COPAYMENTS AND CONSUMER SEARCH: INCREASING COMPETITION IN MEDICARE AND OTHER INSURED MEDICAL MARKETS

by James R. Cantwell

Between 1950 and 1980, the physician fee component of the Consumer Price Index (CPI) rose 488 percent. In contrast, an index of physician fees adjusted for 1) overall inflation, and 2) the declining proportion which is paid out-of-pocket by the patient, declined over the same 30-year period. This last observation, pointing to the erosion of the market, is important for structuring price competition for physician services.

For insured patients, out-of-pocket payments arise from deductibles, coinsurance and limits, each of which is briefly discussed in this article. Following a review of Medicare Part B physician reimbursement, the paper shows that limits can be used to strengthen the incentive which insured patients have to search for less expensive medical care.

Introduction

Physician fee information is becoming available to consumers through the publication of physician directories and through physician advertisements. Recent elimination of legal barriers to price competition, including fee advertisements by physicians, can be expected to promote increased dissemination of fee information.[1] Moreover, if a surplus

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[1] In December 1975 the Federal Trade Commission (FTC) filed a complaint against the American Medical Association (AMA), the Connecticut State Medical Society and the New Haven County Medical Association. Paragraph six of the complaint charged that these organizations had agreed "to prevent or hinder their members from (a) soliciting business, by advertising or otherwise; (b) engaging in price competition; and (c) otherwise engaging in competitive practices." In October 1979, the commissioners of the FTC issued a final order supporting an earlier finding of an FTC administrative law judge that the AMA and the two medical societies had indeed "conspired, combined and agreed" to limit competition among physicians. The ruling was affirmed by the 2nd Circuit Court of Appeals in October 1980. The U.S. Supreme Court has granted a writ of certiorari, with oral arguments tentatively scheduled for December 1981 *(American Medical Association et al., Versus Federal Trade Commission, Case No. 80-1690).* One unresolved issue raised by this decision is the effect of increased price information (advertising) on medical services. See Rosoff (1979) for additional discussion of recent applications of antitrust laws to the medical profession.

of physicians is experienced in the latter part of this decade, as forecast (GMENAC, 1980), physicians may be more inclined to compete through fee advertising. But, effective price competition in this area, as in all other sectors of the economy, requires that the consumer (patient) have an incentive to respond to lower prices. This paper examines the incentives which *insured* patients have to respond to physician fee information.

Using the Medicare physician reimbursement system as an example, the paper suggests changes in copayments which would strengthen beneficiaries' incentives to search for lower fees. The recommended changes could potentially reduce both governmental and beneficiary costs of Medicare.

Numerous articles and books (Stigler, 1961; Maurizi and Kelly, 1978) have analyzed consumer search and the impact of advertising in selected markets, including some which have focused on drugs (Cady, 1976) and eyeglasses (Benham, 1972; Benham and Benham, 1975). With the exception of Satterthwaite, 1979, which explores the effect of an increase in the number of sellers on consumer information and the individual

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seller's elasticity of demand, none has analyzed consumer search and the effects of advertising in insured medical markets. Insurance dilutes patient concern about the price of medical service because it weakens the link between the fee charged by the physician and the patient's out-of-pocket costs. The existence of insurance and the lack of physician fee information, resulting from a prohibition on advertising, have combined to blunt the impact of physician fees on a patient's selection of a physician and the use of physician services.

Removing the ban on physician advertising will promote the dissemination of physician fee information. This dissemination is necessary for patients to respond to the financial incentives created through adjustments to the copayment structure. This paper demonstrates that the value of physician fee information to the patient (and therefore the incentive to search for this information) varies according to the type of copayment (coinsurance, deductibles, limits). The paper concludes that by rearranging the copayment structure to incorporate more stringent limits insurers could increase incentives for patients to search for lower fees. These changes in copayment will both help promote price competition among physicians and lower total outlays for physician services.

Sources of funds, prices and expenditures for physician services from 1950 to 1980 are discussed in the next section. Expenditures for physician services have risen rapidly while inflation-adjusted, out-of-pocket prices (one overall measure of a patient's incentive to search) have declined. The effects of coinsurance, deductibles and limits on consumer search are reviewed in the section, "Effect of Copayments on Benefits from Consumer Search," followed by a discussion of Medicare reimbursement in the section, "Consumer Search Under the Medicare Program." The section, "Benefits to Search in a Hypothetical Example," analyzes the effects of varying coinsurance rates and limits on consumer search.

Balancing Benefits and Costs

One recent important advance in consumer demand theory is the development of economic models which explicitly incorporate the idea that, "because different retailers offer identical goods at different prices, consumers can search rewardingly for price information" (Maurizi and Kelly, 1978, p. 9). In addition to providing a framework to evaluate advertising, these models establish equilibrium conditions for the consumer confronting alternatives: consumption, work, leisure and search. (Subject to the constraint imposed by fixed wealth at any point in time, the consumer will maximize his well-being by engaging in various alternatives until marginal returns are equalized.) But, none of these models has been applied to the market for medical services. This section addresses two differentiating characteristics of the market for medical services which are important for consumer search—high variability of price among physicians and insurance coverage.

Unless prices vary in a market there will be no advantage to the consumer to search for lower prices. The expected reduction in the minimum quoted price for physician services will be greater the greater is the dispersion in fees. Several studies (Newhouse and Sloan, 1972; Reinhardt, 1975; Cantwell, 1976 and 1977; Hsiao, 1980; Muller and Otelsberg, 1979; and Health Research Group, 1979) have established that there is a marked dispersion of physician fees. Table 1 displays the coefficients of variation reported in two of these studies. Compared with the variation in coal prices and new car prices, reported in Newhouse and Sloan, physician fees exhibit sizeable dispersion.

Insurance coverage, the second differentiating characteristic of the medical services market, has reduced patient concern about prices charged by physicians. As a result of the rapid growth of public and private insurance coverage of physician services, the percent of physician expenditures funded by direct (or out-of-pocket) payments fell from 83.2 percent in 1950 to 37.3 percent in 1980 (Table 2, row 1).

Statistics on direct payments (Table 2, row 1) and overall inflation (Table 2, row 4) can be used to deflate physician price and expenditure statistics to calculate inflation-adjusted, direct price and expenditure statistics for physician services. The methodology is comparable to that employed by Feldstein (1971) to calculate trends in inflation-adjusted, direct cost of hospital services. While both prices and expenditures rose dramatically between 1950 and 1980, inflation-adjusted, direct expenditures were roughly constant, and inflation-adjusted, direct prices for physician services declined. (See Figure 1.)

Using the physician fee component of the CPI as an index of physician fees, the physician fee index increased from 55.2 to 269.3 between 1950 and 1980 (Table 2, row 5), with the inflation-adjusted price of physician services (that is, the physician fee component of the CPI delfated by the CPI all item) rising from 76.6 to 109.1 over the same period. Direct (out-of-pocket) prices rose from 45.9 to 100.4 from 1950 to 1980, with most of this increase occurring since 1975. Adjusting the fee index for both price increases in all items of the CPI and for the decline in the percent of funds originating from direct payments results in a series of inflation-adjusted, direct prices of physician services (Table 2, row 8). Between 1950 and 1975, the index of inflation-adjusted, direct prices of physician services declined from 63.7 to 38.0. Subsequently, it increased slightly, to 40.7 in 1980. As perceived directly by the typical patient, physician fees in constant dollars have declined since 1950.

TABLE 1
Coefficients of Variation for Physicians' Fees in Selected Places

Specialty	California	Georgia	Chicago	New York City
General Practitioner				
Initial Office Visit	.31	.52	.364	.332
Follow-Up Visit				
	.25	.25	.209	.205
Specialist				
Initial Office Visit	.49	.74	.424[1]	.241[1]
Appendectomy	.19	.25	.148[1]	.115[1]

[1] Chicago and New York specialist data are for General Surgeon.

Source: New York and Chicago—Newhouse and Sloan (1972); California and Georgia—Cantwell (1977). The table is reproduced from Juba (1979).
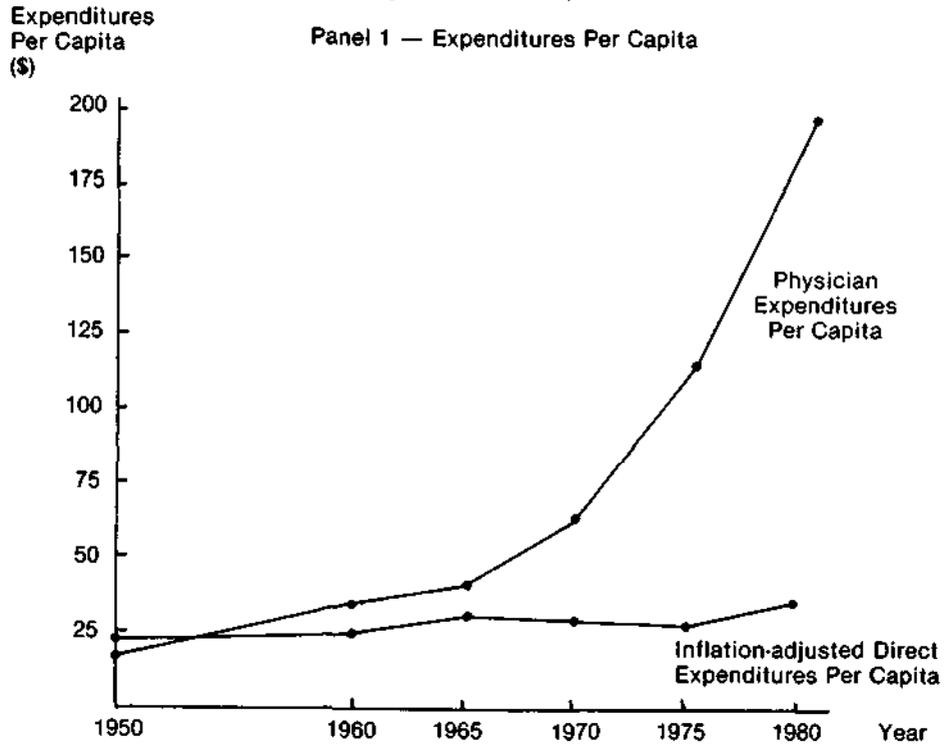
TABLE 2
Source of Funds, Prices and Expenditures for Physician Services, 1950-1980

|	1950	1960	1965	1970	1975	1980[1]
Source of Funds (%)						
1. Direct Consumer Payments	83.2	65.4	61.3	45.1	36.2	37.3
2. Private (Insurance and Other)	11.7	28.2	31.8	34.0	37.7	36.4
3. Public Programs	5.2	6.4	6.9	20.9	26.2	26.4
Price Indices						
4. Consumer Price Index	72.1	88.7	94.5	116.3	161.2	246.8
5. Physician Fee Component of CPI	55.2	77.0	88.3	121.4	169.4	269.3
6. Inflation-adjusted Price (Row 5 ÷ Row 4 X 100)	76.6	86.8	93.4	104.4	105.0	109.1
7. Direct Price (Row 5 X Row 1)	45.9	50.4	54.1	54.8	61.3	100.4
8. Inflation-adjusted Direct Price (Row 7 ÷ Row 4 X 100)	63.7	56.8	57.2	47.1	38.0	40.7
Expenditures ($)						
9. Aggregate (Billions)	2.7	5.7	8.5	14.3	24.9	46.6
10. Per Capita	17.76	30.92	42.82	68.74	113.38	201.18
11. Inflation-adjusted Expenditures Per Capita (Row 10 ÷ Row 4 X 100)	24.63	34.86	45.33	59.11	70.33	81.52
12. Direct Expenditures Per Capita (Row 10 X Row 1)	14.78	20.22	26.26	31.00	41.04	75.04
13. Inflation-adjusted Direct Expenditures Per Capita (Row 12 ÷ Row 4 X 100)	20.50	22.79	27.79	26.66	25.46	30.41

[1] 1980 price indices are for all urban consumers; earlier price indices are for urban wage earners and clerical workers.

Source: Gibson and Waldo (1981), Table 5 for rows 1-3, 9 and 10; Bureau of Labor Statistics communication for rows 4 and 5; calculation by the author for remainder.

FIGURE 1
**Expenditures Per Capita and Prices
for Physician Services, 1950-1980**

Expenditures
Per Capita
($)

Panel 1 — Expenditures Per Capita

Panel 2 — Price Indices
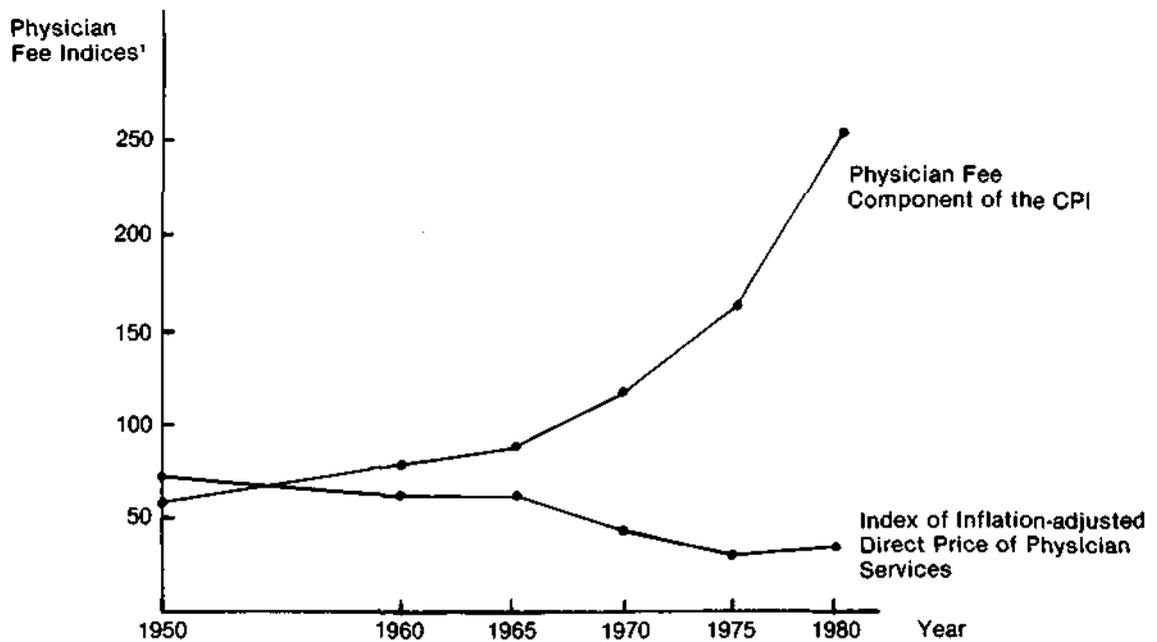
' 1967 CPI = 100
Source: Table 2

Similar adjustments can be made to the expenditure series.[2] While expenditures for physician services rose rapidly between 1950 and 1980, inflation-adjusted, direct expenditures for physician services were roughly constant. Figure 1 illustrates the movement of inflation-adjusted, direct expenditures and prices between 1950 and 1980.

The statistics reviewed in this section reveal a serious problem—rapidly rising expenditures for physician services—and point to one important cause of this problem—declining inflation-adjusted, direct prices of physician services.[3] The latter trend has been brought about by increased insurance coverage. On average the trend suggests that, when selecting a physician, patients would become progressively less concerned with fees charged by physicians. For those covered by insurance, the incentive to search for low priced physicians would arise primarily through copayments (coinsurance, deductibles and limits) rather than transaction price differences themselves. The next section addresses the impact of copayments on benefits from consumer search.

Effect of Copayments on Benefits from Consumer Search

Stigler (1961) has shown that in an uninsured market a "buyer's expected savings from an additional unit of search E(S) will be approximately the quantity (q) he

wishes to purchase times the expected reduction in price" (with P_{min} representing the minimum price quoted and n the number of searches):

$$(1) \qquad E(S) = q \left| \frac{\partial P_{min}}{\partial n} \right|$$

In an insured medical market the buyer's benefits from an additional unit of search would be the reduction in copayments rather than the reduction in the transaction price. If copayments arose solely from coinsurance at a rate of c percent, a buyer's expected savings from an additional unit of search would be the coinsurance rate times the quantity purchased times the expected reduction in price:

$$(2) \qquad E(S) = c\, q \left| \frac{\partial P_{min}}{\partial n} \right|$$

Benefits to search are reduced by a factor c. The larger the coinsurance rate, the greater will be the benefits to search.

Under a typical medical insurance plan, there are two other sources of copayments for physician services—deductibles and limits. If the deductible has not been satisfied, equation (1) will apply.

Limits are of two types. Under some plans when total copayments have exceeded a stated amount the insured will then pay no additional copayments. Equation (2) would then apply with a zero coinsurance rate, c. There would be no financial benefits to search. The other type of limit applies to the provider's fee, not to total outlays. Limits will be discussed in more detail in the next section using Medicare reimbursement as an example.

Consumer Search Under the Medicare Program

Under usual, customary and reasonable (UCR) reimbursement, which is employed by the Blue Shield plans, and under Medicare's reasonable charge policy, a coinsurance rate of 100 percent applies to the difference between a relatively high priced physician's charge and some maximum pre-established price limit. Blue Shield plans employ a limit, called the customary charge, usually determined by the 90th percentile of the fee distribution. The Part B Medicare program uses a 75th percentile (of the preceding calendar year fees) which is subject to further constraint by an economic index used as a limit, called a prevailing charge limit.[4]

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[2] Between 1950 and 1980, total expenditures for physician services rose from $2.7 billion to $46.6 billion (Table 2, row 9); *per capita* expenditures rose from $17.76 to $201.18 over the same period (Table 2, row 10). These data, however, are not adjusted for the effects of inflation and therefore overstate the real changes in expenditures. When *per capita* expenditures are adjusted for overall inflation (Table 2, row 4, which uses 1967 as a base), a less rapid increase in inflation-adjusted, *per capita* expenditures is observed—from $24.63 in 1950 to $81.52 in 1980 (Table 2, row 11). Weighting *per capita* expenditures by the percent of funds originating from direct payment (Table 2, row 1) yields direct expenditures *per capita* (Table 2, row 12), which rose from $14.78 in 1950 to $75.04 in 1980. Adjusting *per capita* expenditures for increases in the consumer price index and for the reduction in the percent of funds originating from direct payments gives inflation-adjusted, direct expenditures *per capita* (Table 2, row 13). Between 1950 and 1975 inflation-adjusted, direct expenditures *per capita* rose only slightly, from $20.50 to $25.46; but, between 1975 and 1980 these expenditures increased to $30.41.

[3] Feldstein (1970) estimated an annual (1948-1966) equilibrium model of the market for physicians' services and found that the insurance variable (defined as "an increasing function of the extent to which health insurance reduces the net cost of physicians' services to the patient") had a large and significant negative coefficient. He concluded that it was not possible to estimate directly the parameters of the demand function because at observed prices there is excess demand. In contrast, using annual observations from 1949-1975 and estimating separate demand equations for the insured and the uninsured, Hixson (1979) found that demand for physician services was highly responsive to price. He did not, however, estimate the impact of a rising proportion of people in the insured category.

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[4] See Health Care Financing Administration (1977) for additional information on Medicare Part B reimbursement policies. A glossary of Medicare Part B terms from this publication appears at the end of this paper.

The relationship between the direct price (Pd) and the physician's fees (P) is given by equations (3) and (3') if the physician accepts assignment[5] for the claim:

$$(3) \quad Pd = cP \quad \text{if } P < \min (Pc, Pr)$$
$$(3') \quad Pd = c \min (Pc, Pr) \quad \text{if } P \geq \min (Pc, Pr)$$

where c is the coinsurance rate, Pc is the physician's customary charge and Pr is the prevailing charge.

If the physician does not accept assignment of the claim, then:

$$(4) \quad Pd = cP \quad \text{if } P < \min (Pc, Pr)$$
$$(4') \quad Pd = P - (1 - c) \min (Pc, Pr) \quad \text{if } P \geq \min (Pc, Pr)$$

Figure 2 illustrates these relationships. The first panel would apply if the patient selected a physician whose customary charge was greater than or equal to the prevailing charge. In all three panels of Figure 2 the direct price line will begin as a straight line starting at the origin with a positive slope of c. Initially, the patient's direct price is c percent of the physician's fee. But, once the physician's fee rises above either the prevailing charge (P_r) or the customary charge (P_c) then the direct price line will branch into two segments. A horizontal segment will indicate that, if the physician accepts assignment, the patient's direct payments will be constant at c times the lower of the prevailing charge or the customary charge. The other segment will have a slope of one, indicating that without assignment the patient is responsible for not only coinsurance up to the lower of the customary or prevailing charge limits but for the entire amount by which the physician's actual charge exceeds the lower of his customary charge or the prevailing charge.

In the first panel, if physician A charged price P^1, then the patient would pay P^1d. If the physician charged Price P^2, then the patient would pay P^2d' if the physician accepted assignment of the claim, and P^2d if the physician did not accept assignment. Without assignment, a 100 percent coinsurance rate applies to the difference between P^2 and Pr.

In the second panel a different physician has been selected—one whose customary charge is less than the prevailing charge. If this physician D were to charge price P^1 (equal to P^1 in Panel 1), the patient would face a

higher direct price than applied with physician A. Now, a 100 percent coinsurance rate applies to the difference between the price charged (P^1 or P^2) and the customary charge for the procedure.

Ignoring specialty differentials, which are employed by all but a few Medicare carriers, each physician in a locality will have an individual and perhaps unique customary charge screen for each procedure, but will confront a common prevailing charge limit. For illustrative purposes, assume there are four different physicians (A, B, C and D), each with different customary charge profiles. Further, assume physician A has the highest customary charge and physician D the lowest.

As Panel 3 indicates, a patient would confront four direct price lines, each positioned by the individual physician's customary charge (assuming the prevailing charge in the locality is higher than each physician's customary charge). A perverse price effect will occur if each physician were to charge the same price and decline assignment. In Panel 3 the patient will confront widely different direct prices (P^3d, ^{A}; P^3d, ^{B}; P^3d, ^{C} and P^3d, ^{D}) from the four physicians, each of whom charge the same fee (P^3). Without assignment, the lower the physician's customary charge, the higher will be the direct price to the patient for a given fee (P^3 in the example), if the fees exceed the customary charges.

Assume that deductibles have been met, that the prevailing charge limit is Pr, and that the physician's fee is less than or equal to his customary charge. Under these conditions a buyer's expected savings from an additional unit of search would depend on: 1) whether the initial price was above or below Pr; and 2) whether the search process resulted in a price below Pr. If the minimum price P remains above the prevailing charge limit Pr, the benefits to search will be given by equation (1). In this situation, the savings from an additional unit of search would equal the quantity of services purchased times the expected reduction in the minimum price. Once the minimum price falls below the prevailing charge then equation (2) will apply, if the deductible has been met. Savings are then shared jointly by the beneficiary and the Medicare program.

Benefits to Search in a Hypothetical Example

The principle that as buyers lengthen the search process the expected minimum price will decline was established by Stigler (1961). Table 3 is similar to the one he used for illustrating the principle. As Table 3 shows, assume there are numerous physicians divided into four groups of equal size, each charging $100, $200, $300 or $400 depending upon the group to which they are assigned. Here, as in Stigler's example, the expected minimum price (listed in the last column of Table 3) will decline at a diminishing rate as the number of prices canvassed is increased. But, unlike Stigler's

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[5] Assignment is a method of Medicare payment in which the physician or other supplier of Part B services applies directly to the carrier for reimbursement (with the beneficiary's approval). It constitutes an agreement by the physician that his total charge will not exceed the carrier's determination of the reasonable charge. On assigned claims the beneficiary is responsible only for any of the Part B annual deductible not yet met, plus 20 percent of the balance of the reasonable charge. The beneficiary cannot be billed for the difference between the submitted charge and the reasonable charge.

FIGURE 2
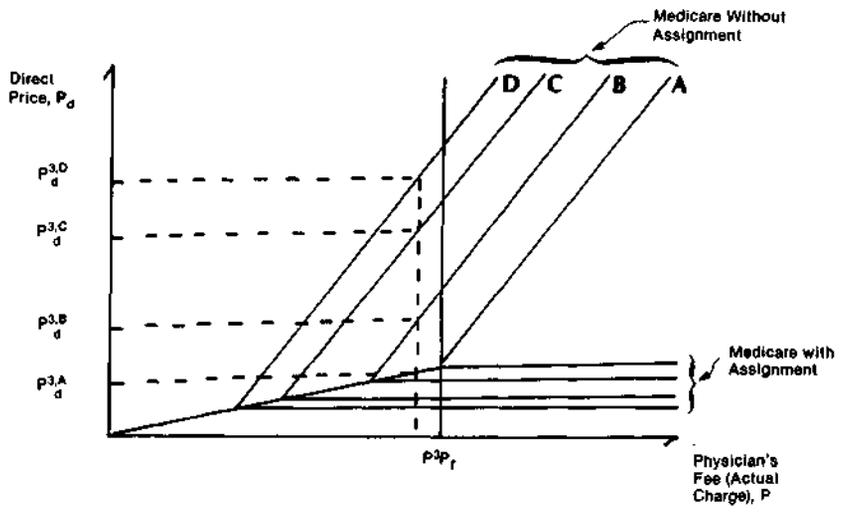**Relationship Between Physician's Fee and Direct Price to the Medicare Patient**

Panel 1 — Physician A Whose Customary Charge (Pc) Is Greater Than or Equal to the Prevailing Charge (Pr)
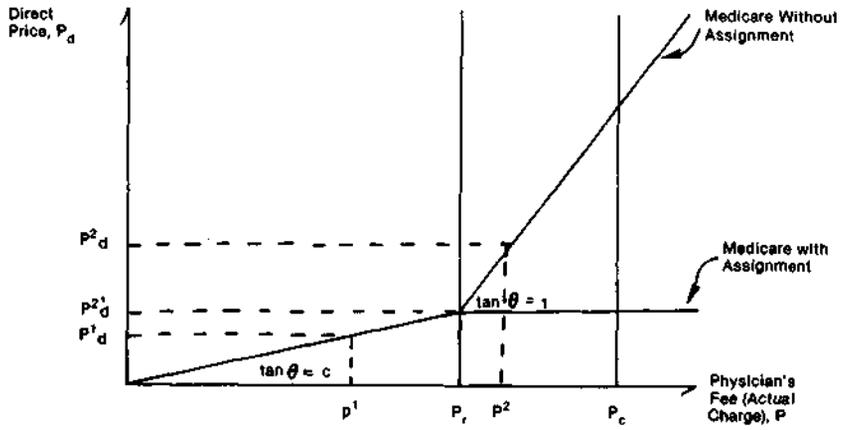
Panel 2 — Physician D Whose Customary Charge (Pc) Is Less Than the Prevailing Charge (Pr)
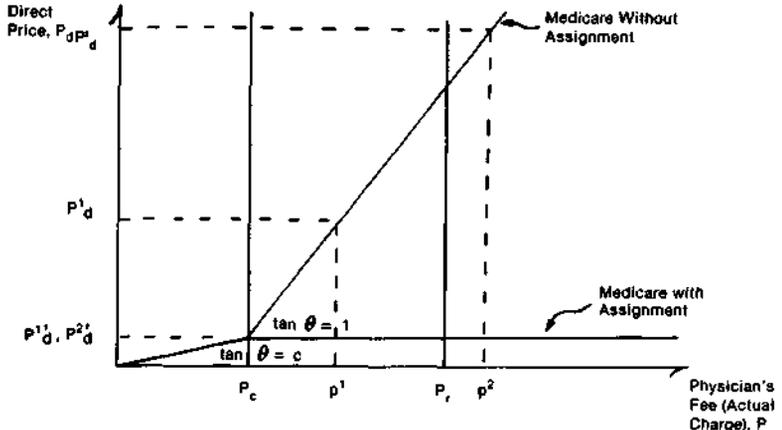
Panel 3 — Family of Direct Price Lines (Four Physicians Illustrated)

example, in the presence of insurance the consumer's benefits to search is not necessarily the reduction in the expected minimum price. Rather, the reduction in expected minimum price which results from search will generate savings to both the beneficiary and his insurance company, with the reduction in expected minimum price equal to the sum of beneficiary and insurer savings. The problem that arises is that the beneficiary will search only until marginal search costs are equal to expected marginal beneficiary savings. Expected insurer savings will not affect the beneficiary's decision. The challenge is to structure beneficiary copayments (deductibles, coinsurance and limits) so that, for a given level of copayments, the beneficiary's incentive to search for low fees will be maximized.

In the remainder of this section the effect of varying coinsurance and prevailing charge limits will be explored in the context of three hypothetical examples. Each is related to present Medicare Part B reimbursement policies, and each assumes that the beneficiary has no supplementary (Medigap or Medicaid) insurance.[6] Program A has a 20 percent coinsurance and prevailing charges set at the 75th percentile. Program B reduces the prevailing charge limit to the 50th percentile while holding coinsurance at 20 percent. Program C eliminates coinsurance.

Hypothetical minimum prices from Table 3 are listed in Table 4 column 2 under the heading "Expected Minimum Price." For each of the three insurance programs these expected minimum prices are used to calculate "Expected Direct Expenditures" (column 3) and "Expected Program Costs" (Column 5). Differences between successive rows of column 3 will yield "Beneficiary Expected Savings" (column 4). Similarly, differences between successive rows of column 5 will yield "Program Expected Savings" (column 6).

The examples illustrate two principles. First, the benefits to the Federal government from patient search for lower fees are much greater than the benefits to the patient. Second, for a copayment of any fixed amount, the patient's incentive to search for low fees is stronger if the fixed copayment arises from limits than if it arises from coinsurance.

Reducing the prevailing charge limit can have a sizeable impact on the beneficiary's expected savings. In the example given in Table 4, the beneficiary's expected direct expenditures under Program A with no search is $70.00; the expected program costs are $180.00. If the patient canvassed a second physician, the expected price would decline from $250.00 to $187.50 (a reduction of $62.50 which would be divided between beneficiary and program savings). Expected

[6] Medigap insurance policies or Medicaid coverage of the poverty-level, over 65 population would substantially reduce price consciousness for Medicare beneficiaries with these types of supplementary insurance.

direct expenditures would decline from $70.00 to $42.50, for an expected beneficiary savings of $27.50. Expected program costs would decline from $180.00 to $145.00 (a program saving of $35.00). Assuming that marginal search costs are $30.00, the patient would canvass only one physician if Program A were in effect. Then, even though marginal search costs ($30.00) are less than the sum of beneficiary savings ($27.50) and program savings ($35.00), a second physician would not be canvassed. Contrast this with the outcome if Program B were in effect.

Program B is identical to Program A except that the prevailing charge limit has been reduced from the 75th to the 50th percentile. Under Program B, if the beneficiary obtains a second price quote (and the expected savings of $47.50 would encourage him to do so), his expected direct expenditures would decline from $110.00 to $62.50. The expected program costs would decline from $140.00 to $125.00. Compare the outcome under Program A with one physician canvassed with the outcome under Program B with two physicians canvassed. The expected price has declined from $250.00 to $187.50, for a combined expected savings of $62.50. The patient's expected outlay has declined from $70.00 (Program A) to $62.50 (Program B) and additional search costs of $30.00 have been borne by the patient. Program costs have declined from $180.00 (Program A) to $125.00 (Program B). Varying the prevailing charge limit is a strong policy tool in this example. By reducing the coinsurance rate, more of the expected savings can be shifted to the beneficiary, as the next example will show.

Under Program C, which reduces the prevailing charge and eliminates coinsurance, with one additional search both beneficiary expected direct expenditures and expected program costs decline. Expected direct expenditures would be $31.25 and expected program costs would be $156.25 if two physicians were canvassed rather than only one. The $38.75 ($70.00-$31.25) beneficiary savings under Program C, compared with beneficiary savings of $27.50 under Program A, would more than compensate the beneficiary for incurring search costs of $30.00. Both the government and the beneficiary would be net gainers.

The results illustrated by the hypothetical examples are general and not limited to the specific coinsurance rates or percentile for prevailing charge limits. A 100 percent copayment rate applies to that part of a physician's fee which is in excess of established prevailing charges. As long as coinsurance rates are less than 100 percent, limits will provide a stronger incentive to search than coinsurance mechanisms.

In summary, these hypothetical examples have illustrated the relative effectiveness of stimulating search through prevailing charge limits. Once a patient has met deductible requirements, for a copayment of any fixed amount, incentives to search for lower fees are stronger if copayments arise from fee limits rather

TABLE 3
Distribution of Hypothetical Minimum Prices

No. of Physicians Canvassed	Probability[1] of Minimum Price of				Expected Minimum Price
	$100	$200	$300	$400	
1	1/4	1/4	1/4	1/4	$250.00
2	7/16	5/16	3/16	1/16	184.50
3	37/64	19/64	7/64	1/64	156.25
4	175/256	65/256	15/256	1/256	138.28
∞	1	0	0	0	100.00

[1] Based on a multinomial distribution. A similar table based on a binomial distribution appears in Stigler (1961).

TABLE 4
Patient and Government Savings to Search Under Three Programs (No Deductible)
A. Prevailing Charge at 75th Percentile ($300), 20% Coinsurance.
B. Prevailing Charge at 50th Percentile ($200), 20% Coinsurance.
C. Prevailing Charge at 50th Percentile ($200), No Coinsurance.

	Number of Physicians Canvassed 1	Expected[1] Minimum Price 2	Expected[2] Direct Expenditures 3	Beneficiary Expected Savings 4	Expected Program Cost 5	Program Expected Savings 6
	1	$250.00	$ 70.00		$180.00	
	2	187.50	42.50	$27.50	145.00	$ 35.00
Program	3	156.25	32.50	10.00	123.75	21.25
A	4	138.28	27.97	4.53	110.31	13.44
	∞	100.00	20.00	7.97	80.00	30.31
				50.00		100.00
	1	$250.00	$110.00		$140.00	
	2	187.50	62.50	$47.50	125.00	$ 15.00
Program	3	156.25	42.50	20.00	113.75	11.25
B	4	138.28	32.97	9.53	105.31	8.44
	∞	100.00	20.00	12.97	80.00	25.31
				90.00		60.00
	1	$250.00	$ 75.00		$175.00	
	2	187.50	31.25	$43.75	156.25	$ 18.75
Program	3	156.25	14.07	17.18	142.18	14.07
C	4	138.28	6.64	7.43	131.64	10.54
	∞	100.00	-0-	6.64	100.00	31.64
				75.00		75.00

[1] From Table 3.

[2] Expected Direct Expenditures = $cE(P)$ + $cE(P_r)$ + $E(P_r - P)$
$P \leq P_r$ $P > P_r$

than from coinsurance. Incorporating limits in Federal health insurance programs is important not only to reduce beneficiary outlays but to lower program outlays as well.

Since the inception of the Medicare program, prevailing charge limits have been an integral part of Part B reimbursement. Prevailing charge limits are established at the 75th percentile of customary charges. Only recently have *indexed* prevailing charge limits moved to a lower percentile of customary charges through the progressive restraint of the Medicare Economic Index (first applied to fiscal year 1976 prevailing charges). Since 1976, as physician fees have risen more rapidly than the Medicare Economic Index, the indexed prevailing charge limit has fallen below the unindexed limit. For many medical procedures the actual percentile of customary charges at which the limit is effectively established is currently well below the 75th percentile, and falling.

In FY 1980, under the Medicare program, Part B carriers made reasonable charge reductions on 113.7 million claims, with the amount of reduction exceeding $3.06 billion (Health Care Financing Administration, 1981). Beneficiaries have become increasingly liable for the cost of Part B services over and above deductibles and coinsurance. This has encouraged the purchase of Medigap policies and has been a source of beneficiary frustration. Consequently, it is timely to consider the following two changes: First, reduce the prevailing charge limit by explicitly adopting a percentile lower than the 75th percentile of customary charges or by allowing the economic index to continue reducing it to the desired level. In order to maintain (or reduce) current levels of beneficiary copayments, offsetting (or greater) reductions in the 20 percent coinsurance rate should accompany the reduction in prevailing charge limits. Second, establish mechanisms (including information "hot lines" and publication of prevailing charge limits) so patients could calculate in advance of treatment how much a particular service would cost them. Collectively, such changes would strengthen the incentive to search for low fees, and, more importantly,

would provide Medicare Part B beneficiaries with alternatives for reducing the cost of their health care through price competition.

Conclusions

Changes in the legal environment, manifested in the publication of physician fee schedules, may not, by themselves, significantly affect an individual's choice of a physician. Physician directories containing fee information (such as the one for the Washington, D.C. area recently published by the Public Citizen Health Research Groups) and physician advertising of fees will reduce search costs. Even so, price competition may fail to emerge because the individual's benefits to search may remain meager in the presence of insurance. Benefits will depend on fee dispersion and on the form of copayments.

Prices will affect decisions only if they are known before the decision is made and only if the decision-maker has an incentive to respond to the information conveyed by these prices. Advertising physician fees would reduce the costs of obtaining information about prices of alternative sources of care. But, unless there are changes: 1) to allow the patient to translate prices into costs he will bear, and; 2) to strengthen the financial incentive insured patients have to respond to this increased availability of price information, the changed legal environment may have little impact on insured patients.

The program changes recommended in Medicare Part B physician reimbursement are: 1) that the prevailing charge limit be reduced below the 75th percentile of physician customary charges; and 2) that coinsurance rates be reduced below the current 20 percent. Beneficiaries could then reduce their copayments, to a greater degree than under the current program, by selecting lower priced physicians. In addition, mechanisms should be established so patients could calculate in advance of treatment how much a particular service would cost them.

Technical Note
Glossary of Terms[1]

Actual Charges—A charge made by a physician or other supplier of Part B medical services, which is the basic data used in the determination of reasonable charges.

Base Year and Calendar Year—Carriers develop revised customary and prevailing charge screens after the end of the calendar year, based upon all available charge data for services during all of that calendar year (January 1 through December 31). They implement these screens at the beginning of the following fee screen year.

> Example: The base year for rates effective with the beginning of fee screen year 1982 (July 1, 1981) is the calendar year January 1, 1980 through December 31, 1980.

Carrier—A commercial insurance firm or Blue Shield plan administering Part B of Medicare. Carriers are distinguished from commercial insurance plans or Blue Cross plans administering Part A, which are referred to as intermediaries.

Coinsurance—A provision by which the insured person shares part of his own medical expenses. In reasonable charge discussions it refers to the 20 percent of reasonable charges for which the Medicare beneficiary is responsible after the Part B annual deductible has been met.

Customary Charge—The amount computed by the carrier based on actual charge data for a specific service performed by one physician (or supplier) to his patients in general. It is a computation essential to the determination of the reasonable charge in a given claim.

Deductible—The portion of reasonable charges (for covered services each calendar year) for which a beneficiary is responsible before his benefits begin. For Medicare Part B, it currently refers to the first $60 ($75 effective January 1, 1982) of incurred expenses in a calendar year determined to be reasonable charges by the carrier.

Fee Screen Year—Within the meaning of reasonable charge discussions, the fee screen year, beginning in 1976, runs from July 1 of any calendar year through June 30 of the following calendar year.

> Example: Fee screen year 1982 begins July 1, 1981, and runs through June 30, 1982.

Locality—For the purpose of making reasonable charge determinations, a locality is identified as a geographic area for which a carrier derives the prevailing charges for services. Usually, a locality is a political or economic subdivision of a State which should include a cross-section of the population with respect to economic and other characteristics.

Prevailing Charge—Generally, the lowest charge in an array of customary charges which is high enough to include 75 percent of all the customary charges.

Reasonable Charge—An individual charge determination made by a carrier on a covered Part B medical service or supply. In the absence of unusual medical complications or circumstances it is the lowest of: 1) the physician's or other person's customary charge for that service; 2) the prevailing charge for similar services in the locality; and 3) the actual charge of the physician or other person rendering the service.

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