Reducing Ambulance Diversion in California:
Strategies and Best Practices

California HealthCare Foundation

ISSUE BRIEF

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Introduction

Ambulance diversion that results from the overcrowding of emergency departments is a serious issue, not only in California, but in many parts of the United States as well. Diversion occurs when a hospital emergency department is unable to provide care for additional patients and redirects ambulances to other hospitals nearby. Ambulance diversion has a negative impact on patient outcomes, patient safety, continuity of care, and surrounding hospitals.

The California HealthCare Foundation retained The Abaris Group to measure and track ambulance diversion in California and collect and analyze corresponding data on emergency department (ED) demand and capacity. This data includes utilization rates, licensed treatment beds and their utilization, and total emergency medical services transports. Called the California ED Diversion Project, the study also involved the formation of a one-year, multi-region, multi-hospital collaborative, intended to help reduce diversion hours and act as a diversion-reduction model for the state as a whole.[1] In addition, the project inventoried best and promising practices to assist hospitals in improving flow and capacity.

The study found that when hospitals and their local emergency medical services agency (LEMSA) are focused and united in reducing diversion, employing a collaborative process and best practices can aid in reducing ambulance diversion, improving patient flow, and opening communication among participants. All of the hospitals in the collaborative experienced a significant reduction of diversion hours during the collaborative time period.

This issue brief provides an overview of ambulance diversion throughout the United States and in California, and summarizes the work completed on The California ED Diversion Project. It finds that while diversion is typically a symptom of a community experiencing considerable stress as a result of diminishing hospital capacity, those with lower diversion rates do not necessarily have higher capacity or lower utilization. The collaborative model and best practices presented here offer useful tools to communities that are committed to reducing or eliminating diversion.

Overview of Ambulance Diversion

Ambulance diversion is a statewide and national issue. Communities across the country have reported struggling with the challenges caused by hospitals diverting ambulances. A 2003 study found that an estimated 501,000 ambulances in the United States were rerouted as a result of ambulance diversion, which amounts to approximately one ambulance diverted each minute.[2] And approximately 45 percent of all EDs reported they were "on diversion" at some point during the year.[3]

The same 2003 study also identified the inability to transfer admitted patients from the emergency department to inpatient beds as the most common factor for ED overcrowding. This indicates that

diversion is the result of factors more complex than emergency department capacity alone.

Ambulance diversion was once thought to be a "novel" solution for ED overcrowding.[4] However, it is now understood that diversion is not an effective means for alleviating overcrowding, because when one hospital is overcrowded, others in the area are likely to be full as well. Another study found that when a hospital diverts ambulances, it artificially creates more diversion at surrounding hospitals.[5]

More significant is the fact that ambulance diversion has been found to be unsafe for patients because it increases their transport times, which interferes with continuity of care, causes delays (e.g., in reperfusion therapy for patients with acute myocardial infarction), and increases mortality for severe trauma patients. More than one dozen articles and studies have been published on this topic, providing evidence of adverse patient outcomes associated with ambulance diversion or ED overcrowding.[6-18]

Ambulance Diversion in California

The initial report from the California ED Diversion Project, published in March 2007, examined the status of ambulance diversion for each emergency medical services (EMS) region in California. At the time, Inland Counties, Los Angeles, San Diego, San Francisco, San Mateo, and Ventura EMS regions had the highest number of diversion hours per hospital ED treatment station.[19] The study used the number of licensed ED treatment stations as a surrogate of emergency department capacity for comparing EMS regions in the state.

Nine of the 31 LEMSAs in California initially approached the issue of ambulance diversion by prohibiting hospitals from diverting patients (i.e., implementing a "no-divert" policy). While this approach solves the diversion problem, it risks shifting the burden elsewhere. For instance, it can create long delays in transferring patients from ambulances into overcrowded EDs, interfering with patient safety and continuity of care.

However, these agencies are not unique in adopting no-divert policies. New Hampshire also does not allow its hospitals to divert ambulances, and Massachusetts initiated a "no-divert" policy on January 1, 2009. In California, Riverside County converted to "no-divert" approach last year, and San Bernardino initiated a no-divert policy in January 2009. Ventura County also has also indicated it intends to adopt a no-divert policy sometime in 2009 or early 2010.

While some EMS regions in California have reduced diversion by implementing these policies, others have successfully reduced diversion hours through a series of best practices. Alameda, Riverside, Sacramento, and Santa Clara Counties have implemented effective diversion strategies independent of this study that do not completely eliminate diversion, but instead provide very stringent standards for when hospitals can divert patients and for how long they may remain on diversion. In addition, many of the hospitals within the jurisdiction of these local EMS agencies have developed improved ED and inpatient flow strategies that have dramatically improved hospitals' ability to accommodate ambulance patients and better handle emergency department visits overall.

The Sacramento region, and in particular Sacramento County, has seen a sharp reduction in diversion hours and has been recently recognized for its success.[20] This reduction began after a three-year collaboration among all hospitals, EMS providers, and the EMS agency in the county.[21]

Best practices such as these, as well as other nationally accepted best practices and those discovered during The California ED Diversion Project, may be applicable to remaining California regions that are experiencing

high ambulance diversion rates. Many of these practices have been published and are available on the California ED Diversion Project website (http://www.caeddiversionproject.com).

Diversion Project Methodology

California's 58 counties are organized into 31 local LEMSAs. Some of these agencies, particularly in rural areas, represent more than one county. The first phase of the California ED Diversion Project involved contacting each LEMSA to determine the state of ambulance diversion in the corresponding region. Copies of LEMSA diversion policies were also collected and studied to determine EMS and diversion trends.

The study also involved collecting five years of data regarding EMS transport and diversion hours for the entire state (2003 through 2007). If data such as the number of 9-1-1 transports were unavailable, estimates were made using generally accepted utilization ratios based on the region's population. (See Appendix A for detailed statewide EMS, ED, and diversion results for the years 2003 to 2007). In addition to data collected, each LEMSA was asked about diversion issues particular to the region, as well as needs and progress made if diversion was a problem.

According to data provided by each LEMSA, there were 1.6 million emergency EMS transports in 2003 compared with nearly 1.9 million in 2007 (an increase of 14.6 percent). In that same period, emergency department visits increased 6.4 percent, with a peak increase of 7.6 percent from 2004 to 2005. Bear in mind that analysis performed as part of the study also found that California's population grew by 5.1 percent from 2003 to 2007, increasing from 35.9 million to 37.8 million.[23] See Table 1 for details.

Table 1: Statewide Trends, 2003–2007

	2003	2007	Percent Change
Population	35,944,213	37,771,431	5.1%
ED Volume	9,780,948	10,402,309	6.4%
EMS Transports*	1,637,411	1,876,212	14.6%
Diversion Hours†	302,169	165,180	-45.3%

* Unavailable data was estimated based on average growth rate (four counties in 2007).

† When data was not provided by the EMSA, OSHPD was used (six counties in 2003 and three counties in 2007).

Source: California Department of Finance, OSHPD, EMSAs

In spite of the overall rise in emergency department visits, total diversion hours have continued to decline. In 2003, California hospitals were on diversion status for a total of 302,169 hours. By 2007, hospitals were on diversion for 165,180 hours, a 45.3 percent decrease from 2003.

The most substantial decrease occurred from 2005 to 2006, when diversion was reduced by 30.5 percent, followed by a 15.3 percent decrease from 2006 to 2007. Most of the decrease in hours for 2006 occurred in Los Angeles County after it changed its diversion policy. (The new policy limits the number of hours a hospital may go on diversion at any given time.)

Although the diversion rates do appear to be declining in some regions and in general statewide, eight regions experienced increases in diversion levels during the 2003 to 2007 time period:

- Imperial County
- Marin County
- Northern California EMS, Inc. (an 11-county region that includes Redding)
- San Diego County
- San Luis Obispo County
- San Mateo County
- Santa Clara County
- Santa Cruz County

Most of these regions had only nominal increases, but two counties' increases were substantial. Imperial County's diversion hours increased from 806 hours in 2003 to 1,120 hours in 2007, and San Mateo County's diversions increased from 1,948 to 2,499, respectively. However, ambulance diversion is sometimes implemented as a result of other unique variables, such as the closure of a hospital in the area.

Another two of these eight EMS regions, Marin County and Santa Barbara County, had zero hours of ambulance diversion in 2003 but began increasing diversion in 2007. However, these increases were very small. Marin County's diversions rose to 65 hours in 2007. With a total of three hospitals in the county, this amounts to an average of 1.8 diversion hours per hospital per month. Santa Barbara County's diversions increased to 236 hours in 2007. With a total of five hospitals in the county, this amounts to an average of only 3.9 hours per hospital per month.

In addition, San Luis Obispo County experienced an increase from just 56 diversion hours in 2003 to 376 hours in 2007. This LEMSA region has four hospitals in the area, so its average hours per hospital each month was also relatively low.

While the annual diversion hours for these three regions are all relatively minimal, the fact that rates have increased so drastically is cause for concern.

Twelve of the total EMS regions reduced their ambulance diversion from 2003 to 2007, realizing a reduction of anywhere from 4 percent to 75 percent. This data does not include regions that have adopted no-divert policies.

In the two-year period from 2005 to 2007, diversion hours decreased in the state by 41 percent, despite corresponding increases in ED volume and EMS transports (5.4 and 7.3 percent, respectively). Inland Counties, Los Angeles, and Riverside LEMSAs saw the majority of the non-rural regional reductions, although other LEMSAs had significant decreases as well. See Table 2 for details.

Table 2. Statewide Trends 2005–2007

	2005	2007	Percent Change
Population	36,896,220	37,771,431	2.4%
ED Volume	9,865,864	10,402,309	5.4%
EMS Transports*	1,749,039	1,876,212	7.3%
Diversion Hours†	280,466	165,180	-41.1%

* Unavailable data was estimated based on average growth rate (four counties in 2007).

† When data was not provided by the EMSA, OSHPD was used (two counties in 2005 and three counties in 2007).

Source: California Department of Finance, OSHPD, EMSAs

For diversion data by region and other comparison metrics, see Appendix A.

Statewide Data Study Findings

The hypothesis of this study, prior to analyzing the collected data, was that regions with higher diversion levels would likely have more emergency department visits per population, higher emergency department bed utilization (annual ED patients per ED bed), and higher acuity emergency department visits (percent of ED patients admitted to the hospital). However, this trend could not be verified; in fact, for some regions the opposite was true.

Contra Costa County, for example, is a no-divert region, despite the fact that it has some of the highest ED utilization rates in the state—much higher than other regions that have higher diversion rates. And it also has an ED bed utilization rate that is approximately the same as regions with higher diversions. In addition, Los Angeles County has the second highest number of diversion hours per hospital (next to San Diego County), but it also has one of the lowest ED utilization rates.

But in reviewing the differences among the diversion policies for each region, some trends begin to emerge. While no two diversion policies are exactly alike, regions that tend to have low diversion hours have stricter policies, with more supervision from the local EMS agency as to when a hospital can activate diversion, how long it can divert, and when it should discontinue

diversion. In some regions, hospitals are at risk of having a LEMSA staff member visit the site when the emergency department is diverting ambulances.

Nowhere is there a better example of how policy affects diversion than in Los Angeles County. This LEMSA region instituted a limit to its diversion policy in late 2005, requiring hospitals in the region that are actively diverting ambulances to stop diverting every two hours for a minimum of 15 minutes. This policy change alone reduced diversion hours from 174,952 in 2005 to 81,741 in 2007—a 53 percent drop.

The Sacramento collaborative, mentioned earlier in this report, had a similar decrease in diversion hours. All hospitals in that region agreed to follow a strict region-wide policy, as well as adopt internal policies with characteristics similar to the diversion policies of other nearby hospitals. During the first month following the adoption of those policies, diversion hours fell by 50 percent. During the initial year of the collaborative, the drop in diversion hours continued with another 50-percent reduction. The data for the second and third years showed similar results.

Collaborative Methodology

The second phase of the California ED Diversion Project involved forming a 12-month collaborative among four LEMSA regions and 11 hospitals within those regions. Table 3 lists each region and participating hospitals.

The goals of the collaborative were to reduce diversion, identify best practices for minimizing diversion, and help implement these practices in communities less successful in resolving their EMS diversion problems.

Each LEMSA was asked to work with a sample number of hospitals in its region to reduce diversion hours. Through mentoring by outside experts, each hospital chose interventions, best practices, and new policies to improve its ED and inpatient flow.

Table 3. Collaborative Participants by Region

EMS Region/Hospital	City
Los Angeles EMSA	Commerce
St. Francis Medical Center	Lynwood
Presbyterian Intercommunity Hospital	Whittier
Methodist Hospital	Arcadia
San Bernadino County ICEMSA	San Bernadino
Arrowhead Regional Medical Center	Colton
Loma Linda University Medical Center	Loma Linda
St. Mary Medical Center	Apple Valley
Santa Clara County EMSA	San Jose
Regional Medical Center	San Jose
Ventura County EMSA	Oxnard
Community Memorial Hospital	Ventura
Simi Valley Hospital	Simi Valley
St. John's Medical Center	Oxnard
Ventura County Medical Center	Ventura

During the 12-month period (September 2006 to August 2007) prior to the implementation of the collaborative portion of the project, the four LEMSA regions had accumulated 17,618 diversion hours. At the completion of the collaborative, diversion hours had decreased by 19.9 percent, to 14,117. (Two months of diversion data post-project were added for the purpose of matching them to the 12 months of the pre-project period.) The monthly average for hospital diversion hours from pre- to post-project periods also decreased by 19.9 percent, from 1,468 to 1,176. For both years studied (before and during the collaborative), the diversion hours followed typical seasonal trends, reaching lows in the summer (June to August), and highs in the winter (December to February).

Aside from Santa Clara County, which had only one hospital participating in the collaborative, Los Angeles County's participating hospitals had the lowest total of diversion hours throughout the project. San Bernardino County (part of the Inland Counties LEMSA region, and the only county of the three Inland Counties that

participated in the collaborative) experienced the greatest difference in its monthly average for hospital diversion hours (reduced by 161 hours per hospital on average), followed by Los Angeles County (reduced by 80.4 hours per hospital on average). The greatest number of diversion hours in the project period were in Ventura County. However, this data is confounded in part because of the closure of one of the county's hospitals for six weeks. For tables of these metrics, see Appendix B.

Collaborative Findings

None of the counties involved in the collaboration completely eliminated diversion during the 12-month project. However, ambulance diversion for each month during the project was lower than the same month of the previous year (pre-project), except for winter. The spike in diversion hours during winter months is largely attributable to a heavy influenza season, which caused a surge in ED volume.

The collaborative nature of the project increased the visibility of issues surrounding ambulance diversion in the four participating communities and provided a much-needed platform for working toward reducing diversion. It also demonstrated the beneficial effects of sharing experiences and solutions. Not only did the participating LEMSAs and hospitals gain a better sense of how diversion at one hospital directly affects other hospitals in the region, but they also witnessed how working together can be more effective in addressing the growing problem of diversion.

The partnership also reinforced the conclusion that ambulance diversion is a systemic problem and cannot be solved by any single hospital or LEMSA. However, with coordinated and improved hospital and LEMSA policies and practices, ED diversion can be reduced. In addition, the collaborative made it apparent that reducing diversion hours is not the only solution to ED overcrowding and that additional remedies and best practices can also be implemented to alleviate it.

While there are a number of regions in the state and elsewhere that have gone to a "no-divert" policy, this is not a simple fix. Some communities have experienced long delays in the transfer of patients from ambulances to EDs, as mentioned earlier in this issue brief, because no-divert policies do not fix underlying problems with hospital capacity. To move in the direction of a no-divert policy statewide would require a joint effort, not only among the groups that participated in the collaborative, but among all LEMSAs in the state and all the hospitals in each county.

Another major outcome of the collaboration was a heightened awareness of the importance of tracking, collecting, and applying diversion data to help LEMSAs and hospitals address diversion issues. Table 4 shows the overall results for the project's data points, or key performance indicators (KPIs).

Table 4. KPI Comparison, Sept. '07–June '08

KPI	Percent Change
Hospitals	
Time to Heart Treatment	-28.4%
Time to Pain Management	n/a
Bed Assignment to Placement	8.1%
Time of Discharge	3.9%
Bed Empty to Clean/Available	n/a
Total Hospital Discharges	n/a
ED TAT – Admitted*	12.2%
ED TAT – Fast Track	n/a
ED TAT – Treated and Released*	-1.4%
ED Volume	12.1%
ED Admissions	22.7%
Incomplete Treatment	-2.4%
Boarding Hours	-14.5%
EMSAs	
Diversion Hours (monthly)	-39.8%

n/a: Not available due to incomplete data availability

* The percent change for ED TAT (turn-around-time) for admitted and treated and released was calculated comparing data from Sep 1-15, 2007 to April 1-15, 2008, because the period June 16-30, 2008 had insufficient data for comparison.

The collaborative also revealed that diversion actually affects only a small number of EMS patients transported compared with the number of diversion hours. During this project, an average of 78 patients were diverted per LEMSA per month. This would equate to approximately 0.2 patients per diversion hour, a very modest number of actual patients diverted.

While there were many positive results from the collaboration, there were also some lessons learned. Many of the participants felt that the data collection process was difficult because of limited staff resources, and because in some cases it was necessary to collect data manually.

LEMSAs and hospitals also realized that some issues need to be considered when measuring the full impact of the reduction in diversion hours. Historical data show that diversion hours were declining statewide prior to the start of this project, and it could be said that the drop experienced as a result of the collaborative may have occurred without the project initiative. Unfortunately, statewide diversion data during the study period was not available.

All participants stated that the project was a benefit to their organization.

In summary, when a region is focused and united in the goal of reducing diversion, employing a collaborative process and implementing best practices can aid in reducing ambulance diversion, improving patient flow, and opening communication among the participating hospitals and LEMSAs.

Diversion Project Best Practices

Hospitals that participated in the collaborative chose best or promising practices they felt would be valuable in meeting the specific capacity challenges that were driving their diversions.

Some of the more common best practices initiated at many hospitals include the following:

- Created, expanded or re-engineered bed control meetings;
- Added bed control czars;
- Created new reporting processes (e.g., fax report) or improved nurse communication interfaces; and
- Created a bed crisis or surge model with color-coded thresholds.

In addition, the following are some examples of best practices that were chosen by each hospital to address their specific challenges.

Methodist Hospital of Southern California (Los Angeles County):

- Re-engineered its ED triage process;
- Developed a Rapid Admission Unit;
- Improved the productivity of bed huddles; and
- Established an electronic bed board and bed czar.

Presbyterian Intercommunity Hospital (Los Angeles County):

- Strengthened its hospital diversion policy;
- Revamped the pediatric admissions process by having someone from the pediatric inpatient unit retrieve the patient from the emergency department;
- Implemented computerized order entry; and
- Opened a bed census program that uses a real-time dashboard and capacity-matching resource plan with color coding.

St. Francis Medical Center (Los Angeles County):

- Developed an ED fast track;
- Created two inpatient discharge lounges;
- Initiated a hospitalist program; and
- Established a capacity management protocol called "Code Purple."

Arrowhead Regional Medical Center (San Bernardino County):

- Established nurse executive rounding in the ED;
- Sends daily "flash" reports on key capacity issues throughout the hospital;
- Re-engineered the ED triage process to include a provider who could dismiss patients who did not require the services of the ED; and
- Implemented a practice of bed huddles three times a day.

Loma Linda University Medical Center (San Bernardino County):

- Created a larger triage area;
- Hired a bed czar;
- Hired a patient flow director responsible for managing flow for both the ED and operating room; and
- Developed a Service Designation Program for ED admissions with delayed resident response times, allowing the ED physician to admit the patient.

St. Mary Medical Center (San Bernardino County):

- Established an ED front-end team leader;
- Reversed physician rounding and meeting schedules;
- Created bed flow meetings twice a day; and
- Standardized nursing interfaces for admissions, thus reducing delays.

Regional Medical Center (Santa Clara County):

- Established a combined Rapid Admission Unit and Clinical Decision Unit;
- Expanded its Rapid Medical Evaluation process (provider at triage); and
- Re-engineered the inpatient admission and discharge processes.

Community Memorial Hospital (Ventura County):

- Created an ED medical director/hospitalist task force to improve communications;
- Expanded the hours of the fast track;
- Redefined the criteria for utilizing its inpatient telemetry unit; and
- Implemented a Capacity Command Center.

St. John's Regional Medical Center (Ventura County):

- Increased the interface with the inpatient tracking center so that it could be accessed anywhere in the hospital;
- Implemented an admission/transfer/discharge nurse position;
- Implemented a "fax report" for all non-ICU admissions; and
- Started "slotting" inpatient discharges.

Simi Valley Hospital (Ventura County):

- Established a triage bypass policy;
- Made the ED diversion policy stricter
- Changed medical staff bylaws to require speedier response times for on-call specialists; and
- Reorganized the inpatient case management program to improve the review of length of stays.

Ventura County Medical Center (Ventura County):

- Made the ED diversion policy stricter;
- Established a triage bypass policy;
- Developed a color-coded capacity management policy; and
- Developed a "bed-crisis" mode.

Lessons for Other Communities

Ambulance diversion is a national and statewide problem, but not all communities experience diversion the same way.

This study was designed to better understand the differences among communities that have high diversion, low diversion, and no diversion. The collaborative incorporated eleven hospitals and four regions that reflect these different diversion levels.

The Risks of Ambulance Diversion

Ambulance diversion is an unhealthy practice for a number of reasons. It is unhealthy for the patient from the standpoint of quality, outcome, and length of stay. It is unhealthy for the community because it delivers patients to a hospital that may not be the best fit for their individual and immediate needs. It is unhealthy because the patients' primary physicians may not have privileges, and medical records may not be available at the receiving hospital. And it is unhealthy financially because hospitals that divert lose money when they send patients to other hospitals.

Capacity

While each community may have a unique reason for implementing diversion at its hospitals, including availability of mental health beds, other specialty care capability, and patient acuity, ambulance diversion can be minimized through a variety of strategies.

Diversion is about hospital capacity, not community capacity. When a diverted patient is accommodated by another hospital, the successful admission of that patient demonstrates that community capacity is sufficient. The same is true with "boarders" in the emergency department (i.e., patients who are waiting for an impatient bed). These patients are eventually provided a hospital bed, so the issue lies in a mismatch between the demand and capacity at specific hospitals, rather than aggregate hospital capacity. If a hospital is struggling with capacity, the solution is not to simply add resources and beds, but to fundamentally re-engineer policies and practices.

Policies

Communities in California that have lower diversion hours have stricter LEMSA policies regarding diversion. These policies often stipulate when a hospital can activate diversion, when it must stop diverting, and in some cases set time limits for how long diversion can be active (e.g., no more than two hours).

Similarly, hospitals that have lower diversion hours tend to have their own stricter internal diversion policies that require high-level approval (e.g., the on-duty administrator) and convene executive teams during diversion events to resolve the problems in real time. There are also hospitals that anticipate capacity challenges using color-coded systems so that they can address anticipated problems before they occur.

Best and Promising Practices

This study and other literature on the topic of ambulance diversion make it clear that hospital capacity can be improved through the adoption and implementation of best and promising practices.

In addition to implementing best practices, it is also important that hospitals and LEMSAs maintain diversion data and other pertinent metrics as part of their data dashboard. This can help them track and sustain changes that have already been implemented and make new changes as necessary.

Solving Ambulance Diversion

Ambulance diversion is a symptom of a community experiencing considerable stress as a result of diminishing hospital capacity. However, communities with lower diversion rates do not necessarily have higher capacity or lower utilization. Communities that are committed to resolving diversion can be successful using a collaborative model and best practice tools outlined in this study, or in other readily available and related studies.

Despite considerable variability among communities, implementing best practices can help to minimize ambulance diversion in California. Even in areas facing severe capacity challenges, diversion can be reduced by improving regional oversight and re-engineering patient flow in hospitals.

A more detailed edition of this project report can be found on the California ED Diversion Project website: caeddiversionproject.com.

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About the Foundation

The California HealthCare Foundation is an independent philanthropy committed to improving the way health care is delivered and financed in California. By promoting innovations in care and broader access to information, our goal is to ensure that all Californians can get the care they need, when they need it, at a price they can afford. For more information about CHCF, visit www.chcf.org.

Endnotes

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Appendix A

Diversion by Region 2007

EMS Region	Population (per CA DOF)*	ED Volume (per OSHPD)	Hospitals (OSHPD)†	ED Treatment Stations (OSHPD)	EMS Transports (per EMS Agency)	Diversion Hours (per OSHPD)	Diversion Hours (per EMS Agency)	ED Utilization/ 1,000 Population	ED Visits/ED Treatment Station	Diversion Hours/ 1,000 Population	Diversion Hours/ EMS Transport	Diversion Hours/ Hospital	Diversion Hours/ED Treatment Station
Alameda	1,530,620	478,353	13	305	82,150	881	714	313	1,568	0.47	0.01	55	2
Central California	1,657,210	521,991	16	340	149,865	72	n/a	315	1,535	n/a	n/a	n/a	n/a
Coastal Valleys	707,257	189,801	12	131	41,885	0	n/a	268	1,449	n/a	n/a	n/a	n/a
Contra Costa	1,044,201	326,314	9	223	58,213	9	n/a	313	1,463	n/a	n/a	n/a	n/a
El Dorado‡	178,689	44,281	2	27	9,112	0	n/a	248	1,640	n/a	n/a	n/a	n/a
Imperial‡,#	174,322	73,452	2	36	11,078	1,120	-	421	2,040	6.42	0.10	560	0
Inland Counties	2,071,775	654,035	19	360	25,142	14,405	19,224	316	1,817	9.28	0.76	1,012	53
Kern	809,903	220,739	9	130	66,708	548	621	273	1,698	0.77	0.01	69	5
Los Angeles	10,294,280	2,653,876	75	1,541	496,896	73,072	81,741	258	1,722	7.94	0.16	1,090	53
Marin§	256,310	75,733	3	45	15,643	104	65	295	1,683	0.25	0.00	22	1
Merced	252,544	66,313	2	31	14,153	0	n/a	263	2,139	n/a	n/a	n/a	n/a
Monterey	425,356	136,971	4	63	20,571	0	n/a	322	2,174	n/a	n/a	n/a	n/a
Mountain Valley	626,982	232,882	7	126	44,216	164	1,089	371	1,848	1.74	0.02	156	9
North Coast	225,392	128,939	8	63	17,582	0	n/a	572	2,047	n/a	n/a	n/a	n/a
Northern California#	643,505	266,885	19	150	77,210	594	-	415	1,779	0.92	0.01	31	0
Orange	3,098,183	764,169	27	552	55,931	8,445	7,197	247	1,384	2.32	0.13	267	13
Riverside#	2,070,315	564,402	15	300	117,200	2,423	-	273	1,881	1.17	0.02	162	0
Sacramento‡	1,415,117	389,134	9	231	71,864	3,721	3,905	275	1,685	2.76	0.05	434	17
San Benito	57,493	15,580	1	6	3,771	0	n/a	271	2,597	n/a	n/a	n/a	n/a
San Diego**	3,120,088	727,096	17	424	147,639	19,015	24,458	233	1,715	7.84	0.17	1,439	58
San Francisco	817,537	226,942	9	163	57,173	5,689	6,477	278	1,392	7.92	0.11	720	40
San Joaquin	680,183	203,858	7	107	40,575	227	320	300	1,905	0.47	0.01	46	3
San Luis Obispo	267,154	89,623	4	56	14,580	26	376	335	1,600	1.41	0.03	94	7
San Mateo‡	734,453	179,863	8	119	28,318	2,035	2,499	245	1,511	3.40	0.09	312	21
Santa Barbara	425,710	130,410	5	56	27,487	0	236	306	2,329	0.55	0.01	47	4
Santa Clara	1,820,176	398,334	11	228	59,557	1,965	2,600	219	1,747	1.43	0.04	236	11
Santa Cruz	265,183	62,062	2	36	11,384	677	1,440	234	1,724	5.43	0.13	720	40
Sierra-Sacramento††	794,063	261,522	8	147	43,558	644	681	329	1,779	0.86	0.02	85	5
Solano	423,970	117,410	4	82	29,430	0	n/a	277	1,432	n/a	n/a	n/a	n/a
Tuolumne	56,910	23,150	1	14	4,849	0	n/a	407	1,654	n/a	n/a	n/a	n/a
Ventura	826,550	178,189	7	112	32,472	8,858	7,400	216	1,591	8.95	0.23	1,057	66
Total/Average	**37,771,431**	**10,402,309**	**335**	**6,204**	**1,876,212**	**144,694**	**161,043**	**275**	**1,677**	**4.26**	**0.09**	**481**	**26**
Total diversion hours including OSHPD data, when EMS agency data was not available							**165,180**						

* Population as of July 1, 2007

† Includes all General Acute Care hospitals with at least 1 ED Visit reported in the OSHPD data

‡ EMS transports estimated based on average growth rate

§ Diversion hours include all types (e.g. ED Sat, CT Failure, Neuro, Trauma)

Diversion hours were not made available from the EMS agency. The diversion hours calculations were estimated using OSHPD data

** During 2002, San Diego County implemented a "home hospital" policy where a managed care patient is transported to their payer contracted hospital irrespective of the hospital's diversion status. Thus, diversion hours may overstate the total diversion problem as each diverted ED may still receive ambulance patients.

†† Region changed to "no divert" policy 7/2007. Thus the data reflect only January through June 2007.

n/a = Not applicable. The region has a "no divert" policy or does not have any hospitals

"-" = EMS agency did not respond to requests for data

Source: OSHPD Annual Hospital Utilization Report 2007 (Pivot Tables), CA DOF, interviews with each EMS agency

Diversion by Region 2006

EMS Region	Population (per CA DOF)*	ED Volume (per OSHPD)	Hospitals (OSHPD)†	ED Treatment Stations (OSHPD)	EMS Transports (per EMS Agency)	Diversion Hours (per OSHPD)	Diversion Hours (per EMS Agency)	ED Utilization/ 1,000 Population	ED Visits/ED Treatment Station	Diversion Hours/ 1,000 Population	Diversion Hours/ EMS Transport	Diversion Hours/ Hospital	Diversion Hours/ED Treatment Station
Alameda‡	1,513,859	438,597	12	288	83,882	1,034	1,073	290	1,523	0.71	0.01	89	4
Central California	1,624,906	522,599	17	326	83,927	50	n/a	322	1,603	n/a	n/a	n/a	n/a
Coastal Valleys	701,065	208,439	13	149	36,694	49	238	297	1,399	0.34	0.01	18	2
Contra Costa	1,031,012	317,594	8	191	59,517	1,494	1,674	308	1,663	1.62	0.03	209	9
El Dorado	176,969	45,549	2	27	8,991	0	n/a	257	1,687	n/a	n/a	n/a	n/a
Imperial	168,979	78,161	2	36	10,670	791	518	463	2,171	3.07	0.05	259	14
Inland Counties	2,043,644	543,740	20	361	103,566	17,177	22,318	266	1,506	10.92	0.22	1,116	62
Kern	790,246	216,728	10	125	39,863	420	1,020	274	1,734	1.29	0.03	102	8
Los Angeles‡	10,247,672	2,713,973	77	1,544	459,065	102,551	102,609	265	1,758	10.01	0.22	1,333	66
Marin§	254,000	75,446	3	45	13,093	297	126	297	1,677	0.50	0.01	42	3
Merced	248,258	19,923	1	9	13,026	0	n/a	80	2,214	n/a	n/a	n/a	n/a
Monterey‡	421,463	126,114	4	63	19,755	0	n/a	299	2,002	n/a	n/a	n/a	n/a
Mountain Valley	618,847	226,847	7	110	77,688	493	622	367	2,062	1.01	0.01	89	6
North Coast	224,503	127,887	8	66	19,048	3	n/a	570	1,938	n/a	n/a	n/a	n/a
Northern California	638,490	245,252	19	150	42,500	529	593	384	1,635	0.93	0.01	31	4
Orange‡	3,075,341	739,141	26	518	53,371	11,340	9,821	240	1,427	3.19	0.18	378	19
Riverside	2,004,174	535,372	15	285	114,946	1,718	2,573	267	1,878	1.28	0.02	172	9
Sacramento‡	1,396,496	358,727	9	227	70,428	6,519	6,644	257	1,580	4.76	0.09	738	29
San Benito	57,128	14,838	1	6	2,049	0	n/a	260	2,473	n/a	n/a	n/a	n/a
San Diego#	3,077,877	696,161	18	440	142,791	15,182	21,771	226	1,582	7.07	0.15	1,210	49
San Francisco	806,210	227,382	9	163	55,777	4,116	4,725	282	1,395	5.86	0.08	525	29
San Joaquin	671,115	204,525	7	107	48,120	100	196	305	1,911	0.29	0.00	28	2
San Luis Obispo‡	264,972	87,266	4	48	13,843	24	18	329	1,818	0.07	0.00	5	0
San Mateo	726,260	182,400	8	119	26,703	1,973	2,079	251	1,533	2.86	0.08	260	17
Santa Barbara	421,337	125,622	5	59	26,294	0	402	298	2,129	n/a	n/a	n/a	n/a
Santa Clara	1,790,272	354,929	10	224	54,246	1,593	2,546	198	1,585	n/a	n/a	n/a	n/a
Santa Cruz	262,150	65,351	2	36	10,588	1,225	686	249	1,815	n/a	n/a	n/a	n/a
Sierra-Sacramento	778,231	242,760	8	149	47,708	1,882	1,825	312	1,629	n/a	n/a	n/a	n/a
Solano	421,815	112,596	4	71	21,774	4	n/a	267	1,586	n/a	n/a	n/a	n/a
Tuolumne	56,882	30,165	2	20	4,765	0	1	530	1,508	n/a	n/a	n/a	n/a
Ventura	818,803	194,963	8	108	31,872	12,078	10,836	238	1,805	n/a	n/a	n/a	n/a
Total/Average	**37,332,976**	**10,079,047**	**339**	**6,070**	**1,796,560**	**182,642**	**194,914**	**270**	**1,660**	**5.22**	**0.11**	**575**	**32**

* Population as of July 1, 2006

† Includes all General Acute Care hospitals with at least 1 ED Visit reported in the OSHPD data

‡ EMS transports estimated based on typical 9-1-1 utilization by population

§ Diversion hours include all types (e.g. ED Sat, CT Failure, Neuro, Trauma)

During 2002, San Diego County implemented a "home hospital" policy where a managed care patient is transported to their payer contracted hospital irrespective of the hospital's diversion status. Thus, diversion hours may overstate the total diversion problem as each diverted ED may still receive ambulance patients.

n/a = Not applicable. The region has a "no divert" policy or does not have any hospitals

Source: OSHPD Annual Hospital Utilization Report 2006 (Pivot Tables), CA DOF, interviews with each EMS agency

Diversion by Region 2005

EMS Region	Population (per CA DOF)*	ED Volume (per OSHPD)	Hospitals (OSHPD)†	ED Treatment Stations (OSHPD)	EMS Transports (per EMS Agency)	Diversion Hours (per OSHPD)	Diversion Hours (per EMS Agency)	ED Utilization/ 1,000 Population	ED Visits/ED Treatment Station	Diversion Hours/ 1,000 Population	Diversion Hours/ EMS Transport	Diversion Hours/ Hospital	Diversion Hours/ED Treatment Station
Alameda	1,501,124	442,775	12	286	82,141	1,124	1,319	295	1,548	0.88	0.02	110	5
Central California	1,591,635	508,298	17	310	79,107	115	n/a	319	1,640	n/a	n/a	n/a	n/a
Coastal Valleys	698,353	201,612	13	149	37,118	2,088	2,747	289	1,353	3.93	0.07	211	18
Contra Costa	1,021,555	280,237	8	192	54,568	388	506	274	1,460	0.50	0.01	63	3
El Dorado	174,542	45,039	2	27	8,850	0	n/a	258	1,668	n/a	n/a	n/a	n/a
Imperial	163,521	79,141	2	36	10,670	1,975	1,073	484	2,198	6.56	0.10	537	30
Inland Counties	2,002,506	518,377	19	319	101,121	24,998	32,661	259	1,625	16.31	0.32	1,719	102
Kern	765,161	211,731	10	124	35,830	543	1,905	277	1,708	2.49	0.05	190	15
Los Angeles	10,197,247	2,679,473	73	1,443	459,065	162,448	174,952	263	1,857	17.16	0.38	2,397	121
Marin	252,179	72,178	3	45	12,734	167	204	286	1,604	0.81	0.02	68	5
Merced	242,260	48,539	2	26	12,662	0	n/a	200	1,867	n/a	n/a	n/a	n/a
Monterey‡,§	421,211	118,579	4	54	19,586	428	n/t	282	2,196	1.02	0.02	107	8
Mountain Valley	609,961	223,575	7	116	73,944	422	253	367	1,927	0.41	0.00	36	2
North Coast	223,443	127,128	8	66	18,750	0	n/a	569	1,926	n/a	n/a	n/a	n/a
Northern California§,#	632,023	224,046	18	131	42,075	294	196	354	1,710	0.31	0.00	11	1
Orange	3,056,814	767,336	26	523	53,426	10,808	10,608	251	1,467	3.47	0.20	408	20
Riverside	1,922,209	491,004	14	285	110,898	1,352	3,847	255	1,723	2.00	0.03	275	13
Sacramento	1,378,299	350,457	9	225	69,068	5,809	5,811	254	1,558	4.22	0.08	646	26
San Benito	57,112	14,592	1	6	1,865	0	n/a	255	2,432	n/a	n/a	n/a	n/a
San Diego**	3,051,175	718,290	19	426	138,598	13,331	18,841	235	1,686	6.18	0.14	992	44
San Francisco	799,731	225,179	9	154	53,084	6,670	7,106	282	1,462	8.89	0.13	790	46
San Joaquin‡	659,707	202,230	7	107	44,752	137	n/t	307	1,890	0.21	0.00	20	1
San Luis Obispo	262,480	90,411	4	46	14,857	186	48	344	1,965	0.18	0.00	12	1
San Mateo	722,012	185,588	8	119	26,009	2,287	2,458	257	1,560	3.40	0.09	307	21
Santa Barbara	418,899	128,041	5	59	19,905	8	1,004	306	2,170	2.40	0.05	201	17
Santa Clara	1,763,481	305,690	10	224	57,293	1,723	2,638	173	1,365	1.50	0.05	264	12
Santa Cruz	260,469	64,800	2	36	10,149	1,726	689	249	1,800	2.65	0.07	345	19
Sierra-Sacramento	759,050	217,333	8	128	49,989	1,502	1,516	286	1,698	2.00	0.03	190	12
Solano	419,180	109,017	4	71	17,251	0	n/a	260	1,535	n/a	n/a	n/a	n/a
Tuolumne	56,816	31,740	2	20	4,232	0	4	559	1,587	0.07	0.00	2	0
Ventura	812,065	183,428	7	99	29,442	11,376	9,521	226	1,853	11.72	0.32	1,360	96
Total/Average	**36,896,220**	**9,865,864**	**333**	**5,852**	**1,749,039**	**251,905**	**279,907**	**267**	**1,686**	**7.59**	**0.16**	**841**	**48**
Total diversion hours including OSHPD data, when EMS agency data was not available							**280,472**						

* Population as of July 1, 2005

† Includes all General Acute Care hospitals with at least 1 ED Visit reported in the OSHPD data

‡ Diversion hours calculations estimated using OSHPD data

§ EMS transports estimated based on typical 9-1-1 utilization by population

Diversion hours (per EMS Agency) estimated from 2003-2004 diversion hours

** During 2002, San Diego County implemented a "home hospital" policy in which managed care patients are transported to their payer-contracted hospital irrespective of the hospital's diversion status. Thus, diversion hours may overstate the total diversion problem as each diverted ED may still receive ambulance patients.

n/t = Not tracked by EMS agency

n/a = Not applicable. The region has a "no divert" policy or does not have any hospitals

Source: OSHPD Annual Hospital Utilization Report 2005 (Pivot Tables), CA DOF, interviews with each EMS agency

Diversion by Region 2004

EMS Region	Population (per CA DOF)*	ED Volume (per OSHPD)	Hospitals (OSHPD)†	ED Treatment Stations (OSHPD)	EMS Transports (per EMS Agency)	Diversion Hours (per OSHPD)	Diversion Hours (per EMS Agency)	ED Utilization/ 1,000 Population	ED Visits/ED Treatment Station	Diversion Hours/ 1,000 Population	Diversion Hours/ EMS Transport	Diversion Hours/ Hospital	Diversion Hours/ED Treatment Station
Alameda	1,497,110	381,701	11	239	75,424	1,505	1,764	255	1,597	1.18	0.02	160	7
Central California	1,559,868	394,962	12	229	72,501	50	n/a	253	1,725	n/a	n/a	n/a	n/a
Coastal Valleys	696,168	163,171	11	110	34,927	798	2,990	234	1,483	4.29	0.09	272	27
Contra Costa	1,011,851	283,104	8	159	49,314	253	257	280	1,781	0.25	0.01	32	2
El Dorado	171,355	45,300	2	27	8,769	0	n/a	264	1,678	n/a	n/a	n/a	n/a
Imperial	158,650	68,880	2	36	10,455	2,083	1,276	434	1,913	8.04	0.12	638	35
Inland Counties	1,952,754	466,912	18	298	97,944	26,269	37,114	239	1,567	19.01	0.38	2,062	125
Kern	742,529	171,670	9	110	34,124	519	1,368	231	1,561	1.84	0.04	152	12
Los Angeles	10,127,440	2,658,919	79	1,500	419,644	144,272	165,026	263	1,773	16.29	0.39	2,089	110
Marin‡	250,703	68,947	3	45	10,733	98	n/t	275	1,532	0.39	0.01	33	2
Merced	236,367	46,357	2	26	11,558	0	n/a	196	1,783	n/a	n/a	n/a	n/a
Monterey‡,§	421,191	119,248	4	54	19,641	603	n/t	283	2,208	1.43	0.03	151	11
Mountain Valley	598,538	213,635	7	123	70,200	246	207	357	1,737	0.35	0.00	30	2
North Coast‡	222,162	100,356	7	55	19,481	0	n/a	452	1,825	n/a	n/a	n/a	n/a
Northern California§	625,925	235,292	20	153	41,654	926	251	376	1,538	0.40	n/a	13	2
Orange	3,033,026	747,031	28	530	52,301	11,482	10,767	246	1,409	3.55	0.21	385	20
Riverside	1,841,707	481,754	15	266	112,796	1,586	3,216	262	1,811	1.75	0.03	214	12
Sacramento	1,358,046	335,871	9	211	65,704	7,576	7,785	247	1,592	5.73	0.12	865	37
San Benito	56,865	14,046	1	6	1,853	0	n/a	247	2,341	n/a	n/a	n/a	n/a
San Diego#	3,027,440	520,859	15	325	133,902	15,051	22,063	172	1,603	7.29	0.16	1,471	68
San Francisco	796,288	220,235	9	148	48,103	6,604	8,015	277	1,488	10.07	0.17	891	54
San Joaquin‡	643,929	179,606	7	102	41,619	134	n/t	279	1,761	0.21	0.00	19	1
San Luis Obispo	260,146	89,707	4	46	14,512	44	48	345	1,950	0.18	0.00	12	1
San Mateo	719,102	176,967	8	120	22,949	2,030	2,160	246	1,475	3.00	0.09	270	18
Santa Barbara‡	416,612	78,900	4	47	19,181	3	n/t	189	1,679	0.01	0.00	1	0
Santa Clara	1,747,249	306,481	11	216	54,246	2,397	3,077	175	1,419	1.76	0.06	280	14
Santa Cruz	259,666	81,403	2	36	10,325	892	371	313	2,261	1.43	0.04	186	10
Sierra-Sacramento	740,890	211,243	8	125	45,597	615	623	285	1,690	0.84	0.01	78	5
Solano	417,574	104,984	4	61	16,162	0	n/a	251	1,721	n/a	n/a	n/a	n/a
Tuolumne	56,686	30,946	2	20	4,412	0	0	546	1,547	0.00	0.00	0	0
Ventura	806,634	166,371	7	97	28,417	13,265	9,257	206	1,715	11.48	0.33	1,322	95
Total/Average	**36,454,471**	**9,164,858**	**329**	**5,520**	**1,648,448**	**239,301**	**277,635**	**251**	**1,660**	**7.62**	**0.17**	**844**	**50**
Total diversion hours including OSHPD data, when EMS agency data was not available							**278,473**						

* Population as of July 1, 2004

† Includes all General Acute Care hospitals with at least 1 ED Visit reported in the OSHPD data

‡ Diversion hours calculations estimated by OSHPD data

§ EMS transports estimated based on typical 9-1-1 utilization by population

During 2002, San Diego County implemented a "home hospital" policy in which managed care patients are transported to their payer-contracted hospital irrespective of the hospital's diversion status. Thus, diversion hours may overstate the total diversion problem as each diverted ED may still receive ambulance patients.

n/t = Not tracked by EMS agency

n/a = Not applicable. The region has a "no divert" policy or does not have any hospitals

Source: OSHPD Annual Hospital Utilization Report 2004 (Pivot Tables), CA DOF, interviews with each EMS agency

Diversion by Region 2003

EMS Region	Population (per CA DOF)*	ED Volume (per OSHPD)	Hospitals (OSHPD)†	ED Treatment Stations (OSHPD)	EMS Transports (per EMS Agency)	Diversion Hours (per OSHPD)	Diversion Hours (per EMS Agency)	ED Utilization/ 1,000 Population	ED Visits/ED Treatment Station	Diversion Hours/ 1,000 Population	Diversion Hours/ EMS Transport	Diversion Hours/ Hospital	Diversion Hours/ED Treatment Station
Alameda	1,492,709	403,396	12	232	78,660	1,251	3,496	270	1,739	2.34	0.04	291	15
Central California	1,523,446	445,605	16	249	70,253	1,542	n/a	292	1,790	n/a	n/a	n/a	n/a
Coastal Valleys‡	691,607	168,441	11	100	32,439	229	n/t	244	1,684	0.33	0.01	21	2
Contra Costa	1,000,115	302,636	8	157	48,958	369	381	303	1,928	0.38	0.01	48	2
El Dorado	168,310	47,725	2	27	8,637	0	n/a	284	1,768	n/a	n/a	n/a	n/a
Imperial	154,138	67,296	2	36	9,555	1,754	806	437	1,869	5.23	0.08	403	22
Inland Counties	1,898,287	479,368	18	301	94,767	36,314	52,387	253	1,593	27.60	0.55	2,910	174
Kern	719,357	180,474	10	114	32,758	2,258	1,532	251	1,583	2.13	0.05	153	13
Los Angeles	10,026,859	2,887,922	84	1,535	438,010	143,900	166,159	288	1,881	16.57	0.38	1,978	108
Marin‡	250,729	67,134	3	45	11,868	0	n/t	268	1,492	0.00	0.00	0	0
Merced	230,363	49,926	3	40	8,665	540	n/a	217	1,248	n/a	n/a	n/a	n/a
Monterey‡,§	420,068	126,745	4	54	19,448	119	n/t	302	2,347	0.28	0.01	30	2
Mountain Valley	588,185	219,477	7	117	66,456	1,115	2,295	373	1,876	3.90	0.03	328	20
North Coast‡	220,032	92,427	6	50	18,913	0	n/a	420	1,849	n/a	n/a	n/a	n/a
Northern California§	618,647	268,481	21	160	41,238	459	141	434	1,678	0.23	0.00	7	1
Orange	3,001,168	749,713	28	504	51,902	14,011	14,561	250	1,488	4.85	0.28	520	29
Riverside	1,764,136	486,344	15	258	110,735	3,231	6,712	276	1,885	3.80	0.06	447	26
Sacramento	1,332,815	352,973	9	197	66,348	6,374	6,380	265	1,792	4.79	0.10	709	32
San Benito§	56,591	15,621	1	6	1,840	0	n/a	276	2,604	n/a	n/a	n/a	n/a
San Diego#	2,998,514	670,814	17	359	131,762	16,891	23,084	224	1,869	7.70	0.18	1,358	64
San Francisco	793,715	188,894	8	134	46,152	6,852	13,582	238	1,410	17.11	0.29	1,698	101
San Joaquin‡	625,556	153,722	6	83	38,706	153	n/t	246	1,852	0.24	0.00	26	2
San Luis Obispo‡	257,024	89,185	4	44	14,258	56	-	347	2,027	0.22	0.00	14	1
San Mateo	716,773	187,162	8	107	22,468	1,244	1,948	261	1,749	2.72	0.09	244	18
Santa Barbara	413,823	137,950	5	63	16,820	0	0	333	2,190	0.00	0.00	0	0
Santa Clara	1,732,417	323,002	11	217	55,930	1,849	2,084	186	1,488	1.20	0.04	189	10
Santa Cruz	258,565	65,024	2	39	10,133	1,044	479	251	1,667	1.85	0.05	240	12
Sierra-Sacramento	720,819	221,889	8	124	41,773	639	766	308	1,789	1.06	0.02	96	6
Solano	414,759	110,656	4	58	15,980	0	n/a	267	1,908	n/a	n/a	n/a	n/a
Tuolumne	56,648	31,800	2	13	4,085	0	0	561	2,446	0.00	0.00	0	0
Ventura‡	798,038	189,146	7	97	27,894	4,819	n/t	237	1,950	6.04	0.17	688	50
Total/Average	**35,944,213**	**9,780,948**	**342**	**5,520**	**1,637,411**	**247,013**	**296,793**	**272**	**1,772**	**8.26**	**0.18**	**868**	**54**
Total diversion hours including OSHPD data, when EMS agency data was not available							**302,169**						

* Population as of July 1, 2003

† Includes all General Acute Care hospitals with at least 1 ED Visit reported in the OSHPD data

‡ Diversion hours estimated by OSHPD data

§ EMS transports estimated based on typical 9-1-1 utilization by population

During 2002, San Diego County implemented a "home hospital" policy in which managed care patients are transported to their payer-contracted hospital irrespective of the hospital's diversion status. Thus, diversion hours may overstate the total diversion problem as each diverted ED may still receive ambulance patients.

n/t = Not tracked by EMS agency

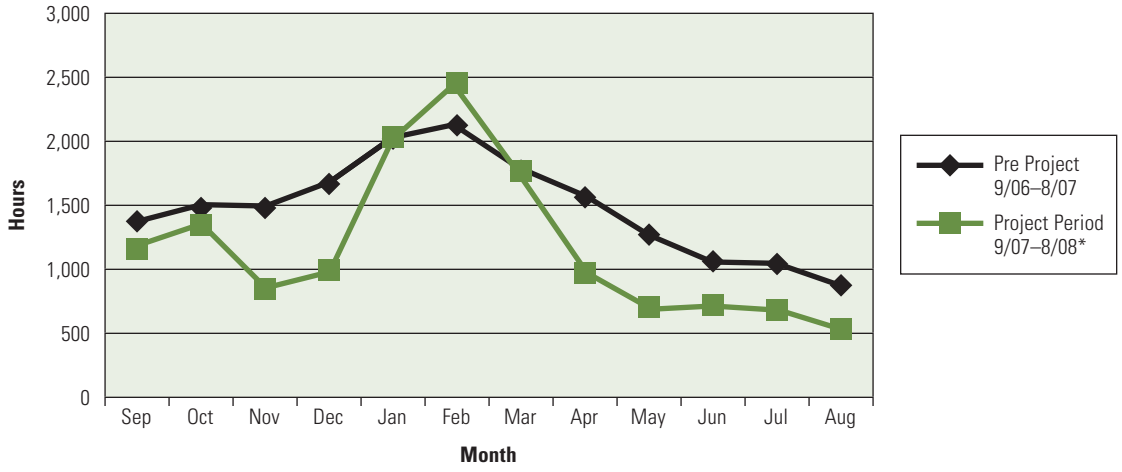
n/a = Not applicable. The region has a "no divert" policy or does not have any hospitals

"-" = EMS agency did not respond to requests for data

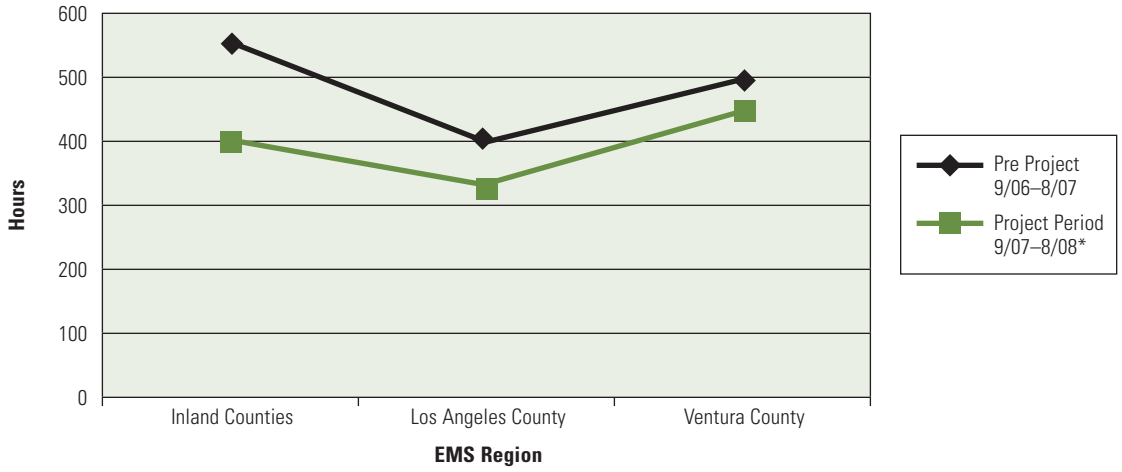
Source: OSHPD Annual Hospital Utilization Report 2003 (Pivot Tables), CA DOF, interviews with each EMS agency

Appendix B

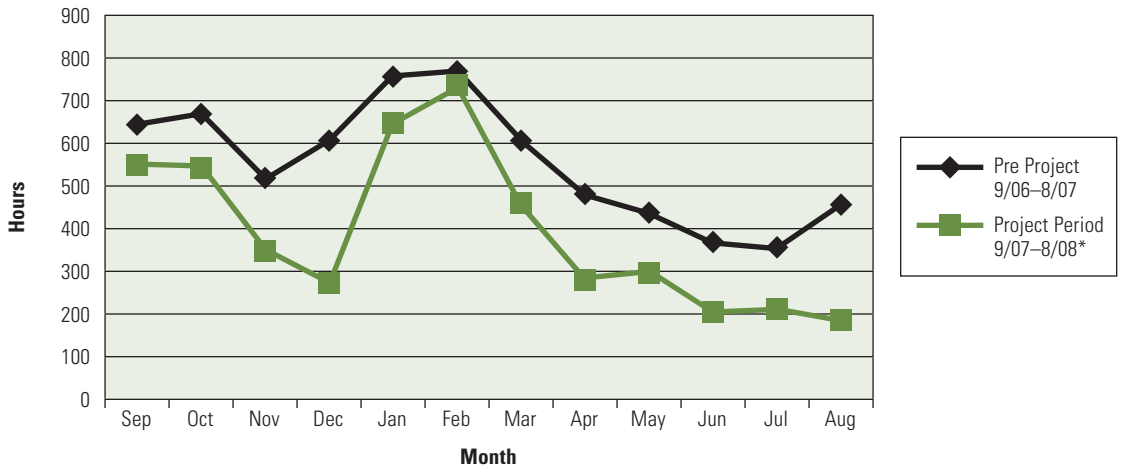
Diversion Hours for Participating Hospitals, Sept. '06—Aug. '08



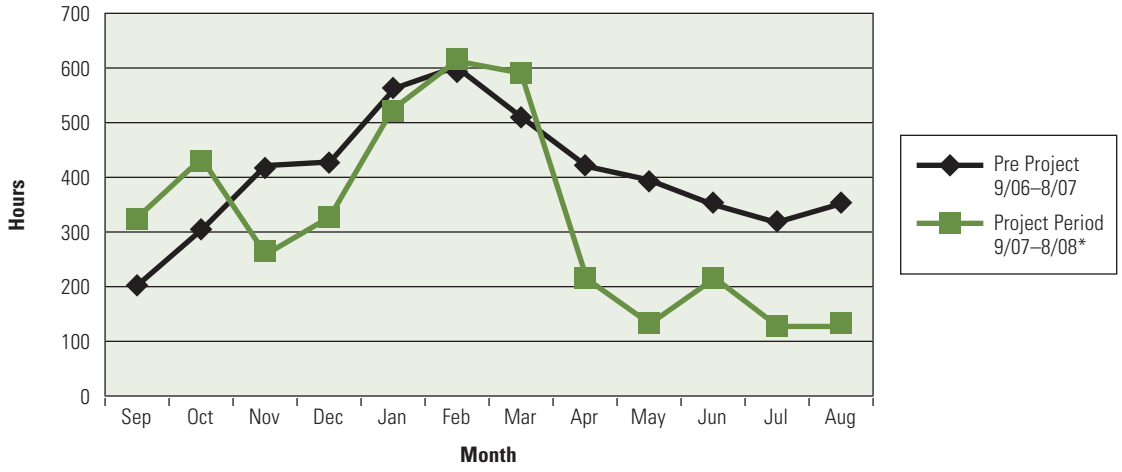
Average Monthly Diversion Hours by EMSA Region Sept. '06—Aug. '08



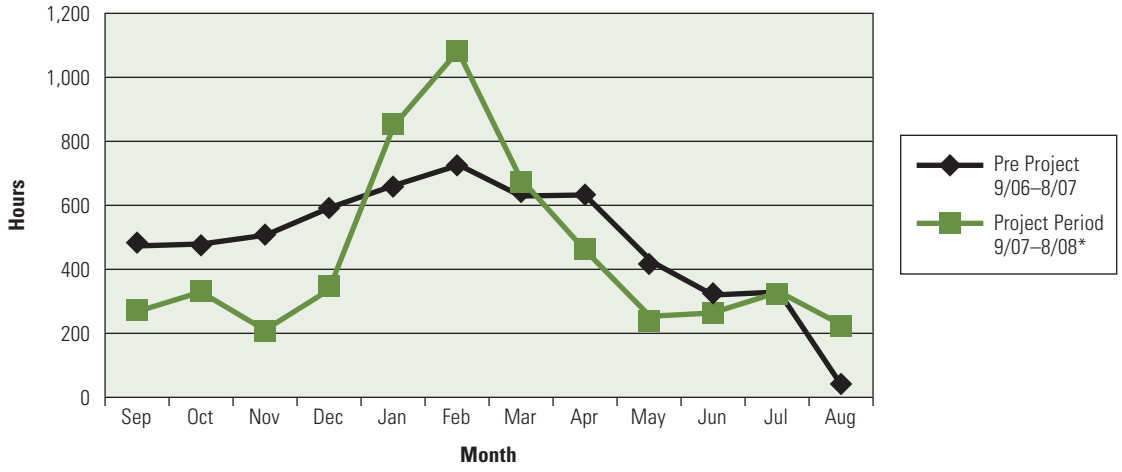
Diversion Hours for San Bernardino County



Diversion Hours for Los Angeles County EMSA Region



Diversion Hours for Ventura County EMSA Region



Diversion Hours for Santa Clara EMSA Region