The Features of Primary Care: First Contact, Person-focused over Time, Comprehensiveness, and Coordination

Barbara Starfield, MD, MPH

Primary Care Course
(Based on Cape Town, South Africa, 2007; and Barcelona, Spain, 2009)
Primary care is characterized by four essential functions. This presentation summarizes evidence for the utility of each of these functions.
First Contact
This figure specifies the important components of health services systems according to their type (structure, process, and outcome in the terminology of Donabedian (1966). In the diagram, structural components of health services systems are designated as Capacity and include the characteristics that enable medical practices to provide services. The process components are designated as Performance and include the categories of action engaged in by practitioners as well as the actions of patients and populations that enable them to receive services that are recommended. All characteristics of health systems and their interactions with communities and civil society should be represented by this diagram. (The diagram applies to ambulatory care as well as to care in institutions; hospitalization is represented as a management strategy under the control of providers.) Costs can be superimposed on each of the components of the system.

This slide shows how the feature of first contact is made operational by considering the extent to which the facility is accessible ("accessibility") and the extent to which it is achieved in practices through use of services, when needed, to the primary care facility or practitioner. The first element is a structural feature ("capacity") of the practice, and the second is the extent to which expected performance ("process") is achieved.
Accessibility is a structural feature of services that makes it possible for people to reach care in time and place.

Access is the ability of people to reach services when and where they need them.

Use of services is the actual reaching of services. It should distinguish both the place and the type of services reached.

Benefits of First Contact Care

- Lower costs
- More efficient use of specialists
- Better outcomes of care for primary care problems
First contact care (in primary care) is associated with lower costs and better outcomes.

Sources:

These data, from a national data source in the US show that spending is much lower when episodes of care begin with a visit to a primary care physician. This is even more the case when the episode is one that concerns an illness, where the differences between a first visit to primary care versus to a specialist are very marked (more than double in the case of first visits to specialists).

The United States is one of the few industrialized countries in which primary care is split into 4 major groups, only two of which are primarily family oriented (family physicians and osteopaths). Another group cares for only adults, and the fourth cares only for children (generally through age 18 or 21). There are systematic differences in the extent to which the functions of primary care are achieved, particularly with regard to the comprehensiveness of services, with family physicians and osteopaths providing a wider range of age-appropriate services than is the case for general internists and pediatricians.
A five-year follow-up study of adults in a national probability sample survey showed that those who had a primary care physician as their regular source of care had one-third lower costs and were 19% less likely to die, even after controlling for several other predispositions to dying.

Children who were referred to an otolaryngologist for possible T & A – rather than going directly there – are more likely to have

- Appropriate indicators for T & A
- Better outcomes at one year

People in countries with stronger primary care are more likely to visit the primary care professional before visiting a specialist, whether primary care strength is measured by the country's primary care policies (3rd column), by clinical practices (second column), or both together (first column).
Continuity
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
Definitions of Continuity NOT Amenable to Measurement

- Orderly, uninterrupted movement of patients
- Team approach
- Even flow of care
- Care that is regularly handed off
- Improving communication methods
- Too many practitioners (as few providers as possible)
- Trust (??)
Continuity =
Uninterrupted Succession
“Uninterrupted Succession”

- Bridging discrete events
- Events are part of time.
Because the term continuity connotes two different aspects of “bridging events” (one across events in visits and one involving processes of care over time), it has been useful to use different terms: “continuity” when the phenomenon is follow-up of discrete events, and “longitudinality” when the focus is on clinical care of the individual or patient population over time.
Continuity: Issues

Disease versus person focus

Episode of care versus continuum of care (duration)

This slide distinguishes the different focus of “continuity” from that associated with a patient focus over time (“longitudinality”)
Do we need a different term for each?

1. For measurement purposes

2. For assignment of responsibility
The common unifying theme between person-focused and disease-focused continuity is the structural features of

INFORMATION TRANSFER

The behavioral feature differs in

• use of services: consistency of place over time (person-focus)
• recognition of information across visits (illness-focus)
Measurement of "Continuity": Information Transfer

Mechanisms of information transfer:
- By person
- By records
- By computers
- By patients

Recognition of information
Measurement of “Continuity”*: Management

- Same provider (SECON index)
- Care coordinator (? primary care)
- Common problem lists

*? Coordination
Measurement of “Continuity”*:
Relational

Affiliation: PCAT measure of extent of relationship

Provider-patient relationship: PCAT measure of interpersonal relationships

Duration

Consistency: UPC, COC

*? Longitudinality
Conclusion

There are two types of “continuity”:

- Relational (person-focused), longitudinal
- Management (disease-focused), coordinating

The common underlying theme is information transfer.

Primary care requires relational continuity, i.e., longitudinality. Both primary care and specialty care require management continuity, i.e., coordination.
Longitudinality
IOM Formulation:

“Sustained partnership in which the patient is treated as a whole person whose values and performance are taken into account”
This slide shows that the primary care feature of person-focus over time ("longitudinality") is achieved when a practice defines its population as the one for which it is responsible (the structural or capacity feature) and that population seeks care there consistently over time. Generally, it requires 2-5 years of a relationship over time for the benefits of longitudinality to be achieved optimally.
Scores of studies have documented benefits from long-term patient-provider relationships. This chart shows that the benefits are greater and more consistently found when that relationship is with a particular person rather than simply with a particular place for receiving care. Outcomes that are less person-focused, for example routine immunizations, are as likely to be achieved when the particular regular source of care is a place, but those features that depend on the knowledge that grows out of an interpersonal relationship are much better achieved when the regular source of care is a person.

In evaluating the benefits of a regular source of care, it is methodologically better to ascertain the relationship before the outcomes (benefits) are measured. Otherwise, better reports of personal relationships might be attributable to better outcomes rather than the other way around. (Some early studies of satisfaction with the regular source of care were prey to this reverse relationship.)


<table>
<thead>
<tr>
<th>Benefits of Longitudinality (Person-centered over Time), Based on Evidence from the Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Identification with a Person</td>
</tr>
<tr>
<td>Better problem/needs recognition</td>
</tr>
<tr>
<td>More accurate/earlier diagnosis</td>
</tr>
<tr>
<td>Better concordance</td>
</tr>
<tr>
<td>Appointment keeping</td>
</tr>
<tr>
<td>Treatment advice</td>
</tr>
<tr>
<td>Less ER use</td>
</tr>
<tr>
<td>Fewer hospitalizations</td>
</tr>
<tr>
<td>Lower costs</td>
</tr>
<tr>
<td>Better overall prevention</td>
</tr>
<tr>
<td>Better monitoring</td>
</tr>
<tr>
<td>Fewer drug prescriptions</td>
</tr>
<tr>
<td>Less unmet needs</td>
</tr>
<tr>
<td>Increased satisfaction</td>
</tr>
</tbody>
</table>

++Evidence good
+Evidence moderate

In British Columbia, every additional 1% increase in continuity of care is associated with a saving of about $81 per year per person with diabetes. A 5% increase would save about 85 million dollars in the care of people with high burdens of morbidity with their diabetes or congestive heart failure. The benefit of continuity of primary care is especially great for people with complex morbidity patterns.

Having a general internist as the PCP is associated with more different specialists seen. Controlling for differences in the degree of morbidity, receiving care from multiple specialists is associated with higher costs, more procedures, and more medications, independent of the number of visits and age of the patient.

Benefits of Longitudinality: Identification with a Place

- Better preventive care
- Better appointment-keeping
- Fewer and shorter hospitalizations
- Less preventable illness/better birth weight
- Lower cost of care

Benefits of Longitudinality: Identification with a Person

- Better concordance
- Better problem/needs recognition
- More accurate diagnoses
- Fewer hospitalizations
- Lower costs
- Better overall prevention
- (Increased satisfaction)

Note: Durations of at least 3 years are required to achieve benefits.

Likely Mechanisms of Benefit from Longitudinality: Person

- Focused on patients, not diseases
- Better knowledge of patient, therefore better appreciation/Recognition of problems
  - more efficient care
  - less inappropriate diagnostic testing
  - more appropriate interventions
  - better concordance
  - better preventive care (some types)
- Better agreement between patient and practitioner on the nature of the problem
  - better outcomes

Likely Mechanisms of Benefit from Longitudinality: Place

- Greater likelihood of seeing same practitioner
- Better information due to common records
  - better knowledge about preventive care needs

Likely Mechanisms of Benefit from Longitudinality: Person Versus Place

- Place is better than no place.
- Particular practitioner is better than place for certain key aspects of care.

This chart reflects the result of an analysis of characteristics of primary care in 11 industrialized countries. Four characteristics are shown in the chart, from left to right: the strength of the primary care system and services overall; the strength of the policy characteristics that support primary care services; the strength of primary care clinical services; and the score for one of those clinical characteristics that reflects strong interpersonal relationships over time between patients and clinicians. Countries that are strong in promoting these relationships have strong primary care oriented policy, strong primary care clinical services, and strong overall primary care as the infrastructure of their health services systems.
Countries with stronger primary care have more person-focused care over time (“longitudinality”), whether primary care strength is measured by the country’s primary care policies (3rd column), just by the clinical practices (2nd column), or both together (1st column).

<table>
<thead>
<tr>
<th>Country</th>
<th>Average total primary care</th>
<th>Primary care (clinical)</th>
<th>Primary health care (systems)</th>
<th>Longitudinality</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE, FR, GE, US</td>
<td>0.4</td>
<td>0.1</td>
<td>0.6</td>
<td>0.0</td>
</tr>
<tr>
<td>AU, CA, JP, SW</td>
<td>1.0</td>
<td>0.9</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>DE, FI, NE, SP, UK</td>
<td>1.6</td>
<td>1.5</td>
<td>1.7</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Recognizing Patients’ Problems
Patient-Centeredness - Definitions

- American College of Physicians: “…provides continuous access to a personal primary or principal care physician who accepts responsibility for treating and managing care for the whole patient through an advanced medical home”.
- Goodman 2006 (Health Affairs symposium on consumer-directed care): opportunity for patients to make choices and manage their health care dollars
- Institute of Medicine (2001): “…health care that establishes a partnership … to ensure that decisions respect patients’ wants, needs, and preferences.”
- International Association of Patients Organizations: “…is designed and delivered to address the healthcare-needs and preferences of patients so that healthcare is appropriate and cost-effective”.


There are many different definitions of patient-centeredness. Some are related to each other, but others are not. In order to be precise about achieving something that appears worthwhile, it is important to know what it is.

Ill health is not the same as disease. It is the purpose of health systems to deal with ill health, not only with disease. In contrast, building the evidence-base for quality of care is disease-oriented.
Neither providing access or opportunities for care nor respecting patients’ wants, needs, and preferences is the same as recognizing patients’ needs or problems. It is not possible to respect patients' needs if one does not know what they are.

No quality assessment/assurance/payment for performance system includes recognition of patients’ needs as a criterion for adequate care.

The few studies that have addressed recognition of patients’ problems as an appropriate subject of inquiry have shown that when patients and practitioners agree on what the patient’s problem is, both the patient and the practitioner are more likely to subsequently judge the patient problem as improved.

Sources:

Patient-Centeredness

- “… is designed and delivered to address the healthcare needs and preferences of patients so that healthcare is appropriate and cost-effective”
- is responsiveness to patients’ needs in the context of the whole person rather than with regard to interventions for specific diseases. Rather than blind faith, trust in one’s physician(s) is manifested by comfort in asking questions and challenging when there is lack of understanding or agreement.

Where does patient-centeredness (relationship-based care over time; “longitudinality”) fit with regard to important structures and processes of health services?
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.

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 multimorbidity measures in records and data systems
Patient-centeredness (or patient-orientation) is an essential hallmark of primary care. Along with comprehensiveness and coordination of care, it distinguishes primary care from all other types of care delivered in health systems.
Comprehensiveness
The Health Services System: Comprehensiveness

Annotation: This diagram selects the structural and performance characteristics that are most essential in providing comprehensive care in primary care settings. The primary care facility should have or have immediate access to a broad enough range of services to meet most health needs of the population served. It should also recognize those situations arising in the practice that require the application of the particular service when appropriate.

Comprehensiveness is a critical feature of primary care because it is responsible for avoiding referrals for common needs in the population and hence for saving unnecessary expenditures.

Comprehensiveness is measured by the availability in primary care of a wide range of services to meet common needs, and by demonstrating that care is, indeed, provided for a broad range of problems and needs.
Countries with stronger primary care have a greater range of services ("comprehensiveness") whether primary care strength is measured by the country’s primary care policies (3rd column), just by the clinical practices (2nd column), or both together (1st column).
Criteria for Comprehensiveness

In US studies: universal provision of extensive and uniform benefits for children, the elderly, women, and other adults; routine OB care; mental health needs addressed; minor surgery; generic preventive care

In European studies: treatment and follow-up of diseases (e.g., hypothyroidism, acute CVA, ulcerative colitis, work-related stress, n=17); technical procedures (e.g., wart removal, IUD insertion; removal of corneal rusty spot; joint injections); taking cervical smears; group health education; family planning and contraception

Sources:
Assessment of Comprehensiveness

- Assess the range of services available in primary care: diagnosis and management of all common problems in the population, mental health problems, minor surgery, indicated screening for disease, common minor procedures, common follow-up needs. (Normative measure)
- Determine the cumulative percentage contributed by visits for the most common problems. The higher the percentage, the greater the breadth of services provided. (Empirical measure)

Sources:
This chart reflects information about the practice of US primary care and specialist physicians. The higher the percentage in the left column, and the lower the percentage in the right column, the more comprehensive the primary care services. As noted, the greatest comprehensiveness of care is provided by family physicians. Specialists, on the other hand, limit their practices to a very narrow scope of services.

Higher comprehensiveness scores in primary care* are associated with better coordination between primary care and other specialists.

*number of medical procedures performed; presence of occupational and physical therapists


This study in Quebec, Canada, used the Primary Care Assessment Tool (PCAT) (www.jhsph.edu/pcpc/pca_tools.html) to ascertain peoples’ experiences with the cardinal functions of primary care: accessibility/first contact; affiliation with a primary care source/person-focused care over time; comprehensiveness of services available and received in primary care; coordination of care; and the related features of family orientation, community orientation, and cultural competence.
Comprehensiveness – a wide range of services within primary care – is an important feature of primary care because it helps to assure that professionals who know patients best are in a position to provide care that is most appropriate to patients’ needs at appropriate times. This slide shows that, in the three countries studied (Republic of the Congo, Madagascar, and Rwanda), the greater the comprehensiveness of services in health centers, the better the vaccination coverage in the populations served by the center.

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.

The procedures and interventions in this chart were unanimously reported (2008) as performed in primary care settings by experts in ten countries. In the US, most or all of these procedures are performed by family physicians, but few are performed by primary care internists or primary care pediatricians. Because primary care practice in the US is often provided by general internists and general pediatricians, overall, comprehensiveness of primary care is less in the US than in other comparable countries.

NOTE: This list does NOT represent the full complement of procedures and services in primary care because the survey did not contain an exhaustive list of the possibilities.

The greater the comprehensiveness of services in primary care, the greater the coordination of care between primary care physicians and other specialists.

When technology is divided into types (machine intensive, mixed, and labor intensive), countries poorly oriented towards primary care had relatively greater use of machine-intensive technology, but relatively lower use of labor intensive technology than countries better oriented towards primary care. Canada had relatively high use of both.

Assessment of Comprehensiveness May Differ from Place to Place

Comprehensiveness means that primary care meets all health-related needs of the population except those that are too uncommon to maintain competence. This will differ from place to place.
The seeking of care from specialists varies considerably across different health systems. In some countries, e.g., the United States, it is common for patients to go directly to a secondary care physician (specialist) without a referral from another health professional (usually a primary care physician). In at least some parts of Canada, self-referrals are discouraged, as specialists are paid a lower fee in such instances. In the UK and Spain, seeing a secondary care physician through a referral from primary care is the norm in the national health system.

The percentage of patients seeing one or more specialists in a year in the United States is very high (at least 40% of the population, but over half of people who have sought any care) but very variable, and it is much higher among the elderly, reaching to over 90% in some health care organizations. In Canada and Spain, the percentage is less and in the UK is about half of that in these two countries – about 15% in the non-elderly. The extent to which the excess in the US is a result of increased self-referral, poor comprehensiveness of primary care, historical practice and peoples’ expectations, and/or financial incentives that encourage specialty care is unknown.

Whatever the explanation, the subject of the role of specialists deserves investigation. In view of the evidence that much of specialty care may be inappropriate and increasing,\(^1\) and that it raises costs of care unnecessarily, studies of the contributions made by specialists to diagnosis and management are needed, as are studies of the role of primary care in maintaining comprehensiveness of services in the primary care sector. Increasing comprehensiveness of care is associated with more effective, efficient, and equitable services in countries where the subject has been studied.\(^2\)


In primary care, who refers and for what?
This chart, based on nationally representative data, shows that referrals from primary care in the US have been increasing over time. The extent to which this is the case in other countries as well, and in countries that have strong primary care, is not known. DOES IT SIGNIFY A FAILURE OF PRIMARY CARE, OR IS THERE SOME INHERENT BENEFIT FROM IT?
In the United States, physicians trained in general internal medicine are considered to be primary care physicians. In their practices, however, they are more likely to be seeing patients for routine follow-up and less likely to be dealing with new problems at visits than is the case for family physicians. Some of this difference is likely to be because some family physicians care for children, but it is much more common in the US for pediatricians to care for children and young adolescents, who are less likely to have chronic conditions than are adults. Other data indicate that family physicians are more comprehensive in the care they provide and more responsive to the variety of health problems experienced by patients, which would account for their greater likelihood of caring for new problems in visits.
These data from an area in Catalonia (Spain) indicate that about one-quarter of reasons for visits for referral from primary care are associated with the diagnosis of diabetes, with referrals to ophthalmologists. However, the most common TYPE of problem accounting for referrals is orthopedic.
### Conditions with Variability in Specialist Referral to:

<table>
<thead>
<tr>
<th>Condition</th>
<th># specialist types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benign neoplasm</td>
<td>5</td>
</tr>
<tr>
<td>Low back pain</td>
<td>4</td>
</tr>
<tr>
<td>Musculoskeletal signs/symptoms</td>
<td>3</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3</td>
</tr>
<tr>
<td>Depression/anxiety</td>
<td>3</td>
</tr>
<tr>
<td>Bursitis, synovitis</td>
<td>3</td>
</tr>
<tr>
<td>Neuropathy, neuritis</td>
<td>2</td>
</tr>
<tr>
<td>Hearing loss</td>
<td>2</td>
</tr>
<tr>
<td>Sprains/strains</td>
<td>2</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>2</td>
</tr>
</tbody>
</table>


Referrals, even for specific conditions, are to a variety of types of specialists. For example, for low back pain alone, consultation may be sought from any one (or more) of five different specialists.
This diagram shows the very complex processes involved in the movement of patients from primary care to secondary care. For the most part, referrals are made in the middle of the diagram, where patients are sent elsewhere for help in making diagnoses when they present with problems, for instituting treatment when a diagnosis is made, and for reassessing the patient after management (treatment) is instituted. Patients are sometimes re-referred to a different physician at any step in this process. The general expectation is the secondary care physicians ("specialists") will send the patient back to the referring physician, but in countries such as the United States, which are highly oriented to non-primary care physicians, there appears to be an increasing tendency for secondary care physicians (particularly medical subspecialists) to maintain continuing care for routine follow-up. As of 2005 in the United States, about half of all visits to these physicians are for routine follow-up only, thus raising the question as to appropriateness of this care, which is more costly than that provided by primary care physicians and has no known added value.

Sources:


This diagram explains the challenge of coordination for each of the mechanisms of referral shown.

In this study carried out primarily in US family practices, the most common characteristic of patients who were referred to specialists was a high degree of morbidity burden, as measured by the combination of different types of conditions that people experience in a year. It was more important than prevalence of any particular diagnosis or type of diagnosis, whether or not the diagnosis was surgical, and whether or not gate-keeping was a feature of the primary care provided. For just those diagnoses for which referral could be considered discretionary, morbidity burden was not a major influence on likelihood of referral.
Visit referral rates are influenced by how many different types of illnesses (i.e., morbidity burden) people have. In this study, many fewer physicians are considered to be excessive referrers when their patient profiles are taken into account.
A study in the Canadian province of British Columbia explored the challenges of coordinating care by examining the number of specialists visited by patients of family physicians. The modal (most common) number of specialists seen in a year by patients affiliated with family practitioners was between 100 and 125. About 15% of family physicians had professional affiliations with over 200 specialists. The impact of this large number of possible relationships is a consideration in understanding the challenges of coordination of care.

The findings in this study were identical to those in a subsequent US study of referrals for people age 65 and over. (Pham HH, O'Malley AS, Bach PB, Sainz-Martinez C, Schrag D. Primary care physicians' links to other physicians through Medicare patients: the scope of care coordination. Ann Intern Med 2009;150:236-42. )
Comprehensiveness of services is key to achieving patient-oriented care.
Comprehensiveness in primary care is necessary in order to avoid unnecessary referrals to specialists, especially in people with comorbidity.
Coordination of Care
Coordination: Definition

...the combining of diverse parts to make a unit; skillful and balanced movements of different parts

Coordination

Coordination requires transfer of information (a structural element) and the recognition of that information in the ongoing care of a patient (a process element).

Modes of transfer are multiple: conventional medical records, patient-held records; smart cards; electronic medical records; multidisciplinary teams with specified complementary, supplementary, and substitutive functions of each team member.

These different types have not been compared with regard to effectiveness and efficiency, but developing countries (in particular) are exploring the potential of community workers in assuming explicit responsibility for a variety of primary care tasks in conjunction with personnel in health centers where they exist.

Sources:
This diagram shows that coordination is composed of two elements: a structural characteristic denoting the capacity of a facility or practice to facilitate information transfer from one time or place to another and a behavioral (performance) feature that indicates that problems generated at one time or place are recognized at another time or place.
Countries with stronger primary care are more likely to provide better coordination of care, whether primary care strength is measured by the country’s primary care policies (3rd column), by clinical characteristics (2nd column), or both together (1st column).
Challenges of Coordination

To understand need for contributions of specialist care

• Assistance with diagnosis
• Advice on treatment
• Definitive treatment

  1. Short-term
  2. Long-term (ongoing management)
     a. Shared responsibility
     b. Transferred responsibility
Research on coordination of care has been hampered by cross-disciplinary differences in conceptualization. Research in primary care indicates that continuity of type of practitioner, especially specific practitioner, as well as problem lists in medical records, enhances the recognition of patients' problems from one visit to the next.

The importance of coordination has only recently been recognized as a major issue in primary care.

Sources:


Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies: Volume 7—Care Coordination.

When patients’ visits to specialists are based on a primary care physician referral, patients report much better coordination of care, i.e., better informed primary care physician, better primary care physician follow-up, than is the case when patients self-refer or are referred by some other source.

The addition of problem lists or computerized summaries of information on problems, tests, and therapies improves recognition of important patient information from one visit to another, especially if the inter-visit duration is long and the practitioner changes from one visit to the other.

Sources:

Starfield B, Simborg DW, Horn SD, Yourtee SA. Continuity and coordination in primary care: their achievement and utility. Med Care 1976;14:625-36.


The more common the condition in primary care visits, the less the likelihood of referral, even after controlling for a variety of patient and disease characteristics.

When comorbidity is very high, referral is more likely, even in the presence of common problems.

IS THIS APPROPRIATE? IS SEEING A MULTIPlicity OF SPECIALISTS THE APPROPRIATE STRATEGY FOR PEOPLE WITH HIGH COMORBIDITY?

Expectations for the type of referral are markedly different depending on the type of secondary care physician to whom the patient is referred; they differ according to whether the referral is for a procedure or for advice and guidance. In this US study, more than 60% of referrals to gastroenterologists, otolaryngologists, general surgeons, urologists, and obstetrician/gynecologists are expected (by the referring primary care physician) to be short term (less than one year). In contrast to these referrals to secondary care physicians who focus on procedural interventions, referrals to psychiatrists, ophthalmologists, cardiologists, and allergists are much more likely to be for long-term ongoing care (more than one year). A relatively high percentage of short-term referrals for the purpose of consultation (rather than definitive care) are made to dermatologists, neurologists, pulmonologists, orthopedists, psychiatrists, non-physician practitioners, and, especially, psychologists. These findings suggest that traditional modes of interaction among primary care physicians and some types of secondary care physicians might be changed to allow primary care physicians to play a more active role in the care of patients, with appropriate consultation (by phone or video-technology) that do not require direct involvement (through referral) of the secondary care physician with the patient. It may even be that some procedures could be devolved to primary care where the need for them is common enough to make it practical to carry them out there.


These US data indicate that, for most referrals to specialists, the primary care physician expects a test or a procedure to be done. Exceptions are for allergists and pulmonologists (for whom about 45% or referrals are expected to be with shared management), and for psychologists and psychiatrists (where more referrals are expected to generate shared management).

Primary care physicians have different expectations from referrals to different types of specialists. For most specialists, the expectation is for shared management, but in at least a quarter of referrals to surgeons, ophthalmologists, urologists, and dermatologists, the expectation is for definitive management by the specialist for the specific problem occasioning the referral.

The majority of family physicians and pediatricians sent information to the specialist on referring a patient; family physicians were more likely than pediatricians to schedule the appointment. Less than half of family physicians were aware of the status of the referral three months later, but most had received a feedback letter when it occurred, mostly by mail. Less than two-thirds of pediatricians had any of these types of follow-up available to them.
In the United States, more than a quarter of referrals are expected to be associated with shared management, except in the case of referrals to general surgeons, urologists, and obstetrician/gynecologists. More than half of all referrals to most types of specialists are expected to be for short term consultation.

Fewer than one quarter of referrals are expected to result in transferred management, although, in fact, there is evidence that about half of all visits to secondary care physicians in the US are for routine follow-up instigated by the specialist.

Sources:


Types of “Referral”: Volunteer US Practices, Mid-1990s

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Practice</td>
</tr>
<tr>
<td>Pediatrics</td>
</tr>
<tr>
<td>Consultations (no transfer of responsibility)</td>
</tr>
<tr>
<td>Referral with shared management</td>
</tr>
<tr>
<td>Referral with transferred management</td>
</tr>
</tbody>
</table>

Sources:

In this study of US family physicians and pediatricians who were participating in a collaborative practice network, there were differences between family practice and pediatric practice in the percentage of referrals for consultation, referral with shared management, and referral with transferred management (for the problem occasioning the referral). (The data were not controlled for age difference in the patients of pediatricians and family practitioners.) More than half of family practitioner referrals were expected to be for short-term consultation only (as compared with 40% for pediatricians), although “consultation only” was more common among pediatricians than shared management or transferred management.
Percent of Visits Made by Patients Who Were Referred*: US, 1994

<table>
<thead>
<tr>
<th></th>
<th>All ages</th>
<th>Children under age 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>All physicians</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Family practice</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Other specialties</td>
<td>24</td>
<td>35</td>
</tr>
</tbody>
</table>

*for this visit


These national (US) data from the mid 1990s show that only about one-quarter (and one in three for children) of visits to specialists were by referral from primary care. In the US, in contrast to most other industrialized countries, most patient still (as of the early 2000s) can go directly to specialists without financial penalty to the patient or to the practitioner.
Percent of Visits in Which Patient Was Referred Elsewhere: US, 1994

<table>
<thead>
<tr>
<th></th>
<th>All ages</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>All physicians</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Family practice</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other specialties</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>


Fewer than 10% of visits to primary care physicians in the US result in a referral, although general internists appear to refer more than other types of primary care physicians. (Data not controlled for patient characteristics such as age or gender.)
### Characteristics of Referrals: Volunteer US Practices, Mid-1990s

<table>
<thead>
<tr>
<th>Reasons (not mutually exclusive)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice on diagnosis</td>
<td>44</td>
</tr>
<tr>
<td>Advice on treatment</td>
<td>48</td>
</tr>
<tr>
<td>Surgery</td>
<td>36</td>
</tr>
<tr>
<td>Non-surgical procedure and/or medical treatment</td>
<td>29</td>
</tr>
<tr>
<td>Mental health counseling</td>
<td>7</td>
</tr>
<tr>
<td>Patient request</td>
<td>16</td>
</tr>
<tr>
<td>Failed treatment</td>
<td>31</td>
</tr>
<tr>
<td>Multidisciplinary care</td>
<td></td>
</tr>
<tr>
<td>Expected duration of referral less than 3 months</td>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatrics</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>62</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>31</td>
</tr>
<tr>
<td>40</td>
</tr>
</tbody>
</table>

Sources:


For both family physicians and pediatricians, the most common reasons for referral are for advice on diagnosis and/or treatment. In three of every five referrals from family medicine, the expected duration of the referral process was less than three months. (The corresponding percentage for pediatricians is 40.)
The characteristics of referrals and expectations from them in the 15 years since these previous studies were done are largely unknown, as the studies have not been repeated.
In the United States, about half of all referrals are intended to be for short-term consultation. For the remaining half, the overwhelming expectation is for shared care rather than transferred care.

Differences in expected length and type of referral

(short-term consult, short-term referral, long-term consult/referral)

Only found for:

Benign neoplasm, musculoskeletal signs/symptoms, diabetes

Differences in expectation of specialist
(advice, procedure, shared responsibility,
assume total responsibility)

Only found for: sprains/strains, diabetes

There were no statistically significant
differences in expectation for the referral for
any of the other 10 broad categories of types
of conditions referred, e.g., benign neoplasms,
mental health problems, abdominal pain, low
back pain.
Imperatives for Research in Primary Care/Specialty Care

- The impact of comorbidity on development of clinical and preventive care guidelines
- New strategies to better plan for relationships between primary care physicians and specialists.
- Cross-country and cross-area variations in referral rates and variations in care-seeking from primary care physicians and specialists demands a new approach to designing more appropriate roles of the two types of physicians.
Challenges of Coordination

To understand need for contributions of specialist care

- Assistance with diagnosis
- Advice on treatment
- Definitive treatment
  1. Short-term
  2. Long-term (ongoing management)
    a. Shared responsibility
    b. Transferred responsibility
A major function of primary care is to assure that specialty care is more appropriate and, therefore, more effective.
The US Needs More Experience with Alternative Modes of Primary Care/ Specialist Interaction

- Direct consultation rather than through the patient
- Specialist outreach through primary care
- In-service training in primary care subspecialization?

Starfield 12/04
RC 8330
What We Already Know

1. Inappropriate referral to specialists leads to greater frequency of tests than appropriate referrals to specialists.
2. Inappropriate referrals to specialists leads to poorer outcomes than appropriate referrals.
3. The socially advantaged have higher rates of visits to specialists than the socially disadvantaged.

Starfield 02/03
RC 5995
Specialists and Generalists: the Imperative for Shared Care

The reasons:
Costs
Comorbidity
Effectiveness of care

Challenges and alternatives:
Payment mechanisms
Global capitation (fund-holding)
Episode payment (not feasible)

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.