Improving the Equity and Efficiency of the Delivery of Primary Care

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Professor Barbara Starfield: “how health systems impact health”
Technologies for Primary Care

• Primary care assessment - PCATs

• Morbidity burden: assess and manage
  ACG System

• Problem recognition/follow-up (outcomes), including adverse effects - ICPCs
Information is key to improving the delivery of primary health care

- EMR (DATABASE WAREHOUSE)
- ANALYTICAL TOOLS
- REPORT GENERATORS
- INTERVENTION PROGRAMS

IMPROVED POPULATION HEALTH STATUS

FEEDBACK LOOP
Primary health care is primary care applied on a population level. As a population strategy, it requires the commitment of governments to develop a population-oriented set of primary care services in the context of other levels and types of services.
Why Is Primary Care Important?

• Better health outcomes
• Lower costs
• Greater equity in health
Relationship between Strength of Primary Care and Combined Outcomes

*1=best
11=worst
## Average Rankings for World Health Organization Health Indicators for Countries Grouped by Primary Care Orientation

<table>
<thead>
<tr>
<th></th>
<th>DALEs</th>
<th>Child Survival Equity</th>
<th>Overall Health</th>
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</thead>
<tbody>
<tr>
<td><strong>Worse primary care</strong></td>
<td>16.3</td>
<td>22.5</td>
<td>36.3</td>
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<td>(Belgium, France, Germany, US)</td>
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<tr>
<td><strong>Better primary care</strong></td>
<td>11.0</td>
<td>15.8</td>
<td>29.1</td>
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<tr>
<td>(Australia, Canada, Sweden, Japan, Denmark, Finland, Netherlands, Spain, UK)</td>
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**DALE**: Disability adjusted life expectancy (life lived in good health)

**Child survival**: survival to age 2, with a disparities component

**Overall health**: DALE minus DALE in absence of a health system

**Maximum DALE for health expenditures** minus same in absence of a health system

In 7 African countries

- The highest 1/5 of the population receives well over twice as much financial benefit from overall government health spending (30% vs 12%).
- For primary care, the poor/rich benefit ratio is much lower (23% vs 15%).

“From an equity perspective, the move toward primary care represents a clear step in the right direction.”

Studies in other developing and middle income countries also show benefit from primary care reform.

- In Bolivia, reform in deprived areas lowered under-5 mortality rates compared with comparison areas.
- In Costa Rica, primary care reforms in the 1990s decreased infant mortality and increased life expectancy to rates comparable to those in industrialized countries.
- In Mexico, improvements in primary care practices reduced child mortality in socially deprived areas.

Primary Care Oriented Countries Have

• Fewer low birth weight infants
• Lower infant mortality, especially postneonatal
• Fewer years of life lost due to suicide
• Fewer years of life lost due to “all except external” causes
• Higher life expectancy at all ages except at age 80
• BETTER HEALTH AT LOWER COSTS

Primary Care Oriented Countries Have

- more equitable resource distributions
- health insurance or services that are provided by the government
- little or no private health insurance
- no or low co-payments for health services
- Are rated as better by their populations
- primary care that includes a wider range of services and is family oriented

In New Zealand, Australia, and the US, an average of 1.4 problems (excluding visits for prevention) were managed in each visit. However, primary care physicians in the US managed a narrower range: 46 problems accounted for 75% of problems managed in primary care, as compared with 52 in Australia and 57 in New Zealand.

In the United States, half of all outpatient visits to specialist physicians are for the purpose of routine follow-up.

Controlled for morbidity burden*:

The more DIFFERENT generalists seen: higher total costs, medical costs, diagnostic tests and interventions.

The more different generalists seen, the 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)

The greater the morbidity burden, the greater the persistence of any given diagnosis.

That is, with high comorbidity, even acute diseases are more likely to persist.
With high morbidity burden, the number of different physicians seen rises to a greater extent than is the case for number of visits, for both primary care and specialist care.

Therefore, coordination of care is a major challenge for those with high morbidity burden.
Primary care is the provision of first contact, person-focused ongoing care over time that meets the health-related needs of people.
Referring only those patients with needs too uncommon to maintain competence, and

Coordinating care when people receive services at other levels of care.
The Primary Care Assessment Tools (PCATs)*
Evaluating the Delivery of Primary Care

An existing suite of instruments makes it possible to evaluate the primary care orientation of health systems and facilities. It includes surveys of:

- Professionals knowledgeable about the health system
- People in communities
- Patients, professionals, and administrators of health care facilities

PCATs are used to assess the achievement of primary care
Each country was rated (scores of 0, 1, or 2) on the strength of 9 characteristics of health policy that are conducive to strong primary care.
System (PHC) and Practice (PC) Characteristics Facilitating Primary Care, Early-Mid 1990s

*Best level of health indicator is ranked 1; worst is ranked 13; thus, lower average ranks indicate better performance.

Based on data in Starfield & Shi, Health Policy 2002; 60:201-18.
At the same time the international comparisons were being carried out, efforts were initiated to develop a tool that could be used to assess the clinical aspects of primary care. This set of tools became known as the PCAT – Primary Care Assessment Tools.

These tools were initially tested for reliability and validity in the United States. Within a decade, they had also been tested in Spain and in Canada.
Utility of the PCATs

• To compare one type of facility with another
• To compare one type of practitioner with another
• To compare one country or region with another
• To detect particular functions that appear to be suboptimal, and explore why
PCAT Versions

Primary Health Care Systems Assessment

Primary Care
Facility long/short
Provider long/short
Adult consumer long/short
Child consumer long/short
Domains of the Systems PCAT

• Equity in distribution of resources

• Universality of financing

• Role of government in policy regarding quality, comprehensiveness, and payment for services
Primary Care Orientation of Health Systems - Domains

- First-contact
- Person-focus over time
- Comprehensiveness
- Coordination
- Family-centeredness
- Community orientation
- Cultural competence

How Are the Features of Primary Care Actually Measured?

Principle: Each domain of primary (health) care has two subdomains, one related to important characteristics of the facility or practice and one related to the performance of the practitioner or facility on primary care functions.
The International Classification of Primary Care (ICPC) coding system*
Overview of ICPCs

• Developed by Wonca, the World Organisation of Family Doctors

• Classifies three important elements of the health care encounter:
  ✓ reasons for encounter (RFE),
  ✓ diagnoses or problems, and
  ✓ process of care.
Structure of ICPCs

• the ICPC *chapters* are all based on body systems
  • A  General
  • B  Blood, blood forming
  • D  Digestive
  • F  Eye
  • H  Ear
  • K  Circulatory
  • L  Musculoskeletal
  • N  Neurological
  • P  Psychological
  • R  Respiratory
  • S  Skin
  • T  Metabolic, endocrine, nutrition
  • U  Urinary
  • W  Pregnancy, family planning
  • X  Female genital
  • Y  Male genital
  • Z  Social
Structure of ICPCs

- The *components* that are part of each chapter permit considerable specificity for all three elements of the encounter
  1. Symptoms, complaints
  2. Diagnostic, screening, prevention
  3. Treatment, procedures, medication
  4. Test Results
  5. Administrative
  6. Other
  7. Diagnoses, diseases.
The Adjusted Clinical Groups (ACG) System*
Case mix (risk adjustment) is the process by which the health status (morbidity profile) of a population is taken into consideration when setting budgets or capitation rates, evaluating provider performance, or assessing outcomes of care.
Conceptual Basis for ACGs

- Individual diagnoses are less important in the care of patients and populations than are patterns and overall burdens of morbidity.
- Models of care need to be based on overall morbidity burdens rather than on specific diagnoses.
- Assessing the appropriateness of care needs to be based on patterns of morbidity rather than on specific diagnoses.
Overview of the ACG System

• TOTAL POPULATION – Not just those who have been in hospital and includes non-users.

• TOTAL EXPERIENCE - Applied using all diagnoses describing the person. They do not focus on individual visits. Ideally they are derived from primary and specialty ambulatory contacts as well as inpatient.

• TOTAL PERSON - Comprehensive measure of a population’s risk and morbidity burden. They do not just categorize organ system-based diseases.
ACG Actuarial Cells Reflect the Constellation Of Health Problems Experienced by a Patient

ACG Category

Time Period (e.g., 1 year)

Treated Morbidities

Diagnostic Codes

Morbidity Groups

Clinic C Judgment

Clinical Grouping

Data Analysis

Visit 1

Code A

ADG10

Visit 2

Code B

ADG21

Visit 3

Code C

ADG03

Code D
Possible Applications

• Population based need-assessment across patient populations
• Assessing performance of providers (e.g. hospital clinics, doctors, regions).
• Resource allocation / budgeting across clinics, regions or other care units.
• “Predictive Risk” measurement to assist in targeting patients for chronic care management.
• Quality improvement comparisons.
• Ensure appropriate comparisons for research
We have instruments to assess the utility of health systems, the strength of primary care, and the outcomes as measured by morbidity burden. We need the political will to use them.
For More Information

• Dr. Karen Kinder
  – kkinder@jhsph.edu

• PCATs
  – www.jhsph.edu/pcpc/pca_tools.html

• ACGs
  – www.acg.jhsph.edu

• ICPCs

• Dr Barbara Starfield