

# Preventable Hospitalizations in California:

STATEWIDE AND COUNTY TRENDS (1997-2003)



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
HEALTHCARE QUALITY AND ANALYSIS DIVISION  
HEALTHCARE OUTCOMES CENTER



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**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
HEALTHCARE QUALITY AND ANALYSIS DIVISION**

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Additional copies of the report can be obtained through the OSHPD Web site ([www.oshpd.ca.gov](http://www.oshpd.ca.gov)).

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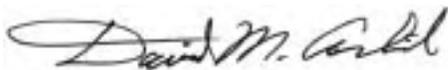
## **PREFACE**

### **NOVEMBER 2005**

Potentially preventable hospitalizations place a burden on our inpatient care systems and cost insurers, businesses, and patients unnecessary pain and expense. The California Office of Statewide Health Planning and Development, in step with national healthcare leaders and health research organizations, is trying to better understand these events with the goal of reducing their occurrence. Towards that goal, this report provides statewide and county rates for preventable hospital admissions in 2003 and shows how these have changed over time. The report also shows how these events relate to the insurance coverage of patients. We need to benchmark and monitor preventable admissions in California so that our success or failure in critical health policy areas such as providing universal healthcare coverage for infants and treating the ever-growing number of patients with diabetes can be measured.

This is the second OSHPD report that employs the Prevention Quality Indicators, created by the US Agency for Healthcare Research and Quality, to understand California healthcare issues. The first report, published in 2003, applied these indicators to understanding racial and ethnic healthcare disparities in California. The current report contains three sections and uses the indicators to identify hospital admissions for 15 different conditions. The first section presents age-sex adjusted hospital admission rates for conditions at the state level from 1997-2003. The second section provides the same information for all 58 California counties. The third section provides statewide patient insurance coverage information by condition.

This report is unique for OSHPD in that much of its information is intended for county officials such as public health officers and others who help maintain local access to healthcare services for county residents. Most prior OSHPD reports have provided information on the quality of healthcare provided by hospitals. We hope that this report will provide useful information on how state and local policies have affected admission rates for potentially preventable hospital admissions in the last seven years and provide benchmarks for measuring future progress in reducing such admissions.



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## INTRODUCTION

This report provides state and county level hospital admission rates for 15 health conditions over a 7-year period from 1997 to 2003. The 15 conditions are serious but potentially preventable admissions referred to as ambulatory care sensitive conditions (ACSCs) because their occurrence is sensitive to treatment received in the outpatient or ambulatory care setting. Avoiding or reducing such admissions should result in reduced healthcare costs as well as reduced morbidity and suffering for patients with these diseases.

ACSCs are distinct conditions for which timely intervention and high quality outpatient care can potentially prevent the need for hospitalization. The Agency for Healthcare Research and Quality (AHRQ) developed the Prevention Quality Indicators (PQIs) as a tool for tracking these conditions. The PQIs were designed to identify community healthcare needs in the outpatient setting, providing information on the quality of the healthcare system outside the hospital. However, they are not intended to be stand-alone measures of community healthcare quality. The complete definition of these indicators and additional background information are available at: [www.oshpd.ca.gov/HQAD/Outcomes/index.htm](http://www.oshpd.ca.gov/HQAD/Outcomes/index.htm) (AHRQ, 2004). The conditions are:

- **Diabetes Short-Term Complications/Uncontrolled:** *including diabetic ketoacidosis, hyperosmolarity, coma, and uncontrolled diabetes.*
- **Diabetes Long-Term Complications:** *including renal, eye, neurological, and circulatory disorders.*
- **Lower Extremity Amputation among Diabetes Patients:** *caused by infection, neuropathy, and microvascular disease.*
- **Pediatric Asthma:** *the most common chronic childhood disease.*
- **Pediatric Gastroenteritis:** *inflammation of the stomach and intestines.*
- **Low Birth Weight:** *birth weight less than 2,500 grams.*
- **Adult Asthma:** *patients 18 years or older.*
- **Chronic Obstructive Pulmonary Disease:** *including emphysema and bronchitis.*
- **Bacterial Pneumonia:** *inflammation of the lungs caused by infection.*
- **Hypertension:** *abnormally high blood pressure, excluding cardiac procedures.*
- **Congestive Heart Failure:** *failure to maintain adequate circulation of blood, excluding cardiac procedures.*
- **Angina without Procedure:** *chest pain symptomatic of coronary artery disease, excluding cardiac procedures.*
- **Dehydration:** *insufficient fluid intake (hypovolemia).*
- **Perforated Appendix:** *perforation or abscess of appendix.*
- **Urinary Tract Infection:** *bacterial infection that begins in the urinary system.*

With access to quality, community-based preventive and outpatient care, the risk of such hospitalizations should be reduced. For example, patients are less likely to be hospitalized for asthma if they have access to outpatient care providers who adhere to established guidelines and prescribe appropriate treatments. Patients with diabetes are less likely to be hospitalized if their conditions are adequately monitored and they receive the patient education needed for timely self-management. A high hospital admission rate for these conditions may also be indicative of deficiencies in outpatient management and follow-ups. Affordable access to outpatient care is essential in avoiding these types of hospitalizations.

## **DATA AND METHODS**

The principal data source for this report is the OSHPD Patient Discharge Data for the years 1997-2003. These data are an administrative abstract of all patient records for each hospital stay in California. OSHPD and its predecessor organizations have been collecting patient discharge data since 1983 and all California licensed hospitals are included in this database.

To make hospital admission rates more comparable among counties where population characteristics vary significantly, 13 of the 15 rates were adjusted for the age and sex of each county's population. Perforated appendix rates were adjusted for the age and sex of patients with appendicitis. Low birth weight was not adjusted. This standardization allows for comparisons across counties as if each county had the same age and sex distribution.

For more details on the data and methods used in this report, see Appendix A.

## **STATEWIDE TRENDS IN ACSC RATES**

Changes in statewide admission rates for ACSCs from 1997 through 2003 have not been dramatic, with three exceptions (see Table 1). The percent of patients hospitalized for unstable angina, who did not receive a medical procedure, declined by 48 percent during this period. This trend was seen across virtually all counties. This decrease may reflect stricter thresholds for hospital admission (some cases are treated in emergency rooms), more aggressive treatment of unstable angina utilizing invasive procedures such as angioplasty, better treatment of angina in the community, or a combination of these factors (ACC/AHA, 2003).

The second largest percentage decrease in admissions over time occurred in pediatric gastroenteritis (22.6%) followed by pediatric asthma (18.0%). Conversely, admissions for adult asthma increased by approximately 3 percent. The large percentage decrease in rates for both pediatric measures is noteworthy. This finding appears to support the contention that increased enrollment in Medi-Cal and Healthy Families during these years has improved pediatric care in California. A recent UCLA Center for Health Policy Research study shows the number of uninsured children in California fell from 1.5 million in 2001 to 1.1 million in 2003 (Brown and Lavarreda, 2004).

**TABLE 1: ACSC ADMISSION RATES PER 100,000 POPULATION, 1997 AND 2003**

ACSC	1997	2003	Change
Diabetes Short-Term Complications/Uncontrolled	57.7	60.6	5.03%
Diabetes Long-Term Complications	103.9	112.4	8.18%
Lower Extremity Amputation among Diabetes Patients	32.5	34.1	4.92%
Pediatric Asthma	163.7	134.2	-18.02%
Pediatric Gastroenteritis	79.3	61.4	-22.57%
Low Birth Weight*	47.2	49.2	4.24%
Adult Asthma	95.0	97.7	2.84%
Chronic Obstructive Pulmonary Disease	209.4	185.3	-11.51%
Bacterial Pneumonia	280.4	306.8	9.42%
Hypertension	28.0	30.3	8.21%
Congestive Heart Failure	434.0	408.0	-5.99%
Angina without Procedure	90.9	47.0	-48.29%
Dehydration	98.3	100.5	2.24%
Perforated Appendix**	34.0	31.0	-8.82%
Urinary Tract Infection	122.7	130.4	6.28%

ACSC: Ambulatory Care Sensitive Conditions

\* Per 1,000 births

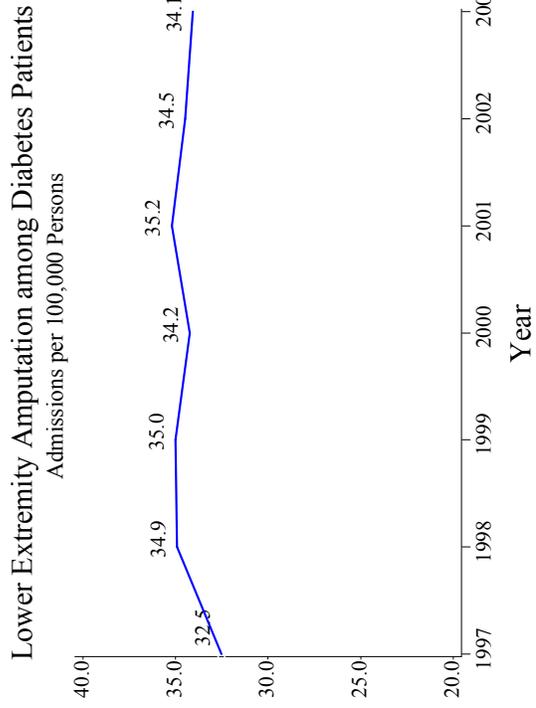
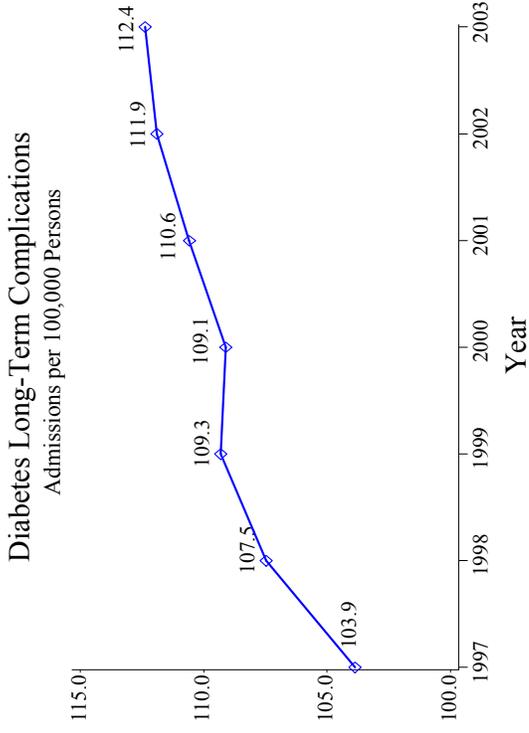
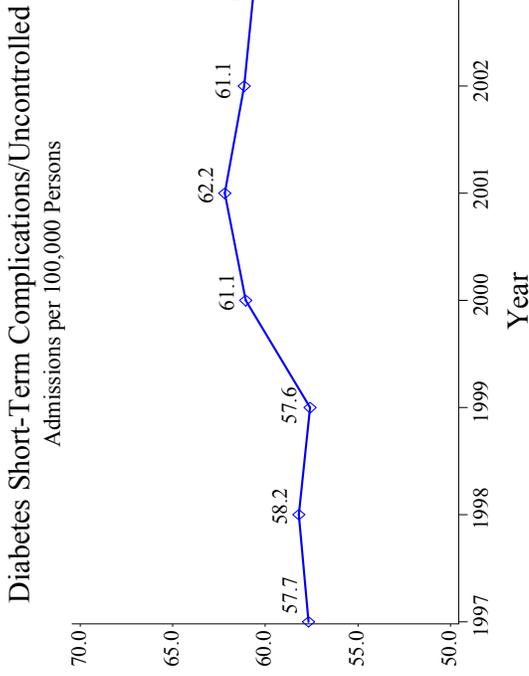
\*\* Per 100 admissions for appendicitis

The largest percentage increase in admission rates (9.4%) occurred in bacterial pneumonia. The reasons for this finding are unclear. Five to eight percent increases in admission rates were seen across all three diabetes indicators – long-term complications (8.2%), short-term complications/uncontrolled (5.0%), and lower extremity amputation (4.9%). This finding is consistent with state and national studies demonstrating an increased prevalence of diabetes in the general population (Diamant, Babey, Brown & Chawla, 2003; Gerberding, 2004). A National Centers for Disease Control survey that includes a California sample shows both a national and state increase in diabetes prevalence of 7.2% over the time period (CDC BRFSS Online Prevalence Data, 1995-2004). We would expect to see increases in preventable admission rates associated with the disease as prevalence increases, assuming that other factors remain constant and there is no corresponding improvement in outpatient care for diabetes patients.

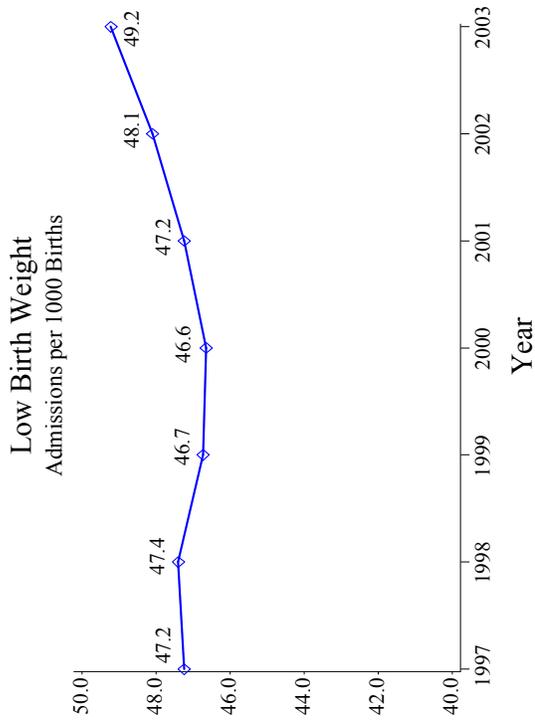
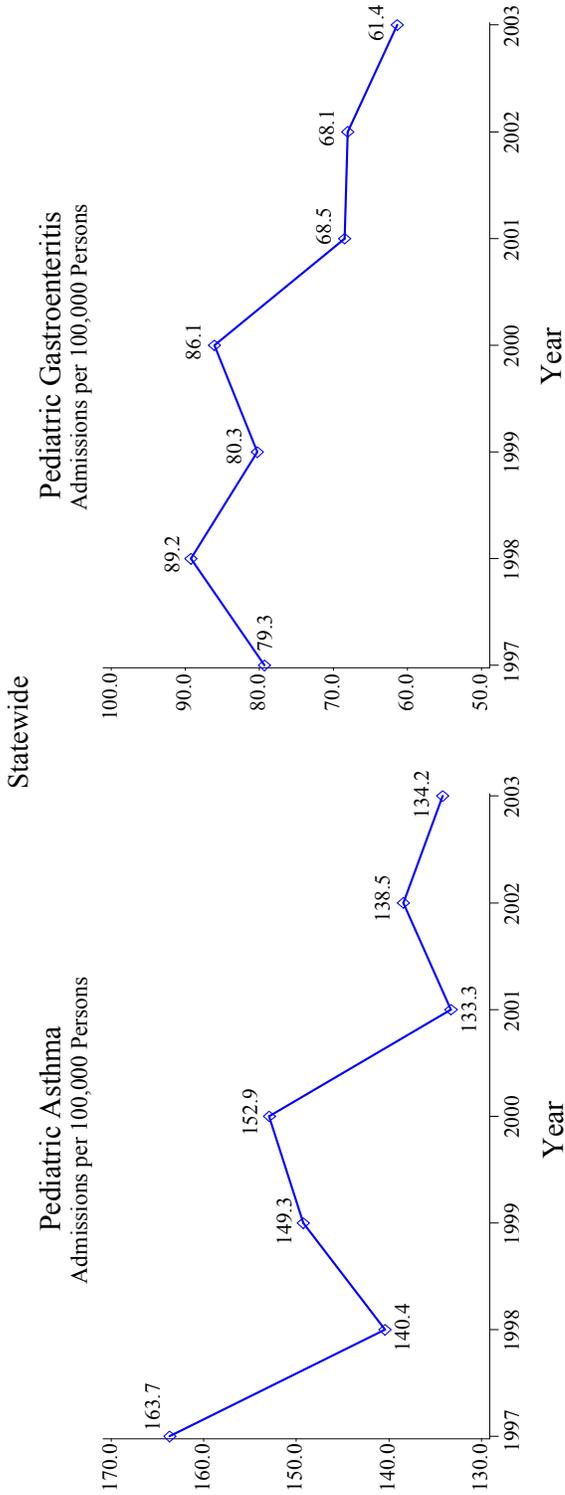
Of the 15 indicators, six conditions showed a downward trend over the seven-year period, including the four largest percentage changes. The remaining nine trended upward.

Figure 1 illustrates trends in statewide admission rates from 1997 to 2003. Clinically related conditions have been grouped together on the same page when possible. Data years are arranged on the horizontal axis and rates are presented on the vertical axis. For example, in 1997, the rate of admissions for short-term complications and uncontrolled diabetes was approximately 58 per 100,000 population. In 2003, the rate of admissions for this condition increased to about 61 per 100,000 population.

## Prevention Quality Indicators Statewide

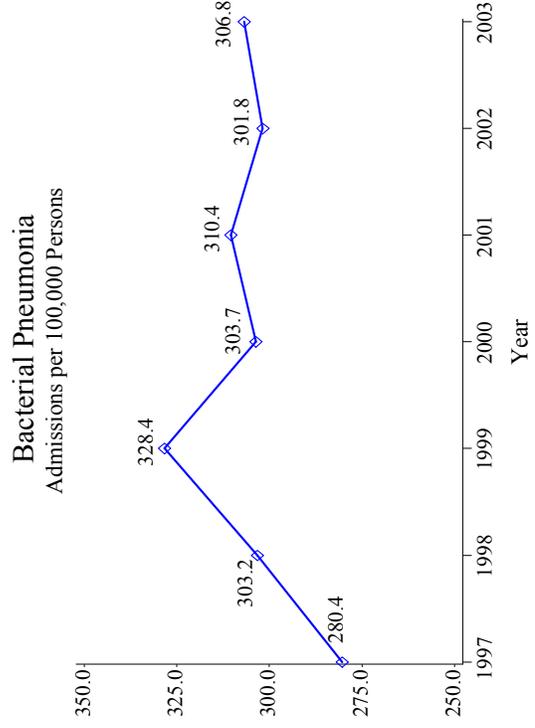
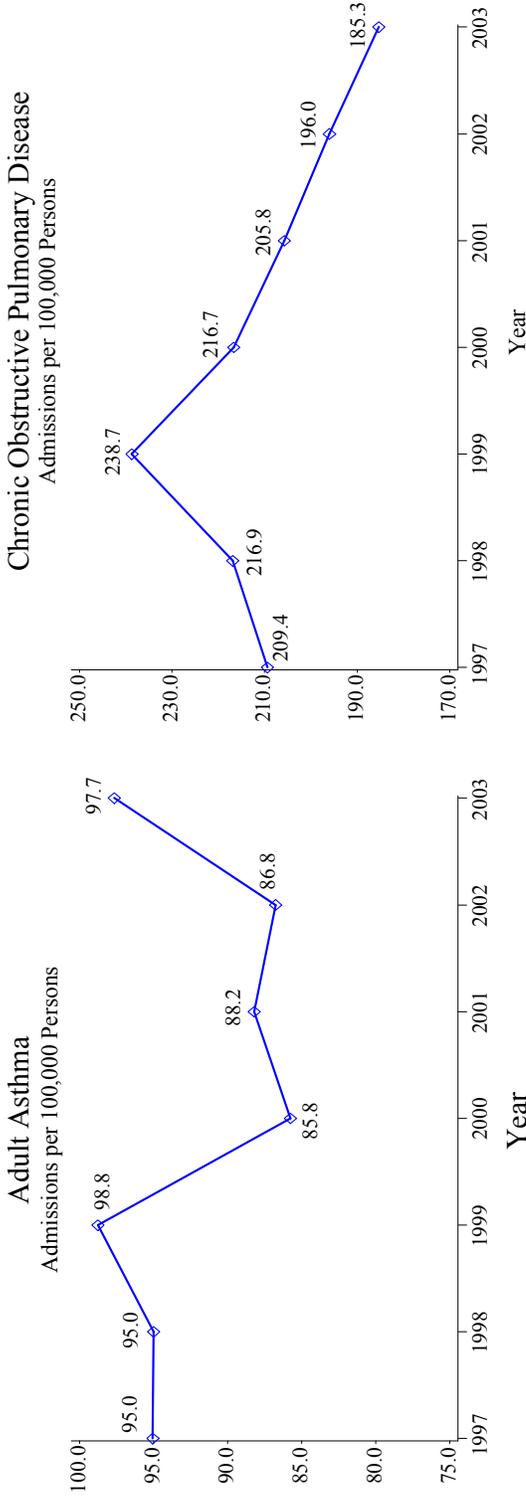


## Prevention Quality Indicators

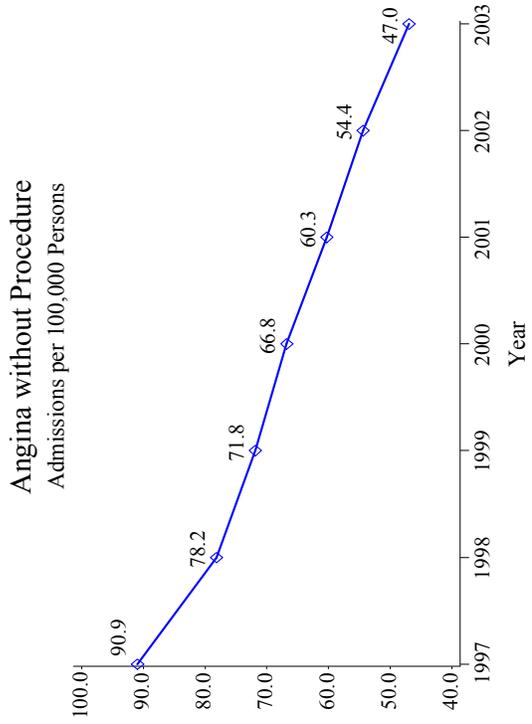
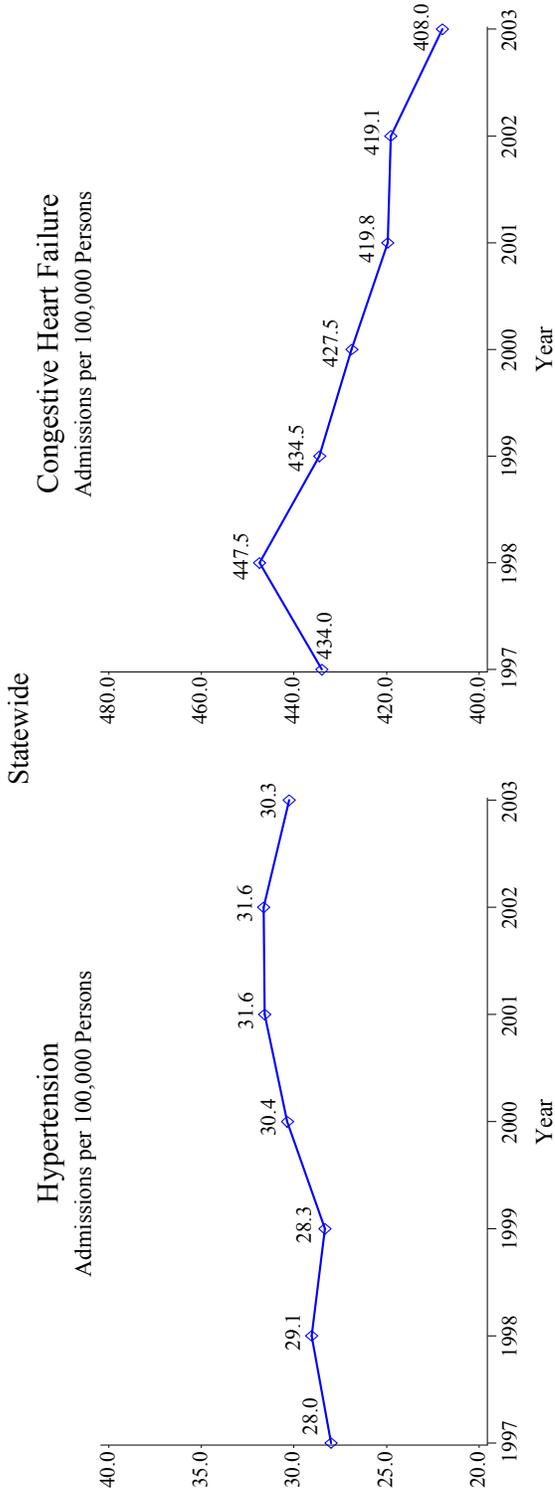


## Prevention Quality Indicators

Statewide

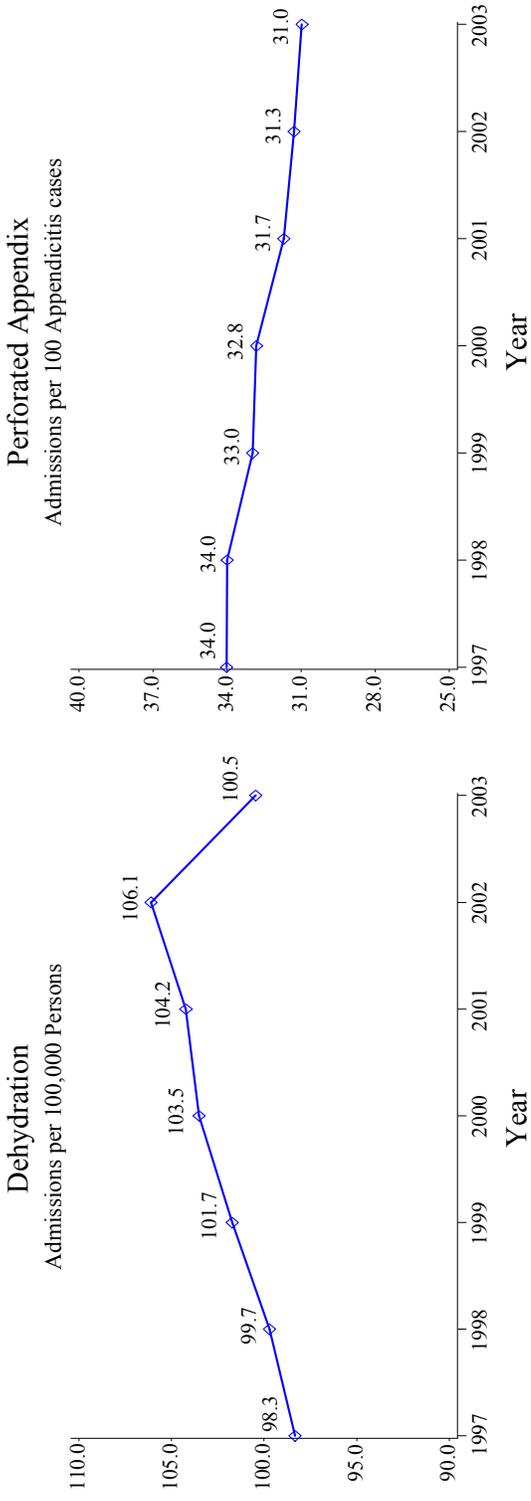


## Prevention Quality Indicators



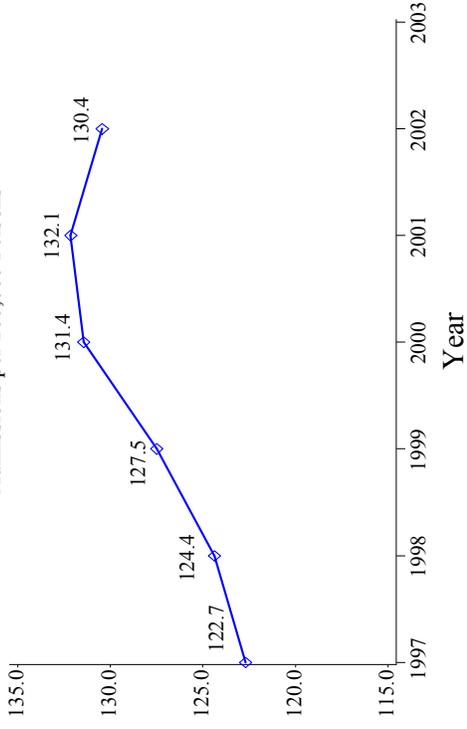
## Prevention Quality Indicators

Statewide



## Urinary Tract Infection

Admissions per 100,000 Persons



## COUNTY-LEVEL ACSC RATE TRENDS

Graphs portraying county ACSC admission rates over time, including the state average, can be found on OSHPD's Web site at [www.oshpd.ca.gov](http://www.oshpd.ca.gov). Statewide information may help state policymakers understand general trends in preventable hospitalizations, and county-level information should provide local public health officials with information of sufficient detail to enable investigation and possibly initiate action.

County-level data are valuable because statewide averages can mask large differences in rates across counties. For example, despite an encouraging overall decline of approximately 20 percent in pediatric admissions from 1997 to 2003, roughly half the counties experienced rate increases (sometimes dramatic) for these same conditions. While these analyses cannot tell us why, for example, a large increase in pediatric asthma admissions has occurred in a county despite an overall statewide decline, it helps draw our attention to a potential problem.

Hospital admission rates based on small population areas, such as low-density rural counties, can be unreliable indicators, even when charted over time. To provide more meaningful data, smaller counties were grouped using the following criteria: 1) all grouped counties must be contiguous to other counties in the group; 2) the total population of individual counties or groups of counties must approximate or exceed 100,000 persons; 3) a majority of the county's patients must be hospitalized in the county of residence and/or one or more of the adjacent counties. Appendix A provides additional information on the county grouping strategy used.

## PATIENT HEALTH INSURANCE COVERAGE AND ACSC RATES

A factor often proposed as a cause of preventable hospitalizations is lack of insurance coverage or inadequate insurance coverage. We expect that patients with health insurance will get the needed outpatient treatment that prevents unplanned hospitalizations. However, other factors may also be important, including patients' relationships with healthcare providers, their willingness to seek care when they need it, the geographic availability of health services, and costs of services (even with insurance). OSHPD collects expected source of payment information for each hospitalized patient. Payment source may be used to describe the insurance coverage of patients with possibly preventable hospitalizations. While the reporting of patient insurance is generally believed to be accurate, it has not been widely validated. A recent study found some undercounting and misclassification of MediCal patients with ACS conditions (Chattopadhyay & Bindman, 2005).

Table 2 displays, for each ACSC, the number and percentage of admissions by insurance type. Of the 15 conditions, bacterial pneumonia, congestive heart failure (CHF), urinary tract infection, and chronic obstructive pulmonary disease (COPD) account for the majority of total admissions and Medicare is the major payer for these conditions. In fact, Medicare is the primary source of payment for 10 of the 15 conditions. Medi-Cal is the primary payment source for two of the three childhood indicators (pediatric asthma and pediatric gastroenteritis) as well as short-term complications/uncontrolled diabetes. Private insurance

is the dominant payment source for perforated appendix and low birth rate admissions. Medi-Cal and private insurance account for nearly the same number of admissions across the 15 conditions. Medi-Cal accounts for approximately 21 percent of all admissions and private insurance accounts for approximately 22 percent. For both insurance types, bacterial pneumonia, low birth rate, and CHF admissions dominate in number.

Indigent admissions are dominated by bacterial pneumonia, CHF, adult asthma, and the two diabetes-related conditions. As a payment category, indigent only accounts for between 0.1 percent and 9 percent of claims for any given condition. The distribution of patients across conditions in the “Other” column, which includes self-pay, is similar to the “Indigent” column though slightly larger in number.

Overall, Medicare is the source of payment for most adult conditions while Medi-Cal and private insurance are the major payers for a few ACSCs. The majority of these admissions, then, are related to problems other than insurance coverage and are experienced by patients 65 years of age or older. Indeed, many of these conditions are more prevalent in the Medicare-aged population. For the three pediatric admission categories, Medi-Cal is the major payer overall, followed closely by private insurance. The other three payer categories generally account for less than 5 percent each of the cases for a given condition.

**TABLE 2: ACSC ADMISSIONS BY INSURANCE TYPE\* (2003)**

Condition	Other Government Programs <sup>1</sup>				
	Medicare	Medi-Cal	Private <sup>2</sup>	Indigent <sup>3</sup>	Other <sup>4</sup>
Diabetes Short-Term Complications/Uncontrolled	3,676 (24.5%)	4,162 (27.7%)	3,907 (26.0%)	1,327(8.8%)	1,702 (11.3%)
Diabetes Long-Term Complications	13,957 (52.6%)	5,680 (21.4%)	4,849 (18.3%)	997 (3.8%)	831 (3.1%)
Lower Extremity Amputation among Diabetes Patients	4,570 (57.9%)	1,246 (15.8%)	1,489 (18.9%)	337 (4.3%)	191 (2.4%)
Pediatric Asthma	7 (0.05%)	7,162 (50.7%)	6,240 (44.2%)	15 (0.1%)	402 (2.8%)
Pediatric Gastroenteritis	8 (0.1%)	3,384 (52.0%)	2,787 (42.8%)	8 (0.1%)	181 (2.8%)
Low Birth Weight	9 (0.03%)	11,080 (41.6%)	13,468 (50.6%)	38 (0.1%)	706 (2.7%)
Adult Asthma	8,530 (35.8%)	6,476 (27.2%)	5,974 (25.1%)	1,066 (4.5%)	1,508 (6.3%)
Chronic Obstructive Pulmonary Disease	27,883 (68.9%)	6,154 (15.2%)	4,862 (12.0%)	566 (1.4%)	730 (1.8%)
Bacterial Pneumonia	58,402 (58.5%)	18,211 (18.2%)	17,990 (18.0%)	1,666 (1.7%)	2,755 (2.8%)
Hypertension	3,010 (43.2%)	1,347 (19.3%)	1,577 (22.6%)	420 (6.0%)	487 (7.0%)
Congestive Heart Failure	63,822 (70.6%)	12,398 (13.7%)	10,111 (11.2%)	1,499 (1.7%)	2,134 (2.4%)
Angina	4,628 (43.2%)	1,615 (15.1%)	3,373 (31.5%)	442 (4.1%)	484 (4.5%)
Dehydration	15,453 (47.0%)	6,723 (20.4%)	9,321 (28.4%)	214 (0.7%)	797 (2.4%)
Perforated Appendix	1,355 (10.9%)	3,243 (26.2%)	5,928 (47.8%)	618 (5.0%)	1,069 (8.6%)
Urinary Tract Infection	24,542 (54.0%)	9,376 (20.6%)	8,901 (19.6%)	844 (1.9%)	1,429 (3.1%)

\* Expected source of payment in the OSHPD Patient Discharge Data abstract

ACSC: Ambulatory Care Sensitive Conditions

<sup>1</sup>Includes any form of payment from a government agency including Workers' Compensation, TRICARE, CCS, and the Veterans Administration.<sup>2</sup>Includes payment covered by private, non-profit, or commercial health plans. Also includes payment covered by local or organized charities.<sup>3</sup>Includes payment covered by county indigent programs as well as patients who receive charity care.<sup>4</sup>Includes self-pay and other third-party payments not listed here.

## CONCLUSIONS

The statewide analysis shows a substantial decline in preventable hospital admissions for pediatric gastroenteritis and pediatric asthma, the two age-sex adjusted pediatric measures in our study, from 1997-2003. Conversely, increases in admissions for the three diabetes-related conditions were found over the same time period, and this appears to reflect the increasing prevalence of diabetes in California and the nation. The dramatic drop in admissions for angina without procedure may be evidence of more effective management of coronary disease in the outpatient setting over time, but it may also indicate more aggressive treatment for unstable angina in the inpatient setting.

County-level condition rates show much greater, and less consistent, variation over time and readers must exercise caution in interpreting the meaning of rate declines and increases, especially for small counties. Nonetheless, these may provide a starting place for questions regarding the level of healthcare services provided in counties and by county agencies.

Medicare is the payment source for most of the adult admissions, demonstrating that factors other than lack of insurance are responsible for many preventable hospital admissions. Medi-Cal is the expected source of payment for the majority of pediatric conditions, with private insurance very close behind. These facts suggest that very different strategies will be needed to reduce admission rates for different conditions.

## LIMITATIONS OF THIS REPORT

- Because this report is based on administrative data, the statistics may be affected by differences in coding of specific patient diagnoses across hospitals (primarily due to different requirements by insurance payers).
- Hospital inpatient data affords only indirect measurement of the quality and degree of access to health services, including community-based outpatient services.
- The age-sex adjustment is based on the available data and is meant to allow readers to better compare disparities in access to quality ambulatory care. Other factors such as socioeconomic status, county size, and population heterogeneity can also impact the accessibility of quality preventive care.
- Combining inpatient data with emergency room data would provide a more complete picture of care for ACSCs. Admission rates for many of these conditions may be reduced by shifting care to freestanding emergency rooms. The uninsured poor are more likely to use emergency rooms as a routine source of care.
- Environmental risk factors, such as air and water pollution, are likely to be associated with increased hospitalization rates, but outside the direct control of the healthcare system.

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## APPENDIX A

### REPORTING METHODS

The age-sex adjusted rates were produced using the PQI software and population tables developed by AHRQ. The software is the result of years of study and research in using hospital administrative data to analyze and improve healthcare services. Extensive information about development of the PQIs is available at [www.ahrq.gov](http://www.ahrq.gov).

Input patient discharge datasets were created by recoding data elements to be consistent with coding expected by the software. The population denominators for calculating the PQI rates were computed from county tables derived by AHRQ from annual U.S. Census population figures. SAS® statistical programs in the software were used to generate output datasets containing observed rates for each year. Observed rates were computed for each county based on the patient residential state/county Federal Information Processing Standards (FIPS) code to more accurately reflect the true population at risk. County groupings were facilitated by creating new FIPS codes for each group in the input datasets and census population tables supplied with the PQI software (see Appendix A for county groupings).

Overall means and regression coefficients from a baseline database were then applied to the observed rates to adjust the rates by state/county. The overall means and regression coefficients were derived from AHRQ's State Inpatient Databases (SID) for 29 states and provided as part of AHRQ's PQI software. The rates then reflect the standard age and sex distribution of a large proportion of the U.S. population, allowing readers to more directly compare counties to one another.

Finally, a graphics dataset containing all data years was inputted into the SAS/GRAPH gplot procedure, using the output delivery system to produce a pdf file. Multiple-plot pages were created using extension macros developed by Watts (Watts, 2002).



## APPENDIX B

### PATIENT COUNTY OF RESIDENCE AND HOSPITAL ADMISSIONS BY TREATMENT FACILITY COUNTY

Note: This table illustrates the county groupings used in this study as well as where residents of a particular county/county group are hospitalized and treated for ACS conditions. The county where a patient is hospitalized is referred to as the treatment facility county. For each county of residence/county group, the top three treatment facility counties are listed and generally represent the treatment location for at least 80% of the patients living in that county. The Amador, Calaveras, Inyo, Mono, and Tuolumne group is an exception to this; this county group's patient distribution is quite dispersed across and outside group boundaries, with the top three treatment facility counties only representing about 55 percent of the total patients.

Group Name / Patient County of Residence	Treatment Facility County	%
Alameda	Alameda	85.32%
	Contra Costa	5.49%
	Santa Clara	3.48%
Amador, Calaveras, Inyo, Mono, Tuolumne	Tuolumne	29.78%
	Amador	14.05%
	Sacramento	11.11%
Butte, Colusa, Glenn	Butte	83.90%
	Sacramento	5.20%
	Colusa	2.97%
Contra Costa	Contra Costa	73.70%
	Alameda	16.84%
	San Francisco	3.57%
El Dorado, Alpine	El Dorado	51.92%
	Sacramento	35.07%
	Placer	8.40%
Fresno	Fresno	87.31%
	Madera	7.40%
	Kings	1.50%
Humboldt, Del Norte	Humboldt	76.22%
	Del Norte	14.81%
	San Francisco	3.08%
Imperial	Imperial	74.98%
	San Diego	20.72%
	Riverside	2.44%

Group Name / Patient County of Residence	Treatment Facility County	%
Kern	Kern	85.45%
	Los Angeles	10.53%
	Madera	0.90%
Kings	Kings	61.11%
	Fresno	18.64%
	Tulare	9.61%
Lake	Lake	50.95%
	Napa	22.62%
	Sonoma	11.13%
Lassen, Modoc, Siskiyou	Siskiyou	48.59%
	Lassen	17.21%
	Shasta	15.04%
Los Angeles	Los Angeles	96.38%
	Orange	2.31%
	San Bernardino	0.60%
Madera	Madera	49.39%
	Fresno	43.07%
	Merced	2.76%
Marin	Marin	71.48%
	San Francisco	19.69%
	Sonoma	2.44%
Mendocino	Mendocino	69.60%
	Sonoma	12.86%
	San Francisco	5.80%

**APPENDIX B (CONT.)**

Group Name / Patient County of Residence	Treatment Facility County	%
Merced, Mariposa	Merced	59.83%
	Stanislaus	20.68%
	Fresno	5.01%
Monterey, San Benito	Monterey	79.26%
	Santa Clara	7.31%
	San Benito	6.52%
Napa	Napa	63.07%
	Solano	23.42%
	San Francisco	3.69%
Nevada, Sierra, Plumas	Nevada	61.82%
	Sacramento	11.41%
	Plumas	11.26%
Orange	Orange	91.26%
	Los Angeles	7.52%
	San Diego	0.39%
Placer	Placer	60.53%
	Sacramento	32.10%
	Nevada	2.89%
Riverside	Riverside	78.97%
	San Bernardino	10.58%
	Orange	3.83%
Sacramento	Sacramento	88.28%
	Placer	7.06%
	San Joaquin	1.42%
San Bernardino	San Bernardino	80.39%
	Los Angeles	12.20%
	Riverside	4.64%

Group Name / Patient County of Residence	Treatment Facility County	%
San Diego	San Diego	98.24%
	Los Angeles	0.63%
	Orange	0.42%
San Francisco	San Francisco	91.56%
	San Mateo	4.89%
	Alameda	0.96%
San Joaquin	San Joaquin	84.69%
	Sacramento	4.47%
	Stanislaus	3.43%
San Luis Obispo	San Luis Obispo	83.80%
	Santa Barbara	6.62%
	Los Angeles	3.35%
San Mateo	San Mateo	66.14%
	Santa Clara	16.31%
	San Francisco	15.02%
Santa Barbara	Santa Barbara	91.78%
	Los Angeles	3.42%
	Ventura	1.69%
Santa Clara	Santa Clara	93.32%
	San Mateo	2.47%
	Alameda	1.69%
Santa Cruz	Santa Cruz	84.02%
	Santa Clara	10.22%
	Monterey	1.64%
Shasta, Tehama, Trinity	Shasta	73.54%
	Tehama	13.09%
	Butte	4.47%

**APPENDIX B (CONT.)**

Group Name / Patient County of Residence	Treatment Facility County	%
Solano	Solano	70.93%
	Contra Costa	8.19%
	Sacramento	4.66%
Sonoma, Stanislaus	Stanislaus	49.61%
	Sonoma	37.12%
	San Francisco	3.60%
Sutter, Yuba	Sutter	44.61%
	Yuba	32.00%
	Sacramento	11.15%
Tulare	Tulare	79.64%
	Fresno	8.33%
	Kern	3.86%
Ventura	Ventura	82.34%
	Los Angeles	15.46%
	Santa Barbara	1.26%
Yolo	Sacramento	48.23%
	Yolo	45.82%
	Solano	1.46%





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