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TECHNICAL REPORT:

## **Primary Care: Summary of Recent Developments**

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**4 February, 2002**

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# Table of Contents

I. Abstract .....	1
II. Executive Summary .....	2
III. Introduction .....	2
IV. The Evolving Definition of Primary Care.....	4
A. The Alma Ata Declaration .....	4
B. New Emphasis on Elements of Primary Care .....	5
V. Does Primary Care Work? .....	7
A. International and Inter-Regional Comparisons – Health Outcomes and the Commitment to Primary Care .....	7
B. Case/Control and Longitudinal Studies.....	8
VI. Who Provides Primary Care?.....	10
A. “General Practitioner” vs. “Family Practice Specialist” vs. “Specialists” (Internists / Pediatricians) .....	10
B. Scope of Practice .....	11
C. Gatekeeping.....	12
D. Prescribing and Dispensing.....	13
E. Role of Non-Physician Providers .....	13
F. Integration with Other Services and Community Care Providers .....	14
VII. How is Primary Care Organized? .....	14
A. Independent Private or Group Practice.....	14
B. Salaried in Government-Run Centers .....	15
VIII. How are Primary Care Providers Paid? .....	15
A. Salaries .....	15
B. Fee for Service.....	15
C. Capitation.....	15
D. Mixed Systems .....	16
E. Patient Co-Payments.....	16
F. Relative Payment Levels for Primary Care Physicians and Specialists .....	16
IX. How is Government Organized to Deal with Primary Care? .....	17
A. Local/Regional.....	17
B. National.....	18
X. Urban and Rural Primary Care.....	19
A. Rural.....	19
B. Urban: Broader Concept of the Primary Care Team.....	19
XI. New Development within Primary Care .....	20
A. Essential Drugs and Rational Prescribing .....	20
B. Fundholding: Primary Care Control of Funding for Specialist Care.....	20
C. Loose Collective Organizations for Quality Control, Continuing Medical Education, Coverage Rotation, etc.....	21

D. Telephone Hotlines .....	22
E. Rostering .....	22
F. Polls to Measure Patient Satisfaction .....	22
G. Quality Measurement .....	23
H. Focus on Mental Health.....	23
I. Local vs. National Contracting and Determination of Pay and Conditions .....	23
J. Evidence-Based Medicine and Practice Guidelines.....	24
XII. Conclusion .....	24

## **I. Abstract**

Primary care is at the heart of healthcare reform in Central Asia. By increasing a patient's relationship with one specific primary care physician, it is anticipated that the physician will be able to resolve most medical problems without referral.

Through an analysis of primary care in a number of developed countries, and a review of related literature, this document explains why an emphasis on primary care is ultimately more effective than narrow specialty outpatient and inpatient care. The report concludes that primary care does work although there is no single model of primary care that must be followed. Good results are achieved from systems with different sources of funding, different types of organization, and different schemes of physician compensation. The report stresses the importance of adequate funding for primary care, even if at the expense of other healthcare sectors; high-quality education for primary care physicians; the role of continuity provided in the primary care doctor-patient relationship; and the importance of the holistic approach.

## II. Executive Summary

Primary care is at the heart of healthcare reform in Central Asia. By increasing a patient's contact with one specific primary care physician based in a family group practice, it is anticipated that this physician will be able to resolve most medical problems without referral. In such a system, the stronger relationship between a single primary care physician and a patient should lead to improved patient education, a reduction in risk factors for disease, and more uniform application of preventive measures.

By looking at primary care provision in various developed countries with similar doctor-patient ratios and education levels as the post-Soviet Central Asian states, this report explains why an emphasis on primary care is ultimately more effective than narrow specialty outpatient and inpatient care.

The report provides a step-by-step description of primary care provision and the role of family practitioners in the health system. By analyzing primary care in a number of developed countries: Australia; Canada; Finland; Japan; Malaysia; United Kingdom; and the United States, and through a review of related literature, the report concludes that there is no single model of primary care that must be followed. Good results are achieved from systems with different sources of funding, different types of organization, and different schemes of physician compensation.

There are a number of conclusions, however, which apply across a spectrum of countries. Firstly, primary care does work. Cross-country comparisons and empirical studies show this. When done well, primary care improves health status and reduces costs compared to models relying more heavily on specialist interventions.

The two most important things a national government can do to support primary care are to get the funding and educational systems "right." Funding systems must devote enough money to primary care, even at the expense of secondary and tertiary care. And the systems must assure reasonable equity in primary care funding across regions with wide disparities in average local income.

Getting the education "right" means resisting the tendency of the medical education establishment to expand specialized training and tertiary teaching facilities. Primary care should, effectively, be seen as its own specialty in which good primary care is provided by doctors with special postgraduate training. Medical schools must recognize and train for a primary care specialty, with some clinical training for all physicians offered in primary care settings. Primary care will not succeed if primary care practitioners are the least trained physicians. Once primary care physicians are properly trained, the scope of their practice can be very broad, and they can effectively treat the vast majority of presenting complaints. They can use a wide variety of laboratory and basic diagnostic tests. In addition, it is not necessary to segregate the care of infectious diseases or most chronic complaints such as diabetes, asthma, or hypertension.

The continuing relationship between the primary care physician and the individual patient is of the utmost importance in achieving primary health care goals. "Rostered" patients who return to a single practitioner for their primary care are more likely to use preventive services and comply with physician instructions than those in systems where patients visit a number of different specialists depending on their complaint. The continuing relationship with the primary care physician does lower long-term costs through the less tangible benefits achieved from health promotion and the physician's knowledge of the patient as a person.

Finally, the report emphasizes that primary care must be supported by programs to make essential drugs available and affordable. However, having physicians dispense the drugs they prescribe will distort their practice inappropriately and is only encouraged in rural areas where it is difficult to reach alternative dispensaries.

### III. Introduction

The following paper was prepared for the ZdravPlus Project working in the Central Asian countries of Kazakhstan, Uzbekistan, and Kyrgyzstan. Health reforms supported by the U.S. Agency for International Development in these countries support primary care in order to improve health outcomes and to permit the rationalization of the health sector (including a reduction of inpatient capacity) by reducing the amount of illness treated in hospitals.

Primary care, as emphasized in these reforms, stresses the provision of first line medical services for common conditions by a single medical practitioner who understands the patient and the family. Such a practitioner will operate within a small primary care group, not the large polyclinics combining first contact physicians and narrow specialists which were a hallmark of the Soviet medical system. The intent is to make the service more “client friendly,” with the first contact physician resolving most medical problems without referral. In such a system, the stronger relationship between a single primary care physician and a patient should lead to improved patient education, a reduction in risk factors for disease, and more uniform application of preventive measures.

How, some have asked, does this approach differ from the Soviet emphasis on free and readily accessible medical care provided through polyclinics for women, children, and the general population? What evidence is there that the primary care approach being advocated will improve health outcomes or efficiency? What is happening with primary health care around the world? How has the concept evolved since the famous WHO declaration of “Health Care for All,” issued in Alma Ata (Almaty), Kazakhstan in 1978 and regarded by most as the “Magna Carta” of the primary health care movement? To answer these questions, the ZdravPlus project commissioned this review of the recent literature.

The emphasis in this paper is placed on countries with a substantial supply of physicians. While the per capita income of the Central Asian Republics is comparable to mid-level developing countries, the size of the health care workforce and level of education of the population is more like that in developed countries. For these reasons, we have not discussed the strategies applied to populations where there is one doctor for several thousand people. Such countries must emphasize the use of non-physician health workers as the first contact for prevention and much curative care. However, the developed countries, like the Central Asian Republics, have some remote areas with widely dispersed populations, and we discuss strategies for primary care in such remote areas.

This paper is based on a review of the general literature on primary care, and an in-depth look at the characteristics of primary care in seven well developed health care systems:

- United Kingdom
- Canada
- Australia
- Finland
- Japan
- Malaysia
- United States Managed Care Organizations

The system studies are profiled in the matrices following this text. Where appropriate, information from the matrices is imported into the body of the report. References on specific health system characteristics are confined to the matrices, and not repeated in the text. Where a trend or specific empirical study is discussed, the reference is cited at that point in the text.

## **IV. The Evolving Definition of Primary Care**

The definition of primary care may shift with the perspective of the individual or group issuing the definition. In this report, we define primary care as the medical aspect of a comprehensive system of primary health care that encompasses the broader community and recognizes the link between health outcomes and those factors beyond the direct control of the medical care system. Throughout this report, we discuss primary care with the recognition that it should fit within the larger concept of primary health care.

Common elements in most definitions specify that primary care:

- is the citizen's first level of contact with the health care system
- is focused on prevention and patient education as well as curative care
- is responsive to community needs and supported by the community
- is patient centered and provides continuity, usually further defined as a situation in which the patient (and sometimes the family) see a single primary care provider who becomes familiar with their medical and social condition and gains the confidence which increases patient adherence to physician instructions.

In the U.S., long a bastion of the free market and specialist dominated medical practice, the Institute of Medicine issued a definition of primary care in 1994 which echoes that in the Alma Ata declaration and stresses many of the same points.

“Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”

### **A. The Alma Ata Declaration**

The 1978 Alma Ata Declaration is usually referred to as “Health for All by the Year 2000.” But the declaration came out of a WHO Conference on Primary Health Care. In stating the principle that health, and health care, is a right, the declaration made clear that primary care is a mechanism by which the right can be achieved. The Alma Ata declaration stated that primary care is the central function and main focus of a country's health care system and is “the first level of contact of individuals, the family, and community with the national health system bringing health as close as possible to where people live and work.”

The Declaration went on to state that primary care must be part of a primary health care initiative that involves, and works with, other aspects of development including agriculture, housing and education. A successful primary health care program should include:

- education concerning prevailing health problems and the methods of preventing and controlling them
- promotion of food supply and proper nutrition
- safe water and sanitation
- maternal and child health care, including family planning
- immunization against major infectious disease
- prevention and control of locally endemic diseases

- appropriate treatment of common disease and injuries
- provision of essential drugs

Primary care, the medical component of this program, is to be closely integrated with the community, and responsive to its needs.

## **B. New Emphasis on Elements of Primary Care**

### **1. Equity and Efficiency**

Primary care concepts have been adopted by two groups that would seem, at first, to have very different agendas. For those who advocate that health and health care are a basic human right, primary care is seen as the vehicle for realizing this entitlement. As emphasized at Alma Ata, primary health care must be available to all.

At the same time, governments in the developed and the developing world are worried about the cost of health care. For many who study this problem, primary care offers the promise of greater efficiency. Good primary care prevents hospital admissions, reduces the use of specialists and high tech tests, and produces better health outcomes at a lower cost. In systems with extensive specialist and hospital capacity, the primary care physician becomes a gatekeeper – a physician who directs (and controls) referral to more specialized services, and assumes the responsibility for managing such services on behalf of the patient. The gatekeeper controls, and rationalizes, access to more expensive services. This role of primary care as a vehicle leading to greater efficiency in the health care system has taken on more importance in recent years.

The goals of efficiency and entitlement to access can be combined. In a fully rational system, savings from better primary care could be ploughed back into expanded services for disadvantaged groups. While there is evidence (discussed below) of the impact of primary care on referral costs, the goal of substituting primary care for excessive expenditures on referral care is not easily achieved. Hospitals and specialists often control health ministry budgets and positions of power, and are reluctant to divert funding to strengthen the primary care system.

Public health research has long demonstrated that poverty and poor health outcomes are closely related.<sup>i</sup> Some of this effect was thought to relate to difficulties in access to health care, including primary care. However, even in systems in which health care funding is fairly distributed and primary care readily accessible, health outcomes are poorer in poor communities.<sup>ii</sup> Poor health habits (smoking, drinking) in the disadvantaged population do not explain all of this difference. For this reason, the Labour government in Britain is beginning to look at ways in which primary and community care must react to redress health inequalities. In an attempt to maximize the health benefit of a target community this “Community Oriented Primary Care”, strategy incorporates epidemiology, public health and financial management into a primary care delivery model.<sup>iii</sup> The primary care system must be proactive, not just accessible, in order to improve health outcomes.

### **2. Package of Basic Services**

In 1993, the World Bank published its World Development Report: Investing in Health, a very influential and controversial report on health and development. Using the methodology of Murray and Lopez, the report showed how the burden of disease varies with levels of development. Infectious disease and reproductive health problems create the greatest burden in developing countries. As development proceeds, these burdens are reduced, but the relative burden of chronic disease and injuries increases. The Bank’s analysis showed the conditions creating the greatest burden of disease are addressed by a basic package of primary care services that can be delivered at low cost through first contact providers.<sup>iv</sup> Included in the recommended package are:

- family planning and pre-natal care,

- treatment for infectious diseases, including tuberculosis and malaria
- childhood vaccinations
- care of minor injuries

The Bank also recognized that the burden of chronic disease would increase as a population ages. The Bank advocated public support for this basic benefit package, and a concomitant reduction in public funding of large specialist hospitals. The Bank's cost effectiveness analysis reinforced the case for strengthening primary care services.<sup>iv</sup>

Other research continues to make the point that good primary care can handle most health problems. A 1994 paper by the World Health Organization and the World Organization of Family Doctors quotes work twenty years previously which found that only one health problem in 1,000 requires service in a tertiary care hospital.<sup>v</sup> The same paper argues that a well-trained generalist physician can diagnose and treat well over 90% of the problems seen in the population. Dutch primary care physicians are reported to treat 94% of the medical problems that present to them.<sup>vi</sup>

### **3. Continuity of Services**

The role of the primary care physician in assuring the continuity of care has received more emphasis in developed countries as the costs of referral care expand. First, the primary care practitioner is expected to know the patient, and thus to obtain the patient's confidence and effectively address the patient's problems. (This trustful relationship is correlated with positive outcomes.<sup>vii</sup>) Then, if the primary care provider cannot solve the medical problem, he or she is expected to guide the patient through the referral system. The primary care provider not only refers to the specialist, but also helps to "package" services in the community. Thus, there has been an increasing emphasis on "teamwork," with primary care coordinating the specialist, hospital, home nursing services, mental health care, physiotherapy, and other elements of the broader network of health and social services. The primary care physician is increasingly seen as the "captain of the ship," directing the crew which meets the overall needs of the patients.

Putting the primary care provider at some financial "risk" through fundholding or similar mechanisms further expands this responsibility. "Fundholding" refers to an arrangement where the primary care practitioner manages a budget intended to cover some or all of the costs of services used by referred patients. Success in reducing referral costs may increase the funds available to the primary care practice, while the practitioner may see practice income fall if referral costs exceed the budget. Thus, the primary care practitioner has an interest in solving the patient's problem without referral, or in seeing the referred patient return promptly to the community for care. The active management of referral and follow up care so encouraged can benefit the patient as well by reducing the time away from home or work by decreasing hospitalizations, length of stay, and unnecessary referrals. This is documented in numerous studies.<sup>viii<sup>ix</sup></sup>

### **4. Purchaser/Provider Split**

Since the Alma Ata declaration was issued in 1978, a broad spectrum of health systems has followed advice to split the financing of health services from the direct provision of such services.<sup>x<sup>xi</sup></sup> This does not mean that local governments (as in Finland and Sweden) which ran primary health clinics have stopped doing so. Municipal governments continue to run these entities. However, more and more of the conditions for primary care practice are dictated by a government agency or health insurer that funds medical care, with provider units (including primary care providers) shifting from direct control to a contractual relationship. This need not inhibit the expansion of good primary care services. It may even lead to increased financing allocations for primary care.<sup>xii</sup> But it does mean that governments, particularly central governments, are less likely to employ physicians directly to provide primary care services.

## V. Does Primary Care Work?

### A. International and Inter-Regional Comparisons – Health Outcomes and the Commitment to Primary Care

There is no simple “League table” or standard performance ranking which permits an analyst to rate a country’s development of primary care. However, a number of attempts have been made to assess different aspects of commitment to primary care and relate them to health outcomes. The general conclusion: the number of first contact physicians, not the total number of physicians or the number of specialists, is most closely correlated with health performance measured by life expectancy and infant mortality.

In the U.S., a study by Shi showed that the availability of primary care physicians in the 50 states and District of Columbia correlates positively with health outcomes.<sup>xiii</sup> Such a positive correlation has not been observed for the total number of physicians or number of specialists. This finding confirmed earlier work showing that the ratio of primary care physicians to population was the only consistent correlate of improved age-specific mortality rates in the United States.<sup>xiv</sup>

Primary care also appears to lower per patient costs as well as improve outcome. A study of U.S. Medicare data showed that benefit costs were lower in areas with high ratios of primary care physicians.<sup>xv</sup> Medicare is a uniform national health benefit program for pensioners and provides relatively unlimited access to both primary and specialty care.

Starfield, a professor at Johns Hopkins and a well-known proponent of primary care, extends the U.S. argument internationally, stating that “a primary care orientation of a country’s health service system is associated with lower costs of care, higher satisfaction of the population with its health services, better health levels, and lower medication use.”<sup>xvi</sup> The core of her argument is summarized in Table 1. Eleven different factors in each health system were rated, and the countries then ranked so that a lower number for the “primary care rating” in Table 1 means that the country comes closer to meeting primary care ideals (it ranks closest to a theoretical “#1”). Among the primary care factors rated were:

- assignment of a primary care function to one particular type of physician rather than more than one or a multiplicity of types
- percentage of active physicians who are primary care specialists
- earnings of primary care physicians compared to specialists (a high ratio of primary care to specialist income is good)
- access to specialists primarily through referral from primary care
- primary care physicians assume responsibility for a defined panel of patients
- breadth and uniformity of benefits for preventive care
- formal mechanisms for the transfer of information between primary care physicians and specialists
- explicit assumption of responsibility for care of families by primary care physicians

The outcome measures in Table 1 include patient satisfaction, expenditure per head (lower expenditure is considered “good”), achievement on standardized health indicators such as life expectancy and infant mortality, and medications per head (fewer medications are considered better). The lower the score for individual and aggregate outcome indicators, the better the country is performing.

**Table 1: Ranks for primary care and “outcome” indicators**

Country	Primary Care Ranking	Outcome Indicators				Average Rank for “outcomes”
		Satisfaction	Expenditure per head	Health indicators	Medications per head	
United States	11.0	8.0	11.0	8.0	7.0	8.5
Australia	8.0	5.0	6.0	5.0	-	5.3
Belgium	9.0	-	4.0	11.0	6.0	7.0
West Germany	10.0	3.0	8.0	9.5	9.0	7.4
Canada	6.5	1.0	10.0	3.0	8.0	5.5
Denmark	3.0	-	3.0	6.5	1.0	3.5
Finland	3.0	-	5.0	6.5	-	5.8
Netherlands	3.0	2.0	7.0	2.0	3.0	3.5
Spain	5.0	7.0	2.0	4.0	5.0	4.3
Sweden	6.5	4.0	9.0	1.0	2.0	4.0
United Kingdom	1.0	6.0	2.0	9.5	4.0	5.4

Source: Starfield, B. *Is primary care essential?* *Lancet* 1994 ;344:1131.

Germany and the United States have poor primary care “scores” – 11 and 10 – compared to the best primary care ranking of 1 for the United Kingdom. The average rank for outcomes in the United States and Germany is also relatively poor compared to the results achieved by the Netherlands, United Kingdom and some of the Scandinavian countries. Countries which have better outcomes tend to have a greater commitment to primary care, often including a requirement that specialists can only be reached on referral from the primary care physician. Starfield does note that the countries with stronger primary care systems also tend to have greater equality of income. Multi-country studies have shown that relative income equality is correlated with better health outcomes.<sup>xvii</sup> A commitment to equity undoubtedly influences the emphasis on broad availability of primary care.<sup>xvi</sup> Nonetheless, Starfield makes a strong argument that primary care, including gatekeeping, is an independently important element in producing good national health outcomes.

In a keynote address given at a conference in Malaysia, Starfield enumerates the reasons for the observed correlation between emphasis on primary care and better health outcomes. One is financial: “Specialty care is more expensive than primary care and therefore less accessible to individuals with fewer resources...the financial resources required to pay for specialty care compete with those for primary care, thus draining capacity for just those services that are better distributed.”<sup>xviii</sup>

Starfield buttresses her arguments with studies not discussed in the previous article. A study was done in Barcelona after the implementation of primary care reforms. In the districts of the city where reforms were first implemented, death rates associated with hypertension and strokes fell more than in districts where primary care reforms were delayed.<sup>xix</sup> In the U.S., studies found that the availability of primary care even tends to offset the poorer health outcomes expected in areas with greater income inequality.<sup>xviii</sup>

## **B. Case/Control and Longitudinal Studies**

Statistical comparisons across national or regional borders are fraught with difficulty. For this reason, researchers have looked for more controlled studies to assess the effect of primary care. Some measure the longitudinal effects before and after the introduction of primary care innovations. Others attempt a case/control methodology where a group of patients served by primary care services is compared with a similar group that does not have such services. Much of this research has been done in the United States because, unlike Canada or the United Kingdom, it does not have a national system which emphasizes primary care and general practice. Thus, there are natural control groups who do not use primary care services as defined in this paper. The lack of a nationwide emphasis on primary care, and the high

percentage of specialists, creates important similarities to the former Soviet Union, where experiments in primary care are also occurring within a specialist dominated medical care system.

Many of these studies look at the aspects of continuity and “patient centered” care. Continuity is defined as a continuing relationship with a single primary care provider. “Patient centeredness” has a softer definition, but usually includes continuity plus such aspects as:

- patient selection of the primary care provider,
- extent to which the provider establishes a relationship in which the patient will confide in the doctor
- good physician knowledge of the patient and the patient’s family circumstances
- continuing contact and information exchange between the primary care provider and specialists to whom the patient is referred

Some of the significant findings from this genre of research are summarized below:

- In a U.S. health maintenance organization (HMO), "increasing the number of primary or specialty care providers a patient encountered... was associated with increased utilization and costs... The number of specialty care providers also increased as the number of primary care providers increased." Drug costs for the same medical condition went up as the number of individual providers increased.<sup>xx</sup> An HMO is an organization charged with delivering the full range of medical services required by a patient, is paid on a capitation basis, and generally stands to benefit financially if better preventive and primary care services lower the total cost of care.
- Easier access to primary care (as perceived by the patient) lowered preventable hospitalizations.<sup>xxi</sup> Factors contributing to easier access included longer clinic hours, shorter travel times, and lower out of pocket costs.
- Physician’s comprehensive knowledge of patients, and patient trust in the physician, were correlated with greater patient adherence to physician instructions.<sup>vii</sup>
- Primary care attributes (knowledge of the patient, continuity, good patient communication) improve counseling on disease prevention and increase immunization rates.<sup>xxii</sup>
- Psychiatric outpatients assigned to a primary care team (in addition to receiving mental health services) had better outcomes and lower hospital utilization.<sup>xxiii</sup>

An interesting discussion of the reasons why primary care may achieve better results and lower cost is included in an article by a Canadian physician, Walter Rosser, in the *Journal of Family Practice*. Rosser notes that there are significant differences between the diagnostic approaches of the primary care and specialist physician. “Since the problems they see are usually early and undifferentiated, family physicians...deal with greater diagnostic uncertainty. Specialists... see illnesses at a more advanced stage and generally do not deal with problems beyond the realm of their discipline. They usually do not sustain a partnership with patients, and have a shorter problem list from which to develop a hypothesis...Faced with the same patient problems as specialists, family physicians order fewer tests and procedures, yet produce identical outcomes.”<sup>xxiv</sup> The family physician uses his knowledge of the whole patient and their family to narrow the list of possible diagnoses, while the specialist uses more tests because he already has received a tentative diagnosis, or because he does not have the holistic knowledge of the patient that would enable him to rule out many diagnostic possibilities. This is a telling argument for NOT having a specialist physician serve as the regular primary care practitioner.

## VI. Who Provides Primary Care?

### A. "General Practitioner" vs. "Family Practice Specialist" vs. "Specialists" (Internists / Pediatricians)

There is no single model for the education and scope of practice of the primary care physician. Table 2 summarizes the requirements in the systems studied. The one common factor is that primary care practitioners in successful systems are NOT simply medical school graduates who failed to go on for further training. Primary care is not simply a job category for those doctors with the most limited skills.

**Table 2: Educational Requirements for Primary Care Practitioners**

Country	Educational Requirements
United Kingdom	5 (sometimes 6) years of undergraduate education and training in medicine + pre-registration year (residency) + 3 years for general practice specialty
Canada	3-4 years undergraduate university education + 4 years medical education + 2 years residency (PGY1,2).
Australia	4 to 7 years of medical school (may be entered before, during or after university) + 1 year internship in hospital + 1-3 years residency in hospital. All doctors obtain a Bachelor of Medicine/Bachelor of Surgery degree
Finland	6 years of medical school + 2 years of practical training in hospitals and health centers + 6 years post-graduate for general practice specialty.
Japan	6 years including practical training + post graduate training before independent practice
Malaysia	5 or 6 years of undergraduate medicine + 1 year of practical training (housemanship)
US Managed Care	4 years undergraduate university education + 4 years undergraduate medical education + 3 years residency (PGY1,2,3)

See appendices for references.

Those countries with the most successful primary care programs tend to have primary care practitioners who are specially trained in general practice and do not also serve as specialist consultants. In Britain, for example, General Practitioners (GPs) have three years of training after medical school which specifically prepares them for their primary care role. They must pass a national exam specific to General Practice before practicing independently. The qualified General Practitioners have their own powerful professional association. Canada, Australia, and Finland also have training structures which specifically prepare physicians for the role as first contact physicians.

Before the reform of medical education in the early 20th century, primary care practitioners in the United States were generally those without advanced specialty training. Through much of the last century, American medicine evolved towards greater specialization, with fewer doctors entering primary care, and most of those qualifying in pediatrics or internal medicine. Only later was the specialty of family medicine created, with post medical school residencies that prepare the student for the full range of family practice. Most first contact physicians continued to obtain a specialty in pediatrics, internal medicine, or obstetrics and gynecology.

In the last ten years, opinion in the United States has shifted, with a realization that too many physicians are highly specialized. Concerted efforts have been made to raise the proportion of medical school graduates entering family practice residencies, and to encourage new internists and pediatricians to take up primary care.<sup>xxv</sup> Because there are so few family practitioners and so many specialists, U.S. HMO's permit pediatricians and internists to serve as primary care physicians. Concerns have been expressed that such specialists tend to order more tests and have higher patient care costs than physicians specifically trained for family practice. A 1998 study found that "specialists were associated with more organizational and geographic access barriers and provided less first-contact care...Policy directed at shifting the specialist work force into primary care could lead to a deterioration in the quality of the primary care delivery system."<sup>xxvi</sup> However, in countries where specialists in family practice are a small proportion of the total number of physicians, the health care system must find a way to use pediatricians and internists (therapists in the Soviet system) in primary care.

## **B. Scope of Practice**

The pattern of practice varies according to physician training, reimbursement, and the structure of the health care system. Some systems, notably Britain, impose a much more rigid dividing line between the scope of practice for primary care physicians and specialists. Others, such as the U.S. and Canada, do not demarcate the two so clearly.

### **1. Hospital Admissions**

#### **Referral of Patients**

In the United States and Canada, physicians in primary care practice are granted hospital privileges and admit and treat patients needing basic inpatient care. Primary care physicians in Canada, and qualified family practice specialists in the U.S., also admit patients for normal deliveries. In Britain, Finland, and Australia, primary care physicians generally do not undertake inpatient care, and refer their patients to hospital based consultants for both consultation and admission. In Britain, the GP remains in close contact with the specialist consultant, and arranges for the patient's follow up care upon discharge.

#### **Care of Patients in Hospital**

The primary care physician must have a link to a good, trusted hospital. The physician is not solely a gatekeeper in that when a patient does need hospital treatment, the GP becomes the patient's best advocate – he or she is a knowledgeable person who helps the patient select the specialist physician and the hospital and intervenes with the hospital staff on the patient's behalf. As the “captain of the ship” the primary care physician consults with other providers, reviews test results with the patient and family, and evaluates treatment options. The primary care physician plans for the aftercare of the patient upon discharge from the hospital and helps the family members cope with the patient's illness and/or mental stress and depression. Thus, the primary care physician oversees the care provided in the hospital and provides a quality check which could be lost upon referral to the hospital specialist. The communication and close relationship between the hospital doctors and the primary care physician, and the continuity of care that it creates, is an important benefit of the primary care model.

#### **Included and Excluded Services (infectious diseases, STDs, etc.)**

Few countries enforce the rigid segregation in the treatment of infectious diseases which characterized the medical care system in the Soviet Union. Primary care physicians are expected to treat STDs, respiratory infections, and most reportable diseases, unless these are very serious and require hospital admission and isolation. Even care for tuberculosis and HIV/AIDS may be offered in the primary care setting, particularly if the primary care practitioner has a number of patients with the condition. In Japan, the Government contracts with independent primary care doctors to deliver and supervise therapy for TB patients.<sup>xxvii</sup>

#### **Obstetrics and Family Planning**

In most primary care systems, the first contact physician is expected to provide family planning services as well as pre-natal care. Abortions and sterilizations would usually be referred to a hospital or specialized clinic, and problem pregnancies would be referred to an obstetrical specialist.

There is greater variance in performing deliveries. When primary care physicians do not have hospital privileges, they refer for delivery. American family practitioners and Canadian general practitioners can deliver a baby in hospital. In most developed countries, almost all deliveries occur in hospital, and even mothers from rural areas are transported for delivery. To the extent that nurse midwives are used, they usually practice in hospitals under the supervision of a physician. However, the Netherlands has maintained a strong tradition of midwifery, and a substantial portion of deliveries still occurs at home with the aid of a midwife. Infant and maternal mortality do not seem to be adversely affected.<sup>xxviii</sup>

The U.S. has a problem in providing family planning and pre-natal services through many of its first contact physicians because so many are trained as internists, and are not comfortable providing these services.<sup>xxix</sup> For this reason, many American managed care plans, which generally enforce gatekeeping requirements, permit a woman to see an obstetrician/gynecologist for these services without a referral.

### **Chronic Disease**

Successful primary care systems expect patients with common chronic diseases to remain under the care of the responsible primary care physician. The family doctor will manage asthma, hypertension, diabetes, and much cardiovascular disease (including angina pectoris and congestive heart failure). In the U.S., the fact that many primary care practitioners are trained as internists prepares them to manage these cases. Even where primary care practice training is more general (in the U.K., for example), the primary care practitioner will continue to follow the patient after a consult with a neurologist, cardiologist, or endocrinologist. A recent innovation has been the referral of cancer patients for follow up by family physicians after the intensive phase of treatment. A U.K. study found that breast cancer patients were more satisfied when returned to their General Practitioner for follow up rather than being followed in an outpatient oncology clinic.<sup>xxx</sup>

### **Laboratory and X-ray**

If a primary care doctor is to manage most health conditions, she must have access to diagnostic tools beyond the stethoscope and thermometer. In most of the countries studied, a primary care physician would have immediate access in the clinic to a simple X-ray machine and electrocardiogram. The primary care practitioner can also order and interpret a wide range of tests. The sample – a Pap smear, blood, urine or tissue – may be taken in the primary care office. However, the typical primary care practice will have only the most basic laboratory, if any – perhaps just enough to check the blood sugar of a diabetic. Instead, most samples taken from patients are sent on to a separate laboratory for analysis, with the result reported to the primary care physician, who then interprets the results and treats the patient. Very large group practices and large municipal clinics offering primary care (such as those in Finland) may have a laboratory on site to do these tests.

Where primary care practices are small, independent commercial laboratories or other health institutions do the actual laboratory analysis, but the patient looks to the primary care physician to follow up on the test. Having a good system for the follow up of test results is one sign of a well-organized primary care practice.

### **Mental Health**

Mental illness – notably depression and anxiety – has always been the precipitating or contributing cause for many primary care visits. Murray and Lopez estimate that in 1990 mental illness accounted for 15.4 per cent of the total burden of disease in established market economies, with depression the most prevalent mental illness. Their projections suggest that the proportionate burden of mental illness will increase further as development proceeds.<sup>xxxi</sup>

Now, primary care practitioners are being asked to take a more active role in diagnosis and treatment of these conditions. They are being trained to identify depression, and most primary care practitioners can and do prescribe anti-depressants.<sup>xxxii</sup> However, primary care physicians do still not recognize a significant amount of mental illness.

Patients are referred for psychotherapy, psychiatric evaluation, and the management of more complex psychoactive medications, as well as inpatient care. Where there are few qualified psychiatrists, primary care practitioners can expect to see and treat an increasing volume of mental illness.

## **C. Gatekeeping**

Although not universal, a “gatekeeping” requirement is standard in many well-organized primary care systems and is viewed as a key cost control element. With the exception of an emergency, a patient

cannot reach a specialist (without paying privately) unless referred by/his primary care physician (the “gatekeeper”). This is true in the British National Health Service, in Australia, Finland, and Canada.

In a study of poorer patients served by a U.S. public hospital, a requirement that the primary care physician approve specialist referrals reduced the total number of outpatient visits and hospital admissions, even when physicians were salaried and realized no financial reward by reducing referrals. The number of primary care visits increased by an average of 0.27 visits per patient per year, but the number of specialist visits decreased by 0.57 visits per patient per year. The number of hospital admissions also decreased by 0.14 per patient per year.<sup>viii</sup>

Most U.S. managed care organizations have also adopted a gatekeeper requirement, with Americans giving up the free choice of provider for each encounter in order to obtain the lower premiums offered by managed care plans. A very recent study reports that specialist utilization did not increase significantly in the year after a large HMO removed the “gatekeeping” requirement for referrals although there was an increase in self referrals for treatment of low back pain. The study does not prove that gatekeeping is ineffective, since it covers only the first year of the new policy in a population that was habituated to rely on their primary care provider for referrals.<sup>xxxiii</sup> Where U.S. patients resisted strict gatekeeping, managed care plans implemented a compromise – many patients can now reach a specialist without referral, but they incur a higher co-payment for the service.

Some of the larger countries of Europe do not impose strict gatekeeping requirements. These countries do NOT “roster” patients, listing the patient with a single general practitioner who is responsible for primary care and arranging and approving referrals. This absence of a gatekeeping function explains, in part, the higher frequency of physician visits observed in these countries, and perhaps the larger numbers of practicing physicians. There is no literature which conclusively proves that the higher percentage of Gross Domestic Product committed to health care in France and Germany results from a lack of gatekeeping. Nor is there proof that the apparent efficiency of the British National Health Service is explained by gatekeeping alone. Nonetheless, gatekeeping remains a cornerstone of the NHS.

#### **D. Prescribing and Dispensing**

In the countries studied, primary care physicians are not generally limited in the range of licensed drugs which they can prescribe. Special licenses may be needed to prescribe narcotics. However, because the primary care physician is expected to have the competence to treat such a wide range of diseases, he is not limited in the categories of drugs which he can prescribe. Because of concerns about professional liability, primary care physicians will rarely exercise this authority to prescribe drugs, such as cancer chemotherapy agents, which are only appropriate in recognized specialist care.

A separate issue is the actual dispensing of prescribed medications by the physician. Of the developed countries studied, only Japan and some regions of Malaysia permit widespread dispensing of drugs by prescribing physicians. (Britain and Canada have permitted this in certain isolated rural practices). Because Japanese physicians earn a dispensing fee for each medication given the patient, they have an incentive to increase the number of patient visits by dispensing relatively small quantities of drugs. They may also be encouraged to prescribe a larger number of drugs.<sup>xxxiv</sup> In general, most studies conclude that dispensing should be a separate function assigned to pharmacists and pharmacies, and doctors should not dispense. Rational pharmaceutical use is encouraged when a doctor’s income is not affected by the dispensing of drugs.

#### **E. Role of Non-Physician Providers**

While all of the countries studied generally use trained physicians as the first contact primary care provider, nurses provide the first contact with patients in many isolated rural locations such as the Canadian Arctic. Because of the high salaries of its physicians, the U.S. has increased the scope of practice of physician extenders – nurse practitioners and physician assistants. They now treat many basic conditions using protocols developed by physicians. These physician extenders may prescribe drugs under

certain limited conditions. With the growth of larger group practices, the use of physician extenders has expanded.

Even where nurse practitioners and physician assistants have not moved into a more direct role in diagnosis and treatment of common conditions, they are an integral part of primary care. In Britain, nurses employed in a practice are active in prevention and education, working under the direction of the general practitioner. Nurses in Britain also extend the physician’s ability to care for chronically ill patients in the community through home visits, monitoring frail patients and alerting the doctor to signs of trouble.<sup>x</sup>

## F. Integration with Other Services and Community Care Providers

Although primary care practices employ nurses as physician extenders and patient educators, they do not usually provide home health services beyond physician visits. Such services, as well as support for mental patients, are usually provided by local health or social service agencies. A municipal government clinic which also provides primary care services (as in Finland) can act directly to coordinate primary care and community support services. Elsewhere, there is a trend to encourage greater collaboration between primary care physicians and local service agencies.<sup>xxxv</sup> In the UK, the new Primary Care Groups are ultimately expected to take a role in purchasing these community services. (See below.) In both the United States and Britain, nurses working in primary care practices may be asked to “make the arrangements” so that patients receive the appropriate community services.

## VII. How is Primary Care Organized?

The organization of primary care practice depends on the historical tradition of a country and the extent of its commitment to private markets. Primary care physicians can function well in a variety of organizational settings. Table 3 summarizes the typical organizational arrangements for primary care in the countries studied. The dominant trend seems to be for primary care practitioners to maintain substantial organizational autonomy and run their own businesses.

**Table 3: Typical Organizational Form for Primary Care**

Country	Organization of Practice
United Kingdom	The majority of practices are group practices while 10% are individual practices
Canada	Individual practices but often with partners (do not share patients)
Australia	Individual practices
Finland	Municipal health centers employ multiple physicians as well as a few private primary care physicians who contract for government funded services
Japan	Individual practices
Malaysia	Formerly GPs have practiced in isolation. The trend is towards forming partnerships in polyclinics
US Managed Care	Individual practices, increasingly in groups

*See appendices for references.*

### A. Independent Private or Group Practice

In the English speaking countries studied, as well as Japan, the majority of primary care physicians work as individuals or small groups and the practice is an independent business. In much of Europe, first contact physicians also practice independently as individuals or small groups. Even though British General Practitioners have only one “client,” the National Health Service, they run their practices as an independent business depending on contractual income from that client.

The trend in many countries is away from single physician practices to small groups. This solves the “coverage” problem when a solo practitioner is off duty, and decreases expenses for support staff and the purchase and use of office equipment. In the U.S., this consolidation trend extends to the formation of larger multi-specialty groups where both primary and specialty care can be obtained at the same site.

Groups – small or large – also provide a check against possible patient abuse or malpractice committed by a single physician practicing in isolation.<sup>xxxvi</sup>

## B. Salaried in Government-Run Centers

Of the countries in the appendices, Finland provides the only example where employment in government run health centers is the dominant form of primary care organization. A minority of primary care doctors in Finland are independent practitioners. In Sweden, primary care clinics run by local government are also dominant.<sup>xxxvii</sup>

In certain environments in the United States, notably poorer inner-city neighborhoods, primary care coverage has in the past been inadequate because independent physicians and groups would not locate in these areas. Municipal government and NGO's (non-profit organizations run by a community group) created clinics and employed physicians in order to offer primary care services in these areas.<sup>xxxviii</sup> A few large managed care organizations in the U.S. (Kaiser Health Plan, Harvard Community Health Plan) also employ primary care physicians on the basis of salary plus productivity bonuses.

## VIII. How are Primary Care Providers Paid?

The following table summarizes the payment arrangements for primary care physicians in the countries studied.

**Table 4: Compensation Systems for Primary Care Physicians**

Country	Dominant Compensation System
United Kingdom	Combination of fixed allowances, capitation fees and fees for specific services, incentives for meeting targets
Canada	Fee-for-service (pilot projects are introducing capitation funding)
Australia	Fee-for-service
Finland	Salary
Japan	Fee-for-service
Malaysia	Fee for service in the private sector, salary for GPs in public health centers. There are now a small number of private providers that are under HMOs and receive capitation payments
US Managed Care	Shift from fee-for-service to capitation payments for enrolled patients, some with incentives to reduce referrals

*See appendices for references.*

### A. Salaries

Salary has traditionally been the method of payment for physicians working in municipal clinics in countries such as Finland and Sweden, and in government and NGO clinics in the U.S.

### B. Fee for Service

This was the dominant mode of payment for primary care in the U.S., and is still the method of payment under Canada's universal health insurance system. Japanese primary care physicians are also paid on a fee for service basis, with the low fee per visit perhaps partially explaining the high frequency of physician visits in Japan. Health insurance systems in Germany and France also pay first contact physicians on a fee for service system, although the German government has tried various methods to cap the total amount of such payments.

### C. Capitation

Risk adjusted capitation payments form the basis for GP compensation in Britain. The GP receives an amount for each patient who has voluntarily enrolled on his or her "list." The amount is adjusted based upon the age and sex of the patient.<sup>x</sup> Capitations have also been introduced by U.S. HMO's and are recommended by most economists when government or insurance pays for primary care. However, if the

patient is not covered by a national health program or insurance policy and is paying for service out-of-pocket, it is very hard to collect an annual capitation fee in advance.

In many U.S. managed care schemes, capitation payments were expanded to include services obtained from other providers. Such schemes are far more complex and controversial than capitation payments which cover only the services of the primary care physician. These arrangements are discussed below.

## D. Mixed Systems

There is a discernable trend towards mixed systems of compensation which combine one or more elements of salary, capitation, and fee for service, as well as incentives for reaching certain health care targets. Thus, British GP's are paid amounts in addition to capitation for services such as house calls and family planning. In Finland, salaries in municipal clinics were combined with capitation payments and an incentive fee to increase the proportion of rostered patients seen. In Norway, general practitioners are paid through a combination of capitation and fee for service.<sup>xxxix</sup>

## E. Patient Co-Payments

Many insurance schemes – private and social – require some form of co-payment at the time of a primary care visit. Preventive visits (such as childhood immunizations) may be exempted from the fee. Where the co-payment is large, as in France, the patient may take out additional insurance to cover these costs. In Britain, the GP visit is free, but most patients have to pay a dispensing fee for medications prescribed.

The literature on co-payments shows that they do have an effect on utilization, but it varies depending upon the type of patient, the use of the revenue, and the economic environment. In one of the most extensive U.S. experiments (RAND Corporation), a per visit fee did reduce the total number of visits in insurance plans where benefits were otherwise comparable.<sup>xl</sup> In developing countries where there is a cash economy, research shows that the number of visits drops off initially when a fee is introduced, then slowly recovers to previous levels. In a non-cash economy, the reduction in visits may be more permanent. The effect of the co-payment is least when the fees collected are retained locally and used to improve services.<sup>xli<sup>xlii</sup>xliii<sup>xliv</sup>xlv</sup> This is particularly true if the fees are used to purchase drugs which would otherwise be lacking. In such a situation, utilization may decrease very little, if at all.

To the extent that the low funding levels in the Central Asian Republics force first contact physicians to collect shadow payments from their patients, the research from other environments may not be directly applicable. In effect, there already is a co-payment. If a formal co-payment substitutes for this shadow payment, the cost to the user will not increase, and utilization may not fall. If the shadow payments are made in addition to the co-payment, then the co-payment has effectively been increased, and utilization will likely fall. However, if the payments are used to improve service, particularly the availability of essential drugs at low prices, patients may even use the service more.

## F. Relative Payment Levels for Primary Care Physicians and Specialists

The appendices display available information on the relative average compensation of primary care physicians relative to that of specialists. It is summarized in Table 5 immediately below.

**Table 5: Relative Compensation of Primary Care Physicians and Specialists**

Country	Ratio of Compensation of Primary Care to Specialist
United Kingdom	Good (Approximately 1:1)
Canada	Fair (2:3)
Australia	Fair (1:2)
Finland	Good (Approximately 1:1) Salary is based on post, length of career, degree of training, and degree of responsibility
Japan	Very good (Approximately 2:1)
Malaysia	Good

US Managed Care	Fair (0.5-0.7 depending on type of PCP and specialist) However, managed care is narrowing the gap between income of specialist vs. primary care provider
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*See appendices for references.*

In Britain, a successful General Practitioner can earn as much as a hospital based consultant. In the United States, specialists, particularly those who are paid fee for service for each procedure, traditionally earned much more than family practitioners or internists and pediatricians giving primary care. This differential is now falling.<sup>xlvi</sup> The Medicare program (for pensioners) revised its payment methodology to decrease the premium for procedure based specialties. With the new emphasis on primary care and gatekeeping in the U.S. managed care system, newly trained primary care practitioners see an increase in the relative demand for their services, while new specialists are having a harder time finding jobs.<sup>xlvii</sup> Doctors in training are not immune to market forces, and a system which depresses the compensation of primary care physicians will find that the best graduates seek to specialize. Very low compensation for primary care specialists may date to a time when primary care did not require special training after graduation from medical school, and was essentially an “entry level” job in the medical profession. If health systems expect primary care physicians to obtain training in that specialty, the system must recognize this extra training with compensation roughly equivalent to specialists who have invested similar time in qualifying for their specialty.

## **IX. How is Government Organized to Deal with Primary Care?**

For all its importance, primary care is not a highly visible part of the organogram in most national health ministries. Traditionally, Ministries had vertical programs for particular diseases, such as tuberculosis. There was a department of maternal and child health. There might be a national immunization program. Important supports to the primary care system, such as drug supply, had their own organization. But most of the organization and supervision of primary care systems is decentralized, with both positive and negative consequences. Where insurance is a major source of financing, the payment of primary care physicians is just a part of the overall process of qualifying and paying doctors.

### **A. Local/Regional**

It is instructive to look at the systems summarized in the Appendix, and at the references shown there. Most of the operational decisions which affect the primary care provider are made at the regional level.

In Britain, for example, contracts with General Practitioners are signed by the district health authorities. However, funding is distributed to these organizations by the NHS according to a national formula based on population and need. The NHS also stipulates the basic terms of the standard GP contract, including the adjusted capitation and incentive payment rates. The national government also retains some control over the location of new General Practices in order to achieve an equitable distribution of primary care services. The newly organized Primary Care Groups are taking shape for populations of 100,000 or so, and will (it is planned) involve all of the GP's in decisions to purchase referral and community services for that population.<sup>iii</sup>

Finland delegates responsibility for primary care to its municipalities, which may provide such service directly, share services with other municipalities, or elect to purchase some services from private sector providers. However, the national Government does place on the municipalities a specific requirement (under a 1972 statute) to provide primary care services including health promotion, disease prevention, screening and family planning.

The focal point of the Canadian health care system is the government of a province, which may range in size from a population of 100,000 to several million. The provincial government funds and administers the health insurance system, and uses its purchasing power to steer the system. National statutes require universal eligibility and accessibility, stipulating principles of public administration (no private health insurance for covered benefits), accessibility, comprehensiveness, universality (equal benefits for all Canadian citizens) and portability (full coverage anywhere the citizen may travel or move in Canada).

Some centrally collected tax revenues are distributed to the provinces to partially fund the health care system. Recently, the national government has agreed to fund certain investments when the provinces make primary care a priority. But national legislation clearly leaves the burden of health system administration to the provinces.

Most Canadian provinces have created health service districts to plan and manage hospital services, but doctors are paid directly by the provincial insurance plan. In remote areas where physicians would not voluntarily locate, government does assume the responsibility for providing primary care services through salaried staff.

Switzerland suggests that good health outcomes may be achieved with little central direction. The Federal government contributes only 15% of health expenses. There is no Federal Ministry of Health; health provision and funding is left to the cantons (federated states). This leads to wide inequalities in health care funding, and to inefficiencies when separate cantons (some of which are very small) unnecessarily duplicate services. This overly decentralized structure, driven by the traditional fierce independence of the cantons, may explain, in part, why the Swiss health care system is one of the most expensive in the world.<sup>xlviii</sup>

## **B. National**

Perhaps the most important act a nation can take to support primary care is to equalize the funding available to different regions with wide differences in financing capability. The NHS in Britain does this very effectively, as does the American Medicare system. The Swiss do this poorly, the Canadians somewhat better.

Money alone is not the answer. A provincial or regional payer could decide to spend too much on referral care. Thus, national policies can play a role in encouraging primary care. This can take the form of defining the terms and conditions of primary care contracts (as the British NHS does), or limiting capacity in the referral sector so that more money is available to primary care.

There are varieties of other actions which a national government can take to influence primary care. One of the most important is to redirect the system of medical education towards primary care. In most countries, even the United States, the national government plays a role in providing, or funding, medical education. Increasing the number of training slots for primary care, and decreasing the number for specialists, is a powerful way to influence the primary care system.<sup>xlix</sup>

Programs which assure the availability of essential drugs and vaccines will re-enforce primary care. However, there is little evidence that the presence of a “Department of Primary Care” in a national Ministry makes much difference in the success of primary care. Decentralization of administration (if not of funding responsibility) seems to be dominant trend in health administration worldwide. The most important level of government for primary care will be the province or region which has funding and contracting powers.

If we look at the structures underlying these health systems, we see that the strongest primary care systems have a history of primacy for primary care. The long tradition of the well trained General Practitioner in Britain is the best example. On the other hand, the U.S. has a history of specialization in the 20th century which has proven hard to reverse. One of the most important acts a government can take to encourage primary care is to prevent “creeping specialization,” the process by which capital investments, operating budgets and manpower gradually shift to specialty care, thus reducing the funds available for primary care and further de-emphasizing this most important segment of the health care system.

## X. Urban and Rural Primary Care

### A. Rural

All countries, even those with large numbers of doctors, have relied on non-physician providers for first contact care in very remote areas. The Soviets created feldsher posts to meet the needs of isolated communities. Doctors will not locate in such areas because of the lack of educational and other opportunities. In fee for service practice, the income may be inadequate due to the small population. For physicians who receive government salaries, these salaries may be lower for rural regions. Developing countries use a variety of sub-physician professionals to provide first contact care in rural areas. In developed countries, the primary care provider in a remote rural area is likely to be a nurse. The nurse is tied into a system which provides supervision, medical advice, referrals, and coverage during holidays. Often, this rural health service also provides visiting doctors who see patients at the remote site at regular intervals.

Three interesting developments in rural primary care are discussed below.

- *Physician extenders* – In an affirmation of the merits of continuity in primary care, providers in remote area of Canada argue for a system where a single physician takes responsibility for the supervision of specific physician extenders and for periodic visits to their clinics. In this way, the physician supervisor would better understand the community, the information received from the resident nurse, and the patients examined during physician visits. This is preferable to the normal situation in which different doctors consult with the nurse by radio and make periodic field visits. It is an extension of the basic primary care principle of continuity.<sup>i</sup>
- *Telemedicine* – The ability to rapidly transmit diagnostic data and pictures has developed quickly in the last decade. The U.S. military uses such telemedicine systems for specialists to consult on the treatment of patients at remote bases. The capability has been expanded to the isolated island nations of the Pacific. In Canada, such a telemedicine system has been used to link rural nurses with distant physicians. One article reports that the system made it possible to care for more patients in the community, with savings in patient transport, hospital care, and family subsistence costs.<sup>ii</sup>
- *Training in rural areas for rural practice* – Medical schools are usually located in big cities. Training at such sites does not prepare students for the professional demands or hardships of remote primary care postings. This may be one more reason that it is difficult to recruit new doctors to sparsely populated areas like the Australian outback. Australia has created special departments of rural health to train students at these remote sites and counter the centripetal tendencies of the typical medical education.<sup>iii</sup>

### B. Urban: Broader Concept of the Primary Care Team

It is harder to define “trends” in the provision of primary care in urban areas. Many of the changes have been driven by shifts in financing and organization, such as the purchaser provider split, or the move to involve primary care practitioners in purchasing referral services. The one trend that comes across in the literature is an expanded interest in the team concept of primary care, particularly for seriously disadvantaged urban populations. This stems from the recognition, embodied in primary care philosophy, that health problems require solutions broader than medical care. Housing, food, employment, social support – all are important to better health outcomes. Physicians are not trained to coordinate all of these services, and generally do not want to. So, there is an increasing emphasis on team work, with nurses and social workers extending the reach of the primary care medical providers in order to address the problems that go beyond the health care system.

## **XI. New Development within Primary Care**

Primary care has not been static in the years since the Alma Ata Declaration. Different countries with different primary care strategies have experimented in many ways to improve efficiency, access, and outcomes. We summarize here the most interesting innovations, particularly those that have been attempted in more than one country.

### **A. Essential Drugs and Rational Prescribing**

Although worthy of a paper in itself, no review of developments in primary care can overlook the drive to improve the availability of essential drugs and the efficiency of pharmaceutical use.

Primary care for all, as envisioned at Alma Ata, is meaningless if patients have access to a primary care practitioner, but no access to the drugs which the care giver prescribes. Thus, to make primary care more effective, national governments and international aid agencies are working in developing countries to:

- lower prices through competitive tendering and improved regulation
- improve drug distribution systems
- regulate and test the drugs in the marketplace in order to assure the quality of what is sold
- create revolving drug funds and other mechanisms to mobilize money for drug purchases
- educate physicians in rational prescribing, and discourage the excessive use of antibiotics and the prescribing of ineffective drugs

While they are better able to afford prescription drugs, developed countries have watched total drug costs grow faster than other elements of the health care system over the past decade. As a result, these countries adopted a variety of strategies to keep necessary drugs available within health service budgets or amounts that the patient can afford. These efforts include:

- pressure for prescribing and dispensing of generic equivalents (particularly in the United States)
- limited national formularies (most notably that in Australia)
- price controls and reference pricing systems
- monitoring of physician prescribing patterns

In the United Kingdom, for instance, the NHS database on prescription payments is used to create prescribing profiles for each primary care physician.<sup>liii</sup> The individual physician can then compare his own pattern of prescribing with the norm for other physicians in the area. In this way, the NHS hopes to use peer pressure to reduce prescription drug costs and keep down the total cost of primary care.

### **B. Fundholding: Primary Care Control of Funding for Specialist Care**

One of the most radical innovations in primary care is to give the primary care practitioner a role in purchasing specialist services. The two most prominent experiments of this type have occurred in the United Kingdom and the United States.

#### **1. The Rise and Fall of the GP Fundholder in the NHS**

In the early 1990's, the most controversial reform of the British NHS was the creation of "fundholding" general practices. The primary care physician or group became, in effect, a buyer of specialty services for enrolled patients. The Conservative government developed the program as a cornerstone of its plan for

an “internal market” to make the NHS more efficient. Fundholders were allocated a budget from which to buy the referral services needed by their patients. As a purchaser, the fundholder could select the hospital or specialist that offered lower costs and/or better service. If the fundholder spent less than the capitated allowance, a portion of the savings could be ploughed back into the practice.<sup>x</sup>

Many British GP’s were unprepared for such an entrepreneurial experiment, but others seized the opportunity. By 1998, there were 3,500 fundholding practices in the UK, encompassing 15,000 general practitioners.<sup>x</sup> Evaluations of the impact of fundholding were just beginning to come in. The results were equivocal, suggesting some reduction in waiting lists and a perception that specialists were more responsive to general practitioner requests.<sup>liv</sup> The data from fundholding evaluations offered little hard evidence of systematic cost savings.

The moment for GP fundholders had already passed. The Labour government, elected in 1997, promised to eliminate the potential inequality created by a system where some GP’s were fundholders and some were not. The experiment with fundholding at the level of the individual practice was ended.

However, the attempt to create an internal market and give more “buying power” to primary care providers was not abandoned completely. The Labour Government created new entities, Primary Care Groups (PCGs), which would have the power to commission specialist and hospital services for the entire population of a service area. All of the GP’s in the area belong to the PCG, but this does not change the basic nature of the individual or group primary care practice. The PCGs are to collectively decide on the purchase of hospital and specialist services, and ultimately, community health services such as home care.<sup>iii</sup> Britain has not been alone in its initiatives to bring primary care providers into the purchasing decision for referral care. New Zealand too has created “budget holding” primary care organizations.<sup>lv</sup>

## **2. Managed Care, Capitation, and the American Health System**

Britain was not the only system to experiment with financial incentives to primary care practitioners in order to influence the use of specialist care. In the United States, managed care organizations began to offer primary care physicians capitation type budgets. The costs of hospital and specialist care are deducted from such capitations, and the primary care provider is “at risk” for some of the cost – that is, the primary care practitioner’s compensation increases if the total cost of referral care is reduced. This made primary care physicians sensitive to the cost of referral decisions, but raised questions about the conflict of interest when the primary care physician might “profit” from a decision not to refer.<sup>lvi</sup>

Legislative limits on such incentives have been proposed, and in none of the other countries studied has the primary care physician been given such a direct incentive to reduce specialist referrals. However, a similar model was part of experiments in Soviet health care funding in the late 1980’s, and has emerged again in recent experiments in Kaluga and Tula oblasts.<sup>lvii</sup>

### **C. Loose Collective Organizations for Quality Control, Continuing Medical Education, Coverage Rotation, etc.**

While individual and small group practices can offer accessible and “patient-centered” care, they encounter a number of obstacles. The solo practitioner finds it hard to take time off for continuing medical education, or even for vacation. Alternative coverage – finding another qualified physician to see patients in the GP’s absence – may be hard to arrange. Individuals and small groups find it hard to develop and implement protocols reflecting new medical knowledge, or to adopt new quality control and review mechanisms. For these reasons, a number of countries have encouraged the voluntary collaboration of primary care practitioners at a local level. Such cooperative aggregations are often not mandated by government, but form voluntarily. The patient benefits if the new organization contributes to an improvement in the quality of care in the participating practices.

## **D. Telephone Hotlines**

While nominally an extension of primary care services, this development could affect the traditional therapeutic understanding between primary care physician and patient. In order to improve access and avoid unnecessary emergency room visits, health systems – including U.S. HMO's and the British National Health Service – established patient hotlines; dedicated phone lines open to enrolled patients, often 24 hours a day. Staffed by trained nurses, these hotlines answer a variety of queries from patients, particularly in the hours when a doctor may not be readily reached. Nurses attempt to determine the patient's condition and need for immediate medical attention. The nurse may advise an immediate trip to the emergency room, recommend that the patient see his or her primary care practitioner during office hours, or suggest steps to self-treat mild complaints that are likely to resolve without medical attention.<sup>lviii</sup> This approach may improve the patient's sense of access, and offers an opportunity to educate the patient on some aspect of his health. For many conditions, it saves a more expensive visit to the surgery or the emergency room. But it begins to fragment the continuity of care that lies at the heart of the primary care philosophy.

## **E. Rostering**

Systems such as the British NHS and U.S. managed care plans require the patient to select a single first contact physician. Payment through capitation, and gatekeeping rules, reinforce this requirement. Such rostering of patients (listing of each patient with a single primary care provider) is now becoming more common, even where physician reimbursement or specialist referrals do not require it. Even salaried physicians in government clinics may develop a list of “their” patients to reinforce the continuity of care. These rostering initiatives are motivated by research that shows better outcomes and patient satisfaction when a single physician provides continuity of care.

Finland is a country which has encouraged rostering to further the “personal doctor” principle. Most primary care, in the past, was provided in municipal clinics by salaried general practitioners. However, these physicians worked on rotation, often in vertical programs, and did not have a defined patient list. In an experiment in the 1980's, patients were assigned to an identified family doctor, who also worked with a regularly assigned support team of nurses and technicians. As part of the experiment, compensation for some “family physicians” shifted from straight salary to a combination of salary, capitation, and an activity measure based upon the percentage of listed patients seen in a given time period. This “personal doctor” program did not require patients to go to the roster physician for every visit. In fact, many visits occurred with other primary care physicians. Nonetheless, patients reported improved satisfaction with the new model. Evaluation of the experiment showed that the combination of rostering and the new compensation package produced better results without an increase in total cost of care.<sup>lix</sup> Since the initial experiment, a mixed compensation system and rostering have been disseminated widely in the Finnish health care system – although central authorities have not required such innovation.

## **F. Polls to Measure Patient Satisfaction**

The “patient-centered” aspect of primary care places an increasing emphasis on what patients think about their health care. For example, Blendon and his colleagues at Harvard have polled citizens in several developed countries to compare attitudes to health care systems. National health systems and U.S. HMO's have commissioned their own polls to probe patient satisfaction.

In these polls, patients generally express greater satisfaction with their own health care than with the health system as a whole. In general, higher degrees of specialization (and technological prowess) do not generate greater levels of patient satisfaction. Despite tight “gatekeeping” controls by general practitioners and long waiting lists for elective surgery, the British National Health Service has remained more popular than the American ‘non- system.’<sup>lx</sup>

## **G. Quality Measurement**

A strong theme across all health care systems is the need to measure and improve quality. For specialty care, attempts have been made to compare “risk adjusted” outcomes for specialty procedures. Statistical techniques are used to adjust the observed outcome for various risk factors – patient characteristics such as age, income, race, or prior illness – which influence disease and morbidity. For primary care, a number of measurements have been developed.

### **1. Avoidable Hospitalization**

Many studies have used the concept of “avoidable hospitalization” to measure health system quality. Some conditions – such as appendicitis – cannot be averted, even by good primary medical care. But many admissions for respiratory infections, asthma, or complications of hypertension and diabetes could be averted by prompt and effective primary care. The California study by Bindman et al found that self-rated ease of access to medical care explained 50% of the large variation in avoidable hospital admissions.<sup>xxi</sup> In Canada, study of the data on avoidable hospitalization led to a decision to push, at the primary care level, for broader influenza vaccination coverage. This would reduce the burden that flu cases place on emergency rooms and hospitals at a time when Canada substantially reduced the number of hospital beds.<sup>lxi</sup>

### **2. Report Cards**

In the United States, health plans have begun to compare themselves using a variety of measures, most of which are based on primary care or perceived patient satisfaction. Measures included in these report cards include screening rates for breast and cervical cancer as well as childhood immunization coverage. A system which provides good primary care will score well on these ratings, while the differences in specialist care have little effect.

## **H. Focus on Mental Health**

Over the last decade, a number of factors have increased the attention to mental health within primary care. New psychoactive medications for common conditions, particularly depression, have fewer side effects and can be prescribed safely by primary care physicians. Quantification of the burden of disease using the method of Murray and Lopez emphasizes the amount of disability caused by mental illness, particularly depression. In developing countries, attempts are being made to introduce competence in mental health at the primary care level. Such skills would permit the primary care team to relieve depression, avoid suicides, and treat epileptics in the community. In developed countries, psychiatrists are encouraging more training on mental illness for primary care practitioners so that they will more readily diagnose and treat depression and similar common conditions, and recognize when patients need to be referred to mental health specialists.

## **I. Local vs. National Contracting and Determination of Pay and Conditions**

Decentralization has been a popular management trend in health systems in both the developed and developing world. However, the scope of financial and managerial decision making which is delegated to these authorities varies widely. In Britain, health districts have powers to contract and purchase primary care from the risk adjusted capitation-based budgets which they receive from the NHS. However, the payment formula for primary care practitioners is determined nationally. Canada leaves most financial decisions to the provincial government, while municipal governments exercise such authority in Finland. In the United States, the government or insurer paying the health care bill makes the key financial decisions. The Federal government determines provider compensation in the Medicare program, while state governments which run the Medicaid program (for the poor) determine the rates paid for primary (and specialty) care within their jurisdiction. In general, most health systems are reluctant to delegate a

great deal of financial authority to lower levels of government unless these governments carry a substantial portion of the responsibility for financing the health program.

## **J. Evidence-Based Medicine and Practice Guidelines**

Throughout the medical profession, pressures increase for evidence-based diagnosis and treatment. While the research supporting new protocols flows from academic medical centers, much of it focuses on common conditions and treatments in primary care. Doctors are urged to adopt protocols supported by the evidence from clinical trials. In many countries, computers and the Internet offer a new way to disseminate this research to dispersed primary care practitioners. Evidence-based protocols can also be developed and distributed by medical societies, or through continuing education programs required as a condition of medical licensure.<sup>lxiii</sup>

## **XII. Conclusion**

Our analysis suggests that there is no single model of primary care which must be followed. Good results are achieved from systems with different sources of funding, different types of organization, and different schemes of physician compensation. However, a review of the systems profiled and the research summarized here suggests several important conclusions which apply across a spectrum of countries:

1. Primary care does work. Cross country comparisons and empirical studies show this. When done well, primary care improves health status and reduces costs compared to models which rely more heavily on specialist interventions.
2. Primary care will not succeed if primary care practitioners are the least trained physicians. Good primary care is provided by doctors with special postgraduate training. As a corollary to this requirement, primary care physicians must be compensated at a level that is not too different from that of more narrow specialists.
3. Once primary care physicians are properly trained, the scope of their practice can be very broad, and they can effectively treat the vast majority of presenting complaints. They can use a wide variety of laboratory and basic diagnostic tests. It is not necessary to segregate the care of infectious diseases or most chronic complaints such as diabetes, asthma, or hypertension.
4. The continuing relationship between primary care physician and individual patient is of utmost importance in achieving primary health care goals. “Rostered” patients who return to a single practitioner for their primary care are more likely to use preventive services and comply with physician instructions. The continuing relationship with the primary care physician does lower costs.
5. Patients can be satisfied with a system which relies on primary care, even one which uses primary care physicians as “gatekeepers” controlling access to specialists.
6. Primary care must be supported by programs to make essential drugs available and affordable. However, having physicians dispense the drugs they prescribe will distort their practice inappropriately.
7. The two most important things a national government can do to support primary care are to get the funding and educational systems “right.” Funding systems must devote enough money to primary care, even at the expense of secondary and tertiary care. And the systems must assure reasonable equity in primary care funding across regions with wide disparities in average local income. Getting the education “right” means resisting the tendency of the medical education establishment to expand specialized training and tertiary teaching facilities. Medical schools must recognize and train for a primary care specialty, with some clinical training for all physicians offered in primary care settings.

8. Additional lessons can be learned by focusing in on each of the countries studied, and on particular innovations in their primary care systems. But the above seven lessons should inform primary care efforts wherever they are undertaken.

## How Do You Get There From Here? The Path to Better Primary Care

The following is an adaptation of 21 recommendations approved in 1994 by WONCA, the international professional organization for family physicians. We have condensed the language, and eliminated some of the circumlocutions inevitable in a document from an international organization. The following are the steps that Family Physicians think necessary to promote a strong system of primary care staffed by family physicians.

1. *Accept that the health care system must change.*

Existing systems are not reforming adequately and all parties must collaborate to encourage effective change.

2. *Link funding policies to defined needs.*

Generally, primary care should get a larger percentage of the health care budget.

3. *Reward effective public health and primary care.*

Fund primary care infrastructure and staff adequately, and reward those that meet public health and primary care goals.

4. *Implement workforce reform.*

Eventually, a majority of doctors should be family doctors.

5. *Define the role and raise the status of family doctors.*

The responsibility of family doctors should be understood by everyone (policy makers, educators, medical professionals, national and regional boards).

6. *Use specialist services more appropriately.*

Generally, use specialists less frequently.

7. *Test new models of integrated care delivery.*

Experiment with systems to integrate individual care and public health.

8. *Target medical practice to people's needs.*

Use data and local analysis to define the most important things, and then do them.

9. *Use well trained family doctors; they provide better quality care more cost effectively*

10. *Encourage all patients to identify with an individual family doctor.*

Every person should know the name of his/her primary care provider; every doctor should know his/her patients by name.

11. *Establish professional societies/ colleges of family doctors in all countries.*

Provide professional recognition for the specialty, and protection of its interests.

12. *Family doctors should demonstrate their continuing competence.*

Make continuing medical education a requirement; encourage periodic re-qualification.

13. *Remuneration systems should not distort health care priorities.*

End the bias to procedure based specialties.

14. *Make medical education relevant to people's needs.*

Create national quality standards that reflect needs of medical practice - medical education shapes the future of the health care system.

15. *Recognize family medicine as a special discipline.*

16. *Basic medical education should provide a foundation for all subsequent specific training.*

Basic medical education is NOT sufficient for primary care practice.

17. *Teach family medicine in every medical school.*

And assure a generalist/specialist balance.

18. *Provide specific postgraduate training in family medicine.*

Family medicine becomes its own recognized specialty.

19. *Research new methods of improving performance of doctors.*

Doctors should continuously monitor/ revise practice behavior in order to meet needs of patients.

20. *Perform research on prevention and primary care.*

Discover new methods that directly affect health outcomes.

21. *Disseminate examples of excellence.*

When systems of primary care work, share the secret.

*Adapted from the WHO-WONCA Conference Working Paper, Chapter 5<sup>bviii</sup>*

## Cross-Country Comparison of Primary Health Care Programs

	USA (managed care) <sup>1</sup>	Malaysia	UK	Canada	Australia	Finland	Japan
Years of training for Primary Care Provider (PCP)	11	6	9	9	8	14	7
Do PCPs use laboratory services?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do PCPs use diagnostic equipment?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are drugs dispensed at practices?	No	Sometimes	No	Rural areas only	No	No	Yes
Can PCPs prescribe all licensed drugs?	Yes	No	No	Yes	Yes	Yes	Yes
Does the government regulate the number of providers in given area?	No	No	No	Some areas	No	No	No
Is the PCP allowed to admit patients to hospitals?	Yes	Sometimes <sup>2</sup>	No	Yes	No	No	No
Is a PCP referral required for patients to see specialists or receive hospital care?	Yes	Yes for specialists	Some	Yes	Yes	Sometimes <sup>3</sup>	No

Are patients required to enroll with a PCP?	Yes	Yes	Yes	No	No	Sometimes <sup>4</sup>	No
Does the PCP have a responsibility for patient education?	Implicit responsibility	No	Yes	No	No	No	No
Does the PCP have a responsibility for community health outreach?	No	No	Yes	No	No	No	No
PCP salary relative to specialists (PCP : Specialist)	1:2	good	1:1	2:3	1:2	1:1	2:1

- 1) Managed care refers to privately owned health care organizations, often called Health Maintenance Organizations, which provide all health care for patients that have enrolled and paid a fee.
- 2) In the private sector, no. In the public sector, yes.
- 3) Some specialists may be seen in the health centers and the private sector without a referral.
- 4) Some patients are simply assigned to a PCP.

*Please note: Detailed tables are available from ZdravPlus.*

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