Uniform EMS Data Element Dictionary Format

Each data element is presented using the following template. The Consensus Panel considered it important to provide sufficient detail about each data element to justify its inclusion in the uniform data set, as well as to assist agencies which seek to implement a data collection system. When a data element requires specific categories, these are listed in the data item specification ("Data Items"). The Panel recognizes that the lists which are included in this dictionary are imperfect, but definitions of these lists have been debated for many years without resolution. The lists included here are intended as a starting point for a uniform EMS data set which will evolve.

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Name of Data Element:	Name
Priority:	Essential or desirable
Definition:	Short definition of data element
Code:	A coded description of the data element values or attributes
Data Items:	Defined data elements - alternative descriptions of the data element values or attributes.

Content: Detailed discussion of definition and content.

Discussion and Justification: Provide further details and justify the data element.

Technical Comments: Additional information which may be of use to individuals setting up a data collection system.

Uniform EMS Data Element Dictionary

1.

Name of Data Element:	Incident Address
Priority:	Essential
Definition:	Address (or best approximation) where patient was found, or, if no patient, address to which unit responded.

Code:	Free text entry, or "unknown"

Content: Contains the street address or post office box number, followed by the apartment number of internal building number.

Discussion and Justification: Provides location of incident, which can be used to determine the appropriate level of EMS resources for specific areas.

Technical Comments: Use route numbers and mileposts, or other landmarks which can be coded in a consistent manner if a street address is not applicable.

2.

Name of Data Element:	Incident City
Priority:	Essential
Definition:	City or township (if applicable) where patient was found or to which unit responded (or best approximation)
Code:	Numeric entry.
Data Items:	{5 digit FIPS code} 88888 Not Applicable 99999 Unknown

Content: It is recommended that this field be coded using the FIPS system, wherein each city is encoded as a 5 digit number (i.e. Salt Lake City is coded as '93010'.) City FIPS codes are only unique within a state; for unique identification of a city within the United States, the two-character State code must precede the city code (i.e Salt Lake City, Utah is coded as UT93010).

Discussion and Justification: Provides city location of incident, which can be used to determine the appropriate level of EMS resources for specific areas. In addition, this field may facilitate probabilistic linkage to crash reports from the same city, or to hospitals within the same city. Field may be used for local city reports, permitting local understanding of the impact of EMS.

3.

Name of Data Element:	Incident County
Priority:	Essential
Definition:	County or parish where patient was found or to which unit responded (or best approximation) (if applicable)
Code:	Numeric entry.
Data Items:	{3 digit FIPS code} 888 Not Applicable 999 Unknown

Content: It is recommended that this field be coded using the FIPS system, wherein the county is coded as a 3 digit number (i.e. Salt Lake County is coded as '035'.) The FIPS code uniquely identifies a county only within its state. For unique identification of a county within the United States, the code of the State must precede the county code.

Discussion and Justification: Provides county location of incident, which can be used to determine the appropriate level of EMS resources for specific areas. In addition, this field may facilitate probabilistic linkage to crash reports from the same county, or to hospitals within the same county. Field may be used for local county reports, permitting local understanding of the impact of EMS. Can link data file with census data to determine effects of population density, socioeconomic information, etc. on need for EMS and evaluations of EMS outcome.

4.

Name of Data Element:	Incident State
Priority:	Essential
Definition:	State, territory, or Province, or District of Columbia, where patient was found or to which unit responded
Code:	Numeric entry.
Data Items:	{2 digit FIPS code} 88 Not Applicable 99 Unknown

Content: It is recommended that this field be coded using the FIPS system, or by using standard abbreviations.

Discussion and Justification: Provides a means of aggregating EMS incidents by state, which allows reports to state legislatures concerning statewide EMS activities. Can be used to assess statewide resource requirements for EMS operations. Important where patients are transported across State lines.

Technical Comments: FIPS codes should be used for outlying areas of the United States, Freely Associated States, and the Trust Territory, as well as for individual minor outlying island territories.

5.

Name of Data Element:	Location Type
Priority:	Essential
Definition:	Type of location of incident
Code:	Numeric or alpha/numeric entry

Data Items

849.0	Home / Residence	849.6	Public Building
849.1	Farm	849.7	Residential Institution
849.2	Mine or quarry	849.E	Educational Institution
849.3	Industrial place and premises	849.8	Other specified location
849.4	Place for recreation or sport	849.9	Unspecified location
849.5	Street or highway	849.U	Unknown

Content: Location type data items are coded in terms of the (ICD-9) E849 place of occurrence codes. This location refers to the location where the injury occurred, not necessarily the origin of the transport.

Discussion and Justification: Location type of the incident is important for epidemiologists as well as EMS planners deciding where to allocate EMS resources. The categories in this dictionary are from ICD-9 and are E849 place of occurrence codes, with the exceptions that a category for educational institutions has been added, and an unknown category is provided. The unknown category is provided so that inaccurate data is not entered into this field.

Technical Comments: It is expected that these codes will need to be modified when ICD-10 becomes widely used. Definitions below are from ICD-9, which is currently utilized. It is suggested that implementors of EMS database systems use the E Code (for those categories which have an E Code) for reporting and exporting purposes.

Home / Residence (E Code 849.0)

Includes apartment, boarding house, farm house, home premises, residential house, noninstitutional place of residence, private driveway, private garage, private garden, private home, private walkway, swimming pool within private house or garden, and yard of home. Excludes home under construction but not occupied, or institutional place of residence.

Farm (E Code 849.1)

Includes farm buildings and land under cultivation. Excludes farm house and home premises of farm.

Mine or quarry (E Code 849.2)

Includes gravel pit, sand pit, or tunnel under construction.

Industrial place and premises (E Code 849.3)
Includes building under construction, dockyard, dry dock, factory building or premises, garage (place of work), industrial yard, loading platform in factory or store, industrial plant, railway yard, shop (place of work), warehouse, and workhouse.

Place for recreation or sport (E Code 849.4)
Includes amusement park, baseball field, basketball court, beach resort, cricket ground, football field, golf course, gymnasium, hockey field, holiday camps, ice palace, lake resort, mountain resort, playgrounds including school playground, public parks, racecourses, resorts of all types, riding school, rifle range, seashore resorts, skating rink, sports ground, sports palace, stadium, public swimming pool, tennis court, vacation resort. Excludes occurrences in private house, private garden, private swimming pool, private yard.

Street or highway (E Code 849.5)
Includes all public roadways.

Public building (E Code 849.6)
Includes any building used by the general public, including airport, bank, cafe, casino, church, cinema, clubhouse, courthouse, dance hall, parking garage, hotel, market, movie theater, music hall, nightclub, office, office building, opera house, post office, public hall, broadcasting station, restaurant, commercial shop, bus or railway station, store, or theater. Excludes home garage or industrial building or workplace. Also excludes state, public, and private schools, which varies from the ICD-9 definition.

Residential institution (E Code 849.7)
Children's home, dormitory, hospital, jail, home for elderly, orphanage, prison, reform school.

Educational institution (E Code 849.E)
Includes state, public and private schools. Excludes playground, gymnasium, and other recreational locations within educational institutions, which should be coded as place for recreation or sport.

Other specified location (E Code 849.8)
Includes beaches, canal, caravan site, derelict house, desert, dock, forest, harbor, hill, lake, mountain, parking lot, parking place, pond or natural pool, prairie, railway line, reservoir, river, sea, seashore, stream, swamp, trailer court, and woods. Excludes resorts.

Unspecified location (E Code 849.9)
Includes any location not included in the above classification.

Unknown (E Code 849.U))
To be used when the location of incident is not known.

6.

Name of Data Element:	Onset Date
Priority:	Desirable
Definition:	Date of onset of symptoms or injury date
Code:	Date format should be coded as YYYYMMDD.

Content: Format permits sorting across multiple years, and is recommended for data export purposes. Century digits are mandatory.

Discussion and Justification: This date may differ from the date of the EMS response, and was considered important to provide linkages to other data files such as crash files, and to provide information concerning how long it takes individual patients or families to obtain prehospital care. For example, if a crash occurs and 3 days later the patient decides he isn't feeling better, he may call EMS at that point. Another example is the patient who calls EMS with chest pain that has been present for 3 weeks.

Technical Comments: Format YYYYMMDD is recommended as part of FIPS standard. If YYYY is unknown, it should be coded as 9999; if MM is unknown it should be coded as 99; if DD is unknown it should be coded as 99. For month and day, use leading zeros if necessary to pad the fields to 2 characters each.

7.

Name of Data Element:	Onset Time
Priority:	Desirable
Definition:	Time of onset of symptoms or injury time.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Useful for linkage to injury files, and useful for same reasons as the onset date. It is recognized that this information may be difficult to obtain from prehospital providers. In combination with the Onset Date, this time is used as the start time for calculating the "EMS notification time"; notification time is used to determine the adequacy of communications for timely reporting by the public of medical emergencies in a given area.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

8.

Name of Data Element:	Date Incident Reported
Priority:	Essential
Definition:	Date the call is first received by a public safety answering point (PSAP) or other designated entity.
Code:	Date format should be coded as YYYYMMDD.

Content: Format permits sorting across multiple years, and is recommended for data export purposes. Century digits are mandatory.

Discussion and Justification: Used in conjunction with "Time Incident Reported" to assess the duration between onset of a medical emergency and receipt of a request for EMS response, as well as to assess the duration of time required to mobilize the response and provide the patient definitive care. The data element is also used to help EMS planners allocate resources by day of week and season of year.

Technical Comments: Format YYYYMMDD is recommended as part of FIPS standard. If YYYY is unknown, it should be coded as 9999; if MM is unknown it should be coded as 99; if DD is unknown it should be coded as 99. For month and day, use leading zeros if necessary to pad the fields to 2 characters each.

9.

Name of Data Element:	Time Incident Reported
Priority:	Essential
Definition:	Time call is first received by Public Safety Answering Point (PSAP) or other designated entity.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59. When available, the time should be the connect time to the PSAP.

Discussion and Justification: Provides the start point of the EMS response, and allows managers to assess the adequacy of EMS response, identify delays, and plan resources in a manner to provide expeditious EMS response.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

10.

Name of Data Element:	Time Dispatch Notified
Priority:	Essential
Definition:	Time of first connection with EMS dispatch.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Provides the start point of the dispatch component of the EMS response. This data element allows managers to assess delays between the time of incident report and the notification of EMS dispatchers.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

11.

Name of Data Element:	Date Unit Notified
Priority:	Desirable
Definition:	Date response unit is notified by EMS dispatch.
Code:	Data format should be coded as YYYYMMDD.

Content: Format permits sorting across multiple years, and is recommended for data export purposes. Century digits are mandatory.

Discussion and Justification: Permits planning of EMS resources by day of week or season of year. Also permits assessment of EMS responsivity. The data element is labeled as desirable because it is recognized that this is almost always the same date as the date incident was reported. The data element will be of use particularly when the incident is reported immediately prior to midnight, and the response unit is notified after midnight.

Technical Comments: Format YYYYMMDD is recommended as part of FIPS standard. If YYYY is unknown, it should be coded as 9999; if MM is unknown it should be coded as 99; if DD is unknown it should be coded as 99. For month and day, use leading zeros if necessary to pad the fields to 2 characters each.

12.

Name of Data Element:	Time Unit Notified
Priority:	Essential
Definition:	Time response unit is notified by EMS dispatch
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Permits measurement of the actual responder response or delays. Assists planning of communication resources for individual responders, and allows identification of system delays following the dispatch component of the EMS system.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

13.

Name of Data Element:	Time Unit Responding
Priority:	Essential
Definition:	Time that the response unit begins physical motion.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Permits measurement of delay between notification of EMS responder and the actual mobilization of the response unit. This data element refers to physical motion of the responding EMS vehicle, and does not refer to individual EMTs who may respond directly to the scene when notified by individual radio or telephone. For example, if an EMS incident is reported, one EMT may be at home or at work and be responsible to go to the station which holds the ambulance. Another EMT may be notified and may drive in a private vehicle directly to the scene. The data element entered should be the time that the ambulance actually leaves the station, not the time at which the other EMT drives to the scene in the private vehicle.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

14.

Name of Data Element:	Time arrival at scene
Priority:	Essential
Definition:	Time EMS unit stops physical motion at scene (last place that the unit or vehicle stops prior to assessing the patient).
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Permits measurement of the time required for the response vehicle to go from the station to the scene. This data element refers to the physical motion of the responding EMS vehicle. If an individual EMT arrives at the scene by private vehicle, that is NOT the value to be entered in this field. Otherwise, system delays in having an equipped vehicle at the scene will fail to be identified.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

15.

Name of Data Element:	Time of arrival at patient
Priority:	Desirable
Definition:	Time response personnel establish direct contact with patient.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Desirable in certain situations in which there may be a significant delay between the time at which a response unit arrives at the scene and the time at which the personnel can access the patient. For example, if the EMTs are prevented because of fire or adverse conditions from approaching the patient, this time will be useful. Search and rescue operations will also note delays between arrival at the overall scene and the actual patient contact.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

16.

Name of Data Element:	Time Unit Left Scene
Priority:	Essential
Definition:	Time when the response unit begins physical motion from scene.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Permits calculation of scene time by subtracting the time of arrival at scene from the time unit left scene.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

17.

Name of Data Element:	Time Arrival at Destination
Priority:	Essential
Definition:	Time when patient arrives at destination or transfer point.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Permits calculation of the time required to go from the scene to the destination of the response unit. If the patient is transferred from one EMS responder vehicle to another, then the time of arrival at destination for the first responder is the time of arrival or patient contact (or both) for the second agency.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

18.

Name of Data Element:	Time back in service
Priority:	Essential
Definition:	Time response unit back in service and available for response.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Allows planning of EMS resources. Permits assessment of the delay between arrival at destination and availability of the response unit.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

Note:

The relationship between various time periods may be demonstrated through the use of a chart as follows:

Incident onset	Time/date	
Incident reported		Time/date
Dispatch notified		Time
Unit notified		Time/date
Unit responding		Time
Arrival at scene		Time
Arrival at patient		Time
Unit left scene	Time	
Arrival at destination	Time	
Return to service		Time

19.

Name of Data Element:	Lights and Sirens to Scene
Priority:	Essential
Definition:	The use of lights and sirens enroute to scene.
Code:	Numeric entry.

Data Items:

01	Non-emergent, no lights or sirens
02	Initial emergent, downgraded to no lights or sirens
03	Initial non-emergent, upgraded to lights or sirens
04	Emergent, with lights or sirens
88	Not applicable

Discussion and Justification: To allow system administrators to know the frequency with which responder vehicles are using lights and sirens. Such usage carries explicit risks and EMS managers are responsible to assure that lights and sirens are used appropriately.

20.

Name of Data Element:	Service type
Priority:	Essential
Definition:	Type of service requested.
Code:	Numeric entry

Data Items:

01	Scene
02	Unscheduled Interfacility Transfer
03	Scheduled Interfacility Transfer
04	Standby
05	Rendezvous
88	Not Applicable
99	Unknown

Discussion and Justification: Used to categorize the types of service which are required, and allows planning of EMS resource allocation.

Scene

Refers to direct response to scene of incident or injury, such as roadway, etc. This location should be the location indicated in Data Elements 1-5 in this document. This code should not be used by the second unit which receives the transfer of a patient from another EMS responder prior to arrival at a medical facility or final destination which is coded as a rendezvous.

Unscheduled Interfacility Transfer

Refers to transfers of patients from one facility to another facility. This code should not be used for planned, scheduled transfers, which are coded separately. This code should not used by the second unit involved in the transfer of a patient from one EMS responder to another responder during an unscheduled interfacility transfer, which is also coded as a rendezvous.

Scheduled Transfer

Refers to transfers of patients from one facility to another facility, as defined above for *interfacility*. However, this code is chosen when the transfer is scheduled in advance, such as a planned morning transfer of a patient from one hospital to another.

Standby

Refers to situation in which EMS response unit is requested to arrive at a scene and be available, such as at a football stadium. If an incident occurs during the *standby*, the service requested becomes *scene*.

Rendezvous

Refers to situation in which a second EMS unit receives transfer of patient from first EMS unit before arrival at a medical facility. Can be used when two units meet to complete the initial scene response or during an unscheduled interfacility transfer.

21.

Name of Data Element:	Incident Number
Priority:	Essential
Definition:	Unique number for each incident reported to dispatch.
Code:	Numeric or alpha/numeric entry.

Content: Code missing values in a consistent manner.

Discussion and Justification: This number should be unique, if possible, within a state or region. If this is not possible, it must be unique within an agency, and then by combining it with a unique agency number, it will be possible to construct a unique identifying number for the incident.

This number is valuable for linking EMS data files with other files related to the incident, such as emergency department and inpatient hospital files, if those medical files also contain this number. Accurate numbering within all available files may be facilitated by technologies such as bar codes.

Probabilistic linkage methodology is of great value when linking files that do not have numeric fields such as incident number in common. However, linkage is greatly facilitated by the presence of such a number in each of the files to be linked.

Technical Comments: In some cases incident number, patient care number, or response number may be the same.

22.

Name of Data Element:	Response Number
Priority:	Essential
Definition:	Unique number for each individual response by a response unit to an incident.
Code:	Numeric or alpha/numeric entry.

Content: Code missing values in a consistent manner.

Discussion and Justification: This is the unique number within an individual response unit's records that identifies its runs. This number should be unique for an incident within a single EMS response unit.Useful for linking to other health files. Same purposes as incident number.

Technical Comments: In some cases incident number, patient care number, or response number may be the same. In other instances, this response number may be a component of the incident number. For example, an incident number might be constructed from a responder license number combined with the response number.

23.

Name of Data Element:	Patient care record number
Priority:	Desirable
Definition:	Unique number for each patient care record (PCR).
Code:	Numeric or alpha/numeric entry.

Content: Code missing values in a consistent manner.

Discussion and Justification: Unique number for a patient care record. Ideally, this number should be unique within a state or region. If unique within a state, this number could also be the incident number and response number. Provides a specific key to a specific record. This record number, if unique within a state or region of interest, will fulfill all the requirements for linkage which have been described under incident number.

Technical Comments: In some cases incident number, patient care record number, or response number may be the same.

This is the central and most important number in the prehospital portion of the EMS information system. Every incident must have a PCR number even if there is no patient. An incident will have multiple PCRs if there are multiple patients or multiple responders to single patients.

24.

Name of Data Element:	Agency / Unit Number
Priority:	Essential
Definition:	Number that identifies the agency and unit responding to an incident.
Code:	Numeric or alpha/numeric entry.

Content: This element consists of the agency number and the unit number. Code missing values in a consistent manner.

Discussion and Justification: Identifies specific agency and unit number. Can be used to construct reports which are specific to agencies or units. Particularly valuable for local reporting. This number may also be of value in the automatic construction of PCR numbers or incident numbers.

Technical Comments: Must be unique within largest region of interest. For instance, if it is desired to generate statewide reports broken out by agency, then the number must be unique within the state.

25.

Name of Data Element:	Vehicle type
Priority:	Essential
Definition:	Type of vehicle which responded to incident.
Code:	Numeric entry
Data Items:	01 Ground 02 Rotor craft 03 Fixed wing 04 Other 05 None

Discussion and Justification: Allows EMS managers and planners to break out EMS responses by the major categories of responding vehicles. While there are clearly numerous other possible vehicles, such as water craft, skis, sleds, etc., the categories provided here are the major vehicle types which will be of interest at regional and state levels.

For individual data systems in which there is more specific interest in other vehicles, additional categories may certainly be added. For purposes of exporting data to a common dataset, these additional categories should be collapsed into the category *Other*.

26.

Name of Data Element:	Crew member one number
Priority:	Essential
Definition:	Personnel certification / license number for first crew member.
Code:	Numeric or alpha/numeric entry.

Discussion and Justification: Necessary to identify specific crew members participating in an EMS response. Useful for constructing experience reports, monitoring care rendered by specific providers, planning educational programs.

Technical Comments: Should be unique within the region of interest. If not applicable, code in a consistent manner.

27.

Name of Data Element:	Crew member two number
Priority:	Essential
Definition:	Personnel certification / license number for second crew member.
Code:	Numeric or alpha/numeric entry.

Discussion and Justification: Necessary to identify specific crew members participating in an EMS response. Useful for constructing experience reports, monitoring care rendered by specific providers, planning educational programs.

Technical Comments: Should be unique within the region of interest. If not applicable, code in a consistent manner.

28.

Name of Data Element:	Crew member three number
Priority:	Desirable
Definition:	Personnel certification / license number for third crew member.
Code:	Numeric or alpha/numeric entry.

Discussion and Justification: Necessary to identify specific crew members participating in an EMS response. Useful for constructing experience reports, monitoring care rendered by specific providers, planning educational programs.

This data element is labeled as desirable while the data elements referring to the first 2 crew members are labeled as essential. This is because the crew members should be listed in order of skill level and involvement, and it has been the experience of most data collection efforts in EMS that most incident records list 2 crew members. There is no intent to discourage data managers to list as many additional crew members as desired.

Technical Comments: Should be unique within the region of interest. If not applicable, code in a consistent manner.

29.

Name of Data Element:	Crew Member One Type
Priority:	Essential
Definition:	Personnel certification / license level of crew member
Code:	Numeric entry.

Data Items:

01	First responder	05	Nurse
02	EMT basic	06	Physician
03	EMT intermediate	07	Other health care professional
04	EMT paramedic	88	Not applicable
		99	Unknown

Discussion and Justification: This data element permits assessing the level of care which was available on the EMS responder team. By combining this information with vehicle type, there is maximum flexibility in describing the type of service which was provided. For instance, any level of crew member certification may be present with any type of vehicle.

Reports of value may include descriptions of therapies according to level of provider, adherence to protocols which are written differently for various levels of provider, etc.

30.

Name of Data Element:	Crew Member Two Type
Priority:	Essential
Definition:	Personnel certification / license level of crew member
Code:	Numeric entry.

Data Items:

01	First responder	05	Nurse
02	EMT basic	06	Physician
03	EMT intermediate	07	Other health care professional
04	EMT paramedic	88	Not applicable
		99	Unknown

Discussion and Justification: This data element permits assessing the level of care which was available on the EMS responder team. By combining this information with vehicle type, there is maximum flexibility in describing the type of service which was provided. For instance, any level of crew member certification may be present with any type of vehicle.

Reports of value may include descriptions of therapies according to level of provider, adherence to protocols which are written differently for various levels of provider, etc.

31.

Name of Data Element:	Crew Member Three Number
Priority:	Desirable
Definition:	Personnel certification / license level of crew member
Code:	Numeric entry

Data Items:

01	First responder	05	Nurse
02	EMT basic	06	Physician
03	EMT intermediate	07	Other health care professional
04	EMT paramedic	88	Not applicable
		99	Unknown

Discussion and Justification: This data element permits assessing the level of care which was available on the EMS responder team. By combining this information with vehicle type, there is maximum flexibility in describing the type of service which was provided. For instance, any level of crew member certification may be present with any type of vehicle.

Reports of value may include descriptions of therapies according to level of provider, adherence to protocols which are written differently for various levels of provider, etc.

32.

Name of Data Element:	Patient Name
Priority:	Essential
Definition:	Patient name.
Code:	Free text entry, "not applicable" or "unknown"

Content: "Not applicable" is used when there is no patient, such as when the responding team cannot find the patient, or when the responding team is on standby.

Discussion and Justification: Essential because of its value in probabilistic linkage, both as a linking variable as well as a confirmatory variable to determine appropriate linkage. It is recognized that this data element requires careful protection from misuse, but it is more appropriate to regulate appropriate use of this field rather than to prevent its collection.

Technical Comments: If coded in a single field, then the format should be LAST, FIRST, MIDDLE INITIAL with only one space after the comma between the last and first names, and between first name and initial. An alternative approach is to separate the data element into three fields, one each for the last and first names, and middle initial.

33.

Name of Data Element:	Patient Street Address
Priority:	Desirable
Definition:	Patient's street address.
Code:	Free text entry, "not applicable", "unknown" or "none"

Discussion and Justification: Useful for determining the political entity responsible for potential public health interventions, payment for services, etc..

34.

Name of Data Element:	City of Residence
Priority:	Desirable
Definition:	Patient city or township of residence (if applicable)
Code:	Numeric entry
Data Items:	{5 digit FIPS code} 88888 Not Applicable 99999 Unknown

Content: It is recommended that this field be coded using the FIPS system, wherein the city is encoded as a 5 digit number (i.e. Salt Lake City is coded as '93010'). City FIPS codes are only unique within a state.

Discussion and Justification: Useful for determining the political entity responsible for potential public health interventions, payment for services, etc.

35.

Name of Data Element:	County of Residence
Priority:	Desirable
Definition:	County or parish where patient resides (if applicable).
Code:	Numeric entry
Data Items:	{3 digit FIPS code} 888 Not Applicable 999 Unknown

Content: It is recommended that this field be coded using the FIPS system, wherein the county is encoded as a 3 digit number(i.e. Salt Lake County is coded as '035'). The FIPS code uniquely identifies a county only within its state. For unique identification of a county within the United States, the code of the state must precede the county code.

Discussion and Justification: Useful for determining the political entity responsible for potential public health interventions, payment for services, etc.

36.

Name of Data Element:	State of Residence
Priority:	Desirable
Definition:	State, territory, or Province, or District of Columbia, where patient resides.
Code:	Numeric entry
Data Items:	{2 digit FIPS code} 88 Not Applicable 99 Unknown

Content: It is recommended that this field be coded using the FIPS system, or by using standard abbreviations.

Discussion and Justification: Provides a means of aggregating EMS incidents by state, which allows reports to state legislatures concerning statewide EMS activities. Can be used to assess statewide resource requirements for EMS operations.

Technical Comments: FIPS provides codes for outlying areas of the United States, Freely Associated States, and the Trust Territory, as well as for individual minor outlying island

territories.

37.

Name of Data Element:	Zip Code of Residence
Priority:	Essential
Definition:	Zip Code of patient's residence
Code:	Numeric entry.
Data Items:	{5 digit FIPS code} 88888 Not Applicable 99999 Unknown

Content: Code as 5 digit field.

Discussion and Justification: Useful for determining the political entity responsible for potential public health interventions, payment for services, etc. From Zip Code, county could be derived in software.

38.

Name of Data Element:	Telephone Number
Priority:	Desirable
Definition:	Patient's primary telephone number
Code:	Numeric entry.
Data Items:	{10 digit telephone number} 8888888888 Not Applicable 9999999999 Unknown

Content: Coded as 10 digit field.

Discussion and Justification: Permits followup with patient and facilitates billing.

39.

Name of Data Element:	Social Security Number
Priority:	Desirable
Definition:	Patient Social Security number
Code:	Numeric entry.
Data Items:	{9 digit SSN} 888888888 Not Applicable 999999999 Unknown

Content: Code as 9 digit field.

Discussion and Justification: Could provide valuable linkage data element. However, this field is very difficult for field responders to obtain.

Unknown should be coded when the responder does not know the Social Security number, while not applicable is coded when there is no patient or when the patient is known to not have one.

Technical Comments: May be particularly valuable in jurisdictions where driver licenses or other forms of identification have bar coded Social Security numbers.

40.

Name of Data Element:	Date of Birth
Priority:	Essential
Definition:	Patient's date of birth.
Code:	Date format should be coded as YYYYMMDD

Content: Format permits sorting across multiple years, and is recommended for data export purposes. Century digits are mandatory.

Discussion and Justification: Extremely valuable for probabilistic linkage and calculation of accurate age information. Provides much more discriminatory power in probabilistic linkage than the numeric age.

Technical Comments: Format YYYYMMDD is recommended as part of FIPS standard. If YYYY is unknown, it should be coded as 9999; if MM is unknown it should be coded as 99; if DD is unknown it should be coded as 99. For month and day, use leading zeros if necessary to pad the fields to 2 characters each.

41.

Name of Data Element:	Age
Priority:	Desirable
Definition:	Patient's age or best approximation
Code:	Numeric entry.
Data Items:	{3 digits for age in years} 888 Not Applicable 999 Unknown 000 For patients up to 1 year of age

Content: Coded as 3 digit field.

Discussion and Justification: Valuable in the absence of a date of birth. When date of birth is available this data element should be calculated by the computer. Age information permits linkage to other files, and is useful for epidemiologists interested in patterns of emergency medical problems in different age groups.

42.

Name of Data Element:	Gender
Priority:	Essential
Definition:	Gender of patient.
Code:	Alphabetic entry.
Data Items:	**M**ale **F**emale **U**nknown

Discussion and Justification: Valuable for linkage to other files, and permits reporting of epidemiologic information by gender.

Technical Comments: This field should be coded as M, F, or U.

43.

Name of Data Element:	Race / Ethnicity
Priority:	Essential
Definition:	Patient's ethnic origin.
Code:	Numeric entry.

Data Items:

01	White, non-Hispanic	05	American Indian/Alaska Native
02	White, Hispanic	06	Asian/Pacific Islander
03	Black, non-Hispanic	07	Other
04	Black, Hispanic	88	Not Applicable
		99	Unknown

Discussion and Justification: Useful for epidemiologic studies, and of importance to data systems in order to access certain types of Federal or state funds which are directed to specific ethnic groups.

Technical Comments: Data item format taken from the Office of Management and Budget Directive 15. Race and ethnicity have been combined, as the Hispanic or Non-Hispanic indicators primarily apply to only Black or White patients. However, this field may be split into two fields, one for race and one for ethnicity.

44.

Name of Data Element:	Destination / Transferred To
Priority:	Essential
Definition:	Health Care Facility or Prehospital Unit/Home that received patient from EMS responder providing this record.
Code:	Numeric entry.

Data Items:

01	Home	05	Other EMS responder (air)
02	Police/jail	06	Hospital
03	Medical Office/clinic	07	Morgue
04	Other EMS responder (ground)	88	Not applicable

Discussion and Justification: Allows reporting by destination facilities, and allows linking when a patient is transferred between EMS responder agencies. Not applicable would be selected when there is no patient.

It is anticipated that each region or state will codify its list of hospitals in an internally consistent manner, permitting reports by facility. For purposes of the uniform data set, the first 8 categories have been defined above. For purposes of export to a larger data set, such as a national data set, all hospital destinations would be collapsed down into a single code for Hospital.

This data element is very valuable for probabilistic linkage. For instance, when an EMS responder indicates a specific hospital identifier, this can greatly facilitate linkage to outpatient and inpatient facility records.

45.

Name of Data Element:	Destination Determination
Priority:	Essential
Definition:	Reason a transport destination was selected.
Code:	Numeric entry

Data Items:

01	Closest Facility (none below)	06	Protocol
02	Patient/Family Choice	07	Specialty Resource Center
03	Patient Physician Choice	08	On-line Medical Direction
04	Managed Care	09	Diversion
05	Law Enforcement Choice	10	Other
		88	Not Applicable
		99	Unknown

Discussion and Justification: Helps EMS managers to determine whether the choice of destination is appropriate. Items which are defined as patient, physician, or family choice are of interest to determine whether a trauma or referral system is functioning well, or is frequently overridden by non-medical issues.

Technical Comments: Only 1 choice should be selected.

46.

Name of Data Element:	Lights and/or sirens used from scene
Priority:	Essential
Definition:	Use of lights and/or sirens from the scene.
Code:	Numeric entry

Data Items:

01	Non-emergent, no lights or sirens
02	Initial emergent, downgraded to no lights or sirens
03	Initial non-emergent, upgraded to lights or sirens
04	Emergent, with lights or sirens
88	Not applicable

Discussion and Justification: Allows system administrators to know the frequency with which responder vehicles are using lights and sirens. Such usage carries explicit risks and EMS

managers are responsible to assure that lights and sirens are used appropriately.

47.

Name of Data Element:	Incident / Patient Disposition
Priority:	Essential
Definition:	End result of EMS response.
Code:	Numeric entry

Data Items:

01	Treated, transported by EMS	06	Patient refused care
02	Treated, transferred care	07	Dead at scene
03	Treated, transported by private vehicle	08	Cancelled
		88	Not Applicable
04	Treated and released	99	Unknown
05	No treatment required	00	No patient found

Discussion and Justification: Allows reports to be generated according to the final disposition of EMS responses. This will provide information about the reasons for which EMS is notified, correlated with the ultimate incident disposition. For instance, it will be of value to know that in certain regions, EMS is frequently activated to see patients who require no treatment nor transport. Reports generated from this data element may be of use in coordinating the dispatch and responder functions as well.

Technical Comments:

Treated and transported by EMS

This code means that the EMS responder providing the data record treated and transported the patient. Transport may be to any valid destination, as defined for the destination data element. If the EMS responder transports a patient to a rendezvous point with another EMS responder (for instance, a ground crew rendezvous with a helicopter based agency), this is the correct code for this data element.

Treated, transferred care

This code means that the EMS responder provided treatment at the scene but the patient was transferred into the care of another service. The EMS responder did not provide transport in this instance. For example, if a BLS provider is at a scene and treats a patient, but a separate ALS responder arrives and takes over, the BLS record would indicate this code. If an EMS responder treats a patient who is then transported by a separate police or fire vehicle, this is the correct code

for the EMS responder record.

Treated, transported by private vehicle

This code means that the EMS responder provided treatment, but the patient was transported to his or her destination by a private vehicle. This includes instances in which the patient transports himself via private automobile, if the EMS responder understands that the patient is going to seek further medical care, such as at a private doctor's office or the local emergency department.

Treated and released

This code means that the EMS responder provided treatment, and the patient required no further emergency care. This is distinct from the instance in which the patient is known to be in need of further care, but is transported by himself or others to the facility providing further care

No treatment required

This code means that the EMS responder evaluated the patient, and no treatment was required. If the patient refused evaluation, or if the EMS responder did not evaluate a specific patient, this is not the correct code for this data element.

Patient refused care

Patient was at scene and refused care, whether injured or not. If the EMS responder knows that there is an injury, but the patient refuses care and is transported by friends or acquaintances, this is still the correct code for this data element.

Dead at scene

This code means that the patient was pronounced dead at the scene, whether or not treatment was undertaken. If a patient is given CPR at the scene and transported to the hospital while undergoing CPR, then this is not the correct code. If a patient is given CPR and is then pronounced dead at the scene, this is the correct code.

Cancelled

This code means that the EMS response was cancelled enroute or on scene.

Not Applicable

This code is used when a disposition is not applicable. For instance, if the unit is on standby and no incident occurs, then this data element is not applicable. In this instance, the data element call "Service Type" will have been coded as standby. For all standby records, this data element should be coded as not applicable.

No patient found

If not cancelled, but no patient can be found by the responder, this is coded as not applicable.

48.

Name of Data Element:	Chief complaint
Priority:	Desirable
Definition:	Statement of problem by patient or other person.
Code:	Free text entry, "not applicable" or "unknown"

Content: Use "unknown" when this information cannot be obtained (for instance, a comatose patient, or a patient injured without witnesses). If there is no patient, such as in a standby call, this should be coded as not applicable.

Discussion and Justification: May be useful, particularly with sophisticated text searching algorithms, for analysis of certain types of EMS incidents. Difficulties of categorization and interpretation were the primary reasons for labeling this item as desirable rather than essential.

May be of use in correlating the perception of patients who utilize the EMS system with the objective outcome of the run. This information could be of use in directing public educational efforts concerning health or EMS use.

Technical Comments: If the element is collected, then it is important to consistently code unknown and not applicable when the chief complaint is not known or not present.

49.

Name of Data Element:	Cause of Injury
Priority:	Essential
Definition:	External cause of injury.
Code:	Alpha/numeric entry.

Data Items:

E81x.x Motor vehicle traffic accident
E814.x Pedestrian traffic accident
E82x.x Motor vehicle non-traffic accident
E826.x Bicycle accident
E83x.x Water transport accident
E84x.x Aircraft related accident
E85x.x Accidental drug poisoning
E86x.x Accidental chemical poisoning
E88x.x Accidental falls
E89x.x Fire and flames
E89x.2 Smoke inhalation
E900.x Excessive heat
E901.x Excessive cold
E905.x Venomous stings (plants, animals)
E906.x Bites
E907.x Lightning
E910.x Drowning
E913.x Mechanical suffocation
E919.x Machinery accidents
E925.x Electrocution (non-lightning)
E926.x Radiation exposure
E985.x Firearm injury (accidental)
E965.x Firearm assault
E955.x Firearm self inflicted (intentional)
E960.1 Rape
E966.x Stabbing assault
E967.x Child battering
E000.8 Not applicable
E000.9 Unknown

Discussion and Justification: It is necessary to have a broad taxonomy for defining the external causes of injury, and this data element is coded according to the E codes in ICD-9. However, it is recognized that the entire E code list is too cumbersome for field use, and the element may be collapsed into the categories which have been listed above. When possible, the E code should be defined in as much detail as is present in the E code definitions. Such codes will always be collapsible to the categories defined here, but the added detail will provide additional

value to injury prevention researchers.
It has been traditional to attempt to assign a single E code to individual incidents. Multiple entries, however, aids in gathering better detail about injuries, and to eliminate confusion when the EMS provider must choose between two reasonable E codes.

Technical Comments: This data element is based on E codes, but the coding structure is intended to be more flexible. Additional categories for not applicable and unknown have been added, so that this data element can always be filled in on the data base. The item list is shown below, and the actual code number is indicated. When the code number includes lower case x's, this means that the item list includes all E codes which have the initial part of the code. For example, motor vehicle traffic accident is coded as E81x.x, and would include any E code from E810.0 through E819.9. In instances where further detail is not available, the data element should be filled in with x's to fill out the length of the field. Thus, the field width should always be 4 characters in length (the E and decimal point are not necessary).

It is understood that the fourth digit may rarely be available or coded in this data element. However, the data element is defined in a complete manner so that when agencies are able to provide all the detail possible within the E code taxonomy, it is possible to do so. The uniform standard should be collapsibility to the categories listed in this dictionary.
If agencies, regions, or states wish to collect additional specific field values for this data element, they should adhere to the E code listing in ICD-9.

Motor vehicle traffic accident E81x.x
This includes any motor vehicle accident occurring on a public roadway or highway.

Pedestrian traffic accident E814.x
Motor vehicle accidents in which the patient was a pedestrian struck by a motor vehicle of any type. Includes individuals on skates, in baby carriages, in wheelchairs, on skateboards, skiers, etc.

Motor vehicle non-traffic accident E82x.x
This includes any motor vehicle accident occurring entirely off public roadways or highways. For instance, an accident involving an all terrain vehicle (ATV) in an off-road location would be a non-traffic accident.

Bicycle accident E826.x
Includes any pedal cycle accident. Pedal cycle is defined to include bicycles, tricycles, and excludes any motorized cycles.

Water transport accident E83x.x
Includes all accidents related to watercraft. Excludes drowning and submersion accidents unless they are related to watercraft use. Thus, if a person falls out of a boat and drowns, it should be coded within this category. If a person drowns in a swimming pool or bathtub, it should be coded as E910.x (see below).

Aircraft related accident E84x.x

Includes spacecraft.

Accidental drug poisoning E85x.x

Includes accidental poisoning by drugs, medicinal substances, or biological products. Extensive codes are available if an agency wishes to collect specific information.

Accidental chemical poisoning E86x.x

Includes accidental poisoning by solid or liquid substances, gases, and vapors, which are not included under accidental drug poisoning.

Accidental falls E88x.x

Excludes falls which occur in the context of other external causes of injury, such as fires, falling off boats, or falling in accidents involving machinery.

Fire and flames E89x.x

Includes burning by fire, asphyxia or poisoning from conflagration or ignition, and fires secondary to explosions. Excludes injuries related to machinery in operation, vehicle accidents, and arson.

Smoke inhalation E89x.2

Includes smoke and fume inhalation from conflagration. The numeric code includes an option to indicate the site of the fire (3rd digit).

Excessive heat E900.x

Includes thermal injuries related to weather or heat produced by man, such as in a boiler room or factory. Excludes heat injury from conflagration.

Excessive cold E901.x

Includes cold injury due to weather exposure, or cold produced by man, such as in a freezer.

Venomous stings (plants, animals) E905.x

Includes bites and stings from venomous snakes, lizards, spiders, scorpion, insects, marine life, or plants.

Bites E906.x

Includes animal bites, including non-venomous snakes and lizards. Subcodes are available to include dog, cat, rat, and other specific bites.

Lightning E907.x

Excludes falling of an object secondary to lightning, and also excludes injuries from fire secondary to lightning.

Drowning E910.x

Accidental drowning not related to watercraft use. Includes swimming accidents, bathtubs, etc.

Mechanical suffocation E913.x

Includes suffocation in bed or cradle (crib death), closed space suffocation, plastic bag asphyxia, accidental hanging, etc.

Machinery accidents E919.x

Includes all machinery accidents except when machinery is not in operation. Excludes electrocution.

Electrocution (non-lightning) E925.x

Includes accidents related to electric current from exposed wire, faulty appliance, high voltage cable, live rail, or open electric socket. Excludes lightning, which is coded as E907.x.

Radiation exposure E926.x

Excludes complications of radiation therapy.

Firearm injury (accidental) E985.x
Firearm assault E965.x
Firearm self inflicted (intentional) E955.x

These codes refer to firearm injuries, which are subcoded by the final digit into handguns (.0), shotguns (0.1), hunting rifle (0.2) and others. If the EMS responder knows that an intentional assault was involved, or knows that the injury was intentionally self inflicted, then the E code should be entered to indicate this (E965.x or E955.x). In most instances, the EMS provider will not be able to easily assess this issue, and then the code should be entered as accidental (E985.x).

Stabbing assault E966.x

Includes cuts, punctures, or stabs of any part of the body.

Child battering E967.x

Includes all forms of child battering and non-accidental injury to children. The subcode indicates the perpetrator, and it is unlikely that the EMS responder will be able to provide this information. This code should be entered in all instances in which there is sufficient suspicion by the EMS responder that the responder would be required by law to report the case to authorities as a suspected case of child abuse.

Not applicable E000.0

This code is not an official E code, and should be entered in any case where an external injury code is not applicable, such as when a patient suffers from chest pain or fever. In nearly all instances where an injury has occurred, this data element should be filled in with a valid E code, not a not applicable designation.

Unknown E000.1

This code is provided primarily for situations in which the data is being entered at a time when the information cannot be accurately reconstructed from the run record. This should be a rare entry.

50.

Name of Data Element:	Provider Impression

Priority:	Essential
Definition:	Provider's clinical impression which led to the management given to the patient (treatments, medications, procedures).
Code:	Numeric entry

Data Items:

789.00 Abdominal pain / problems
519.80 Airway obstruction
995.30 Allergic reaction
780.09 Altered level of consciousness
312.90 Behavioral / psychiatric disorder
427.50 Cardiac arrest
427.90 Cardiac rhythm disturbance
786.50 Chest pain / discomfort
250.90 Diabetic symptoms (hypoglycemia)
994.80 Electrocution
780.60 Hyperthermia
780.90 Hypothermia
785.59 Hypovolemia / shock
987.90 Inhalation injury (toxic gas)
798.99 Obvious death
977.90 Poisoning / drug ingestion
659.90 Pregnancy / OB delivery
799.10 Respiratory arrest
786.09 Respiratory distress
780.30 Seizure
959.90 Sexual assault / rape
987.90 Smoke inhalation
989.50 Stings / venomous bites
436.00 Stroke / CVA
780.20 Syncope / fainting
959.90 Traumatic injury
623.80 Vaginal hemorrhage
000.88 Not applicable
000.99 Unknown

Discussion and Justification: This data element contains the single clinical assessment which primarily drove the actions of the EMS responder. It should be possible to determine whether the treatments or medications provided match protocols which relate to the clinical impression. When more than one choice is applicable to a patient, the responder should indicate the single most important clinical assessment that drove most of the plan of therapy and management.

It is obvious that this list is incomplete. It is also recognized that different agencies, which have different assessment driven protocols, will wish to have lists corresponding to the authority of their own responders. The list above is provided in order that consistent coding of at least the above items be achieved. Agencies are encouraged to add other categories, and provide their experience with the data element at the time of its next revision.

It should be noted that this coding system differs from current systems. For instance, many EMS data sets include the entity, Animal Bite. In the uniform data set, such an entry should be coded in this field as a Traumatic Injury. The site of injury should be indicated in the injury field described later in this dictionary, showing the type (laceration or puncture) and site of the bite itself. In addition, the Cause of Injury should be coded as E906.x as discussed under the data element, Cause of Injury. For another example, Sexual Assault is coded in this data element in the same manner as a Traumatic Injury, but the Cause of Injury would be coded as E960.1, and Injury Intent would be coded as intentional. The reason for using this approach is to avoid overlapping, duplicative codes which are not attached to a general taxonomy such as ICD9. Such codes would become agency specific and would not be flexible enough to permit combining data from different agencies.

Technical Comments: The field width should always be 4 digits in length. Therefore, data items should be zero padded on the left to assure interpretability. The list provided here is not all-inclusive, but the definitions are described in more detail below.

Abdominal pain / problems *789.00*
Includes acute abdomen, painful abdomen, cramps, etc. Does not include abdominal trauma.

Airway obstruction *519.80*
Includes choking, swelling of neck, croup, epiglottitis, foreign body in airway, etc.

Allergic reaction *995.30*
Includes reactions to drugs, plants, insects, etc. Category includes hives, urticaria, wheezing and so forth when suspected of being related to allergy.

Altered level of consciousness *780.09*
Refers to patients with any alteration of consciousness, including patients who appear to be substance abusers or under the influence of drugs or alcohol.

Behavioral / psychiatric disorder *312.90*
Includes all situations in which a behavioral or psychiatric problem was considered the major

problem for the EMS responder.

Cardiac arrest *427.50*

All instances in which cardiac arrest occurred, and either death was pronounced immediately, or external cardiac massage was instituted.

Cardiac rhythm disturbance *427.90*

Includes any rhythm disturbance which was noted on physical examination or with a cardiac monitor, when the rhythm was the major clinical reason for care rendered by the EMS responder.

Chest pain / discomfort *786.50*

Includes patients with complaint of chest pain, including pain felt related to heart disease, upset stomach, or muscle pain in the chest wall. If an agency has different protocols for different types of chest pain, then this code should be separated out according to the types of protocols.

Diabetic symptoms (hypoglycemia) *250.90*

Relates to patients with symptoms relatable to diabetes, generally when there is a history of diabetes in the patient. The major symptom is hypoglycemia, but in circumstances where diabetes is known to exist, this category can include ketoacidosis, as well as other complications of diabetes.

Electrocution *994.80*

Instances of electrocution. Please note that the proper E code should be entered in the Cause of Injury data element.

Hyperthermia *780.60*

When hyperthermia is the major clinical assessment driving EMS responder care.

Hypothermia *780.90*

Usually relates to environmental hypothermia, such as following submersion in cold water, avalanches, or other environmental exposure situations.

Hypovolemia / shock *785.59*

Patients with clinical shock, usually felt to be hypovolemic. All patients considered to have shock by EMS responders should be coded with this code, as it is relatively difficult to identify other less common forms of shock outside the hospital setting.

Inhalation injury (toxic gas) *987.90*

Excludes smoke inhalation.

Obvious death *798.99*

Patients who were dead at the scene, in whom no therapy was undertaken.

Poisoning / drug ingestion *977.90*

Includes drug ingestions which are inappropriate drugs or overdoses, as well as poisonings from chemicals. Toxic gases should be coded as inhalation injury (987.90). Venomous bites or stings should be coded as 989.50 (see below).

Pregnancy / OB delivery *659.90*

Includes all aspects of obstetric care rendered in the prehospital setting. This ICD code is the closest approximation for such a general category, and agencies may wish to break down this category more explicitly.

Respiratory arrest *799.10*

Instances in which the patient stops breathing. These patients always require ventilatory support on at least a temporary basis.

Respiratory distress *786.09*

Includes patients with respiratory distress who continue to have spontaneous breathing and never suffer respiratory arrest. These patients may require ventilatory support.

Seizure *780.30*

Includes major and minor motor seizures.

Sexual assault / rape *959.90*

Refers to suspected sexual assault / rape. The code refers to unspecified traumatic injury, but the Cause of Injury code should resolve this adequately.

Smoke inhalation *987.90*

Smoke inhalation encountered in conflagration setting. The Cause of Injury code should include the proper E code.

Stings / venomous bites *989.50*

Includes poisonous snakes, insects, bees, wasps, ants, etc. If an allergic reaction occurs and predominates the clinical situation, then the clinical assessment should be coded as an allergic reaction rather than a sting or bite, since the E code in the Cause of Injury data element will further clarify the cause.

Stroke / CVA *436.00*

Cardiovascular accidents, strokes, TIA.

Syncope / fainting *780.20*

Fainting is the major clinical assessment, even though the patient may be fully awake at the time of EMS evaluation.

Traumatic injury *959.90*

All patients in whom traumatic injury is the major reason for the EMS action. Further details should be provided in the injury description matrix described later in this data dictionary.

Vaginal hemorrhage *623.80*

Refers to abnormal vaginal bleeding in sufficient amount to have driven the EMS response. When pregnancy is involved, vaginal hemorrhage should be coded when the hemorrhage itself was the major concern to the EMS responder. When childbirth or other obstetric issues are more important, then this data element should be coded as 659.90.

Not applicable *000.88*

Use this code when there is no patient.

Unknown *000.99*

Use this code when there is not enough information on the run sheet to determine the clinical impression of the EMS responder. This should be a very rarely used code.

51.

Name of Data Element:	Pre-existing Condition
Priority:	Essential
Definition:.	Pre-existing medical conditions known to the provider.
Code:	Numeric or Alpha/numeric entry

Data Items:

493.90 Asthma	585.00 Chronic Renal Failure
250.00 Diabetes	239.90 Cancer
011.90 Tuberculosis	401.90 Hypertension
492.80 Emphysema	312.90 Psychiatric problems
518.81 Chronic respiratory failure	780.30 Seizure disorder
	V44.00 Tracheostomy

Discussion and Justification: Pre-existing conditions may affect the protocols followed by EMS responders. The data element is intended to capture information as understood by EMS providers at the scene, not as defined later in the medical record of the hospital. Thus, if the EMS responder finds out that a patient has several pre-existing conditions after he or she arrives at the hospital, those conditions should not be coded in this data element. It is clear that the list provided here may not include other important conditions. Other conditions should be added as desired, but it is hoped that the above conditions will be included in all data sets.

In the future, it may be possible to use ICD9 codes for this field. However, some of the items on the list are not diagnoses per se, yet would significantly alter the approach of the EMS responder. This data element will clearly need refinement after there is more experience with its collection and interpretation.

Technical Comments: Multiple entries should be possible. As with other multiple entry data elements, the preferable data base architecture is a properly designed relational file structure. Also, the field width should always be 5 digits in length; data items should be zero padded on the left to assure interpretability.

52.

Name of Data Element:	Signs and Symptoms Present
Priority:	Essential
Definition:	Signs and symptoms reported to or observed by provider.
Code:	Numeric entry

Data Items:

789.00 Abdominal pain	401.90 Hypertension
724.50 Back pain	780.90 Hypothermia
578.10 Bloody stools	787.00 Nausea
786.09 Breathing difficulty	344.90 Paralysis
427.50 Cardioresp. arrest	785.10 Palpitations
786.50 Chest pain	659.90 Pregnancy/childbirth/miscarriage
933.10 Choking	780.30 Seizures/convulsions
558.90 Diarrhea	780.20 Syncope
780.40 Dizziness	780.09 Unresponsive/unconscious
388.70 Ear pain	623.80 Vaginal bleeding
379.91 Eye pain	787.00 Vomiting
780.60 Fever/Hyperthermia	780.70 Weakness (malaise)
784.00 Headache	

Discussion and Justification: This data element is intended to capture the information provided to or obtained by the EMS responder in order to assess the patient. It is intended that these signs and symptoms be correlated with the clinical impression of the responder. This would help EMS managers plan educational programs for the responders.

It is obvious that the list of items provided here is incomplete. It is hoped that at least these items will be incorporated into data being collected, and after several years of experience with the data element, the listing should be appropriately refined. For this reason, ICD9 codes have been used for this data element.

Technical Comments: Multiple entries should be possible. As with other multiple entry data elements, the preferable data base architecture is a properly designed relational file structure.

53.

Name of Data Element:	Injury Description
Priority:	Essential
Definition:	Clinical description of injury type and body site.
Code:	Alphabetic and numeric entry.

Data Items:

Body Sites	Injury Types
A External *(including burns)*	1 Pain w/o swelling/bruising
B Head only *(excluding neck,* cervical spine and ear)	2 Soft tissue swelling/bruising
C Face *(including ear)*	3 Blunt injury
D Neck	4 Laceration
E Thorax (excluding thoracic spine)	5 Dislocation/fracture
F Abdomen *(excluding lumbar spine)*	6 Puncture/stab
G Spine	7 Gunshot
H Upper extremities	8 Amputation
I Lower extremities or bony pelvis	9 Crush
J Body region unspecified	10 Burn

Content: Intended to permit the detailed listing of all injuries sustained by a patient, coded according to injury type and body site of the injury. Multiple entries will be possible. Each injury should be designated by body site and injury type. The most severe five injuries should be recorded.

The body sites included as Data Items are consistent with body areas used to calculate the Injury Severity Score (ISS). This list is slightly expanded from the usual ISS, but is easily collapsed if necessary.

Discussion and Justification: This is a crucial data element which will enable EMS planners to know what types of injuries are incurred by patients using the EMS system. The data element will also be of value in assessing the correspondence between injury assessment in the field and actual injuries as evaluated in medical facilities. A major reason for using ISS related body sites is the ability to compare the hospital inpatient ISS areas with those indicated by the prehospital provider.

It is understood that various levels of providers will be permitted to make injury assessments at different levels of sophistication. For example, the diagnosis of fracture is considered out of scope for many prehospital responders. In this case, a term might be added for swelling, or some other marker by which an EMS responder is supposed to suspect a fracture or dislocation. It is stressed that this data element is supposed to reflect the clinical impression of injury by the EMS

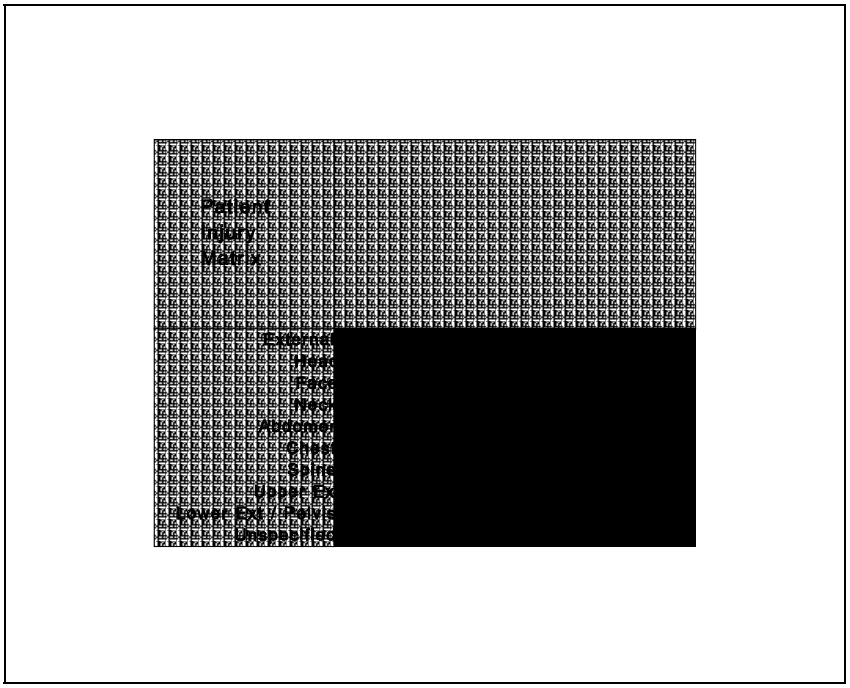
responder, not necessarily the final, correct medical diagnosis.

Technical Comments: There are at least 2 reasonable approaches to coding this data element. It is assumed for purposes of this discussion that up to 5 injuries should be entered.

First, body site and injury type could each be coded by letters from A to J. Each entry into this data element could then be coded as two letters, the first for body site and the second for injury type. This method has the advantage of conserving space on the run sheet, because only the two lists would be necessary.

Second, a matrix could be placed on the run sheet, and each intersection on the matrix could have a numeric code. The provider would simply circle or mark the intersections corresponding to each of the specific injuries, up to a maximum of five. The numeric codes would then be entered. There are 100 possible intersections, so the codes would range from 1 to 100. This method has the disadvantage of requiring a larger amount of space on the run sheet, but offers the advantage of being more readily understood by the EMS responder.

To illustrate the matrix method, consider the following diagram.



In this case, there has been an upper extremity amputation, blunt trauma to the chest and abdomen, a pelvic crush injury, and a gunshot wound to the abdomen.

54.

Name of Data Element:	Injury intent
Priority:	Desirable
Definition:	Intent of individual inflicting injury
Code:	Numeric entry
Data Items:	1 Intentional, self 2 Intentional, other 3 Unintentional 8 Not applicable 9 Unknown

Discussion and Justification: Intended to help injury surveillance specialists who are interested in homicide and suicides, inflicted child injuries, etc. The EMS provider may be in a unique situation to assess this issue which would then be of enormous value to the medical personnel caring for the patient. However, it is clear that the EMS provider will often not be able to assess this question.

Drug or alcohol abuse is impossible to code with this data element unless involved in a suicide attempt. For instance, if an EMS responder transports an intoxicated patient to a hospital with no other injuries, this data element would be coded as not applicable.

If the data element is collected, the EMS provider should indicate that an event is intentional if he or she has any suspicion of such. The data element is not intended to carry legal significance, but rather is intended to assist researchers in identifying possible cases of intentional injury for further study.

Technical Comments: If a firearm or stabbing is involved, this data element is redundant with proper coding of the external cause of injury, which permits coding for intentional injury on self or others.

55.

Name of Data Element:	Safety Equipment
Priority:	Essential
Definition:	Safety equipment in use by patient at time of injury.
Code:	Numeric entry.

Data Items:

01 None used
02 Shoulder belt only
03 Lap belt only
04 Shoulder and lap belt
05 Child safety seat
06 Airbag deployed, no lap belt
07 Airbag deployed, lap belt used
08 Airbag deployed, lap and shoulder used
09 Airbag deployed, child safety seat used
10 Helmet
11 Eye protection
12 Protective clothing
13 Personal flotation device
14 Protective clothing/gear
88 Not applicable
99 Unknown

Discussion and Justification: Provides important information about safety device use in motor vehicle accidents, boating accidents, and industrial accidents with eye injuries. Data will be of use for corroboration of police reports concerning crashes.

If the EMS responder knows that no safety device was employed, then the data element should be coded as none. If none of the indicated devices was used, the element should also be coded as none. If the data element is not applicable, then this should be coded as such. Finally, if the EMS provider has no information about safety device use and cannot obtain such information from the patient or witnesses, then the data element should be coded as unknown.

56.

Name of Data Element:	Factors Affecting EMS Delivery of Care
Priority:	Desirable
Definition:	Special circumstances affecting the EMS response or delivery of care.
Code:	Numeric entry

Data Items:

01	Adverse weather	05	Language barrier
02	Adverse road conditions	06	Prolonged extrication (>20 min)
03	Vehicle problems	07	Hazardous material
04	Unsafe scene	08	Crowd Control
		09	Other
		88	Not applicable

Discussion and Justification: For systems planners who are evaluating response times, this data element provides explanations for delays encountered in the system. For instance, the time to scene would be expected to be prolonged if there was a blizzard, or if gunfire prevented EMS responders from patient access. If there was no problem with EMS delivery, this data element would be coded as not applicable.

The list provided is intentionally small, as it is expected that agencies that collect this data element will have very specific issues to address. Their data should, however, be collapsible to the above list.

Technical Comments: Unsafe scene includes presence of gunfire, instances in which police prevented access because of safety concerns, etc. Vehicle problems includes problems with the EMS responder vehicle itself, not with other vehicles which might have obstructed traffic.

Extrication has been moved into this data elements because extrication is not a patient treatment and relates less to the medical care of the patient than to the environment in which EMS responders must work.

57.

Name of Data Element:	Alcohol / Drug Use
Priority:	Essential
Definition:	Suspected alcohol or drug use by patient.
Code:	Numeric entry.
Data Items:	01 Alcohol, yes 02 Drugs, yes 03 Alcohol/Drugs, yes 04 No 88 Not applicable 99 Unknown

Discussion and Justification: Important data element for injury research, permitting reports of value to public health researchers and policy makers.

Technical Comments: Should be coded as yes whenever the EMS responder suspects alcohol or drug use by the patient may have contributed to the incident. The use of drugs or alchohol in isolation have been coded individually for epidemiological purposes and specific use should be coded appropriately when possible. Not applicable should be used when there is no patient, such as in a standby response. If alcohol or drugs are totally unrelated to the incident, this field should be coded as no.

58.

Name of Data Element:	Time of First CPR
Priority:	Desirable
Definition:	Best estimate of time of first CPR.
Code:	Time format should be coded as HHMM.

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Permits assessment of the duration of cardiopulmonary resuscitation prior to arrival of EMS responder. Useful for research purposes and for planning public education concerning CPR.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

This data element is undefined if CPR was never administered. Thus, in writing computerized reports, a program should first examine the "Provider of First CPR" field, or a treatment field, to

determine that CPR occurred on the run. If CPR was never rendered, this field should never be examined by the software.

59.

Name of Data Element:	Provider of First CPR
Priority:	Desirable
Definition:	Person who performed first CPR on patient.
Code:	Numeric entry
Data Items:	01 Bystander 02 EMS responder 88 Not applicable 99 Unknown

Discussion and Justification: Useful for assessing the quality of CPR rendered by initial responders to a cardiorespiratory arrest, for planning public educational efforts, etc.

Technical Comments: Not applicable should be used when there is no need for CPR given the condition of the patient. Unknown should only be used when data is being entered long after the actual incident and the information cannot be correctly reconstructed from the hardcopy record. For instance, unknown should never be the code if there was no CPR rendered; this should be coded as not applicable.

60.

Name of Data Element:	Time CPR Discontinued
Priority:	Desirable
Definition:	Time at which medical control or responding EMS unit terminated resuscitation efforts (chest compressions and CPR) in the field.
Code:	Time format should be coded as HHMM

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Provides information concerning the duration of CPR in the field in cases in which the patient was pronounced dead in the field.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

This data element is undefined if CPR was never administered (see Technical Comments for "Time of First CPR")

61.

Name of Data Element:	Time of Witnessed Cardiac Arrest
Priority:	Desirable
Definition:	Time of witnessed cardiac arrest.
Code:	Time format should be coded as HHMM

Content: HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Allows assessment of actual total arrest time in patients with cardiac arrest. This information is valuable for researchers and educators concerned with CPR training.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

This data element is undefined if CPR was never administered. Thus, in writing computerized reports, a program should first examine the "Provider of First CPR" field, or a treatment field, to determine that CPR occurred on the run. If CPR was never rendered, this field should never be examined by the software.

62.

Name of Data Element:	Witness of Cardiac Arrest
Priority:	Desirable
Definition:	Person who witnessed the cardiac arrest.
Code:	Numeric entry
Data Items:	01 Bystander 02 EMS Responder 88 Not Applicable 99 Unknown

Discussion and Justification: Provides information concerning the incidence of witnessed cardiac arrest prior to or during EMS responses.

Technical Comments: Not applicable should be used when there was no cardiac arrest or

witness of a cardiac arrest. Unknown should only be used when data is being entered long after the actual incident and the information cannot be correctly reconstructed from the hardcopy record. For instance, unknown should never be the code if there was no cardiac arrest or witness; this should be coded as not applicable.

63.

Name of Data Element:	Time of First Defibrillatory Shock
Priority:	Desirable
Definition:	Time of first defibrillatory shock.
Code:	Character entry - HHMM

Content: Time format should be coded as HHMM. HH ranges from 00 to 23; MM ranges from 00 to 59.

Discussion and Justification: Allows assessment of the time required between onset of cardiac arrest and provision of defibrillation in instances of ventricular fibrillation. Provides information about the rapidity with which the EMS responder correctly diagnoses the rhythm and takes action.

Technical Comments: Format HHMM is recommended as part of FIPS standard. There should be no colon in the field when used for export purposes. Unknown values should be coded as 99 for HH or MM. Use leading zeros to assure 2 character field width for HH and MM. Midnight is coded as 0000, and begins the new day.

This data element is undefined if defibrillation was never administered. Thus, in writing computerized reports, a program should first examine a treatment / procedure field, to determine that defibrillation occurred on the run. If defibrillation was never rendered, this field should never be examined by the software.

64.

Name of Data Element:	Return of Spontaneous Circulation
Priority:	Desirable
Definition:	Whether a palpable pulse or blood pressure was restored following cardiac arrest and resuscitation in the field.
Code:	Numeric entry.
Data Items:	01 Yes 02 No 88 Not applicable

Discussion and Justification: Outcome of cardiac resuscitation in the field. If the patient remains in cardiac arrest throughout the incident and continues to receive CPR until reaching the emergency department, this data element should be coded as no, even if the patient was subsequently resuscitated in the emergency department.

Technical Comments: There should be no unknown value for this data element. If no cardiac arrest ever occurred, this data element is not applicable and should be coded as such.

65.

Name of Data Element:	Pulse Rate
Priority:	Essential
Definition:	Patient's palpated or auscultated pulse rate expressed in number per minute.
Code:	Numeric entry.
Data Items:	{pulse rate} 888 Not Obtained 999 Unknown

Content: Code as 3 digit field.

Discussion and Justification: The pulse rate is a component of various triage scoring systems, and permits a rough assessment of the severity of illness of the patient. This data element is based on the physical examination of the patient, and the pulse must be palpated or auscultated. An electrical rhythm is not sufficient, as the patient could have electromechanical dissociation. In this instance, the correct value of this data element is '000'.

66.

Name of Data Element:	Initial Cardiac Rhythm
Priority:	Desirable
Definition:	Initial monitored cardiac rhythm as interpreted by EMS personnel.
Code:	Numeric entry

Data Items:

01	Sinus rhythm	06	Narrow complex tachycardia
02	Other rhythm from 60-100 (not otherwise listed)	07	Wide complex tachycardia
		08	Ventricular fibrillation
03	Paced rhythm	09	Asystole
04	Bradycardia	10	Pulseless electrical activity
05	Extrasystoles	88	Not Applicable
		99	Unknown

Discussion and Justification: Provides the initial monitored rhythm, permitting reports generated according to initial rhythm. Such reports would be of use in assessing the survival rate after certain rhythms.

It is understood that some agencies collect data about cardiac rhythms with more detail than this list. For instance, many agencies expect EMS personnel to distinguish first, second, and third degree heart block. There is no intention to restrict the manner in which any agencies decide to code cardiac rhythms, but there is a necessity to be able to collapse those rhythms to a common definition which can then be combined. For the examples of heart block mentioned, those would all collapse into a wide or narrow complex tachycardia (if the rate is > 100), other rhythm between 60 and 100, or bradycardia, if heart rate < 60.

Technical Comments: This field should be coded as not applicable when the EMS responder is not an appropriate level provider to assess electrical rhythm, or if electrical monitoring is unavailable to the provider.

67.

Name of Data Element:	Rhythm at Destination
Priority:	Desirable
Definition:	Monitored cardiac rhythm upon arrival at destination.
Code:	Numeric entry.

Data Items:

01	Sinus rhythm	06	Narrow complex tachycardia
02	Other rhythm from 60-100 (not otherwise listed)	07	Wide complex tachycardia
		08	Ventricular fibrillation
03	Paced rhythm	09	Asystole
04	Bradycardia	10	Pulseless electrical activity
05	Extrasystoles	88	Not Applicable
		99	Unknown

Discussion and Justification: Captures the electrical rhythm at the time of arrival at a destination, as previously defined. Reports could examine whether this rhythm differs from the initial rhythm of the patient when encountered in the field, whether there was improvement or deterioration, etc. If an EMS responder is not equipped with electrical monitoring capability or is not of an appropriate level to assess rhythm, this field should be coded as not applicable.

68.

Name of Data Element:	Respiratory Rate
Priority:	Essential
Definition:	Unassisted patient respiratory rate expressed as number per minute.
Code:	Numeric entry.

Data Items:

{respiratory rate}
888 Not Obtained
999 Unknown

Content: Coded as 3 digit field.

Discussion and Justification: Component of several triage scoring systems and provides some assessment of severity of illness or injury. If a patient is not breathing and requires artificial ventilation, this data element should be coded as '000'.

69.

Name of Data Element:	Respiratory Effort
Priority:	Desirable*
Definition:	Patient respiratory effort.
Code:	Numeric entry.
Data Items:	
	0 Normal
	1 Increased, not labored
	2 Increased and labored, or, decreased and fatigued
	3 Absent
	9 Not assessed

* This field is essential for children. For purposes of the uniform data definition, children are defined as 18 years or younger.

Discussion and Justification: Respiratory effort is an integral component of pediatric emergency assessment, and is a major part of curricula dealing with pediatric emergencies. Respiratory effort is also potentially valuable in assessing adult patients.

Technical Comments: If the patient is an adult and it is decided to not collect this item for adults, this data element should be coded as 9, not assessed.

70.

Name of Data Element:	Systolic Blood Pressure
Priority:	Essential
Definition:	Patient's systolic blood pressure
Code:	Numeric entry.
Data Items:	
	{systolic blood pressure}
	888 Not Obtained
	999 Unknown

Content: Coded as 3 digit field.

Discussion and Justification: Important component of several scoring systems for triage, and permits some assessment of acuity of patient.

71.

Name of Data Element:	Diastolic Blood Pressure
Priority:	Essential
Definition:	Patient's diastolic blood pressure
Code:	Numeric entry.
Data Items:	{diastolic blood pressure} 888 Not Obtained 99 Unknown

Content: Coded as 3 digit field.

Discussion and Justification: Important component of several scoring systems for triage, and permits some assessment of acuity of patient.

72.

Name of Data Element:	Skin Perfusion
Priority:	Desirable*
Definition:	Patient skin perfusion, expressed as normal or decreased.
Code:	Numeric entry.
Data Items:	1 Normal 2 Decreased 3 Not assessed

* This field is essential for children. For purposes of the uniform data definition, children are defined as 18 years or younger.

Discussion and Justification: Normal is defined as warm, pink, and with a capillary refill time of 2 or less seconds. Decreased is defined as cool, pale, mottled, dusky, and with a capillary refill time of greater than 2 seconds.

If the patient is hypothermic or febrile, this may affect skin perfusion. However, the skin perfusion should be scored consistently as defined above.

Technical Comments: If the patient is an adult and it is decided to not collect this item for adults, this data element should be coded as 9, not assessed.

73.

Name of Data Element:	Glasgow Eye Opening Component
Priority:	Essential
Definition:	Patient's eye opening component of the Glasgow coma scale.
Code:	Numeric entry.
Data Items:	
1	None
2	Opens eyes in response to painful stimulation
3	Opens eyes in response to verbal stimulation
4	Opens eyes spontaneously
9	Unknown

Discussion and Justification: One of three components of the Glasgow coma scale, which is widely used to assess neurological status. The score and its components are also parts of a variety of triage scoring systems.

Technical Comments: If the data element is not assessed, code this data element as 9. If the score cannot be reconstructed from the run sheet at the time of data entry (e.g., is unknown), the element should also be coded as 9. A judgment that the data element is not applicable should not be made at the responder level. Instead, this can be made by generating data reports for specific conditions in which the data element is considered relevant, and examining the field for valid values.

74.

Name of Data Element:	Glasgow Verbal Component
Priority:	Essential
Definition:	Patient's verbal component of the Glasgow coma scale
Code:	Numeric entry.

Data Items:

For patients >5years:

1 None
2 Non-specific sounds
3 Inappropriate words
4 Confused conversation or speech
5 Oriented and appropriate speech
9 Unknown

For patients 2-5 years:

1 None
2 Grunts
3 Cries and/or screams
4 Inappropriate words
5 Appropriate words
9 Not assessed

For patients 0-23 months:

1 None
2 Persistent cry, grunting
3 Inappropriate cry
4 Cries, inconsolable
5 Smiles, coos, cries appropriately
9 Not assessed

Discussion and Justification: One of three components of the Glasgow coma scale, which is widely used to assess neurological status. The score and its components are also parts of a variety of triage scoring systems.

Technical Comments: If the patient is intubated and deeply comatose, then this data element is coded as 1 for none, since there was no verbal response at the time of intubation. However, if the patient is intubated but not deeply comatose, and there is a possibility of verbal response, it is difficult to apply the Glasgow coma scale. The EMS responder can ask questions and if the patient can nod his head or blink eyes, etc. appropriately, then this element is coded as 5. In other instances, the data element should be coded as 9, or unknown.

If the data element is not assessed, code this data element as 9. If the score cannot be reconstructed from the run sheet at the time of data entry, the element should also be coded as 9. A judgment that the data element is not applicable should not be made at the responder level. Instead, this can be made by generating data reports for specific conditions in which the data element is considered relevant, and examining the field for valid values.

As a validity check, data analysts may run a report which reports the verbal score on all intubated patients. In the majority of instances, the score should be either 1 or 9.

75.

Name of Data Element:	Glasgow Motor Component
Priority:	Essential
Definition:	Patient's motor component of the Glasgow coma scale.
Code:	Numeric entry.

Data Items:

For patients >5 years:

1	None
2	Extensor posturing in response to painful stimulation
3	Flexor posturing in response to painful stimulation
4	General withdrawal in response to painful stimulation
5	Localization of painful stimulation
6	Obeys commands with appropriate motor response
9	Unknown

For patients up to 5 years:

1	None
2	Extensor posturing in response to painful stimulation
3	Flexor posturing in response to painful stimulation
4	General withdrawal in response to painful stimulation
5	Localization of painful stimulation
6	Spontaneous
9	Not assessed

Discussion and Justification: One of three components of the Glasgow coma scale, which is widely used to assess neurological status. The score and its components are also parts of a variety of triage scoring systems.

Technical Comments: This component cannot be assessed if the patient has received a muscle relaxant. If the data element is not assessed, code this data element as 9. If the score cannot be reconstructed from the run sheet at the time of data entry, the element should be coded as 9. A judgment that the data element is not applicable should not be made at the responder level. Instead, this can be made by generating data reports for specific conditions in which the data

element is considered relevant, and examining the field for valid values.
76.

Name of Data Element:	Glasgow Coma Score (Total)
Priority:	Desirable
Definition:	Patient's total Glasgow coma scale score.
Code:	Numeric entry.

Content: Calculated 2 digit character field. It is a sum of the eye opening, verbal and motor response components.

Discussion and Justification: Important component of several triage scoring systems. Provides information about severity of neurologic disorder.

Technical Comments: The range of the score is 3 to 15. This data element should not be directly entered. Before generating this value, each of the components should be checked to make certain that '9' is not recorded within them. If any of the components are '9', then the score cannot be calculated and should be coded as '99'. Reports based on the Glasgow coma score should be programmed to skip records with '99' as the value of this data element. This data element should be zero padded if the total score is less than 10 to assure 2 digit field width.

77.

Name of Data Element:	Revised Trauma Score
Priority:	Desirable
Definition:	Patient's revised trauma score.
Code:	Numeric entry.

Content: Coded as 2 digit field.

Discussion and Justification: One example of a triage scoring system which may be used to categorize injured patients in an EMS system. This data element is considered desirable, but the intention is that local agencies use scoring systems which are applicable to their own purposes. Most of these scoring systems should be calculable from other data elements which are included as core elements of the uniform data set.

Other scoring systems which are used in EMS information systems include the CRAMS, the Trauma Index, the Trauma Score (Champion), the Glasgow coma scale, APACHE, PRISM, Hanover Intensive Score (HIS), AIS and ISS. It is recommended that experience be gained with these scoring systems, emphasizing scoring systems which can be automatically calculated from components which are designated as core data elements.

Technical Comments: The revised trauma score may be calculated from other data elements. It is the sum of a respiratory rate component, systolic blood pressure component, and a neurologic component.

Respiratory Rate Component

4	10 - 29 per minute
3	>29 per minute
2	6 - 9 per minute
1	1 - 5 per minute
0	None spontaneous

Systolic Blood Pressure Component

4	>89 mm Hg
3	76 - 89 mm Hg
2	50 - 75 mm Hg
1	1 - 49 mm Hg
0	No pulse

Neurologic Component

4	Glasgow coma score 13 - 15
3	Glasgow coma score 9 - 12
2	Glasgow coma score 6 - 8
1	Glasgow coma score 4 - 5

0 Glasgow coma score 3

If the score cannot be calculated because of absent component data or is unknown, then the score should be coded as '88', while if the score is not applicable (e.g., a non-injury patient) then it should be coded as '99'.

78.

Name of Data Element:	Procedure or Treatment Name
Priority:	Essential
Definition:	Identification of procedure attempted or performed on patient.
Code:	Numeric entry.

Data Items:

96.70 Assisted ventilation (positive pressure)
93.59 Backboard
39.98 Bleeding controlled
93.57 Burn care
99.60 Cardiopulmonary resuscitation
93.52 Cervical immobilization
31.10 Cricothyrotomy
89.51 ECG monitoring
96.04 *Endotracheal intubation*
99.63 External cardiac massage
99.62 External defibrillation (includes auto)
38.93 Intravenous catheter
41.92 Intraosseous catheter
99.29 Intravenous fluids
93.58 MAST (military antishock trousers)
96.01 Nasopharyngeal airway insertion
96.05 Nasogastric tube insertion
73.59 Obstetrical care (delivery)
96.02 Oropharyngeal airway insertion
93.96 Oxygen by mask
93.96 Oxygen by cannula
93.54 Splint of extremity
93.54 Traction splint

Discussion and Justification: Intended to provide planners and educators with information about which procedures are conducted in the field, by whom, and for what indications. Procedures are defined here as anything done by way of assessment or treatment of the patient. Thus, application of a cervical collar is a treatment, use of a cardiac monitor is a tool of assessment, and drawing blood tubes is neither a specific treatment nor a means of field assessment. All of these would be considered procedures for purposes of this data element. It is

likely that each responder agency will have its own list of procedures which are authorized for its EMS responders, and this list should be used for the data collection efforts of the agency. The procedures listed above and detailed below are not a restrictive list, nor is it expected that every agency will permit its providers to carry out all of these procedures. These lists are intended as samples, while the coding scheme should remain consistent. The coding system used above is the ICD-9 Procedure Classification (p codes). For the procedures listed above, the ICD-9 p code has been indicated. Agencies should identify the codes of other authorized procedures which they plan to track in their data collection system.

Technical Comments: Multiple entries will be needed, and should be separated into multiple fields in a flat file structure, or preferably, should be placed in a separate relational file to permit unlimited numbers of procedure entries. Using the latter type of architecture will also facilitate adding fields for numbers of attempts, time of the procedures, and identification of the individuals performing the procedures. There is no question that the relational model is preferred to the flat file approach, but it is recognized that more investment of time and effort is required to properly design the relational architecture.

79.

Name of Data Element:	Procedure Attempts
Priority:	Desirable
Definition:	Total number of attempts for each procedure attempted, regardless of success.
Code:	Numeric entry.

Discussion and Justification: For procedures which are performed on the patient, this field indicates the number of attempts required. In most instances, this number will be 1. This data element permits educators to know whether certain procedures are posing particular technical problems in the field.

Technical Comments: This data element should be combined in a relational file with the procedures conducted on a given patient. This will permit optimal data base design, as pointed out in the Technical Comments concerning procedure names.

80.

Name of Data Element:	Medication Name
Priority:	Essential
Definition:	Medication name.
Code:	Free text entry.

Data Items:

Acetaminophen	Ipecac
Adenosine	Isoproterenol
Albuterol	Lidocaine
Amyl nitrate	Lorazepam
Aspirin	Magnesium sulfate
Atropine	Mannitol
Bretylium tosylate	Meperidine
Bumetanide	Metaproterenol
Calcium chloride	Methylprednisolone
Calcium gluconate	Metoclopramide
Charcoal, activated	Morphine
Dexamethasone	Naloxone
Dextrose and water (50%)	Nifedipine
Diazepam	Nitroglycerin
Diphenhydramine	Procainamide
Dopamine	Sodium bicarbonate
Epinephrine	Succinylcholine
Furosemide	Terbutaline
Glucagon	Thiamine
Heparin	Verapamil

Discussion and Justification: Intended to provide planners and educators with information about which drugs are administered in the field, by whom, and for what indications. It is likely that each responder agency will have its own list of drugs which are carried by the response vehicles, and this list should be used for the data collection efforts of the agency. The drugs listed above and detailed below are not a restrictive list, nor is it expected that every agency will permit its providers to use all these drugs. These lists are intended as samples, while the coding scheme should remain consistent.

The drugs may be grouped together based on the groupings and coding used in the American Hospital Formulary Service (AHFS) "Redbook" Formulary (American Hospital Formulary Service Drug Information: 93. McEvoy GE, Litvak K, Walsh O (eds), American Society of Hospital Pharmacists, Bethesda, Maryland, 1993). Using this formulary provides us with a standard that can be widely compared and interpreted. Use of these criteria also facilitate translation into ICD-9 drug codes, if desired.

The downside of using the formulary is its lack of specificity. For instance, dopamine and albuterol are both identified with the same text descriptor and numeric code (12:12.00). Individual agencies may prefer a more detailed coding, but such coding should be collapsible to the formulary format to facilitate interpretation at regional, state, or national levels.

Additional drugs are easy to add to this definition. Simply use the AHFS categorization and numeric coding, or be collapsible to such a coding.

Technical Comments: Multiple entries may be needed, and should be separated into multiple fields in a flat file structure, or preferably, should be placed in a separate relational file to permit unlimited numbers of drug entries. Using the latter type of architecture will also facilitate adding fields for dose, route, and time of administration, for those agencies which wish to computerize that information.

For each of the medications listed above, the major and secondary drug headings are provided. The code which should be used for the drugs included under each heading is underlined.

ANTIHISTAMINE DRUGS - 04:00.00
Diphenhydramine

AUTONOMIC DRUGS - 12:00.00
ANTICHOLINERGIC AGENTS - 12:08.00
ANTIMUSCARINIC/ANTISPASMODICS - 12:08.08
Atropine

AUTONOMIC DRUGS - 12:00.00
SYMPATHOMIMETIC (ADRENERGIC) AGENTS - 12:12.00
Albuterol
Terbutaline
Dopamine
Epinephrine
Isoproterenol
Metaproterenol

AUTONOMIC DRUGS - 12:00.00
SKELETAL MUSCLE RELAXANTS - 12:20.00
Succinylcholine

BLOOD FORMATION - 20:00.00
COAGULANTS AND ANTICOAGULANTS - 20:12.00
ANTICOAGULANTS - 20:12.08
Heparin

CARDIOVASCULAR DRUGS - 24:00.00
CARDIAC DRUGS - 24:04.00
Adenosine
Bretylium tosylate
Lidocaine
Procainamide
Verapamil
Nifedipine

CARDIOVASCULAR DRUGS - 24:00.00
VASODILATING AGENTS - 24:12.00
Amyl nitrate
Nitroglycerin

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
ANALGESICS AND ANTIPYRETICS - 28:08.00
NONSTEROIDAL AGENTS - 28:08.08
Aspirin

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
ANALGESICS AND ANTIPYRETICS - 28:08.00
OPIATE AGONISTS - 28:08.08
Meperidine
Morphine

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
ANALGESICS AND ANTIPYRETICS - 28:08.00
OPIATE ANTAGONISTS - 28:08.12
Naloxone

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
ANALGESICS AND ANTIPYRETICS - 28:08.00
MISCELLANEOUS AGENTS - 28:08.92
Acetaminophen

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
ANTICONVULSANTS - 28:12.00
BENZODIAZEPINES - 28:12.08
Diazepam

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
ANTICONVULSANTS - 28:12.00
MISCELLANEOUS AGENTS - 28:12.92
Magnesium sulfate

CENTRAL NERVOUS SYSTEM DRUGS - 28:00.00
AXOLYTICS, SEDATIVES, AND HYPNOTICS - 28:24.00
BENZODIAZEPINES - 28:24.08
Lorazepam

ELECTROLYTE, CALORIC AND WATER BALANCE - 40:00.00
ALKALINIZING AGENTS - 40:08.00
Sodium bicarbonate

ELECTROLYTE, CALORIC AND WATER BALANCE - 40:00.00
REPLACEMENT SOLUTIONS - 40:12.00
Calcium chloride
Calcium gluconate

ELECTROLYTE, CALORIC AND WATER BALANCE - 40:00.00
CALORIC AGENTS - 40:20.00
Dextrose and water (50%)

ELECTROLYTE, CALORIC, AND WATER BALANCE - 40:00.00
DIURETICS - 40:28.00
Furosemide
Mannitol
Bumetanide

GASTROINTESTINAL DRUGS - 56:00.00
ANTACIDS AND ADSORBENTS - 56:04.00
Charcoal, activated

GASTROINTESTINAL DRUGS - 56:00.00
EMETICS - 56:20.00
Ipecac

GASTROINTESTINAL DRUGS - 56:00.00
MISCELLANEOUS GI DRUGS - 56:40.00
Metoclopramide

HORMONES AND SYNTHETIC SUBSTITUTES - 68:00.00
ADRENALS - 68:04.00
Dexamethasone
Methylprednisolone

HORMONES AND SYNTHETIC SUBSTITUTES - 68:00.00
ANTIDIABETIC AGENTS - 68:20.00

MISCELLANEOUS AGENTS - 68:20.92

Glucagon

VITAMINS - 88:00.00

Thiamine

81.

Name of Data Element:	Treatment Authorization
Priority:	Desirable
Definition:	Indicates the type, if any, of treatment authorization.
Code:	Numeric entry.

Data Items

01	Protocol (Standing Orders)
02	On-Line (Radio Telephone)
03	On-Scene
04	Written Orders (Patient Specific)
88	Not Applicable
99	Unknown

Discussion and Justification: Enables managers of EMS systems to determine the authorization type used for emergency medical care provided on specific EMS runs. This data may be of used for determining legal accountability and for auditing the supervision of EMS systems.

Technical Comments:
Following is a more detailed explanation of the Data Items that define Treatment Authorization:

Protocol (Standing Orders)
Pre-established physician authorized procedures or guidelines for medical care of a specified clinical situation, based on patient presentation. Also known as standing orders. The pre-establishment of protocols is the responsibility of a physician having responsibility for medical direction of an EMS system.

On-line (Radio Telephone)
Immediate physician orders to EMS provider through direct telecommunications such as radio or telephone. Also known as *on-line medical direction*.

On-Scene
Immediate orders to an EMS provider by a physician at the scene of the medical emergency who has officially assumed responsibility for the management of the prehospital care of the patient.

Written Orders (Patient Specific)

Written orders by a physician having on-going or continuing responsibility for the medical care of the patient, to an EMS provider regarding the prehospital care of the patient. The orders must accompany the patient, must be in writing, and must be signed by the responsible physician. Also known as *advanced medical directions.* An example is "Do Not Resuscitate" orders.

Not Applicable

Citation of authorization is not applicable or indicated, such as in cases where no medical treatments are provided, or no treatments requiring explicit physician authorization are administered.

Unknown

Applicable authorization for treatment not recorded or not known by the EMS provider, such as cases where prehospital skills and treatments are applied by an EMS provider based on his training and experience, without knowledge of the existence of applicable protocols. This is a default data entry, to be used when none of the other above Data Items are recorded.