AHIP

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Recent Trends in Hospital Prices in California and Oregon

LIST OF FIGURES, TABLES AND APPENDICES

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SUMMARY

Price inflation can be very hard to measure in the U.S. health care system. Many available measures of health care costs or charges fall short of capturing true prices – amounts actually paid by insurers – for particular health care services.

This report presents new data on the growth of hospital prices in California and Oregon. To our knowledge, these are the only states that systematically report transaction prices for hospital services paid by private insurers over a relatively long period of time.

Using data from California's Office of State Health Planning and Development (OSHPD) for major payer groups (such as Medicare and commercial insurers), we can track trends in prices for very general categories of service, such as hospital inpatient days or hospital "discharges" (a term for a unique hospital stay that may include several days from admission to discharge of one patient). The California price data in this report are from 2000-2009.

The state of Oregon now publishes actual transaction prices[1] for an array of detailed hospital services – such as appendix removal and knee joint replacement – paid by the state's nine largest commercial health insurance plans. Oregon price data from 2005-2009 are now available from the Office for Oregon Health Policy and Research (OHPR).

Here are some highlights of the California and Oregon price trends:

- In California, transaction prices for a day in the hospital (or a discharge) paid by commercial insurers increased by more than 150 percent between 2000 and 2009 (an average annual growth rate of 11 percent per year).

[1] Oregon reports insurers' average aggregate allowed charges, which may be paid in part by patients through deductibles, copayments or coinsurance amounts. Allowed charges are generally based on insurers' negotiated rates, and are thus a measure of the total effective price of the hospital service for insured patients.

- In Oregon, hospital prices faced by commercial insurers for common discharge categories also grew very rapidly between 2005 and 2009:

	2005-2009 Price Increase
Appendix removal:	53%
Balloon angioplasty without heart attack:	38%
Cesarean delivery:	55%
Hip joint replacement:	51%
Normal newborn:	49%
Pneumonia:	44%
Upper spine and neck procedures:	57%
Vaginal delivery:	69%
Vaginal hysterectomy (excluding cancer or non-malignant tumor):	63%

	2005-2009 Average Annual Rate of Price Inflation
Appendix removal:	11.3%
Balloon angioplasty without heart attack:	8.4%
Cesarean delivery:	11.5%
Hip joint replacement:	10.9%
Normal newborn:	10.4%
Pneumonia:	9.6%
Upper spine and neck procedures:	11.9%
Vaginal delivery:	14.0%
Vaginal hysterectomy (excluding cancer or non-malignant tumor):	12.9%

As with any measure of prices over time, the California and Oregon data may over- or under-state true price trends if the underlying service being measured (such as a day in the hospital or a hospital stay to remove an appendix) is itself changing in quality or in the basic nature of how the service is performed. For example, if the way a procedure is done changes over time – requiring more or fewer resources – the observed transaction price of a hospital stay for that procedure could reflect more than a true price change.

Likewise, the data in each state are subject to reporting errors and missing values, and results for particular years or individual hospitals may be subject to considerable uncertainty. However, the California data for general price trends by type of payer and the Oregon prices for specific hospital services seem consistent with other recent studies. We believe the results presented here represent a reasonable approximation of price increases affecting commercial health plans in those states.

ISOLATING THE GROWTH OF HEALTH CARE PRICES

What is really driving health insurance costs? Health insurance premiums are based on more than prices. Nationwide premium increases are based on changes in the total cost of covering a group of people, which can include increased prices, a higher volume of services, and changes in care patterns. Changes in the underlying demographics of a group – especially age and health status – in turn, can affect the volume and mix of services.

Broad measures of health costs, such as total national health expenditures (NHE), are also affected by the numbers of persons covered. In a recession, the growth of health spending may decelerate because fewer people are insured and thus may not have ready access to health care services, regardless of trends in the cost of coverage.

For example, growth in total private insurance premiums in the NHE accounts has fallen to 3 percent in 2008, and is projected to grow slowly in 2009 (3 percent) and 2010 (4 percent).[2] However, alternative measures of underlying cost growth per covered enrollee, such as the new Healthcare Economic Indices compiled by Standard & Poor's, show much more rapid growth: a 7 percent annual rate for the 12 months ending in August 2010 (5 percent cost growth for Medicare and 9 percent for commercial insurance).[3]

Health insurance plans can use case management and benefit design to counteract trends toward higher health costs per enrollee, including special programs for patients with chronic illnesses and incentives to help patients better manage their own care and stay well. For example, plans can use tiered networks and health savings accounts (HSAs) to give patients incentives to try generic drugs. Care coordination programs can help improve primary care and reduce duplicative tests. Post-discharge follow-up programs for patients who have been hospitalized can reduce preventable readmissions.

However, in recent years, the prices of some health care services have accelerated to the point that they cannot be offset by improvements in care management and changes in benefit design. In many parts of the country, price increases for a unit of service – such as a day in the hospital – are now driving a large share of the increase in health costs.

Unfortunately, the regular price indexes that we use for most other goods and services – the Consumer Price Indexes and Producer Price Indexes – are not much help for assessing the prices of covered health care benefits. For example, the CPI for Medical Care (CPI-M) is designed to measure the inflation rate for consumer out-of-pocket health costs. Therefore, the CPI-M mainly measures prices for health care services that are *not* covered by insurance. The CPI-M contains some elements for insured benefit costs, since consumers pay a share of their premiums and have out-of-pocket costs for coinsurance and deductibles. However, the main components of the CPI-M are prices for non-covered goods and services, such as over-the-counter medications and supplies, dental services, and eyeglasses.

[2] NHE Projections 2009-2019. Centers for Medicare and Medicaid Services. https://www.cms.gov/NationalHealthExpendData/downloads/proj2009.pdf. Accessed November 2010.

[3] S&P Healthcare Economic Composite Index. Standard & Poor's. 21 October 2010. In addition to changes in enrollment, aggregate premiums may grow faster or slower than underlying health costs because benefit packages are changing or because administrative costs are changing. For example, total administrative and "net" costs of private insurance in the NHE data have fallen as a percentage of premiums in recent years. This has reduced the growth of premiums in the NHE account below the rate at which benefit expenses are growing.

Likewise, hospital charges are not a good indicator of actual price changes. Several states require hospitals to report their charge lists. However, hospital charges can be highly artificial, and thus are not a very useful measure of actual costs for hospital services. For example, the average charge for one 325 mg acetaminophen (Tylenol) tablet among 10 of the largest hospitals in California was approximately $7.50 in 2010. (In one California hospital, the charge for one 325 mg tablet of Tylenol ranged from $0.29 to $13.12 in 2010, depending on the hospital department and which charge code was used.)

But obviously, $7.50 is a highly inflated price for one Tylenol tablet. At the time of this publication, the drug store chain CVS is advertising a 100 tablet bottle of Tylenol 325 mg tablets for $8.49, which is about 8 cents per pill. So the California hospital price of Tylenol is roughly 90 times the retail price for consumers purchasing in drug stores. (According to the CVS Web site, store-brand acetaminophen is even less expensive.)

Hospital prices are affected by changes in uncompensated care provided to uninsured patients and by changes in reimbursement rates paid by public insurance programs, such as Medicare and Medicaid. Some hospitals may be able to "cost-shift," by increasing prices for privately insured patients if payment rates from public programs were reduced or their number of uninsured patients rose. For example, a study prepared for the Oregon Office of Health Policy and Research estimated that 6 to 9 percent of the cost of private health insurance in the state may be related to issues of uncompensated care.[4]

[4] K. John McConnell and Neal Wallace, Oregon's Cost-Shift: The Effect of Public Insurance Coverage on Uncompensated Care, http://www.oregon.gov/OHPPR/docs/OR_Uncom_Care-McConnell.pdf?ga=t.

TRANSACTION PRICES FOR HOSPITAL SERVICES IN OREGON AND CALIFORNIA

To get a more realistic look at actual prices for hospital services, we must turn to data on actual reimbursements for a unit of service.

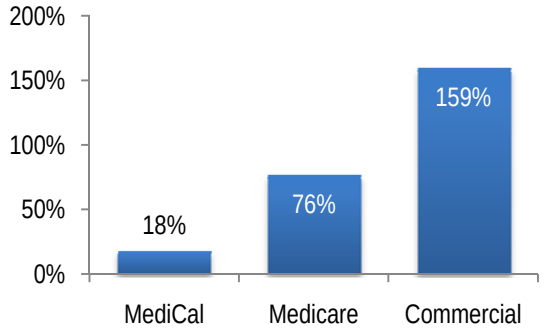
California publishes hospital costs per inpatient day and per discharge[5] for each major type of payer, including Medicare, Medicaid (called Medi-Cal in the state) and other programs for the indigent, and private insurance plans. These are not charges; rather, they are actual revenues received by hospitals from each payer group. The raw data are published by the state's Office of State Health Planning and Development (OSHPD). We limited the dataset for this report to include only those acute care hospitals in California with continuously reported data for 2000-2009. We did not include long-term or specialty hospitals, because their price accounting or care systems are not comparable. Kaiser Permanente is not included in the OSHPD data.

The units of service measured in the California reimbursement data are days and "discharges" (hospital stays, possibly over several days), the nature or character of which can change over time. For example, if a hospital has fewer medical discharges and more surgical discharges over time, the cost impact (higher or lower) would be reflected in reimbursements per day or per discharge.

Thus, the prices reported below are prices for a day in the hospital, or for an average discharge based on the hospital's patient mix.

[5] Although they do not have identical meanings, the terms hospital "discharge" and "admission" can be used interchangeably when referring to basic counts of hospitalizations.

Figure 1. Statewide Absolute Growth in Net Inpatient Revenue per Day, California Hospitals, 2000-2009



Source: State of California, Office of Health Planning and Development (OSHPD). Calculations by AHIP Center for Policy and Research.

Figure 2a. Oregon Statewide Average Reimbursement for Normal Vaginal Delivery, 2005-2009

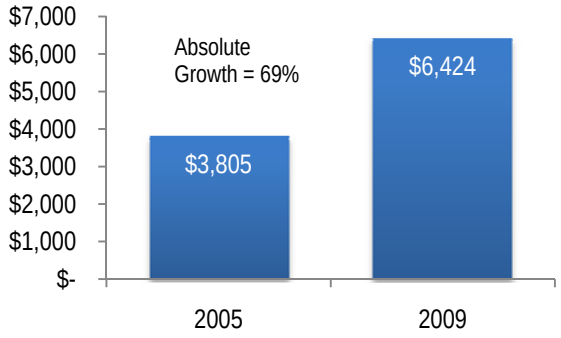
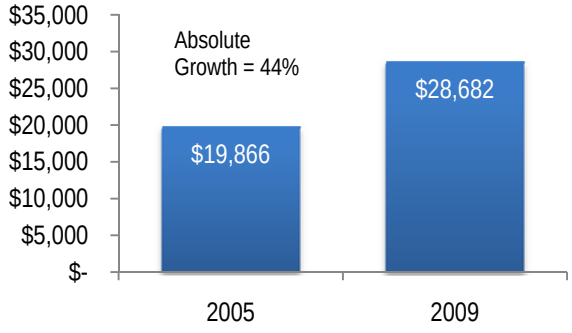


Figure 2b. Oregon Statewide Average Reimbursement for Knee Joint Replacement, 2005-2009



Source: Office for Oregon Health Policy and Research (OHPR).
Note: Data from nine private health insurance plans.

Oregon reports actual allowed payments (including both the insurance reimbursement and any patient liability) for hospital discharges associated with certain major diagnosis codes, such as normal childbirth and coronary artery bypass surgery, from the state's nine largest health insurance plans. The Oregon data reflect prices for a particular type of hospital discharge without regard to how many days patients averaged in the hospital for those conditions. Thus, the Oregon data reflect the transaction price of a specific episode of inpatient care.

California Hospital Costs by Payer. Table 1 (see page 8) shows inpatient revenues per day and per admission by payer for Medi-Cal and other programs for the indigent, Medicare, and private health insurance plans in California over the last 10 years. In California, changes in hospital prices paid by private insurers may be affected by changes in Medi-Cal losses, Medicare losses, and the number of uninsured patients.

Between 2000 and 2009, Medicare inpatient revenue per hospital day grew by 76 percent. That is about 6.5 percent per year – faster than general price inflation, but not unusual in health care in recent years. However, during the same period, inpatient revenue per day for Medi-Cal and other programs for people with low incomes grew by only 18 percent – approximately 2 percent per year. The Medi-Cal program is the lowest paying Medicaid program in the nation. Inpatient revenues from commercial insurance per patient day during the period 2000-2009 grew by a whopping 159 percent, more than 11 percent per year (see Figure 1).

The combination of slow growth in reimbursements from Medi-Cal and moderately growing Medicare payments has likely played a major role in the rapid growth of prices charged to private insurers. Some hospital systems and their affiliated physician groups

have attained dominant market shares in their regions, and they have used their market power to drive up hospital prices for private plans. For example, one dominant hospital system in northern California costs private health insurance plans 44 percent more (inpatient reimbursement per discharge) than the state average for private plans in 2009. However, this "cost-shift" to private payers may not be sustainable.

Appendix A provides technical information on how the trends in the California OSHPD data were computed.

Oregon Hospital Price Data for Types of Admissions. Price growth is especially pronounced in California, but it is not unique. For example, in Oregon, the average reimbursement rate from the state's largest nine health plans to hospitals for childbirth – a normal vaginal delivery – has increased from $3,800 in 2005 to roughly $6,400 in 2009, an average price increase of 14 percent each year (see Figure 2a). The price of knee joint replacement has risen from approximately $19,900 in 2005 to about $28,700 in 2009, a 10 percent average annual price increase (see Figure 2b). These are actual reimbursements paid by private insurers in the state driven in part by Medicaid payment shortfalls and the uninsured.

Table 2 (see page 9) shows changes in average transaction prices from the nine largest health plans in Oregon for the most common diagnosis related groups (DRGs) between 2005 and 2009.[6]

Table 3 (see page 10) shows average prices for three common women's health services – cesarean delivery, vaginal delivery, and hysterectomy – for several of the largest individual hospitals in the state.

Appendix B provides additional details on statewide average prices for common DRGs in Oregon in the 2005-2009 period, and also for the most recent year of growth, 2008-2009.

DISCUSSION

Hospital price trends in California may be a reflection of provider market power and low Medi-Cal reimbursements affecting prices paid by private insurers. As hospitals faced lower payments from Medi-Cal, and more uninsured patients, many appear to have been successful in passing much of the cost to private payers.[7]

The California OSHPD data track hospitals' complete financial reporting; we converted these aggregated accounts into annual rates such as net inpatient revenues per hospital day, by major payer category. The California data appear to be comprehensive in the most recent years. However, in the earlier years, our analysis has found some discontinuities and possible missing or incomplete datapoints. We believe therefore, that the California data are best suited for a more general look at trends in prices by broad categories of payers. It appears that missing datapoints and possible changes in reporting at the individual hospital level are distributed fairly randomly over the years 2000-2009, and are therefore unlikely to substantially affect the state's overall trends reported here.

[6] The codes used to group discharges in these data are identified through version 25 DRG codes, and were linked by the state of Oregon to different DRG versions as the codes have changed over time.

[7] For a discussion, see Robert A. Berenson, Paul B. Ginsburg, and Nicole Kemper, "Unchecked Provider Clout In California Foreshadows Challenges To Health Reform," *Health Affairs*, April 2010; 29(4): 699-705.

It is possible that the underlying level of service provided for each hospital day or discharge is changing, and thus the increases in prices are also reflecting added consumer benefits. For example, California hospitals are required by law to retrofit their facilities to achieve greater earthquake protection. A series of studies by the Rand Corporation has variously estimated the cost of construction for this additional protection at $40 billion to $110 billion.[8] Thus the reported California prices may reflect significant service improvements.

The Oregon hospital data are reported directly as average transaction prices from the largest health plans for each service. Thus, even if data are missing from some hospitals or years for certain services, the average reimbursement rates would not be affected. Moreover, because the data are specific for each type of discharge, we believe that changes in the underlying level of service are unlikely to greatly affect the trends. A cesarean delivery in 2009 is basically the same procedure as a cesarean delivery was in 2005. It is also possible that some discharge categories in Oregon reflect additional or enhanced services over the course of time. However, because of the specificity of the Oregon data, this is likely a relatively small issue.

Neither state's dataset allows us to distinguish prices associated with in-network reimbursements versus out-of-network hospital claims. This may be particularly important, since the popularity of out-of-network benefits expanded considerably in the last decade.

In some cases, hospital reimbursement rates could be affected by cooperative arrangements with health insurance plans to improve patient care. For example, health plans have been leading efforts to improve transitional care after patients are discharged from hospitals and thereby reduce readmissions. Hospital readmission rates in the Medicare population are somewhat lower in Oregon than many other states and the nation as a whole.[9]

In a series of reports and working papers, AHIP has documented the success of efforts to reduce readmissions among the Medicare population enrolled in private comprehensive health plans known as Medicare Advantage plans.[10] However, we have no time trend data for Oregon at this point that allows us to check for a trend toward lower readmission rates among private plan enrollees in Oregon that is coincident with the trend toward higher prices seen in this report. A key area for future research will be to examine whether observed price increases for hospital services are being accompanied by increases in quality and improved patient care.

[8] Charles Meade and Jonathan Kulich, RAND Corporation, SB 1953 and the Challenge of Hospital Seismic Safety in California, California Health Foundation (January 2007), available at http://www.chcf.org/~/media/Files/PDF/S/PDF%20SB1953Report.pdf.

[9] A study of readmission rates in Medicare's traditional fee-for-service program found a 30-day rate of 15.7 percent in Oregon and a nationwide rate of 19.6 percent in 2004. Jencks, S., Williams, M., and Coleman, E., "Rehospitalizations in the Medicare Fee-for-Service Program," *New England Journal of Medicine* (April 2, 2009), available at http://content.nejm.org/cgi/content/full/360/14/1418.

[10] For more recent data on 30-day readmission rates in Medicare's fee-for-service program in 2006-2008 by state, please see AHIP Center for Policy and Research, *Using AHRQ's 'Revisit' Data to Estimate 30-Day Readmission Rates in Medicare Advantage and the Traditional Fee-for-Service Program* (October 2010), Appendix A, http://www.ahipresearch.org/pdfs/AHRQ_revisit_readmission_rates_10-12-10.pdf.

Table 1. Medicare, Medi-Cal, and Commercial Revenue per Day and per Discharge, All "Comparable" California Hospitals, 2000-2009

	Net Inpatient Revenue per Day			Annual Percent Change		
	Medi-Cal*	Medicare	Commercial	Medi-Cal*	Medicare	Commercial
2000	1,431	1,402	1,954			
2001	1,459	1,457	2,181	2%	4%	12%
2002	1,510	1,581	2,506	3%	9%	15%
2003	1,519	1,639	2,913	1%	4%	16%
2004	1,590	1,681	3,393	5%	3%	16%
2005	1,647	1,818	3,674	4%	8%	8%
2006	1,483	1,964	3,973	-10%	8%	8%
2007	1,509	2,077	4,239	2%	6%	7%
2008	1,576	2,219	4,612	4%	7%	9%
2009	1,686	2,465	5,061	7%	11%	10%
2000-2009 Growth	18%	76%	159%			
2000-2009 Avg. Annual Growth	2%	6%	11%			
	Net Inpatient Revenue per Discharge			Annual Percent Change		
	Medi-Cal*	Medicare	Commercial	Medi-Cal*	Medicare	Commercial
2000	8,842	8,324	8,240			
2001	9,257	8,798	9,263	5%	6%	12%
2002	9,472	9,559	10,865	2%	9%	17%
2003	9,499	9,871	12,738	0%	3%	17%
2004	10,102	10,162	14,531	6%	3%	14%
2005	10,262	10,800	15,810	2%	6%	9%
2006	9,513	11,493	16,983	-7%	6%	7%
2007	9,766	12,007	17,921	3%	4%	6%
2008	10,052	12,841	19,788	3%	7%	10%
2009	10,453	14,168	20,800	4%	10%	5%
2000-2009 Increase (Percent)	18%	70%	152%			
2000-2009 Avg. Annual Growth	2%	6%	11%			

Source: State of California, Office of State Health Planning and Development (OSHPD) – tabulations by AHIP Center for Policy and Research.
Note: OSHPD data on comparable hospitals do not include data from Kaiser Permanente hospitals, or certain specialty hospitals, such as long-term or psychiatric hospitals.
*Includes other programs paying for care for the indigent.

Table 2. Average Price of Selected Procedures, Data from Nine Private Health Insurance Plans, Oregon Hospitals, 2005-2009

		2005		2009		2005-2009	
	DRG v25	Number of Cases	Average Price	Number of Cases	Average Price	Absolute Increase	Average Annual Increase
Appendix removal	225	661	$9,037	781	$13,867	53%	11.3%
Balloon angioplasty without heart attack	175	479	$18,922	304	$26,161	38%	8.4%
Cardiac catheterization for heart disease	192	204	$10,784	189	$13,560	26%	5.9%
Cesarean delivery	540	2,055	$7,701	2,576	$11,906	55%	11.5%
Complications of pregnancy	566	275	$3,787	258	$6,506	72%	14.5%
Coronary bypass with angioplasty or cardiac catheter	165	82	$43,458	92	$63,985	47%	10.2%
Fusion of lower spine vertebra	304	273	$31,853	273	$49,460	55%	11.6%
Heart attack	190	142	$10,114	139	$14,837	47%	10.1%
Hernia procedures except inguinal, femoral & umbilical	227	97	$10,951	125	$17,957	64%	13.2%
Hip joint replacement	301	496	$19,233	667	$29,098	51%	10.9%
Knee joint replacement	302	636	$19,866	1,004	$28,682	44%	9.6%
Mastectomy procedures	362	109	$11,155	153	$19,683	76%	15.3%
Normal newborn	640	3,969	$1,425	6,289	$2,119	49%	10.4%
Peptic ulcer	241	125	$7,664	131	$10,674	39%	8.6%
Pneumonia	139	431	$6,726	489	$9,692	44%	9.6%
Poisoning by medications	812	141	$5,630	204	$7,565	34%	7.7%
Procedures for hip and femur fractures, except joint replacement	308	111	$11,936	112	$19,391	62%	12.9%
Septicemia & disseminated infections*	720	67	$20,322	141	$29,231	44%	9.5%
Surgical repair of female reproductive system	514	173	$7,812	135	$13,126	68%	13.9%
Surgical repair of herniated/ruptured disc	310	658	$9,108	458	$13,199	45%	9.7%
Upper spine and neck procedures	321	367	$16,183	374	$25,417	57%	11.9%
Vaginal delivery	560	4,412	$3,805	5,242	$6,424	69%	14.0%
Vaginal hysterectomy, excluding cancer or non-malignant tumor	513	1,315	$8,682	1,228	$14,128	63%	12.9%

Source: Office for Oregon Health Policy and Research (OHPR).
Note: APR-DRGs, version 25. Except as noted, the DRGs reported are for Minor/Moderate severity indicators.
*Major/Extreme severity indicator.

Table 3. Average Price of Procedures Related to Women's Health, Data from Nine Private Health Insurance Plans, Various Oregon Hospitals, 2005-2009

	2005	2009	2005-2009	
	Average Price	Average Price	Absolute Increase (Percent)	Average Annual Increase
Cesarean Delivery				
Hospital A	$7,767	$14,329	84%	17%
Hospital B	$6,362	$10,762	69%	14%
Hospital C	$7,359	$13,849	88%	17%
Hospital D	$8,063	$11,367	41%	9%
Hospital E	$7,941	$12,164	53%	11%
Hospital F	$7,112	$11,941	68%	14%
Hospital G	$7,876	$11,171	42%	9%
Hospital H	$7,756	$11,215	45%	10%
Hospital I	$8,130	$12,875	58%	12%
Vaginal Delivery				
Hospital A	$3,739	$6,509	74%	15%
Hospital B	$3,767	$6,336	68%	14%
Hospital C	$3,985	$6,361	60%	12%
Hospital D	$3,965	$5,893	49%	10%
Hospital E	$3,960	$6,236	57%	12%
Hospital F	$3,514	$6,471	84%	16%
Hospital G	$3,966	$7,769	96%	18%
Hospital H	$3,954	$6,076	54%	11%
Hospital I	$4,036	$7,617	89%	17%
Vaginal Hysterectomy, Excluding Cancer or Non-Malignant Tumor				
Hospital A	$8,683	$17,378	100%	19%
Hospital B	$8,063	$9,942	23%	5%
Hospital C	$8,130	$16,011	97%	18%
Hospital D	$8,446	$12,525	48%	10%
Hospital E	$8,349	$13,644	63%	13%
Hospital F	$7,478	$15,075	102%	19%
Hospital G	$9,029	$11,407	26%	6%
Hospital H	$8,324	$14,134	70%	14%
Hospital I	$7,737	$13,659	77%	15%

Source: Office for Oregon Health Policy and Research (OHPR).
Note: Mild/Moderate severity indicators for these types of hospitalizations.

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APPENDIX A

OSHPD Data Notes

THE CALIFORNIA "ALL YEARS" DATASET FROM OSHPD ANNUAL AND QUARTERLY REPORTS

In order to study trends in hospital revenue and other factors in California, we constructed an "All Years" data file from individual year files on the OSHPD website.[11] We used the data sheets for the hospital Annual Financial Data Pivot Profiles for 1995-2008, and quarterly filings for 2009.[12]

A dataset suitable for analysis of trends over time required a considerable amount of data filtering and cleaning. In general, the results prior to 2000 were less detailed. Therefore, we only used hospital data from 2000-2009 to compute the trends in this report.

First, we filtered the data to include only "comparable" facilities that provide general acute care. We removed 1,113 cases to delete those facilities that were not designated by OSHPD as "general acute."

Type of Care Provided ("TYPE_CARE")	
General Acute	5,326
Psychiatric	696
Specialty	417
Total cases*	6,439

* Note that the "total cases" is not the number of different hospitals; rather it represents all hospitals for all years, 1995 through 2008.

Then we removed 283 cases to delete those facilities that were not designated as "comparable," using the OSHPD definition, which includes all hospitals that submitted a full annual financial disclosure report (i.e., without any reporting modifications). Please note that there may have been additional "comparable" facilities in the full dataset, but that were removed when we deleted non-acute care cases. Those hospitals designated as "non-comparable" have unique characteristics and have been granted modifications to the annual reporting requirements. We excluded these data in order to avoid inaccurate or misleading information that may result from including those facilities.

Type of Hospital ("TYPE_HOSP")	
Comparable	5,043
Kaiser	246
LTC Emphasis	8
Other Non-Comparable	20
State	9
Total cases*	5,326

* Note that the "total cases" is not the number of different hospitals; rather it represents all hospitals for all years, 1995 through 2008.

With these exclusions, the resulting dataset had 409 unique facility numbers. Of those, 246 appear in each year with no apparent errors; 163 of the facility numbers do not appear in each year. We have 670 unique facility names, 390 of which appear in each year with no apparent errors; 280 of those facility numbers do not appear in each year.

In many cases, there were apparent mismatches between facility numbers and names. Often these were relatively minor differences in the reporting of a hospital name and were easily corrected. For example, Table A-1 shows changes in the hospital name associated with one hospital facility code during the 1995-2008 period. In the case of this facility, the facility name apparently changed once, possibly due to a merger. The name was also

[11] http://www.oshpd.ca.gov/HID/Products/Hospitals/AnnFinanData/PivotProfles/default.asp.

[12] Annual data for 2009 have subsequently been published by OSHPD; the differences between the final annual data and the preliminary quarterly data used for this report are minimal and do not substantially affect the trend rates of growth.

Table A-1. Changes in Hospital Names, 1995-2008

Year	Reported Hospital Name
1995	Brookside Hospital
1996	Brookside Hospital
1997	Brookside Hospital
1998	Doctors Medical Center
1999	Doctors Medical Center
2000	N/A
2001	Doctors Medical Center
2002	Doctors Medical Center
2003	Doctors Medical Center
2004	Doctors Medical Center
2005	Doctors Medical Ctr
2006	Doctors Medical Ctr
2007	Doctors Medical Ctr
2008	Doctors Medical Ctr - San Pablo

reported several different ways (e.g., "Ctr" versus "Center") and one year of data was missing (2000). In other cases, the same facility number appeared for two different names in the same year. In some cases, the same facility name shows up once in each year, but has a different facility number in various years. There were even a handful of cases where a facility (same name/same number) was recorded twice in the same year.

Where data problems seemed obvious and corrections appropriate, we cleaned the dataset accordingly. However, in some cases, data errors may remain. We did not attempt to interpolate or estimate missing datapoints. Given the size of the dataset, we believe that the large-scale trend results would likely not be greatly affected by any remaining uncorrected data problems, and the problems themselves seemed to "wash out" randomly in many cases.

PAYER CATEGORIES

The payer categories reported by OSHPD have been combined to those seen in this report. For years 2000-2008, the County, Indigent, Medi-Cal Managed Care, and Medi-Cal Traditional categories were combined into a single "Medi-Cal" category. In 2009, the newly-reported County Managed Care category was also considered "Medi-Cal." For all years, the "Medicare" category shows data for both Medicare Managed Care and Traditional (Fee-for-Service) Medicare. The "Commercial" category in the report combines the OSHPD categories "Other Third Party Traditional" and "Other Third Party Managed Care."

APPENDIX B

Number of Discharges and Yearly Growth in Average Payment per Patient Discharge, Statewide, All Reporting Oregon Hospitals, 2005 and 2009, and 2008-2009

Table B-1. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2005 and 2009

DRG Description	DRG Code v25	2005 Number of Discharges, Statewide	2005 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2005-2009
Abdominal pain	251	153	$6,164	136	$7,321	19%
Appendix removal	225	661	$9,037	781	$13,867	53%
Balloon angioplasty with heart attack	174	272	$22,986	335	$29,786	30%
Balloon angioplasty without heart attack	175	479	$18,922	304	$26,161	38%
Bipolar disorders	753	233	$6,964	199	$11,084	59%
Cardiac arrhythmia	201	248	$6,240	256	$7,368	18%
Cardiac catheterization for circulatory disorders	191	38	$11,144	56	$16,663	50%
Cardiac catheterization for heart disease	192	204	$10,784	189	$13,560	26%
Cardiac valve procedures w/o cardiac catheter	163	70	$44,318	88	$62,912	42%
Cellulitis and bacterial skin infections	383	229	$6,201	322	$9,167	48%
Cesarean delivery	540	2,055	$7,701	2,576	$11,906	55%
Chemotherapy	693	221	$13,244	281	$15,072	14%
Chronic obstructive pulmonary disease	140	163	$7,291	142	$10,616	46%
Complications of pregnancy	566	275	$3,787	258	$6,506	72%
Complications with medical care with OR procedure	711	47	$17,048	56	$21,746	28%
Complications with medical care without OR procedure	721	103	$10,748	119	$12,787	19%
Congestive heart failure	194	184	$7,625	151	$10,447	37%
Coronary heart disease	198	223	$6,937	140	$6,961	**
Coronary bypass with angioplasty or cardiac catheter	165	82	$43,458	92	$63,985	47%
Coronary bypass without angioplasty or cardiac catheter	166	111	$34,309	86	$47,779	39%
Diabetes	420	157	$5,233	201	$8,225	57%
Disorders of blood vessels outside the heart and brain *	197	26	$9,013	52	$18,686	107%
Disorders of the pancreas, excluding cancer	282	154	$10,499	232	$11,325	8%
Diverticulitis	244	180	$6,738	161	$10,096	50%
Fusion of lower spine vertebra	304	273	$31,853	273	$49,460	55%
Heart attack	190	142	$10,114	139	$14,837	47%

Table B-1. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2005 and 2009 (continued)

DRG Description	DRG Code v25	2005 Number of Discharges, Statewide	2005 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2005-2009
Hernia procedures except inguinal, femoral & umbilical	227	97	$10,951	125	$17,957	64%
Hip joint replacement	301	496	$19,233	667	$29,098	51%
Hysterectomy for non-malignant tumor	519	529	$8,365	505	$13,753	64%
Intestinal obstruction	247	213	$6,160	259	$9,129	48%
Kidney and urinary tract infections	463	162	$5,238	151	$7,735	48%
Knee joint replacement	302	636	$19,866	1,004	$28,682	44%
Laparoscopic removal of gall bladder	263	315	$10,891	417	$16,834	55%
Laparoscopic repair of abdominal adhesions	224	64	$15,368	44	$26,378	72%
Major depressive disorders and psychoses	751	374	$6,187	376	$9,506	54%
Major kidney and urinary tract procedures, excluding cancer	443	66	$13,413	111	$18,782	40%
Major procedures for lymphatic/ hematopoietic/other cancers	680	15	$26,026	33	$20,870	-20%
Major procedures for prostate cancer and male genital disorders	480	203	$12,014	404	$16,517	37%
Major procedures on esophagus, stomach, and duodenum	220	76	$17,491	103	$24,903	42%
Major procedures on lungs	120	47	$23,983	62	$33,733	41%
Major procedures on small and large intestines	221	453	$21,081	486	$27,930	32%
Mastectomy procedures	362	109	$11,155	153	$19,683	76%
Nausea and vomiting	249	227	$4,769	212	$7,531	58%
Non-specific chest pain	203	325	$4,870	159	$7,395	52%
Normal newborn	640	3,969	$1,425	6,289	$2,119	49%
Other back and neck disorders, fractures, and injuries	347	196	$10,652	190	$14,863	40%
Other digestive system diagnoses	254	177	$6,943	201	$9,417	36%
Other knee and lower leg procedures	313	303	$11,793	342	$20,703	76%
Other nervous system symptoms and disorders	058	77	$15,950	94	$15,568	-2%
Other procedures on blood vessels	173	89	$18,261	88	$28,520	56%
Other procedures on esophagus, stomach, and duodenum	222	74	$12,822	91	$17,801	39%
Other procedures on lungs	121	77	$16,207	78	$25,901	60%

Table B-1. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2005 and 2009 (continued)

DRG Description	DRG Code v25	2005 Number of Discharges, Statewide	2005 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2005-2009
Other procedures on small and large intestines	223	95	$16,451	113	$21,421	30%
Other respiratory diagnoses, excl. signs, symptoms & minor diagnoses	143	66	$6,467	75	$11,024	70%
Peptic ulcer	241	125	$7,664	131	$10,674	39%
Plaque removal from blood vessels	024	86	$16,379	92	$25,708	57%
Pneumonia	139	431	$6,726	489	$9,692	44%
Poisoning by medications	812	141	$5,630	204	$7,565	34%
Procedures for cancer of urinary organs or kidneys	442	60	$17,307	77	$24,303	40%
Procedures for hip and femur fractures, except joint replacement	308	111	$11,936	112	$19,391	62%
Procedures to open the skull	021	105	$23,470	112	$32,779	40%
Pulmonary embolism	134	125	$8,771	164	$11,316	29%
Renal failure *	460	88	$14,036	149	$15,428	10%
Respiratory failure *	133	65	$18,889	81	$22,272	18%
Septicemia & disseminated infections *	720	67	$20,322	141	$29,231	44%
Shoulder, arm, and forearm procedures	315	199	$11,622	214	$18,784	62%
Stroke	045	154	$9,162	207	$12,597	37%
Surgical repair of female reproductive system	514	173	$7,812	135	$13,126	68%
Surgical repair of herniated/ruptured disc	310	658	$9,108	458	$13,199	45%
Upper spine and neck procedures	321	367	$16,183	374	$25,417	57%
Vaginal delivery	560	4,412	$3,805	5,242	$6,424	69%
Vaginal hysterectomy, excluding cancer or non-malignant tumor	513	1,315	$8,682	1,228	$14,128	63%

Source: Office for Oregon Health Policy and Research (OHPR).
Note: APR-DRGs, version 25. Except as noted, the DRGs are for Minor/Moderate severity indicators.
* Major/Extreme severity indicator.
** Less than 0.5 percent.

Table B-2. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2008 and 2009

DRG Description	DRG Code v25	2008 Number of Discharges, Statewide	2008 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2008-2009
Abdominal pain	251	136	$9,018	136	$7,321	-19%
Alcohol abuse & dependence	775	104	$8,280	77	$9,222	11%
Appendix removal	225	833	$13,112	781	$13,867	6%
Asthma	141	160	$6,542	175	$6,601	1%
Balloon angioplasty with heart attack	174	392	$25,991	335	$29,786	15%
Balloon angioplasty without heart attack	175	492	$22,909	304	$26,161	14%
Bipolar disorders	753	236	$11,118	199	$11,084	**
Bone marrow transplant	003	25	$78,479	28	$79,044	1%
Cardiac catheterization for circulatory disorders	191	64	$13,540	56	$16,663	23%
Cardiac catheterization for heart disease	192	175	$12,211	189	$13,560	11%
Cardiac pacemaker implant w/o AMI, heart failure, or shock	171	53	$24,925	56	$24,000	-4%
Cardiac valve procedures w/o cardiac catheter	163	128	$56,170	88	$62,912	12%
Cellulitis and bacterial skin infections	383	354	$8,598	322	$9,167	7%
Cesarean delivery	540	2,568	$10,362	2,576	$11,906	15%
Chemotherapy	693	347	$14,621	281	$15,072	3%
Chronic obstructive pulmonary disease	140	142	$9,351	142	$10,616	14%
Complications of pregnancy	566	225	$5,482	258	$6,506	19%
Complications with medical care with OR procedure	711	80	$20,303	56	$21,746	7%
Complications with medical care without OR procedure	721	120	$11,271	119	$12,787	13%
Concussion or uncomplicated intracranial injury	057	56	$15,506	60	$13,029	-16%
Congestive heart failure	194	142	$8,792	151	$10,447	19%
Coronary heart disease	198	170	$6,074	140	$6,961	15%
Coronary bypass with angioplasty or cardiac catheter	165	105	$56,054	92	$63,985	14%
Coronary bypass without angioplasty or cardiac catheter	166	155	$39,304	86	$47,779	22%
Diabetes	420	242	$7,622	201	$8,225	8%
Disorders of blood vessels outside the heart and brain *	197	47	$17,951	52	$18,686	4%

Table B-2. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2008 and 2009 (continued)

DRG Description	DRG Code v25	2008 Number of Discharges, Statewide	2008 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2008-2009
Disorders of the pancreas, excluding cancer	282	222	$10,898	232	$11,325	4%
Diverticulitis	244	214	$9,085	161	$10,096	11%
Foot and toe procedures	314	70	$15,507	51	$15,899	3%
Fusion of lower spine vertebra	304	284	$45,516	273	$49,460	9%
Gall bladder removal, except laparoscopic	262	54	$20,146	45	$21,174	5%
Head trauma with coma or hemorrhage	055	52	$12,665	70	$13,292	5%
Heart attack	190	166	$12,924	139	$14,837	15%
Hernia procedures except inguinal, femoral & umbilical	227	11	$24,034	125	$17,957	-25%
Hip & femur procedures, except joint replacement	309	83	$16,645	71	$18,188	9%
Hip joint replacement	301	654	$25,630	667	$29,098	14%
Hysterectomy for non-malignant tumor	519	510	$12,022	505	$13,753	14%
Hysterectomy for non-ovarian cancer	512	91	$15,160	95	$16,575	9%
Inflammatory bowel disease	245	111	$9,762	111	$12,723	30%
Intestinal obstruction	247	232	$8,744	259	$9,129	4%
Intracranial hemorrhage	044	29	$15,477	31	$17,089	10%
Kidney and urinary tract infections	463	189	$6,994	151	$7,735	11%
Knee joint replacement	302	983	$25,199	1,004	$28,682	14%
Laparoscopic removal of gall bladder	263	462	$15,102	417	$16,834	11%
Laparoscopic repair of abdominal adhesions	224	60	$22,901	44	$26,378	15%
Major blood/immunity disorders	660	130	$12,255	126	$10,527	-14%
Major chest & respiratory trauma	135	48	$13,010	54	$14,104	8%
Major depressive disorders and psychoses	751	415	$9,538	376	$9,506	**
Major digestive system infections	248	83	$11,219	91	$15,205	36%
Major kidney and urinary tract procedures, excluding cancer	443	102	$17,422	111	$18,782	8%
Major lung infections *	137	34	$17,501	59	$19,753	13%
Major pancreas, liver and shunt procedures	260	43	$29,036	36	$27,146	-7%
Major procedures for prostate cancer and male genital disorders	480	376	$14,828	404	$16,517	11%
Major procedures on lungs	120	61	$35,006	62	$33,733	-4%
Major procedures on small and large intestines	221	499	$26,555	486	$27,930	5%

Table B-2. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2008 and 2009 (continued)

DRG Description	DRG Code v25	2008 Number of Discharges, Statewide	2008 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2008-2009
Mastectomy procedures	362	159	$15,468	153	$19,683	27%
Nausea and vomiting	249	249	$7,224	212	$7,531	4%
Newborn 2000-2499g w/ other problem	626	93	$7,057	104	$6,759	-4%
Newborn 500-1000g underweight	614	42	$37,086	68	$34,681	-6%
Newborn with other significant condition	639	107	$9,193	106	$10,544	15%
Newborn with respiratory disorder	634	63	$22,953	51	$18,235	-21%
Non-specific chest pain	203	244	$6,261	159	$7,395	18%
Normal newborn	640	5,786	$1,965	6,289	$2,119	8%
Other anemias and disorders of blood	663	71	$7,446	82	$9,234	24%
Other back and neck disorders, fractures, and injuries	347	133	$12,818	190	$14,863	16%
Other complications of treatment	813	67	$9,608	80	$9,740	1%
Other digestive system diagnoses	254	196	$8,599	201	$9,417	10%
Other knee and lower leg procedures	313	429	$16,562	342	$20,703	25%
Other musculoskeletal system diagnoses	351	106	$10,438	116	$16,582	59%
Other musculoskeletal system procedures	320	51	$15,386	48	$16,646	8%
Other nervous system symptoms and disorders	058	80	$10,786	94	$15,568	44%
Other procedures on blood vessels	173	123	$27,372	88	$28,520	4%
Other procedures on esophagus, stomach, and duodenum	222	104	$15,204	91	$17,801	17%
Other procedures on lungs	121	76	$22,399	78	$25,901	16%
Other procedures on small and large intestines	223	95	$18,016	113	$21,421	19%
Other respiratory diagnoses, excl. signs, symptoms & minor diagnoses	143	94	$8,938	75	$11,024	23%
Peptic ulcer	241	133	$10,488	131	$10,674	2%
Plaque removal from blood vessels	024	84	$22,743	92	$25,708	13%
Pneumonia	139	416	$8,782	489	$9,692	10%
Poisoning by medications	812	222	$7,059	204	$7,565	7%
Procedure for other complications of treatment	791	73	$17,937	71	$18,595	4%
Procedures for cancer of urinary organs or kidneys	442	75	$20,089	77	$24,303	21%

Table B-2. Number of Discharges and Average Payment per Patient, Statewide, All Reporting Oregon Hospitals, 2008 and 2009 (continued)

DRG Description	DRG Code v25	2008 Number of Discharges, Statewide	2008 Average Payment per Patient, Statewide	2009 Number of Discharges, Statewide	2009 Average Payment per Patient, Statewide	Absolute Growth in Average Payment per Patient, Statewide, 2008-2009
Procedures for hip and femur fractures, except joint replacement	308	116	$18,679	112	$19,391	4%
Procedures to open the skull	021	201	$29,391	112	$32,779	12%
Pulmonary embolism	134	153	$11,415	164	$11,316	-1%
Rehabilitation *	860	142	$30,053	161	$26,613	-11%
Renal failure *	460	162	$12,930	149	$15,428	19%
Respiratory failure *	133	91	$23,838	81	$22,272	-7%
Seizure	053	160	$7,011	179	$7,535	7%
Septicemia & disseminated infections *	720	136	$29,510	141	$29,231	-1%
Shoulder, arm, and forearm procedures	315	283	$15,840	214	$18,784	19%
Spinal procedures	023	86	$16,293	54	$20,059	23%
Stroke	045	210	$11,519	207	$12,597	9%
Surgical repair of female reproductive system	514	156	$11,340	135	$13,126	16%
Surgical repair of herniated/ruptured disc	310	615	$10,818	458	$13,199	22%
Tendon, muscle & other soft tissue procedures	317	57	$13,054	72	$14,706	13%
Thyroid, parathyroid & thyroglossal procedures	404	149	$10,799	90	$13,325	23%
Upper spine and neck procedures	321	427	$23,201	374	$25,417	10%
Urethral & transurethral procedures	446	87	$11,427	75	$12,760	12%
Vaginal delivery	560	5,683	$5,493	5,242	$6,424	17%
Vaginal delivery with sterilization	541	172	$8,921	155	$10,124	13%
Vaginal hysterectomy, excluding cancer or non-malignant tumor	513	1,203	$12,388	1,228	$14,128	14%

Source: Office for Oregon Health Policy and Research (OHPR).
Note: APR-DRGs, version 25. Except as noted, the DRGs are for Minor/Moderate severity indicators.
* Major/Extreme severity indicator.
** Less than 0.5 percent.

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