Primary care: creating the practice of the future

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Objectives

• Explain why primary care is essential to a well-functioning health care system
• Describe the crisis in primary care
• Suggest a primary care practice of the future that addresses this crisis

Primary care and outcomes

• Persons who receive care in a primary care-oriented model are more likely to
  – Receive recommended preventive services
  – Adhere to treatment
  – Be satisfied with their care


Primary care and costs

• Increased primary care to population ratios are associated with reduced hospitalization rates for ambulatory sensitive conditions [Parchman and Culler, J Fam Pract 1994;39:123]
• Health care costs are higher in regions with higher ratios of specialists to generalists [Welch et al. NEJM 1993;328:621]
Primary care and costs

- Dartmouth Atlas demonstrates that per capita Medicare expenditures in certain regions of the country are far higher than in other regions. In 2007
  - Miami, Florida: $17,274
  - Portland, Oregon: $6,857
  - LA, NY, Miami, Chicago are high
  - Seattle, Minneapolis, Denver are low

  www.dartmouthatlas.org

Primary care and costs/outcomes

- Per capita Medicare expenditures are almost 3 times higher in Miami than in Portland
- These differences are not explained by demographic, socioeconomic or burden of illness factors
- Higher cost areas tend to have a greater preponderance of specialists
- Quality of care for certain measures is no better in the higher cost areas

  Fisher. NEJM 2003;349:1665

Primary care and costs/outcomes

- 24 common quality indicators for Medicare patients: high quality significantly associated with lower per capita Medicare expenditures
- States with a greater ratio of generalist physicians to population had higher quality and lower costs
- States with a greater ratio of specialist physicians to population had lower quality and higher costs


Primary Care and Costs/Outcomes

- Adults with a primary care physician rather than a specialist as their personal physician
  - 33% lower annual adjusted cost of care
  - 19% lower adjusted mortality, controlling for age, gender, income, insurance, smoking, perceived health (SF-36) and 11 major health conditions

Primary care works but...

American College of Physicians (2006):

“primary care, the backbone of the nation’s health care system, is at grave risk of collapse.”

The crumbling primary care home

- Plummeting numbers of new physicians entering primary care
- Primary care shortages throughout US
- Growing problems of access to primary care
- The primary care medical home is falling off the cliff

Residency Match, 2010
% of graduating US medical students choosing specialties

Why?

- Reasons for lack of interest in primary care careers
  - PCPs earn on average 54% of what specialists earn and most medical students graduate with >$120,000 in debt
  - Worklife of the PCP is stressful
  - Medical schools are often toxic to primary care “You are too smart for family medicine”
PCP Burn Out

“Across the globe doctors are miserable because they feel like hamsters on a treadmill. They must run faster just to stay still.”

Morrison and Smith, BMJ, 2001

Stressful work life

- Survey of 422 general internists and family physicians 2001-2005
  - 48%: work pace is chaotic
  - 78%: little control over the work
  - 27%: definitely burning out
  - 30%: likely to leave the practice within 2 years


Effect on patients: access

- 22% of Medicare patients and 31% of patients with private insurance had unwanted delay obtaining appointment for routine care in 2008. MedPAC Report to Congress, March 2009
- 73% of adults with PCP had trouble contacting the physician by phone, obtaining care after hours, or experiencing timely office visits. Closing the Divide. Commonwealth Fund, 2007

Adult Care: Projected Generalist Supply vs Pop Growth + Aging

Shortage of 40,000 by 2020

Supply: Family Med, Gen’l Internal Med

Demand: adult pop’n growth/aging

Colwill et al., Health Affairs, 2008:w232-241
Effect on patients

- A study of 264 visits to primary care physicians using audiotapes
- Patients making an initial statement of their problem were interrupted by the physician after an average of 23 seconds

Marvel et al. JAMA 1999;281:283

Effect on patients

- Asking patients to repeat back what the physician told them, half get it wrong. [Schillinger et al. Arch Intern Med 2003;163:83]
- Asking patients: “Describe how you take this medication” -- 50% don’t understand and take it differently than prescribed [Schillinger et al. Medication miscommunication, in Advances in Patient Safety (AHRQ, 2005)]
- 50% of patients leave the physician office visit without understanding what the physician said [Roter and Hall. Ann Rev Public Health 1989;10:163]

The diagnosis

The fundamental pathology of primary care:

The 15-minute visit

In primary care, time flies by

Panel size too large for physician to manage alone

- Average primary care panel in US is 2300
- A primary care physician with an panel of 2500 average patients will spend 7.4 hours per day doing recommended preventive care [Yarnall et al. Am J Public Health 2003;93:635]
- A primary care physician with an panel of 2500 average patients will spend 10.6 hours per day doing recommended chronic care [Ostbye et al. Annals of Fam Med 2005;3:209]
The dilemma

- Panel size too large for average PCP to manage
- We can’t reduce panel size due to worsening shortage of PCPs
- Shortage = larger panels, poorer access for patients, poorer quality, more PCP burnout
- More PCP burnout means fewer medical students will be attracted to primary care
- Doomsayers: it could become a primary care death spiral

The doomsayers forgot one thing

- Upsurge of energy within primary care practices and clinics all over the country
- Intelligence and dedication of many people working in primary care: nurses, clinicians, medical assistants, practice leaders

Transforming practice

Group Health Factoria Clinic

- Panel size reduced from 2300 to 1800
- Visit length increased from 20 - 30 minutes
- 1/3 face-to-face, 1/3 phone, 1/3 email
- Physician burnout dropped from 25% - 14%
- Burnout in control clinics grew from 28% - 35%
- Quality measures improved
- Patient experience measures improved
- $1 million investment recovered in one year by reduced ED visits and hospital admissions
- After 21 months, savings of $10.30 pmpm compared to control clinics

Reid et al. Health Affairs May 2010

Jonkoping County, Sweden

- RN answers phone, triages patients
  - 20% of visits are to MD -- people who need diagnosis of a symptom or complex management of diseases
  - Uncomplicated respiratory infx, UTI -- RN
  - Well child care -- RN
  - Pregnancy, women’s health -- midwife
  - Diabetes, CHF -- specialized RN
  - Back pain/musculoskeletal problems -- PT
Clinica Family Health Services Denver

- Care teams (pods) with provider/MA teamlet caring for panel of patients, surrounded by larger care team including case manager (health coach), RN, behavioral health provider
- 70-80% continuity of care with provider
- Appointments in less than 5 days (usually 2 days), sustained for 10 years
- Excellent hypertension, diabetes, asthma, prenatal outcomes
- High provider, staff, patient satisfaction

First epidemiologic revolution reducing infectious disease mortality

- Made possible by discovery of germ theory of disease
- Also by environmental sanitation
- Rates of infectious diseases mortality dropped markedly

First primary care revolution

- Providing improved diabetes, asthma, CHF, cholesterol, hypertension management
- Made possible by
  - Chronic Care Model
  - New culture of measurement

Second epidemiologic revolution reducing chronic disease mortality

US age-adjusted coronary heart disease death rate/100,000 pop’n

- Made possible by discovery of link between cardiovascular disease and
  - Tobacco
  - Rich diet/cholesterol
  - Hypertension
- Rates of coronary heart disease mortality dropped markedly
Second primary care revolution

- Deep transformation of primary care
  - Continuity of care
  - Access
  - Empanelment
  - Proper panel size
  - Teams
  - Healing populations in addition to individuals
- Patient-centered medical home

Vision of the primary care practice of the future

- Patient trust in the physician and physician knowing the patient are key for patient satisfaction and outcomes [Safran et al, J Fam Pract 1998;47:213]
- Up through 1960s, many patients had long-term relationships with GP/nurse teamlet, trusted the teamlet, GP/nurse knew the patients.
- Patients prefer solo practices to larger practices [Rubin et al, JAMA 1994;270:835]
- However, clinical quality was often not good in the GP/nurse or solo practices

Vision of the primary care practice of the future

- We need to re-create -- with high clinical quality -- the solo practice GP/nurse teamlet in our far more complex system
- Teamlets similar to the GP/nurse responsible for a panel of patients. Patients trust the teamlet, teamlet knows the patients
- Few RNs in primary care, so most teamlets are clinician (MD, NP, PA) and medical assistant (MA)

1 team, 3 teamlets
RN, social worker, pharmacist, health educator, nutritionist, care manager, panel manager
Priority #1: Continuity

Requires Empanelment

Leads to Panel size

Determines Access

Requires Teams

Culture: Agree that continuity comes first

Start with continuity of care

- Continuity of care is associated with
  - Improved preventive care
  - Improved chronic care outcomes
  - Better physician-patient relationship
  - Reduced unnecessary hospitalizations
  - Reduced overall costs of care

  \[\text{Saultz and Lochner, Ann Fam Med 2005;3:159}\]

- Continuity is related to patient satisfaction

  \[\text{Adler et al, Fam Pract 2010;27:171}\]

Start with continuity of care

- For older adults, continuity with a PCP is associated with reductions in mortality (adjusting for many other factors)

  \[\text{Wolinsky, J Gerontology 2010;65:421}\]

- Primary care physicians want continuity of care


- To achieve and to measure continuity, patients must be empaneled to a clinician or team

Continuity, access and panel size

- We are stuck with large panel sizes

- Panel size too large or too small, access drops

- To achieve continuity and access with large panel sizes, we must have teams

- The teams must be organized so that the physician isn’t doing everything

- 50% of what physicians do could be done by someone else on the team


- If they are trained and if they have time
Will patients accept teams?

- Continuity is redefined as continuity with a teamlet rather than with a clinician
- The same 2 people work together all the time; then patients know who is their team
- Teams are small (teamlets) so patients know and are comfortable with all team members
  - Teams are visible rather than invisible
  - Ideally the physician introduces the team to the patient

Rodriguez et al, Medical Care 2007;45:19, Rodriguez et al, JGIM 2007;22:787

Building teams

- Models of re-distributing the work
- Model #1:
  - Offload tasks from the physicians to RNs/MAs
  - May create resentment in team: not my job, I work for the patients, not for the doctors
- Model #2:
  - Entire team is responsible for health of our panel
  - Different people on the team will have different responsibilities
  - Re-distributing work is not only delegating tasks from clinicians to other team members; it is sharing responsibilities

Teamlet of the present

Patient panel
Clinician
MA
Tasks

Teamlet of the future

Patient panel
Clinician/MA teamlet

Expanded MA role

- MAs participating in the provider visit and assisting the provider with history taking, documentation of physical exam, ordering lab/imaging studies, and entering e-prescriptions
  - Increased patient satisfaction
  - Improved A1c, LDL, BP in diabetic patients
  - Increased productivity and revenue

University of Utah Health System, Care by Design
Teamlet

Practice of the future: Primary care in an era of shortage

- PCPs: 8 - 10 face-to-face visits/day. Reduces burnout
- Serious investment in team building
- Team’s panel, not physician’s panel
- About 100 patients “touched” each day: e-mail, phone, group visits, visits with other team members
- Patients not requiring PCP expertise see other team members. PCPs needed for building relationships, diagnosis, complex management, transitions, training and mentoring team
- Physicians see new patients, introduce team
- Payment reform required

Margolius and Bodenheimer, Health Affairs, May 2010

Template of the past

<table>
<thead>
<tr>
<th>Time</th>
<th>Primary care physician</th>
<th>Medical assistant</th>
<th>Nurse</th>
<th>Nurse Practitioner</th>
<th>Medical assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Patient A</td>
<td>Assist with Patient A</td>
<td>Triage</td>
<td>Patient H</td>
<td>Assist with Patient H</td>
</tr>
<tr>
<td>8:15</td>
<td>Patient B</td>
<td>Assist with Patient B</td>
<td>Injections Wounds</td>
<td>Patient I</td>
<td>Assist with Patient I</td>
</tr>
<tr>
<td>8:30</td>
<td>Patient C</td>
<td>Assist with Patient C</td>
<td>A bit of time left for patient education</td>
<td>Patient J</td>
<td>Assist with Patient J</td>
</tr>
<tr>
<td>8:45</td>
<td>Patient D</td>
<td>Assist with Patient D</td>
<td></td>
<td>Patient K</td>
<td>Assist with Patient K</td>
</tr>
<tr>
<td>9:00</td>
<td>Patient E</td>
<td>Assist with Patient E</td>
<td></td>
<td>Patient L</td>
<td>Assist with Patient L</td>
</tr>
<tr>
<td>9:15</td>
<td>Patient F</td>
<td>Assist with Patient F</td>
<td></td>
<td>Patient M</td>
<td>Assist with Patient M</td>
</tr>
<tr>
<td>9:30</td>
<td>Patient G</td>
<td>Assist with Patient G</td>
<td></td>
<td>Patient N</td>
<td>Assist with Patient N</td>
</tr>
</tbody>
</table>

Template of the Future

About 30 patients contacted/seen in 3 hours
Primary care practice of the future:
Stratifying the patient population

Build different models for different strata of panels. All patients cannot be funneled into 15-minute visit
- People who need same-day acute care (RN,NP,PA)
- Healthy people who need preventive care (panel managers, MAs)
- Women who need pregnancy and infant care (RN,NP,PA,MD)
- People with a chronic condition (health coaches)
- People with complex healthcare needs (MD, RN complex care manager)
- People with mental health/substance use issues (MD, behavioral health provider)
- People who need care at the end of life (MD, RN complex care manager)

Practice of the future: how to start

- Start with 2 major innovations
  - Panel management
  - Complex care management

Individual care to population care

- Instead of: “what can I do to maximize the care of the 25 patients on my schedule today?”

- The future: “what can we do today to maximize the care of the 1500 patients in our panel?”

Panel management

- Patients needing routine preventive and chronic care
- Requires a registry
- Requires panel managers (often MAs) to comb registry for care gaps
- Panel managers identify patients with care gaps, contacts patients and orders services
  - Preventive: mammograms, FOBT, immunizations, etc.
  - Chronic: HbA1c, LDL cholesterol, diabetic eye exams, etc.
- Panel managers work with standing orders written by physicians
Panel management

• Frees up MDs for diagnosis, complex patients, care coordination, leading and mentoring the team
• Several studies show that panel management improves chronic care and preventive care

Stroebel et al. Joint Commission J Qual Improve 2002;28:441
Baker et al, Qual & Safety in Health Care 2009;18:355
Feldstein et al, Am J Manag Care 2010;16:e256
Loo et al, Arch Intern Med 2011, in press

Practice of the future: how to start

• Start with 2 major innovations
  ➢ Panel management
  ➢ Complex care management

Average per capita spending by number of chronic conditions (2004)

Complex care management

• Complex, high-cost patients need RN or RN/social worker to work with physician
• 5 studies: care management improves care
• 4/5 studies: care management reduces costs
• Reduces physician time with complex patients
• RN complex care manager could assist patients in several practices

Bodenheimer and Berry-Millett, Care Management of Patients with Complex Healthcare Needs, RWJF 2009.
Redistributing work among team members

Preventive services: old way
- Mammogram for 55-year-old healthy woman
- Old way:
  - Clinician gets reminder that mammo is due
  - At next visit, clinician orders mammo
  - Clinician gets result, (sometimes) notifies patient

Preventive services: new way
- MA in role as panel manager checks registry every month
- Has mammo standing orders written by physician
- If due for mammo, MA sends mammo order to patient/radiology by mail or e-mail
- Result comes to MA
- If normal, MA notifies patient
- If abnormal, MA notifies clinician and appointment made
- For most patients, clinician is not involved
- Similar for FOBT, pneumovax, flu shots

Chronic care: hypertension: old way
- Clinician sees today’s blood pressure
- Clinician refills meds or changes meds
- Clinician makes f/u appointment
- Often blood pressures are not adequately controlled because visits have too many agenda items
### Chronic care: hypertension new way

| MA as panel manager checks registry every month |
| Patients with high BP contacted to come for RN or pharmacist visit |
| RN/pharmacist: BP education, med adherence counseling |
| Patient taught home BP monitoring |
| If BP elevated and patient med adherent, RN/pharmacist intensifies meds based on standing orders |
| If questions, quick clinician consult |
| RN/pharmacist f/u by phone or e-mail if patient does home BP monitoring, or by return visit, and may intensify meds |
| Clinician barely involved |
| Hypertension outcomes are better |

Margolius and Bodenheimer, Am J Manag Care 2010;16:648

### Reversing the primary care death spiral

| Physicians can handle large panels because they have a well-functioning care team, and they do only what physicians are trained to do |
| Large panels allow everyone in US to have a primary care clinician |
| Physicians seeing 8-10 patients and leading the care team: less burnout |
| Medical students experiencing the practice of the future are more likely to choose primary care careers |
| More primary care physicians |