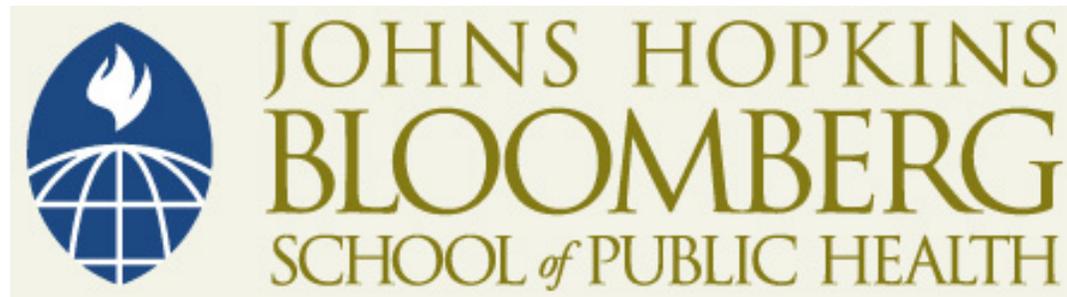


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Primary Care and Specialty Care Issues

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Primary Care Course
(Based on Cape Town, South Africa, 2007;
and Barcelona, Spain, 2009)

This presentation discusses the role of specialists, i.e., non-primary-care physicians, in health systems at a time of increasing recognition of the importance of a primary care orientation in health systems. It concludes that a reassessment of their roles is an imperative, at least in some countries.

Although much is known about the characteristics and contributions of primary care, little is known about the characteristics and contributions of specialist care.

What is the right number of
specialists?

What do specialists do?

What do specialists contribute
to population health?

We know that

1. Inappropriate referrals to specialists lead to greater frequency of tests and more false positive results than appropriate referrals to specialists.
2. Inappropriate referrals to specialists lead to poorer outcomes than appropriate referrals.
3. The socially advantaged have higher rates of visits to specialists than the socially disadvantaged.
4. The more the subspecialist training of primary care MDs, the more the referrals.

A MAJOR ROLE OF PRIMARY CARE IS TO ASSURE THAT SPECIALTY CARE IS MORE APPROPRIATE AND, THEREFORE, MORE EFFECTIVE.

Sources: Starfield et al, Health Aff 2005; W5:97-107. van Doorslaer et al, Health Econ 2004; 13:629-47. Starfield B, Gervas J. Comprehensiveness v special interests: Family medicine should encourage its clinicians to subspecialize: Negative. In: Kennealy T, Buetow S, ed. Ideological Debates in Family Medicine. Nova Publishing, 2007.

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Concomitant with increasing rates of diagnosis and comorbidity is the increased role played by specialists in some health care systems. Increasing use of specialists creates more challenges to maintaining person-focused care rather than disease-focused care.

Royal College of Physicians and Surgeons Task Force (Canada) to Review Fundamental Issues in Specialty Education

GENERALISM	SPECIALISM
<i>Knowledge</i>	
Breadth	Depth
Multidisciplinary	Single discipline
Undifferentiated	Differentiated
Prevention, investigation/ management/ rehabilitation and chronic care	Investigation/management
Disease is considered in the context of multiple systems and the whole.	Disease is considered in the context of a single system.
Community- and hospital-based	Hospital-based
<i>Skills</i>	
Predominantly non-invasive	Predominantly invasive
<i>Attitudes</i>	
Holistic	Reductionist

Why are specialists needed?

Functions 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

We know very little about which specialties take over management of

(a) Patients - all problems

(b) Patients - a specialty problem only

and for how long.

We need this information to better plan for the deployment of specialist resources.

Specialist care can be associated with worse outcomes if it is not adequately coordinated with primary care.

Percentage of People Seeing at Least One Specialist in a Year

US	40% of total population; 54% of patients (users)
Canada (Ontario)	31% of population (68% at ages 65 and over)
UK	about 15% of patients (at ages under 65)
Spain	30% of population; 40% of patients (users)

Use of Specialists in the US

- REFERRAL rates from primary care to specialty care in the US are HIGH.
- Between 1/3 and 3/4 (depending on the type of specialist) of visits to specialists are for routine follow-up.
- The percentage of people SEEN BY a specialist in a year is high, especially in the presence of high morbidity burden.

In the United States,
about one-half of all
visits by “new” patients
are to specialists.

In the US in 2002-2004, 46% of all visits to physician specialists in a year were for routine follow-up of existing diagnoses.

54% of all referred visits to physician specialists were for routine management or preventive care.

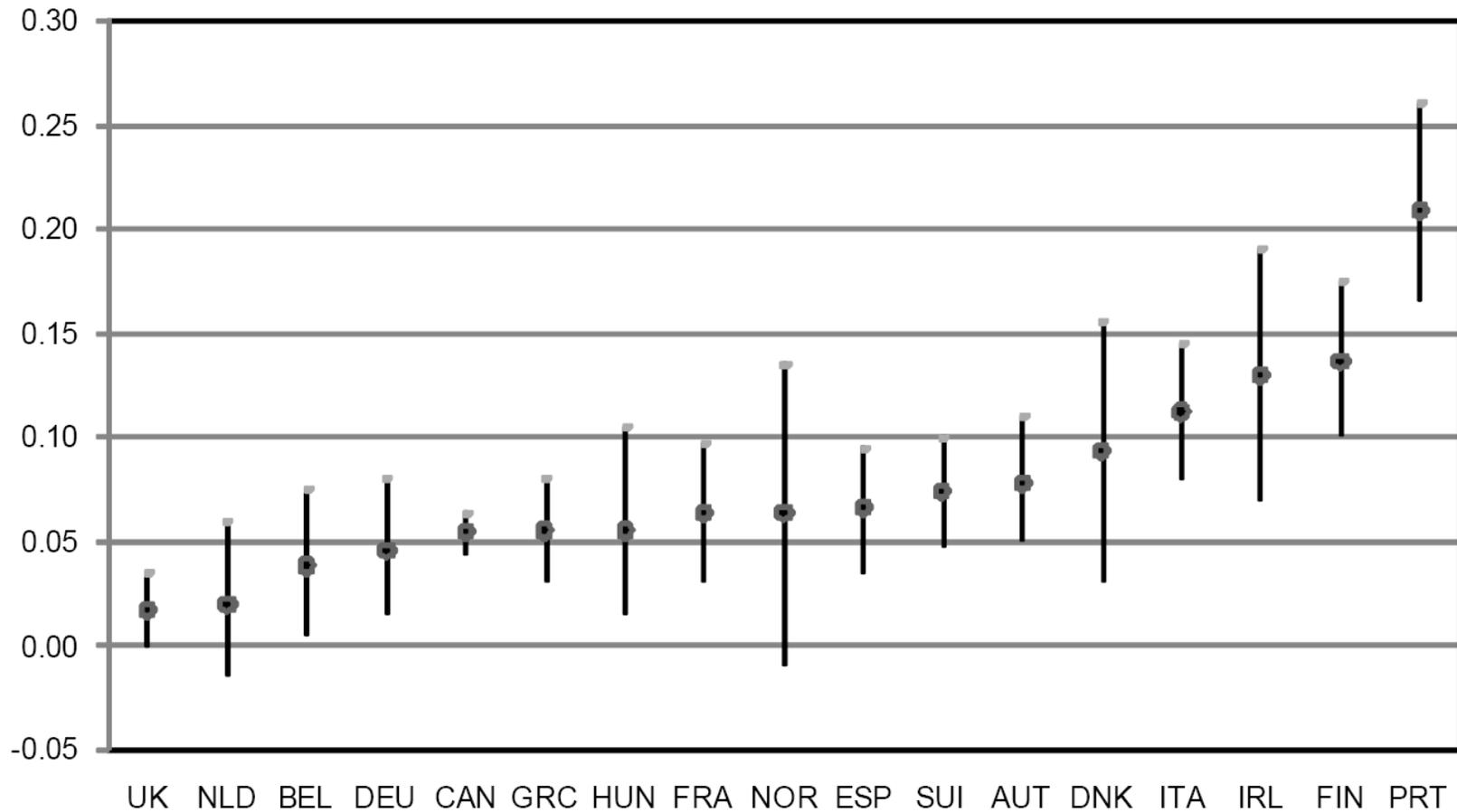
Relationship with Regular Doctor

Percent:	AUS	CAN	GER	NZ	UK	US
Has regular doctor	92	92	97	94	96	84
5 years or more	56	60	76	57	66	42
NO regular doctor	8	8	3	6	4	16

We know exactly what primary care is and how to measure it.

We know almost nothing about what specialty care is and how to measure it.

Horizontal Inequity Indices for Specialist Care Use in 17 Countries, 2000 or Nearest Available Year



Note: Specialist care is inequitable (in this case, favoring high income groups) if the 95% confidence limit is significantly different from zero. This is so for all countries, except the United Kingdom, the Netherlands, and Norway.

Sources: de Looper & Lafortune, OECD Health Working Paper No. 43 ([http://www.ois.oecd.org/olis/2009doc.nsf/LinkTo/NT00000DE2/\\$FILE/JT03260782.PDF](http://www.ois.oecd.org/olis/2009doc.nsf/LinkTo/NT00000DE2/$FILE/JT03260782.PDF)).

van Doorslaer & Masseria, OECD Health Working Paper No. 14 (<http://fiordiliji.sourceoecd.org/vl=22046792/cl=47/nw=1/rpsv/cgi-bin/wppdf?file=5lgsjhvj7phb.pdf>).

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How Frequently Do Specialists Take Care of People with “Specialty” Conditions?

% of episodes

Cardiologists 36% of those with cardiac disease

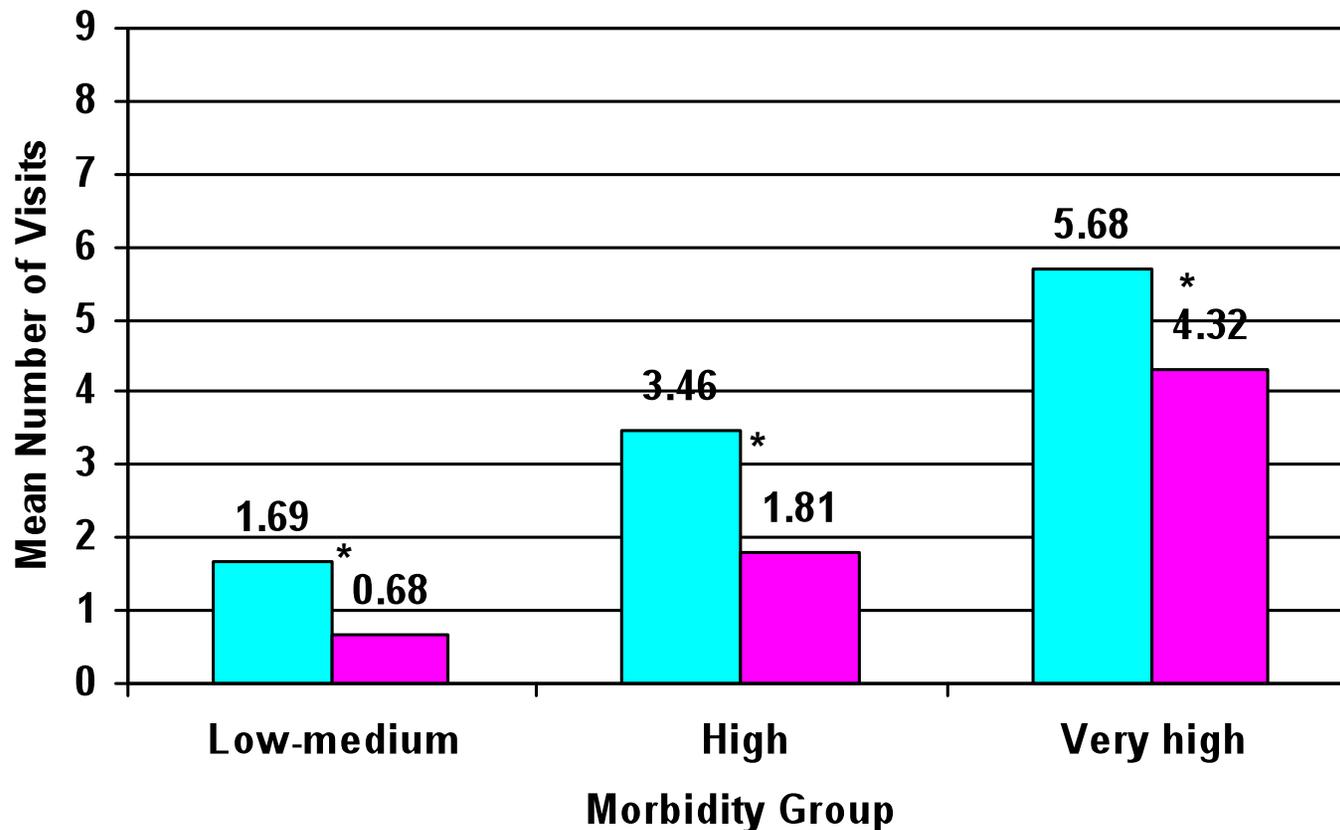
Orthopedists 22% of of those with musculoskeletal disease

Neurologists 40% of those with nervous system disease

Factors other than age, gender, and overall “morbidity burden” determine whether a patient will be seen by a specialist or not, and how much it will cost. Episodes in which a specialist is seen are more expensive.

With the possible exception of long-term management for very uncommon conditions and for elderly patients with high degrees of morbidity, specialists play a lesser role in the care of patients than do primary care physicians.

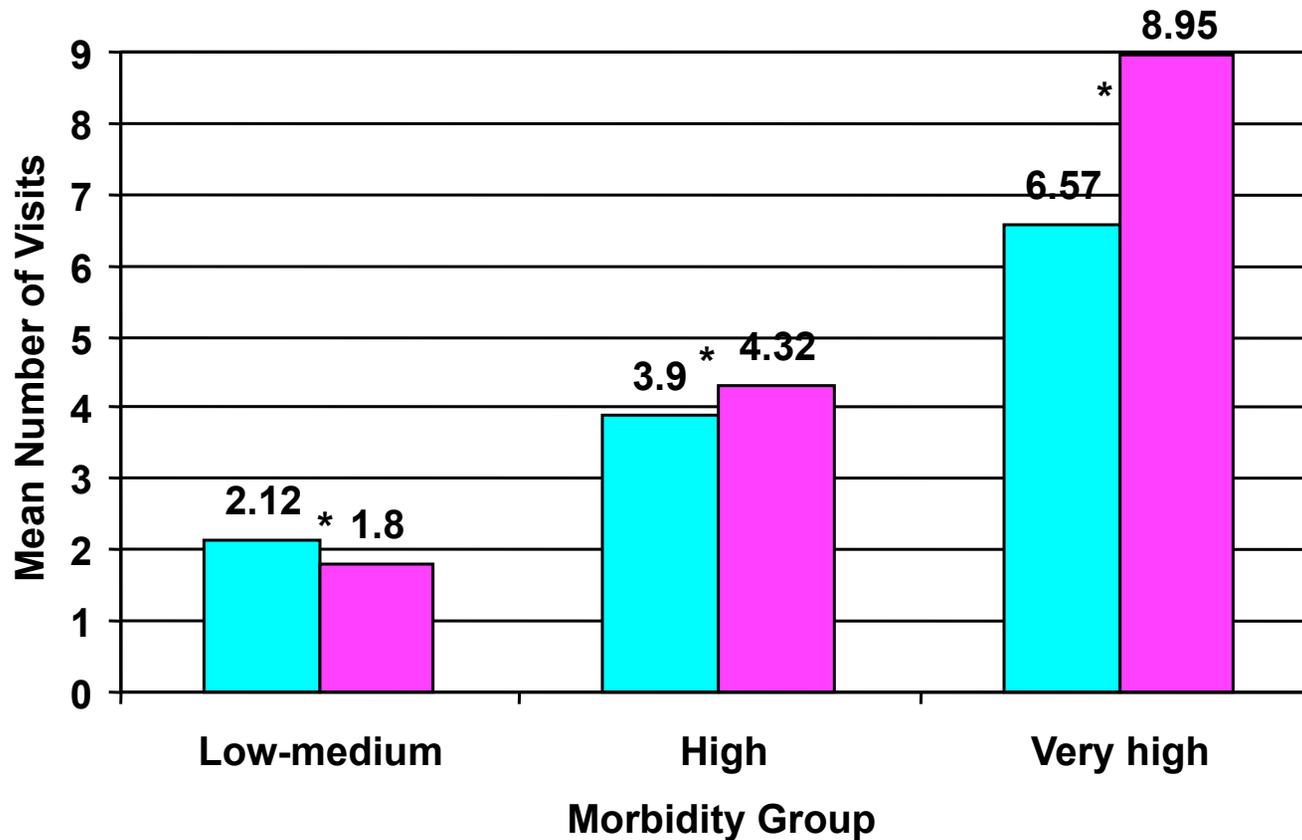
Average Number of Visits Per Year to Primary Care and Specialists by Morbidity Burden, Comorbid Conditions, Managed Care Organizations, 1996



*p<.0001

■ Primary Care Physician ■ Specialist

Average Number of Visits Per Year to Primary Care and Specialists by Morbidity Burden, Comorbid Conditions, Medicare



*p<.0001



Percentage of Visits by Type of Visit and Specialist, US, 2004

	New patient	Known patient			Other
		New problem	Recurrence	Routine followup	
Family physicians	7	46	6	38	3
General internists	7	34	6	50	3
Pediatricians	5	57	2	36	1
All primary care	7	45	5	41	3
Medical specialists	17	18	7	56	2
Surgical specialists	20	39	7	32	2
OB/GYN	7	19	2	71	2
Psychiatrists	10	5	13	70	2

What do specialists
contribute to outcomes?

Problems with an Excessive Focus on Specialist Care

Poorer generic and some disease-specific outcomes

More unnecessary diagnostic and therapeutic intervention

Higher costs

Greater inequities in health care and health

- The higher the ratio of medical specialists to population, the higher the surgery rates, performance of procedures, and expenditures.
- The higher the level of spending in geographic areas, the more people see specialists rather than primary care physicians.
- Quality of care, both for illnesses and preventive care, are no better in higher spending areas, and in most cases are worse.

(Data controlled for sociodemographic characteristics, comorbidity, and severity of illness)

Sources: Welch et al, N Engl J Med 1993; 328:621-7. Fisher et al, Ann Intern Med 2003; 138:273-87. Baicker & Chandra. Health Aff 2004; W4(April 7): 184-197 (<http://content.healthaffairs.org/cgi/reprint/hlthaff.w4.184v1.pdf>).

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Specialty services are more costly than primary care services, both from the systems viewpoint and from the viewpoint of individuals followed over time. This is especially the case for medical subspecialists.

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

Patients receiving care from specialists providing care outside their area of specialization have higher mortality rates for community-acquired pneumonia, acute myocardial infarction, congestive heart failure, and upper gastrointestinal hemorrhage.

For elderly patients with diabetes, disease oriented specialists adhere to guidelines related to diabetes better than primary care physicians, but there are no differences in adherence to other guidelines, in short-term outcomes or satisfaction, and much lower costs for family physicians.

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.

Sources: Hartz & James, J Am Board Fam Med 2006; 19:291-302. Chin et al, Med Care 2000; 38:131-40. Donohoe, Arch Intern Med 1998; 158:1596-1608. Bertakis et al, Med Care 1998; 36:879-91. Harrold et al, J Gen Intern Med 1999; 14:499-511. Smetana et al, Arch Intern Med 2007; 167:10-20. Other studies reported in: Starfield et al, Milbank Q 2005; 83:457-502.

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Between 1960 and 2000, specialist physician supply increased markedly – much more than primary care physician supply – in the US. But within the US, the greater the specialist supply, the worse the outcomes for COMMON conditions.

In 35 US analyses dealing with differences between types of areas (7) and 5 rates of mortality (total, heart, cancer, stroke, infant), the greater the primary care physician supply, the lower the mortality for 28. The higher the specialist ratio, the higher the mortality in 25.

Above a certain level of specialist supply, the more specialists per population, the worse the outcomes.

Need and Number of Neonatologists

- Variation in number of neonatologists per population of births does not vary with measures of need (VLBW ratios).
- There is no relationship between the supply of neonatal care resources and infant mortality.
- Increases in the supply of neonatologists beyond a moderate level confer no additional benefit.

After adjustment for neonatal and maternal characteristics, the neonatal mortality rate in neonatal intensive care units was lower in regions with 4.3 neonatologists per 10,000 births than in those with 2.7 per 10,000 (OR .93).

Further increases in the number of neonatologists were not associated with greater reductions in death rates.

In the US, as compared with other industrialized nations, there are

- twice as many coronary artery bypass procedures as the next highest country and three times the average
- one-third more coronary angioplasties than the next highest country, and over twice as many as the average

High specialist supply is also associated with later (rather than early) stage diagnosis of cervical cancer, colorectal cancer, breast cancer, and for melanoma.

Specialist societies are often strong enough to prevent primary care from providing services that are provided in primary care elsewhere and despite evidence that they can be provided safely in primary care.

- monitoring anticoagulant therapy in atrial fibrillation
- routine colonoscopy
- early voluntary abortion
- management of insulin-dependent diabetes (Belgium)
- reduction of dislocated toe
- injection of vitamin B12 in iatrogenic pernicious anemia secondary to gastric bypass
- H. pylori screening

What Is Wrong with Specialty-driven Medicine?

- Specialist care is very important, if it is appropriate.
- Specialist care is dangerous, if it is inappropriate.

What We Do Not Know

The contribution of specialists to

- Unnecessary care (due to overestimation of the likelihood of disease)
- Potentially unjustified care (due to inappropriateness of guidelines when there is comorbidity)
- Adverse effects (from the cascade effects of excessive diagnostic tests)

What specialty care can be done in the community rather than in hospitals for

- Help with diagnosis and initiation of treatment for relatively common problems and conditions?
- Help with ongoing management of relatively common conditions?

Can subspecialization within primary care reduce unnecessary specialist visits?

What Is Subspecialization?

A primary care practitioner

- working part-time
- consulting on certain medical problems
- managing certain medical problems
- doing certain medical procedures

What Is NOT Subspecialization?

- Encouraging primary care physicians to undertake what they already should be doing
- Enhancing the comprehensiveness of primary care
- Developing a full-time consulting service

Proposed Benefits of Subspecialization

- Quicker potential access
- Improved patient and/or practitioner satisfaction
- Make primary care more intellectually rewarding
- Reduced referrals to secondary care
- Career development (circular reasoning!)
- Improved communication with specialists*
- Clinical benefits*
- Financial benefits*

*No evidence to date

Source: based on Leese, Comprehensiveness v special interests: Family medicine should encourage its clinicians to subspecialize. In Kennealy & Buetow. Ideological Debates in Family Medicine. New York, NY: Nova Publishing, 2007.

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Examples of Subspecialization in Primary Care

- Complementary: palliative care, public health, cardiac rehab, clinical governance training, chronic lung disease, preventing hospital readmissions
- Supplementary: respiratory disease management (?), women's health (?), ENT services, diabetes care (?), orthopedics (?)
- Substituting: cancer leads, dermatology, glaucoma, teenage pregnancy, diverting from emergency care

Possible Advantages of Subspecialization

- Fewer referrals/increased comprehensiveness of primary care (supplementary services)
- Potential for greater understanding of roles of specialist care

Possible Disadvantages of Subspecialization

- Increase in referrals
- Decreasing experience with the range of primary care problems for those who specialize
- Inappropriate services, mimicking currently inappropriate care in specialty practice

Requirements for Successful Subspecialization

- Training in primary care settings, NOT specialty care settings
- Focus on disability and discomfort, not on medical diagnoses

Evidence on the Impact of Subspecialization

- Increases referrals without improving outcomes
- Increases costs and administrative challenges
- May improve patient's view of access to care
- Practitioners may function more as specialists than as primary care physicians.

Alternatives to Subspecialization

- Train more gerontologists.
- Delegate primary and secondary preventive activities.
- Encourage more inquiry into primary care to make it more intellectually challenging.
- Change (or better specify) the roles of specialists.
- Increase comprehensiveness by increasing the range of problems in primary care.

Questions Needing Answers

Is the greater use of diagnostic technology among specialists only because of higher prior probability of a positive result, or is there some inherent predisposition to using diagnostic tests among specialty-oriented physicians?

Questions Needing Answers

Is comorbidity associated with more hospitalizations for ambulatory care sensitive conditions (ACSC) because there is simply more pathology or because medical care does a poor job of detecting and treating comorbidity?

Can we clearly specify what it is that specialists can do that primary care physicians can't do?

Questions Needing Answers

At what time during an episode of illness should one refer to a specialist? How can this appropriate time be measured?

Is there evidence for a threshold of frequency such that something is too rare for primary care physicians to maintain competence?

Is it good (or bad) that the rich see specialists more than the poor?

What We Need to Know

- What specialists contribute to population health
- The optimum ratio of specialists to population
- The functions of specialty care and the appropriate balance among the functions
- The appropriate division of effort between primary care and specialty care
- The point at which an increasing supply of specialists becomes dysfunctional

Making More Efficient Use of Specialists

- Consider when specialist referrals can be avoided by direct consultation between the primary care physician and the specialist, without the patient having to be present.
- Develop a strong secondary (community) level of care for diagnostic testing.
- Periodic specialist (secondary level) visits to primary care, perhaps involving group visits where appropriate.

Assessment of Specialty Care Orientation

- percentage of population seeing one or more specialists in a year
- visits to specialists per person in a year
- percentage of patients seeing one or more specialists in a year
- visits to specialists per patient per year
- percentage of patients referred in a year
- ability of patients to go directly to specialists for new and/or re-visits)

ALL of the above are also relevant for the type of specialist, and for the reason for visit.

Because of their difference in training and roles, it is important to distinguish primary care physicians and other specialists in analyses of supply, demand, quality, effectiveness, efficiency, and equity of health services.

The more training in hospitals, the less the likelihood that physicians will be able to deal adequately with problems that present in the community. This is why specialists do not do as well as primary care practitioners in the management of **common** problems. It is also the reason additional training in a subspecialty makes physicians refer more; they learn to have a higher suspicion of serious illness than is really the case in the community and therefore do more interventions.