Background
The goal of every emergency medical provider (first responder, E.M.T., Paramedic, Flight Nurse, Physician and others) is to respond to patients in their time of need and to provide them with the most appropriate and highest quality care possible. This care is frequently critical to a patient’s health or survival and is often provided in settings that are challenging, chaotic and even hazardous. Decisions and actions by emergency medical providers are sometimes influenced by environmental factors but are always based upon the experience, training, protocols, medical direction, common medical practice and ultimately the provider’s best judgment. Regardless of training, experience and especially the intent of the provider, medical errors in the EMS setting occur and cause harm or even take the life of the very patients the system is intending to save.

The national Institute of Medicine (IOM) studied medical errors in hospitals and reported that between 44,000 and 98,000 people die each year as a result of medical errors, preventable mistakes, oversights and omissions. *This accounts for more deaths than motor vehicle accidents, breast cancer or AIDS.* ¹ Similarly, the Institute for Healthcare Improvement estimated that 15 million medical mistakes occur in U.S. hospitals each year.² Hospitals in the U.S. and Canada are focusing on quality improvement like never before. They are analyzing the failures in their systems of care, the processes that lead up to a mistake and are working hard to improve performance by making systemic changes. Hospitals are moving away from having a “culture of blame,” where one individual is singled out to carry the blame. Instead the desired work atmosphere is one of mutual accountability, where mistakes are viewed as the result of a series of system failures that allowed the error to occur. In that kind of work environment, when errors or even close calls occur, the duty of the entire organization is to transform the entire system; re-train every hand that touches a piece of the puzzle, re-tool every protocol, policy, practice and attitude in order to ensure that the mistake never happens again.

Emergency Medical Services (EMS) are an important part of the healthcare system and EMS has the same responsibility to patients that hospitals and physicians do: to do no harm. It would be naive to think that errors in EMS either don’t exist or that nothing can be done to reduce or even eliminate them. One tool that moves systems in this direction is an “Event Reporting System.” An Event Reporting System allows providers to anonymously report safety events that have occurred, could have occurred or could potentially occur in order to capture the event so work can be done to improve the *system* of care.

² [http://www.ihi.org/IHI/Programs/Campaign/](http://www.ihi.org/IHI/Programs/Campaign/)
What is the EMS Voluntary Event Notification Tool?
The EMS Voluntary Event Notification Tool (EVENT) is an anonymous, non-punitive and confidential system that has been developed to help improve the quality and reliability of the care provided to patients by emergency medical service personnel. Event Reporting Systems have been shown to be a key component of quality improvement mechanisms in a variety of fields from aviation to hospitals. The model for EVENT was first developed and used by the Commonwealth of Pennsylvania for use by their Emergency Medical Services. The purpose of the Pennsylvania system and that of EVENT is to collect and utilize valuable information from anonymous reports to help improve the consistency and quality of the care in the EMS arena. Information provided in these anonymous reports identifies needed changes in the systems and processes and does so without placing blame on the individual provider.

What constitutes a reportable event?
The goal of EVENT is to improve the systems (communication, education/training, etc.) and the processes (common/standard practices, protocols, etc.) of emergency medical care by identifying situations where a patient was potentially harmed, could possibly be harmed or when a “close call” has occurred. A “Safety Event” is defined as any event or action that leads to or has the potential to lead to a worsened patient outcome related to the event or action: these may be related to systems, operations, drug administration or any clinical aspect of patient care. Safety Events also include “Near Misses” (i.e. close calls) that are recognized before they actually occur. The terms “report(s)” and “notification(s)” are used synonymously to represent events submitted to the EVENT system.

While transport vehicle, apparatus or aircraft issues, incidents and accidents are crucial to collectively report, the expertise of the CONCERN-Network is the place to report these events or “bulletins.” (http://www.concern-network.org/) CONCERN is an organization with a long history of this service to the air medical and critical care transport services. As of August 1, 2010, CONCERN will include ground-based emergency medical services as well. The CONCERN website will provide further information.

Another future advancement anticipated for EVENT will include additions of EMS Provider Safety reporting. This is being done in conjunction with the National Association of Emergency Medical Technicians and should be available as part of the Center for Leadership, Innovation and Research website in the second half of 2011.

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4 http://app1.health.state.pa.us/EMSEventSystem/
5 Adopted from Commonwealth of Pennsylvania: http://app1.health.state.pa.us/EMSEventSystem/
What types of events may be reported to the EVENT system?

- The EVENT system can be used to anonymously report any patient-safety related issue such as:
  - “Sentinel Events” where unexpected or unintended occurrences result in serious physical injury, psychological trauma or death
  - Unexpected or unintended occurrences that result in any physical injury or psychological injury of a patient, including adverse drug reactions
  - “Near Misses” which are close calls that could have resulted in accident, injury or illness but did not either by chance or through timely intervention
  - Equipment or device failures, malfunctions or provider errors of omission (not using when called for) or misuse (using it in the incorrect way); that cause or could cause harm to a patient.
  - Lessons learned, safety ideas and/or concerns or any topic that has been vetted through local authority either without resolution or the reporting person feels that it cannot be brought up with local authority without the risk of repercussion

- The EVENT system is only applicable to safety events that are related to care given by components of the EMS system including but not limited to: ambulance attendants, first responders, all levels of EMT including Paramedics, Critical Care Transport service personnel, quick response services, ambulance services, air ambulance services, dispatch centers and medical command facilities.

What types of events and information should not be reported to the EVENT system?

- Ambulance, aircraft or any recognized patient transport vehicle issues, incidents and accidents should be reported to the CONCERN-Network (http://www.concern-network.org). Typically, reportable CONCERN events or “bulletins” are one where the vehicle or craft is removed from service, is significantly damaged or there is a resulting injury or death. These events and information should be provided to the CONCERN-Network. Additional information is available on their website.

- Events such as criminal acts should not be reported to EVENT but instead they should be reported immediately to the appropriate law enforcement agency.

- This is not the place to submit concerns related to patient care in hospitals or by non-EMS health care providers.

- EVENT is anonymous and reports cannot include identifying information regarding patient, provider or specific EMS service. No information will be retained regarding the specific incident related to the date, time, location or any information that may jeopardize the anonymity of the report or the privacy of the patient. Any submission that includes these identifiers will be deleted from the system completely and the report will not be included in the effort to improve the quality of the system of EMS care.
EVENT is not intended for general complaints and will not spur a complaint investigation. Any individual that wants to submit a formal complaint against an EMS provider or practitioner should contact their state or provincial EMS office to report the complaint through those institutions’ established processes.

Who can report events into the EVENT system?
Any individual, in the US or Canada, who encounters a problem or recognizes a situation in which a safety event occurred, could have occurred or could potentially occur that would negatively affect a patient that is the care of EMS providers, is encouraged to anonymously report to the EVENT system. This includes but is not limited to traditional EMS providers as well as any provider or individual involved in the care of a patient after EMS care is provided.

What happens to reports that are submitted to EVENT?
Anonymous reports/notifications will be received by EVENT staff through the EVENT website which is hosted by the Center for Leadership, Innovation and Research for EMS (CLIR-EMS). CLIR-EMS is a non-regulatory, not-for-profit group that is promoting and advancing the practice and profession of EMS internationally (http://clirems.org/). Once a report is received it will be reviewed to ensure that it meets the criteria set out above for a reportable event and remove any identifying marks (name, electronic signatures, URL components, etc.). These reports will then be sent to the EMS governing body of the state, territory or province responsible for the EMS system in which the event occurred. Tracking of issues and follow-up will be provided at the request of the EMS governing body that receives notifications.

How can someone report an event to the system?
Simply access the internet and enter the address http://event.clirems.org/ and follow the prompts on the screen. A mechanism for reporting is being considered for situations where the internet may not be readily available.

How does EVENT improve the quality or consistency of care?
The EVENT system is not designed to nor can it directly improve either the quality or consistency of care provided by EMS systems. EVENT is a channel for thoughtful, accurate and timely notification through anonymous submissions to the appropriate state, territory or provincial EMS governing body. Once the governing body receives the anonymous notification, they are encouraged to address systemic issues in order to improve the overall quality of care provided.

There is a famous quote by Dr. W. Edwards Deming, arguably the preeminent expert in quality performance that states, “The problems are with the system, and the system belongs to management.” Errors are the result of a system failure not attributable to a single individual. Punitive action against one individual provider

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6 As of June 2010, staff is limited to Gary Wingrove and Matt Womble (CVs available on request)
7 Out of the Crisis, W. Edwards Deming, PhD., pg 151
or even one EMS agency should not be taken unless negligent or intentionally harmful actions were taken by the provider. Instead, protocols, training, education, practice and other system-related inputs should be examined to determine how to fix the problem at its core in order to ensure that it doesn't happen again. EVENT aims to help EMS organizations and leaders change their approach to quality management by designing better systems of care in EMS.

The National EMS Advisory Council (NEMSAC) which serves as an ongoing forum of nongovernmental organizations and people for the National Highway Traffic Safety Administration (NHTSA) and the Department of Transportation (DOT) will receive updates on the cumulative reports from EVENT.

Regardless of the way in which the data from EVENT will be used, the anonymity of the report will never be jeopardized.

**The future vision for EVENT**

EMS organizations at the local, state and even national level need to improve their capability to identify and systematically address quality improvement opportunities. In the future, EVENT staff will make the following tools available to EMS organizations to help EMS organizations improve their quality and to develop a culture of patient safety:

- Tracking of EVENT submissions by topic and the identification of trends
- Recommendations, training and resources made available for:
  - Quality improvement in EMS
  - Process design and systems approach to problem solving
  - Implementing a “culture of patient safety,” also called “just culture,” where importance is placed on fixing the root cause of systemic errors and not blaming an individual or staff
  - Culture of patient safety surveys

- Connection with programs and pilots that are implementing advanced quality assurance / process improvement efforts
- Site visits and reviews of ongoing quality issues
- In-depth system failure analysis when serious errors occur or systemic problems require external intervention

**For More information**

Visit the EVENT website: [http://event.clirems.org/](http://event.clirems.org/)

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8 To be developed, modeled from AHRQ program (http://www.ahrq.gov/qual/patientsafetyculture/)