

Trend in the Cost of Operating a Nursing Home: Analysis of Medicare Cost Reports for Skilled Nursing Facilities

Health Services Research and Evaluation
American Health Care Association

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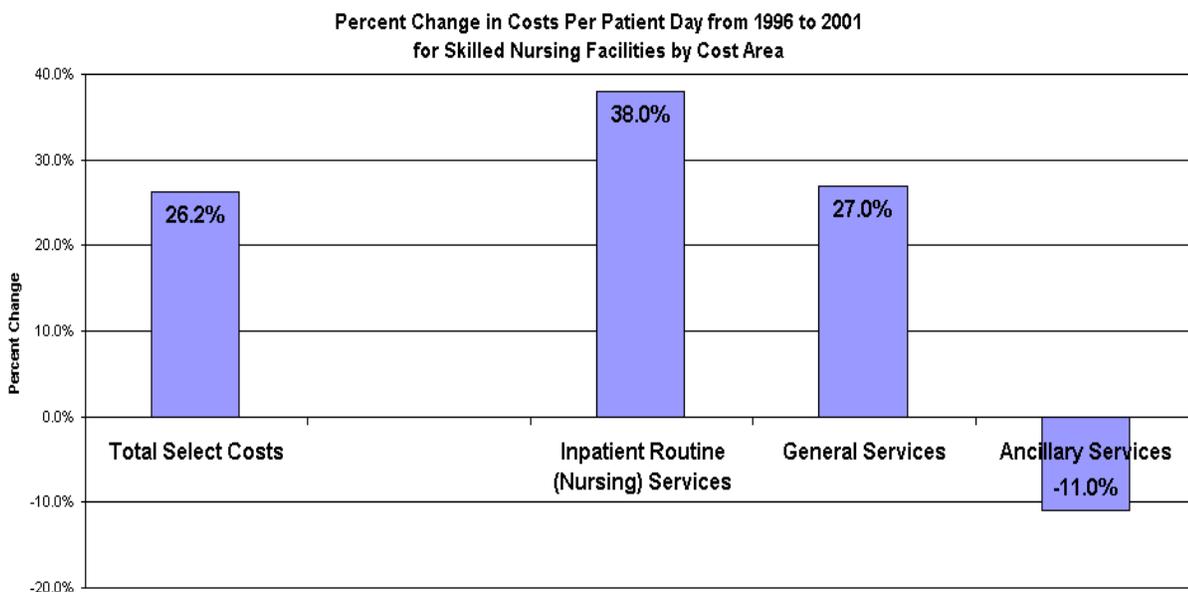
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January 26, 2004



Abstract

The magnitude of the growth in costs incurred in the operation of nursing homes is one that concerns providers, payers, and policymakers. Payment increases by Medicare and Medicaid are typically tied to the projected increase in costs. In the recent update in Medicare payments to skilled nursing facilities (SNFs) for fiscal year (FY) 2004, the Centers for Medicare and Medicaid Services (CMS) included a 3.26 percent increase to correct for the understatement of the actual cost inflation by the projected inflation used in the updates of previous years. Some consumer advocates and policymakers consider the payment increases associated with the 3.26 percent to be new funds, not the replenishing of funds already spent, and want assurances that the monies from the forecast correction will be used to increase amounts spent on direct care. The forecast correction was largely due to the underestimation of the actual increases in wages that nursing homes incurred in the provision of care. We analyzed Medicare cost reports from skilled nursing facilities across the period of FYs 1996 through 2001 to discern the growth in costs per patient day. The greatest increase in costs was in inpatient routine (nursing) services, 38% between 1996 and 2001, while general operational costs grew only 27% over the same period. Concern expressed today for assurances that the funds associated with the forecast correction are used to increase spending on direct care may imply to the uninformed that spending on direct care has not increased in nursing homes in recent years. Nothing is further from the facts as shown in our analysis. Direct care spending has outpaced other areas of spending in nursing homes. The results indicate that nursing homes have increased direct care spending substantially relative to other costs before the forecast correction was implemented. The correction appears to partially amend for the underestimation of previous market basket forecasts, and represents some, but not all, of the increase in money already spent in the past on direct care.



Analysis of SNF Medicare cost reports for facilities with cost reports for each year between 1996 through 2001 (N=3,443).

Trend in the Cost of Operating a Nursing Home: Analysis of Medicare Cost Reports for Skilled Nursing Facilities

The Empirical Issue

The magnitude of the growth in costs incurred in the operation of nursing homes is one that concerns providers, payers, and policymakers. Payment increases by Medicare and Medicaid are typically tied to the projected increase in costs. And in the recent update in Medicare payments to skilled nursing facilities (SNFs) for fiscal year (FY) 2004, the Centers for Medicare and Medicaid Services (CMS) included a 3.26 percent increase to correct for the understatement of the actual cost inflation by the projected inflation used in the updates of previous years.¹

According to CMS, the SNF market basket forecasts of inflation underestimated the actual inflation for the period of FY 2000 through FY 2002 by 3.26 percent as measured by the data for this period collected for the various cost indices in the market basket. Thus, pursuant to CMS' calculations, the base payment rate computed for FY 2003 based upon forecasts of inflation was 3.26 percent lower than it would have been, if actual data had been used. CMS acknowledges that the SNF market basket forecast underestimated the actual measured inflation because wages and benefits for nursing home workers increased more rapidly than expected.² The forecast correction constitutes funds that the SNF sector had already expended since 2000, i.e., SNFs spent substantially more on wage increases than forecasted by the market basket. The actual measured inflation was greater because it was based upon what had actually been spent during the period between FY 2000 and FY 2002.

Although the forecast correction reflects expenses already incurred, some consumer advocates and policymakers considered the payment increases associated with the 3.26 percent to be new funds, not the replenishing of funds already spent.³ They want assurances that the monies from the forecast correction will be used to increase amounts spent on direct care. Indeed, CMS at the request of Congress implemented a procedure in the Medicare cost reports to track that funds were applied to expenses related to direct care.⁴

What has been the trend in the costs of direct care? Indeed, what has the trend in the cost of operating a nursing home been generally? Both questions are relevant given the concern regarding the use of the payment increase to correct past market basket forecasts where some define the increase as "new money" rather than a recouping of expenses and debt already

¹ "Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities—Update; Final Rule," *Federal Register*, August 4, 2003, 68(149): 46036.

² "Medicare Program; Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities -- Update; Proposed Rule Notice," *Federal Register*, June 10, 2003, 68: 34768.

³ See the press release by Senator Charles Grassley on October 27, 2003 entitled, "Grassley Secures Pledges to Direct Additional Federal Dollars to Nursing Home Resident Care," available at <http://grassley.senate.gov/releases/2003/p03r10-27a.htm> (last accessed, January 22, 2004).

⁴ Centers for Medicare and Medicaid Services, Transmittal 13 (R13P235), October 1, 2003, for the Medicare Provider Reimbursement Manual Part 2, Provider Cost Reporting Forms and Instructions, Chapter 35, Form CMS-2540-96. Transmittal available at http://www.cms.gov/manuals/pm_trans/R13P235.pdf (last accessed, January 22, 2004).

incurred. To address these questions, we conducted an analysis of the costs incurred by nursing homes between 1996 and 2001 using the Medicare cost report data for SNFs provided by CMS.

Method

SNF Medicare cost reports submitted to CMS by SNF providers report operational costs and patient days enabling the calculation of costs per patient day. We are interested in the trend in overall operational costs, not the costs for a subset of patients by payer. Worksheet A of the cost report contains these overall costs categorized by different general cost centers. We tabulated allowable costs reported on Worksheet A for the cost sections of General Service, Inpatient Routine Services (nursing services), and Ancillary Services using available data from the SNF Medicare cost reports released for 1996 through 2001 by CMS in June 2003 with the new CMS database structure. We calculated total allowable costs as the sum of the costs in each of these three cost sections as well as the allowable costs within each cost area.

Appendix A contains a copy of Worksheet A and the line items within each cost section. Allowable costs are the costs defined under column 7 of Worksheet A which are calculated from the data provided for salary expenses (column 1), other expenses (column 2), the reclassification of expenses to fit the Medicare definitions of cost centers (column 4), and adjustments to expenses to reflect only costs allowable under Medicare reporting (column 6).

The purpose of this analysis is to discern the trend in costs entailed in operating a nursing facility. Our analysis focused on nursing facilities that provided 12-month cost reports for each fiscal year across the period FYs 1996 to 2001 and reported costs within each of the three cost sections in our analysis—general services, inpatient routine services, and ancillary services. Further, we edited the cases included in our analysis by removing the cases from each fiscal year representing the highest and lowest one percent of cost reports in the distribution on total select (allowable) costs per patient day (i.e., the column 7 sum of the selected cost sections divided by patient days). Providers that had cost reports excluded as outliers for any one or more fiscal years had all cost report data excluded from the final analysis. There were 3,443 facilities with the required cost reports for each fiscal year between 1996 and 2001.

The sample size does decrease with each year added to the analysis. To inspect any bias that may exist in results due to the sample size for the period 1996 to 2001, we performed analysis for the period 1996 to 2000 and for the period 1998 to 2001 using the same criterion for inclusion of facilities. There were 5,049 facilities with relevant cost reports for the period 1996 to 2000 and 5,099 for the period 1998 to 2001. If the trend line for the 3,444 facilities with cost reports across the full period of 1996 to 2001 is similar to those in the analyses covering shorter periods with larger samples, then the results are robust.

Results

Medicare costs per patient day increased by over 26% (over \$33 per patient day) between fiscal years 1996 and 2001.

Total costs, as defined, are shown in Table 1. While total costs increased from approximately \$20.4 billion to \$25.1 billion for those nursing facilities over the period, total patient days dropped from 159.4 million to 155.2 million. Taken together, the trends of increasing costs and decreasing patient days resulted in an increase in average costs per patient day from \$128.38 to \$162.05 between FY 1996 and FY 2001. The greatest inflation in total costs occurred in 2000 and 2001, 6.25% and 7.92% respectively.

Of the three cost sections from the cost report that were examined, the largest cost increases occurred in inpatient routine or nursing services, where the increase in the average cost per patient day for the period was nearly 38% (exceeding \$15 per patient day). Inpatient routine services represent services most directly tied to the care of patients. Table 2 shows inpatient routine services costs over 1996-2001. The percent change in costs for nursing services was the greatest in most of the recent years, ranging from 4.40% in 1997 to 8.41% in 2001.

TABLE 1
TOTAL SELECT COSTS
FY 1996 – 2001

	Total Select	Total	Average		1996-2001		1996-2001
	Costs	Patient days	Costs per	% Chg.	Chg.	%Chg.	Chg.
			Patient Day				
FY2001	\$25,148,312,415	155,190,026	\$162.05	7.92%	\$11.89	26.22%	\$33.67
FY2000	\$23,520,905,860	156,644,127	\$150.16	6.25%	\$8.83		
FY1999	\$22,153,206,068	156,749,517	\$141.33	1.29%	\$1.80		
FY1998	\$22,150,653,075	158,751,897	\$139.53	3.82%	\$5.14		
FY1997	\$21,444,744,218	159,569,053	\$134.39	4.68%	\$6.01		
FY1996	\$20,467,352,983	159,425,059	\$128.38				

Note: Total select costs is the sum of General Service, Inpatient Routine and Ancillary Services Costs. N = 3,443 Nursing Facilities.

TABLE 2
COSTS OF INPATIENT ROUTINE SERVICES
FY 1996 – 2001

	Total Inpatient	Total	Average		1996-2001		1996-2001
	Routine Costs	Patient days	Costs per	% Chg.	Chg.	%Chg.	Chg.
			Patient day				
FY2001	\$8,585,036,240	155,190,026	\$55.32	8.41%	\$4.29	37.95%	\$15.22
FY2000	\$7,993,489,721	156,644,127	\$51.03	7.48%	\$3.55		
FY1999	\$7,441,991,850	156,749,517	\$47.48	7.60%	\$3.35		
FY1998	\$7,004,800,725	158,751,897	\$44.12	5.39%	\$2.26		
FY1997	\$6,680,545,926	159,569,053	\$41.87	4.40%	\$1.76		
FY1996	\$6,393,260,752	159,425,059	\$40.10				

N = 3,443 Nursing Facilities

TABLE 3
COST OF GENERAL SERVICES
FY 1996 – 2001

	Total General Services Costs	Total Patient days	Average Costs per Patient day	% Chg.	Chg.	1996-2001 %Chg.	1996-2001 Chg.
FY2001	\$14,597,219,547	155,190,026	\$94.06	7.20%	\$6.31	27.01%	\$20.01
FY2000	\$13,744,819,128	156,644,127	\$87.75	5.69%	\$4.73		
FY1999	\$13,013,229,656	156,749,517	\$83.02	4.51%	\$3.59		
FY1998	\$12,610,180,880	158,751,897	\$79.43	4.30%	\$3.27		
FY1997	\$12,152,634,155	159,569,053	\$76.16	2.84%	\$2.10		
FY1996	\$11,806,154,193	159,425,059	\$74.05				

N = 3,443 Nursing Facilities

TABLE 4
COST OF ANCILLARY SERVICES
FY 1996 – 2001

	Total Ancillary Services Costs	Total Patient days	Average Costs per Patient day	% Chg.	Chg.	1996-2001 %Chg.	1996-2001 Chg.
FY2001	\$1,966,056,628	155,190,026	\$12.67	11.33%	\$1.29	-10.95%	-\$1.56
FY2000	\$1,782,597,011	156,644,127	\$11.38	5.05%	\$0.55		
FY1999	\$1,697,984,562	156,749,517	\$10.83	-32.18%	-\$5.14		
FY1998	\$2,535,671,470	158,751,897	\$15.97	-2.41%	-\$0.39		
FY1997	\$2,611,564,137	159,569,053	\$16.37	15.05%	\$2.14		
FY1996	\$2,267,938,038	159,425,059	\$14.23				

Note: N = 3,443 Providers.

The cost category showing the second largest increases over the period were general services costs. The total of these costs averaged per patient day increased by 27% (\$20 per patient day) over the period. Table 3 shows general services costs between FYs 1996 and 2001.

Ancillary services costs, however, showed a different pattern of change over the period. After a significant increase (15%) between FY 1996 and FY 1997, ancillary services costs dropped slightly (2.4%) between FY 1997 and FY 1998 and then dropped sharply (over 32%) between FY 1998 and FY 1999. The decrease coincides with the implementation of the SNF prospective payment system (PPS). Because ancillary services costs represent a lesser proportion of total costs than general services and inpatient routine (nursing) services costs, the effect of the drop in ancillary costs did not result in a drop in total costs, but rather resulted in a smaller increase for

FY 1998 in total costs. Ancillary services costs have growth 5% and over 11% in 2000 and 2001 respectively, but the average ancillary cost per patient day remains below the costs per day in the years prior to the implementation of the SNF PPS. The ancillary cost per patient day in 2001 was \$12.67 compared to a range of \$14.23 to \$16.37 in the years 1996-1998. Ancillary services costs for the period 1996-2001 are shown in Table 4.

The trend in costs is similar in the analyses restricted to the period 1998-2001 and 1996-2000 where the samples (due to fewer years in each analysis) were over 5,000 facilities. Although there are some differences in the percent change each year in cost per patient day between the cost report samples, the scope of the trend lines are similar. Appendix B contains charts comparing the trends in cost inflation for the samples available in the analysis of FYs 1996-2001, FYs 1996-2000, and FYs 1998-2001.

Conclusion

The greatest increase in costs was in inpatient routine (nursing) services, 38% between 1996 and 2001, while general operational costs grew only 27% over the same period. Concern expressed today for assurances that the funds associated with the forecast correction are used to increase spending on direct care may imply to the uninformed that spending on direct care has not increased in nursing homes in recent years. Nothing is further from the facts as shown in our analysis. Direct care spending has outpaced other areas of spending in nursing homes. The results indicate that nursing homes have increased direct care spending substantially relative to other costs before the forecast correction was implemented. The correction appears to partially amend for the underestimation of previous market basket forecasts, and represents some, but not all, of the increase in money already spent in the past on direct care.

Appendix A

Worksheet A of the SNF Medicare Cost Report

RECLASSIFICATION AND ADJUSTMENT				PROVIDER NO.:			PERIOD:		WORKSHEET A		
OF TRIAL BALANCE OF EXPENSES							FROM _____				
							TO _____				
COST CENTER (Omit Cents)				SALARIES	OTHER	TOTAL (Col 1 + Col 2)	RECLASSIFICATIONS Increase/Decrease (Fr Wkst A-6)	RECLASSIFIED TRIAL BALANCE (Col 3 +/- Col 4)	ADJUSTMENTS TO EXPENSES Increase/Decrease (Fr Wkst A-8)	NET EXPENSES FOR COST ALLOCATION (Col 5 +/- Col 6)	
A	B	C	D	1	2	3	4	5	6	7	
GENERAL SERVICE COST CENTERS											
1	0100	x	Capital-Related Costs - Building & Fixture		X		X		X	1	
2	0200	x	Capital-Related Costs - Movable Equipment		X		X		X	2	
3	0300	x	Employee Benefits	X	X		X		X	3	
4	0400	x	Administrative and General	X	X		X		X	4	
5	0500	x	Plant Operation, Maintenance and Repairs	X	X		X		X	5	
6	0600	x	Laundry and Linen Service	X	X		X		X	6	
7	0700	x	Housekeeping	X	X		X		X	7	
8	0800	x	Dietary	X	X		X		X	8	
9	0900	x	Nursing Administration	X	X		X		X	9	
10	1000		Central Services and Supply	X	X		X		X	10	
11	1100		Pharmacy	X	X		X		X	11	
12	1200		Medical Records and Library	X	X		X		X	12	
13	1300		Social Service	X	X		X		X	13	
14	1400		Intern & Residents (Apprvd Tchng Prog.)	X	X		X		X	14	
15			Other General Service Cost	X	X		X		X	15	
PATIENT ROUTINE SERVICE COST CENTERS											
16	1600	x	Skilled Nursing Facility	X	X		X		X	16	
17										17	
18	1800	x	Nursing Facility	X	X		X		X	18	
18.1	1810		Intermediate Care Facility - Mentally Retarded	X	X		X		X	18.1	
19	1900	x	Other Long Term Care	X	X		X		X	19	
20			Other Inpatient Routine Cost							20	
AMBULATORY SERVICE COST CENTERS											
21	2100	x	Radiology	X	X		X		X	21	
22	2200	x	Laboratory	X	X		X		X	22	
23	2300	x	Intravenous Therapy	X	X		X		X	23	

24	2400	x	Oxygen (Inhalation) Therapy	X	X		X		X		24
25	2500	x	Physical Therapy	X	X		X		X		25
26	2600	x	Occupational Therapy	X	X		X		X		26
27	2700	x	Speech Pathology	X	X		X		X		27
28	2800	x	Electrocardiology	X	X		X		X		28
29	2900	x	Medical Supplies Charged to Patients	X	X		X		X		29
30	3000	x	Drugs Charged to Patients	X	X		X		X		30
31	3100	x	Dental Care - Title XIX only	X	X		X		X		31
32	3200	x	Support Surfaces	X	X		X		X		32
33		x	Other Ancillary Service Cost Center	X	X				X		33

x Indicates the lines to be used under the Simplified Method

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35-3

90 (Cont.)

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12-

RECLASSIFICATION AND ADJUSTMENT OF TRIAL BALANCE OF EXPENSES				PROVIDER NO.:			PERIOD: FROM _____ TO _____		WORKSHEET A	
COST CENTER (Omit Cents)				SALARIES	OTHER	TOTAL (Col 1 + Col 2)	RECLASSI- FICATIONS Increase/Decrease (Fr Wkst A-6)	RECLASSIFIED TRIAL BALANCE (Col 3 +/- Col 4)	ADJUSTMENTS TO EXPENSES Increase /Decrease (Fr Wkst A-8)	NET EXPENSES FOR COST ALLOCATION (Col 5 +/- Col 6)
A	B	C	D	1	2	3	4	5	6	7
OUTPATIENT SERVICE COST CENTERS										
34	3400		Clinic	X	X		X		X	
35	3500		Rural Health Clinic (RHC)	X	X		X		X	
36			Other Outpatient Service Cost	X	X		X		X	
OTHER NONREIMBURSABLE COST CENTERS										
37	3700		Administrative and General - HHA	X	X		X		X	
38	3800		Skilled Nursing Care - HHA	X	X		X		X	
39	3900		Physical Therapy - HHA	X	X		X		X	
40	4000		Occupational Therapy - HHA	X	X		X		X	
41	4100		Speech Pathology - HHA	X	X		X		X	
42	4200		Medical Social Services - HHA	X	X		X		X	
43	4300		Home Health Aide - HHA	X	X		X		X	
44	4400		Durable Medical Equipment - Rented - HHA	X	X		X		X	

45	4500		Durable Medical Equipment - Sold - HHA	X	X		X		X		45
46	4600		Home Delivered Meals - HHA	X	X		X		X		46
47	4700		Other Home Health Services - HHA	X	X		X		X		47
48	4800		Ambulance	X	X		X		X		48
49	4900		Intern and Resident (Not Apprvd Tchng Prog)	X	X		X		X		49
50	5000		Outpatient Rehabilitation Provider	X	X		X		X		50
51			Other Reimbursable Cost	X	X		X		X		51
SPECIAL PURPOSE COST CENTERS											
52	5200		Malpractice Premiums & Paid Losses	X	X		X		X		52
53	5300		Interest Expense		X		X		X	- 0 -	53
54	5400	x	Utilization Review -- SNF	X	X		X		X	- 0 -	54
55	5500		Hospice	X	X		X		X	- 0 -	55
56		x	Other Special Purpose Cost	X	X		X		X		56
57	5700		Subtotals	X	X		X		X		57
NON REIMBURSABLE COST CENTERS											
58	5800		Gift, Flower, Coffee Shops and Canteen	X	X		X		X		58
59	5900	x	Barber and Beauty Shop	X	X		X		X		59
60	6000		Physicians' Private Offices	X	X		X		X		60
61	6100		Nonpaid Workers	X	X		X		X		61
62	6200		Patients Laundry	X	X		X		X		62
63		x	Other Non Reimbursable Cost	X	X		X		X		63
75		x	TOTAL	X	X				X		75

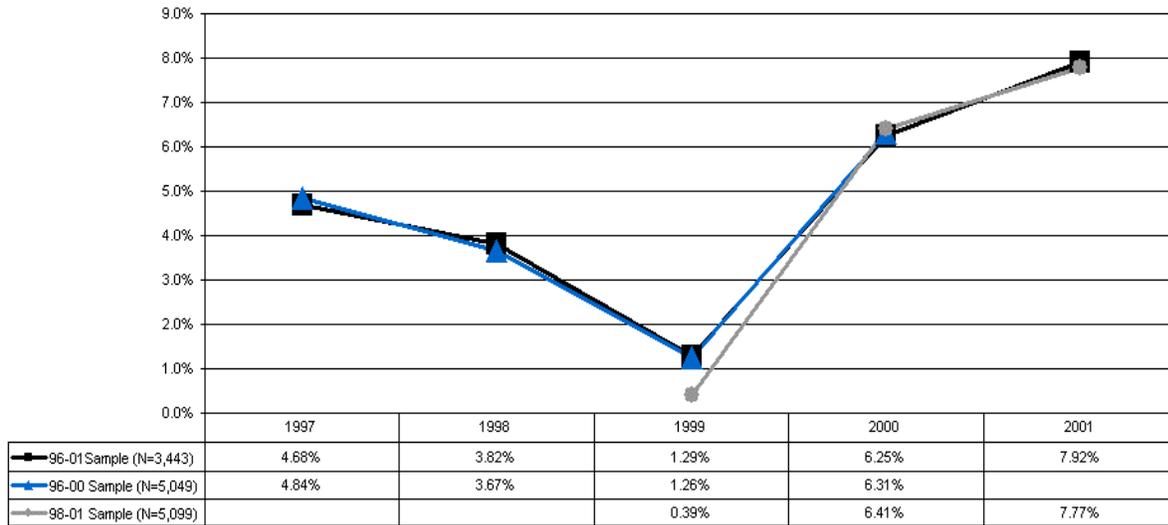
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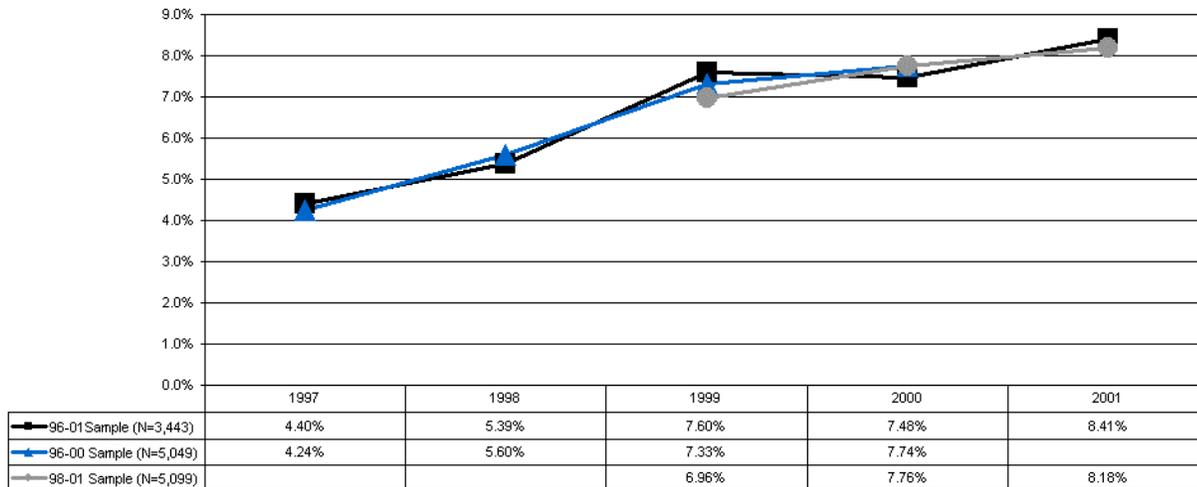
Appendix B

Comparison of Trend in Costs Across the Samples for Fiscal Years 1996-2001, 1996-2000, and 1998-2001

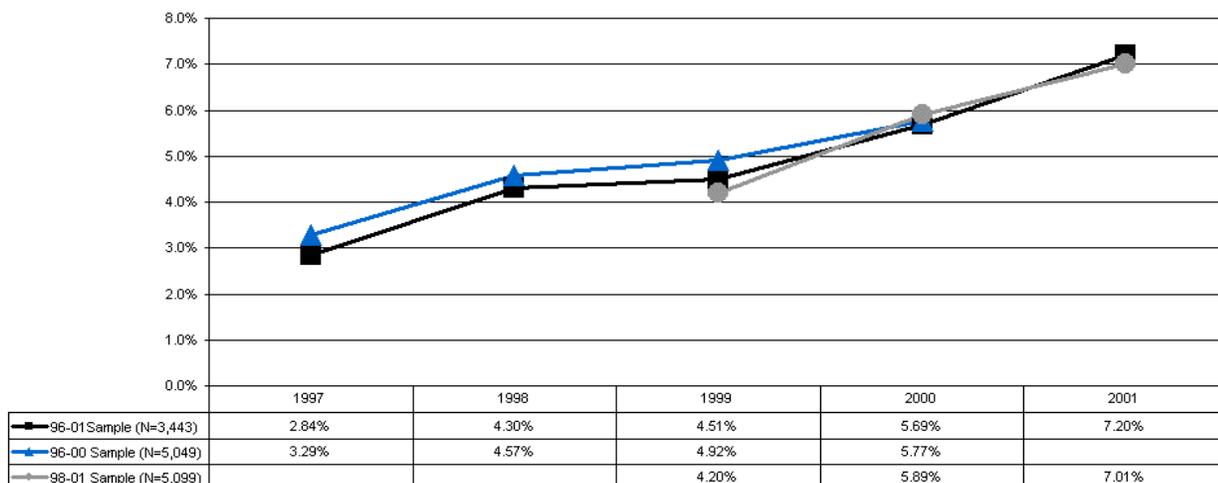
Percent Change in Total Select Cost Per Patient Day by Cost Report Sample



Percent Change in Inpatient Routine (Nursing) Services Cost Per Patient Day by Cost Report Sample



Percent Change in General Services Cost Per Patient Day by Cost Report Sample



Percent Change in Ancillary Services Cost Per Patient Day by Cost Report Sample

