

Emergency Response Electronic Health Record (ER-EHR)
Detailed Use Case Feedback

Organization Name	COMCARE
Contact Person Name	Amy DuBrueler
Contact Person Telephone	202-429-0574
Contact Person Email Address	{ HYPERLINK "mailto:adubrueler@comcare.org" }
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<p>COMCARE is a national non-profit alliance with over 100 member organizations. We are dedicated to advancing emergency response by promoting interoperable emergency systems, the use of open standards and forward thinking policies and procedures to maximize their value for emergency responders and the public. Our members include a broad representation of the emergency response and healthcare communities with representation of national organizations for EMS, emergency nurses, 9-1-1, emergency management, along with many other stakeholders. The comments submitted here represent the views expressed by our member organizations, and specifically supported by the following:</p> <ul style="list-style-type: none"> Brain Trauma Foundation Emergency Nurses Association (ENA) Kay Center for E-Health Research, Claremont Graduate University National Association of Emergency Medical Technicians (NAEMT) National Association of State EMS Officials (NASEMSO) National Emergency Number Association (NENA) Spectracom 	

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Section	Comments
2.0 Use Case Stakeholders	
2.0	<p>It is important to include 9-1-1 Telecommunicators/Emergency Medical Dispatchers in the list of stakeholders because the PSAP/9-1-1 center is often the first point of contact the consumer/caller/patient has with the emergency response system. A telecommunicator is a highly trained member of the overall emergency services network, and what they do in the PSAP is an important part of the documentation of the medical care given (or not given) to the patient or victim. In a recent meeting in Washington, DC on pandemic response it became clear that field EMS response and 9-1-1 EMS protocols are linked to a degree that precludes consideration of any aspect of one without discussion of impact on the other.</p> <p>The following is a definition for this stakeholder group:</p> <p style="text-align: center;">9-1-1 Telecommunicators/Emergency Medical Dispatchers (EMD) - Trained emergency medical telecommunicators who provide the initial patient assessment,</p>

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triage and, when necessary, telephone treatment of patients many minutes before the arrival of the first responders. They build an electronic record of the case in their Computer Aided Dispatch (CAD) software immediately after the emergency callers access the system (which is beginning to be shared with EMS).

If 9-1-1 Telecommunicators/Emergency Medical Dispatchers are not added as a separate stakeholder group, which is the preference, then they must be mentioned with the "On-site Care Providers" stakeholder group.

We believe that EMS Systems should be identified as stakeholders separately and in addition to the inclusion of EMTs within the On-site Care Providers stakeholder group. We make this suggestion because an EMS System is distinct from an EMS responder unit or an EMT. The definition for EMS System is:

EMS System – Local, regional and state agencies charged with coordination of the EMS system on a particular level. State EMS agencies are the repositories of "on-scene" data and generally dictate the use of prehospital data formats.

We propose the addition of Electronic Medical Record Vendors, as the developers of first responder IT field systems is included, and health information services providers, as defined, would not include EMR vendors.

Electronic Medical Record Vendors – Those who have developed comprehensive health system wide electronic medical records that includes an established Emergency Department Information System (EDIS) as well as a longitudinal record of patient demographic, medication, allergy and medical problem history in their database. This core data should be integrated and incorporated throughout the continuum of care.

Similarly, any databases and repositories providing or collecting data in addition to electronic medical records should be included.

Public/Private Database Providers – External databases not controlled by the listed stakeholders from which data may be collected and drawn from, or added to; examples include state EMS data agencies, NEMESIS, and personal health record databases.

We suggest changing the definition of **Clinicians** to better describe the primary personnel responsible for receiving and treating emergency incident patients when they arrive at the emergency department or equivalent facility. We propose that the definition say "healthcare providers located at a Medical Treatment Facility (MTF) with responsibility for treating emergency incident victims. This includes emergency physicians, emergency nurses, and all other clinical and ancillary personnel at the MTF."

We also suggest that the **Emergency Management Agencies** stakeholder group be changed to **Emergency Operations Management** and the definition be broadened to include the personnel as described in that perspective in Section A.1.5 of the Detailed Use Case. The current stakeholder definition in Section 2.0 is limited to government agencies. Alternatively, these personnel described in Section A.1.5 could be added as a separate stakeholder group in addition to Emergency Management Agencies.

3.0 Issues and Obstacles

3	This section should mention that ER-EHR data elements must be compliant with NEMESIS Version 2.2.1 (or greater), the current universally agreed upon prehospital EMS data set. Harmonization with HL7 and other data sets will still be necessary for data messaging.
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4.0 Use Case Perspectives	
4.0	<p>We believe the functional nature of the perspective definitions helps to allow for flexibility of the actual location where care may be rendered. However, alternative scenarios should be considered as well to support flexibility of responder/provider type and site of care. Consider that there is an increasing potential to provide treatment and guidance through telemedicine/telehealth channels, whether in a day-to-day scenario or in a mass illness event such as a pandemic. Additionally, the transport of patients from one facility to another is both a day-to-day occurrence and an issue for a mass evacuation of a facility, as was the case in Hurricane Katrina, and the ER EHR should accommodate this scenario as well.</p>
A.1.1	<p>This perspective, phase 1, occurs prior to the patient arriving at a medical treatment facility (MTF). It begins with and can include the initial call for help to 9-1-1 and ends when the patient is transported and turned over to the MTF. In some cases, the emergency incident victim may be evaluated, treated, and released in the field.</p> <p>Because information may first be collected by the 9-1-1 Telecommunicator/Emergency Medical Dispatcher, it should specify here within A.1.1 that 9-1-1 Telecommunicator/EMD is a part of this perspective. This will help clarify that while the dispatcher is located off-site, he/she contributes to the care of the patient while the patient is on-site.</p>
A.1.2	<p>Phase 2 begins when the patient arrives at the MTF, either by EMS transport or by independent means. The perspective definition should be changed to "Healthcare providers located at a MTF with responsibility for treating emergency incident victims. This includes emergency physicians, emergency nurses, and all other clinical and ancillary personnel at the MTF." The primary providers of emergency care at the MTF are the emergency physicians and emergency nurses. The utilization of physician extenders, including advanced practice nurses and physician assistants, varies across the country. The inclusion of emergency physician would imply the inclusion of physician extenders where applicable.</p>
A.1.3	<p>The categories of Emergency Care and Definitive Care should be combined into a single category. If the Emergency Response Electronic Health Record contains a limited data set that will be utilized in the field prior to transport to a MTF, then the typical point of handoff for these patients will be at the MTF ED. At that time the ER EHR will become part of the MTF's electronic medical record and the data collected in the field will be added to and updated as the patient is treated and dispositioned (admit, transfer, discharge).</p> <p>When access to historical information, including medications and problem list information, is needed in order to provide continuous care to a patient (e.g. when providers in evacuation centers needed access to medical histories of evacuees), the practitioner can either access the existing full EHR which will include a record of the emergency care provided, or he/she may access the subset contained in the Emergency Response EHR.</p>
A.1.5	<p>The stakeholders identified within the Emergency Operations Management perspective definition represent a broader group than those identified for emergency management within the list of stakeholders, which only refers to local, state and federal government emergency management agencies. These two sections should be synchronized so that all appropriate stakeholders are included in the stakeholder definition in Section 2.0.</p>
5.0 Scale of Incident	
5.0	<p>While the breadth is appropriate, it should be noted within the use case that the scale of all incidents is relative to the location and the resources of the locality responding to the event. All emergency response events should be considered as scaleable in recognition of the similarity of resources and to recognize that response systems themselves cannot and should not be tailored to events of a specific size.</p>

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5.1	<p>Small incidents should specifically include day to day operations and emergencies, and should specify all single patient incidents. By using the system in normal operations, users would not have to adapt to another system during a time when their resources are being overwhelmed. The timescale for response should be edited so that the minimum range is less than 8 hours to reflect normal response times for routine EMS operations (single patient calls). Examples of routine EMS calls (such as a heart attack) will help clarify this.</p>
6.0 Care Delivery Perspectives	
6.0	<p>In the diagram, Emergency Dispatch Centers should be included within the main scenario data flow (Section 6.1 On-site Care), rather than listed as a Secondary User. All information collected by a properly trained and certified EMD must be considered to be part of the records of medical events, even if there are no "Dispatch Life Support" (DLS) protocols needed or if the caller refuses to assist the victim/patient.</p> <p>The data flow in number III should allow patient care data to be added directly to the permanent medical record for each of the three care delivery perspectives rather than only going through the Definitive Care Data Flow. This will accommodate patients who are discharged prior to receiving definitive care, or those who do not make it to Emergency Care from On-site Care.</p>
6.1.1	<p>The title "On-site Management and Coordination" does not reflect the first step in the scenario. Information should be collected about a patient when he/she is first identified, rather than upon the first physical contact with the patient. If the patient is first identified through a 9-1-1 call, then the triage begins in the PSAP/Communications Center and the data collected on the patient by a trained and certified EMD is entered into their Computer Aided Dispatch (CAD) system. The action (triage) and information collected at this stage is the first step in the care of the patient and the event title of the first step should reflect this.</p>
6.1.1.1	<p>"Calls for assistance are received at the Emergency Dispatch Center" should be a separate step prior to the dispatch of on-site care providers. The dispatch of emergency field responders is the second step and follows the initial triage of the patient. In the majority of settings, the PSAP decides how many personnel/units/apparatus to send on the initial dispatch and how many not to send. This happens only after the patient is triaged by an EMD. The EMD collects more than just the patient location data. The EMD is the eyes and ears of the field responders and can make or break every medical related EMS (or fire, or law enforcement) call for assistance.</p> <p>In the reference to larger scale incidents, it may be better to say that "less specific information may be collected about individual patients. Information provided by the caller on the size and nature of the incident, and characteristic injuries of the patients associated with the incident will allow the proper personnel/units/apparatus to be dispatched."</p> <p>"Emergency medical operations personnel coordinate response deployment" happens in a later step. This initial patient triage by the EMD followed by the dispatch of personnel, emergency response units, and apparatus should be separate steps prior to the arrival of on-site care providers on the scene.</p>
6.1.2	<p>In addition to entering new information, in this step patient information will be updated and built on the patient information collected by the EMD.</p> <p>Any data collected here should be compliant with NEMESIS Version 2.2.1 (or greater).</p>
6.1.5.1	<p>The patient's destination, mode of transport, and priority of movement is communicated directly to Medical Control. This communication is in the majority of cases made from the field, not from the communications center or emergency dispatch center. Terminology</p>

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	regarding the communications between the two should be added here in order to capture the decision-making and data relevant to transporting a patient to a specific MTF. Upon determining the receiving facility, the ER EHR should be transferred to the MTF so they can determine if an additional prior health record is available for the patient. This exchange should occur prior to the arrival of the patient at the MTF if possible. This step is prior to (and in addition to) step 6.1.7.1.
6.2.1	<p>Typically the communications center (PSAP) or emergency dispatch center does not call the emergency room clinical care personnel to notify them of the in-coming patient. Rather, the EMS personnel or other field responders will communicate directly with Medical Control to determine the receiving facility.</p> <p>Language should reflect that once the patient identity is confirmed, data from the ER EHR should be merged/appended to the patient's existing record if available, or added to the new care record. In either case the ER EHR data should be included with the care record for the present encounter.</p>
6.2.2	This step states that a new record is created, however we believe that record may start much earlier, whether on the scene or in the PSAP. Data, enhanced by the patient's medical record if available, is updated with triage and treatment information. It is then sent to the receiving facility as well as submitted to other designated recipients. A new record would only be started if the patient arrives without an ER EHR or arrives at the MTF by independent means.
6.2.3	In some cases a patient is not identified in the field or after treatment has begun in the ED (e.g. trauma patient). The patient may have data in the repository but since they are not identified, it is not initially available. After the patient is identified, the ability to merge the new record with prior EHR data is needed.
7.0 Additional Perspectives	
7.0	<p>It appears as though the perspectives of Medical Examiner/Fatality Manager, Emergency Operations Management, and Public Health identified in Section 4.0 are missing from the use case.</p> <p>Within the Emergency Operations Management perspective it should be noted that emergency management personnel do not need patient identification data to detect trends or clusters, or for managing and allocating resources. Non-identifying or anonymized data should be available for these purposes without the risk of exposing sensitive patient data.</p>
8.0 Emergency Response Electronic Health Record Definition	
8.0	Again, the ER-EHR data elements must be compliant with NEMSIS Version 2.2.1 or greater. NEMSIS is the current universally agreed upon prehospital EMS data set. Many data elements in this standard are a component of an EMS medical record. Harmonization with HL7 and other data sets will still be necessary for data messaging.
Appendix A: Glossary	
A	<p>The following definitions should be added to the glossary:</p> <p>Electronic Health Record (EHR) – The electronic health record (EHR) is a longitudinal electronic record of patient health information generated in one or more encounters in any care delivery setting. Included in this information are patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports.</p> <p>Emergency Dispatch Center - definition should also include PSAP (Public Safety Answering Point), and Communications Center as alternative names</p>

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	<p>Emergency Medical Dispatcher - A specially trained public safety telecommunicator with the specific emergency medical knowledge essential for the appropriate and efficient functioning of emergency medical dispatching.</p> <p>9-1-1 Telecommunicator – As used in 9-1-1, a person who is trained and employed in public safety telecommunications. The term applies to call takers, dispatchers, radio operators, data terminal operators or any combination of such functions in a PSAP.</p> <p>The National EMS Information System (NEMSIS) - The single national entity with authority, granted by state EMS agencies, to dictate the definition of EMS data elements, their inclusion in the EMS data dictionary, and the compliance of commercially available and widely used EMS patient care report software.</p> <p>The term Patient Regulator is not a commonly used term by EMS stakeholders. It should be replaced with the term Medical Control and/or EMS Director.</p>
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