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HI Trust Fund

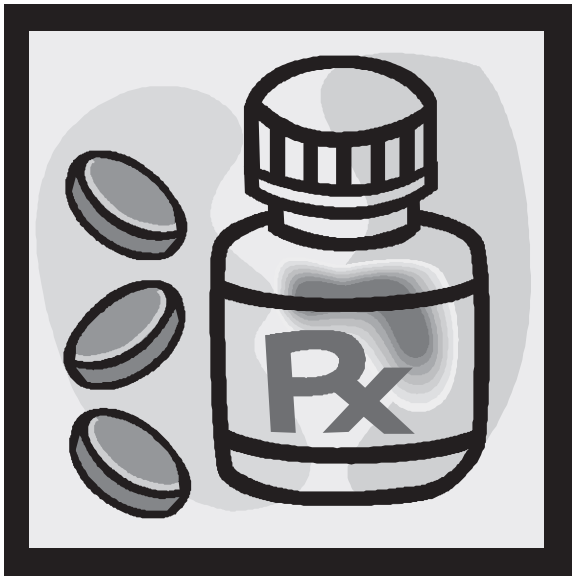
Actuarial Methodology and Principal Assumptions

Editor's Note: The following excerpt is taken from Section III.A, "Actuarial Methodology and Principal Assumptions for the Hospital Insurance Cost Estimates," in the 2003 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. Copies of the 2003 Annual Report are available from Sol Mussey (410-786-6386).

This section describes the basic methodology and assumptions used in the estimates for HI (Medicare Part A) under the intermediate assumptions. In addition, projections of program costs under two alternative sets of assumptions are presented.

Assumptions

The economic and demographic assumptions underlying the projections shown in this report are consistent with those in the 2003 Annual Report of the Board of Trustees of the Federal Old Age and Survivors Insurance and Disability Insurance Trust Funds. These assumptions are described in more detail in that report.



Program Cost Projection Methodology

The principal steps involved in projecting the future HI costs are (a) establishing the present cost of services provided to beneficiaries, by type of service, to serve as a projection base; (b) projecting increases in HI payments for inpatient hospital services; (c) projecting increases in HI payments for skilled nursing, home health and hospice services covered; (d) projecting increases in payments to managed care plans; and (e) projecting increases in administrative costs. The major emphasis is directed toward expenditures for fee-for-service inpatient hospital services, which account for approximately 71 percent of total benefits.

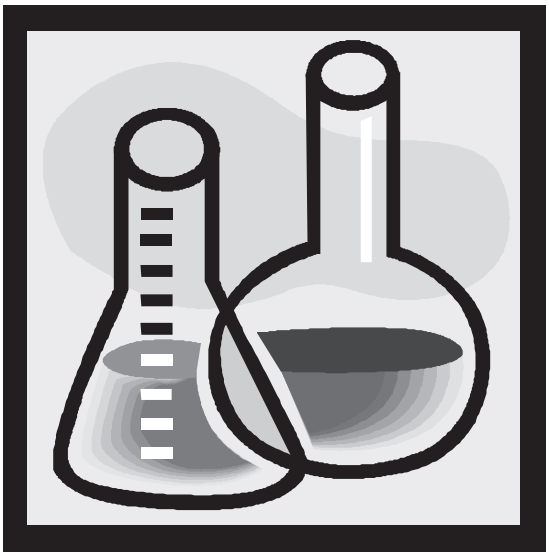
Projection Base

In order to establish a suitable base from which to project the future HI costs, the incurred payments for services provided must be reconstructed for the most recent period for which a reliable determination can be made. Therefore, payments to providers must be attributed to dates of service, rather than to payment dates. In addition, the nonrecurring effects of any changes in regulations, legislation or administration and of any items affecting only the timing and flow of payments to providers must be eliminated. As a result, the rates of increase in the incurred cost differ from the increases in cash expenditures shown in the tables in section II.B (not shown).

For those expenses still reimbursed on a reasonable cost basis, the costs for covered services are determined on the basis of provider cost reports. Due to the time required to obtain cost reports from providers, to verify these reports, and to perform audits (where appropriate), final settlements have lagged behind the original costs by as much as several years for some providers.

Additional complications are posed by changes in legislation or regulation, or in administrative or reimbursement policy, the effects of which cannot always be determined precisely.

The process of allocating the various types of HI payments made to the proper incurred period—using incomplete data and estimates of the impact of administrative actions—presents difficult problems, the solutions to which can be only approximate. Under the circumstances, the best that can be expected is that the actual HI incurred cost for a recent period can be estimated



within a few percent. This process increases the projection error directly, by incorporating any error in estimating the base year into all future years.

Fee-for-Service Payments for Inpatient Hospital Costs

Almost all inpatient hospital services covered by HI are paid under a prospective payment system. The law stipulates that the annual increase in the payment rate for each admission will be related to a hospital input price index (also known as the hospital market basket), which measures the increase in prices for goods and services purchased by hospitals for use in providing care to hospital inpatients. For the fiscal year 2003, the prospective payment rates have already been determined. For fiscal years 2004 and later, current statute mandates that the annual increase in the payment rate per admission equal the annual increase in the hospital input price index.

Increases in aggregate payments for inpatient hospital care covered under HI can be analyzed in five broad categories:

- Labor factors—the increase in the hospital input price index that is attributable to increases in hospital workers' hourly earnings (including fringe benefits).
- Nonlabor factors—the increase in the hospital input price index that is attributable to factors other than hospital workers' hourly earnings, such as the cost of energy, food and supplies.
- Unit input intensity allowance—the amount added to or subtracted from the input price index (generally as a result of legislation) to yield the prospective payment update factor.
- Volume of services—the increase in total output of units of service (as measured by hospital admissions covered by the HI program); and
- Other sources—a residual category, reflecting all other factors affecting hospital cost increases (such as intensity increases).

Table III.A1 on page 10 shows the estimated historical values of the principal components, as well as the projected trends used in the estimates. Unless otherwise indicated, the following discussions apply to projections under the intermediate assumptions. ◆

(continued on page 10)

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Table III.A1 Components of Historical and Projected Increases in HI Inpatient Hospital Payments *

	Labor			Nonlabor			Units of Service							
Calendar Year	Average Hourly Earnings	Hospital Hourly Earning Differential	Hospital Hourly Earnings	CPI	Hospital Price Differential	Nonlabor Hospital Prices	Input Price Index	Unit Input Intensity Allowance **	HI Enrollment	Managed Care Shift Effect	Admission Incidence	Calendar Year	Other sources	HI Inpatient Hospital Payment
Historical Data														
1993	1.4%	2.1%	3.5%	2.8%	-0.3%	2.5%	3.0%	-0.5%	2.1%	-0.6%	2.8%	**1993**	-1.1%	5.8%
1994	1.7	1.2	2.9	2.5	-0.4	2.1	2.7	-0.6	1.8	-1.0	2.4	**1994**	1.6	7.1
1995	3.3	-0.9	2.4	2.9	0.5	3.4	3.1	-0.7	1.7	-2.0	2.4	**1995**	0.1	4.7
1996	4.9	-2.4	2.9	2.9	-1.1	1.8	2.3	-0.5	1.4	-2.7	5.1	**1996**	1.4	7.1
1997	4.2	-2.3	1.8	2.3	-0.8	1.5	2.1	-0.8	1.1	-3.2	2.3	**1997**	-0.7	1.0
1998	5.3	-2.6	2.6	1.3	2.5	3.8	3.0	-2.6	1.0	-3.1	0.6	**1998**	0.3	-0.9
1999	4.8	-1.7	3.0	2.2	-0.1	2.1	2.5	-2.2	0.8	-1.8	1.3	**1999**	1.7	2.2
2000	6.4	-2.4	3.8	3.5	-0.5	3.0	3.8	-2.2	1.3	0.4	-0.1	**2000**	-1.5	1.7
2001	2.9	2.3	5.3	2.7	0.3	3.0	3.9	-0.9	0.8	2.2	1.6	**2001**	1.7	9.7
2002	2.8	2.1	5.0	1.4	0.2	1.6	3.3	-0.7	2.7	2.4	0.5	**2002**	1.5	10.0
Projections ++														
2003	3.4%	0.9%	4.3%	2.3%	0.2%	2.5%	3.5%	-0.4%	0.9%	0.1%	1.2%	**2003**	-0.5%	4.9%
2004	4.1	0.0	4.1	2.4	0.2	2.4	3.5	0.0	1.5	-0.1	0.1	**2004**	0.7	5.8
2005	4.2	0.2	4.4	2.7	0.0	2.7	3.7	0.0	1.6	0.2	0.0	**2005**	0.7	6.4
2006	4.4	0.2	4.6	2.9	0.0	2.9	3.9	0.0	1.4	0.9	-0.2	**2006**	0.7	6.8
2007	4.4	0.2	4.6	3.0	0.0	3.0	4.0	0.0	1.7	0.2	-0.2	**2007**	0.6	6.5
2008	4.3	0.1	4.4	3.0	0.0	3.0	4.0	0.0	1.9	0.2	-0.4	**2008**	0.7	6.4
2009	4.3	0.1	4.4	3.0	0.0	3.0	3.9	0.0	2.2	0.0	-0.3	**2009**	0.7	6.6
2010	4.2	0.1	4.4	3.0	0.0	3.0	3.9	0.0	2.5	0.0	-0.3	**2010**	0.7	6.9
2015	4.1	0.0	4.1	3.0	0.0	3.0	3.8	0.0	3.0	0.0	-0.5	**2015**	0.8	7.2
2020	4.1	0.0	4.1	3.0	0.0	3.0	3.8	0.0	3.0	0.1	-0.2	**2020**	0.8	7.5
2025	4.1	0.0	4.1	3.0	0.0	3.0	3.8	0.0	2.6	0.0	0.1	**2025**	0.9	7.5

* Percent increase in year indicated over previous year, on an incurred basis.

** Reflects the allowances provided for in the prospective payment update factors.

++ Under the intermediate assumptions

Note: Historical and projected data reflect the hospital input price index which was recalibrated to a 1992 base year in 1997.