

Chapter 6

Demonstration Program Costs

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Demonstration Program Costs

INTRODUCTION

Oregon's proposed Medicaid demonstration project is not expected to save program costs during the 5 years of its implementation. The waiver application submitted by the State to the Health Care Financing Administration (HCFA) predicts that the cost of conducting the demonstration (over and above the normal costs of the State's Medicaid program) would be about \$25 million during its first year and about \$238 million overall (table 6-1).¹ Therefore, over the 5-year project, Oregon predicts that the State must increase its Medicaid expenditures by \$95 million and the Federal Government must provide \$143 million in matching funds in order to carry out the program (178).

Because State law states that the employer mandate portion of the Oregon Basic Health Services Act will not go forward without the Medicaid demonstration, and because increased employer-based insurance would shift some Medicare as well as Medicaid beneficiaries to private coverage, Oregon counts savings from the employer mandate in its program cost estimates. Over the 5 years of the program, the State projects that the Federal Medicare program would save \$34 million due to the employer mandate. Thus, according to the State,

overall Federal expenditure increases related to the demonstration would be limited to less than \$110 million (see table 6-1) (178).

A critical question for both the State and the Federal Government is whether Oregon has accurately predicted the costs of the demonstration. If the State has overestimated the costs, Medicaid beneficiaries will have been denied services to which they might have had access (because the coverage line might have been set lower on the prioritized list). More importantly, if costs have been underestimated, and the State is unable or unwilling to reallocate State funds to cover the difference, then either: 1) services must be reduced below those the Federal Government is assuming will be available, 2) Federal and State taxpayers must be prepared to pay out additional dollars, or 3) the demonstration must be curtailed. Clearly, the accuracy with which costs have been predicted has implications for Oregonians, for the Federal Government, and for other States interested in similar programs.

This chapter describes the method used by Oregon's contractors to derive the per capita costs that formed the basis for predicting program expenditures associated with the demonstration. (For simplicity's sake, in this chapter assumptions and

Table 6-1-Oregon's Demonstration Cost Estimate (in millions of dollars)

	Year 1 (FY 93)	Year 2 (FY 94)	Year 3 (FY 95)	Year 4 ^a (FY 96)	Year 5 (FY 97)	5-year total
Projected cost of current program	\$925.9	\$1,037.1	\$1,180.6	\$1,351.5	\$1,546.7	\$6,041.8
Total program cost under demonstration ^b	950.8	1,093.0	1,260.6	1,394.0	1,581.7	6,280.1
Incremental Medicaid cost due to demonstration^c	24.9	55.9	80.0	42.5	35.0	238.3
State Medicaid share	10.1	21.9	31.2	17.3	14.5	95.0
Federal costs (Medicaid only) ^d	14.8	34.0	48.8	25.2	20.5	143.3
Change in Medicare due to employer mandate	0.0	0.0	0.0	(16.1)	(17.6)	(33.7)
Total change in Federal costs	14.8	34.0	48.8	9.1	2.9	109.6

KEY: FY = fiscal year

a The employer mandate is to take full effect by the fourth year of the demonstration, resulting in a presumed drop in Medicaid (and Medicare) costs in years 4 and 5 of the demonstration due to beneficiary coverage through employers rather than through public programs.

b Total costs of the Oregon Medicaid program, including services to the population not currently inducted under the demonstration.

c Incremental costs of the demonstration presented here do not include the costs of including mental health/chemical dependency services or the costs of services provided to elderly and disabled Medicaid beneficiaries. These services were not included in the original waiver application. Their costs would be separately calculated at the time they would be included under the demonstration.

d Does not include Federal research costs of evaluating the demonstration.

SOURCE: Based on data from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, The Oregon Medicaid Demonstration Waiver Application, submitted to the Health Care Financing Administration, Aug. 16, 1991.

¹ The total projected costs of the entire State Medicaid program are \$951 million in the first year and nearly \$6.3 billion over the 5 years the waiver would be in effect.

analyses made by contractors on behalf of the State are not distinguished from the State's own analyses and assumptions; both are attributed here to the State, which bears the responsibility for them in the waiver application.²) The chapter then discusses factors that might affect the per capita estimates, and other factors that might affect the broader estimates of program expenditures as set out in the waiver application. Finally, it draws conclusions about the likely accuracy of the estimates and discusses the implications of costs significantly different from those projected.

CALCULATING DEMONSTRATION COSTS

Overall Demonstration Costs

The direct incremental costs of the proposed demonstration project are simply the difference between the projected costs of Oregon's Medicaid program with and without the demonstration. These incremental costs are the direct 'price' faced by the State and the Federal Government when undertaking all of the changes the State proposes under the waiver.³

In addition to this direct cost, the waiver would result in secondary costs and savings to non-Medicaid programs. Most of these costs/savings would occur as a result of the State mandate for minimum employer benefits that will go into effect only if the waiver is approved. These secondary costs and savings will be discussed later in this chapter.

To calculate the net (incremental) direct costs of the demonstration, Oregon first projected the costs of providing services under current rules to the existing Medicaid population that would be covered by the demonstration: i.e., persons eligible through Aid to Families with Dependent Children (AFDC), and pregnant women and young children with incomes up to 133 percent of the Federal poverty level. The projected costs were then subtracted from the costs of serving these and newly eligible persons under the demonstration program.

Table 6-2-Oregon's Basic Assumptions for Projecting Costs of the Medicaid Program Under Current Rules (Demonstration Eligibles Only)

- **Participation:** of those eligible for Medicaid, an estimated 72 percent participate (i.e., enroll in the program). This participation rate will hold steady in the future.
- **Caseload** for the purposes of this calculation, the relevant caseloads are the expected average number of program enrollees per month. The average number of enrollees per month times 12 is assumed to be the average number of eligibles served per year.
- **Inflation:** the expected future rate of inflation in per capita costs is the average rate of inflation experienced by the Medicaid program during the past 6 years. Care-specific inflation rates are applied separately to acute and primary care (currently prioritized), mental health/chemical dependency services (to be added to the demonstration in year 2), and long-term care (outside the waiver).
- **population growth and composition:** the Medicaid caseload will grow by 4.5 percent per year due to population growth and phase-in of older children mandated by Congress (Public Law 101 -508). The overall population will grow at the rate projected by the Census Bureau for Oregon. Children will represent 39 percent of the caseload by year 5.

SOURCE: Based on information from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991.

Conceptually, projecting program expenditures under current rules is relatively straightforward: it requires assumptions regarding inflation, unemployment, Medicaid participation, and other basic economic and program-specific factors and is subject to uncertainty and error, but the method requires no unusual manipulations. Some of the basic assumptions used in projecting current costs are listed in table 6-2.

Estimating costs over the next **5 years** under the demonstration, however, is much more complex. It requires projections regarding how many people will be newly eligible, how quickly they will enroll in the program, how intensely they will use services, and what the cost of the new package of services to be offered will be. The estimate must also account for the broader use of managed care under the demonstration and the administrative costs of implementing the new program.

² The State of Oregon contracted with the consulting firm **Lewin/ICF**, Inc. to provide estimates of caseloads over the course of the demonstration and overall program costs. Coopers & Lybrand was the contractor for the per capita cost analysis.

³ The cost estimate in the waiver application assumes that **all** services provided to elderly and disabled Medicaid beneficiaries, **and all mental health/chemical dependency services**, are outside the demonstration. **These** costs are part of projected costs of the current **program**, but they do not affect the incremental demonstration cost calculation. If the waiver were **approved**, the State would apply for amendments to the waiver to include these additional populations and services, and the estimated incremental costs of including them would be presented to the Federal Government at that time.

To estimate the cost of services under the demonstration, Oregon separated the calculation into four steps:

1. *Estimate the new caseload; the number of people who would be eligible under the proposal, their participation rate, and the ‘uptake’ rate-how quickly they would enroll.* Basic assumptions regarding demonstration caseload are listed in table 6-3.
2. *Estimate the costs of providing the total package of all 709 condition-treatment (CT) pairs to this caseload.* Since different people have different utilization characteristics (e.g., pregnant women generally use more services than AFDC-qualifying eligibles), estimate these costs separately for each of six different eligibility groups. Final total costs are an average of these separate group-specific costs, weighted for the caseload represented by each group.
3. *Estimate the proportion of total costs represented at different cutoff points on the list, and specifically at line 587—i.e., the cost of providing the final covered benefit package for prioritized services.*
4. *Add to this “per capita service cost for prioritized services” the cost of providing nonprioritized mental health, chemical dependency, and long-term care services to the demonstration caseload.* Since these costs are not initially prioritized, they must be calculated separately and added to the prioritized benefits to yield the final total cost of services under the demonstration.

Per Capita Service Costs

Calculating Per Capita Costs for All 709 Services

The basic method used by Oregon to calculate the costs of providing all services on the prioritized list is summarized in figure 6-1. For each of 70 categories of service (e.g., anesthesia, emergency room, physician inpatient visits), and for each of six categories of enrollees (e.g., AFDC, new noncategorical eligibles), the State estimated the average per capita monthly cost of providing that service to that enrollee. The overall per capita monthly cost for a given eligibility category was the sum across all 70 services, with an additional allowance for provider administrative costs; the overall per capita monthly

Table 6-3-Oregon’s Caseload Assumptions for Projecting Costs of the Demonstration Program

- The potentially eligible population—those with incomes up to 100 percent of the Federal poverty level and pregnant women/young children with incomes up to 133 percent of the poverty level—is deduced largely from the Current Population Survey (U.S. Bureau of the Census), using pooled data from the 4 years 1985-88.
- The overall participation rate of the newly eligible population at steady state will be 59 percent.
- The participation rate of current and projected pregnant women and children under age 6 will be 72 percent, the current rate.
- Full participation will not occur until year 4 of the demonstration. Uptake rates for years 1 through 3 will equal 40, 70, and 90 percent of the steady-state participation rate, respectively.
- Caseloads are expressed as the expected average number of enrollees per month. The average number of enrollees per month times 12 is assumed to be the average number of enrollees served per year.
- Caseload will decline in year 4 with the implementation of the small business health insurance mandate, after which it will grow 2 percent per year due to general population growth. (Participation rates at steady state are assumed not to include caseload decline due to the employer mandate.)
- The caseload growth and decline will be uniform throughout all counties.

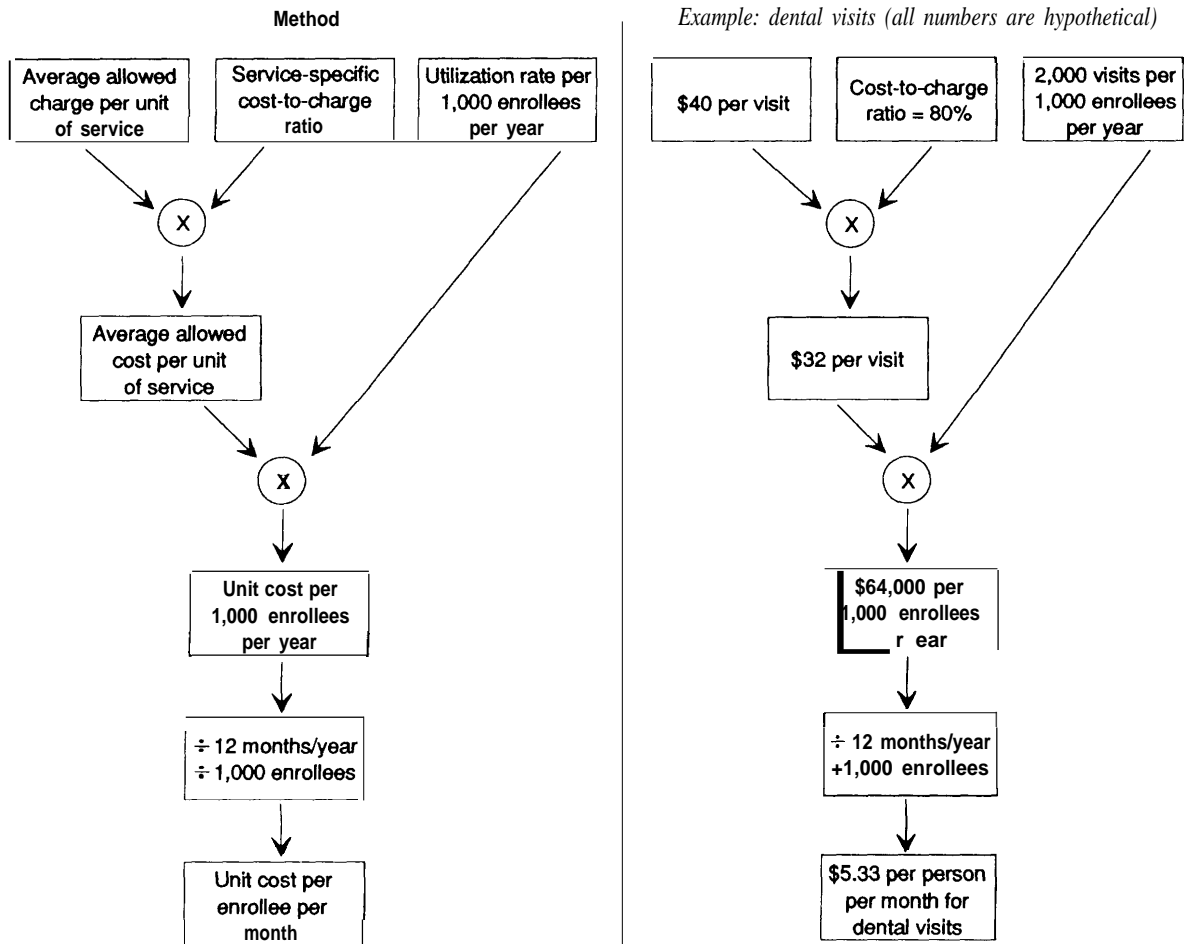
SOURCE: Based on information from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991.

cost per enrollee was the weighted average across all six eligibility categories,

The utilization and cost information used to derive the per capita monthly costs were based largely on fee-for-service data (table 6-4). The Medicaid data used, for example, were for fee-for-service utilization for currently eligible groups. Private insurance data was used to estimate utilization for services not currently covered by Medicaid (e.g., hospice care) and to estimate utilization rates for services used by the currently uncovered groups who will be newly eligible under the demonstration. Since all demonstration participants are to be enrolled in some form of managed care, Oregon adjusted the per capita cost to accommodate its assumption, based on its past experience with prepaid managed care, that managed care saves money. Overall savings from this source were assumed to total \$225 million over the 5 years of the demonstration. Most of the savings was assumed to accrue through lower emergency room and hospital inpatient utilization.

Figure 6-1—Per Capita Cost Calculation for the Full List

STEP 1. CALCULATE PER CAPITA COST PER SERVICE (repeat for each of 70 services)



STEP 2. CALCULATE TOTAL PER CAPITA COSTS

- a. Sum per capita cost across all 70 services for each eligibility group.
- b. Add provider administrative costs for enrollees in fully capitated health plans (assume equal to 6% of total costs).
- c. Total per capita cost for each eligibility group.
- d. Average costs across all 6 eligibility groups, weighting according to expected caseload.
- e. Average per capita cost per month per enrollee= \$145.15,

SOURCE: Office of Technology Assessment, 1992; based on data from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991.

Table 6-4--Sources of Data for Oregon's Per Capita Cost Calculation

Data source	Use in calculation
Blue Shield of California claims data	Primary data source for allocating costs to condition-treatment pairs. Source of service-specific charge data. Source for utilization data of services not currently covered.
Blue Cross/Blue Shield of Oregon claims data	Comparative charge data used to adjust California data (which is a larger sample) for Oregon charges for nonhospital services.
Oregon Medicaid Management Information System	Source of utilization data for services and eligibility groups currently covered by Medicaid.
Hospital information from California Office of Statewide Health Planning, Oregon Office of Health Policy	Used to calculate cost-to-charge ratios for hospital services (inpatient and outpatient combined). (Data from Medicare Cost Reports considered not reliable because calculated ratios were below 50 percent.)
Physician-provided information on average compensation levels and overhead costs	Used as basis for rough estimate that cost-to-charge ratio for primary care physician services was no higher than 80 percent. (Specific data sources included American Medical Association, Warren Surveys, and Medical Group Management Association.)
Resource-based relative value scale	Used to calculate rest-to-charge ratios for physician services relative to primary care physicians.
Information on existing managed care contracts	Used to estimate cost-to-charge ratio for primary care services based on "market rate."
Oregon State University-provided information	Used to estimate costs associated with dispensing prescription drugs.
Oregon Dental Association	Overhead costs of dentists.

SOURCE: Office of Technology Assessment, 1992. Based on data from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, The *Oregon Medicaid Demonstration Waiver Application* (app. D), submitted to the Health Care Financing Administration, Aug. 16, 1991; S. Hunt, Coopers & Lybrand, San Francisco, CA, personal communication, Jan. 6, 1992.

Calculating Threshold-Specific Per Capita Costs

Because the legislature was unlikely to fire the entire list, the State also calculated the proportion of costs represented by different "thresholds" on the list. In contrast to the all-list per capita cost calculation, the threshold-specific calculation required actually mapping existing medical claims data (i.e., utilization and cost data) to specific CT pairs. Table 6-5 presents an overview of the threshold-specific cost calculation.

Mapping claims data to CT pairs proved to be a difficult task. CT pairs are defined in part by CPT-4⁴ procedure codes, the codes physicians use to specify their services, and in part by ICD-9-CM⁵ codes, which hospitals use to assign diagnoses to patients.⁶ But these diagnosis (i.e., condition) and procedure (i.e., treatment) codes are often not unique to individual CT pairs; some pairs, for example, have the same condition appearing at different places on the list with different medical and surgical treatments (see ch. 3). In addition, many health care products and services—e.g., laboratory tests, ther-

apy visits, and prescription drugs—could apply to almost every CT pair.

Since diagnostic services for any condition are to be covered regardless of whether treatment is covered, as a first step in code assignment all CPT-4 codes for diagnostic procedures were assigned to a hypothetical "CT pair O." Codes for therapeutic procedures, and services with no specific codes, were then assigned to specific CT pairs according to the basic decision rules outlined in table 6-6.

Once all claims had been assigned to CT pairs, the State could calculate the proportion of total list costs represented by each CT pair. The actual estimated cost of any given CT pair was then the percentage of costs represented by that pair, multiplied by \$145.15 (the total cost as calculated by the method described above).

The final step was to determine threshold-specific cumulative costs. For any given threshold on the list (e.g., line 587), the State summed the costs of all individual CT pairs up to and including that line. It then made two specific adjustments. Both adjust-

⁴Current Procedural Terminology, 4th Edition.

⁵International Classification of Diseases, 9th Edition, Clinical Modification.

⁶Dental codes are also used for CT pairs that include dental services.

Table 6-5--Oregon's Method for Estimating Threshold-Specific Costs

1. Assemble private insurance data on utilization and charges according to ICD-9-CM diagnostic and CPT-4 procedure codes
2. Adjust billed charges to reflect Oregon providers' actual costs
3. Adjust utilization to reflect lower income population (e.g., more high-risk maternity cases)
4. Allocate claims data to appropriate condition-treatment (CT) pairs based on ICD-9-CM/CPT-4 codes (see table 6-6)
5. Calculate cost for each CT pair (= percent of total costs represented by that pair x \$145.15 [from full-list per capita cost calculation])
6. Calculate cumulative threshold-specific costs at various thresholds
 - Sum costs of individual CT pairs above threshold
 - Apply CT-specific substitutions as suggested by the Health Service Commission
 - Assume that 15 percent of all rests below the threshold will be "upcoded"

SOURCE: Office of Technology Assessment, 1992. Based on data from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991.

ments were made under the assumption that if low CT pairs were not covered, some treatments that would otherwise appear low would be replaced by substitute treatments in or assigned to higher, covered CT pairs.

First, the State considered a list of services provided by the Health Services Commission (HSC) in which the Commission considered that one service (i.e., high on the list) could be substituted in whole or in part for another that was lower on the list (table 6-7). For any given threshold, the State assigned substitutable costs from lower (i.e., below-threshold) to higher (above-threshold) CT pairs. In other words, it was assumed that any patient needing one of these "substitutable" services appearing below the cutoff line would gain coverage by receiving the substitute service above the line.

Second, the State assumed that regardless of the cutoff line, a certain amount of uncovered services would be redefined and assigned by the provider to covered CT pairs. Some of these cases might be additional cases of substituting one treatment for another, but in other cases the provider might simply define the otherwise uncovered service in such way that it could legitimately appear to fall into a covered CT pair. (Such "upcoding" could occur in response to a desire to gain payment for the service, but it could also be a natural result of physicians trying to

Table 6-6-Basic Rules and Assumptions Used to Assign Claims to Condition-Treatment (CT) Pairs

Decision	steps/assumptions
----------	-------------------

- | | |
|--|--|
| 1. Prepare data | <ul style="list-style-type: none"> • Identify claims with codes that can and cannot be matched to codes specified in CT pairs |
| 2. Assign claims with matching codes (i.e., claims for medical and surgical therapies) | <ul style="list-style-type: none"> • Assign each surgical claim to relevant surgical CT pair • Assign each medical claim with only one relevant CT pair to that pair • Assign each medical claim with either multiple medical or multiple surgical matching CT pairs proportionately to relevant pairs • Assign each medical claim with multiple matching CT pairs that include both surgical and medical therapies so that 90 percent of claim is distributed evenly among medical CT pairs and 10 percent of claim is distributed evenly among surgical CT pairs • Summarize total treatment costs assigned to each CT pair on the list at the end of above steps |
| 3. Assign claims for ancillary services (which cannot be matched to specific pairs) | <ul style="list-style-type: none"> • Summarize each claim by ICD-9-CM code and identify all possible CT pairs that include that code • Total the existing dollars (from medical/surgical claims) already assigned to each of the possible pair matches and calculate the proportion of treatment dollars represented by each CT pair for that ICD-9 code • Allocate the ancillary costs for that ICD-9-CM code among the possible CT pairs according to the percentage of treatment costs for that code in each pair • Repeat for each ancillary-related ICD-9-CM code • Summarize total treatment and ancillary costs assigned to each CT pair on the list |
| 4. Assign claims for other services that cannot be matched to specific pairs | <ul style="list-style-type: none"> • Total the claims for prescription drugs and assign to CT pairs so that drug costs equal 7 percent of total costs for each pair • Assign a cost to "comfort care" CT pairs on the assumption that this cost equals 0.5 percent of total costs |

SOURCE: Office of Technology Assessment, 1992. Based on information in Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991; app. D.

ensure that patients receive the services they are perceived to need.) For each threshold calculated, the State assumed that 15 percent of the costs of services below that threshold would be redefined by providers in such a way as to fall into CT pairs above the threshold.

Table 6-8 presents the estimated per capita costs applicable at various thresholds. Because all diagnostic services are assumed to be covered, and because many high-cost or high-utilization services are ranked near the top of the list, per capita costs accumulate rapidly. Even at a threshold set at CT pair 200, for example, the State estimates that 60

Table 6-7-Substitute Services Used in the Threshold-Specific Cost Calculation

Line substituted		Percentage of service costs of "substitute from" line assumed to be substitutable
From:	To:	
209	189	100%/0
277	200	100
279	118	5
291	1	5
293	53	10
307	181	100
309	21	100
365	124	100
367	95	50
367	246	50
368	126	100
388	253	5
397	355	50
415	253	10
444	64	9
483	399	5
492	385	20
497	385	20
502	450	20
532	467	10
535	445	100
564	460	20
<hr/>		
588	83	5
615	159	20
624	450	5
637	446	20
637	447	20
660	64	5
686	18	1
691	239	20

NOTE: "Line" refers to condition-treatment pair on prioritized list. Substitutes below shaded line are those that are assumed to occur at the 587 threshold determined by the Oregon legislature.

SOURCE: Adapted from P.R. Sipes-Metzler, Oregon Health Services Commission, memorandum to S. Hunt, Coopers & Lybrand, San Francisco, CA, Mar. 15, 1991.

percent of all the costs represented by providing services on the list would be incurred.

FACTORS AFFECTING COSTS

Caseload Assumptions

One of the most basic and critical assumptions underlying Oregon's analysis of the cost of its proposed demonstration project is the estimate of how many people would be served under the new plan.

Number of Eligibles

To estimate the number of State residents who would qualify for medical assistance under the demonstration, Oregon relied on pooled estimates from several years worth of data from the Oregon

Table 6-6-Estimated Per Capita Costs and Percent of Total List Costs at Selected Threshold "Lines" (program startup)

Threshold*	Per capita cost	Percent of total costs
200	\$87.12	60.0%
365	102.26	70.5
478	117.21	80.8
585	127.01	87.5
640	134.61	92.7
709	145.15	100.0

a Threshold is condition-treatment pair below which services would not be covered.

SOURCE: Based on data from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, The Oregon Medicaid Demonstration Waiver Application, submitted to the Health Care Financing Administration, Aug. 16, 1991.

subsample of the Current Population Survey (CPS), a national survey undertaken by the U.S. Bureau of the Census. Since any survey has a degree of uncertainty in its estimates, pooling several years worth of data is a common measure to increase accuracy.

Projecting the future number of people with incomes below the poverty level also depends on assumptions regarding the economy and the number of people who cannot find work. For its estimated eligibles through the 5 years of the demonstration, the State assumed a constant unemployment rate equal to the average U.S. unemployment rate during 1985-88—that is, the rate applicable during the period represented by the CPS data used as the basis of caseload calculations. Again, it is impossible to say that this assumption is too high or too low for Oregon in the 1990s, but if reality is significantly different the number of people eligible to participate could be very different from the prediction.

One important assumption regarding future caseload is the assumption that people currently eligible will be eligible for the demonstration in roughly the same numbers as they were in the late 1980s, with a small increase allowed for general population growth. Recent information indicates that the Medicaid population in 1991 is much larger than expected (38). Unless this upsurge in persons eligible under current rules disappears by mid-1992, the demonstration caseload estimates probably underestimate the true initial caseloads that will occur. This larger caseload would increase the total costs of the Medicaid program under the demonstration (though it would not necessarily increase the net costs of the demonstration, since program costs would be higher

than originally predicted regardless of whether the demonstration was approved).

Participation Rate

The proportion of eligible individuals who will actually participate in the program depends on two factors: the underlying participation rate at steady state, and the length of time it takes for individuals to learn about their eligibility and decide to enroll (the *uptake rate*).

Oregon has assumed that, at program steady state, the base participation rate under the demonstration for existing eligibility categories will be the same as in the existing program (72 percent). For newly eligible individuals, the State adjusted this base rate for differences in demographic characteristics between current and new eligible groups—that is, differences in age, sex, family composition, income, and employment status (177). The adjustment also accounted for differences in insurance status. (This adjustment implicitly assumes that more of the newly eligible population will be covered under private insurance.) The net result is that newly eligible persons are projected to have only 59 percent participation in the program (177).

These participation assumptions may be low. Broader studies of Medicaid programs throughout the United States have found participation to average 76 percent (95). If Oregon has underestimated both the speed of implementation and the participation rate of new eligibles in private insurance plans, then participation may be much higher than 59 percent among new eligibles.

The State expects that it would take several years to reach these steady-state participation rates. Uptake into the program is assumed to be 40 percent in the first year and 70, 90, and 100 percent in years 2, 3, and 4 of the demonstration, respectively. Thus, the full expected participation rate for new eligibles is not predicted to be achieved until the fourth year the new program is in place.⁷

The uptake rates could be a slight underestimate if the unusual level of publicity received by the proposal resulted in faster-than-usual enrollment of eligible individuals. Also, according to the Congressional Budget Office (CBO), national Medicaid

estimates usually assume a faster uptake rate for new programs, with 100 percent uptake (i.e., steady-state participation rate) reached by year 3 (237).

Oregon performed sensitivity analyses on its participation and uptake assumptions. If, as the above discussion implies, the baseline assumptions understate what might actually occur, these sensitivity analyses can give some sense of the magnitude of costs affected by their use.

According to the State's analysis, assuming that new-eligible participation is 69 rather than 59 percent raises the net demonstration costs by 37 percent (or \$75 million). Assuming a faster uptake of that population (50, 80, and 100 percent in years 1, 2, and 3) raises net costs by 16 percent (\$33 million). Participation and uptake rates that were higher than baseline but lower than the 'upper bound' rates that Oregon's sensitivity analysis examined would result in less dramatic cost increases.

The State did not perform a sensitivity analysis on both high-rate and high-uptake assumptions simultaneously. Since uptake and participation may interact, the effect of both high assumptions occurring simultaneously cannot be estimated without the model. Even without interactive effects, however, the simple effect of both assumptions in place would probably beat least \$108 million (\$75 million + \$33 million), or an increase of over 50 percent in net demonstration costs.

Utilization Assumptions

Most of the basic utilization assumptions derive from the inherent characteristics of the data sources used to estimate utilization under the demonstration. Oregon Medicaid claims data were used to estimate future utilization by current eligibles and new categorical-type eligibles and for currently covered services; in this case, the underlying assumption is that utilization for this group and these services will be unchanged. Blue Shield of California data were used for estimates of utilization of new services and for noncategorical groups newly eligible under the demonstration.⁸

If unadjusted, the use of the Blue Shield data would assume that this population would use services at the same rate as privately insured

⁷ It is not entirely clear from the waiver application whether these uptake rates apply **only** to the newly eligible population but **State Medicaid officials confirm that they do** (2 12).

⁸ Blue Cross/Blue Shield of Oregon data were used to adjust the more comprehensive California data for **State-specific** differences.

individuals. The State, recognizing that it is unlikely that poor individuals who have newly received access to publicly financed health care will use services at the same rate as individuals with private insurance, adjusted the Blue Shield data to reflect certain additional assumptions about how the two populations might differ. For example, the newly eligible population should include very few pregnant women and young children, since these groups are eligible up to 133 percent of the poverty level under current rules.

In addition, the State assumed that the newly eligible Medicaid population would be both younger and have a higher prevalence of males than a standard commercially insured population. It translated this assumption into a quantitative assumption that, even after maternity and newborn claims were removed, the newly eligible population would incur health care costs of only 89 percent of what the Blue Shield population incurred. Total “list” costs for new eligibles were adjusted downward accordingly.

These adjustments to the Blue Shield data all assume that the newly eligible Medicaid population will, by nature of its demographics, use fewer services and incur fewer costs than a standard privately insured population. This assumption is a reasonable one for program steady state. What is not known, however, is the extent of ‘pent-up demand’ for services that may exist in the first few years of a new program targeted to a previously uninsured population. If newly eligible persons have preexisting health problems that have gone untreated while these individuals were uninsured, demonstration program costs could be higher than estimated.⁹

Assumptions Relating to CT Pair Assignment

To translate existing data into the proper form for projecting demonstration costs, Oregon assigned codes for services (and associated costs) from past claims to the CT pairs on the new list that appeared to best correspond. Assigning codes correctly to the appropriate pairs above and below the line is crucial to correctly estimating the cost of covered services.

The State faced potential coding assignment errors at three different levels. First, codes could

have been “incorrectly” assigned to CT pairs in the list as it stood at the time of code assignment (e.g., because of the ambiguities in how to allocate many services across CT pairs). Second, the list—or rules for assigning codes—could change after the cost estimate was made but before the program was implemented. And third, when the list is implemented, providers may code services differently than the actuaries did at the time the list was “costed.” Each of these potential errors can affect whether the estimated cost of providing services through line 587 would be an accurate projection of final program costs.

Coding Assignment at the Time the List Was “Costed”

Given the inherent uncertainties in translating codes to CT pairs, Oregon’s method for doing so appears basically sound. Treatment codes were matched as well as possible; ancillary codes were assigned proportionately to relevant pairs based on accompanying diagnosis; and drugs, for which claims carry no accompanying diagnosis, were distributed proportionately across the entire list.

Nonetheless, the inherent uncertainties remain, and the resulting cost estimates could be either exaggerated or understated. For example, it could be that in fact drugs would be prescribed disproportionately for CT pairs above line 587. If this were the case, the costs of treating patients with covered services would have been underestimated. Clearly, the converse can also be true. Neither the magnitude nor the direction of any possible error can be estimated based on existing data and analyses.

Similarly, the State’s judgment regarding which diagnostic codes should be assigned to a hypothetical “CT pair O” (and covered regardless of the cutoff threshold on the list) could result in under- or overestimates of cost. A particularly sensitive issue is whether hospital diagnostic procedures will in fact be covered when the condition ultimately established as the diagnosis lies below the line. Hospital Medicaid bills (which in Oregon are based on diagnosis-related groups) do not distinguish between services performed before and after the diagnosis is made, and all but hospitals participating

⁹Oregon recognized the possibility of “pent-up demand” but assumed that any subpopulation of new eligibles with higher-than-expected utilization would be balanced by subpopulations with little demand, and by low demand resulting from the time it would take new enrollees to “learn the system.” It seems to OTA, however, that the result will still not quite balance. The underlying data from the commercial insurance population already account for “no demand” eligibles in their own averages, and the fact that new enrollees must learn the system simply postpones, rather than eliminates, their expected utilization.

in fully capitated plans would still bill separately for services. The State plans to devise an administrative mechanism to address this problem (212), but the solution may take time to implement and could entail its own problems. Until then, the Medicaid program must either overpay for services (e.g., by paying for any hospital service performed during the initial stay that includes the diagnostic workup), underpay for services (by denying payment for diagnostic services accompanying bills for below-the-line procedures), or incur high administrative costs (in order to estimate what proportion of the hospital bill is related to diagnostic services).

Coding Errors in the Initial List

The prioritized list used by Oregon's contractors and by the legislature was not exactly the list that will be implemented when and if the demonstration begins. Although the number and order of CT pairs have not changed since the HSC transmitted the list to the legislature, the HSC has made technical corrections to the list as code- and service-specific errors have become apparent. These technical corrections could have implications for the accuracy of the cost analysis.

One type of technical 'error' lay in unintentionally omitting codes from the list. Those codes must still be assigned to CT pairs, since the list is to be a comprehensive one. The original code allocation method used in costing various thresholds on the list essentially assumed that services with unmatched codes were spread proportionately throughout the entire list. If, after correcting the list, these codes and their associated costs are disproportionately placed above line 587, costs will have been underestimated. Conversely, assigning more "missing" codes to CT pairs below the line will result in the cost estimate for covered services being too high.

Other codes may have appeared on the list used by the State's contractors in the cost analysis, but they may have appeared in incorrect CT pairs. For example, the HSC has informed the Office of Technology Assessment (OTA) that some above-the-line codes that appeared to be new benefits (e.g., tissue expanders) were not intended to be benefits for many of the conditions with which they are currently associated on the list, and they may be reassigned to CT pairs below the line (35). Other codes that appear in CT pairs that are below the line (e.g., codes for medical therapy for myasthenia

gravis) might at some point, according to the HSC, be moved up to covered CT pairs (1 19).

Regardless of whether codes are added or moved between CT pairs, the result is that the list that providers must follow would not be identical to the list that was used in the cost analysis. No technical corrections were final as of March 1992, so again their impact on costs cannot be assessed in either magnitude or direction. However, if in the final technical corrections costs associated with added or shifted codes are disproportionately assigned to covered CT pairs, the result will be higher program costs than anticipated. (The converse may also be true, but it seems to OTA to be less likely.)

Provider Coding

Many medical diagnoses are not clear-cut and distinct, and a patient may frequently fit logically into more than one diagnostic category. A patient with ill-defined breathing difficulties, for example, might sometimes legitimately be considered to have either chronic bronchitis or emphysema. Similarly, a patient with terminal cancer who is in respiratory failure might be described according to either the immediate problem or the underlying disease.

In each of these examples, one service (treatment for chronic bronchitis; aggressive therapy for terminal cancer) lies below the line and is uncovered, while the other (respiratory failure; emphysema) ranks higher and would be covered. Given the prioritized list as it currently stands, and absent any additional instructions or information, clinicians could legitimately choose to categorize patients into either covered or uncovered CT pairs. (The State is developing instructions for using the prioritized list, but the breadth and extent of detail to be included is not known.)

Oregon's method for allocating services for the purposes of costing the list generally assumes that physicians are neutral to financial and emotional incentives when coding the services they provide. However, the State did make one major adjustment to accommodate any changes in coding practice that might affect coverage. It assumed that 15 percent of the costs of services that would be uncovered under current medical and coding practice would be coded into covered CT pairs under the demonstration and paid accordingly (177). Of this 15 percent, 10 percent was assumed to result from general changes in medical practice and coding decisions, and the

remaining 5 percent was assumed to result from the continued prescribing of drugs for uncovered conditions (which cannot be monitored easily) (98).

Some allowance for changes in coding practice (and medical practice) as a result of implementing the list is certainly appropriate. It is impossible to say whether 15 percent would be the correct amount in reality, particularly since the State has not yet developed either detailed CT pair assignment instructions or methods for scrutinizing suspect categorization. Given the strong financial incentives to receive payment for specific services provided in the fee-for-service sector, changes in coding practice may be greater than 15 percent for the patients served outside of prepaid managed care. Prepaid providers have no financial incentive to “upcode,” however, since for them upcoding is not directly linked to increased payment. Increased use of above-the-line services in the prepaid sector would be limited to actual service substitutions and any desire of physicians to justify certain services to their own administrators. Thus, the 15 percent assumption seems a reasonable middle ‘best guess. The actual percentage could be lower if managed care providers are especially successful at eliminating the use of therapies associated with uncovered CT pairs; it could be higher if they are not successful at controlling such prescribing or if Oregon fails to meet its goal of enrolling the majority of eligible Medicaid beneficiaries in prepaid managed care (see below).

Delivery System Assumptions

The basic method used to derive costs was based on fee-for-service data. Oregon’s demonstration, however, proposes that all Medicaid demonstration enrollees will be in some form of managed care, and three-fourths will be enrolled in prepaid plans. The State assumes that managed care will be associated with substantial cost savings over what fee-for-service expenditures would have been. Specific savings assumptions, as presented in the waiver application, are summarized in table 6-9.

Savings Associated With Managed Care

The assumption that managed care (particularly prepaid managed care) lowers health care costs is the major premise behind its increasing use in Medicaid programs. Oregon assumes in its cost estimate that primary care case management will save some costs, primarily through averted emergency room use and hospital admissions. Prepaid care is assumed to have an even greater effect on hospital-associated savings and have some general efficiency-related cost savings as well.

Oregon’s savings assumptions for managed care are based on its own experience with Medicaid managed care over the past few years. An analysis performed on the State’s behalf estimated program savings during the 3½ year period from March 1985 through September 1988. It found that although program costs increased during the first 6 months of the managed care program, savings were positive and increasing in each of the succeeding 3 years (41).

Table 6-9-Savings Assumptions for Managed Care
(savings compared with fee-for-service scenario)

Type of provider	Percent savings ^a	Enrollees to whom savings apply
Fully capitated health plan.	25% 12.5%	AFDC, PLM, new eligibles GA
Partially capitated health plan.	13% 6% (6% average for all enrollees and services)	AFDC, PLM, new eligibles
Primary care case management	9% 4.5% (4% average for all enrollees and services)	AFDC, PLM, new eligibles GA

KEY: AFDC = Aid to Families with Dependent Children; PLM = poverty-level pregnant women and children (incomes up to 133% of the Federal poverty level); GA = State general assistance eligibles.

a Savings apply to all hospital care except maternity and newborn care. Medicaid maternity/newborn care is already case-managed. Physician and pharmacy services for general assistance enrollees are also case-managed.

SOURCE: Based on data from Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991; L. Read, Office of Medical Assistance Programs, Salem, OR, personal communication, Jan. 16, 1992.

Studies of other Medicaid managed care demonstration projects have found some promising effects. An analysis of six Medicaid projects found that utilization did decrease, particularly emergency room utilization, but that cost savings were more difficult to achieve, particularly in the first year of the demonstrations (72). A detailed analysis of Utah's Medicaid managed care program (which included both prepaid and case-managed fee-for-service components) found that the program decreased hospital outpatient utilization (including emergency room use) but increased use of primary care, specialist, and prescription drug services (130). Consequently, costs for ambulatory care in this program increased in the early years of the program.

The Congressional Budget Office (CBO) found that Oregon's savings assumptions for the various forms of managed care were generally higher than used in national estimates based on existing studies (237). CBO concluded that Oregon's savings assumptions for managed care may be optimistic. The State is confident that its past experience with Medicaid managed care makes its savings assumptions realistic (212). Still, if managed care savings under the demonstration were to differ from those assumed in the cost estimate, the literature suggests that the error would be in the direction of overestimating savings and underestimating costs.

Implementation of Managed Care¹⁰

Managed care savings in the demonstration project are predicated on the assumption that a managed care system will be fully in place by the end of the first year of the new program. Meeting this goal is probably the greatest challenge to realizing the expected savings from managed care.

The greatest expected savings are to come from fully capitated prepaid care plans. Fewer than 12,000 Medicaid beneficiaries are currently enrolled in such a plan; under the waiver, over 100,000 beneficiaries are to be full-cavitation enrollees. The General Accounting Office has expressed skepticism regarding whether Oregon's current partially capitated Medicaid providers can organize and contract sufficiently quickly to meet this goal (238). Nonetheless, the State believes it is on schedule thus far for the expansion of fully capitated care (212).¹¹

In addition to greatly expanding its contracts with fully capitated plans, the State must recruit more providers into partially capitated plans and recruit primary care case managers for the 18 rural counties of the State that are expected to be predominately fee-for-service. Health personnel shortages and the need to negotiate with public health departments and federally qualified health clinics in these counties may make recruiting case managers difficult and time-consuming (see ch. 4). Again, the State believes it is on schedule for its overall managed care expansions. If the expansion continues in a timely manner, assumptions based on managed care savings will be reasonable. Any future delay in implementation, however, would cause costs to be higher than predicted.

Any unexpected variation in the numbers of enrollees could increase (or diminish) the problem. For instance, the State assumes a uniform increase in eligible persons over time in all counties. If, due to high local unemployment or other reasons, Medicaid enrollment in certain counties were higher than the predicted average, these counties must attract more Medicaid managed care providers to fill the demand. This problem may be particularly acute in rural counties, where physicians are sometimes in short supply and primary care case management may take some time to implement in any case.

After the first year, continued participation of both prepaid providers and primary care case managers may depend in part on whether providers continue to consider payment rates to be adequate to cover their own individual costs (see ch. 4). Continued participation would also depend on the degree of administrative costs and difficulties the providers incur. Again, if providers remain satisfied with their payments and responsibilities, Oregon's baseline cost estimate would remain valid. If they become dissatisfied, however, the result would almost certainly be to increase program costs. Constraining payment rates below what providers would be willing to accept might decrease participation, reducing the possibilities for savings through managed care. Raising rates, on the other hand, would raise program costs in its own right. Thus, for both initial provider recruitment and long-term provider

¹⁰ See ch. 4 for a more detailed discussion of the proposed managed care system.

¹¹ The Oregon Medicaid program has letters of intent to participate as fully capitated health plans from plans with an identified start-up capacity of 158,200 enrollees (212).

participation, uncertainties operate in the direction of increasing program costs.

Other Program-Specific Assumptions

Demonstration Administration and Management

A critical component of the original State legislation authorizing the demonstration, Senate Bill (SB) 27, was that unexpected program cost increases could be controlled by decreasing benefit coverage for enrollees. In 1993 and 1995, the State legislature meets and can, if it chooses, establish a threshold either higher or lower than CT pair 587 on the prioritized list. If costs in the interim have been higher than expected, the legislature might choose to reduce benefits to bring future costs in line with projected expenditures.

In addition, SB 27 made provisions for costs exceeding the allotted budget in the midst of the 2-year budget cycle. If, for example, it became apparent in the fall of 1994 that costs were to greatly exceed appropriated funds for the 1993-95 period, the State could reduce benefits as necessary (subject, presumably, to some level of Health Care Financing Administration (HCFA) oversight in the context of the Federal waiver). Alternatively, the State emergency fired overseers could choose to allocate funds to make up the difference if those funds were available.

A critical question is how rapidly the State could reduce expenses in mid-cycle by restricting benefits, and what the consequence of such a reduction would be. For fee-for-service providers, reducing benefits would simply mean that from that time forward, providing these services brings no payment. For prepaid providers, the model contract proposed by the State allows the State to lower the benefit package, if necessary, within 60 days of legislative approval of the change in benefits (174). The cavitation rate would be lowered to reflect the change in benefits. Prepaid providers could withdraw from participation in the program if these events occurred. In the long run, the effect of mid-cycle benefit reductions (if they occur) on program costs would thus depend heavily on whether prepaid providers withdraw their participation in the program, endangering anticipated managed care savings.

Health Care Cost Inflation

Any projection of costs forward in time requires some assumption regarding underlying cost inflation. Oregon assumed that Medicaid costs in any given sector (e.g., acute care, long-term care) would rise in the future at the same underlying rate as that actually experienced in recent years. This rate was calculated as the average actual and estimated program cost increases in that sector during the years 1987-91, with some additional adjustments to specifically address hospital trends for 1991-93 (212).

This approach is a reasonable and simple one, given the level of uncertainty in any forecast. Nonetheless, under- or overestimating the underlying rate of inflation could have a major effect on the difference between real and expected program costs. If, for example, costs have been increasing *at an increasing rate*, projecting forward an average of past inflation rates would probably underestimate future inflation.

In fact, nationally, this appears to be the case. The Consumer Price Index for medical care rose from a 6.6 percent increase in prices during 1987 to a 7.7 percent increase in 1989 and increases of 8.5, 9.0, and 9.3 percent in the first three quarters of 1990, respectively (127). If Oregon's Medicaid expenditures have followed a similar pattern, future cost inflation may have been underestimated in the analysis.

Assumptions Affecting Nonprogram Costs

Medicare Costs

Oregon's cost analysis includes an assumption that the implementation of the demonstration will reduce Federal Medicare expenditures by \$33.7 million. The savings in this case would derive not directly from the Medicaid demonstration but as a consequence of the associated mandated health insurance program for small employers, which is to be implemented only if the Medicaid demonstration goes forward (see ch. 2). SB 27 required that all Medicare beneficiaries who are employed by qualifying firms will become covered under this insurance program, making Medicare a secondary payor.

The demonstration itself may also have some effect on Medicare costs by increasing Medicare disproportionate share payments to hospitals. At present, Medicare hospital reimbursements on behalf of its own beneficiaries include an adjustment

that is intended to compensate certain hospitals for extra costs associated with serving a disproportionately low-income patient population. The amount of this adjustment depends on the size and location of a hospital and the proportion of its patient days attributed to Medicare Supplemental Security Income recipients *and Medicaid beneficiaries*. Thus, as the proportion of hospital patients enrolled in Medicaid increases, Medicare payments also increase. Covering previously uninsured patients under Medicaid, as the demonstration proposes, will raise Medicare hospital payments unless accompanied by a proportionate decrease in Medicaid hospital stays due to managed care.

(Medicaid itself also makes payments to disproportionate share hospitals, although States are permitted some leeway in defining which hospitals are eligible for payments and how much additional payment they receive. It is not clear what effect a greater Medicaid-covered population will have on Oregon Medicaid payments, since many hospital stays will be covered under prepaid cavitation contracts and Oregon could choose to change payment rules to offset anticipated greater costs. Nonetheless, this is another potential source of Medicaid program costs that could be greater than anticipated.)

Other Federal Costs

From a Federal budget perspective, a potentially significant assumption of the demonstration cost estimate is that the demonstration, and the small employer insurance mandate that depends on its approval, will not reduce Federal tax revenues. CBO, challenging this assumption, has testified:

To the extent that employers would have to pay for new [insurance] policies, their profits would be reduced, resulting in lower corporate tax payments to the federal government. Alternatively, if the costs of the insurance policies were passed back to the employees in the form of lower (or more slowly increasing) monetary wages, personal income tax and payroll tax revenues would decline by about one-fourth of the increase in health premiums (237).

The State, although acknowledging this effect, argues **that the** Medicaid and small employer programs will reduce the need to subsidize uninsured care through high insurance premiums and will increase the incomes of health care providers (through greater health care utilization). Thus, it argues, corporate savings (from lower insurance

premiums) and higher provider incomes will result in Federal tax revenue increases that will offset the losses described by CBO (212). Although the effects described by Oregon may well occur, OTA is skeptical that the gains will entirely offset the losses.

Another legitimate Federal concern regarding demonstration funding and expenditures relates to the recent passage of Oregon Ballot Measure 5, which restricts the property taxing capability of local governments and requires the State government to redirect a greater proportion of State spending toward education in order to make up the difference. This law has caused concern regarding Oregon's ability to maintain its current level of Medicaid spending, and the State is making contingency plans for reducing spending if necessary (150). In light of this, it is unclear to OTA how the State could raise sufficient funds to pay its share of increased Medicaid costs related to the demonstration, even if the incremental demonstration cost were no higher than predicted.

IMPLICATIONS FOR BENEFITS

If Oregon has overestimated the costs of conducting the proposed demonstration, the consequences for benefits are few and positive. The State could choose to lower the threshold below CT pair 587, enabling coverage for such conditions as back sprains, viral hepatitis, and breast reconstruction (CT' pairs 594, 597, and 600, respectively). Or, the State could choose to redirect the savings toward improving outreach, expanding the eligible population, higher reimbursement for providers, or any of the myriad non-Medicaid programs funded by the State.

On balance, however, it seems more likely that Oregon has underestimated the costs and overestimated the initial savings of the program than the reverse. If this proves to be the case, the implications for program benefits could be substantial. As designed, the demonstration program has two options in the face of higher-than-predicted costs: increase expenditures, which is possible only if both the funds and the will exist; or reduce benefits by moving the threshold up the list.

Raising the threshold carries with it two implications. First, the State may need to eliminate a substantial number of CT pairs to gain even a small savings, because the bulk of program costs are accounted for early in the list. (All diagnostic

Table 6-10-Examples of Condition-Treatment (CT) Pairs Excluded Under Four Scenarios of Higher Costs^a

<i>Baseline threshold: CT pair 587</i> <i>Per capita monthly rest: \$129.44</i>		
Scenario	New threshold	Examples of CT pairs excluded ^c
<i>1% cost overrun</i> Reduce per capita costs by \$1.29	CT pair 585	587—Esophagitis 586--Spondylosis
<i>5% cost overrun</i> Reduce per capita costs by \$6.46	CT pair 503	573-Chronic sinusitis 569--Rib fracture 544-Spine deformities 533--Minor burns 515-Pituitary dwarfism 514-Acute polio 506-Muscular dystrophy 504-Hernia repair (unobstructed) (plus all pairs listed above)
<i>10% cost overrun</i> Reduce per capita costs by \$12.94	CT pair 475	503--Goiter/thyroidectomy 498-Ovarian cyst/oophorectomy 494-Tonsillectomy, adenoidectomy 492--Paraplegia/surgery 489--Stomatitis, oral abscess 483--Osteoarthritis 480--Surgery for impacted teeth 477-Hearing loss over age 3 (plus all pairs listed above)
<i>15% cost overrun</i> Reduce per capita costs by \$19.42	CT pair 420	469--Endometriosis 466--Complicated hemorrhoids 447-Limb deformities 440-Cerebral palsy/repair, reconstruction 434-Lice 431--Migraine 425--Refraction/glasses 423--Osteoporosis (plus all pairs listed above)

^a Assumes all needed cost reductions are obtained by decreasing benefits.

^b New thresholds lower than CT pair 500 are approximate, based on the information in the waiver application. Detailed line-by-line costs were not available for more precise estimates.

^c See app. D for complete descriptions of CT pairs.

SOURCE: Office of Technology Assessment, 1992, calculated from information in Oregon Department of Human Resources, Office of Medical Assistance Programs, Salem, OR, *The Oregon Medicaid Demonstration Waiver Application*, submitted to the Health Care Financing Administration, Aug. 16, 1991.

services are covered, for example, and many high-cost conditions rank high on the list.) Second, by design, conditions increase in presumed importance as one progresses up the list. Thus, the further up the list the threshold is drawn, the greater the presumed risk of causing harm to beneficiaries by eliminating coverage.

Table 6-10 illustrates the degree of CT pair elimination needed to redress even relatively small cost overruns through the use of the prioritized list alone. Even reducing per capita costs by 5 percent, if the State anticipated an equivalent expenditure excess, would require eliminating 84 CT pairs, or 14

percent of all CT pairs currently proposed to be covered. A 15 percent cost overrun in the first 2 years could, in the absence of greater funding, require the State legislature to eliminate approximately 167 CT pairs (28 percent of currently covered pairs).

Despite the apparent barriers, however, it is possible that the consequences of eliminating benefits would lead Oregonians to find ways to supplement program funds if necessary. The prevalence and severity of many of the conditions whose treatment would be eliminated in such a scenario implies that the health consequences would be significant and measurable. Furthermore, the pub-

lie's familiarity with such conditions as muscular dystrophy, hearing loss, and limb deformities could make the elimination of treatment for many of these conditions politically untenable.

In fact, if there were to be enough public concern with the consequences of cutting treatments for well-known conditions, the State legislature could even be faced with amending SB 27 so that other measures (e.g., limiting program enrollment) would again become possible. Thus, if costs actually have been significantly underestimated, the demonstration would become an interesting test of the relative strengths in Oregon of taxpayer resistance, public opinion, and political will.

SUMMARY OF CONCLUSIONS

The State of Oregon has used a reasonable approach for the difficult task of estimating the costs of the proposed demonstration program. Most of the assumptions behind the cost analysis are defensible "best guesses" in light of the sparse information available when the analysis was done.

Nonetheless, despite the State's best efforts, its cost estimate may be low. Several important assumptions have one-sided errors; if the assumption is wrong, the result would probably be to under-rater than to overestimate program costs.

Any delay in the full implementation of the planned managed care system would probably raise costs, for example, since managed care savings are a crucial assumption of the cost estimate. Even under full implementation, managed care savings that were not as great as expected would result in higher-than-expected program costs.

In addition, the administrative difficulty of limiting use of services associated with below-the-line CT pairs in the fee-for-service sector makes moving to prepaid managed care critical to keeping costs low. (In the short run, for instance, the State may be unable to link certain medical products and services, such as home medical equipment and prescription drugs, with specific diagnoses. Although the State

accounted for some of this problem in the cost estimate, any delay in enrolling persons in managed care would exaggerate the problem.) Also, incentives for "upcoding" services into covered CT pairs is greater in the fee-for-service sector than in prepaid managed care.

Program costs could be slightly higher than expected if some "technical fixes" to the program are necessary to avoid unintentional consequences of the initial list (e.g., very effective services inadvertently grouped with ineffective ones and ranked low). Such costs could be reduced, or counterbalanced, through internal administrative measures (e.g., stricter utilization controls, eliminating outreach efforts), but only at the expense of inhibiting access to the program or its services.

The waiver cost estimate does not include any incremental costs due to including mental health and chemical dependency services in the demonstration, or any costs associated with folding into the demonstration elderly and disabled beneficiaries. Including these services and populations in the demonstration in the future would increase the total costs of the proposed program, adding another layer of uncertainty to demonstration costs that could exacerbate any cost estimation error.

Some costs external to the program, but relevant to Federal fiscal concerns, may also have been underestimated. In particular, CBO has predicted a loss of Federal tax revenues if the State implements the associated mandate requiring small businesses to provide health insurance. (This revenue loss was not accounted for in the cost analysis, although savings predicted from this mandate were included. The State maintains that Federal revenue loss from this source would be negligible.) Also, if Oregon's passage of Ballot Measure 5 decreases the State funds available to the Medicaid program, as it is predicted to do, the State maybe unable to furnish its full share of demonstration funding even if program costs have been estimated correctly.