

EXHIBIT 4.1 Cost by Diagnosis

Aggregate Costs for Hospital Stays by Principal Diagnosis, 1997, 2003, and 2009

PRINCIPAL CCS DIAGNOSIS	TOTAL INFLATION-ADJUSTED [†] HOSPITAL COSTS IN BILLIONS: 2009 DOLLARS			COST PER STAY			AVERAGE ANNUAL GROWTH IN AGGREGATE COSTS 1997-2009
	1997	2003	2009	1997	2003	2009	
All diagnoses	\$229.6	\$324.3	\$361.5	\$6,600	\$8,500	\$9,200	3.9%
Septicemia	\$4.3	\$5.7	\$15.4	\$10,300	\$14,800	\$18,500	11.3%
Osteoarthritis	\$4.9	\$8.2	\$13.6	\$11,800	\$14,000	\$14,800	8.8%
Coronary atherosclerosis	\$15.3	\$18.2	\$13.4	\$10,900	\$14,500	\$16,100	-1.1%
Liveborn (newborn infant)	\$8.3	\$10.7	\$11.6 ‡	\$2,200	\$2,600	\$2,800	2.8%
Acute myocardial infarction	\$9.6	\$13.1	\$11.5	\$13,100	\$17,500	\$18,200	1.5%
Complication of device, implant or graft	\$5.8	\$9.5	\$11.4	\$11,800	\$16,000	\$17,000	5.8%
Congestive heart failure	\$7.0	\$11.4	\$10.7 ‡	\$7,000	\$10,200	\$10,400	3.6%
Pneumonia	\$9.3	\$11.5	\$10.5	\$7,600	\$8,800	\$9,000	1.0%
Spondylosis, intervertebral disc disorders, and other back problems	\$3.6	\$7.1	\$9.9	\$6,700	\$10,900	\$15,100	8.8%
Respiratory failure	\$3.5	\$5.3	\$8.1	\$17,400	\$22,000	\$21,400	7.4%
Cardiac dysrhythmias	\$3.7	\$6.9	\$7.5 ‡	\$6,500	\$9,800	\$9,300	6.1%
Acute cerebrovascular disease	\$5.7	\$7.0	\$7.4 ‡	\$9,200	\$12,500	\$13,400	2.3%
Complication of surgical procedures or medical care	\$3.0	\$5.1	\$6.1	\$8,600	\$11,200	\$11,800	5.9%
Chronic obstructive pulmonary disease and bronchiectasis	\$3.5	\$4.6	\$5.4	\$6,300	\$7,400	\$7,400	3.8%
Biliary tract disease	\$3.5	\$4.6	\$4.8 ‡	\$7,600	\$10,000	\$10,100	2.8%
Rehabilitation care, fitting of prostheses, and adjustment of devices	\$3.9	\$4.9 ‡	\$4.8 ‡	\$10,000	\$10,700	\$11,800	1.8%
Diabetes mellitus with complications	\$2.9	\$4.3	\$4.6 ‡	\$7,000	\$8,900	\$8,700	3.9%
Fracture of neck of femur (hip)	\$3.3	\$4.0	\$4.4	\$10,100	\$13,000	\$14,300	2.3%
Mood disorders	\$3.3	\$4.2	\$4.3 ‡	\$5,100	\$5,200	\$4,900	2.4%
Heart valve disorders	\$2.6	\$3.4	\$4.2 ‡	\$27,200	\$35,400	\$36,700	4.2%

[†] Adjusted for inflation using the GDP deflator (<http://www.bea.gov/national/nipaweb/SelectTable.asp>, Table 1.1.4. Price Indexes for Gross Domestic Product).

[‡] Inflation-adjusted hospital costs are not statistically different from previously reported year shown on table at p<0.05.

Note: Aggregate costs for residual codes and those not elsewhere classified are not shown here. As a result, aggregate costs for all body systems may be larger than the sum of the component parts.

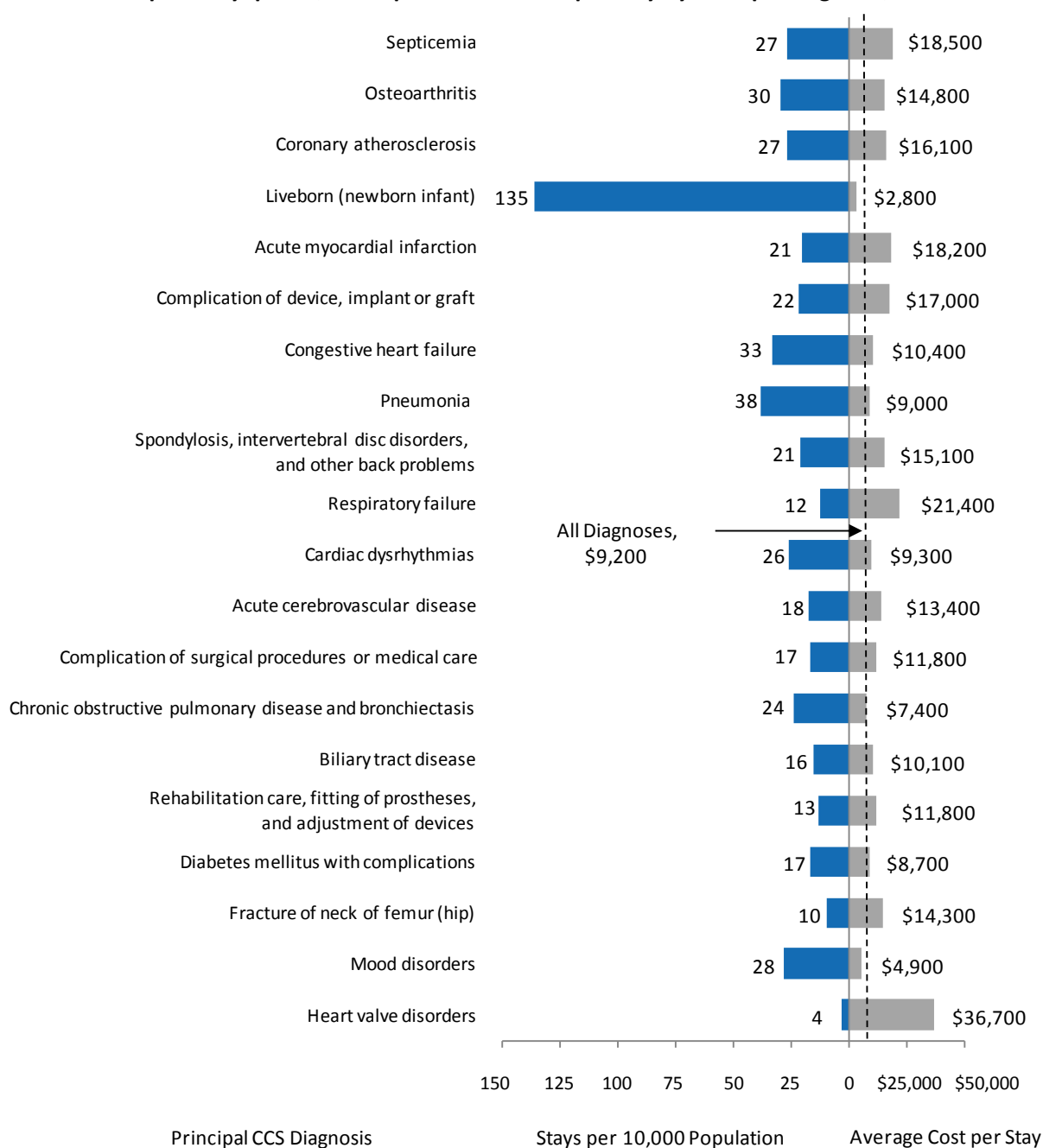
Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 1997, 2003, and 2009.

This table presents the twenty conditions with the highest total costs in 2009. For each condition, the aggregate cost and the cost per stay are shown for 1997, 2003, and 2009; the average annual growth in aggregate costs between 1997 and 2009 is also provided.

- Inflation-adjusted aggregate costs for community hospital stays for all diagnoses rose from \$229.6 billion in 1997 to \$361.5 billion in 2009.
- The top three conditions with the highest aggregate costs—septicemia, osteoarthritis, and coronary atherosclerosis—accounted for more than 11 percent of all hospital costs in 2009.
 - Septicemia was the most expensive condition in 2009, and among these most expensive conditions, its costs grew the fastest between 1997 and 2009.
- Five of the twenty most expensive conditions were cardiovascular: coronary atherosclerosis, acute myocardial infarction, congestive heart failure, acute cerebrovascular disease, and cardiac dysrhythmias.
 - With the exception of costs of stays for congestive heart failure and cardiac dysrhythmias, the costs for these cardiovascular diagnoses grew at a slower pace than total hospital costs between 1997 and 2009.

- Three of the twenty most expensive conditions were musculoskeletal: osteoarthritis, spondylosis, intervertebral disc disorders, and other back problems, and fracture of neck of femur (hip).
 - Costs for osteoarthritis and spondylosis grew at more than twice the pace of total hospital costs between 1997 and 2009.
- Between 1997 and 2009, costs for septicemia, osteoarthritis and spondylosis grew at two to three times the rate of total hospital costs. Costs for coronary atherosclerosis, acute myocardial infarction and pneumonia grew at a slower pace than overall costs.

Hospital Stays per 10,000 Population and Cost per Stay by Principal Diagnosis, 2009



Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2009.

The figure above shows the rate of hospital stays and the average cost per stay for the twenty conditions with the highest total inpatient costs in 2009. Conditions are ordered by the aggregate costs of inpatient stays.

- Hospital stays for septicemia cost a total of \$15.4 billion and occurred at a rate of 27 stays per 10,000 population. The average cost per stay was \$18,500, about twice as much as the average cost for all stays.
- There were 135 hospital stays for liveborn (newborn infants) for every 10,000 population. These stays were responsible for \$11.6 billion in hospital costs; each stay cost an average of \$2,800.

- Stays for mood disorders cost a total of \$4.3 billion; there were 28 of these stays per 10,000 population. This diagnosis had the lowest average cost per stay (\$4,900) after liveborn (newborn infants).