The Effectiveness of Primary Care

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Primary Care Course
(Based on Cape Town, South Africa, 2007; and Barcelona, Spain, 2009)
This presentation provides evidence from the 1990s and early 2000s (concomitant with the growth of interest in primary care in the world) concerning the impact of primary care-oriented health systems on population health outcomes and on distribution of these outcomes ("equity") from cross-national and selected within-nations studies.
This graph shows the well-known relationship between country wealth (as expressed by GDP per capita) and life expectancy. Although not previously stressed, it shows considerable variation in life expectancy at any given GDP. For example, Poland and South Africa have approximately similar wealth but life expectancy is, on average, 7-8 years greater in Poland. Variability is noted all along the curve, even at its asymptotic end, as some countries at the wealthy end of the curve experience lower life expectancy than less wealthy countries. These include, particularly, Switzerland and the US. Other wealthy countries fall below the curve; these include Germany, Taiwan, and Singapore. Thus, wealth alone does not assure health. The graph also shows a new phenomenon: an apparent decline in life expectancy above a certain level of country wealth. Some very wealthy countries (US, Switzerland) are recently experiencing lower life expectancy than some less wealthy countries, and some others (Germany, Singapore, Taiwan) are below the curve. That is, they have lower life expectancy than expected despite their wealth. These five countries are all countries whose health systems are more specialty oriented than primary care oriented, suggesting the likelihood that there is excessive and unnecessary specialty and technology use leading to inappropriate care and perhaps even an increasing rate of adverse effects from excessive intervention.

This slide shows the well-known direct relationship between the density of health professionals and one aspect of the health of populations: health professional supply. As this slide shows, the relationship holds only on average, and there is considerable variation, with some countries having many health workers but still relatively high child mortality under age 5. There is even one country with few health workers that has a child mortality the same as the United States and Cuba. Clearly, it is not the number of health professionals that influences child mortality; rather, it must be how those health professionals are organized and what they do that is the influence.


This chart, which uses data from the early years of the 21st century, confirms the earlier noted pattern of increasing life expectancy with increasing country wealth. An important observation is the variability in life expectancy at any given level of country wealth, which is most striking across the poorer countries although it occurs among wealthy countries as well. This variability is likely to be due, at least in part, to variability in the organization and delivery of health 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.

Sources:
Based on the October 2008 World Health Report entitled Primary Health Care: Now More than Ever, the World health Assembly affirmed the value of primary health care. In nine resolutions, it urged all countries to accept its principles and values and to promote the organization of health services around the functions of primary health care systems and clinical primary care.
The Sixty-second World Health Assembly
– WHA 62.12 – Agenda Item 12.4
22 May 2009 (continued)

4. to promote active participation ...empowering communities, especially women, in the processes of developing and implementing policy and improving health and health care, in order to support the renewal of primary health care

5. to train and retain adequate numbers of health workers, with appropriate skill mix, including primary health care nurses, midwives, allied health professionals, and family physicians ... in order to respond effectively to people’s health needs

6. to encourage that vertical programs (be) ... integrated and implemented in the context of integrated primary health care
The Sixty-second World Health Assembly
– WHA 62.12 – Agenda Item 12.4
22 May 2009 (continued)

7. to improve access to appropriate medicines, health products, and technologies, all of which are required to support primary health care
8. to develop and strengthen health information and surveillance systems, relating to primary health care … to facilitate evidence-based policies and program and their evaluation
9. to strengthen health ministries, enabling them to provide inclusive, transparent and accountable leadership of the health sector and to facilitate multisectoral action as part of primary health care …
Aspects of Care That Distinguish Conventional Health Care from People-Centred Primary Care

<table>
<thead>
<tr>
<th>Conventional ambulatory medical care in clinics or outpatient departments</th>
<th>Disease control programmes</th>
<th>People-centred primary care</th>
</tr>
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<tbody>
<tr>
<td>Focus on illness and cure</td>
<td>Focus on priority diseases</td>
<td>Focus on health needs</td>
</tr>
<tr>
<td>Relationship limited to the moment of consultation</td>
<td>Relationship limited to programme implementation</td>
<td>Ensuring personal relationship</td>
</tr>
<tr>
<td>Epidemic reactive care</td>
<td>Programme-defined disease control interventions</td>
<td>Comprehensive, continuous and person-centred care</td>
</tr>
<tr>
<td>Responsibility limited to effective and safe advice to the patient at the moment of consultation</td>
<td>Responsibility for disease-control targets among the target population</td>
<td>Responsibility for the health of all in the community along the life cycle; responsibility for tackling determinants of ill-health</td>
</tr>
<tr>
<td>Users are consumers of the care they purchase</td>
<td>Population groups are targets of disease-control interventions</td>
<td>People are partners in managing their own health and that of their community</td>
</tr>
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</table>


This chart captures the essence of the difference between disease-oriented (vertical) health services and person-oriented (horizontal) health services. Disease-oriented programs are unable to deal with people’s health problems in the context of their evolution over time and, especially, with the evolution of other seemingly unrelated health problems and disabilities.

In 1978, the World Health Organization Conference in Alma Ata used the term primary health to characterize an approach to organizing services to meet the needs of populations. Although its focus was derailed by the actions of international organizations such as the World Bank and the International Monetary Fund, which focused more on decentralization and devolving services to local areas to facilitate market solutions rather than government ones, the term primary health care lived on in the minds of many. As the term “primary care” had long been used to describe clinical services provided by family physicians, the distinction between the two became blurred or even used synonymously. The distinction, however is useful, in that the Alma Ata term connotes a population strategy, with the development of policies designed to provide the basis for interventions at the individual level. Thus, primary health care is primary care applied on a population level, with policies designed to facilitate the achievement of primary care for all individuals within the population.
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 too uncommon to maintain competence, and coordinates care when people receive services at other levels of care.

On the clinical level, primary care has four main features, all of which must be present in order to define primary care. Sometimes, family orientation and community orientation also are included. Each of these features is measurable, using comparable tools designed for system-level, provider or facility level, patient level, or community level.
There is now good evidence, from a variety of studies at national, state, regional, local, and individual levels that good primary care is associated with better health outcomes (on average), lower costs (robustly and consistently), and greater equity in health.
Evidence for the benefits of primary care-oriented health systems is robust across a wide variety of types of studies:

- International comparisons
- Population studies within countries
  - across areas with different primary care physician/population ratios
  - studies of people going to different types of practitioners
- Clinical studies
  - of people going to facilities/practitioners differing in adherence to primary care practices


Comparisons of health systems involve two aspects: those that concern the nature of the system and the policies that characterize the system and those that concern the nature of the services themselves. In the comparisons of the primary care orientation of several OECD health systems, 9 characteristics of the system were hypothesized to be related to the primary care orientation of the system, as were 6 characteristics previously identified as related to primary care health services.
During the 1990s, two successive international comparisons involved rating different countries on the strength of primary care within the country. Ratings of primary health care were obtained by rating 6 (and 9 in the later study) characteristics of policy in each country: efforts to distribute resources according to where they were most needed; maintaining low or no cost-sharing; financial access controlled or regulated by government; the type of primary care practitioner (family physician or a mixture of types including also general internists and general pediatricians); and the presence of patient lists by primary care practices. In the second study, the following were added: low or no copayments for primary care; strength of academic departments of family medicine; the presence of patient lists by primary care practices; and 24-hour availability of primary care practices. Extent of achievement of the clinical features of first contact care, person-focused care over time, comprehensiveness (breadth) of services, coordination of care, family centeredness, and community orientation were also rated. Each characteristic was rated on a scale of 0 to 2, then all scores were averaged to obtain a systems score, a practice score and a combined overall primary care score. Eleven, and then 13 industrialized countries were compared; this comparison led to three groups of countries: those with low scores, those with intermediate scores, and those with high scores. These three groupings were unchanged over the decade between the two studies.
The predominant form of the health system was rated according to the extent of its primary care orientation in two regards: the strength of health policy conducive to primary care practice and the strength of primary care practice itself.

Health policy characteristics concerned the extent to which there are efforts to distribute health services resources equitably in the population, the aegis and universality of financing for primary care, whether the modal primary care practitioner was a family physician, the balance between the number of primary care physicians and specialists as well as the amount of their professional remuneration, the absence of cost sharing for primary care services, requirements for the maintenance of patient rosters or lists, the extent of requirements for 24-hour coverage, and the strength of academic departments of family medicine. Each country was given a score of 0, 1, or 2 depending on how strongly the characteristic was developed.

This slide shows the four main policy characteristics related to effectiveness and equity of primary health care services: distribution of resources according to extent and type of health needs, progressivity of financing, degree of cost sharing, and breadth of services provided in primary care. Scores range from zero (0), where the policy characteristic is absent, to a score of 1, where the characteristic is present but poorly developed, to a score of 2, where the characteristic is well developed. Belgium, France, Germany, and the US have weak primary health care systems; Denmark, Finland, The Netherlands, Spain, and the UK have strong primary healthcare; and Australia, Canada, Japan, and Sweden are in-between. With few exceptions, countries with equity-focused health policy are countries with strong primary care; countries with weak policy characteristics have weak primary care health systems.

Sources:


Key system factors in achieving primary health care in both developing and industrialized countries are:

- Universal financial coverage, under governmental control or regulation
- Efforts to distribute resources equitably (according to degree of need)
- No or low co-payments
- Comprehensiveness of services

Both international comparisons and within-country studies provide the basis for specifying 6 key factors in achieving an effective health system (Starfield and Shi 2002; Gilson et al 2007). There are some countries in the world that approach the achievement of these policies; they also have the best health in the world, as measured by conventional and widely accepted health statistics, including mortality and illness rates as well as indicators related to death and age at death.

Sources:
Each country was also rated 0, 1, or 2 with regard to its achievement of the cardinal features of primary care practice. A score of 0 indicates poor achievement of the feature; a score of 1 indicates intermediate achievement, and a score of 2 indicates high achievement of the feature.

First contact is the seeking of care for each newly occurring problem or need from a primary care practitioner rather than a specialist. Longitudinality is person-focused (not disease-focused) relationships over time with the primary care source. Comprehensiveness is the provision, by the primary care source, of services for all health-related needs except those too uncommon in the population for competence to be maintained. Coordination is the integration of care by the primary care source when services outside of primary are required.

Two related characteristics were also rated. Family centeredness is the extent to which services are provided in a family context. Community orientation is the extent to which data on community health needs are taken into account in planning for primary care services.

• First contact avoids unnecessary specialist visits.
• Person-focus over time avoids disease-focused care (makes care more effective).
• Comprehensiveness avoids referrals for common needs (makes care more efficient).
• Coordination avoids duplication and conflicting interventions (makes care less dangerous).
The primary care score has two parts: the first reflects the strength of primary health care (that is, policies oriented towards primary care), and the second reflects the practice of primary care at the clinical level. In this chart, the countries are ranked by each of their two sub-scores. The country with the best sub-score is ranked #1, and the one with the worst sub-score is ranked #13. The better the policies (systems rankings), the better the practices, indicating the importance of governmental policy to good practice.


An international comparison of industrialized nations found a statistically significant relationship between per capita health care expenditures and the extent to which the health system was oriented around strong primary care policies and practices*. The stronger the primary care, the lower the total health care expenditures. This was the case even when the United States, with its high expenditures and poor primary care infrastructure, was removed from the analysis.

In an international comparison of 18 OECD countries, they were rated* according to whether their primary care systems were strong (high scores) or weak (low scores). Trends in potential years of life lost were examined after also taking into account other influences on health. Even after considering changes in gross domestic product, percentage of elderly people, total number of doctors per capita, average income, and smoking and drinking percentages, people in countries with strong primary care had fewer years of life lost than people in the poor primary care countries, and the differences widened over time.


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

Sources:

These indicators of health system “outcome”, included low birth weight, neonatal mortality, postneonatal mortality, years of life lost associated with suicide, with all-cause mortality excluding external causes such as injuries, and higher life expectancy at all ages (birth, age 15, age 40, and at age 65, but to a much lesser degree at age 80.

Sources:

Primary health care oriented countries

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

Sources:


This slide compares the characteristics of primary health care (including both structural and process features) of three English-speaking industrialized countries as of the early 2000s. The United Kingdom (UK) has the strongest primary care, as shown by its high scores for all three of the most important structural characteristics (attempts to distribute resources equitably, relatively progressive financing, and no cost sharing for primary care services). Except for the coordination features of services delivery (a "process" of care), it achieves the maximum attainable level for the processes of care. The United States has uniformly poor performance on both structural and process features associated with good primary care. Scores for Canada are intermediate; it makes only moderate efforts to distribute resources equitably and, apart from comprehensiveness of care, does not do as well as the UK on other processes of care.

Health “Outcomes”: Canada vs. US*  
(Rank among OECD Countries, 2004-5)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Canada</th>
<th>US</th>
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<tbody>
<tr>
<td>LE birth</td>
<td>9 vs 25</td>
<td></td>
</tr>
<tr>
<td>LE age 65 (males)</td>
<td>4 vs 8</td>
<td></td>
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<tr>
<td>LE age 65 (females)</td>
<td>4 vs 14</td>
<td></td>
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<tr>
<td>PYLL (age 70)</td>
<td>13 vs 21</td>
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<tr>
<td>IHD mortality (males)</td>
<td>7 vs 5</td>
<td></td>
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<tr>
<td>IHD mortality (females)</td>
<td>7 vs 9</td>
<td></td>
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<tr>
<td>Stroke mortality (males)</td>
<td>2 vs 4</td>
<td></td>
</tr>
<tr>
<td>Stroke mortality (females)</td>
<td>3 vs 6</td>
<td></td>
</tr>
<tr>
<td>All cancer mortality (males)</td>
<td>12 vs 7</td>
<td></td>
</tr>
<tr>
<td>All cancer mortality (females)</td>
<td>22 vs 23</td>
<td></td>
</tr>
<tr>
<td>Infant mortality</td>
<td>24 vs 26</td>
<td></td>
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<tr>
<td>Asthma mortality ages 5-39</td>
<td>18 vs 21</td>
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*age standardized where appropriate


Of the widely accepted measures of health outcomes, Canada does better than the United States for most of the 12 indicators. Consistent with its better primary care scores in both systems (structural) and process characteristics, Canada ranks higher than the United States on 10 of 12 major health measures. Although Canada has surpassed the United States in its health levels for most of the 20th century, the gap between the two countries in international comparisons has widened since the passage of the Canada Health Act in the early 1970s. This act and subsequent provincial policies greatly strengthened the primary care underpinnings of the Canadian health services system.
Why Does Primary Care Enhance Effectiveness of Health Services?

- Greater accessibility
- Better person-focused prevention
- Better person-focused quality of clinical care
- Earlier management of problems (avoiding hospitalizations)
- The accumulated benefits of the four features of primary care

Is Primary Care as important within countries as it is among countries?

Given the robust findings of the superiority of primary care-orientation across countries, it was of interest to learn whether the same could be said of differences within countries.
This analysis examined the relationship between the ratio of primary care physicians to population against life expectancy in every state in the United States. Although there are a few states that show considerable deviation from the general relationship, it is clear that, in general, the greater supply of primary care physicians is associated with higher life expectancy. Each additional primary care physician is associated with an increase of over a year of life expectancy, on average.

In Ontario, Canada, the supply of GPs (less than 7 per 10,000 versus 7 or more) is associated with higher likelihood of early diagnosis and higher 5 year survival for breast cancer.*

A loss of GPs during the 1990s was associated with a lower likelihood of early diagnosis and 5-year survival.*

*All analyses controlled for age and area income.

Source: Gorey et al, Cancer 2009;115:3563-70.

Well designed primary care services have been demonstrated to improve health, even in developing and middle income countries that have pursued their development. In Indonesia, spending on primary care increased in the early 1990s, reaching 10.3 billion Indonesian rupiah in 1996 and accomplishing a 20% improvement over five years in infant mortality - improvement in every province in the country. Hospital spending at this time was 4.1 billion rupiah. In the subsequent five years, primary care spending per capita was progressively reduced, reaching 8.2 billion rupiah, concomitant with a rise in hospital spending per capita from 4.1 to 5.3 billion rupiah. During this period, infant mortality rose in 22 of the 26 provinces, with a 14% rise in the country as a whole.

Effectiveness of PC


In Brazil, primary care reform has been spreading throughout the country since the early 1990s. As a very sensitive indicator of the effectiveness of health systems, infant mortality was chosen to evaluate the impact of this reform process. This evaluation took into consideration other changes that might be expected to influence infant mortality over the period of the primary care reform. In evaluating the relative roles of the different changes, the importance of decreasing the illiteracy of women was highlighted, with 15% of the decline in infant mortality attributed to it. The second most influential change was the implementation of the primary care reform (“PSF coverage”), which accounted for almost 5% of the decline. Of lesser importance were increasing availability of clean water (about 3%), decreased fertility rates (about 2%), and the number of hospital beds (about 1%). These characteristics alone accounted for 90% of the variability in infant mortality rates across the Brazilian states. Of no demonstrable importance in influencing the decline in infant mortality were physician and nurse supply. That is, the number of health personnel is not of importance to health outcomes; rather, it is what these professionals do that is the determining characteristic.
Many studies done WITHIN countries, both industrialized and developing, show that areas with better primary care have better health outcomes, including total mortality rates, heart disease mortality rates, and infant mortality, and earlier detection of cancers such as colorectal cancer, breast cancer, uterine/cervical cancer, and melanoma. The opposite is the case for higher specialist supply, which is associated with worse outcomes.

Sources:

What We Already Know

A primary care oriented system is important for

• Improving health (improving effectiveness)

• Keeping costs manageable (improving efficiency)
Does primary care reduce inequity in health?

The preceding empirical demonstrations of the influence of a primary care orientation show that it is associated with greater effectiveness of health services. Does primary care also improve equity in health?
In the United States, an increase of 1 primary care doctor is associated with 1.44 fewer deaths per 10,000 population.

The association of primary care with decreased mortality is greater in the African-American population than in the white population.


As the effect of increasing primary care health professionals is greater in more deprived populations (in this case, the African American population in the US), it can be said that primary care is equity-producing.

A comparison of age-adjusted survival from breast cancer showed that

- Low SES is strongly associated with decreased survival in US, but not Canada.
- The survival advantage in Canada is present in low income areas only.
- The survival advantage in Canada is much larger at ages under 65.
- The Canadian survival advantage is larger for later stage diagnosis. That is, there is almost certainly a medical care benefit to equity in the Canadian context.


The survival advantage from breast cancer in Canada is limited to socially disadvantaged populations, and is greater under age 65 than over age 65 – the population groups that have financial access to care in Canada but not the US. Combined with other evidence, it is highly likely that it is better access to good primary care services in Canada that is responsible for greater effectiveness and equity in this as well as other measures of health amenable to medical care in that country. Thus, equity in diagnosis and management of breast cancer is greater in Canada than in the US. This superiority of age-adjusted survival is particularly evident when comparing socially disadvantaged populations and is less in population subgroups with universal, government sponsored insurance in the US, i.e., those of age 65 and over.
During the 1990s, policy in Thailand led to the development of at least one primary care health center in each rural village. During this time period, insurance for medical services was progressively expanded to cover the entire population by the early 2000s. A very active Rural Doctors Society was a major advocate of this expansion. During this period, under-5 mortality was lowered by a much greater percentage in more deprived populations than in less deprived ones: 44% in the poorest quintile and 13% in the richest percentile - with a progressively greater reduction in successive percentiles of wealth. Both relative and absolute differences in under-5 mortality were reduced.

Primary Care and Reduced Inequity in Health: Low and Middle Income Countries

- Studies of primary care intervention areas compared with comparisons areas:
  - Haiti, Bangladesh, India, Liberia, Zaire, Bolivia
- Studies of country-wide experiences (before/after)
  - Thailand, Indonesia

Why Does Primary Care Enhance Equity in Health?

- Greater comprehensiveness of services (especially important in the presence of multimorbidity)
- Person-focused care over time (better knowledge of patient and better recognition of problems)
- Greater accessibility of services
- Better coordination, thus facilitating care for people of limited flexibility
- Better person-focused prevention

That is: primary care is person-focused, not disease-oriented. Disease-oriented care is inherently inequitable.

Primary Care and Health: Evidence-Based Summary

• Countries with strong primary care
  – have lower overall costs
  – generally have healthier populations

• Within countries
  – areas with higher primary care physician availability (but NOT specialist availability) have healthier populations
  – more primary care physician availability reduces the adverse effects of social inequality

The positive impact on health of primary care resources is most notable in geographic areas that are socially inequitable. Thus, primary care reduces health disparities resulting from social inequity.

Conclusions
Both international comparisons and studies within countries document the beneficial impact of primary care on effectiveness (health outcomes), on efficiency (lower costs), and on equity of health outcomes (reducing disparities across population subgroups).

Health policy should be directed toward strengthening the primary care orientation of health systems.
How Much Does PHC Cost?

- A study in Africa found primary care oriented health services cost about US$8.57 per person.
- The Family Health Program in Brazil costs about $25 per person/year; it has no co-pays, and most drugs (anti-hypertension, HIV, TB, antibiotics) are free of charge.
- The World Bank estimates that $34 per capita is required for full health center support.

Sources:


Although estimates of the costs of implementing primary care services in developing countries vary, even the highest estimates (from the World Bank) are under US $35 per person per year; studies in the field suggest that under US $10 per capita per year is adequate in at least some places.
An increase of primary care resources leads to an even greater benefit in socially deprived populations than in the majority population. An increase in the number of primary care physicians of about 15% would be expected to reduce all-cause mortality in the US African-American population of almost 4%, compared with about one and a quarter percent in the majority white population. This is a result of the accessibility of primary care and its comprehensiveness, both of which would be expected to have a special advantage for populations with greater health needs.
Effectiveness of PC

In the early 1990s in the United States, the estimated annual number of deaths that could have been avoided from a 15% increase in the number of primary care physicians was over 127,000.

Conclusion

Although sociodemographic factors undoubtedly influence health, a primary care oriented health system is a highly relevant policy strategy because its effect is clear and relatively rapid, particularly concerning prevention of the progression of illness and effects of injury, especially at younger ages.
Good Primary Care Requires

- Health system POLICIES conducive to primary care practice: What can we learn from other countries about the relative merits of direct provision of services rather than just financing of services?
- Health services delivery that achieves the important FUNCTIONS of primary care: What can be done to enhance practitioners’ recognition of and responsiveness to patients’ problems (patient-focus) rather than on the professional priorities of diagnoses (diagnosis-focus)?
This slide summarizes the conclusions of many studies. Primary health care is a worldwide imperative. Avoiding an excessive supply of specialists minimizes unnecessary care and reduces costs. Equity in health is facilitated by a primary care orientation and a reduction in specialty services, which are inequitably distributed almost everywhere. Responding to patients’ problems is a rate limiting step in achieving accurate diagnosis and management. Coordinating care reduces duplication and adverse events. Avoiding adverse events improves the safety of services. Certain payment mechanisms facilitate more appropriate care. Information systems (especially if electronic) improve care if the information in them is pursuant to better primary care over time. The increasing focus on prevention requires better coordination between public health and primary care. The following slides provide specificity for some of these imperatives.
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.
PCAT
(Primary Care Assessment Tool)

- First-contact (access and use)
- Person-focused care over time
- Comprehensiveness (services available and provided)
- Coordination
- Family centered
- Community oriented
- Culturally competent

website: http://www.jhsph.edu/popc/pca_tools.html
Starfield 05/03
PCM 6038

The data in this “spider’s web” depict the achievement of the essential features of primary care in primary care practices in an area of Brazil. It also shows the considerable agreement between the three sources of information: patients, practitioners, and managers in the facilities. A score of five represents the maximum, with a score of zero representing the minimum possible. Whereas the facilities scored high on the range of services available (“resources available”) and on a family focus of the health services, scores were relatively low for accessibility of the services. This study showed the potential for application of a standardized and validated instrument (the PCAT) to assess the quality of delivery of primary care services, from the viewpoint of users, providers, and managers. In this way, possible improvements can be discussed and implemented.
There is no such thing as a “primary care service”. There are only primary care functions and “specialty care” functions. We know what the primary care functions are; they are evidence-based. Payment should be based on their achievement over a period of time. Any payment system that rewards specific services will distort the main purpose of medical care: to deal with health problems effectively, efficiently, and equitably.
Primary care has four main functions: first contact (the place where care is first sought for a new or newly recurring health problem or health need); longitudinality (person-focused care over time); comprehensiveness (providing for all common health needs without referral); and coordination (integrating all aspects of care when people have to go elsewhere for uncommon or unusually serious health conditions). Each of these four essential functions can be described and assessed by using several of the elements of health systems, as described in this chart.

<table>
<thead>
<tr>
<th>Primary Care</th>
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<tbody>
<tr>
<td><strong>First Contact</strong></td>
<td><strong>Longitudinal</strong></td>
</tr>
<tr>
<td>• Accessibility</td>
<td>• Relationship between a facility and its population</td>
</tr>
<tr>
<td>• Use by people for each new problem</td>
<td>• Use by people over time regardless of the type of problem; person-focused character of provider/patient relationship</td>
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<tr>
<td><strong>Comprehensive</strong></td>
<td><strong>Coordination</strong></td>
</tr>
<tr>
<td>• Broad range of services</td>
<td>• Mechanism for achieving continuity</td>
</tr>
<tr>
<td>• Recognition of situations where services are needed</td>
<td>• Recognition of problems that require follow-up</td>
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This diagram shows how just seven elements are used to describe and measure the four essential functions of primary care. Each function entails the achievement of a particular structural element that the practitioner or practice must have in place in order for there to be appropriate performance. Three aspects of performance are important to the achievement of the function. For two of the functions (comprehensiveness and coordination), that element is the recognition of patients’ problems. For a service to be comprehensive, the totality of a patient’s health problems must be recognized in order for appropriate actions to be taken. For coordination, the practitioner or facility needs to recognize which problems require integration into the totality of care provided to the patient in order to achieve effective and safe care.
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