Illness-episode approach: Costs and benefits of medigap insurance

by Shoshanna Sofaer and Bruce N. Davidson

Over two-thirds of Medicare beneficiaries have private supplementary coverage, but few know enough about Medicare, their own supplements, or available alternatives to make intelligent comparisons and informed purchasing decisions. The illness-episode approach, a new way to provide insurance information to Medicare beneficiaries, calculates out-of-pocket costs likely to be faced by beneficiaries experiencing 13 illnesses, under Medicare alone and under different medigap policies. Applying the approach to six policies marketed in Los Angeles in 1986 revealed that plans varied widely in their ability to reduce financial vulnerability; many still leave the elderly with substantial out-of-pocket costs.

Introduction

The Medicare program was not designed to provide coverage for all the health care services needed by those 65 years of age or over. It provides greatest coverage for hospital services, substantial but lower coverage for physician services, and relatively little coverage for long-term care services. At an aggregate level, it is estimated that Medicare pays for 48 percent of the personal expenditures on health services by the elderly (Waldo and Lazenby, 1984).

Perhaps the greatest limits in Medicare coverage grow out of its emphasis on acute care and its definition of what constitutes a medical and a medically necessary service. The current definition leaves out a wide range of health services, including preventive examinations; dental care; hearing aids; eyeglasses (except in conjunction with medical treatment of specified diagnoses); and, most important of all, custodial care for patients whose conditions make it impossible for them to carry out activities of daily living. Finally, Medicare does not cover the one item that most would consider an essential component of medical treatment—outpatient prescription medications.

In response to the gaps in Medicare coverage, about two-thirds of Medicare beneficiaries purchase, or have purchased for them, some form of supplementary health insurance (Garfinkel and Corder, 1985; Rice and Gabel, 1986). Approximately 36 percent of beneficiaries with private Medicare supplemental insurance (6.3 million beneficiaries in 1983) receive it as a retirement health benefit (Dopkeen, 1987), paying either no premium, a reduced premium, or a premium only for a dependent spouse.

The remaining 64 percent of beneficiaries with private supplements purchase their coverage as individuals in the private market or as members of affinity groups such as the American Association of Retired Persons (AARP). Overall, approximately $13 billion is spent annually by or on behalf of 21 million Medicare beneficiaries for Medicare supplementary and other health insurance policies (Rice and McCall, 1985; Smeeding and Straub, 1987).

Seniors, especially those making purchases as individuals, face a number of problems in making prudent purchases of supplementary health insurance. Policies are not standardized. The language used to describe policy characteristics is difficult to understand. There are a multiplicity of offerings in most communities. For example, in Los Angeles County in 1986, a senior could choose from over 30 Medicare supplements (Klowden, 1986).

Seniors report receiving several advertisements for supplementary policies each month. Several policies are advertised on television, using well-known personalities from the entertainment industry. A number of specific marketing and advertising abuses have been identified (Charles, 1987; Hagen, 1986; Keyser, 1987; House Select Committee on Aging, 1987). Some companies, using direct mail techniques, camouflage their ads by using "front" organizations with names and stationery that make them appear to be legitimate and disinterested governmental agencies or not-for-profit senior groups. High-pressure sales tactics are sometimes used in face-to-face encounters.

It should not be surprising, therefore, that Medicare beneficiaries are by and large quite confused, not only when they try to make a decision about purchasing supplementary coverage but about the policies they actually purchase. Recent surveys of Medicare beneficiaries' knowledge of their health care coverage (both Medicare and supplements) indicate relatively low levels of knowledge and understanding of this complex insurance system. In general, knowledge of Medicare benefits is greater for benefits that are more frequently used. Thus, 80 percent know about hospital benefits, but less than 50 percent know about nursing home benefits.

Limited knowledge of Medicare benefits causes problems in understanding Medicare supplements because such coverage is usually tied to the Medicare benefit structure. Knowledge about Medicare supplements also varies depending on the characteristic of the policy being examined (Lambert, 1980; Cafferata, 1984; McCall, Rice, and Sangl, 1986). Again, seniors are more likely to understand the hospital coverage in their policies and less likely to understand the nursing home and mental health provisions. Overall, Medicare beneficiaries tend to overestimate the protection afforded by their supplements (LaTour, Friedman, and Hughes, 1986). Surveys

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conducted by the Health Insurance Decision Project, described later, indicate that a sample of 309 older adults with private Medicare supplements who attended insurance education workshops correctly answered an average of only 28.5 percent of questions about their private coverage at baseline.

A perennial, and for beneficiaries often expensive, problem is the purchase of multiple supplementary policies. Many stories have been published about elderly people spending thousands of dollars each year for up to a dozen different health policies, in response to their own ignorance and the marketing techniques of those who offer Medicare supplements (Stettner, 1983; Wattenberg and McGann, 1984; Charles, 1987). Beneficiaries often think that buying two policies gives them twice the coverage, but many policies have coordination-of-benefits clauses that are designed to eliminate duplicate reimbursement for the same service. Even when policies do not have coordination-of-benefits clauses, the additional benefits are seldom worth the additional premiums. McCall et al. (1986) report that beneficiaries' knowledge of their policy features was lowest with regard to coordination-of-benefits clauses; the level of knowledge about these clauses varied from State to State, from 17 percent to 34 percent of respondents.

Several attempts have been and are being made to address the problems faced by seniors in the marketplace for private insurance to supplement Medicare. The Federal Baucus Legislation established seven standards for Medicare supplementary insurance (Cafferata, 1985). They include several minimum coverage standards; a maximum $200 deductible for Part B eligible expenses; a 6-month limitation on the duration of pre-existing condition exclusions; minimum "loss ratios" for both individual and group policies, thus determining the maximum percent of revenues that could be used for the insurance carrier's administrative costs (Fisher, 1987); and the requirement that purchasers receive a standard outline of coverage and a buyer's guide.

Cafferata (1985) estimated that, in 1977, only one-fifth of elderly Medicare beneficiaries with private supplementary insurance held at least one policy that met all seven of these minimum benefit standards. She noted that persons with supplementary coverage provided as part of a retirement benefit (group coverage) were more likely to have policies meeting the standards than those purchasing individual policies were. The effect of the Baucus Legislation has been to alter the characteristics of nongroup supplementary insurance policies. By 1987, it was reported that all but four States had adopted the Baucus standards, so that the vast majority of supplementary policies should now meet the standards (Bowen, 1987). Adoption of the Baucus standards, however, has not eliminated all of the problems faced by elderly beneficiaries. In particular, it is still not clear that beneficiaries have enough knowledge and understanding to make a truly informed choice even though they should have received an outline of policy coverage and a buyer's guide.

Recently, State regulators have also become visible and vigilant in tracking down and prosecuting the most serious violations of their marketing and advertising standards. A variety of abuses were identified in hearings sponsored in 1987 by the California Department of Insurance, including advertising that appears as an official notice, the use of bogus consumer organizations as fronts to solicit medigap insurance, misrepresentation of the terms and conditions of such policies, policy "stacking" (multiple overlapping and unnecessary policies), policy "rollover" (frequent and reckless replacement of policies), and theft of the applicant's premium payment.

In addition, according to a 1983 survey by the National Association of Insurance Commissioners, several States have tried to disseminate information. California's State Department of Aging is funding 25 Health Insurance Counseling and Information Program (HICAP) projects across the State that provide group education; one-to-one counseling; and help for those experiencing claims problems with Medicare, medigap carriers, and Medicare health maintenance organizations (HMOs). Other State efforts include toll-free telephone hotlines; periodic newsletters; educational presentations at meetings attended by senior citizens; and, in the State of Washington's Senior Health Insurance Benefits Advisor Program, one-to-one counseling by trained personnel.

Some former health systems agencies have, in their new "incarnations," taken on the task of providing information or guidelines to consumers. AARP, which has a very active consumer information program, has recently published a brochure on medigaps (AARP, 1987). Finally, many hospitals that have developed membership programs to attract senior citizens to their facilities and to their medical staff have included health insurance counseling, either group or individual, as a benefit of membership in response to their market research and needs assessment with seniors.

Taken together, however, these various educational efforts still do not reach the vast majority of beneficiaries who still lack objective information on the comparative costs and benefits of different medigap policies (Davidson, 1988). This means that seniors cannot effectively perform their role in the increasingly competition-driven health care marketplace.

In almost all cases, the marketing of medigap policies is built around the legitimate concerns of the elderly regarding their health and their financial vulnerability in case of illness. In this article, we will examine the extent to which typical policies from several well-known insurance companies, marketed to individuals and affinity group members in California, reduce the financial vulnerability of the elderly. Our findings are based on the application of a new approach to estimating the benefits and costs of different health care coverage plans, called "the illness-episode approach."

Prior approaches to providing information may not have presented policy comparisons in a way that makes it easy for consumers to apply them to their own experiences or concerns. Typically, available information contains standard insurance terms and features to describe and compare plans, such as deductibles and copayments for inpatient and outpatient care; pre-existing condition limitation clauses; maximum periods or amounts for coverage; and coverage for specific items such as skilled nursing facility stays, outpatient prescriptions, or private duty nursing. Often, information is presented in the form

Table 1

Illnesses specified by *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) code and SysteMetrics disease staging classification system

Illness	Technical diagnosis	ICD-9-CM code(s)	Stage
High blood pressure	Benign essential hypertension	401.1	(dx 0829) 1.2
Hearing loss	Examination of ears and hearing	V72.1	NA
	Presbyacusis-degenerative and vascular ear disorder	388.01	
Arthritis	Osteoarthritis and allied disorders	715.09	
	Arthralgia-pain in joint	719.49	(dx 1454) 2.2
Depression	Depressive disorder	311	(dx 0241) 1.0
Cataract	Senile cataract, unspecified	366.10	(dx 0312) 2.1
Pneumonia	Pneumococcal pneumonia	481	(dx 0504) 1.2
Heart attack	Acute myocardial infarction	410.0	(dx 0811) 1.2
Enlarged prostate	Benign prostatics hyperplasia	600	
	Urinary obstruction, unspecified	599.9	(dx 1008) 2.2
Breast cancer	Malignant neoplasm of female breast	174.4	(dx 1120) 2.0
	Secondary, unspecified malignant neoplasm of lymph nodes, axilla, and upper limb	196.30	
Diabetes, with gangrene	Diabetes mellitus, with peripheral circulatory disorders	250.7	
	Gangrene	785.4	(dx 1214) 2.4
Broken hip and hip replacement	Fracture of neck of femur and transcervical fracture	820.02	
	Joint replaced by artificial device	V43.6	(dx 1411) 2.2
Lung cancer	Malignant neoplasm of trachea, bronchus, and lung	162.9	(dx 0527) 3.29
	Secondary malignant neoplasms, intrathoracic region	196.10	includes 1.0 to 3.1
Stroke	Occlusion and stenosis of carotid artery	433.10	
	Acute but ill-defined cerebrovascular accident	436	(dx 0251) 2.1 to 2.27

NOTE: NA is not applicable.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

of summary charts (e.g., Klowden, 1986). Beneficiaries often do not understand the terms used. Furthermore, they are usually unable to determine how differences in the features described will affect them if they become ill.

The illness-episode approach involves calculating and presenting information on the costs that seniors would incur if they experienced a specific illness and had a specific kind of health insurance coverage.[1] The approach makes possible direct comparisons of very different kinds of plans across a range of illnesses that vary widely in severity and scope of needed services. In our analysis, we developed a typology of medigap plans, i.e., plans that met minimum requirements of the Baucus Legislation but varied in terms of cost and coverage levels.[2] We calculated the strengths and weaknesses of a range of available medigap policies with respect to their impact on the elderly's out-of-pocket costs.[3] Our findings indicate that the typical medigap policies we examined are far from complete in filling all the "gaps" in Medicare coverage. They also illustrate the relationship, and sometimes lack of relationship, between premium cost and reduction in financial vulnerability.

[1]For a detailed description of the methodology, see Sofaer et al. (1990).
[2]In addition to such policies, there are some Medicare supplements that are indemnity plans providing "n" dollars per day while an individual is in the hospital and some that are "dread disease" policies covering a particular condition such as stroke or cancer that are also marketed to the elderly. These were not addressed in our analysis.
[3]The illness-episode methodology has also been applied to two Medicare risk-contract HMOs marketed in Los Angeles County. These low-option, zero-premium plans are heavily marketed in this mature HMO market. Our analysis of these plans is presented in Sofaer and Kenney (1989).

Methodology: The illness-episode approach

The illness-episode approach is based on the very simple notion that it is easier to assess the value of a product if we can see, in some concrete way, how its purchase is likely to affect us in the future. The illness-episode approach, which calculates the out-of-pocket expenses for simulated illnesses under different insurance options, provides a concrete and comprehensible way of comparing financial impacts directly.

The first step in the method is to identify a group of illnesses that can be used in constructing the comparisons. The illnesses are chosen purposively using the following criteria:

- They should be frequent among the target population, in this case Medicare beneficiaries, so that they are relatively familiar and salient.
- There should be a fair degree of consensus among health care professionals regarding the services typically required for their appropriate diagnosis and treatment.
- They should represent a range in levels of severity and in types of required health care services.

Table 1 contains the 13 illnesses selected using these criteria, with respect to a target population of seniors. We give the common and scientific name for each illness, the specific diagnostic code(s) from the *International Classification of Diseases, 9th Revision, Clinical Modification,* and the level of severity of the diagnosis using the SysteMetrics system of disease staging.

The second step in the method is to develop detailed profiles of the diagnostic and treatment services that would be required by a simulated elderly client with one of these illnesses over the course of the first year of care. These profiles were originally developed by a geriatrician. They were then validated through review by physicians in a range of service and practice settings: solo fee-for-service practice, a major HMO, an academic medical center, and a county health care services agency. Table 2 contains, for each illness, the highlights of services that are included in the profile. Five of these illnesses, high blood pressure, hearing loss, arthritis, depression, and cataract, required outpatient services only. The remaining eight—pneumonia; heart attack; enlarged prostate; diabetes, with gangrene complication; breast cancer; broken hip, requiring full replacement; lung cancer; and stroke—involved at least one hospitalization. Lung cancer, which is simulated as ending in death, involved three hospitalizations. Stroke and broken hip required extended care in skilled facilities; diabetes and lung cancer required home health services. There are two versions of the stroke illness. In the first version, we assume that an extended stay in a nursing home would be deemed medically necessary by Medicare; in the second version, we assume that only 20 days of the stay would be deemed necessary.

It is important to note that the detailed profiles are extremely comprehensive: All services, whether typically covered by insurance plans or not, are included. They include encounters with health professionals, facility stays, tests, procedures, medication, durable medical equipment, etc.

The third step in the method is to develop detailed profiles of typical charges for these services in a particular time period and community. The calculations in this article were made for Los Angeles County in 1986. Hospital charges were derived by using the diagnosis-related group price of a local community hospital for each required hospitalization. Typical total charges for up to a year of care for each illness are presented in Table 3.

The fourth step in the method is to examine the Medicare benefit structure—e.g., deductibles, copayments, and service limits—to determine how much Medicare Part A and B would and would not pay for each illness. Using 1986 data from the local Medicare Part B carrier, we were able to identify, for each Part B service, the approved charge for each specific service, test, procedure, and item of equipment. In most cases, especially for physicians' services, the approved charge is lower than the customary charge in the community. The difference, known as "excess charges," is a liability of the beneficiaries, unless their provider agrees to accept assignment, i.e., to accept the Medicare approved charge as payment in full. Also shown in Table 3 are the dollar amount and percent of typical total charges that Medicare

Table 2

Selected indicators of service intensity

Illness	Physician visits[1]		Hospital days	SNF days	Other major services
	Outpatient	Inpatient			
High blood pressure	7	0	0	0	Outpatient Rx medications
Arthritis	7	0	0	0	Outpatient Rx medications Occupational therapy
Depression	26	0	0	0	Outpatient Rx medications
Pneumonia	4	7	8	0	None
Heart attack	6	12	10	0	Emergency room visit Cardiac care unit (3 days) Outpatient Rx medications
Enlarged prostate	7	6	5	0	Intravenous pylogram Cystoscopy Transuretheral resection of prostate
Breast cancer	28	9	7	0	Mammogram; biopsy Mastectomy Outpatient chemotherapy
Broken hip	6	27	13	30	Emergency room visit Hip replacement surgery Physical therapy 56 unskilled home health visits
Lung cancer	10	22	20	0	Bronchoscopy; CAT scan Radiation therapy 6 skilled home health visits
Stroke—Version 1	2	25	9	170	Emergency room visit Physical therapy Occupational therapy Durable medical equipment 3 skilled home health and 48 unskilled home health visits
Stroke—Version 2	2	25	9	20 skilled 150 unskilled	Same as Version 1

[1]Each surgery or procedure is counted as one inpatient visit.

NOTE: SNF is skilled nursing facility.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

would pay for each illness and the amount and percent the patient would pay under two different assumptions: that none of their providers accept assignment and that all their providers do.

The fifth step in the method is to examine a set of prototypical medigap policies to determine whether and to what extent they truly supplement Medicare Parts A and B coverage. Table 4 contains the typology we used in selecting prototypical plans from the many available in our test community, Los Angeles County. We selected policies that were well-advertised and frequently purchase and that represented a range of premium prices. We also purposively selected policies that covered specific gaps, such as extended skilled nursing facility care, excess charges, and outpatient prescription medications.

The last step in the method is to examine each plan in detail to determine what additional costs each policy would cover for each of the illnesses. When published information on plans was not clear, we made multiple anonymous telephone calls to plan vendors to clarify our interpretation. The remaining costs were the out-of-pocket costs that would be incurred by Medicare beneficiaries.

Findings

Total charges

Persons with Medicare coverage only

As can be seen from Table 3, the total charges for the 13 illnesses we selected, in Los Angeles County in 1986, range from $856 for treatment of mild to moderate hypertension to a high of $29,636 for treatment of severe stroke. A patient with Medicare Parts A and B coverage alone, whose providers refused to accept assignment, would be subject to out-of-pocket costs ranging from $479 for high blood pressure to $16,989 for the second version of stroke. Out-of-pocket costs go down for patients whose providers accept assignment because they are no longer subject to excess charges. These costs range from $266 for high blood pressure to $16,447 for stroke.

The amount and percent of total charges covered by Medicare vary substantially from illness to illness. Generally speaking, although the dollar amount of out-of-pocket costs for illnesses requiring only outpatient care is lower, the percent of total charges that the patient pays is higher. The sources of out-of-pocket costs for outpatient illness in our sample included not only the Part B deductible and a 20-percent insurance but also the cost of prescription medications (especially for arthritis and high blood pressure), a $250 per year reimbursement limit on outpatient psychotherapy services in effect in 1986, the lack of coverage for hearing aids, and excess charges that are especially high for outpatient laser surgery used to treat cataract.

In the case of illnesses requiring hospitalization, the sources of out-of-pocket costs include the Part A hospital deductible ($492 in 1986), as well as the $75 annual Part B deductible and co-insurance. As with the outpatient illnesses, excess charges (especially for illnesses requiring surgery) and outpatient prescription medications (especially for illnesses requiring chemotherapy) are also factors. In addition, substantial out-of-pocket costs are incurred for illnesses that require extended care, such as stroke, hip replacement, and diabetes.

As previously noted, we have presented two different versions of stroke. The second version, in which only 20 days of nursing home care are assumed to be medically necessary, is more expensive, with typical total charges of $29,636 versus $28,411. When Medicare finds care in a skilled nursing facility (SNF) medically necessary, it pays the facility a flat daily rate that includes the cost of all therapies provided. When the patient is paying for nursing home care, however, the daily rate, although somewhat lower, does not include therapies, which are billed separately. The total of the private daily rate and the charges for therapies is higher than the Medicare flat rate including therapies.

Patients whose providers do not accept assignment would face out-of-pocket costs of $16,989 for the second version of stroke. Even in the first version, however, in which SNF care is deemed medically necessary, the patient must pay $14,616 because of relatively high

Table 3

Amount and percent of typical total charges for simulated illnesses paid by Medicare beneficiaries with and without provider acceptance of assignment: Los Angeles County, 1986

Illness	Typical total charges	Amount Medicare pays	Percent Medicare pays	Patient payments with no provider assignment		Patient payments with full provider assignment	
				Amount	Percent	Amount	Percent
Stroke—Version 1	$28,411	$13,795	48.6	$14,616	51.4	$14,074	49.5
Stroke—Version 2	29,636	12,647	42.7	16,989	57.3	16,447	55.5
Lung cancer	23,915	19,940	83.4	3,975	16.6	2,129	8.9
Hip replacement	20,251	14,819	73.2	5,432	26.8	4,335	21.4
Breast cancer	13,355	8,693	65.1	4,662	34.9	2,934	22.0
Diabetes, with gangrene	12,355	11,043	89.4	2,624	21.2	1,910	15.5
Enlarged prostate	8,036	6,410	79.8	1,626	20.2	1,173	14.6
Heart attack	7,588	6,223	82.0	1,365	18.0	985	13.0
Pneumonia	5,899	5,021	85.1	878	14.9	626	10.6
Cataract	4,518	2,868	63.5	1,650	36.5	817	18.1
Depression	3,326	364	10.9	2,962	89.1	2,755	82.8
Arthritis	1,458	448	30.7	1,010	69.3	725	49.7
Hearing aid	1,115	146	13.1	969	86.9	862	77.3
High blood pressure	856	377	44.0	479	56.0	266	31.1

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

Table 4

Description of typical medigap policies

Key features	Policy type 1		Policy type 2	Policy type 3	Policy type 4	Policy type 5
Description	Low cost, limited benefits		Average cost, basic benefits	High-cost, moderate benefits	Higher cost, extended SNF benefit	Higher cost, pays excess charges
Policy name	Blue Cross Companion Care Bronze Plan	AARP/Prudential Medicare supplement M2 Plan	Blue Cross Companion Care Silver Plan	Blue Shield Coronet Senior Plan	Mutual of Omaha Mutual Care Plus Plan	Aetna Expanded Medicare Supplement Plan
Annual premium	$288	$119	$480	$955	$875	$828
Extent of coverage						
Part A benefits:						
Deductible	No	Pays one-fourth	Yes	[1]Yes	Yes	Yes
Hospital copayments	Yes	Yes	Yes	Yes	Yes	Yes
Lifetime reserve copayments	Yes	Yes	Yes	Yes	Yes	Yes
Additional hospital days	Up to 365 days	Up to 365 days	Up to 365 days	Up to 365 days	Unlimited extra days	Unlimited extra days
SNF copayments	No	Yes	No	Yes	Yes	Yes
Additional SNF days	No	$123 per day up to 265 extra days	No	No	$92.25 per day, unlimited extra days	$61.50 per day, up to 265 extra days
Part B benefits:						
Deductible	No	No	Yes	Yes	Yes, if inpatient	No
20 percent copayments	After $200 deductible	After $200 deductible	Yes	Yes	Yes	Yes
Excess charges	No	No	No	No	50 percent of 20 percent copayment	Yes
Other benefits:						
Outpatient drugs	No	No	No	[1]50 percent	No	No
Private hospital room	No	No	No	No	No	$100 of cost per day
Private duty nurse	No	No	No	50 percent up to $1,000 per year	No	No

[1]$100 per year deductible for this pair of items.

NOTES: SNF is skilled nursing facility. AARP is American Association of Retired Persons.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

Table 5

Out-of-pocket costs for selected simulated illnesses under different medigap policies for patients whose providers do not accept assignment: Los Angeles County, 1986

Illness	Amount paid by patient with					
	AARP M2	Blue Cross Bronze	Blue Cross Silver	Blue Shield Senior	Mutual of Omaha	Aetna Expanded
Annual premium cost	$119	$288	$480	$955	$875	$828
Stroke—Version 1	315	13,968	13,351	8,413	1,475	3,584
Stroke—Version 2	15,735	15,858	15,241	15,223	14,501	14,681
Lung cancer	2,703	2,826	2,209	2,090	1,572	244
Hip replacement	3,612	4,350	3,733	3,143	2,402	2,021
Breast cancer	3,573	3,696	3,080	2,466	2,534	851
Diabetes, with gangrene	2,273	2,396	1,779	1,565	1,602	851
Enlarged prostate	1,028	1,151	533	559	233	80
Heart attack	1,175	1,298	681	593	472	213
Pneumonia	755	878	334	360	309	82
Cataract	1,153	1,153	1,008	953	716	195
Depression	2,962	2,962	2,872	2,732	2,856	2,665
Arthritis	1,010	1,010	973	660	955	425
Hearing aid	969	969	969	932	967	900
High blood pressure	479	479	460	349	450	186

NOTE: AARP is American Association of Retired Persons.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

Table 6

Percent reductions in out-of-pocket costs, excluding premiums under selected medigap policies for patients whose providers do not accept assignment: Los Angeles County, 1986

Illness	Reductions for policy holders of					
	AARP M2	Blue Cross Bronze	Blue Cross Silver	Blue Shield Senior	Mutual of Omaha	Aetna Expanded
Stroke—Version 1	7.4	6.7	10.3	10.4	14.6	13.6
Stroke—Version 2	97.8	4.4	8.7	42.4	89.9	75.5
Lung cancer	32.0	28.9	44.4	47.4	60.5	93.9
Hip replacement	33.5	19.9	31.3	42.1	55.8	62.8
Breast cancer	23.4	20.7	33.9	47.1	45.6	81.7
Diabetes, with gangrene	13.4	8.7	32.2	40.4	38.9	67.6
Enlarged prostate	36.8	29.2	67.2	65.6	85.7	95.1
Heart attack	13.9	4.9	50.1	56.6	65.4	84.4
Pneumonia	14.0	0.0	62.0	59.0	64.8	90.7
Cataract	30.1	30.1	38.9	42.2	56.6	88.2
Depression	0.0	0.0	3.0	7.8	3.6	10.0
Arthritis	0.0	0.0	3.7	34.7	5.4	57.9
Hearing aid	0.0	0.0	0.0	3.8	0.2	7.1
High blood pressure	0.0	0.0	4.0	27.1	6.1	61.2

NOTE: AARP is American Association of Retired Persons.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

coinsurance ($61.50 per day in 1986) for the 21st to the 100th day of SNF care and no SNF coverage at all after this point.

Out-of-pocket costs

Providers not accepting assignment

Shown in Table 5 are the out-of-pocket costs that would be incurred for these illnesses for Medicare beneficiaries with six different medigap policies if their providers did not accept assignment[4]. Table 6 contains the percent reduction in out-of-pocket costs (not including the cost of the policy premium) experienced by a holder of each policy, compared with having Medicare Part A and B coverage only.

Let us look first at two policies that would be considered low cost: the Prudential policy marketed in California in 1986 through the AARP (the M2 Plan), with an annual premium of $119, and the Companion Care Bronze Plan marketed by Blue Cross of California in that year, with an annual premium of $288. Holders of the AARP M2 whose providers do not accept assignment face out-of-pocket costs ranging from $315 for stroke, whose SNF care is assumed to be medically necessary, to $15,735 for stroke, where only 20 days of care are found necessary. Holders of the more expensive Bronze Plan face costs ranging from $479 for high blood pressure to $15,858 for stroke.

[4]By subtracting out-of-pocket costs under a given plan from out-of-pocket costs under Medicare only, the reader can calculate expected reimbursements under each plan for each illness and relate these to premiums. This information can be presented directly in educational sessions.

Both low-cost policies provide no reimbursement for four of the five illnesses requiring outpatient care only. Both provide about $500 in reimbursement for the fifth such illness, cataract. These policies have a $200 insurance deductible for inpatient care. They do not pay the $75 Part B deductible; in addition, they do not pay the first $125 in Part B coinsurance. This means that a purchaser of these policies must incur over $700 in Medicare approved Part B charges before the policy begins reimbursement. These policies do not cover excess charges or other services and charges that Medicare does not cover.

With respect to illnesses requiring hospitalization, the AARP M2 pays one-quarter of the first day hospital deductible, and the Blue Cross Bronze Plan pays none of the deductible. Several illnesses in this second group involve substantial Part B charges, enough for these policies to begin reimbursements for the 20-percent coinsurance. By and large, however, these reimbursements reduce out-of-pocket costs only slightly.

The exception is the coverage provided by AARP M2 for the first version of stroke. Even though this is the lowest cost policy in our group ($119), it has excellent coverage for medically necessary SNF care. It pays the Medicare coinsurance for the 21st to the 100th day and pays $123 per day for an additional 265 days of SNF care. As a consequence, the out-of-pocket costs for this version of stroke go down to $315 for holders of this policy. However, these benefits disappear when we remove the assumption that the care would be deemed medically necessary, so the out-of-pocket costs go back up, in the second version of stroke, to $15,735.

Reductions in out-of-pocket costs experienced under these policies are shown in Table 6. Holders of the AARP M2 policy will experience reductions ranging from 0 percent to 97.8 percent in the case of stroke with medically necessary SNF care. With the exception of that illness, however, AARP M2 policyholders do not experience reductions greater than 36.8 percent. Reductions are even lower for beneficiaries who purchase the Bronze Plan from Blue Cross: from 0 percent to 30.1 percent for cataract.

Blue Cross of California also markets a medium-priced policy, the Companion Care Silver Plan, with an annual premium in 1986 of $480. This policy covers the most obvious gaps in Medicare: Part A deductible and hospital coinsurance and Part B deductible and 20-percent coinsurance. It also covers up to a year of additional hospital care but provides no reimbursement for SNF care. A holder of this policy would receive some reimbursement for all but one of our conditions: hearing loss. As shown in Table 5, out-of-pocket costs would range from $334 for a pneumonia episode to $15,241 for stroke. Reductions in out-of-pocket costs range from 0 percent to 67.2 percent for enlarged prostate for policyholders whose providers did not accept assignment.

A high-cost policy, Blue Shield Coronet Senior, with an annual premium of $955, provides partial coverage for outpatient prescription medication. Its provisions result in some reimbursement for all illnesses in our sample; reimbursement levels are higher than those under low-cost policies, with the exception of M2 coverage for the first version of stroke. Although the Blue Shield Senior plan covers copayments for days 21 through 100 in a SNF, it provides no additional SNF coverage. However, holders of this expensive policy are still subject to out-of-pocket costs ranging from $349 to $15,223 for excess charges, uncovered services, and for the patient's share of outpatient prescription medication costs. The deductible for this policy is quite unusual and complex. A $100 deductible applies on this policy to the Part A Medicare deductible, the outpatient prescription drug benefit, and a limited private duty nursing benefit; it is applied to the first applicable bills that are proceeded. Percent reductions for holders of this policy range from 3.9 percent for hearing loss to 65.6 percent for enlarged prostate.

Mutual of Omaha's Mutual Care Plus, which has an annual premium of $875, was included in our sample because, like the AARP M2 policy, it provides extra coverage for Medicare approved nursing home stays. It covers coinsurance for 21 to 100, as well as $92.25 per day for an unlimited number of additional SNF days. An unusual characteristic of this policy is its handling of Part B coinsurance. Instead of paying 20 percent of the Medicare approved charge, Mutual of Omaha pays 30 percent, thus, in effect, providing funds that can be used to pay for some, if not all, excess charges. Taken together, this benefit structure results in out-of-pocket costs for policyholders ranging from $233 for enlarged prostate to $14,501 for the second version of stroke. Note that, as a consequence of the extended SNF coverage, the out-of-pocket cost for the first version of stroke was $1,475. Percent reductions under this policy of stroke was $1,475. Percent reductions under this policy range from .2 percent for hearing loss to 89.9 percent for the first version of stroke.

The final policy in our sample is the Aetna Expanded Medicare Supplement Plan, which has an annual premium of $828. It was included because it provides full reimbursement for reasonable charges under Part B. That is, it covers the full extent of excess charges. Although it provides no coverage for outpatient prescription medications, it does cover extended medically necessary nursing home stays, covering copayments for days 21 through 100 and providing $16.50 per day for up to 265 additional medically necessary SNF days. As a result of these extra benefits, holders of this policy face out-of-pocket costs ranging from $80 for enlarged prostate to $14,681 for the second version of stroke. Note that Aetna patients face the lowest out-of-pocket costs for 12 of the 13 illnesses analyzed. The only exception is the first version of stroke, where the AARP policy is the best protection. Thus, the percent reductions in costs paid by holders of an Aetna policy range from 7.1 percent for hearing loss to 95.1 percent for enlarged prostate. Aetna cuts patient costs at least in half for 11 of the illnesses discussed.

Providers accepting assignment

Tables 7 and 8 contain the same information on our six policies as Tables 5 and 6, with respect to patients whose providers accept assignment. These patients are not subject to the excess charges that are displayed in Table 7. Such charges vary widely from illness to illness,

Table 7

Out-of-pocket costs for selected simulated illnesses under different medigap policies for patients whose providers accept assignment: Los Angeles County, 1986

Illness	Excess charges	Amount paid by patient with					
		AARP M2	Blue Cross Bronze	Blue Cross Silver	Blue Shield Senior	Mutual of Omaha	Aetna Expanded
Annual premium cost	—	$119	$288	$480	$955	$875	$828
Stroke—Version 1	542	(227)	13,426	12,809	7,871	933	3,584
Stroke—Version 2	542	15,193	15,316	14,699	14,681	13,959	14,699
Lung cancer	1,846	857	980	363	244	(274)	244
Hip replacement	1,097	2,515	3,253	2,636	2,044	1,305	2,021
Breast cancer	1,727	1,845	1,968	1,352	738	806	851
Diabetes, with gangrene	714	1,559	1,682	1,065	851	888	851
Enlarged prostate	454	573	696	80	102	(220)	80
Heart attack	380	794	917	301	213	92	213
Pneumonia	253	503	626	82	103	56	82
Cataract	833	320	320	175	120	($116)	195
Depression	207	2,755	2,755	2,665	2,585	2,709	2,665
Arthritis	285	725	725	688	375	670	425
Hearing aid	107	862	862	862	825	862	900
High blood pressure	213	266	266	247	136	237	186

NOTES: AARP is American Association of Retired Persons. Amounts in parentheses represent excess reimbursements.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

Table 8

Percent reductions in out-of-pocket costs, excluding premiums under selected medigap policies for patients whose providers accept assignment: Los Angeles County, 1986

Illness	Reductions for policy holders of					
	AARP M2	Blue Cross Bronze	Blue Cross Silver	Blue Shield Senior	Mutual of Omaha	Aetna Expanded
Stroke—Version 1	101.6	4.6	9.0	44.1	93.4	74.5
Stroke—Version 2	7.6	6.9	10.6	10.7	15.1	10.6
Lung cancer	59.7	54.0	82.9	88.5	112.9	88.5
Hip replacement	42.0	25.0	39.2	52.8	69.9	53.4
Breast cancer	37.1	32.9	53.9	74.8	72.5	71.0
Diabetes, with gangrene	18.4	11.9	44.2	55.4	53.5	55.4
Enlarged prostate	51.2	40.7	93.2	91.3	118.8	93.2
Heart attack	19.4	6.9	69.4	78.4	90.7	78.4
Pneumonia	19.6	0.0	86.9	83.5	91.1	86.9
Cataract	60.8	60.8	78.6	85.3	114.2	76.1
Depression	0.0	0.0	3.3	6.2	1.7	3.3
Arthritis	0.0	0.0	5.1	48.3	7.6	41.4
Hearing aid	0.0	0.0	0.0	4.3	0.0	−4.4
High blood pressure	0.0	0.0	7.1	48.9	10.9	30.1

NOTE: AARP is American Association of Retired Persons.

SOURCE: Sofaer, S., School of Public Health, University of California at Los Angeles.

from a low of $107 for hearing loss to a high of $1,846 for lung cancer. Sometimes, some of a beneficiary's providers will accept assignment and others will not; in those circumstances, out-of-pocket costs will fall somewhere along the continuum of costs reflected in the two sets of tables.

In the case of five of the six policies, the impact of assignment is simple and direct: Out-of-pocket costs are reduced by the amount of the excess charges In the case of the Aetna Expanded Plan, which already covers excess charges, it makes no difference whether the providers accept assignment: The out-of-pocket costs are the same in both cases. Thus, Aetna policyholders have no financial incentive to seek providers who accept assignment.

However, because the Mutual of Omaha policy pays 30 percent rather than 20 percent of approved charges, patients who hold this policy whose providers accept assignment will get an additional 10 percent of Medicare approved charges, which they can apply to whatever other costs they face. In a few cases (lung cancer, enlarged prostate, and cataract), Mutual policyholders with providers who accept assignment would actually receive more money for care than they needed to spend.

Discussion

Limitations of medigap coverage

These findings demonstrate that, in 1986, unless the elderly could spend close to $1,000 per year in premiums for medigap policies, they were unlikely to get coverage that significantly reduces their costs for most illnesses. None of the policies we examined (in fact, none that were on the market in California in 1986) covered

preventive services, hearing aids, eyeglasses, or other health services that Medicare does not cover and that many elderly people require. Nor did they add to the limited Medicare coverage for outpatient psychotherapy services. Most policies, except for the most expensive, link their provisions to the benefit structure of Medicare; the limits in that benefit structure are thus reflected in the limited impact of most moderately priced medigap policies on out-of-pocket costs. We should note that the benefits offered, sometimes for no premium, by Medicare HMOs often include many of the services not presently covered by traditional Medicare. We have analyzed the impact of these benefit structures on out-of-pocket costs elsewhere (Sofaer and Kenney, 1989).

All policies, as required by provisions of the Baucus Legislation, offered coverage of the coinsurance charged by Medicare for hospital stays of more than 60 days. This particular benefit has been heavily emphasized in medigap advertising, although it is rarely relevant to the elderly, because few of them experience long-term hospital stays.

Low-cost policies with $200 insurance deductibles have only a limited impact on out-of-pocket costs. They begin reimbursement only when a senior has had more than $700 in Medicare approvable physician services or other Part B charges, and then they cover only the 20-percent coinsurance. The two policies we examined provided either partial or no coverage of the first-day hospital deductible. They appear to be designed to provide partial coverage, at a relatively low cost, for illnesses that utilize physicians' services extensively. As noted earlier, the medium-priced Blue Cross Silver Plan is completely tied to the Medicare benefit structure. By eliminating deductibles, however, it does provide the "first-dollar" coverage desired by some beneficiaries and modest reductions in out-of-pocket costs.

The expensive Blue Shield Senior Plan adds one important extra benefit: partial coverage for outpatient prescription medication. Mutual of Omaha offers some protection against excess charges but no coverage of prescriptions. Aetna offers complete protection from excess charges but no outpatient prescription medication coverage.

Four of the six policies we examined provided some coverage for medically necessary stays in skilled nursing facilities. Blue Shield paid coinsurance for days 21 through 100; AARP, Mutual of Omaha, and Aetna also provided coverage for additional medically necessary SNF days. Note, however, that none of these policies provided any coverage for custodial care, which is reflected in the limited impact they have on the second version of stroke.

We also found that one can spend more money to purchase the same or even lower levels of coverage. For example, the AARP M2 policy has a premium that is less than that of the Blue Cross Bronze Plan, in spite of its uniquely comprehensive coverage of medically necessary SNF stays. It is also interesting to compare the two Blue Cross plans. For an additional premium of $200 per year, the senior who chooses the Silver over the Bronze plan gets an average reduction in out-of-pocket costs ranging from $0 to $617.

Need for consumer education

The need for additional consumer education about what is and is not covered under Medicare and under various medigap policies is clear and growing. The terms of the policies we examined are sometimes very difficult to understand and interpret. The $200 insurance deductible, for example, is often incorrectly understood as meaning that reimbursement will begin after $200 in Medicare approved Part B charges. The deductibles in Blue Shield plans are quite complex and unusual. The Mutual of Omaha plan has several features that can be confusing to consumers: its age-related premium, its 30-percent Part B reimbursement, and its coverage of the Part B deductible only when services are associated with an inpatient stay.

The illness-episode approach shows promise as a vehicle for communicating, directly, the financial consequences of different insurance decisions. It has been tested in Los Angeles County by the Health Insurance Decision Project. Over 600 seniors attended a 3-hour educational workshop. Using a quasi-experimental design, one-half were randomly assigned to workshops using traditional information on available insurance options and one-half to workshops using the information generated by the illness-episode approach. Surveys are being used to determine whether this new approach can help inform seniors and assist them in making more prudent decisions about their health care coverage. Results of this experiment are currently being analyzed and will be reported in future articles.

The illness-episode approach is generic and can be applied to changing conditions, and it can reflect the charges and available options in different local communities. The approach is now being extended to examine long-term care insurance policies available in California using a set of illnesses and conditions that require different levels and kinds of long-term care. The information generated through the approach can be used in several ways by both public and private agencies. It can be incorporated into presentations to groups including not only Medicare beneficiaries themselves but those who help them select their health insurance, such as family members and friends. It can be used to train volunteers, staff of senior organizations, health care professionals, financial and retirement planners, employee benefits personnel, and others who, in turn, can educate and counsel individual beneficiaries and their caregivers.

With further development, the information about specific illnesses and policies could be generated and displayed using personal computers and customized software. It could then be available either at local program sites, such as senior centers or public libraries, or from staff at central telephone hotlines. The approach might also be extended to include simulations of the expected value of a policy for a typical older person, incorporating probabilities of incidence for specific illnesses and relating this to reimbursements provided for those illnesses.

If Medicare beneficiaries are to participate effectively in a competitive marketplace, more innovation and additional public and private commitment to increasing beneficiary awareness will be required in the years to come.

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