Research Frontiers in Primary Care

Barbara Starfield, MD, MPH
HKCFP Visiting Professor

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Is Primary Care Dying?

- Increasing market orientation
- Better informed populations (clinically)
- Competition from “alternative” practitioners
- “Robotization” of medical care
- Disappearance of the physical exam
- Unattractiveness of primary care practice
- Online availability of information

Strategy for Change in Health Systems

• Achieving primary care
• Avoiding an excess supply of specialists
• Achieving equity in health
• Addressing co- and multi-morbidity
• Responding to patients’ problems
• Coordinating care
• Avoiding adverse effects
• Adapting payment mechanisms
• Developing information systems that serve care functions as well as clinical information
• Role of primary care in disease prevention
Proposed PC/MH (Patient-centered Medical Home) Criteria

- Electronic health record
- Teams
- Chronic care guidelines

Question: Do these “enhancements” improve primary care?

This requires evaluation.
Joint Principles of the Patient-centered Medical Home

- Personal physician: ongoing relationship for first contact, continuous, comprehensive care
- Physician directed medical practice
- Whole person oriented
- Coordinated and/or integrated care
- Quality and safety
- Enhanced access
- Added value payment

Any evaluation of enhancements to clinical primary care must consider the extent to which they better achieve the evidence-based primary care functions:

- First contact for new needs/problems
- Person (not disease) focused care (enhanced recognition of people’s health problems)
- Breadth of services
- Coordination (enhanced problems/needs recognition over time)
Tensions in the Medical Home Community

Team leader?
Disease orientation?
Chronic Care Model?
Primary care characteristics as the main criteria?
Comprehensiveness?

Relationship with retail clinics?
Consistent with population-oriented primary care?
(What is the “population”?)
Retail Clinics: Regressive Anachronism or Disruptive Innovation?

- Major source of savings is lower salaries for providers (nurse practitioners and physician assistants).
- Acute illness and immunizations constitute 90% of visits.
- Less likely to be located in socially-compromised areas
- Are geared to providing access, NOT primary care
- Will compromise detection of epidemic adverse events, e.g., from immunizations
- Might be useful when instituted in an integrated health system

Resource Use, Controlling for Morbidity Burden*

- More DIFFERENT specialists seen: higher total costs, medical costs, diagnostic tests and interventions, and types of medication
- More DIFFERENT generalists seen: higher total costs, medical costs, diagnostic tests and interventions
- More generalists seen (LESS CONTINUITY): more DIFFERENT specialists seen among patients with high morbidity burdens. The effect is independent of the number of generalist visits. That is, the benefits of primary care are greatest for people with the greatest burden of illness.

*Using the Johns Hopkins Adjusted Clinical Groups (ACGs)

There are large variations in both costs of care and in frequency of interventions. Areas with high use of resources and greater supply of specialists have NEITHER better quality of care NOR better results from care.

Family Physicians, General Internists, and Pediatricians

A nationally representative study showed that adults and children with a family physician (rather than a general internist, pediatrician, or sub-specialist) as their regular source of care had lower annual cost of care, made fewer visits, had 25% fewer prescriptions, and reported less difficulty in accessing care, even after controlling for case-mix, demographic characteristics (age, gender, income, race, region, and self-reported health status). Half of the excess is in hospital and ER spending; one-fifth is in physician payments; and one-third is for medications.

People and populations differ in their overall vulnerability and resistance to threats to health. Some have more than their share of illness, and some have less. Morbidity mix (sometimes called case-mix) describes this clustering of ill health in patients and populations.
Clustering of morbidity is a result of a complex pattern of influences on health, extending far beyond biological vulnerability.
Total morbidity is not the same as the sum of different diseases, because diseases cluster and are inter-related in various ways. A more accurate way of characterizing morbidity is to characterize the pattern of diseases in people and populations.
Co-morbidity

- is more common in socially deprived populations
- is more common in children, as compared with its expected frequency based on frequency of diagnoses
- has great impact on use of resources
TransforMED was a national demonstration that tested the Patient-Centered Medical Home (PCMH) in primary care practices. It includes an electronic medical record; electronic communications and visits; disease-management software; e-prescribing, patient portals; and clinical decision making support.

Participants report that these tools, which comprise the NCQA standards for PCMH, neglect the person-focused aspects of primary care, and run the risk of circumscribing the assessment of the quality of the medical home to non-evidence-based structural characteristics. Among criteria that are necessary but excluded, is the comprehensiveness of services, which is critical for person-focused care.

Co-morbidity, Inpatient Hospitalization, Avoidable Events, and Costs*


Starfield 11/06
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Can disease-focused care be patient-centered care?
Disease-management has been successful only when it has been implemented to deal with patients’ needs. “Chronic care management” (CCM) is successful only when it goes beyond the management of diseases. The Medical Home, when implemented in a disease-focused environment (e.g., specialty care) will fail unless that environment provides comprehensive patient-focused services.

The global imperative is to organize health systems around strong, patient-centered, i.e., Primary Care.

A disease-by-disease approach will not address the most serious shortfall in achieving the health-related Millennium Development Goals. It will also worsen global inequities. Those exposed to a variety of interacting influences are vulnerable to many diseases. Eliminating diseases one by one will not materially reduce the chances of others.

The several studies that have addressed the subject of recognition of patients’ problems of a wide variety of types are consistent in showing that it is associated with a greater likelihood of improvement on follow-up, whether judged by the patient or the practitioner.

The most salient correlate of poor symptom alleviation, after compromised satisfaction with the visit, is unmet expectations for the visit.
The underlying characteristic of “agreement” is the forging of common ground, which requires the patient and practitioner to mutually define the problem; establish the goals of treatment/management; and identify the roles to be assumed by each. When patients perceive the relationship to be patient-oriented, outcomes are better, and there are fewer referrals and laboratory tests.

The Patient-orientation of Primary Care: an Example from Practice

When diabetic patients appear with new problems unrelated to diabetes, primary care physicians attend to these problems and defer dealing with an abnormal diabetes lab value. However, they institute more rapid follow-up for the diabetes than is the case when there is no new problem.

There is no formal quality assessment approach that includes the critical feature of problem-recognition, despite the evidence that patients are more likely to improve when they and their practitioner agree on what their problem is.

What is needed is person-focused care over time, NOT disease-focused care.
Percent of Patients Reporting Any Error by Number of Doctors Seen in Past Two Years

<table>
<thead>
<tr>
<th>Country</th>
<th>One doctor</th>
<th>4 or more doctors</th>
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<tbody>
<tr>
<td>Australia</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td>Canada</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>Germany</td>
<td>14</td>
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<td>New Zealand</td>
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<tr>
<td>UK</td>
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<td>28</td>
</tr>
<tr>
<td>US</td>
<td>22</td>
<td>49</td>
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Is a Focus on Chronic Disease Compatible with the Patient-Centered Medical Home?

In Pennsylvania, the Governor’s Office of Health Care Reform convened several health plans and physician societies in the southeastern part of the state to “institute a PCMH approach to manage the care of chronically ill patients”.

To what extent is this approach consistent with the principles of population-oriented primary care and the patient-centered medical home? Who is left out?
Diseases

• are professional constructs
• can be and are artificially created to suit special interests; the sum of deaths attributed to diseases exceeds the number of deaths
• do not exist in isolation from other diseases and are, therefore, not an independent representation of illness
• are but one manifestation of ill health


<table>
<thead>
<tr>
<th>Condition</th>
<th>Treated Prevalence</th>
<th>Percentage Change, 1987-2002</th>
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<tbody>
<tr>
<td>Hyperlipidemia</td>
<td>437</td>
<td>9</td>
</tr>
<tr>
<td>(Heart disease)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bone disorders</td>
<td>227</td>
<td></td>
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<tr>
<td>Upper GI problems</td>
<td>169</td>
<td></td>
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<tr>
<td>Cerebrovascular disease</td>
<td>161</td>
<td></td>
</tr>
<tr>
<td>Mental problems</td>
<td>136</td>
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<tr>
<td>Diabetes</td>
<td>64</td>
<td></td>
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<tr>
<td>Endocrine disorders</td>
<td>24</td>
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<tr>
<td>Hypertension</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Bronchitis</td>
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The sum of deaths attributed to specific diseases exceeds the number of deaths in the world.

What are alternatives to a disease approach?
Possible Alternatives to Classification Based on ICD Classification of Diseases

• Alternative conceptualization of disease:
  – Infectious
  – External injury
  – Developmental/physical abnormality
  – Mendelian dominant genetic
  – Autoimmune
  – Cellular degradation/degeneration
• A classification of morbidity burden, e.g., ACGs
• Other?
Adapting Payment Mechanisms
Paying for performance using disease-oriented guidelines will

• create inappropriate incentives in caring for people with multiple conditions
• create incentives based on flawed evidence (inadequate outcomes; unrepresentative populations)
• create perverse incentives based on easily measured rather than important characteristics
• create incentives for avoiding the care of disadvantaged populations

There is no evidence that any particular mode of paying physicians is better than any other. The only consistent findings are:

- Fee-for-service results in more visits.
- Capitation increases referrals, but only where payments to specialists are separate, and not in situations where both primary care physicians and specialists work in an organization that coordinates their work.
Theory dictates that certain things are likely to influence physician practices:

• Impact on income
• Accountability to peers
• Accountability to patients
  – Who pay or co-pay
  – Who don’t pay or co-pay
• Training, expectations, and ingrained practice patterns
• Whether service is indicated or discretionary
• Perturbation of usual practice (e.g., bonuses), at least in the short run (? Hawthorne effect)

THUS, examining impact of payment type must control for a variety of other influences.
Most primary care oriented countries are adopting blended modes of payment in an effort to capitalize on the advantages of each.
The Role of Primary Care in Disease Prevention
“Swine Flu: Public Health Has Become a Public Nuisance”

“The moralising propaganda of public health has a generally demoralising effect on society – encouraging fear and anxiety – and attendant sentiments of stigma and blame. It has a degrading effect on medical practice and is corrosive of good relationships between doctors and patients. As the swine flu scare confirms, it is also disruptive of day-to-day medical practice.”

Source: Fitzpatrick, Br J Gen Pract 2009;59:615.
## Types of Interventions

<table>
<thead>
<tr>
<th>Target group</th>
<th>A. Health protection, promotion, avoiding risk (1º)</th>
<th>B. Early detection (2º)</th>
<th>C. Remedia- tion (3º &amp; 4º)</th>
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</thead>
<tbody>
<tr>
<td>Population</td>
<td>PH</td>
<td>PH</td>
<td>PH (PC)</td>
</tr>
<tr>
<td>As population*</td>
<td>PH/PC</td>
<td>PH/PC</td>
<td>PH/PC</td>
</tr>
<tr>
<td>All individuals</td>
<td>PH/PC</td>
<td>PH/PC</td>
<td>PH/PC</td>
</tr>
<tr>
<td>Selective</td>
<td>?</td>
<td>PC/PH</td>
<td>PC/PH</td>
</tr>
<tr>
<td>Indicated</td>
<td>PC/PH</td>
<td>PC/PH</td>
<td>PC (PH)</td>
</tr>
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</table>

*or all people of a given age