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The Abaris Group

# The TAG Line

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## California ED Diversion Project Report One

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The Abaris Group recently released Report One of the California ED Diversion Project. This report concludes the first phase of a project supported by the California HealthCare Foundation, Oakland, CA.

The purpose of the study is to identify the nature and extent of ED saturation and EMS diversion in the state, inventory best practices and take a select number of communities through a collaborative designed to significantly improve ED diversion.

The two-year project is made up of four phases. These phases are:

- Phase 1: Initial Research and Reporting
- Phase 2: Identification of Best Practices and Policies
- Phase 3: Implementation of Best Practices
- Phase 4: End of Project Reporting

During the first phase of the project, the Abaris Group obtained and analyzed data in order to get a clear picture of ambulance diversion in each of California's 31 EMS Regions. Data was collected from each local EMS Agency and California's Office of Statewide Health Planning and Development website. The findings were published in this report.

Report One tracks EMS transports, diversion hours, average off-load time, and other indicators of diversion and ED saturation from 2003 to 2005. The report found that California EDs were closed to ambulances 11 percent of the time in 2005. In the four regions with the most severe diversion problems, EDs were on diversion 22.6 percent of the year.

Nine EMS regions in California have gone to policies of "no diversion." Hospitals in these regions are not allowed to divert ambulances. In some instances this solution leads to different problems, including increased off-load times as EDs are unable to accommodate patients in a timely fashion.

Eleven EMS regions saw a decrease in ambulance diversion from 2003 to 2006, reducing diversion hours anywhere from 5.7 to 72.9 percent. Other regions, however, saw increases in diversion of as much as 339.4 percent.

Phase two will involve looking at the practices and experiences of nine EMS regions in greater detail. These nine regions include three regions that are experiencing significant diversion, three that appear to have a good handle on the diversion problem, and three that have made substantial progress in reducing diversion at their hospitals. The information gained during phase two will be used to develop relevant tools and to identify customizable best practices and policies to be used in resolving diversion.

Four EMS Agencies will be invited to participate in phase three of the project. A collaborative will assist each of these agencies and participating hospitals in implementing best practices and developing plans to improve ED capacity and reduce diversion. The collaborative will use knowledge obtained during phase two to help these regions meet the goal of reduced diversion.

California ED Diversion Project

Finally, the Abaris Group will

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## Do Firefighter First Responders Need to Respond?

Firefighter first responders are dispatched on some emergency responses in the hopes that they may be able to administer time-sensitive and life-saving care to ALS patients before EMS paramedics arrive at the scene. Researchers in Toronto set out to create a model to predict the probability of a critical intervention by Firefighter First Responders before paramedics arrive.

The researchers analyzed 16 months of data from an urban EMS system. They found that firefighters were first on scene only 50 percent of the time.

For each EMS response in which there had been an ALS intervention, or in which the situation warranted an ALS intervention, researchers looked at which Medical Priority Dispatch System (MPDS) determinants had been assigned. They then determined the probability of each MPDS determinant producing a call warranting an ALS intervention.

According to this model, firefighter first responders should not be sent on calls in which the probability of firefighter ALS intervention is less than 0.4 percent. If the probability of intervention by firefighters before EMS paramedics arrive is greater than one percent, then a "lights-and-siren" response is warranted. Situations in which the probability of intervention is between 0.4 percent and one percent are considered "non-emergency," and firefighters can still provide on-scene assistance to the paramedics. Firefighter first responder "hot" responses will be reduced by 76 percent under this model.

This study is important, as "lights-and-siren" firefighter responses lead to increased risk to both the firefighters and the public. Reducing such responses to only those calls that are more likely to require a Firefighter First Responder intervention decreases these risks, without compromising patient care.

The results of the study were presented by Toronto EMS Chief Alan Craig at the NAEMSP annual meeting in January. A summary of the study can be found here.

## AHRQ 2006 National Healthcare Quality Report

The Agency for Healthcare Research and Quality's 2006 National Healthcare Quality Report (NHQR) provides a comprehensive overview of the current state of health care in America. The report uses 42 core measures to look at the timeliness of care, effectiveness of care, patient safety, and patient centeredness of care received in healthcare facilities in the U.S.

The timeliness of primary, emergency, and hospital care were examined by looking at three measures. The first measure, getting care for illness or injury as soon as it is wanted, showed no significant change in the years for which data is available. The other two measures, emergency department visits in which the patient left without being seen and time to initiation of thrombolytic therapy for heart attack patients, were among the only measures that have been getting worse, according to the report.

Effectiveness of care was measured by looking at prevention, screening, or management techniques for cancer, diabetes, end stage renal disease, heart disease, HIV and AIDS, maternal and child health, mental health and substance abuse, respiratory disease, and nursing home, home health and hospice care.

The report also looked at patient safety, as measured by the following:

- Postoperative care composite (pneumonia, urinary tract infection, and/or venus thromboembolic event)
- Antibiotics administered at appropriate times among surgical patients
- Adverse events associated with central venus catheters
- Deaths following complications of care
- Adverse drug events in the hospital
- Inappropriate medication use among the elderly

Of those measures for which trend information is available, only inappropriate medication use among the elderly showed any significant change, decreasing from 21.3 percent in 1996 to 18.7 percent in 2003.

Finally, patient centeredness was measured by looking at patient perceptions of the care they receive. Specifically, measures of how often their provider really listened carefully, explained things clearly, respected with they had to say, and spent enough time with them were reported. These data show that patient satisfaction increased from 2000 to 2003.

The report found that most measures of healthcare quality are improving, although the rate of improvement has been modest. Overall, 26 of the core measures with trend data available showed significant improvement, 12 showed no significant change, and only 2 showed significant deterioration. These improvements vary from facility to facility, state to state, and across different types of care.

The complete report can be found at the Agency for Healthcare Research and Quality's website, by clicking here.

## Compression-Only CPR Most Effective for Heart Attack Victims

Chest compressions without mouth-to-mouth ventilation has been found to save twice as many heart attack victims as traditional CPR, according to a new study performed by the Surugadai Nihon University Hospital in Tokyo.

The study looked at 4,068 adults who had a heart attack in front of witnesses, and compared the outcomes depending on whether the patient received no resuscitation from bystanders (72 percent of victims), conventional CPR (18 percent of victims), or compression-only resuscitation (10 percent of victims). Researchers further looked at subgroups of those patients with apnea, patients whose heart rhythm could be shocked back to normal, and patients who received resuscitation within four minutes of the attack. Patients who received compressions only had a higher one-month survival rate than those who received traditional CPR for each of these subgroups. The difference was greatest for patients with apnea, where the survival rate for patients who received compressions only was double that of patient who received traditional CPR.

Compression-only CPR is optimal as it maintains blood pressure in the heart, which is essential for restoration of a spontaneous pulse. The blood pressure in the heart is significantly reduced when compressions are stopped to perform the mouth-to-mouth component of CPR. Heart attack victims usually have enough oxygen in their blood to last seven or eight minutes, and many continue to gasp for air every 15 to 20 seconds, which essentially eliminates the need for mouth-to-mouth ventilation.

It is important to remember that the compression-only technique should only be used on heart attack victims. Traditional CPR is still necessary for anyone suffering from respiratory arrest, such as from drowning or drug overdose.

Eliminating the mouth-to-mouth component of CPR may increase bystander intervention in heart attack situations, as the most common deterrent from performing CPR on a stranger is the fear infectious disease.

The American Heart Association has since September 2000 recommended the compression-only technique for anyone unwilling or unable to perform mouth-to-mouth ventilation while performing chest compressions.

Click here for more information. The study was published in the medical journal *Lancet*, and is available for purchase here.

### Group Identifies Need for Tiered Critical Care System

Researchers from the University of Pittsburgh School of Medicine convened a group of 39 individuals, representing provider, payer, accreditation, and quality oversight groups for a conference to discuss their perceptions of problems and solutions to the delivery of critical care services in our county. Specifically, they set out to address the issue of unmet demand that is expected to plague the critical care industry as the population ages.

Participants in this conference came up with potential solutions for fixing a critical care system that they described as divided, inconsistent by location, and not centered around patient care.

The solution decided on by the group was a reorganized system that resembles the current trauma care system. Specifically, they called for a tiered system, with hospitals certified as critical care facilities depending on their ability to offer critical care services. Higher acuity patients will then be sent to the top level facilities, while lower acuity patients may be sent to a facility that does not have full critical care capabilities.

The findings of this conference were published in *Critical Care Medicine*. The article, titled "Prioritizing the organization and management of intensive care services in the United States: The PrOMIS Conference," can be purchased here.

### CMS Physician Quality Reporting Initiative

The Centers for Medicare and Medicaid Service's Physician Quality Reporting Initiative (PQRI) provides a financial incentive for healthcare providers to voluntarily report quality measures beginning in July of 2007. This incentive allows eligible Medicare-enrolled professionals to earn a bonus payment of 1.5 percent of total allowed charges for covered Medicare Physician Fee Schedule services by reporting on the set of 74 quality measures defined in the PQRI.

No registration is necessary to participate in PQRI. Providers must report data on those quality measures applicable to their practice on claims submitted to their Medicare claims processing contractor. In order to qualify for a bonus, which is subject to a cap, a minimum reporting threshold must be met.

Participating providers will have access to a CMS analysis of the data they reported; however data will not be publicly reported.

For more information about PQRI, for a list of eligible professionals, or to view the list of 74 quality measures, please visit the CMS website by clicking here.

## Increase in Unnecessary Trauma Transfers, Study Finds

A study recently published in the *Journal of TRAUMA Injury, Infection, and Critical Care* found that hospitals are transferring more and more trauma patients that they should be able to treat themselves. These unnecessary transfers are putting pressure on both the resources and finances of the Level I trauma centers to which they are sent.

Researchers from Loyola University, in Maywood, IL looked at trauma registry data for 1999 through 2003, and compared transferred trauma patients with all trauma patients on a variety of factors. In particular, they looked at date and time of injuries, severity of injuries, primary ICD-9, payer status, and mortality.

The study found that while the volume of trauma patients increased at a relatively modest rate between 1999 and 2003 (six percent), the number of patient transfers increased at a much higher rate of 34 percent. The study noted that most of these transfers were from Level II to Level I trauma centers.

The study found that trauma patients appeared more likely to be transferred to a different facility if they arrived in the ED between 3pm and 7am and had a head or orthopedic injury.

The authors noted that the increase in the number of trauma transfers means that more trauma patients are being put at risk as they are being subject to unnecessary treatment delays.

The report of the study's findings, titled "Socioeconomic factors, medicolegal issues, and trauma patient transfer trends: Is there a connect?" is available for purchase at the *Journal of TRAUMA Injury, Infection, and Critical Care* website.

## California Hospital Comparison Website

California residents now have a powerful online tool available to compare 209 of California's hospitals in terms of quality of care, patient satisfaction, and safety measures. The website, launched Tuesday, March 6, allows for a side-by-side comparison of up to five hospitals on more than 50 performance measures. Hospitals are rated on each applicable performance measure, with five possible ratings ranging from "poor" to "superior."

Users can search for hospitals based on zip code, city, county, hospital name, or medical condition. Currently data is available for heart attack, heart failure, heart bypass surgery, pneumonia, and maternity, the five most common conditions for admission to a hospital. Specifically, for heart attack patients arriving in the ED, hospitals are rated on whether or not these patients received asprin or Beta Blockers upon arrival, anti-clotting therapy within 30 minutes, and percutaneous coronary intervention within 120 minutes. More conditions are expected to be added in the coming years.

The website includes a checklist to help keep track of differences when selecting between a few hospitals. Additionally, it offers advice on how to choose a hospital, and tips for preparing for a planned hospital visit.

The system was developed by the California Hospital Assessment and Reporting Taskforce, a coalition made up of hospitals, health insurers, doctors, nurses, consumer groups, employers, and the California HealthCare Foundation. The institute for Health Policy Studies at UC-San Francisco collects and analyzes the data, which is obtained from CMS, OSHPD, and other sources. This project was funded by the California HealthCare Foundation and various health plans, as well as substantial time and resources donated by participating hospitals.

The Centers for Medicare and Medicaid Services (CMS) has a similar tool to compare about 4,200 hospitals across the county. This tool is not as extensive as California's, as it only looks at 20 measures of quality. Other states have tried methods of rating and reporting hospital performance and quality for comparison purposes, however most have not been as complete or user-friendly as California's.

For more information about this tool, please visit http://www.calhospitalcompare.org.

## California ED Diversion Project (*Continued from page 1*)

collect, analyze, and publish data from all 31 EMS Agencies to describe the nature and extent of ambulance diversion in each at the close of the project. If feasible, a mechanism will be put in place to continue to routinely report on the state of diversion in each region.

Click here for more information about the California ED Diversion Project or to view Report One.

## Trauma Care Systems Planning and Development Act of 2007

H.R. 727, the Trauma Care Systems Planning and Development Act, recently approved by Congress, reauthorizes through FY 2012 the Health Resources and Services Administration's (HRSA) Trauma-EMS Program. The Act will create a new and competitive grant program for states. States whose EMS and Trauma systems coordinate care and planning according to national standards may be eligible for these grants. It also requires and provides funding for a study on the current state of trauma care and trauma research.

The Act calls for $12 million for FY 2008, $10 million for FY 2009, and $8 million for each of FY 2010, FY 2011, and FY 2012, to be used for these state grants.

H.R. 727 was passed by the House March 27, 2007 and the Senate March 29, 2007, and was presented to the President April 24, 2007, but has not yet been signed by the President.

For more information and the status of this legislation, please click here.

## Out-of-Hospital Trauma Treatment Study

A recent study titled "The National Study on the Costs and Outcomes of Trauma" set out to determine the extent of variation in out-of-hospital treatment of trauma patients. Previously the extent of variation had been unknown. The results of this study are important in the argument for the development of national standards for treatment and training of EMS providers.

The study looked at 15 metropolitan areas in the United States, and examined data from a sample of Level One Trauma Centers and non-trauma hospitals in these regions. Researchers looked at both out-of-hospital and in-hospital treatment for 3,357 patients who were discharged from one of these hospitals between July 2001 and November 2002 after treatment for a moderate to severe injury.

The greatest variation in treatment between regions was found in the use of endotracheal intubation. Currently there is great controversy over what the appropriate use of this treatment technique.

Out-of-hospital intravenous access appears to be the most widely adopted practice, with little variation in its use among the regions studied.

The researchers determined that in some of the areas of greatest variation, further study is needed to determine the most appropriate technique for care.

The results of this study were published in the March 2007 edition of the *Annals of Emergency Medicine*, available here.


## About Us

The Abaris Group is a consulting firm that specializes in emergency and outpatient services. We provide clients with help on a wide range of topics, including strategic planning, operational improvement, and financial enhancement, to help them achieve their goals.

We pride ourselves on delivering value to our clients in the form of quality recommendations and strategies that work. To achieve this, we conduct detailed analyses, blending insight and experience from all spectrums of the healthcare and emergency care fields to meet our client's unique needs.

Whether it is evaluation of new programs, studies of existing ones or assistance with implementation, we will extend this superior level of service to you and your organization.

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