Introducing a Prepaid Health Insurance Plan into a Family Practice Residency: Some Preliminary Issues

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Residency programs must face the problem of finding revenues to finance their educational activities. This is particularly true of family practice programs, whose budgets are highly dependent on revenues from ambulatory patient care. In an age of funding cutbacks, it becomes increasingly necessary to find innovative ways of generating income while maintaining high standards of medical care.

Prepaid health insurance schemes are one way of guaranteeing a steady income for a practice. At the same time, these schemes have been shown to be less costly overall than the traditional fee-for-service system[1,2] and are the focus of attempts to reduce federal health care expenditures.[3]

Patients covered by a new method of health insurance were accepted into the University of Washington Family Medical Center in July 1978. Called United Healthcare (UHC), the new plan is an innovative, independent practice association which became one of several options available to large employee groups in Washington State. It features a central role for the private practice based primary care physician in coordinating each patient's care. A key aspect is the plan's built-in incentive for physicians to be cost conscious in their use of medical resources, such as laboratory tests, procedures, referrals, and hospitalization.[4] This is accomplished by a financial risk sharing provision, described as follows: An account is established for the practice by United Healthcare from the premiums paid, based on an actuarial formula for each patient group by age and sex. All services provided or approved by the primary care physician are paid out of this account. At the end of the year the practice is allocated a share of any surplus that may remain in this account after paying the costs of all services and procedures which were approved by the primary care provider. Catastrophic costs for patients totaling more than $5,000 are not charged to this account. If the total costs of care exceed the amount allocated to the account, the practice is required to pay United Healthcare a portion of the deficit.

With the introduction of United Healthcare into the Family Medical Center, attempts were made to educate the residents and faculty about the special characteristics of the plan and their effect on the center's finances. These were reviewed at several monthly physician-staff meetings, and particular problems dealing with referral and authorization of payments were discussed. The structure of the Family Medical Center does not reward individual physicians for their conservation of medical resources, but a cost-effective approach to health care is basic to the philosophy of the faculty and a cornerstone of the teaching program. It was hoped that the United Healthcare plan would encourage the clinicians to conserve patient care resources, thereby benefiting the Family Medical Center.

This paper describes the experience of a university-based family practice residency program with this particular prepaid insurance plan. There was also an attempt to survey physicians' knowledge of various health insurance plans and how this knowledge might influence their utilization of health care resources.

Experience with United Healthcare

The number of patients in the practice covered by United Healthcare has increased steadily and at the end of 1980 stood at 517, representing 7 percent of the total active patient population. Most were insured through large employee groups, thus the majority (80 percent) were in the group aged 18 to 64 years.

Since the plan's inception, the Family Medical Center has broken even each year, avoiding having to pay a share of any deficit, but it has not been successful in generating a substantial surplus. This is in part due to the difficulty of controlling

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costs and services, particularly hospitalization, generated by specialists to whom patients were referred. Interestingly, overall fiscal performance of the residency compared favorably with the average expenditures for family and general practitioners in the state of Washington (Table 1). Of particular note is the fact that 34 percent of the services were generated in the ambulatory setting by the primary care providers in the Family Medical Center compared with 29.2 percent for the average. This is also reflected in a lower percent of the total revenues spent that were generated by specialists referred to from the Family Medical Center, 20.4 percent vs 30.6 percent for the average.

Table 1. Distribution of Expenditures for Family Medical Center vs Family/General Practice Average for Washington State

	Percent of Revenue Spent*	
	Family Medical Center	Family/ General Practice
Primary care physician office charges (inculding laboratory and x-ray)	34.1	29.2
Referral		
Medical	9.5	11.4
Surgical	8.1	13.3
Laboratory	0.3	2.6
X-ray	2.5	3.3
Hospital	36.7	28.7
Emergency room	1.2	2.4
Medications	5.1	7.9
Out-of-area and other charges	2.5	(Included above)

*Total not 100.0% because of rounding

Survey of Physician Attitudes and Knowledge of Insurance

Methods

Questionnaires were distributed at the end of the academic year (June 1980) to all 25 Family Medical Center physicians who were in town and who were not assisting with the study. This one-page, self-administered, anonymous questionnaire sought the following information on each physician: resident or faculty status, knowledge of coverage by United Healthcare and other major insurance plans of four common clinical services, knowledge of the unique characteristics of the United Healthcare plan, frequency of noting patients' type of insurance coverage at the time of visit, and perception of the ways they would modify their behavior in caring for United Healthcare patients. In view of the small number of physicians surveyed, analysis was restricted to simple tabulations and cross-tabulations.

Results

Fifteen of the 18 residents and all 7 faculty physicians surveyed returned completed questionnaires for an overall response rate of 88 percent. Family Medical Center physicians seemed aware of the comprehensive nature of United Healthcare coverage, at least for the four services listed on the questionnaire (Table 2). Over 90 percent of the respondents knew that the United Healthcare plan covered well-baby care, counseling/psychotherapy, and outpatient prescription drugs, and 73 percent were aware that the United Healthcare plan covered termination of pregnancy. With just one exception, physician knowledge regarding coverage for these specific services was at least 23 percent higher for United Healthcare than for the four other plans. This differential was noted among both residents and faculty.

Although 91 percent (20/22) of the respondents knew that United Healthcare required the primary physician's approval of consultant fees before payment, few physicians understood the financial risk sharing arrangement between United Healthcare and the Family Medical Center. The faculty were slightly more knowledgeable than the residents (29 vs 16 percent).

Fewer than one half of the center's physicians said they usually or always noted their patients' type of insurance coverage (Table 3). Those physicians who usually or always ascertained patients' type of insurance correctly identified 71 percent of the service coverage combinations compared with 51 percent for those physicians who noted patients' coverage less frequently.

Overall, 52 percent (11/21) of the Family Medical Center physicians stated they would in some manner manage their United Healthcare patients differently than their other insured patients. Twenty-nine percent said they would try to limit

Table 2. Percent of 22 Physicians Correctly Identifying Coverage of Selected Services by Five Insurance Plans

	Well-Baby Care	Counseling/ Psychotherapy	Outpatient Rx Drugs	Pregnancy Terminations
United Healthcare	95	95	91	73
Blue Cross	68	68	91	45
King County Medical	36	41	55	50
Medicaid	41	27	68	45
Medicare	*	45	32	*

Note: Underlined percentages represent the percent correctly identifying services which are covered by a plan. Percentages not underlined denote percent correctly identifying services that are not covered by a plan

*Excluded due to rare occurrence of service for patients under this plan

Table 3. Patient's Insurance Status: Reported Frequency with Which Family Medical Center Physicians Ascertain Patient's Type of Insurance Coverage and Correctly Identify Services Covered

Reported Frequency	Number of Physicians (%)	Percent of Services Covered Correctly Identified
Always	4 (19.0)	71
Usually	5 (23.9)	
Sometimes	8 (38.1)	
Rarely	4 (19.0)	51
Never	0 (0.0)	
Total	21* 100.0	

*One physician did not answer this question

Table 4. Likelihood Family Medical Center Physicians Would Recommend Services for United Healthcare (UHC) Patients as Compared to Other Insured Patients (% of respondents)

Type of Service	More Likely to Recommend for UHC Patients	Equally Likely	Less Likely to Recommend for UHC Patients
Health maintenance	10	90	0
Counseling/psychotherapy	5	95	0
Writing prescriptions in generic form	0	100	0
Laboratory tests	5	85	10
Diagnostic x-ray studies	5	85	10
Referral to specialist	0	71	29
Inpatient surgery vs outpatient surgery for the same procedure (eg, D & C)	5	85	10
Emergency room services	0	71	29

*Based on data from the 21 physicians responding to this question

their referral of United Healthcare patients for specialist consultation and 29 percent said they would encourage these patients to limit their use of emergency room services (Table 4). The main reasons given by those physicians who would limit services to United Healthcare patients was to reduce costs to the Family Medical Center. While 14 percent (3/21) of respondents stated they would be less likely to recommend any of the other six listed services for United Healthcare patients, 11 percent of respondents (2/21) indicated they would be more likely to suggest health maintenance for those patients. Little difference regarding referral was noted between faculty and residents.

Comment

In view of growing concern about escalating health care costs, innovative reimbursement schemes that provide incentives for physicians to conserve resources merit further study. Previous studies concerned with physician behavior and cost containment have tended to focus on physician awareness of costs and have assumed that if physicians were better informed about costs they would use resources more conservatively.[5-11] While it appears that physicians are largely unaware of costs and often underestimate them, there is little evidence in these studies to indicate that cost education alone would influence their patient care behavior.

Experience at the University of Washington Family Medical Center has shown that a prepaid health insurance plan like United Healthcare does guarantee a steady source of income for the practice. It was originally hoped that the introduction of the plan would also lead to conservation of resources and thereby benefit the center through sharing in the surplus revenues. The latter did not occur, however, due to many factors. This survey indicated that at least some of the factors involve the attitudes of the physicians. Less than one half of the physicians included in this survey usually took note of the insurance coverage of their patients. Those who did appeared to be more knowledgeable about insurance coverage and could be expected to practice in a cost conscious way. Of those physicians who indicated that they would manage United Healthcare patients in a more cost conscious way, the greatest impact would be expected to come from a decrease in specialist referrals and emergency room services. This in fact appears to have occurred in practice.

A recent study by Martin et al showed that tests ordered by hospital based medical residents did not decrease after the introduction of a direct financial incentive.[12] Ongoing chart review and discussion, however, were effective in producing sustained change in test ordering behavior. This result suggests a strategy that might be effective in an ambulatory based training program to maximize the educational and financial benefits of introducing a health insurance plan that would emphasize cost conscious and cost-effective health care delivery.

A cost sharing plan like United Healthcare is one innovative way of introducing a prepaid insurance plan in a fee-for-service system. It has both an educational and financial appeal for a residency training program and warrants further study to investigate how effectively it reduces health care costs. The training setting has several factors militating against cost conscious medical practice, related in part to the educational needs and in part to the inexperience of physicians in training. This study suggests that knowledge of the structure of such a prepaid plan probably needs to be supplemented by ongoing review and educational programs before cost saving can be expected.

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