

Primary Care Delivery in the United States and Four Northwest European Countries: Comparing the “Corporatized” with the “Socialized”

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THE WORLD HEALTH ORGANIZATION (WHO) AND ITS member nations consider appropriate primary health care the key to attaining “health for all by the year 2000.” It is widely recognized that reaching this optimistic goal in developing countries will be difficult. A careful reading of the WHO’s objectives, however, suggests that even for those nations with well-developed health care infrastructures, refinement of existing delivery systems will be necessary to achieve “appropriate” primary care (World Health Organization 1981a, 1981b; Kleczkowski et al. 1984; Roemer 1986). The United States is an example of this situation; for decades critics have cited our primary care system as being underpreventive, overspecialized, poorly coordinated, unaccountable, and inaccessible (Andreopoulos 1974). The extent to which these attributes are apt descriptors may be the subject of some debate, but the generalizations must be considered accurate for the care received by a significant proportion of Americans (Starfield 1986).

Although no country’s approach to primary care is flawless, several northwest European nations view a well-developed primary care system as a focal point of health care delivery. Owing, at least in part, to this emphasis, these countries, by most measurable indicators, enjoy a level of health status which the United States has yet to achieve. The objective of this article is to describe the primary care systems

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in four of these countries—the United Kingdom (U.K.), Denmark, Finland, and Sweden—and to explore their implications for primary care delivery in the United States, as our system reorganizes for the late 1980s and beyond.

The four nations selected are usually cited as representing the epitome of “socialized” medicine, and, during the “access-conscious” era of the 1960s and early 1970s, they were of considerable interest to proponents of a United States national health program. How then can these models be of relevance once again, in this mid-1980s era of “cost consciousness” with its increasing corporate involvement and “competitive” provider organizations? This article posits that the changes taking place within American health care are increasing, rather than decreasing, the relevance of comparative analyses with these government-sponsored systems. Current trends in the United States suggest that the basic organizational structure of the primary care system and those of the four European countries are on a course of convergence. One such trend is the shift toward increased central management and integration of providers. Moreover, the rapid move away from retrospective and fee-for-service (FFS) payment is leading to a situation where providers or organizations are increasingly assuming prepaid contractual responsibility for identifiable population groups. The “new” United States organizations that embody these changes have been labeled health maintenance organizations (HMOs) and preferred provider organizations (PPOs) and collectively are known as “managed” or “alternative” delivery systems. They are controlled almost entirely by private, nongovernmental, corporate bodies. Some of these organizations are owned by investors and are “for-profit”; others are run by “voluntary” groups and are considered “nonprofit.” Today, these “corporatized” delivery systems provide care to only a minority of Americans (approximately 15 to 25 percent in 1987); most analysts predict, however, that they will provide services to a majority within a few years (Iglehart 1984; Goldfield and Goldsmith 1987).

In addition to new-found organizational commonalities, the United States and the other countries under comparison are being affected by several similar forces. These important sociomedical factors include concerns with expanding cost in the health care sector (Abel-Smith 1985), increased emphasis on prevention, and rapidly aging populations. Also, each nation is experiencing, at least to some degree, a philosophical

shift away from hospital-based services toward those services delivered outside of institutions.

A Comparison of Delivery Systems

The following section outlines key components of the primary care delivery systems in each of the four European nations relative to that of the United States. These descriptions are based on published and unpublished materials and recent (1986) visits with physicians, nurses, administrators, planners, government officials, and researchers in each of the four countries. (For the sake of brevity and readability, key statistical references used in this section are noted primarily on the accompanying tables.) The intent of this section is not to describe all facets of health care delivery in each nation: rather, the goal is to provide a framework for the two subsequent sections; the first contrasts the attainment of the attributes of "primary care" within each system; the second discusses potential lessons for the United States.

Governance and Organization

The major difference between the United States primary care system and those of the other four nations is one of control and governance. Whereas the United States primary care system is largely private and increasingly corporate, the European systems are publicly sponsored or "socialized."

"Socialized medicine" is a term that has often been misunderstood. To most Americans, it implies a monolithic health care system where all providers are under the direct employ and control of a central, national bureaucracy. Of the four countries studied, this description is untrue in three cases, and only partially true in the fourth.

In the Scandinavian countries (Sweden, Finland, and Denmark), the national government is responsible for a significant level of funding and cross-regional coordination; but much, if not most, of the financing and control is decentralized to the "county" or community level. Within these jurisdictions physicians and administrators usually play an important role in day-to-day management of delivery organizations, but locally elected citizens maintain ultimate control. In Denmark and most of Sweden, primary care is the responsibility of the regional

“county councils.” In Denmark and all of Sweden, these councils also control acute care hospitals. These bodies are not analogous to American municipal councils or state legislatures, as they were formed exclusively for the purpose of providing health care and other social services. Given that the populations in each county may range from 100,000 to 1.5 million, the jurisdictions are further subdivided into community-sized districts for the purpose of primary care planning and management. In Finland and parts of Sweden, most aspects of primary care system governance are highly decentralized, with elected local community members responsible for areas with populations as small as 20,000. In Finland, local communities also control the hospitals, but where population size does not warrant a dedicated facility, multi-area collectives have been formed. In most Scandinavian jurisdictions, the acute care hospital catchment areas usually encompass more than one primary care district.

In the United Kingdom, the National Health Service (NHS) is centralized, with funding and control emanating almost entirely from the national government. Day-to-day management is decentralized to a network of 17 regions (14 of which are in England, the remainder in Scotland, Wales, and Northern Ireland) and 221 districts. Hospitals and the “community nursing” component of the primary care system are administered through this “district authority” hierarchy. General practitioners (GPs) are considered independent providers, and in England and Wales are paid and monitored through a separate network of 98 Family Practice Committees.

Organizationally, Sweden and Finland have similar primary care delivery systems, as do Denmark and Britain. In Sweden and Finland, the majority of primary care is provided by physicians, nurses, and other practitioners who are salaried and work in government health centers. These centers are usually responsible for persons residing in a specific geographic region. In Denmark and Britain, almost all primary care is provided by self-employed physicians who contract with the government to care for patients who appear on their “list.” In Britain and Denmark, community-based primary care nurses are employed directly by government, though in many areas their activities are coordinated with those of GPs.

In all four countries specialist care is delivered mostly by hospital-based physicians who are salaried government employees. As in most of Europe, the primary and secondary care systems are quite distinct; with few exceptions, only hospital-based specialists can admit patients

to acute care facilities. In each of the countries patients may seek care from "private specialists," many of whom are government-employed physicians seeing patients after their work hours. "Private" services rarely are covered in full by the government health programs. (For an interesting discussion of the private sector in Sweden, see Rosenthal [1986].)

Table 1 presents a summary of the basic characteristics of governance and organization for each European system and the United States.

Health Manpower and Facility Resources

In part, the four European countries were selected because their overall health care resources, though deployed differently, are fairly comparable with those of the United States—so much so that they, like the United States, have shifted some of the focus of their resource planning from issues of shortage to surfeit. Table 2 presents a summary of the health provider and hospital resources in the five countries under comparison.

In three of the four European countries, the physician-to-population ratio exceeds ours, and is likely to continue to do so in the years to come. Note that the proportion of all physicians who are general or family practitioners (FPs) varies considerably among the countries (from 12 percent in the United States to 46 percent in the United Kingdom). Pediatricians and general internists have very little involvement in the delivery of primary care in the European countries; because of their importance in the American system, however, they also appear in the table. Even with the inclusion of these "specialists," in the United States "primary care" physicians represent the lowest proportion of the total physician stock.

The distribution of physician manpower is closely controlled in the European systems. In the case of salaried GPs in Finland and Sweden, the distribution across the country is very even, and only in relatively remote areas do positions go unfilled. In Britain and Denmark, GPs who contract to provide care within the government program must obtain permission from local committees to set up practice. As of now, in both countries such permission is usually reserved for those serving as replacements for physicians leaving practice.

Table 2 also presents a summary of the availability of acute care medical/surgical hospital beds and long-term care/nursing home beds

TABLE 1
A Summary of the Governance and Organization of Primary Care in the U.S. and Four Northwestern European Nations

	U.S.	U.K.	Denmark	Finland	Sweden
Control of system and role of government	Pluralistic. No overall governance. Considerable state and federal regulation.	"National Health Service" controlled by national government. Some regional/community input.	Controlled regionally by 16 counties/cities. Some national coordination.	Controlled locally by 464 communities (who have formed 218 "federations"). Very strong national coordination.	Controlled regionally by 26 counties/cities. Some national coordination.
Level of planning/integration in:					
Entire system	Low but increasing	Very high (but decreasing slightly)	High	Very high	High
Primary care subsystem	Very low but increasing	Medium	Medium	High	Medium but increasing
Basic organization for primary care delivery	Independent private MDs. Growing number of managed/capitated organizations.	Independent GPs contract with NHS to care for patients on "list." Some GPs part of locally sponsored "health centers."	Independent GPs contract with counties to care for patients on "list."	Salariated GPs at government health centers. Some private office practice.	Salariated GPs at government health centers. Significant role for government hospital OPDs. Some private office practice.

TABLE 2
A Comparison of Physician and Facility Resources in the U.S. and Four
Northwest European Nations, 1984

	U.S.	U.K.	Denmark	Finland	Sweden
Total active physicians per 100,000 population	210	168	251	220	252
GP/FPs as percentage of all physicians*	14%	46%	25%	25%	23%
General internists and pediatricians as percentage of all physicians	15%	10%	6%	10%	12%
Acute medical/surgical hospital beds per 1,000	4.7	4.0	6.1	5.5	4.8
Long-term/chronic and nursing home beds per 1,000**	6.4	2.0	***	5.2	6.3

* GP/FP = general/family practice.

** Not including "domiciliary/residential" homes or psychiatric facilities.

*** Not available.

Sources: Swedish National Board of Health and Welfare 1985; Swedish Ministry of Health and Social Affairs 1981, 1982; Swedish Institute 1984; U.S. Public Health Service 1985; Fry, Brooks, and McColl 1984; Office of Health Economics 1984; Association of the Danish Pharmaceutical Industry 1985; Steensen, Karle, and Vejlsgaard 1985; Finnish Ministry of Social Affairs and Health 1984; Finnish National Board of Health 1983; and personal communications.

in each country. Note that with the exception of the United Kingdom, the countries have about the same, or more, beds per 1,000 population than the United States.

Financing

Table 3 records that the United States and Sweden commit a similar proportion of resources to health delivery, with about 10 percent of each country's gross national product (GNP) spent on care; the other countries expend a significantly lower percentage—about 6 percent. In Europe, 79 to 91 percent of health care financing is provided by various units of government; only a small percentage of care is paid for directly by the patient/consumer or through private insurance

TABLE 3
A Comparison of Health Care Financing Characteristics in the U.S. and Four Northwestern European Nations, 1984

	U.S.	U.K.	Denmark	Finland	Sweden
Total health care expenditures per person (in U.S. dollars)	\$1,637	\$658	\$841	\$806	\$1,445
Total expenditure as percentage of GNP	10.7%	5.9%	6.3%	6.6%	9.4%
Percentage of health care financed by government:					
All levels of government	41%	89%	83%	79%	91%
National government	29%	89%	60%	49%	35%
Estimated percentage of all health care expenditures for primary care	18%	25%	25%	30%	15%
Estimated average out-of-pocket payment for return GP ambulatory visit (in U.S. dollars)	\$17	0	0	0	\$ 6
Average GP/FP physician salary (U.S. dollars × 1,000)*	\$71	\$35	\$47	\$38	\$40
Average GP salary ÷	5.8	4.8	3.6	3.6	2.7
Average per capita income					
Average GP salary ÷	.5	1.1	1.0	1.1	.9
Average general surgeon salary					

* After expenses, but before taxes.

Sources: Swedish National Board of Health and Welfare 1985; Fry and Stephen 1986; Swedish Ministry of Health and Social Affairs 1981, 1982; Swedish Institute 1984; U.S. Public Health Service 1985; American Medical Association 1985; Fry, Brooks, and McColl 1984; Office of Health Economics 1984; Association of the Danish Pharmaceutical Industry 1985; Finnish Ministry of Social Affairs and Health 1984, 1985; Arnett et al. 1986; Schieber and Pouillier 1986; and personal communications.

(table 3). Among the European countries the proportion of service paid for by funds collected by the national government ranges from a high of 89 percent in Britain to a low of 35 percent in Sweden. In contrast, in the United States 41 percent of total expenditures are supported by all levels of government combined. Of this, 70 percent (or 29 percent of the total) is federally funded.

Approximations of the proportion of all expenditures directed toward primary care are also presented in table 3. These figures range from a low of 15 percent in Sweden to a high of 30 percent in Finland. It should be noted that the higher figures include capital costs that are being expended in the development of primary care facilities.

The amount of out-of-pocket payment required on the part of the patient can affect the use of primary care. In three of the four European countries, there is rarely a fee associated with a primary care visit obtained within the system. Only in Sweden is there a modest (\$6.00) copayment for some types of visits. (The 1984 per capita income figures for Sweden and the United States were quite similar; therefore, to a Swede, \$6.00 is worth about the same as to an American.)

In contrast, a fee for a basic visit to a United States GP/FP is approximately \$25 (not including X-ray and laboratory charges) (American Medical Association 1985). Typical private insurance plans (such as Blue Cross/Blue Shield) cover only a proportion of this fee if the visit is disease related. In alternative settings, such as HMOs, the primary care visit is usually covered with only a limited patient copayment (e.g., \$5.00). It can be estimated that, on average, 30 to 40 percent of all American visit costs are met by third parties, suggesting that the typical GP contact costs the American patient about \$17.00 (National Center for Health Services Research 1983). (If fees to other types of primary care physicians or ancillary services were included in this average, the sum would be significantly higher.) In total, in the four European countries, less than 10 percent of primary care is paid for directly out of pocket. In the United States, the analogous figure can be estimated at well over 50 percent.

Another financing characteristic that potentially affects patterns of primary care delivery is the approach used to remunerate physicians. In Finland and Sweden, primary care physicians receive a salary in return for a predetermined number of service hours per week (usually under 40). They are offered extra pay for off-hour coverage. In most Danish counties, and in all of Britain, primary care physicians are

reimbursed by complex formulae that incorporate capitation payment (based on the number of patients on their list) and some "item-of-service" (i.e., fee-for-service) payments for selected services. In the United Kingdom, GPs also receive fixed payments for certain overhead costs (such as personnel and office expenses). In 1984 British GPs received 45 percent of their payment through capitation, 18 percent via item of service, and the remainder for overhead expenses (Department of Health and Social Security 1986a). American physicians providing primary care are paid under a variety of schemes but the greatest majority (probably over 80 percent) of patient visits are either wholly or primarily reimbursed on a fee-for-service (FFS) basis. It should also be noted that most HMO-affiliated physicians (other than those employed by "staff"-model plans) are paid for each visit, at least in part, by fee-for-service mechanisms.

In none of the European countries are primary care physicians confronted with major financial incentives or disincentives when patients are hospitalized. In the United States, physicians are likely to receive extra payments when they personally care for a patient in hospital; in settings characterized by prepayment, physicians usually gain financially by avoiding hospital care.

The average 1984 before-tax (post-expense) incomes of general/family practitioners in each country are presented in table 3. Note that incomes under all European systems are considerably lower than in the United States, especially when these nations' higher tax rates are taken into consideration. The ratio of GP/FP annual salary to national per capita income is highest in the United States. To assess potential differences between earnings of primary care physicians and specialists, the ratio of average GP/FP salary to that of general surgeons is presented for each country. Only in the United States does income for the specialist significantly exceed that of the GP/FP.

The Primary Care Providers

The configuration of the professional teams that typically provide primary care varies considerably among the five countries and these differences have significant impact on care received. Table 4 provides a summary of the typical ambulatory care (including primary care as well as ambulatory-based "specialty" care) use rates of residents of each country. This table provides data that suggest that the number

TABLE 4
A Comparison of Characteristics of Ambulatory Care Visits in the U.S. and
Four Northwestern European Countries

	U.S.	U.K.	Denmark	Finland	Sweden
Average annual face-to-face ambulatory contacts per person*	5.0	5.3	8.0	3.6	3.7
Approximate percentage of total provided at:					
Health center and other "organized settings"	12%	25%	15%	68%	53%
Hospital OPD	13%	14%	30%	15%	36%
"Physician offices"***	75%	61%	55%	17%	11%
Approximate percentage of total provided by nurses****	10%	10%	15%	25%	40%

* Includes face-to-face ambulatory visits with physicians of all specialties and nurses. Also includes home visits by physicians and preventive services provided by "visiting nurses."

** Defined as "nonorganized" settings controlled by physicians at the practice site. In the U.S. this category includes non-HMO group practices. In the U.K. and Denmark, group practices that are not part of municipally sponsored health centers are included here.

*** Includes physician assistants (PAs) and nurse practitioners (NPs) in the U.S.
Sources: Swedish National Board of Health and Welfare 1985; U.S. Public Health Service 1985; Fry, Brooks, and McColl 1984; Office of Health Economics 1984; Association of the Danish Pharmaceutical Industry 1985; Finnish Ministry of Social Affairs and Health 1984; and personal communications.

of patient-provider contacts are similar in the United States and the United Kingdom (around 5 annually), highest in Denmark, and lowest in Finland and Sweden. It is difficult to assess the comparability of the visits, both in terms of duration and content. For example, in the United States, the average FP visit lasts about 14 minutes; this compares to less than 10 minutes in the United Kingdom, and about 20 minutes in both Finland and Sweden (National Center for Health Statistics 1983; Fry, Brooks, and McColl 1984).

As indicated in table 4 (row 2) the majority of ambulatory care in Finland and Sweden is delivered by providers based in organized health centers (68 and 53 percent respectively). These facilities, serving approximately 20,000 persons each, are typically staffed by about 8

GPs supported by a large team of 25 nurses and 15 nonnurse professionals (e.g., social workers, physical therapists). In addition to delivering ambulatory care, these clinicians also have responsibilities for the provision of inpatient care to chronically ill persons residing in a nursing-home-like 40 to 100 bed "hospital" unit that is part of most centers.

In the majority of Finnish and Swedish centers there is an identifiable team of GPs and "district nurses." The nurses almost always have responsibility for patients in a specific geographic subarea within the health center's catchment region, whereas the physicians, for the most part, do not treat patients from any predetermined subregion. District nurses provide the majority of preventive care received by preschool children and, in conjunction with midwives who are usually hospital-based, nurses are responsible for over 80 percent of all pre- and postnatal care. Moreover, in parts of Sweden, the nurse is responsible for a considerable proportion of illness care; in these regions she/he triages all patients before they are seen by the GP and treats simple cases without assistance. District nurses are also responsible for most home care provided to the chronically ill and infirm elderly. As reflected in the statistics summarized in table 4 (row 5), the proportion of ambulatory care provided by nurses in Finland and Sweden is estimated to be considerably higher than in the other countries.

In Britain and Denmark, most GPs practice either in a private group or on a solo basis ("single-handedly" as they say in the United Kingdom) and deliver the majority of ambulatory care from these settings. Some of the larger groups in Britain have entered into agreements with local municipalities to practice as part of government-sponsored "health centers," where their services are, to a limited degree, coordinated with services provided by a range of nonphysician professionals (e.g., dentists, podiatrists, psychologists, social workers) practicing at the same site. As indicated in table 4 (row 2), these types of centers account for about 25 percent of all services provided in the United Kingdom.

In all types of practices, each British and Danish physician usually has one or two support staff, but only a small proportion of his/her paid employees are trained "practice" nurses (8 percent in the United Kingdom (Department of Health and Social Security 1986a). A relatively recent innovation in both countries is the integration of government-salaried public health nurses who, although administratively independent,

coordinate their care delivery with the GP. In the United Kingdom, many nurses are "assigned" to selected physicians (on either a part-time or full-time basis) who, to some degree, oversee their activity. These nurses are employed by the municipalities in Denmark and the National Health Service local district in the United Kingdom. In both countries, they fall into one of two categories: the "health visitor" and the "district"/"community" nurse. The health visitor, as the name implies, visits families in her/his district and is responsible mainly for preventive care of preschool children. The community or district nurse has responsibility for home care of the chronically ill. The practices of these primary care nurses are almost always limited to specific geographic catchment areas and interaction with more than one GP is often necessary, given that all patients within a single area do not necessarily appear on the list of the same physician. As might be expected, there is currently a range of controversies relating to the awkwardness of a governmentally employed nurse working under the "supervision" of several independent physicians (Department of Health and Social Security 1986b).

About one-half of all GP/FPs in each country (including the United States) have completed postgraduate or "vocational" residency training (as residencies are termed in Europe). This education ranges from three years in the United Kingdom (and the United States) to six years in Finland. In all five countries considered, virtually all new GP/FPs entering practice are now postgraduate-trained GP/FP "specialists."

In contrast to the United States, in the other countries it is rare to find a nongeneral physician as a member of the primary care team, either inside or outside of a health center. Although the majority of visits to specialists in these nations are referred from GPs, in Scandinavia the rules and customs regarding direct patient access to hospital-based physicians varies by county jurisdiction. Table 4 presents the approximate percentage of all ambulatory visits that are to hospital-based specialists. In Denmark and Sweden, the considerably higher rates of in-hospital ambulatory consultations indicate a high degree of reliance on these institutional settings.

In the Swedish and Finnish cities a very significant percentage (as high as one-third in Helsinki) of patients seek the services of "private" specialists, for whom no referral is necessary (visits to these physicians are noted in row 4 of table 4). Denmark is the only one of the four

European countries where officially sanctioned “community specialists” may practice outside of hospitals. These physicians (notably otorhinolaryngologists and gynecologists) receive a fee-for-service payment and treat patients on referral from GPs. These specialists can admit to the hospital, but cannot then provide care to admitted patients.

A Comparison of the Attributes of Primary Care

Researchers and educators have offered a range of attributes that should be assessed when determining the degree to which “primary care” is attained within a particular delivery system. The attributes that have been suggested include:

1. Accessibility—which emphasizes the role of primary care as the entry point into the health care system and the elimination of financial and nonfinancial barriers to the receipt of care;
2. Comprehensiveness—which relates to the range of services available from a single provider, including an appropriate level of preventive, nondisease-oriented care. Comprehensive care incorporates hospital-based and specialized services without overemphasizing such care;
3. Coordination—which relates to the degree of “harmony” that is attained by the primary care provider as the “conductor” of the complex health care delivery “orchestra.” The issue of the provider’s ongoing relationship or “longitudinality,” and the “continuity” of a provider within the episode of care, are often considered essential to the coordinating role of the clinician;
4. Appropriate social milieu—which relates to viewing the “patient” as part of larger social organizations. Treating the patient as a member of a family unit and as part of a community are examples of this type of concern, as is the issue of appropriate consumer input and control over the care delivery system.

There is no universal consensus as to which of the above characteristics should be considered the *sine qua non* of “primary care”; the majority of authors do agree, however, that they are worthy of inclusion in a critical assessment of care received by a particular population (Starfield 1979; Fry and Hasler 1986; Parker, Walsh, and Coon 1976; Holmes 1978; Alpert and Charney 1973; Weiner and Starfield 1983).

Detailed description of the attributes of primary care received by patients in the United States and in each of the four European countries is difficult, in part because of data availability and comparability problems. Moreover, variability within each country often exists. These caveats aside, it is possible to offer some general observations regarding the level of attainment of the aforementioned key attributes, as received by residents served by the predominant modes of care in each nation.

A graphic representation of this comparison is presented as table 5. This table records a general assessment of the degree to which each primary care attribute has been attained relative to the normative, "idealized" standards that have been described in the literature. For each country this summation is made on the basis of: (1) empirical evaluations carried out by researchers and planners; (2) government policy documents; and (3) the opinions obtained "in country" from providers, planners, and researchers expert in the area of primary care. In table 5, a "+" is noted if the attribute is attained for a substantial majority of persons receiving care; if the attribute is not attained for the majority, a "-" is noted, and in cases where it is difficult to assess the level of attainment, or if the situation varies substantially across jurisdictions or practice settings, a "+ -" is noted to represent this uncertainty. For purposes of comparison, this assessment is made in the United States for both traditional fee-for-service practice as well as for a "group" (or "group/network") model HMO, which can be considered reasonably typical of the growing corporately sponsored settings.

Access to Care

For the first primary care attribute—access—the assessments represented in table 5 suggest that for each of three distinct measures, the situation in American FFS practice is mixed or negative. This reflects the fact that the availability of services in some rural and urban locations is limited. In areas with adequate numbers of providers, other barriers (such as difficulty in identifying a source of care, or long waits for appointments) often hamper access to that care. Moreover, for the majority of American residents receiving care outside of organized settings, third-party insurance coverage for primary care is poor if it exists at all.

Access is the only attribute represented in table 5 for which there are uniformly positive assessments in all European systems and within

TABLE 5

Attainment of "Attributes" of Primary Care under Two U.S. Models and in Four Northwestern European Countries

Attributes of primary care	U.S. FFS*	U.S. HMO**	U.K.	Denmark	Finland	Sweden
Access:						
Availability of service	+ -	+	+	+	+	+
Ease of entry into system	+ -	+	+	+	+	+
Financial access	-	+	+	+	+	+
Comprehensiveness:						
Range of services available	+ -	+	+ -	+ -	+	+
Focus on prevention						
Children	+ -	+ -	+	+	+	+
Adults	+ -	+ -	-	-	-	-
Coordination:						
Continuity of patient/provider relationship	+ -	+ -	+	+	+ -	+ -
Coordination of specialty/hospital services	+ -	+	-	-	-	-
Coordination with long-term care	-	+ -	+ -	+ -	+	+
Appropriate social milieu:						
Family centeredness	+ -	+ -	+	+	+ -	+ -
Community orientation	-	+ -	+ -	+ -	+	+

* Fee-for-service (i.e., traditional practice).

** Based on "group model" health maintenance organization.

Key: + = Attribute in general attained.

- = Attribute in general *not* attained.

+ - = Mixed situation exists depending on jurisdiction or provider setting.

American HMOs. These are due to the following characteristics found within each of these models:

1. carefully planned availability of services;
2. formal identification of a "regular" source of primary care for all consumers;
3. careful attention to maintaining ease of entry into the system, and

4. limited, or nonexistent, out-of-pocket expenses for patients seeking services.

Comprehensiveness

Assessments of the second attribute in table 5—comprehensiveness—are mixed. The main criterion assessed for the first parameter—range of services—concerns the diversity of problems that can be treated within a typical primary care setting, without external referral. Those settings that include a wide range of physician specialties and non-physician providers (such as nurses, social workers, physical therapists, and psychologists) are considered to offer a wider range of services than settings that do not. The data suggest that in the United States, the United Kingdom, and Denmark, the situation is mixed, largely because some practice sites represented in these categories do offer a wide range of services (notably large group practices), and many others do not. In the case of American HMOs and the Finnish and Swedish health centers, this criterion is met in the majority of locations given that a wide range of providers are usually found within these large organized settings. Because of the role that many physician “specialists” play in American HMOs, and the relative rarity of such practitioners in Scandinavian primary care, the HMOs probably would rank first when one considers the range of physician services that can be offered within these organizations.

The “prevention” parameter is an important facet of comprehensiveness and is currently of special concern to public and private governing bodies in most countries. Prevention is a critical component, as many consider nonillness care and “health promotion” to be a central mission of primary care. In table 5, assessment of this attribute is subdivided for children and adults; distinction between care of these two subpopulations is very evident in most settings. The two key criteria used in this assessment were: (1) the presence of organized, proactive programs of prevention (e.g., formal screening activities); and (2) empirical measurements of preventive success (e.g., immunization uptake rates).

For preventive care to children, each of the European systems is assessed as positive whereas both American models receive a mixed rating. This is largely due to the Europeans’ extraordinary preschool and inschool prevention programs. These activities, relying heavily on “district” and “visiting” nurses, provide proactive preventive services

to children from birth (or in many cases before birth) through high school graduation. In many jurisdictions a 100 percent participation rate is reached. In the United States, pediatricians and FPs have taken considerable responsibility for the preventive care of children, and are probably more involved in such care than are their FP and pediatric counterparts in the other countries. These services are not universally received by American children, however, either in or out of HMOs.

Adult preventive care is an entirely different matter. In the United States both the FFS and HMO-based providers are actively involved in offering "checkups" and it is not uncommon for adults (particularly those fully insured or in HMOs) to receive such services. Although the benefits of "well adult" examinations are still debated internationally, there is reasonable consensus regarding the efficacy of several of the screening tests that usually are performed as part of these exams. Furthermore, in most organized settings serving adults, many free-standing screening and educational programs are offered. The delivery and receipt of such preventive services are, however, far from universal across the United States. The Europeans' adult preventive care situation contrasts with successes in the area of pediatric prevention. Until recently, only limited attention has been given such care and use rates of nonillness services among adults are considerably lower than in the United States. Moreover, in Europe development of "disease prevention" and "health promotion" programs appear to lag behind the United States in most instances.

One exception to the generally weak state of the European adult preventive services is the notable Scandinavian success story in the area of cervical cytology. In Sweden and in most areas of Finland and Denmark there is a centralized computer system that monitors women in at-risk age groups (Laara, Day, and Hakama 1987). Using this "Pap test" registry, on a predetermined cycle, women are notified to report to their provider for the screening test. Prompted by the computer, the uptake of such services approaches an astounding 100 percent in many jurisdictions. A coordinated information retrieval effort for purposes of prevention probably has never been applied elsewhere on such a large scale.

Coordination

A key component of the "coordination" attribute is the presence of an ongoing continuing relation between the patient and provider.

The extent to which the system encourages and supports such a relationship is central to the assessment of this characteristic. In the United Kingdom and Denmark it is mandatory (with a few exceptions) that all residents choose a single physician as a source of primary care. This leads to a very stable relationship and patients rarely change unless they or the physician move. In the remaining countries the situation regarding continuity varies considerably. For many Americans, both in and out of HMOs, stable relations with a single physician or a single practice often develop. Studies suggest, however, that this is not a universal phenomenon. Only recently, in the Finnish and Swedish health centers, has a priority been placed on continuity. In previous years (and now in some centers), little attempt was (or is being) made by the provider or patient to develop ongoing relations either within an episode of care or across episodes. Improving the continuity of primary care is a major objective of current Finnish and Swedish government policy.

It is difficult to assess the second component of coordination—the role of “gatekeeper” to specialty and hospital services—in each of the systems. Under the American FFS model, much hospital care is directly provided by the primary care physician; this serves to decrease concerns over disharmony caused by the poor integration of primary and hospital care. On the other hand, when a patient is referred to another FFS physician for either hospital care or an ambulatory-based consultation, coordination problems may or may not ensue, depending on the proximity and relationship of the practitioners involved. In the case of the American HMO, not only does the primary care physician directly provide a considerable amount of hospital care, but referrals to specialists are usually made within the same site, or at least within the same organization. In the European systems virtually all acute inpatient care and specialist-provided ambulatory care are supplied by physicians based in hospitals that are organizationally distinct from the sources of primary care. Although attempts have been made to formalize the communication between the primary care physician and the hospital specialist, interactions fall short of the ideal in many cases. While this is an issue that many providers in the countries acknowledge, present trends do not suggest that this problem is likely to be surmounted in the near future; few specialists are interested in increasing their involvement in primary care, and it is unlikely that FPs will ever be fully integrated into the hospital systems.

Another increasingly important aspect of coordination is the role of primary care providers in the provision of long-term care to the elderly and disabled. In all countries, the majority of day-to-day long-term care provided either in an institution (e.g., nursing home) or in the patient's home is provided by those other than physicians. The primary care physician should play a key, if not dominant, role, however, in such care. The extent to which a person's long-term care is coordinated with his/her present and past primary care is the aspect of each system that is assessed in table 5. In the American FFS system many primary care physicians are not actively involved in the provision of primary care to patients in either the institutional or home-care environments. The majority of such care is provided by physicians new to the patient, often assigned by the long-term care organization. American HMOs have had little experience in the integration of primary care and long-term care, as it is only recently that their patients have included a significant proportion of elderly. Most HMOs do not provide such services; a few, however, have become involved in a recent innovation—known as “social” HMOs—where long-term care is closely integrated with both primary medical, hospital, and social services (Leutz et al. 1987).

In the United Kingdom and Denmark, GPs are involved in long-term care provided to patients who remain at home. Such care is given largely by nurses who work in association with the patient's ongoing physician. Institutional long-term care in these systems does not involve the patient's own GP in a major way. In Finland and Sweden the GP in the health center is the key coordinator of most long-term care. District nurses and other providers, working under the direction of the GP, care for home-based patients. Furthermore, most institutional-based long-term care in these Scandinavian countries is provided by the health centers themselves, within their attached “hospital” units. This long-term care is provided under the direct control of the same GPs responsible for ambulatory primary care services. Therefore, in such facilities patients are usually treated by providers with whom they had close relations before they were institutionalized.

Matching the Patient's Milieu

An important, yet often overlooked, attribute of primary care is the extent to which the patient-provider relationship and the delivery

system that supports it is appropriately matched to the patient's social, economic, and political context. Although this aspect of primary care often gets much attention in developing countries, where advancement of health and health care is directly linked to development in other sectors of society, it is also relevant to the five industrialized countries under consideration here.

The first component of the "appropriate milieu" measure is the level of "family centeredness" exhibited by each primary care system. This concern, although relatively new and somewhat controversial, is based on the premise that in human society it is the family unit that is the basic building block. Therefore, when attempting to provide primary care, the practitioner must consider the patient as an integral part of this unit (White 1967; Geyman 1977).

In the United States, as in all countries under study, the present generation of "family" practitioners views this aspect of care as one of its major concerns. Given the choice, most FP physicians prefer to serve all members of a family unit, providing care that ranges from prenatal to geriatric. This type of care, however, is far from universal in many FFS and HMO environments because the practice of other primary care physicians (internists, pediatricians, and gynecologists) is limited to certain ages or sexes, making family-centered care difficult if not impossible. The extent to which this negatively affects care is unclear.

In the United Kingdom and Denmark, the great majority of family units are "listed" with the same FP. Because of the longitudinality provided by this mechanism, and the wide range of conditions that a typical FP can handle without referral, the FPs in these countries offer care that is very family oriented. The Finnish and Swedish health centers have attempted to encourage family members to seek care from the same physician within a center, but in most facilities there is no mandatory requirement to do so. Also, because of existing problems with continuity, it may be difficult for a given provider to develop a long-term relationship with all family members. The nurse members of the Finnish and Swedish primary care teams, on the other hand, are usually assigned on a neighborhood basis; therefore, these providers do develop relations with entire family units.

A second critical measure of the social appropriateness of primary care is the extent to which the community and its needs are integrated into the primary care delivery system and the level of provider accountability to that community. This parameter has been highlighted

by those supporting the school known as “community-oriented primary care” or COPC (Mullan 1982; Hart 1984; Nutting, Wood, and Connery 1985). Under the ideal COPC model, a provider or provider organization accepts responsibility for a particular community, and with its active participation the community’s needs are identified. Care can be targeted either at individuals, through conventional provider-patient interactions, or at populations, through community-wide programs. Under COPC it is intrinsically assumed that the primary care system is directly accountable to the patient and his/her community.

Table 5 records an assessment of the level of “community orientation” of each of the six primary care delivery models. Under FFS practice in the United States, providers make no contractual commitment to an identified group; in other than small towns providers usually do not have a “population” orientation. Nor do such practitioners regularly use formal epidemiologic techniques to identify the needs of their patient population. Likewise, formal mechanisms of accountability are all but nonexistent. In American HMOs and among other alternative providers, the situation is a bit mixed. Such organizations do have identifiable populations for whom they are contractually responsible, and there is a certain level of accountability to these persons. For the most part, however, accountability in HMOs is driven by the fact that such plans wish to keep the pleased “consumer” from switching to one of the competing options available. While many of the approximately 650 HMOs in the United States have sophisticated data systems that could be used to assess consumer needs, only a few regularly apply these systems to develop tailored primary care programs to address the unique problem areas of their enrollee population.

The British and Danish systems also receive mixed ratings for the community-orientation criterion (table 5). In these systems providers have a responsibility for an identifiable population, but within a single community there usually are numerous independent providers. Although some practitioners attempt to link a community-wide assessment of needs with service design, this is not common. While all providers are accountable to patients on their lists, it is unusual to find formal patient committees serving in an advisory capacity. Moreover, it should be recognized that because of the significant government role in financing and organizing primary care, British and Danish providers maintain a general level of accountability to elected officials and/or to regional boards appointed by these officials. While this type of oversight has

an impact on the delivery system, it probably does not affect the scope of day-to-day care in accord with the ideal model of COPC.

Although it is possible that the perfect model of COPC exists nowhere, the systems in Finland and Sweden approach the attainment of the community-orientation criterion as closely as any under scrutiny here. As discussed earlier, Finnish health centers are controlled by the local community (or in cases of rural areas, a collective of several communities). In Sweden, the health centers come under the aegis of county councils, which have responsibility for many communities within their regional jurisdictions. Moreover, in many Swedish counties, the system is undergoing an important change; the day-to-day control of health centers is being transferred to "primary care councils" made up of locally elected and appointed community residents (Swedish Planning and Rationalization Institute 1984; Lawson 1984). Among the six models, it is only in Finland and Sweden that a "single" provider organization has responsibility for all residents within a given geographic catchment area. This unique situation allows for the assessment of an entire population's needs and the subsequent design of appropriate systems to address these needs. Although far from ubiquitous across the hundreds of health centers in the two countries, there is a very real attempt to accomplish this linkage in many areas; the national governments strongly support such efforts (Finnish Ministry of Social Affairs and Health 1985; Swedish National Board of Health and Welfare 1985).

Lessons Learned

Defining the appropriate role of HMOs and other corporately controlled organizations in the provision of health care is a major task confronting American policy makers (Health Care Financing Administration 1986). Central to the debate is whether or not these large private providers, paid mainly on a capitated basis, can offer services that are not only cost effective, but also reflective of "high quality" primary care. Concerns have included: the potential perverse impact of financial incentives and organizational structure on access to needed preventive and specialized services; the disadvantages of private vs. public sponsorship; and the possibility that care delivered by a complex organization will be less coordinated than if provided by an independent FFS physician.

Policy lessons garnered from this article's cross-national comparison are discussed in this section. The validity of the concerns identified above and others are explored through an analysis of the successes and failures observed within the four European systems relative to their attainment of the ideal attributes of primary care.

The Impact of Financial Incentives and Organizational Structure

If HMOs and other "alternative" American primary care providers continue to proliferate, they will lead to an integration between financing and organization previously uncommon within the American health care arena. Within such entities, the insurer, the primary care physician, and the hospital are part of a single "organization," at least at the theoretical level. In practice, however, it is a rare HMO in which all of the parties are "one in the same." Only a minority of HMOs (13 percent) directly employ physicians as "staff," and of these only several operate their own hospitals (Interstudy 1986). For most group IPAs (individual practice associations), and network model HMOs, as well as PPOs, a contractual relation between three separate entities (payer, physician, and inpatient facility) is more common. These contracts typically place the organization's managers and physicians in the middle of a complex web of financial incentives and disincentives potentially having a great impact on the primary care received by enrolled patients (McKinlay 1981; Goldfield and Goldsmith 1987).

The European systems also offer a range of organizational and fiscal incentives, many of which are similar to those found in one or more models of the alternative American providers; others are quite unique and not found in the United States. When compared side by side, are there any major strengths or weaknesses of this aspect of the European systems relative to the objective of attaining appropriate primary care?

One unexpected difference between the HMO and the socialized models is the degree to which incentives promote ambulatory-based primary care as a less costly alternative to inpatient care. Theoretically, the American organized providers and each of the European systems can be viewed as single entities responsible for the provision of all levels of care to an identifiable population. In each system these services

must be purchased from a pool of funds that are predetermined and fixed. Under such a scheme, there are powerful incentives for the highest level of governance (e.g., the board of directors or the elected governing councils) to emphasize primary care over more expensive institutional-based care. The evidence suggests this phenomenon may occur in American HMOs (Luft 1981; McKinlay 1981). In actuality the European systems do not function this way. In several of these systems the ratio of care provided in the inpatient setting relative to the ambulatory often exceeds that of even the American FFS model, which is far higher than that of the HMO. Why does this hospital orientation exist in spite of powerful countervailing incentives?

The first explanation concerns the minimal clinical, administrative, and financial coordination between the European primary care and hospital infrastructures. As already discussed, in none of the countries is there extensive integration of the two types of organizations; very few administrators are concerned simultaneously with budgeting in both the primary care and hospital sectors. Conversely, there are many managers who are responsible for the continued strength of their respective sectors. Moreover, the crossover of physicians between the two systems is very rare and each group of clinicians is understandably most supportive of its own domain. In the European countries, current resource commitments to the inpatient sector relative to the primary care sector, in terms of funds and physician manpower, favor the hospitals by a factor of up to five to one. The pressures emanating from the hospital managers and clinicians to maintain the current inpatient-dominated status quo appear to counterbalance by far the views of the few managers with "joint" responsibility for both primary care and hospital care. The elected and appointed community members with purview over both sectors are more affected by their hospital constituency than that of the less glamorous health centers and doctors' offices. Further adding to the prohospital stance is the limited "grass roots" community support for primary care in these societies, especially given the high level of access to hospital care, which has become accepted as a "norm." (See further discussion of this issue in Brogren and Saltman 1985.)

In contrast to the European models, in American HMOs there are many administrative, clinical, and fiscal links between primary and hospital care. Most top managers are responsible for expenditures in both sectors, and virtually all physicians practice in both environments.

Services provided in the primary care setting rather than in the hospital directly translate into increased efficiency for the system and ultimately into "profits" for the corporation and its physicians. Critics of this facet of the HMO structure suggest that it leads to a skimping of services and ultimately to lower quality of care; the majority of empirical evidence to date does not support this supposition (Luft 1981; Weiner 1986).

The European situation suggests that organizational and financial structures can serve to deemphasize primary care within a delivery system. Such problems have not been common among American HMOs, where, until recently, large group and staff models have predominated. In the future, however, as new multisite structures are developed, incorporating organizationally distinct providers (e.g., as in "network" model HMOs, where a network of independent group practices provides care), system designers should be cognizant of this potential phenomenon. Moreover, the European systems might do well to emulate certain aspects of the management and financial structures of organized providers in the United States. (See further discussion of this issue in Saltman and von Otter 1987.)

Financial incentives at the provider level can also have a significant impact on the primary care delivery process within a system. The primary care physicians in two of the European countries (Finland and Sweden) are reimbursed almost entirely by salary. In the other two (the United Kingdom and Denmark) they receive payments based on capitation and productivity. What are the implications of these reimbursement schemes for the United States?

Danish and British capitation payments help foster a high degree of longitudinality in the patient-physician relationship. The extent to which the incentives for this are financial, rather than strictly organizational or clinical, is unclear. It is apparent, however, that the provider's livelihood is best served if he/she maintains a large and satisfied list of patients. Furthermore, the stability of the relationship induced by capitation appears greater than that observed in settings where such payment does not predominate. The advantages of per capita physician remuneration should be considered by those American HMOs not presently operating under such a scheme.

Prevention is another attribute of primary care that appears to be sensitive to differences in physician reimbursement mechanisms. As

previously identified, the European systems do not rate uniformly high on the adult preventive care criterion. This contrasts to some degree with the situation in the United States, where many adults, and certainly those in most HMOs, receive more preventive services. One explanation for the low European rating is that the physicians in these systems face few, if any, financial incentives when offering such services. In Finland and Sweden the salaried physicians never receive any extra payment for the preventive services they provide during regular hours. Only in cases of a few specialized services (e.g., Pap smears, immunizations) do physicians in the United Kingdom or Denmark receive extra remuneration for offering prevention. In part to address this problem the British are debating the advantages of a new incentive program, which has been dubbed "the good practice allowance." Under a proposal recently advanced, GPs meeting certain practice criteria, many of which relate to improved preventive care, would receive extra "quality" related payments (Royal College of General Practitioners 1985; Department of Health and Social Security 1986a). In the United States, both within FFS practice and most types of alternative plans, physicians receive considerable remuneration for offering these services. For example, a comprehensive adult preventive examination with related diagnostics can easily net a practice over \$150. It is likely that this incentive plays a role in assuring the receipt of such services. Remuneration arrangements used by the American HMOs and other alternative plans should consider the advantages and disadvantages of service-linked financial incentives when attempting to promote preventive care among their enrollees.

In none of the European systems do primary care physicians gain or lose financially when the patient receives resource-intensive services, such as hospital care. A lack of disincentive may help ensure patient access to such care, just as a lack of incentives does not contribute to financially induced "overuse." All told, this financially neutral situation probably contributes to the overuse of services where not constrained by resource availability; services provided by hospital-based specialists relieve the primary care provider of time-consuming, often complex patients. In most American HMOs the provider shares at least to some degree in the financial risk associated with overuse of services. Although this practice has been criticized, especially by those concerned with underuse, it is a reimbursement approach that

might play a role in limiting the inappropriate utilization of specialized care. This is another approach that might be employed in Europe to increase practice efficiencies within their systems.

Access and Community Orientation: An Advantage of Public Governance?

While there are many similarities between the organizational infrastructures within which the clinicians of the European nations and the American alternative systems provide care, the external governance of these organizations is quite different. The American models assume that the interests of the consumer are best met by providers that compete with one another in an open market, free of direct government control. In contrast, the Europeans have adopted a public-sector orientation. Are the primary care needs of the patient/consumer best met by a system controlled by a corporate board working in tandem with marketing staff and accountants, or one directed by elected politicians functioning in consort with planners and bureaucrats?

In the European models, the level of local, regional, and national government involvement varies, but across all nations there are several advantages that can be traced to public-sector control. The first of these is the high level of access to primary care services enjoyed by all citizens, without regard to purchasing power. The second advantage is the geographic or community perspective of the systems.

Complete access to a reasonable level of care for all citizens is a hallmark of the four government-sponsored systems. Intrinsic in the design of each of these primary care delivery programs (and most others in the developed world) is the assumption that no person should be without care, regardless of income or place of residence. The privately controlled American primary care system (either FFS or alternative) can make no claim of uniform access to all segments of our population. A comparison of the American HMO model with the European frame of reference suggests, however, that it is possible for a private delivery system to ensure a high level of access for those it serves. For persons enrolled in an HMO, access to medical care, especially of an ambulatory nature, compares quite favorably to the European systems. It appears, therefore, that as we head toward the organized model concerns over access would best be directed toward the welfare of our society not likely to be franchised by such systems.

These individuals would likely include the unemployed (and others not covered by government programs and unable to afford enrollment fees), those residing outside of targeted "market areas," and those "financially undesirable" (e.g., because of a chronic illness) (Luft 1986).

The competitive model of American health care in the 1980s assumes that consumers will choose a primary care "provider" from among several available to them. These organizations are not expected to be directly accountable to any level of government, except possibly for the care they provide to the elderly and the poor covered by Medicare and Medicaid (representing about 25 percent of the American population). Can these nongovernment entities possibly be as sensitive to community-based primary care issues as the European systems?

From an assessment of the four European models, it appears that attainment of COPC may be related to organizational factors rather than sponsorship and control. That is, a single organization with responsibility for a specific catchment area may be necessary (although not sufficient) to ensure that care takes on a community orientation. Experience in the United Kingdom and Denmark suggests that sponsorship alone is not enough; in these countries, government contracts with all primary care providers has not led to COPC on a wide scale. On the other hand, the fact that so many health centers in Finland and Sweden fail to meet all of COPC's goals does not support the premise that structure alone can promote COPC; it is likely that cultural and political factors are critical as well.

The best system design for the attainment of COPC is unclear. Perhaps organizations accountable directly to consumers, rather than government, will have greater incentives to meet the needs of those enrolled. As long as there is more than one distinct source of primary care in a community, however, without some degree of planning and coordination, it is unlikely that true COPC can occur without wasteful duplication of services. On the other hand, with more than one provider in an area attempting to address the consumers' needs, competitive zeal might lead to innovation and efficiency in this regard.

Improving Comprehensiveness of Care

In comparing the comprehensiveness of the primary care provided by the European systems with those of the American corporate models, it appears that preventive care for children is an area the United States

might do well to emulate. Also, the cross-national comparison suggests some cause for concern, relating to the "range of service" characteristic among certain types of organized practices in the United States.

As identified earlier, one significant difference between primary care provided in the European nations and the United States (both under FFS and in HMOs) is the major role played by nurses in pediatric prevention. In the Scandinavian countries (and in the United Kingdom to a lesser extent), it is the norm rather than the exception for all children to receive near-complete preventive services. This is due to an ongoing program of health promotion largely the responsibility of community-based visiting nurses. Although such a model would be difficult for nongovernmental nurses employed by HMOs, this effective source of care is not without precedent or support in the United States (Weiner, Steinwachs, and Williamson 1986), and is worthy of consideration by the plans of the future.

In the area of adult prevention, the Scandinavian innovation is that of computerized Pap test screening. While the application of computer technology for the purpose of ongoing monitoring of preventive care has been implemented in places in the United States, none of our systems rival the scope of the Nordic programs. In organized settings, with their requisite information systems and registered populations, this type of prevention management system could be readily applied. This approach should not be limited to adults and it could well be integrated with expanded preventive roles for nurses and other "mid-level" professionals such as physician assistants and nurse practitioners.

The Finnish and Swedish health centers were rated most highly for the "range of services" criterion because of the wide scope of multidisciplinary providers available under a single roof within their systems. The richness of personnel in some large American staff or group model HMOs approaches, or even surpasses, that of the Scandinavians. However, in many plans (e.g., in PPOs or in IPA or network-type HMOs) where solo physicians and small group practices predominate, these nonphysician staff members are less available. Moreover, the observed weakness of the IPA-like British and Danish delivery systems relative to the range-of-service criterion lends support to statements of concern regarding the comprehensiveness of the care delivered by these increasingly popular alternative delivery models.

Improving Coordination of Care

The four European systems provide examples of organized practices that exhibit attributes of primary care coordination that are both superior and inferior to those of the American "alternative" models.

The continuity of care and the degree of family centeredness attained by British and Danish GPs under their capitated systems are, in many ways, reminiscent of the patient-doctor relationship of the small-town American doctor of several decades ago. In neither the American group model HMOs nor the Scandinavian health centers do patient-provider interactions approach this level of ongoing consistency. It is possible to design systems within large organizations that attempt to accentuate such care, as exemplified by those centers in Sweden that assign patients to a clinician on the basis of neighborhood, or those HMOs that require patients to contact their designated "primary" provider before other services may be delivered. It appears, however, that it may always be easier to attain these attributes in organized settings such as IPAs, where the individual provider and not the organization has a contractual responsibility to provide services to the patient.

The coordination of primary care with hospital and specialty services is one area where few lessons are apparent among the European models. This is due to the minimal integration of hospital-based specialists with the primary care sector. Given the expense and importance of the care provided in hospitals, this is one major area of primary care that deserves special attention in those systems.

The Europeans offer some interesting models for the coordination of long-term care with primary care. In each of the countries, visiting nurses with responsibility for the home-based care of chronically ill patients are an integral part of virtually all primary care settings. This contrasts sharply with the situation in the United States, where existing home care and "visiting" nursing services are usually independent, or linked to inpatient institutions. The cooperation of community nurses with private physicians in Britain and Denmark, as well as the nurse-doctor team found in the Scandinavian health centers, leads to a level of coordination between home-based long-term care and primary care not found in the majority of American settings, including both IPA and group type HMOs. This would suggest that

the integration of home care agencies and HMOs is both desirable and feasible.

The nursing-home-like hospitals attached to most Finnish and Swedish health centers are unique. These long-term care facilities are part and parcel of the ambulatory-based primary care infrastructure—so much so that planning and administrative documents in these two countries term them “primary care” delivery settings. This conceptual integration is indicative of the level of clinical coordination that exists between what in the United States would be considered two distinct levels of medical care. While it would not be practical for American providers of primary care to attach long-term care facilities to all large practice sites, it might be feasible to develop formalized, integrative relations with such facilities (perhaps in a fashion similar to the social/HMO demonstration projects). It is probable, however, that a complete linkage of nursing homes and HMOs awaits major changes in American health care financing.

Summation

Although the five countries discussed here have amassed a base of health services statistics and research that are among the world's best, the amount and quality of the information available for this cross-national comparison was not wholly adequate. This limitation should, therefore, be acknowledged. Where no relevant studies or reports existed, the assessment of primary care attributes often relied on first-hand observations at selected provider sites and perceptions of “in-country” experts. Although attempts were made to incorporate findings from a variety of sources, assessments made on the basis of potentially biased origins such as these are less preferable than those relying on management-information systems, or the results of evaluation research. Unfortunately, in no country, including the United States, is the body of existing knowledge such that adequate “scientific” data describe all key attributes of primary care. Moreover, addressing the data-deficit problem was a goal of this project; by developing a comparative frame of reference among the countries, it was expected that the international state of the art in primary care health services research could be advanced through the identification of topics worthy of further investigation. It is hoped that in the future cross-national

collaborative research will increase the base of scientific data available for comparable analyses.

Political, social, and economic contexts are never identical, even in countries that share similar values. Such differences make it difficult to apply directly models of care derived from a health care system in one country to that of another. Furthermore, one must recognize that subsystems, or components, taken from a larger "whole," rarely function as in their original state once they have been grafted onto a second delivery system. A program can only be adapted from one country to another if artful adjustments are made based on a sensitivity to the environments of both the "receiver" and the "donor" nations.

The present trend in American health care focuses on the adoption of innovative mechanisms for the financing and organization of primary care delivery; this evolutionary process can, and should, benefit from the experiences of others in the world community who have relied on similar "innovations" for several decades.

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