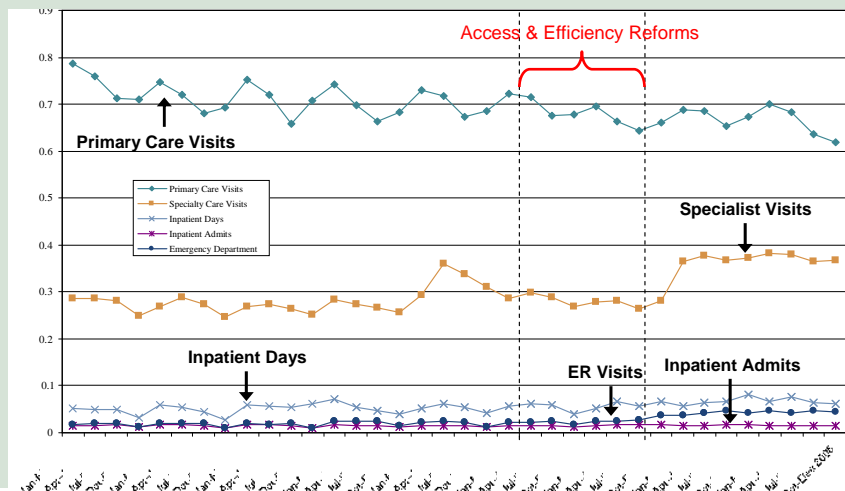
“...the way in which [patient care] is structured, it has shifted such an increased amount of work onto primary care that it is not sustainable at all, so I’m actually looking to get out of primary care because I can no longer work at that pace.” PCP

“The burnout rate among my colleagues is huge and I think that those of us that have managed to retain some semblance of balance do it by almost unacceptable levels of compromise, either for ourselves and our personal time, or what we define as good enough care.” - PCP (Tufano et al. J Gen Intern Med, in press)

The Medical Home Imperative



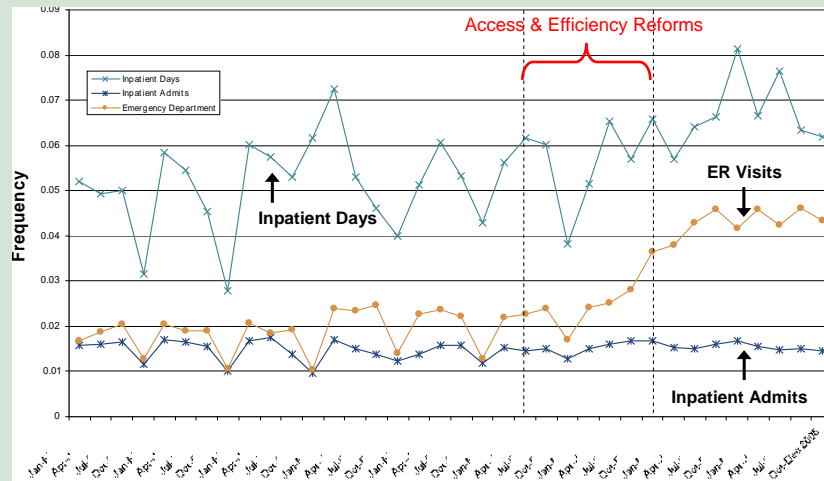
Trends in Utilization at Group Health 1997-2005 by Quarter



The Medical Home Imperative



Trends in Inpatient & ER Utilization at GH 1997-2005 by Quarter



The Medical Home Imperative



There has got to be a better way!

Evidence on Importance of Primary Care



- Health is better in areas where PC supply is higher
- Patients are healthier when patients identify PC physicians as their “regular sources of care”
- Primary care can help mitigate the adverse health effects that come with social disadvantage
- Unique attributes of primary care associated with improved health
- Areas with higher PC supply have lower healthcare costs

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

Patient-Centered Medical Home: Getting Back to Basics



“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 capable of providing 90% of health care 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.)

The *Patient-Centered Medical Home*: A Concept in Evolution



▶ **Re-emphasize Core Attributes of Primary Care** (access, longitudinal relationships, comprehensiveness, coordination)

▶ **System Supports for Chronic Care** (info systems, practice redesign, self mgmt support, decision support)

▶ **Advanced Information Technologies** (EMRs, registries, reminders, patient portals)

▶ **Supportive Payment Methods**



Group Health Medical Home Pilot: The Premise



Activated patients *In relationship with* *Prepared physicians and teams* = *Lower cost trends & more predictable / better outcomes*



Patient (in the purple sweater) surrounded by her health care team.

Medical Home Design Principles



- The **relationship** between the personal care physician and the patient is the core of all that we do. The entire delivery system and the organization will align to promote & sustain this relationship
- The personal care physician will be a leader of the clinical team and be responsible for **coordination & integration** of services, and together with patients will create **collaborative care plans**
- **Continuous healing relationships** will be **proactive** and encompass **all aspects of health and illness**. Patients will be **actively informed** and encouraged to participate in all aspects of their care
- **Access** will be centered on patients needs, be available by various modes 24/7 and **maximize the use of technology**
- Our clinical and business systems are aligned to achieve the most **efficient, satisfying and effective** patient experiences

Medical Home Pilot: Baseline Changes



- **Reduced Panel Size from avg. 2,400 to 1,800 with panel reassignment**
- **Expanded & co-located care teams**
 - PCPs and Med Assistants paired
 - PAs support designated PCPs
 - Team RNs co-located with PCPs
 - Clinical Pharmacists added to team
- **Introduction of “desktop medicine time” for team members**
- **Exemption from physician incentive pay**



Medical Home Pilot: Design Components



Change Components

Structural and Team Changes

Smaller physician rosters
Physician/medical assistant pairing
Team member colocation

Longer standard visits time
Automated phone call routing system
Dedicated “desktop medicine” time

Point-of-Care Changes

Communication of team roles to patients
Promotion of e-mail and phone visits
Previsit chart review and visit planning
Real-time specialist consulting via EMR
Collaborative care planning

Motivational interviewing techniques
EMR “best practice alerts”
EMR “health maintenance reminders”
Promotion of patient Web portal functions
Redirect consulting nurse calls to team

Patient Outreach Changes

New patient outreach
Emergency visit and inpatient follow-up
Chronic disease medication outreach
Outreach using care deficiency reports
Group visit outreach

Mailed “birthday reminder” care letters
Abnormal test outreach
Promotion of e-HRA
Promotion of self-management workshops

Management Changes

Daily care team huddles
Visual reporting system to track changes

Rapid process improvement cycles
Salary-only physician compensation

Medical Home Evaluation: Study Aims



To determine impact on:

1. **Patient experience** including: (a) patient-provider relationships; (b) access; (c) comprehensiveness; (d) coordination of care; and (e) collaborative care planning.
2. **Provider work experience**
3. **Quality of care**
4. **Utilization & costs**

Medical Home Evaluation Design



- Quasi-experimental design: 2 groups, before & after comparisons
- Compare differences at MH clinic vs. other GH clinics, after accounting for baseline differences
- Patient experience & clinician burnout at MH clinic was compared using surveys from patients and clinicians with 2 control clinics
- Cost, utilization & quality outcomes compared against patients enrolled at 19 other medical centers
- Main study variables measured at baseline, 6, 12, & 24 months

Results: Patient Experience



Patient Survey:

- 6,187 adults surveyed at medical home & 2 control clinics at baseline, 12-months, & 24 months
- Survey Components
 - Ambulatory Care Experiences Surveys (ACES) – 5 scales
 - Patient Assessment of Chronic Illness Care (PACIC) – 2 scales
- Response rates: 55% at baseline, 80% at 12 mo

Results: Patient Experience



Patient Experience Sub-scales	PCMH Clinic (n=1024)			Control Clinics (n=1662)			Adjusted mean difference in 12 month between clinics ^{a,c}
	Baseline (mean)	12 mo (mean)	12 mo - Baseline (mean) ^{a,b}	Baseline (mean)	12 mo (mean)	Mean diff 12 mo vs. Baseline ^{a,b}	
Ambulatory Care Experiences Survey (ACES)							
Quality of doctor-patient interactions	86.1	88	1.52 *	81.8	83	0.54	2.12 **
Shared decision making	85.6	87.9	0.96	83.1	83.3	-0.18	2.76 **
Coordination of care	81.3	84.4	2.82 **	78	79.4	0.32	3.38 ***
Access	87.3	88.4	0.54	82.1	82.5	0.08	3.48 ***
Helpfulness of Office staff	92.1	92.5	0.07	89.8	90	-0.19	1.36
Patient Assessment of Chronic Illness Care Survey (PACIC)							
Patient activation/ involvement	77.4	82	4.06 ***	73.8	76	2.08 *	3.30 **
Goal setting/ tailoring	69.1	74.7	4.74 ***	65.4	67.9	2.27 **	3.10 *

a * indicates a P value <0.05, ** indicates a P value <0.01 and *** indicates a P value <0.001.

b P Value from paired t-test for the average difference in scores between 12-month and baseline across all patients in the clinic.

c Adjusted mean difference and P value from linear regression comparing average 12-month score adjusting for age, educational attainment, self-reported health status at baseline, and baseline patient experience between the PCMH and control clinics.

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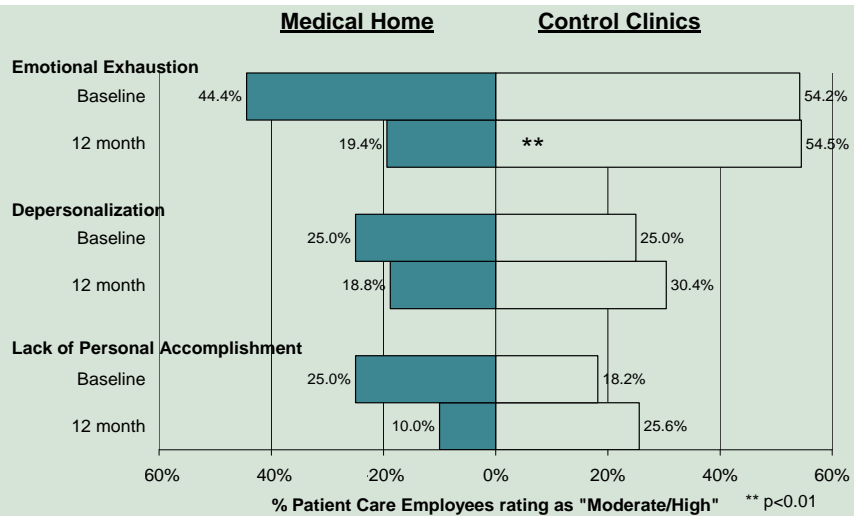
Results: Staff Burnout



Staff Survey

- Staff with direct patient care responsibilities at medical home & 2 control clinics surveyed at baseline & 12 mos (n=132)
- Maslach Burnout Inventory
 - Emotional Exhaustion
 - Depersonalization
 - (Lack of) personal accomplishment
- Response rates: 76% at baseline, 83% at 12 mos

Results: Staff Burnout



Measures – Quality of Care



- Tracked 22 quality indicators in standard use at Group Health for cohort of patients continuously enrolled at the Medical Home and other clinics.
- Compared 4 composite measures based on premise that the MH should improve performance across multiple quality domains.
 - **Patient Average** – percent of indicators fulfilled for the average patient
 - **100% Performance** (“All-or-None”) – proportion of patients who are in numerator for 100% of indicators where they are in denominator
 - **75% Performance** – proportion of patients who are in numerator for 75% of the indicators where they are in denominator
 - **50% Performance** – proportion of patients who are in numerator for 50% of the indicators where they are in denominator

Results: Quality of Care



Performance on Patient Quality Composite Measures

		Patient Average (%)	100% Performance ^d (%)	75% Performance (%)	50% Performance (%)
PCMH clinic	Baseline (2006)	68.1	51.0	56.9	75.9
	Implementation (2007)	72.1	54.6	61.3	79.8
	Change from 2006 to 2007 ^{a, b}	4.0 ***	3.7 ***	4.4 ***	3.9 ***
Other clinics	Baseline (2006)	63.8	44.4	51.0	72.3
	Implementation (2007)	66.5	46.4	53.7	74.9
	Change from 2006 to 2007 ^{a, b}	2.6 ***	2.0 ***	2.7 ***	2.7 ***
Mean difference of changes from 2006 to 2007 between clinics ^c		1.4 **	1.6 *	1.6 *	1.2 *

Composite Quality Measure Definitions	
Measure	Definition
Patient Average	Percent of qualifying indicators which were achieved by each patient
100% Performance	Percent of patients achieving success on all qualifying indicators
75% Performance	Percent of patients achieving success on 75% or more on the indicators for which they qualify
50% Performance	Percent of patients achieving success on 50% or more on the indicators for which they qualify

Results: Quality of Care



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Results: Utilization & Costs



- Tracked rates of utilization and costs for continuously enrolled patients (MH clinic n=8,390; other clinics n=247,508)
- Utilization & costs were included regardless of where they occurred
- Categories:
 - Primary care (in-person visits, telephone encounters, email)
 - Specialty visits
 - Urgent care / ER visits
 - Consulting nurse calls
 - Hospitalizations (total & ambulatory care sensitive conditions)
 - Pharmacy, Laboratory, etc.

Results: Utilization & Costs



- **Costs extracted from Group Health's Costing System**
 - Direct and indirect costs
 - Internal and external (contracted) costs

- **GLM models used to adjust for baseline differences & estimate independent MH effects**
 - Utilization was modeled using Poisson regression to correct for over-dispersion
 - Costs were modeled using an identity gamma model, using iterative re-weighted least squares estimation

- **Cost estimated adjusted for age, sex, DxCG prospective scores**

Results: Utilization & Costs

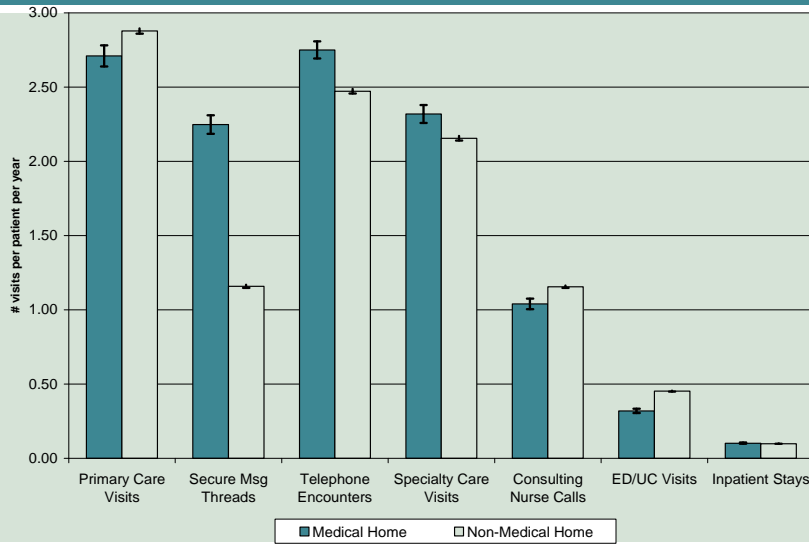


- **Shifts in primary care delivery compared to controls**
 - 6% fewer in-person visits
 - 94% more e-mail
 - 12% more telephone calls

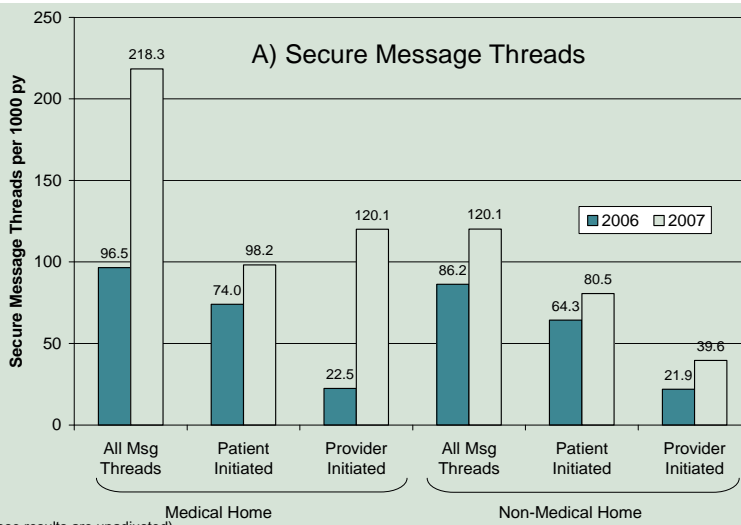
- **Shifts in secondary & tertiary care**
 - 12% more specialty visits
 - 29% fewer ER & urgent care visits
 - 11% fewer "avoidable" hospitalization

- **Cost neutral at 12 months despite upfront PC investment**

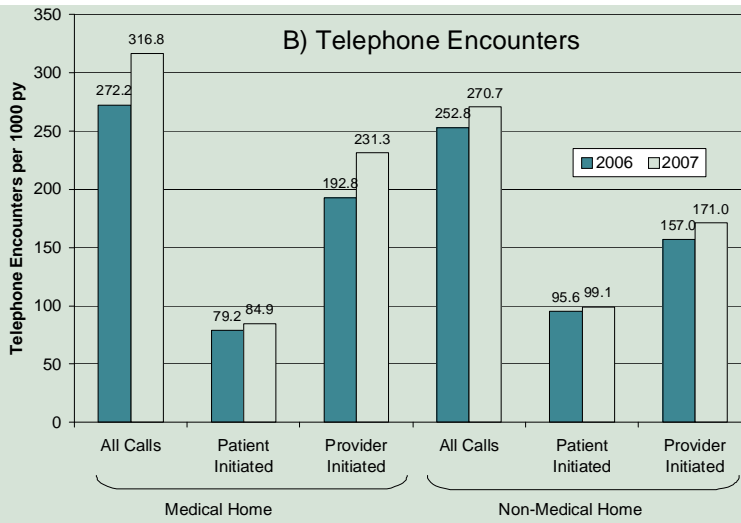
Results – Adjusted Utilization Analyses



Results – Changes in Telephone & Secure Message Use

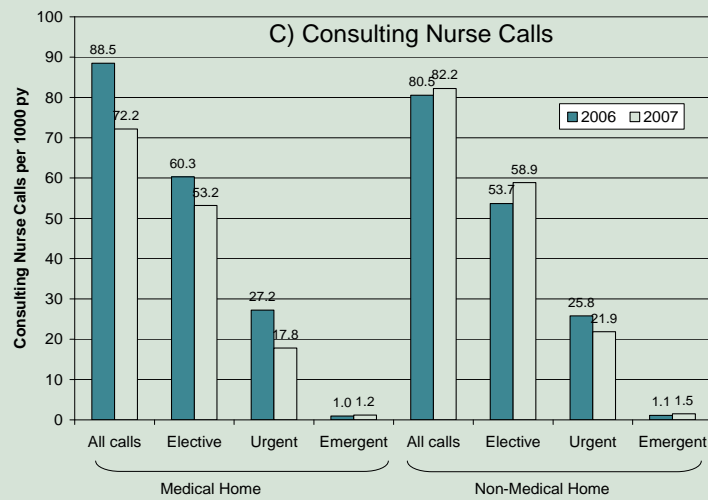


Results – Changes in Telephone & Secure Message Use



(Note: These results are unadjusted)

Results – Changes in Telephone & Secure Message Use

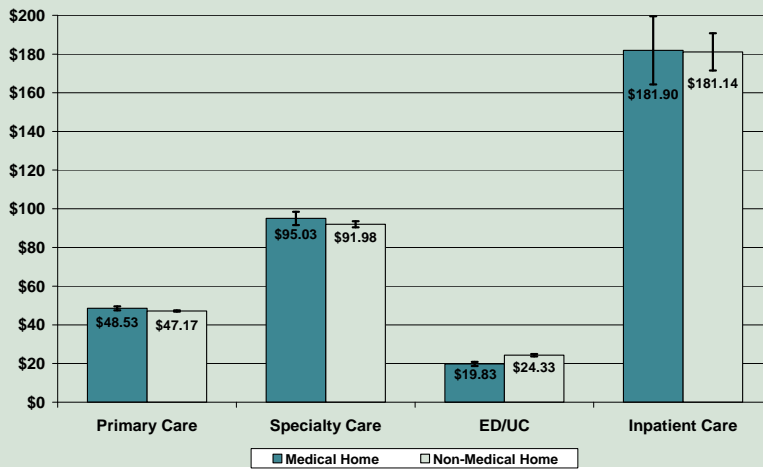


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Results: Utilization & Costs



Adjusted Cost Estimates from Multivariate Regression (PMPM)

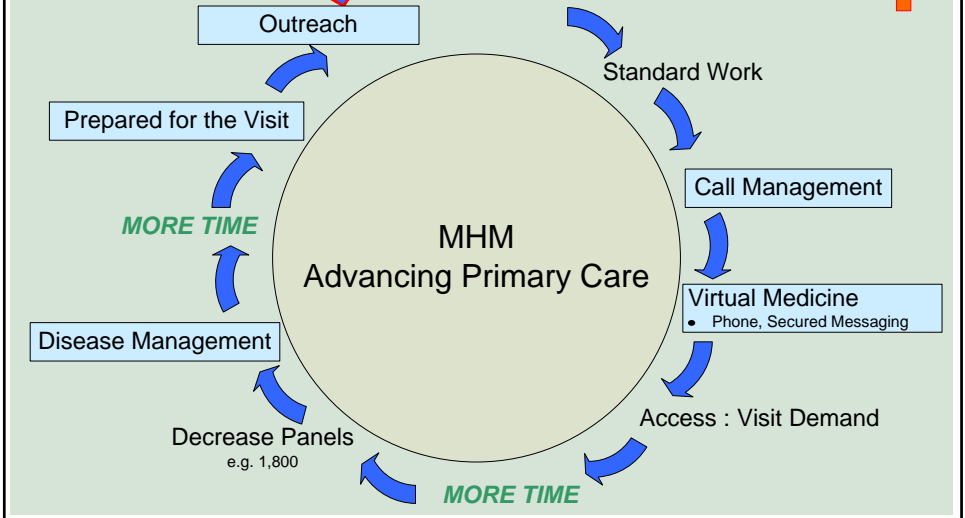


AFFORDABLE EXCELLENCE

Implementing the Medical Home Value Stream



- Enrollment Costs
- Outcomes // Patient & Staff Satisfaction



Patient Experiences



“Not only today, but continually, no matter when we come, we are treated promptly, courteously, cheerfully, and efficiently. In recent visits we are aware of an extended time with the doctor, no longer a sense of rush. To everyone from the front door till the end of our visit... thank you! Keep up the great work!!”

Thank you!

- *Medical Home Patient*

Patient Experiences



“When the pilot program at Factoria was started, I wasn't sure about how it would work. Because of the team's effort, I have lost some pounds, getting help controlling blood pressure, blood work, and some issues that I had no knowledge I had! Thank you to all involved!”

- *Medical Home Patient*

Patient Experiences



“This program is critical to the future of primary care medicine and marks an enormous change in the approach and strategy regarding the use of resources in patient care delivery at the primary care level.”

“Across the board, [there have been] dramatic increase[s] in provider satisfaction in a short period of time.”

- Dr. Bergman re: *"The Implementation of the Medical Home Pilot at Factoria"*

Questions?

To download a copy of journal manuscript go to:
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AJMC_09sep_ReidWEbX_e71toe87](http://www.ajmc.com/articles/managed-care/AJMC_09sep_ReidWEbX_e71toe87)

