

Assessing the Adequacy of Primary Care: What Indicators?

Barbara Starfield, MD, MPH

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Definition of Primary Care

Primary care is the provision of first contact, person-focused care over time, comprehensive care, AND coordinated care.

Primary care is not disease-oriented; it is person oriented. (Specialty care is disease oriented.)

Examples of New Imperatives in Quality

- Many causes, not single causes
- Co-morbidity
- Dangers of new technologies and medications
- Effects of health system organization and delivery characteristics
- Equity in health care

Co-morbidity is characteristic of primary care in both the elderly and non-elderly.

Percent Distribution by Degree of Co-morbidity for Selected Disease Groups, Non-elderly Population

Disease Group	Co-morbidity Level (RUBs)		
	Low	Mid	High
Total population	69.0*	27.5	4.0
Asthma	24.0	63.8	12.2
Hypertension	20.7	65.4	13.9
Ischemic heart disease	3.9	49.0	47.1
Congestive heart failure	2.6	35.1	62.3
Disorders of lipid metabolism	17.6	69.9	12.5
Diabetes mellitus	13.9	63.2	22.9
Osteoporosis	11.1	50.0	38.9
Thrombophlebitis	12.2	53.8	33.9
Depression, anxiety, neuroses	8.1	66.3	25.6

*About 20% have no co-morbidity.

Resource use is determined by the extent of co-morbidity, not by the presence or absence of particular diagnoses.

Expected Resource Use (Relative to Adult Population Average) by Level of Co-Morbidity, British Columbia, 1997-98

	None	Low	Medium	High	Very High
Acute conditions only	0.1	0.4	1.2	3.3	9.5
Chronic condition	0.2	0.5	1.3	3.5	9.8
High impact chronic condition	0.2	0.5	1.3	3.6	9.9

Thus, it is co-morbidity, rather than presence or impact of chronic conditions, that generates resource use.

Management focused primarily on diseases does not make sense for primary care.

The benefits of primary care (person-focused, comprehensive, and coordinated) are greatest for people with high morbidity burdens.

This is at least part of the reason why disease management has not proven useful in improving health. Even the chronic care model will not be useful unless it is carried out in the context of good primary care.

Elements of Primary Care

First-contact

Ongoing person-focused care (“longitudinality”)

Comprehensiveness

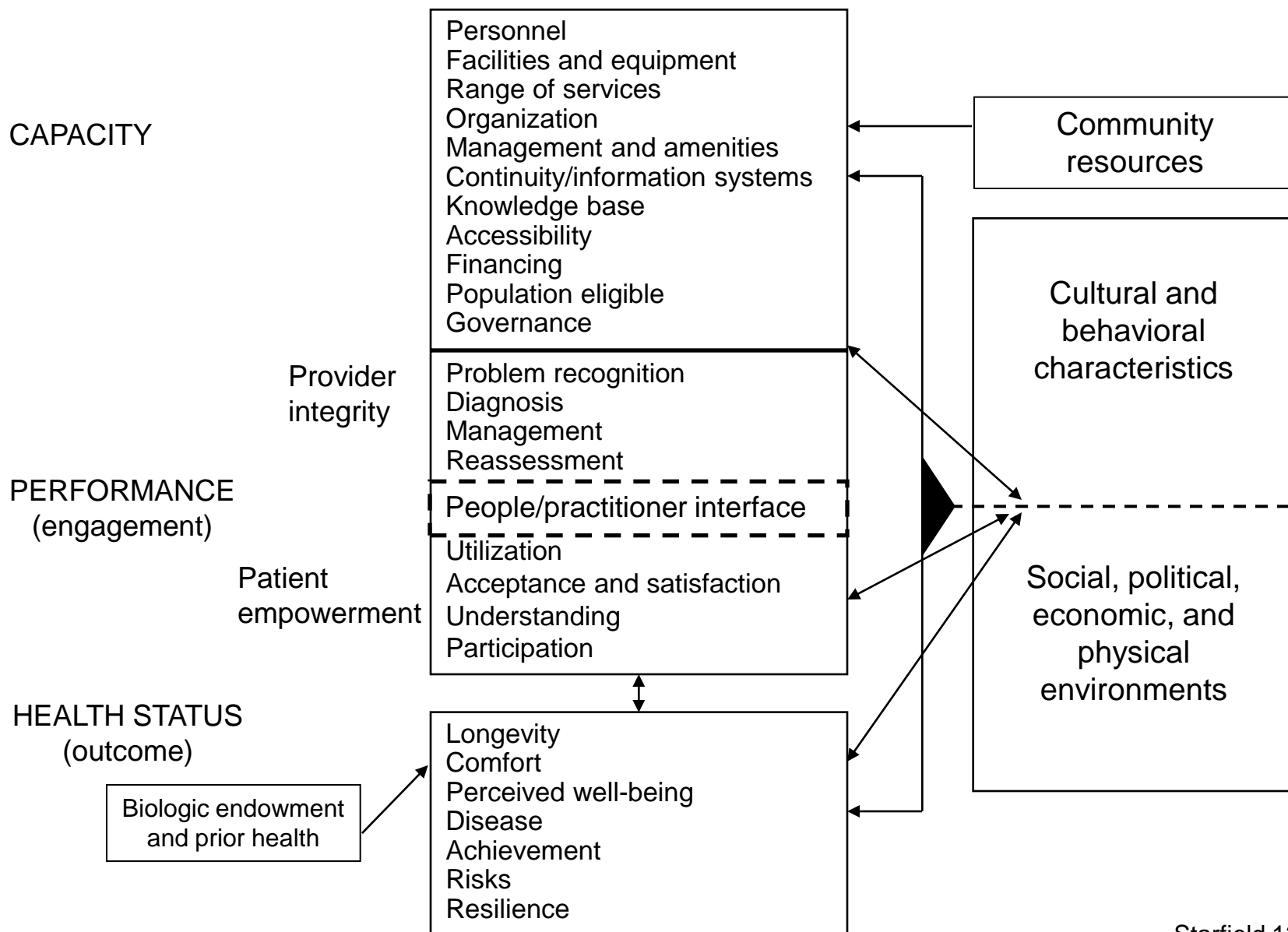
Coordination

Family-centeredness

Community orientation

Cultural competence

The Health Services System



Generic Approaches to Capacity in Primary Care

System Features

Personnel – training and distribution

Facilities and equipment – number and type

Range of services – What can be covered given resources and priority of needs?

Organization – standards of adequacy

Management – training for

Continuity/information systems – not necessarily electronic!

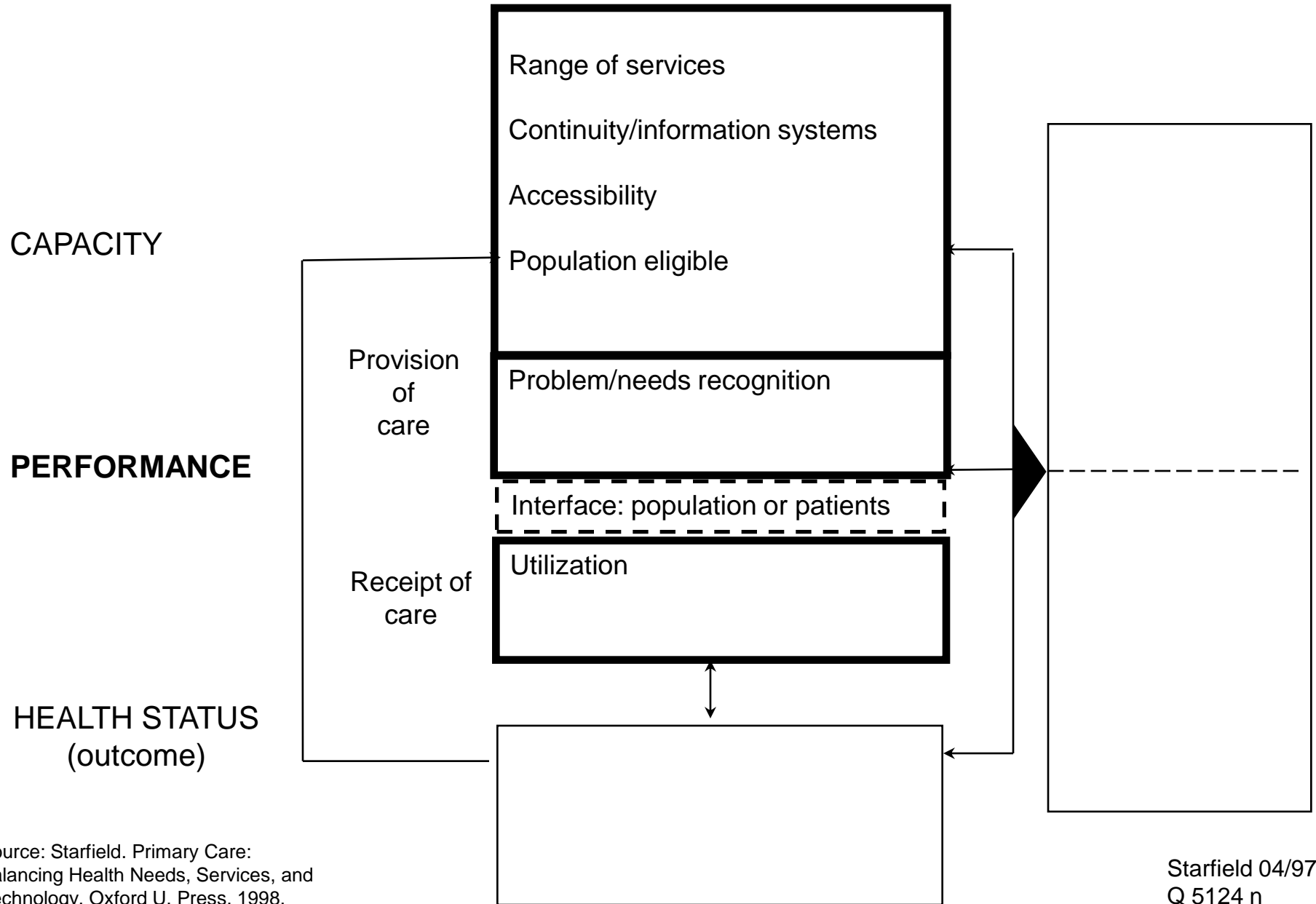
Accessibility – minimum requirements depending on population needs

Financing – especially equity (low/no copay) and government auspices or regulation

Population eligible – How are populations and subpopulations identified and included?

Governance – not only professionals and “experts”

Quality of Primary Care: Services Delivery Assessment



Generic Approaches to Quality of Primary Care Functions*: Comprehensiveness and First Contact

- rates of diagnosis of mental health problems (should be at least 10%)
- range of services available
- average number of different specialists seen in a year (preferably controlled for morbidity mix)
- percentage of patients referred in a year (preferably controlled for morbidity mix)
- number of problems accounting for 70% of visits
- hours of availability for patient face-to-face encounters
- hours of availability for phone contact

Generic Approaches to Quality of Primary Care Functions*: Coordination and Longitudinality

- documentation in medical records: history of allergies
- recognition of visits made elsewhere
- inclusion of information from referral visits in record

- percentage of patients with problem lists
- percentage of patients with medication list
- use of ICPC for coding patient problems
- unified records (primary care, specialist, hospitalization discharge record)
- all diagnoses at each visit
- rates of return of patients from referral (within time interval)
- average number of different generalists seen in a year (within practice)
- average number of generalists seen in a year (out of practice)

*obtainable from medical records, claims/encounter forms or information from providers/facilities

Improving patient focus in primary care would be enhanced by attention to:

- Use of a coding system (e.g., ICPC) for patients' problems
- Clinical guidelines that include responsiveness to patients' problems
- Understanding the relationship between achievement of disease-oriented guidelines and improvement in patients' health, using generic measures
- Complement process-oriented clinical guidelines with degree of overall improvement in patients' symptoms
- Use of multi-morbidity measures in records and data systems

Generic Indicators of Technical Quality of Care

- Percentage of new prescriptions promptly filled/not filled
- Percentage of physicians who promptly review notes of consulting specialists
- Documentation of reasons for disregarding clinical guidelines (“exception reporting”)
- Rates of prescription of new drugs (should be low in primary care)
- Prescription of drugs (DDD/1000 people) within range of community prevalence

Quasi-generic* Indicators of Quality of Care

- Percentage of Type 2 diabetics receiving periodic eye care
- Percentage of patients with congestive heart failure (CHF) with daily weight monitoring
- Percentage of patients with CHF promptly acted upon by responsible physician

*ALL concern responsiveness to patients' problems.

Generic Measures of Specialist Responsiveness to Primary Care Concerns

- Unnecessary repeating of laboratory tests by specialists
- Documented responsiveness by specialist to concerns in referral note

Generic Approaches to Quality of Primary Care Functions*: Outcomes and Costs

- avoidable hospitalizations
- unnecessary tests and procedures
- unnecessary/contraindicated medications
- rates of use of generic medications
- adverse events rates
- smoking rates

Generic Indicators of Quality of Primary Care - Catalonia

Attention to users' needs

Resolution of users' problems

Respect accorded to users' privacy

Time dedicated to the user

Number of patients assigned

High proportion of drugs with high efficacy and safety; limited use of new drugs with no added therapeutic value; reduced prescription of overused drug classes; rates of use of indicated drugs for specific diseases

Imperatives for Quality Assessment

1. The importance of person-focused assessments rather than disease-focused assessments
2. The increasing dangers of medical interventions
3. The recognized effect of the mode of delivery of health services on health
4. The explosion of interest in equity as an important outcome
5. Knowledge generation for population-based evidence

Disease-oriented technical quality may be useful for specialist care but not for primary care because

- co- and multi-morbidity are characteristic of primary care.
- inappropriateness of guidelines in some populations and individuals. (Diseases are not homogeneous entities.)
- statistical issues

Fewer than 10% of physician groups with less than 11 members have sample sizes (Medicare) large enough to reliably reveal differences of 10% in any technical quality metric. Even aggregating over ten years did not produce large enough numbers to distinguish 10% differences in quality in groups of less than 6 physicians. No groups had enough patients to detect 10% differences in preventable hospitalizations or congestive heart failure readmissions.

To be useful, measures have to be aggregated into types of measures of quality:

- ACROSS DISEASE technical quality
- Evidence based DELIVERY CHARACTERISTICS
- FUNCTIONAL OUTCOMES over time

In making comparisons across physicians and medical groups, quality scores should optimally be case-mix adjusted for differences in morbidity burden (not disease-by-disease).

The categories can be disaggregated to identify particular problems that need attention.

Quality of Care in Community Health Centers, Doctors Offices, and Hospital Clinics: Best and Worst

	Number*	
	<u>Best</u>	<u>Worst</u>
Community health centers	37	6
Physician offices	19	25
Hospital clinics	9	39

*Best and worst scores for quality in 53 comparisons (48 condition-specific and 5 generic indicators)

Quality of primary care evaluations should

- address achievement of primary care features
- not be limited to diagnosis and management of specific diseases
- focus on patient's problems (recognition and resolution)
- take into account overall morbidity burden (case-mix)
- include measures of inequity
- include adverse effects

Indicators of Quality Are Not the Same as Health Status/Outcome Indicators

Useful health indicators for populations/subgroups

- Life expectancy: ages 1, 15, 45, 64, 75
- Years of potential life lost: 65, 75
- Age-adjusted/standardized death rates
- Death rates: neonatal, postneonatal, 1-5, 6-17, 18-44, 45-64, 65-74, 75-84

ALL BY MALE, FEMALE, TOTAL

Indicators of Quality Are Not the Same as Health Status/Outcome Indicators

Useful health indicators for individuals/small groups

- Age-adjusted disability/limitations of activity rates
- Polypharmacy rates
- Rates of serious symptoms, e.g., pain
- Smoking rates

Examples of Warranted Process Indicators in Primary Care

- Infant and child immunizations
- Well established diagnostic and therapies for particular conditions (e.g., iron for iron deficiency anemia; oral rehydration for diarrhea; insulin for type 1 diabetes)
- **MESSAGE: BEWARE OF INDICATORS FOR SCREENING OF PARTICULAR CONDITIONS.** Most have not been well validated in most populations and settings.

Importance of Standardizing/controlling for Morbidity Burden in Assessments of Quality of Primary Care

Because populations in different primary care practices differ in the extent of their morbidity burden, it is necessary to take morbidity burden into account in comparing the quality of different practices and health systems.

A measure of morbidity burden that is not based on individual diagnoses is essential in primary care.

To what extent are disease-oriented clinical guidelines pursuant to achievement of the functions of primary care?

Might they be incompatible with the underlying rationale of primary care?

Patients' health problems are not synonymous with their diagnoses. The health problems of people and populations are not the same as the sum of their individual "diseases".

Diseases

- are professionally defined entities, not pathophysiologic "truths"
- have variable manifestations, pathways of genesis, and prognosis
- do not exist in isolation from each other

If primary care is patient oriented and clinical guidelines are disease oriented, then focus on disease-oriented guidelines is not consistent with the focus of primary care on achieving better health of people and populations.

Disease-oriented Guidelines: Validity Concerns

- They cannot guarantee good outcome or avoidance of harm.
- There is no effort to verify the validity of the evidence on which they are based.
- They are implemented on the basis of evidence based on relative risk and without consideration of population attributable risk.
- They are likely to lead to greater inequity across population subgroups if there are differences in effectiveness and safety across population subgroups or if health problems other than those covered by guidelines are more pressing.

Disease-oriented Guidelines: Applicability

- Evidence base is not generalizable to populations to which they are applied.
- They assume no variability in disease manifestations or responsiveness to intervention.
- They are based on imperfect knowledge of the natural history of disease.
- They assume that diseases exist in isolation from other diseases and illnesses and take no account of co-morbidity.
- They are mainly developed to apply to particular diseases and hence most suitable for subspecialty practice, but are used in primary care rather than in subspecialist care.

Disease-oriented Guidelines: Conceptual Concerns

- They do not address critical aspects of patient care: responsiveness to patients' needs, adequacy of range of services provided.
- They are based on evidence from analyses that are often rife with conflict of interest and, thus, have a high likelihood of being unethical as well as ineffective and inefficient.
- They are not prioritized according to the degree to which they improve health.

All measurement of quality in primary care should be time-based, not visit or episode-based. (In contrast, quality assessment in specialty care should be visit or episode-based.)

Conventional Approaches to Quality

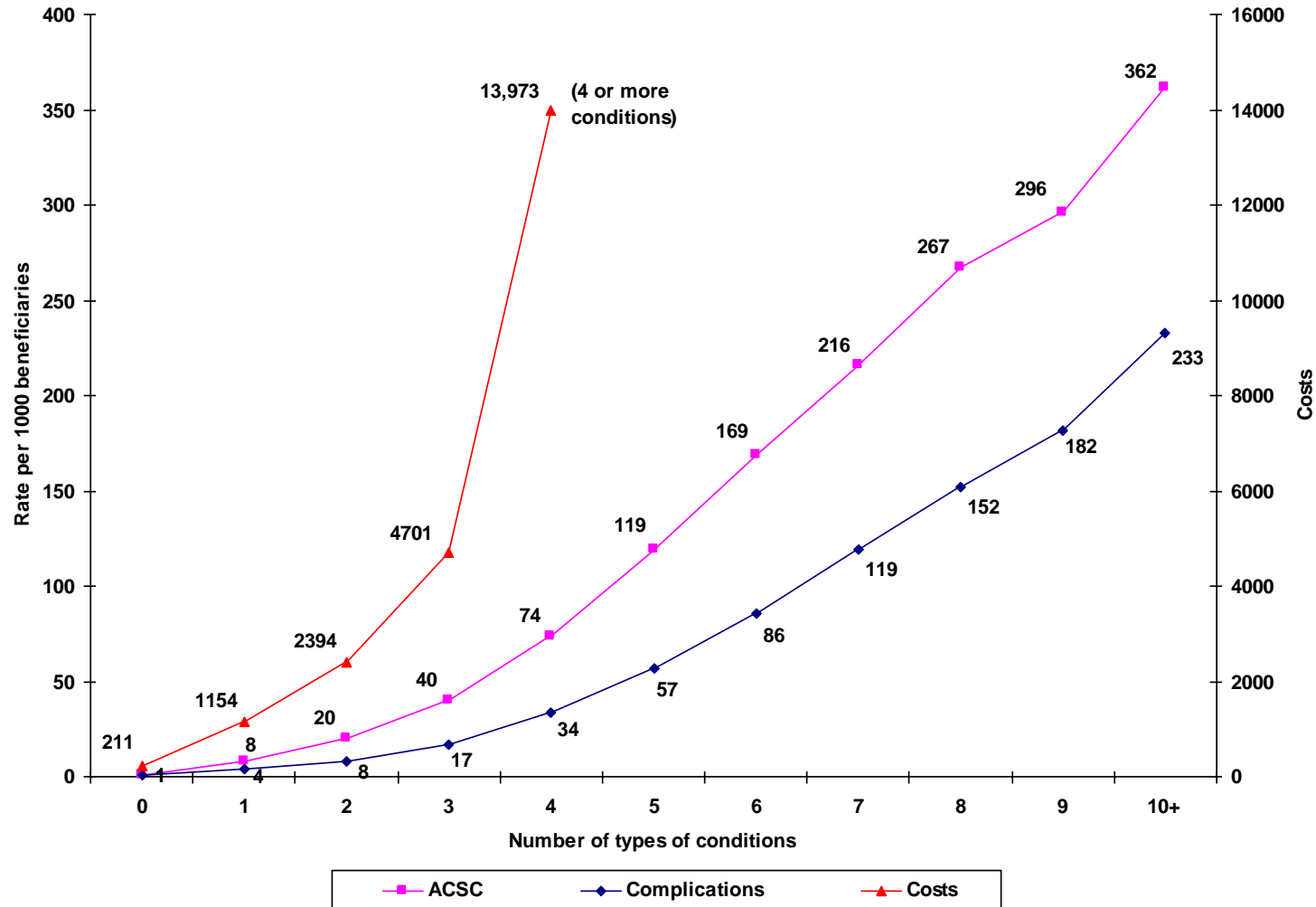
Resources: Are there enough of ...

Health services structures: e.g.,
medical records, hours of availability

Technical quality: disease-oriented
processes of care

Outcomes: biological, functional

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



Source: Wolff et al, Arch Intern Med 2002; 162:2269-76.

*ages 65+, chronic conditions only

Starfield 11/06
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Primary Care Domains and Subdomains: First Contact

First-contact: accessibility

- Health system characteristics that facilitate access; e.g., if closed on weekend days would the individual be seen by a practitioner from the facility?

First-contact: use for each new need
(consumer only)

- Use of primary care place for each new need
(regular checkup, immunization, an acute illness.)

Primary Care Domains and Subdomains: Longitudinality

Longitudinality: strength of affiliation
(consumer only)

- Strength of relationship with a specific provider, e.g., degree to which the identified provider is also the place who knows the individual best and from whom care would be sought for a new problem.

Longitudinality: relationship

- Person orientation of practitioner/patient interactions, e.g., degree of interest of doctor in the individual as a person, rather than as someone with a medical problem.

PCAT: Longitudinality

1. When you go to see your PCP, do you see the *same* doctor or nurse each time?
2. Does your PCP know you very well as a *person*, rather than as someone with a medical problem?
3. Does your PCP know what problems are most important to you?
4. If you have a question, can you call and talk to *the doctor who knows you best*?

Primary Care Domains and Subdomains: Coordination

Coordination: medical record continuity (provider only)

- Do you use flow sheets to assure that needed services are provided? (Also, printed practice guidelines, periodic medical audits, problem lists, medication lists.)

Coordination: integration of referrals

- Quality of primary care-referral interface, e.g., Did the primary care practitioner know you made a visit to a specialist?

Although specialists usually do better at adhering to disease-oriented guidelines, generic outcomes of care (especially but not only patient-reported outcomes) are no better and are often worse than when care is provided by primary care physicians.

Studies finding specialist care to be superior are more likely to be methodologically unsound, particularly regarding failure to adjust for case mix.

Definitions of Continuity That Are Amenable to Measurement

- Having the same provider
- Stability of patient-caregiver relationships
- Strong interpersonal relationships

- Educating the patient; communicating the patient's needs
- Common management strategy/plan

Measurement of “Continuity”*: Relational

Affiliation: PCAT measure of extent of relationship

Provider-patient relationship: PCAT measure of interpersonal relationships

Duration

Consistency: UPC, COC

*? Longitudinality

Assessment of Coordination

- Referral tracking
- Formal process for exchange of information on care management with hospital specialist during inpatient stays