The Prevalence of Hospital Health Promotion and Disease Prevention Services: Good News, Bad News, and Policy Implications

PETER C. OLDEN and
DOLORES G. CLEMENT

University of Scranton; Virginia Commonwealth University

IN RECENT YEARS, THE HEALTH CARE SECTOR HAS begun to emphasize population health in communities and to move away from its original primary focus on acute inpatient hospital care. This shift is one that has been advocated by health care scholars in their discussions of the need for health reform to improve health status rather than only to improve medical services delivery (Fielding and Halfon 1994; Cutler 1995; Fries, Koop, Sokolov, et al. 1998), and by leaders proposing the future role of hospitals in the changing health care system (McNerney 1995; Sigmond 1995; Shortell, Gillies, Anderson, et al. 1996; Griffith 1997). American hospitals traditionally have provided acute medical care, but are now beginning to provide health promotion and disease prevention (HPDP) to improve health for their served populations (Shortell, Gillies, and Devers 1995; Rundall and Schauffler 1997; Fromberg 1997; Olden and Clement 1998). Various explanations have been presented for this hospital HPDP: new missions (Speer 1997; Newbold 1998); justification of not-for-profit, tax-exempt status (McNerney 1995); managed care and capitation (Newbold 1995; Fine 1997; Halverson, Mays, Kaluzny, et al. 1997); purchasers' and citizens' demands for better health (McNerney 1995; Romeo 1996); strategic and competitive advantage (Coye 1995; Campbell 1998; Proenca 1998); cost

The Milbank Quarterly, Vol. 78, No. 1, 2000

reduction (Fries 1997); social and demographic trends (Fine 1997); and marketing (Reichel 1997).

The trade literature has reported anecdotally on hospitals' community outreach and preventive health care (Swan 1997). Some of their programs are designed for individuals and specific population subgroups (Japsen 1996) and purposes: immunizations (Speer 1997; Newbold 1998); child abuse and teen pregnancy deterrence (Bike-Nordhaus 1998; Newbold 1998); prenatal care (Speer 1997); educational classes, information, and self-health improvement (Fine 1997; Reichel 1997); help for the homeless (Bike-Nordhaus 1998); and free primary-care clinics (Mourning 1996). Hospitals are also trying to meet the needs of the larger community: they sponsor programs to prevent violence, improve safety, and deter injuries (Schneider and Northridge 1999); they conduct community health needs assessments (Speer 1997); and they help to staff urban public health clinics (Hagland 1995).

Beyond the anecdotal reports, the research literature offers models, frameworks, and case studies to describe and explain what hospitals are, or should be, doing to improve the health of their local populations. For example, Griffith (1997), Shortell, Gillies, Anderson, et al. (1996), and Welton, Kantner, and Katz (1997) describe their visions and models of collaborative community health care organizations to improve the health of local populations. Longo, Kruse, and Kiely (1997) use a case study approach to investigate community benefit and to develop a model plan for hospital community benefit. Olden and Clement (1998) apply a model of four major determinants of health (environment, heredity, life style, and medical care services) and describe examples of how hospitals have improved each determinant, thereby fostering community health. Rundall and Schauffler (1997) provide a framework by which to study how market forces have affected HPDP in integrated delivery systems, and Robinson (1994) uses economic theory to explore the evolution of acute-care hospitals and their expansion into nonacute services, including health promotion.

What has not yet been reported in the literature for health care leaders, researchers, and policy officials is a comprehensive national profile of what hospitals are actually doing to promote health and prevent disease in their communities. In this article, we first describe the national prevalence of hospital health promotion and disease prevention services, programs, and activities by type of hospital. We then identify significant variation in hospital HPDP by type of hospital. A factor analysis is used

to identify dimensions of HPDP and assess their programmatic and strategic significance. Based on these analyses, we then discuss policy implications for hospitals and community health. This work is useful in four ways: First, it shows how different types of hospitals are working to improve the health of local populations. Second, it expands our understanding of the local availability of many HPDP services, especially the essential primary and preventive services. Third, it helps inform us about the extent to which different types of hospitals in different types of communities are adapting themselves to the new health care system, with its emphasis on population health. Fourth, it creates a hospital-based HPDP service prevalence baseline for future studies.

Methods of Analysis

The unit of analysis of our study is the hospital. Although we analyze the links between individual hospitals and hospital systems, alliances, and networks, we do not use these larger organizations as the unit of analysis because, within each system, alliance, or network, there may be some hospitals that offer a particular HPDP service and others that do not. Also, a system might offer a service in one community that is served by the system, but not in another. The study population is all nonfederal general medical–surgical hospitals in the United States; we include all hospitals rather than using a sample.

An important issue for variable selection is first to understand what health promotion and disease prevention is. Simplistically, HPDP is the promotion of health and the prevention of disease, which differs from the traditional hospital mission of treating and curing illness and injury that have already occurred. Going beyond this somewhat tautological approach, Fries (1997, 41) defines health promotion as "all activities that educate, guide, and motivate the individual to take personal actions which improve the likelihood of sustained good health and increase the appropriateness of use of medical services." Fries, Koop, Sokolov, et al. (1998) embrace this definition and argue that health promotion and disease prevention include health education, risk reduction, healthy behavior, and self-management. Rundall and Schauffler (1997) propose five overlapping categories of health promotion and disease prevention: clinical preventive services; health data systems; community-based services to improve the health of specific individuals; population-based

services to improve the health of an entire specific population; and public policy to improve health.

Our choice of HPDP measures is based upon the definitions and categories noted above, other prior research (e.g., Kellie, Robertson, Van Ostenberg, et al. 1996; Proenca, Rosko, and Zinn 1998; Schauffler and Chapman 1998), availability of data, and our own judgment. The variables are supported by, and fit into, one or more of the categories proposed by Fries et al. (1998) and by Rundall and Schauffler (1997), although we do not intend to measure all their proposed types of HPDP. We believe the services, programs, and activities we have selected can generally be judged to indicate, support, or relate to health promotion and disease prevention. Although some of them may also pertain to traditional hospital services, they are important for studying health promotion and disease prevention. For example, social service is part of traditional hospital work, but it also is important to a study of hospital HPDP (Shortell, Gillies, and Devers 1995).

In table 1, we identify and define the variables based on the 1996 American Hospital Association (AHA) Annual Survey of Hospitals. Measures are grouped into three categories: The first, *hospital characteristics*, covers ownership control, multihospital system (MHS) affiliation, alliance affiliation, network affiliation, bed size, and metropolitan statistical area (MSA) size. The second, *HPDP services for individuals*, comprises 18 HPDP services, programs, and activities provided by hospitals to individual people for improving their health. The third, *HPDP activities for communities*, comprises eight hospital services, programs, and activities for HPDP provided to communities and served populations.

Data are drawn from the 1996 AHA Annual Survey of Hospitals. Other researchers (e.g., Kellie et al. 1996; Proenca, Rosko, and Zinn 1998; Bazzoli, Shortell, Dubbs, et al. 1999) have previously used AHA Survey data for hospital health promotion, disease prevention, and community activities. The data, however, are self-reported by hospitals and could be upwardly biased. The number of responses available and used for any given indicator ranges from a maximum of 4,939 to a minimum of 3,550.

Cross-sectional descriptive analyses are performed, and cross-tabulations are done to analyze the types of HPDP services and activities that are performed according to hospital characteristic. Chi-square and likelihood ratio analyses are done for each cross-tabulation. Where appropriate, Fisher's exact Chi-squares are calculated, particularly for

dichotomous variables. Factor analysis is then used to group the 26 variables into six meaningful clusters; the factors that emerged are then cross-tabulated with the hospital characteristics, again using Chi-square tests for the significance of the relations.

Results

Descriptive statistics displayed in table 1 characterize the general medical–surgical hospitals in this analysis. Slightly more than one-quarter (27 percent) of these hospitals are controlled by nonfederal governments, such as cities and counties. Almost half (47 percent) of the hospitals are non-church-affiliated, not-for-profit organizations, whereas 11 percent are church-affiliated, not-for-profit hospitals. The final 14 percent are for-profit hospitals. Nearly half (47 percent) of the surveyed hospitals are in a multihospital system, approximately one-third (33 percent) are in an alliance, and almost one-third (32 percent) are in a network. The hospitals with fewer than 100 beds account for 44 percent of the total, 40 percent have between 100 and 299 beds, and the other 16 percent have 300 or more beds. With respect to location, slightly less than half (45 percent) of the hospitals are in rural, non-metropolitan areas, 17 percent are in metropolitan areas of under 500,000 population, and the other 38 percent are in an areas of 500,000 or more people.

Hospital HPDP for Individuals

Table 1 shows the numbers and percentages of the surveyed hospitals that report offering each health promotion and disease prevention service received by individual patients, clients, enrollees, and citizens. Social-work services are the most common, as they are offered by 86 percent of the hospitals. Breast cancer screening (83 percent) is reported by the next largest percentage of hospitals. Other services reported by a large percentage of the hospitals are health screenings other than for breast cancer (72 percent), health fairs (70 percent), and outpatient services at the hospital (74 percent), although only 22 percent of the hospitals have a separate, free-standing outpatient center in their community.

Prevalence of the next most commonly available services is within a range of 53 percent to 58 percent of hospitals. Nutrition programs and support groups are provided by 58 percent of hospitals, and 57 percent

TABLE 1
Variables, Descriptions, Counts, and Percentages

Variable	Description	Count	Percent
Hospital characteristics			
Control	Control code: type of authority responsible for establishing policy concerning overall operation of the hospital:		
	Government, nonfederal	1,341	27
	Church-operated, not-for-profit	553	11
	Not-for-profit, non-church	2,339	47
	For-profit	706	14
MHS	Is the hospital a member of a health care system?		
	Yes	1,965	47
	No	2,186	53
Alliance	Is the hospital a member of an alliance?		
	Yes	1,362	33
	No	2,736	67
Network	Is the hospital a participant in a network?		
	Yes	1,287	32
	No	2,748	68
Bed size	Bed-size code:		
	6–99	2,176	44
	100–299	1,964	40
	300 or more	799	16
MSA size	MSA size:		
	Non-metropolitan area	2,243	45
	Under 500,000 population	840	17
	500,000 or more	1,856	38

Health promotion and disease prevention for individuals			
Outreach	Does the hospital provide community outreach? (yes)	2,388	57
Teen outreach	Does the hospital provide teen outreach services? (yes)	488	12
Primary care	Does the hospital provide a primary care department? (yes)	1,372	33
Hospital OP care	Does the hospital provide hospital-based OP care center/ services? (yes)	3,105	74
Separate OP center	Does the hospital provide a freestanding OP center? (yes)	926	22
Screenings	Does the hospital provide health screenings? (yes)	3,005	72
Mammography	Does the hospital provide breast cancer screening/ mammograms? (yes)	3,490	83
Education	Does the hospital provide a patient education center? (yes)	2,235	53
Psychiatric education	Does the hospital provide psychiatric education services? (yes)	971	23
Health information	Does the hospital provide a health information center? (yes)	1,761	42
Nutrition	Does the hospital provide nutrition programs? (yes)	2,445	58
Support groups	Does the hospital provide support groups? (yes)	2,408	58
Social services	Does the hospital provide social work services? (yes)	3,601	86
Home health	Does the hospital provide home health services? (yes)	2,393	57
Meals	Does the hospital provide meals on wheels? (yes)	729	17
Health fair	Does the hospital provide a health fair? (yes)	2,930	70
Child wellness	Does the hospital provide child wellness? (yes)	661	16
Retirement housing	Does the hospital provide retirement housing? (yes)	147	4

(*continued*)

TABLE 1 *continued*

Variable	Description	Count	Percent
Health promotion and disease prevention for communities (continued)			
Mission	Does the hospital's mission statement include a focus on community benefit? (yes)	3,996	96
Long-term plan	Does the hospital have a long-term plan for improving the health of its community? (yes)	3,296	80
Resources	Does the hospital have resources for its community benefit activities? (yes)	3,527	86
Health assessment	Does the hospital work with other providers, public agencies, or community representatives to conduct a health status assessment of the community? (yes)	3,332	81
Capacity assessment	Does the hospital work with other local providers, public agencies, or community representatives to develop a written assessment of the appropriate capacity for health services in the community? (yes)	2,725	67
Assessment use	Has the hospital used the assessment to identify unmet health needs, excess capacity, or duplicative services in the community? (yes)	2,515	68
Health status indicators	Does the hospital use health status indicators for defined populations to design or modify services? (yes)	3,072	74
Information tracking	Does the hospital work with other providers to collect, track, and communicate clinical and health information across cooperating organizations? (yes)	2,898	71

Abbreviations: MHS, multihospital system; MSA, metropolitan statistical area; OP, outpatient.

offer home health services. Community outreach is reported by 57 percent of hospitals, although outreach services specifically for teens are reported by only 12 percent. Over half (53 percent) of hospitals have a patient education center, but only 23 percent offer psychiatric education. Services that are only offered by small percentages of the hospitals include meals on wheels (17 percent), child wellness (16 percent), and retirement housing (4 percent).

Hospital HPDP for Communities

Table 1 continues with indicators of a hospital's HPDP services, programs, and activities designed to meet the needs of its community. Nearly all hospitals (96 percent) have written into their mission a focus on community benefit. Actual commitment does not match these declarations of purpose, however, because only 86 percent of hospitals report designating resources for community benefit activities, and only 80 percent of hospitals have a long-term plan for improving the health of their communities. We will explore this disparity more fully in the subsequent sections, using cross-tabulations with various hospital characteristics.

Community health assessment is an important HPDP activity for a hospital serving a defined community. The findings show that 81 percent of the hospitals work with other providers or public agencies to conduct a health status assessment of their community. Further, 67 percent develop a written assessment of the appropriate capacity of health services for the community, and 68 percent have used the assessment to eliminate excess capacity or duplicative services. Nearly three-quarters (74 percent) of hospitals do use health status indicators for defined populations when designing or modifying services. Finally, 71 percent of the hospitals work with others to communicate health information across cooperating organizations.

Hospital Characteristics Related to HPDP for Individuals

Table 2 contains the results of cross-tabulating hospital characteristics with the hospital health promotion and disease prevention services provided to individuals. This analysis shows interesting trends and patterns, whose implications will be explored in a later section. Beginning with

TABLE 2
Cross-Tabulations of Hospital Characteristics with Hospital HPDP for Individuals[a]

Variable	Outreach	Teen outreach	Primary care	Hospital OP care	Separate OP center	Screenings	Mammography
Control	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Government	489 (42)	81 (7)	311 (27)	776 (67)	161 (14)	668 (58)	826 (71)
Church	361 (74)	87 (18)	185 (38)	395 (81)	156 (32)	400 (82)	448 (92)
Other not-for-profit	1,314 (65)	303 (15)	754 (37)	1,585 (78)	523 (26)	1,602 (79)	1,807 (89)
For-profit	224 (45)	17 (3)	122 (24)	349 (70)	86 (17)	335 (67)	409 (82)
MHS	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Yes	1,259 (64)	289 (14)	710 (36)	1,521 (77)	534 (27)	1,508 (77)	1,741 (89)
No	1,114 (51)	197 (9)	652 (30)	1,561 (71)	388 (18)	1,477 (68)	1,722 (79)
Alliance	[.0001]	[.0001]	[.0036]	[.0001]	[.0001]	[.0001]	[.0001]
Yes	892 (65)	228 (17)	484 (36)	1,080 (79)	372 (27)	1,059 (78)	1,205 (88)
No	1,436 (52)	244 (9)	848 (31)	1,957 (72)	526 (19)	1,878 (69)	2,211 (81)
Network	[.0001]	[.0004]	[.0056]	[.0250]	[.0032]	[.0001]	[.0100]
Yes	828 (64)	180 (14)	459 (36)	986 (77)	317 (25)	992 (77)	1,102 (86)
No	1,465 (53)	278 (10)	859 (31)	2,015 (73)	563 (20)	1,902 (69)	2,265 (82)
Bed size	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
6–99	754 (41)	90 (5)	440 (24)	1,160 (64)	158 (9)	1,085 (60)	1,312 (72)
100–299	1,052 (63)	193 (12)	512 (31)	1,307 (78)	415 (25)	1,307 (78)	1,514 (91)
300 or more	582 (84)	205 (30)	420 (61)	638 (92)	353 (51)	613 (88)	664 (96)
MSA size	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Non-metropolitan area	888 (46)	110 (6)	483 (25)	1,300 (67)	204 (10)	1,231 (63)	1,464 (75)
Under 500,000 population	446 (62)	94 (13)	258 (36)	575 (80)	232 (32)	562 (78)	651 (90)
500,000 or more	1,054 (69)	284 (19)	631 (42)	1,230 (81)	490 (32)	1,212 (80)	1,375 (91)

TABLE 2 *continued*

Variable	Education	Psychiatric education	Health information	Nutrition	Support groups	Social services	Home health
Control	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0185]
Government	453 (39)	148 (13)	307 (26)	516 (44)	442 (38)	840 (72)	651 (56)
Church	305 (62)	173 (35)	272 (56)	352 (72)	375 (77)	469 (96)	309 (63)
Other not-for-profit	1,231 (60)	568 (28)	992 (49)	1,308 (64)	1,361 (67)	1,857 (91)	1,139 (56)
For-profit	246 (49)	82 (16)	190 (38)	269 (54)	230 (46)	435 (87)	294 (59)
MHS	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.1340]
Yes	1,163 (59)	585 (30)	964 (49)	1,281 (65)	1,283 (65)	1,795 (91)	1,099 (56)
No	1,052 (48)	379 (17)	787 (36)	1,149 (53)	1,113 (51)	1,778 (81)	1,273 (58)
Alliance	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0022]
Yes	837 (61)	456 (33)	681 (50)	924 (68)	959 (70)	1,266 (93)	823 (60)
No	1,352 (49)	482 (18)	1,037 (38)	1,473 (54)	1,394 (51)	2,256 (82)	1,516 (55)
Network	[.0002]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0837]
Yes	742 (58)	373 (29)	601 (47)	830 (64)	815 (63)	1,147 (89)	764 (59)
No	1,414 (51)	560 (20)	1,094 (40)	1,528 (56)	1,507 (55)	2,328 (85)	1,552 (56)
Bed size	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0014]
6–99	681 (37)	88 (5)	498 (27)	798 (44)	664 (36)	1,315 (72)	1,010 (55)
100–299	1,035 (62)	472 (28)	791 (47)	1,115 (67)	1,160 (69)	1,600 (96)	944 (57)
300 or more	519 (75)	411 (59)	472 (68)	532 (77)	584 (84)	686 (99)	439 (63)
MSA size	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Non-metropolitan area	829 (43)	211 (11)	590 (30)	918 (47)	828 (43)	1,485 (76)	1,196 (62)
Under 500,000 population	457 (63)	220 (31)	368 (51)	490 (68)	487 (68)	666 (92)	428 (59)
500,000 or more	949 (62)	540 (36)	803 (53)	1,037 (68)	1,093 (72)	1,450 (95)	769 (51)

(*continued*)

TABLE 2 *continued*

Variable	Meals	Health fair	Child wellness	Retirement housing
Control	[.0001]	[.0001]	[.0001]	[.0001]
Government	186 (16)	731 (63)	128 (11)	32 (3)
Church	108 (22)	362 (74)	109 (22)	27 (6)
Other not-for-profit	402 (20)	1,498 (74)	392 (19)	86 (4)
For-profit	33 (7)	339 (68)	32 (6)	2 (0)
MHS	[.8268]	[.0001]	[.0001]	[.4314]
Yes	341 (17)	1,435 (73)	381 (19)	64 (3)
No	385 (18)	1,474 (67)	273 (12)	81 (4)
Alliance	[.8631]	[.0001]	[.0001]	[.0316]
Yes	235 (17)	1,019 (75)	268 (20)	60 (4)
No	478 (17)	1,848 (68)	375 (14)	84 (3)
Network	[.3537]	[.0001]	[.0001]	[.0084]
Yes	235 (18)	976 (76)	262 (20)	60 (5)
No	469 (17)	1,850 (67)	374 (14)	82 (3)
Bed size	[.1482]	[.0001]	[.0001]	[.1134]
6–99	320 (18)	1,142 (63)	148 (8)	58 (3)
100–299	305 (18)	1,233 (74)	265 (16)	55 (3)
300 or more	104 (15)	555 (80)	248 (36)	34 (5)
MSA size	[.3330]	[.0001]	[.0001]	[.0880]
Non-metropolitan area	356 (18)	1,284 (66)	189 (10)	78 (4)
Under 500,000 population	124 (17)	509 (71)	144 (20)	28 (4)
500,000 or more	249 (16)	1,137 (75)	328 (22)	41 (3)

[a]Each row identifies a characteristic of hospitals, and each column identifies a hospital service. The data in each cell thus show, for hospitals having the given characteristic, the number and (percentage) of those hospitals that *do* provide that service. The Chi-square *p*-value for each cross-tabulation analysis is shown in brackets. *Abbreviations:* See table 1.

the type of hospital control, the highest percentage of hospitals offering HPDP services is consistently the church-affiliated, not-for-profit hospitals. This finding held for every HPDP service in this study. Alternatively, the government category most often contains the lowest percentage of hospitals offering an HPDP service; in the case of some services, such as teen outreach, meals, retirement housing, and child wellness, the for-profit hospital category offers the fewest. The findings were all statistically significant with p-values $<.0001$, except home health ($p = .0185$).

Another consistent finding across all HPDP service indicators is that hospitals that are members of, or participants in, a health care system, alliance, or network are more likely to offer an HPDP service, compared with those that are not. For most HPDP services, however, the difference between the member and nonmember percentages was not large. As shown in table 2, many of these cross-tabulations were found to be statistically significant at $p < .0001$, and almost all were at least significant at the $p = .05$ level.

The results for the cross-tabulations of hospital bed size and the HPDP services are useful, although not surprising. Excluding the meals and the retirement housing services, which were not statistically significant, the findings revealed that as the bed-size category (number of staffed beds) increases, so too does the percentage of hospitals offering a particular HPDP service. The hospital-size category with the lowest percentage of hospitals offering a service was always the smallest size category (6 to 99 beds), and the percentages increased as the bed-size category increased, up to the largest category (300 or more beds). These 24 analyses were all statistically significant at $p < .0001$, except for hospital size cross-tabulated with home health ($p = .0014$).

The findings for MSA size related to hospital HPDP services were like those for hospital size. That is, as the population size increased, so too did the percentage of hospitals offering a particular HPDP service. These analyses were all statistically significant, at $p < .0001$, except for MSA size related to meals and retirement housing, which were both not significant. For the 24 significant analyses, the MSA size category with the lowest percentage of hospitals offering a service was always the non-metropolitan area, and the percentages generally increased as the MSA size category increased, up to the largest category (500,000 or more population).

Another way of exploring the cross-tabulations is to examine across the categories of a hospital characteristic the range of percentages of

hospitals offering a given HPDP service. For example, across the four categories of hospital ownership control, there is a range of percentages of hospitals that offer a specific HPDP service. For some services, the range of percentages across the four categories is quite narrow (home health ranges from 56 percent to 63 percent, $p = .0185$), whereas, for other services, the range across the four categories is very wide (support groups ranged from 38 percent to 77 percent, $p < .0001$).

Compared with the variation in how HPDP services were related to the hospital ownership control, the relation between HPDP services and affiliation with multihospital systems, alliances, and networks did not vary by much. Across these three affiliation types and across members and nonmembers—a total of six different categories of hospitals—the percentages of hospitals offering an HPDP service were usually fairly similar. Thus, for example, outreach was offered by 64 percent of hospitals affiliated with an MHS, 65 percent of hospitals affiliated with an alliance, and 65 percent of hospitals affiliated with a network; the respective percentages for nonaffiliates were 51 percent, 52 percent, and 53 percent. In general, there were not large differences between affiliates and nonaffiliates in their provision of HPDP services.

The analyses of hospital and MSA size often revealed wide ranges across the three bed-size categories for the percentage of hospitals that offered a specific HPDP service, but showed much narrower ranges across the three MSA size categories. For example, the percentage of hospitals offering outreach ranged from 41 percent to 84 percent across the bed-size categories; education ranged from 37 percent to 75 percent; primary care, from 24 percent to 61 percent; and health information, from 27 percent to 68 percent. All these results were very statistically significant. Across MSA size categories, the corresponding ranges were 46 to 69, 43 to 62, 25 to 42, and 30 to 53. Thus, the percentages of hospitals providing HPDP generally differ sharply among the three hospital-size categories. However, for the MSA categories, the small and large MSAs have similar percentages of hospitals providing HPDP, and those percentages differ markedly from the percentages for the non-MSA category.

Hospital Characteristics Related to HPDP for Communities

Table 3 shows the findings of cross-tabulating the hospital characteristics with the HPDP services, programs, and activities designed for communities. Some of the findings are similar to those noted in the

TABLE 3
Cross-Tabulations of Hospital Characteristics with Hospital HPDP for Communities[a]

Variable	Mission	Long-term plan	Resources	Health assessment	Capacity assessment	Assessment use	Health status indicators	Information tracking
Control	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Government	1,089 (95)	848 (74)	835 (74)	865 (76)	664 (59)	596 (60)	710 (62)	675 (59)
Church	474 (98)	429 (88)	463 (96)	446 (92)	370 (78)	351 (78)	422 (87)	378 (78)
Other not-for-profit	1,973 (97)	1,635 (81)	1,795 (89)	1,681 (84)	1,419 (71)	1,312 (72)	1,567 (78)	1,482 (74)
For-profit	460 (94)	384 (79)	434 (89)	340 (70)	272 (57)	256 (62)	373 (77)	363 (75)
MHS	[.1092]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Yes	1,886 (97)	1,629 (84)	1,809 (93)	1,632 (84)	1,384 (72)	1,307 (75)	1,601 (82)	1,517 (79)
No	2,082 (96)	1,643 (76)	1,697 (79)	1,672 (78)	1,320 (62)	1,189 (62)	1,450 (67)	1,361 (63)
Alliance	[.0001]	[.0024]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
Yes	1,328 (98)	1,114 (83)	1,254 (93)	1,166 (86)	985 (73)	906 (74)	1,094 (81)	1,035 (77)
No	2,586 (95)	2,119 (79)	2,200 (82)	2,096 (78)	1,675 (63)	1,546 (65)	1,921 (71)	1,794 (67)
Network	[.1296]	[.0004]	[.0001]	[.0007]	[.0003]	[.0005]	[.0035]	[.0004]
Yes	1,238 (97)	1,056 (83)	1,144 (90)	1,067 (84)	888 (70)	825 (72)	986 (77)	941 (74)
No	2,613 (96)	2,121 (78)	2,257 (84)	2,145 (79)	1,728 (65)	1,593 (66)	1,976 (73)	1,849 (69)
Bed size	[.0007]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]	[.0001]
6–99	1,711 (95)	1,336 (75)	1,337 (75)	1,373 (77)	1,058 (60)	937 (60)	1,122 (62)	1,066 (60)
100–299	1,608 (97)	1,368 (83)	1,521 (93)	1,360 (83)	1,144 (70)	1,075 (72)	1,339 (81)	1,245 (76)
300 or more	677 (98)	592 (86)	669 (97)	599 (87)	523 (76)	503 (80)	611 (88)	587 (85)
MSA size	[.0051]	[.0001]	[.0001]	[.0002]	[.0001]	[.0001]	[.0001]	[.0001]
Non-metropolitan area	1,837 (95)	1,451 (76)	1,468 (78)	1,495 (78)	1,155 (61)	1,031 (62)	1,254 (65)	1,176 (62)
Under 500,000 population	698 (97)	605 (85)	657 (92)	600 (84)	512 (72)	482 (74)	588 (82)	540 (76)
500,000 or more	1,461 (97)	1,240 (83)	1,402 (93)	1,237 (83)	1,058 (71)	1,002 (74)	1,230 (82)	1,182 (79)

[a]See footnote to table 2.

previous section, although others are different. As occurred in the relation between hospital ownership control and the various HPDP services provided to individuals, the church-affiliated category consistently has the largest percentage of hospitals providing the HPDP services for communities. Also, as seen in the previous section, the government category usually has the smallest percentage of hospitals offering a service. For a few services, the for-profit category has the smallest percentage. Compared with HPDP services provided to individuals described in the previous section, there is less of a range of percentages across the four control categories for the cross-tabulations with these eight HPDP services for the community. All these analyses were statistically significant at $p < .0001$.

Examining each of the HPDP services offered for communities, the findings show that a higher percentage of hospitals affiliated with a health-care system, alliance, or network do offer the service, compared with the respective nonaffiliated category of hospitals. However, for most HPDP services, there is not much difference between the percentages for the two categories (affiliate and not an affiliate). These analyses are all statistically significant at $p < .01$, except that both MHS and network affiliation are not significantly related to a hospital's mission statement including a focus on community benefit (see table 1).

The cross-tabulations for hospital bed size and the HPDP services for communities show some interesting findings. These were all statistically significant at $p < .0001$, except that bed-size category related to mission was $p = .0007$, still highly significant. Like HPDP for individuals, the percentage of hospitals offering these services generally increased as the bed-size category increased. Hospitals with fewer than 100 beds (the smallest category) reported much less involvement in HPDP. The range across the three size categories was sometimes wide: for example, only 62 percent of hospitals in the smallest category use health status indicators, whereas 88 percent of hospitals in the largest category (300 or more beds) use them. As noted earlier, there was a disparity between the stated mission of most hospitals to offer a community benefit and their actual commitment of resources and long-term plans to accomplish this goal. In the two larger bed-size categories, which include all hospitals of 100 beds or more, the percentages of hospitals reporting a community-benefit mission are fairly similar to the percentages reporting resources to achieve this mission. In fact, all these percentages are in the nineties. However, for the small hospital category (6 to 99 beds), there is a big

difference between the percentage of hospitals with community benefit in their mission (95 percent) and hospitals with resources for community benefit (only 75 percent). For each bed-size category, the percentage of hospitals reporting a long-range plan to improve the health of the community is noticeably lower than the percentage of hospitals with a community-benefit mission, especially among the smallest hospitals.

Finally, the MSA size variable creates some important findings when it is cross-tabulated with the HPDP services and activities carried out for communities. The non-metropolitan-area category always had the smallest percentage of hospitals reporting a particular service, and the percentages for the other two MSA categories were larger and very similar to each other. Returning to the disparity between the percentages of hospitals reporting a community benefit mission and those that could point to a commitment of the necessary resources, the gap is very evident for the non-metropolitan category of hospitals—95 percent versus 78 percent—but is very modest for the other two MSA categories. These analyses were all very statistically significant, with most at $p < .0001$.

Factor Analysis of Hospital HPDP

We factor analyzed the 26 measures of hospital HPDP to create meaningful groups of services. Principal component analysis showed six eigenvalues that exceeded 1.00 and accounted for 47.83 percent of the variance. This variance figure is low, however; initial Kendall Tau-b correlations among these variables were generally low, as there were only seven pairwise correlations greater than 0.40. Following Dillon and Goldstein (1984), six factors were retained for factor analysis. The subsequent absolute value of each factor loading exceeded 0.40, and most exceeded 0.50. The results are shown in table 4.

The six factors that emerged were named, and special attention was given to the variables that had the strongest loadings on a given factor. These are (in the order in which they loaded): hospital-based patient services; community assessment/use; primary wellness; elderly services; hospital commitment; and screening services. The variables that indicate the provision of HPDP services for individuals (see table 1) all loaded on four of the factors (hospital-based patient services, primary wellness, elderly services, and screening services), and the HPDP services for communities all loaded on the other two factors (community assessment/use and hospital commitment). The hospital-based

TABLE 4
Factor Analysis and Loadings of Hospital HPDP Variables

Variable	Hospital-based patient service	Community assessment/use	Primary wellness	Elderly services	Hospital commitment	Screening services
Outreach	0.433					
Hospital-based OP care	0.471					
Mammography	0.547					
Education center	0.559					
Health information center	0.475					
Nutrition	0.590					
Support groups	0.601					
Social services	0.628					
Health assessment		−0.665				
Capacity assessment		−0.881				
Assessment use		−0.883				
Health status indicators		−0.602				
Information tracking		−0.534				
Teen outreach			0.595			
Primary care			0.615			
Separate OP center			0.608			
Psychiatric education			0.440			
Child wellness			0.637			
Meals on wheels				0.762		
Retirement housing				0.571		
Mission					0.770	
Long-term plan					0.604	
Resources					0.582	
Screenings						−0.613
Home health						−0.557
Health fair						−0.707
Percent of hospitals offering factor	17	46	2	1	72	37

Abbreviation: OP, outpatient.

patient-services factor largely reflects services provided to individuals at a hospital that can contribute to health promotion and disease prevention. Although some of the factor loadings are not high for this dimension, it includes nearly one-third of the variables. Many of the eight services that loaded on the first factor already exist in hospitals. Any additional ones needed to provide all eight should be relatively easy for hospitals, so this dimension could be viewed as basic, start-up hospital HPDP. The primary-wellness dimension of HPDP reflects services designed for primary care and maintaining wellness. These services are the foundation of the newly emerging American health care system described by Shortell, Gillies, and Devers (1995), so this dimension is a test of hospitals' contribution to, and support of, their model. The elderly-services factor is distinct and includes two services designated for an older population. This HPDP dimension is especially important to study because of the well-known size and growth of the elderly age cohort of the population. The screening-services factor applies to screenings, which often are performed at health fairs or are used to monitor patients' health status when they are receiving home health services. The community-assessment/use factor reflects hospitals' performance and utilization of assessments of community health, needs, and service capacity. Thus, this dimension helps us focus on system-level HPDP that defines the potential patient population and service area. Finally, the hospital-commitment factor reflects hospitals' mission and long-term commitment to community benefit and health. The latter two factors are both highly pertinent to the issue of hospitals' adapting themselves to meet the evolving emphasis on health rather than continuing to focus on acute medical care, which, until recently, has been the trademark of the American health care system.

We next computed which hospitals offered the six factored dimensions of HPDP, conservatively counting a hospital as offering a given factor *only* if that hospital offered *all* HPDP services that loaded on that given factor. We refer to such a hospital as being fully involved in that dimension of HPDP. Percentages of hospitals that are fully involved in offering each factored HPDP type are also shown in table 4. The findings of these self-reported data reflect that 72 percent of the hospitals have a commitment to HPDP through their mission, long-term plan, and resources. Almost half (46 percent) of the hospitals are fully involved in community assessment and making use of the assessment. Over one-third (37 percent) of the reporting hospitals reflect the screenings dimension by

offering health screenings and home health services and holding health fairs. Seventeen percent of hospitals reported having all eight HPDP services that loaded on the hospital-based services factor, which is a surprisingly low figure given that it would seem that most such services would already exist at a hospital. Only 2 percent of hospitals provide the full complement of primary wellness services, some of which may be provided by other community organizations. Only 1 percent of hospitals were fully involved in the elderly services, although hospitals likely face restrictions in offering retirement housing.

We then cross-tabulated the six factors with the six hospital characteristics (ownership control, MHS affiliation, alliance affiliation, network affiliation, bed size, and MSA size). These results are shown in table 5, and they are statistically significant ($p < .01$), except for network affiliation with primary wellness and several of the elderly services analyses. Two percent or less of hospitals reported offering all the services for each analysis, a number that was not statistically significant.

Regarding hospital ownership control, the church-affiliated category reflects the largest proportion of hospitals that are fully involved in the hospital-based patient services (28 percent), community assessment and use (60 percent), hospital commitment (85 percent), and screening services (47 percent). Church-affiliated and other not-for-profit hospitals were equal in the full provision of primary wellness, with 3 percent of hospitals in these categories offering all services that loaded on this factor. Two percent of other (not church) not-for-profit hospitals accounted for the highest proportion of hospitals offering all elderly services. All six cross-tabulations across the hospital control variable were statistically significant ($p < .001$).

The cross-tabulated results for MHS, alliance, and network affiliations are interesting in that they follow the trends of the descriptive results. Members of systems and participants in alliances and networks consistently have higher proportions of hospitals providing the broad HPDP factors than do nonmembers and nonparticipants, with two exceptions. Among hospitals that are affiliated with an MHS, an alliance, and a network, and among those that are not so affiliated, only 1 percent provide elderly services, and there are no statistically significant differences between affiliates and nonaffiliates for these three cross-tab analyses. Significantly, 3 percent of hospitals that are MHS members report providing all the primary wellness services, in contrast to only 1 percent of hospitals that are not MHS members; the same is true for

TABLE 5
Cross-Tabulations of Hospital Characteristics with Hospital HPDP Factors[a]

Variable	Hospital-based patient services	Community assessment and use	Primary wellness	Elderly services	Hospital commitment	Screening services
Control	[.0001]	[.0001]	[.0001]	[.0008]	[.0001]	[.0001]
Government	90(8)	382(34)	9(1)	8(1)	696(61)	341(29)
Church	135(28)	284(60)	15(3)	5(1)	409(85)	228(47)
Other not-for-profit	438(22)	1,018(51)	52(3)	32(2)	1,498(75)	794(39)
For-profit	48(10)	202(42)	0(0)	0(0)	356(74)	196(39)
MHS	[.0001]	[.0001]	[.0001]	[.4883]	[.0001]	[.0002]
Yes	438(22)	1,057(55)	56(3)	19(1)	1,538(80)	791(40)
No	270(12)	816(38)	19(1)	26(1)	1,402(66)	756(35)
Alliance	[.0001]	[.0001]	[.0049]	[.9038]	[.0001]	[.0001]
Yes	356(26)	712(53)	35(3)	15(1)	1,052(78)	584(43)
No	340(12)	1,130(43)	36(1)	29(1)	1,850(69)	939(34)
Network	[.0001]	[.0001]	[.4935]	[.1152]	[.0001]	[.0004]
Yes	288(22)	642(51)	25(2)	19(1)	975(77)	532(41)
No	397(14)	1,174(44)	45(2)	25(1)	1,878(70)	975(35)
Bed size	[.0001]	[.0001]	[.0001]	[.8337]	[.0001]	[.0001]
6–99	92(5)	676(36)	3(0)	21(1)	1,104(62)	521(29)
100–299	327(20)	384(54)	15(1)	16(1)	1,281(78)	679(41)
300 or more	292(42)	826(56)	58(8)	8(1)	574(84)	359(52)
MSA size	[.0001]	[.0001]	[.0001]	[.0066]	[.0001]	[.0055]
Non-metropolitan area	157(8)	676(36)	3(0)	26(1)	1,215(64)	679(35)
Under 500,000 population	170(24)	384(54)	15(2)	12(2)	568(80)	298(41)
500,000 or more	384(25)	826(56)	58(4)	7(0)	1,176(79)	582(38)

[a]Each row identifies a characteristic of hospitals, and each column identifies a dimension of hospital HPDP. The data in each cell thus show, for hospitals having the given characteristic, the number and (percentage) of those hospitals that *do* provide that full dimension of HPDP. The Chi-square *p*-value for each cross-tabulation analysis is shown in brackets.
Abbreviations: See table 1.

the alliance and primary-wellness cross-tab analysis. However, there is no statistical difference between the respective network and non-network 2 percent of hospitals that provide primary wellness.

With the exception of the elderly-services factor that was again not statistically significant, the bed-size analyses consistently indicated that a larger proportion of hospitals with 300 or more beds reported providing HPDP services than did smaller facilities. This reaffirms the descriptive cross-tabulations, in which none of the individual elderly services was found statistically significant when separately compared across hospital size categories.

Hospitals in the rural, nonmetropolitan areas comprised the lowest proportion of facilities that offer all the services in five (hospital-based patient services, community assessment and use, primary wellness, hospital commitment, and screening services) of the six factors. However, for the elderly-services factor, hospitals in the large metropolitan areas with a population of 500,000 or more indicated the lowest proportion. It may be that other community agencies offer meals in the larger cities, and other opportunities for retirement housing exist in larger cities, lessening the need for hospitals to do so. The highest proportion of hospitals offering all the services for the first three factors (hospital-based patient services, community assessment and use, and primary wellness) was found for the category of larger city hospitals, whereas the highest proportion of hospitals offering all the services for the last three factors (elderly services, hospital commitment, and screening services) was found for the category of hospitals located in smaller metropolitan areas with populations under 500,000. All cross-tabulations for the MSA size and the six HPDP factors were statistically significant ($p < .01$).

Discussion and Conclusions

We draw important conclusions from our findings, and they pertain to the changing mission of the American health care system and its hospitals. These conclusions offer both good news and bad news, and they have policy implications for health leaders, policy makers, planners, and scholars. Although our conclusions are based on AHA data that might be upwardly biased in the numbers and percentages of hospitals that self-report offering HPDP services, we nevertheless believe the data and findings support these conclusions.

As the health care system evolves in the direction of population health, an important success factor will be the extent to which hospitals support and contribute to this development (Sigmond 1995; Proenca 1998). Health leaders, planners, scholars, and policy makers who are trying to advance this new direction might wonder if hospitals, as major components of the health system, are going to join in to help. Based on our research, we conclude that hospitals clearly are helping and contributing to the transition of the health care system to its renewed mission of responsibility for health rather than merely medical care. In this study, we learn that indeed thousands of general acute-care hospitals have begun to offer HPDP services both to individuals and to communities at large. There are more than isolated cases of such activity; indeed, it is pervasive. Further, hospitals are contributing to meaningful areas, identified by Halverson et al. (1997) as follows: health planning, community health assessment, population-based data collection, education, and primary care. More than 3,000 hospitals perform health screenings, more than 2,000 have a nutrition program, and more than 1,000 have their own primary-care department. Thousands of other HPDP services, programs, and activities are provided by hospitals, and many acute-care hospitals are collaborating with other community organizations to perform HPDP activities and services. This work by hospitals contributes to several essential public health services outlined by the U.S. Public Health Service: monitoring health status to identify community health problems; educating people about health issues; linking people to, and providing, needed personal health services; and developing plans that support individual and community health efforts (U.S. Public Health Service 1997). This is good news. However, the bad news is that thousands of other hospitals are not doing as much to raise the level of community health, and even hospitals that are active in HPDP do not provide the full range of services. For example, only 17 percent of hospitals were fully involved with the hospital-based service dimension of HPDP—which in some ways might be the easiest type of HPDP for hospitals—and some of the services that loaded on this factor were only being done by about half of the hospitals.

It has been argued that hospitals must adapt and expand their mission to focus more on disease prevention and health promotion in collaboration with a community network of health and social agencies (Shortell, Gillies, and Devers 1995; Griffith 1997; Olden and Clement 1998). Health leaders, planners, scholars, and policy makers might also wonder

about the extent to which hospitals are doing this. Our study reveals that such activity is prevalent, and that thousands of hospitals are working with community partners to perform needed local HPDP activities and services. Some services are for specific individuals, and some are aimed at the entire community and local population. These activities reflect a broader role in the community that goes beyond institutional medical care and becomes a collaboration designed to prevent disease, promote healthy lifestyles, monitor population health status, and plan for effective resource use. Thus, we conclude that hospitals, as critical components of the American health care system, have started performing HPDP in their communities and, in this way, are evolving into a better fit with the emerging health-care system and larger environment. This is also good news. (We note that the present study does not try to explain why hospitals are doing this—it may be to create healthier populations, increase their own legitimacy, gain strategic or competitive advantage, satisfy consumers, reduce costs in order to prosper with capitation, or for other reasons described in our introduction.) Yet, again, the bad news is that whereas many hospitals are actively participating in health promotion and disease prevention, many others are not. Thus, hospitals as a group show only partial commitment to HPDP.

Health leaders, planners, scholars, and policy makers might also wonder about the distribution and availability of these hospital HPDP services across communities. The research findings lead us to a disturbing conclusion, which is that the prevalence of hospital HPDP does not extend evenly across types of hospitals. Consequently, these important health services are not uniformly available across communities and populations. The findings show that relatively large percentages of church-related hospitals offer HPDP services, whereas relatively small percentages of government and for-profit hospitals are engaged in health promotion and disease prevention. In communities of mainly governmental or for-profit hospitals, fewer hospital HPDP services are available for the local population. The uneven prevalence is also evident in the disparity of HPDP across hospital size categories. The lowest percentage of hospitals offering an HPDP service was most often found for small hospitals. The percentages of hospitals offering an HPDP service generally increased as the bed size increased, up to the large category of 300 or more beds. This observation is consistent with the finding that lower percentages of small hospitals, compared with larger ones, have resources for HPDP

and community benefit. Areas with only a small hospital have fewer hospital HPDP services for the population.

The uneven prevalence and availability of hospital HPDP services is further indicated by the differences across MSA categories. Compared with hospitals in MSAs, smaller percentages of hospitals in non-metropolitan areas offer HPDP services. Also, for this population category, there is a wide gap between the percentages of hospitals reporting a community mission and those allocating resources for community health improvement, whereas for the other two MSA categories the gap is very modest. It appears that hospitals in the non-metropolitan areas are least involved in HPDP and least equipped to provide it. Yet, in those areas, the hospital usually is the main health organization, and there might not be another community agency or organization that could offer health promotion and disease prevention. Our findings suggest that hospitals in these non-metropolitan communities—spread throughout rural America—are not evolving toward HPDP to the degree found achieved by hospitals in MSAs.

In summary, health promotion and disease prevention services are not uniformly available and equally prevalent, but are contingent upon hospital ownership and bed size and on the size of the community population. Populations served only by hospitals that are governmental, for-profit, small, or located in non-metropolitan areas are likely being left behind. This is more bad news, and it deserves further study and possible policy intervention to assure that health promotion and disease prevention is available to all populations at a level adequate to their needs.

Policy Implications and Recommendations

Our findings and conclusions lead to practical implications and policy recommendations for expanding hospital HPDP activities and services. Two major policy issues flow from the analyses:

1. What should be the role of a hospital in community health, particularly in HPDP activities?
2. Which organizations and approaches should be used to provide HPDP services for an entire community?

Hospitals and their communities vary, and what works in one community will not necessarily work in another, so it is hard to define a

standard role for hospitals in community health. The actual role of a hospital is likely to vary, depending upon the hospital characteristics we studied, as well as other factors, so each hospital must wisely develop its roles and relationships as it moves in the domain of community health. Whereas more hospital HPDP in general seems good, opportunity costs of using hospital resources for HPDP (rather than other services) must be considered. Also, in many communities other agencies may be providing some HPDP services: a hospital alone cannot be expected to provide all health-related services. In any case, unnecessary duplication of effort should be avoided, given resource constraints.

Notwithstanding these issues, we suggest a basic, minimal role for hospitals in community health that deserves policy support. First, our findings and conclusions lead us to think that the role of hospitals in HPDP should be a collaborative one. A hospital should work with other community organizations and agencies to assess HPDP needs and then to create an inventory of available HPDP programs. Based on these data, all organizations—including the hospital—can plan how they can contribute most appropriately to community HPDP. The actual role of a hospital is likely to depend on the particular hospital and community; its specific activities and functions will emerge accordingly. For example, should a hospital take the lead in developing a community information network? Or should another entity, such as a public health department, do this (Welton, Kantner, and Katz 1997), or possibly a public–private community partnership (Bazzoli et al. 1997)? It likely will depend on the particular community and hospital. Along these same lines, much hospital HPDP will require the formation of links with other community organizations, which the hospital may most effectively accomplish by establishing a community steering committee.

Second, we can further suggest a role for hospitals by considering the six broad dimensions of HPDP activity identified by our research. Hospitals ought to encourage full involvement in the hospital-commitment dimension of HPDP and become more involved in the hospital-based patient services and community assessment and use dimensions of HPDP. We think this would help to ensure a strong clinical, social service, and health-information base for patient-level HPDP and a solid planning and information base at the community level. A policy goal (which could include some flexibility) would be for hospitals to offer the services that loaded on these three factors. Other HPDP work could follow, once this strong HPDP foundation has been built and community needs and

resources have been identified to determine which services should be provided.

Third, we also suggest that the HPDP role of hospitals support several specific services, depending on the results of community needs assessments and service inventories. Broader primary wellness services for the community should include both screenings for risk factors of preventable diseases and targeted educational programs. The aging of the population intensifies the need to ensure that elderly services are available and accessible. This is more critical in rural areas, where a hospital may be a sole provider of such services. Hospitals could coordinate, provide, and assess elderly and rural HPDP services. Each hospital should evaluate and report to stakeholders on its success in meeting that, and any other, part of its mission. This assessment could also be the basis for determining compensation of managers and for motivating achievement of hospital HPDP.

To fulfill these suggested roles, hospitals must begin to view HPDP as a high priority in both their mission *and* their operations. Our data show that most have done the former; fewer have done the latter. Institutional policy, long-range plans, and resource budgets should be developed for operational programs that would achieve the stated mission. For example, to obtain resources, one hospital active in HPDP tithes 10 percent of its bottom line for community health services (Newbold 1998), and others use foundation funds from a hospital's health care system.

Support for hospitals' assumption of these roles should come also from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and other accreditors. Adapting their standards in order to require broader participation by hospitals in the health of their *entire* community could both speed and support the implementation of previous institutional HPDP recommendations. Such standards should be flexible, allowing hospitals to demonstrate a level of HPDP commitment appropriate to their community, given the alternative sources of HPDP services that are already available.

Although hospitals can accomplish much on their own, appropriate government policy could help them. Without policy commitments to HPDP for entire communities, implementation will likely be fragmented, sporadic, uneven, opportunistic—or all of the above.

At the federal level, the establishment of a normative framework to guide government actions on this issue would be an important foundation (Robinson 1994). A related suggestion, by Welton, Kantner,

and Katz (1997), is for governments to move away from a categorical, programmatic outlook and to look instead toward population and community approaches that would be appropriately coordinated among government agencies. We agree. Within such frameworks, various federal, state, and local government agencies could more readily create incentives for hospitals (and other providers) to offer HPDP services. Medicare and Medicaid reimbursements might ensure basic HPDP for the elderly and for rural hospitals. Incentives could extend to supporting the education and training of HPDP professional staff, such as primary care and wellness providers. Government requirements, such as mandated insurance benefits, which some are likely to oppose, should also be considered in order to encourage hospitals and other providers to expand HPDP in response to the increased insurance coverage. Grants and funded community health initiatives to make financing available for hospital HPDP would be helpful. These added resources could be linked to cost-effectiveness, cost-benefit, and other programmatic evaluations of specific HPDP interventions and services, which would all be performed as public policy research in community health.

At the state level, government could use licensure standards and quality assessment to facilitate HPDP by hospitals and others. Locally, governments that hold not-for-profit hospitals accountable for community benefit in return for tax-exempt status could specify HPDP services as part of that benefit. Public hospitals should have to provide a minimum level of HPDP services supported by the local general tax funds. Government policy might also require that the proceeds that are placed in trust from the purchase of a not-for-profit hospital by a for-profit company be used in part by the now for-profit hospital to further community health. Community health requires extensive information, and hospitals will need new information systems for collecting data, monitoring service use, reporting findings, disseminating results, and collaborating with others. Their systems have traditionally handled clinical data about patients, and they now must shift into compiling and managing health data for populations. Our research shows that many hospitals are starting to do this; government grants or subsidies could help those that are not, which tend to be the small and rural hospitals.

We come now to the second major policy issue: which organizations and approaches should be used to provide HPDP services for an entire community? Health-care reformers in recent years have struggled with proposals to create a system that would have satisfactory costs, access,

quality, and outcomes for inpatient care. These dimensions of performance are important also for community health. Intricately linked to them is the underlying financing and reimbursement. Thus, there are many questions, and public policy must help to answer them. How should HPDP be financed? Should hospitals and other providers receive additional reimbursements to cover HPDP and, if so, after meeting which conditions? How should access for the entire community be enabled, and how can barriers to utilization be removed? How should the quality of these services be managed and assured? What outcomes are desired, and how will we know when we have enough HPDP and community health? How should these services be integrated with other types of health care services? What requirements should exist for community-based planning and collaboration with local health departments and HPDP agencies in order to qualify for added reimbursement for HPDP services? What are the expectations and who will hold whom accountable for meeting them?

As with other types of health services, we need models and ideal approaches to community health and HPDP in order to advance them. These models and answers to the questions we have posed can come from research and demonstration projects. Policy and funding could support pilot HPDP programs in communities, program evaluation research, identification of effective models and "best practice" approaches to HPDP, and dissemination of information about model programs. Broad data sets incorporating multiple entities that serve the health needs of communities are required for monitoring and managing costs, access, quality, and health status. Qualitative and quantitative studies would help to identify financing and delivery models of community health that work best for different conditions and types of communities. Support for these studies could come from private sources and foundations or government sources. Hospitals themselves, and their trade groups, could demonstrate their commitment to HPDP by conducting or funding scientific evaluations of HPDP programs and disseminating the results.

In our study, we see that many hospitals are adapting themselves to a new emphasis of the health care system: health promotion and disease prevention. They are diversifying into this domain and are thereby promoting better health among their local populations. However, institutional and governmental policy must be devised to encourage more hospitals to become more involved and more engaged with the other

organizations and agencies in their respective communities in order to improve the health status of their populations.

References

Bazzoli, G.J., R. Stein, J.A. Alexander, D. Conrad, S. Sofaer, and S.M. Shortell. 1997. Public–Private Collaboration in Health and Human Service Delivery: Evidence from Community Partnerships. *Milbank Quarterly* 75:533–61.

Bazzoli, G.J., S.M. Shortell, N. Dubbs, C. Chan, and P. Kralovec. 1999. A Taxonomy of Health Networks and Systems: Bringing Order Out of Chaos. *Health Services Research* 33:1683–717.

Bike-Nordhaus, A.M. 1998. Street-Smart Health Care: Chicago Hospital Reaches Out through Partnerships That Help Turn Around Inner-City Lives. *Hospitals & Health Networks* 72(10):26.

Campbell, S. 1998. Using Wellness and Prevention as a Strategic Platform for a Hospital System. *Health Care Strategic Management* 16(5):16.

Coye, M.J. 1995. Healthier Communities and the Business of Creating Health. *Healthcare Executive* 10(4):4–7.

Cutler, D.M. 1995. Cutting Costs and Improving Health: Making Reform Work. *Health Affairs* 14(1):161–73.

Dillon, W.R., and M. Goldstein. 1984. *Multivariate Analysis Methods and Applications*. New York: Wiley.

Fielding, J., and N. Halfon. 1994. Where is the Health in Health System Reform? *Journal of the American Medical Association* 272:1292–6.

Fine, H. 1997. HMO's Embracing Preventive Medicine. *Los Angeles Business Journal* 19(38):23–4.

Fries, J.F. 1997. Reducing the Need and Demand for Medical Care: Implications for Quality Management and Outcome Improvement. *Quality Management in Health Care* 6(1): 34–44.

Fries, J.F., C.E. Koop, J. Sokolov, C.E. Beadle, and D. Wright. 1998. Beyond Health Promotion: Reducing Need and Demand for Medical Care. *Health Affairs* 17(2):70–84.

Fromberg, R. 1997. Measuring Up under Managed Care. *Healthcare Executive* 12(1):6–11.

Griffith, J.R. 1997. The Strategic Agenda for Community Health Care Organizations. *Health Care Management Review* 22(3):82–91.

Hagland, M. 1995. An Assist from the Private Sector. *Hospitals & Health Networks* 70(7):56.

Halverson, P.K., G.P. Mays, A.D. Kaluzny, and T.B. Richards. 1997. Not-So-Strange Bedfellows: Models of Interaction between

Managed Care Plans and Public Health Agencies. *Milbank Quarterly* 75:113–38.

Japsen, B. 1996. Focus on Fitness: Hospitals Promote Their Clubs as Another Service in Care Continuum. *Modern Healthcare* 26(15):38–41.

Kellie, S.E., J.W. Robertson, P.R. Van Ostenberg, P.M. Schyve, and A.S. Buck. 1996. Characteristics of Hospitals Providing Preventive Services: Does Delivery System Integration Make a Difference? *Clinical Performance Quality Health Care* 4(1):25–33.

Longo, D.R., R.L. Kruse, and R.G. Kiely. 1997. A Framework for Designing and Implementing Community Benefit Standards. *Journal of Health Care Finance* 23(4):71–90.

McNerney, W.J. 1995. Community Health Initiatives Are Widespread, Challenging Our Sense of Civic Obligation. *Frontiers of Health Services Management* 11(4):39–44.

Mourning, E.L. 1996. Managed Care, Healthy Communities and the New Healthcare Foundation. *Fund Raising Management* 27(7): 24–31.

Newbold, P. 1995. Building Healthy Communities. *Frontiers of Health Services Management* 11(4):45–8.

Newbold, P. 1998. Improving Community Health Status. *Healthcare Executive* 13(1):48–9.

Olden, P.C., and D.G. Clement. 1998. Well-Being Revisited: Improving the Health of a Population. *Journal of Healthcare Management* 43(1): 36–48.

Proenca, E.J. 1998. Community Orientation in Health Services Organizations: The Concept and Its Implementation. *Health Care Management Review* 23(2):28–38.

Proenca, E.J., M.D. Rosko, and J.S. Zinn. 1998. Hospital Provision of Prevention and Health Services: An Organizational Adaptation Perspective. Presented at the Academy of Management 1998 Annual Meeting, August 10, San Diego.

Reichel, P. 1997. Best Way to Promote Health is to Market It. *Marketing News* 31(10):12.

Robinson, J.C. 1994. The Changing Boundaries of the American Hospital. *Milbank Quarterly* 72:259–76.

Romeo, S.J.W. 1996. Community Health and Managing the Care of a Population. *Medical Group Management Journal* 43(6):10–6, 81.

Rundall, T.G., and H.H. Schauffler. 1997. Health Promotion and Disease Prevention in Integrated Delivery Systems: The Role Of Market Forces. *American Journal of Preventive Medicine* 13(4):244–50.

Schauffler, H.H., and Chapman, S.A. 1998. Health Promotion and Managed Care: Surveys of California's Health Plans and Population. *American Journal of Preventive Medicine* 14(3): 161–7.

Schneider, D., and M.E. Northridge. 1999. Promoting the Health and Well-being of Future Generations. *American Journal of Public Health* 89(2):155–7.

Shortell, S.M., R.R. Gillies, D.A. Anderson, K.M. Erickson, and J.B. Mitchell. 1996. *Remaking Health Care in America: Building Organized Delivery Systems*. San Francisco: Jossey-Bass.

Shortell, S.M., R.R. Gillies, and K.J. Devers. 1995. Reinventing the American Hospital. *Milbank Quarterly* 73:131–60.

Sigmond, R.M. 1995. Back to the Future: Partnerships and Coordination for Community Health. *Frontiers of Health Services Management* 11(4):3–36.

Speer, T.L. 1997. Paid to Produce. *Hospitals & Health Networks* 71(10): 50–2.

Swan, H. 1997. Sickness & Sacrifice. *Hospitals & Health Networks* 71(6): 32.

U.S. Public Health Service. 1997. *The Public Health Workforce: An Agenda for the 21st Century*. Washington, D.C.

Welton, W.E., T.A. Kantner, and S.B. Katz. 1997. Developing Tomorrow's Integrated Community Health Systems: A Leadership Challenge for Public Health and Primary Care. *Milbank Quarterly* 75:261–88.

Acknowledgments: We gratefully acknowledge the helpful suggestions of three anonymous reviewers who offered comments on an earlier draft of this article.

Address correspondence to: Peter C. Olden, PhD, Associate Professor and Director, Graduate Health Administration Program, Panuska College of Professional Studies, University of Scranton, Scranton, PA 18510 (e-mail: oldenp1@uofs.edu).