

OKEMSIS v3 Summary

In an effort to improve pre-hospital data quality into the Oklahoma EMS Information System (OKEMSIS), Emergency Systems is upgrading OKEMSIS to the National EMS Information System (NEMSIS) v3 standard. This document will discuss the changes/additions to the OKEMSIS data dictionary. For definitions of the included elements in the OKEMSIS v3 update please refer to the OKEMSIS v3 data dictionary located at:

[http://www.ok.gov/health/Protective Health/Emergency Systems/EMS Division/OKEMSIS - Oklahoma Emergency Medical Services Information System/index.html](http://www.ok.gov/health/Protective%20Health/Emergency%20Systems/EMS%20Division/OKEMSIS%20-%20Oklahoma%20Emergency%20Medical%20Services%20Information%20System/index.html) .

Included Elements: 175 Total Elements

1. 33 demographic elements that are completed by the EMS service in the OKEMSIS database. This data will be submitted to NEMSIS as needed and is not required with every Patient Care Report (PCR). These fields need to be updated at least once a year or as needed (list in OKEMSIS v3 dictionary).
2. 142 ePCR elements (6 are custom (State) elements). All these elements must be in the dataset but most are patient disposition (eDisposition.12) dependent.
3. 33 of the 142 ePCR elements (7 in the header of XML file, 26 in regular ePCR) are mandatory for **every EMS incident** or the entire file will be rejected. **These elements are non-nillable (“Not Applicable” is an example of a null value) and cannot be blank.** A list of the non-nillable elements is located in the OKEMSIS v3 data dictionary.
4. Incident Facility Code (eScene.10) and Destination Transferred To Code (eDisposition.02) utilize the same list of codes which have been changed from encoder numbers to **National Provider Identifier (NPI)** codes. **The EMS service must match their list with the OKEMSIS destination/incident facility list or the entire file will be rejected.** The incident/destination list can be found in the OKEMSIS v3 data dictionary.

OKEMIS v3 ePCR Data Element List

Element	Description
eAirway.01	Indications for Invasive Airway
eAirway.02	Date/Time Airway Device Placement Confirmation
eAirway.03	Airway Device Being Confirmed
eAirway.04	Airway Device Placement Confirmed Method
eAirway.05	Tube Depth
eAirway.06	Type of Individual Confirming Airway Device Placement
eAirway.07	Crew Member ID
eAirway.08	Airway Complications Encountered
eAirway.09	Suspected Reasons for Failed Airway Procedure
eAirway.11	Date/Time Invasive Airway Placement Attempts Abandoned
eArrest.01	Cardiac Arrest
eArrest.02	Cardiac Arrest Etiology
eArrest.03	Resuscitation Attempted By EMS
eArrest.04	Arrest Witnessed By
eArrest.14	Date/Time of Cardiac Arrest
eCrew.01	Crew Member ID
eCrew.02	Crew Member Level
eCrew.03	Crew Member Response Role
eDispatch.01	Complaint Reported by Dispatch
eDispatch.02	EMD Performed
eDisposition.02	Destination/Transferred To, Code
eDisposition.07	Destination ZIP Code
eDisposition.12	Incident/Patient Disposition
eDisposition.16	EMS Transport Method
eDisposition.17	Transport Mode from Scene
eDisposition.20	Reason for Choosing Destination
eDisposition.21	Type of Destination
eDisposition.24	Destination Team Pre-Arrival Activation
eDisposition.25	Date/Time of Destination Pre-arrival Activation
eHistory.01	Barriers to Patient Care
eHistory.06	Medication Allergies
eHistory.17	Alcohol/Drug Use Indicators
eInjury.01	Cause of Injury
eInjury.02	Mechanism of Injury
eInjury.06	Location of Patient in Vehicle
eInjury.07	Use of Occupant Safety Equipment
eInjury.08	Air Bag Deployment

eMedications.01	Date/Time Medication Administered
eMedications.02	Medication Administered Prior to this Unit's EMS Care
eMedications.03	Medication Given
eMedications.04	Medication Administered Route
eMedications.08	Medication Complication
eMedications.09	Medication Crew (Healthcare Professionals) ID
eMedications.11	Medication Authorization
eNarrative.01	Patient Care Report Narrative
eOutcome.01	Emergency Department Disposition
eOutcome.02	Hospital Disposition
ePatient.02	Last Name
ePatient.03	First Name
ePatient.04	Middle Initial/Name
ePatient.05	Patient's Home Address
ePatient.06	Patient's Home City
ePatient.07	Patient's Home County
ePatient.08	Patient's Home State
ePatient.09	Patient's Home ZIP Code
ePatient.12	Social Security Number
ePatient.13	Gender
ePatient.14	Race
ePatient.15	Age
ePatient.16	Age Units
ePatient.17	Date of Birth
ePatient.18	Patient's Phone Number
ePayment.01	Primary Method of Payment
ePayment.50	CMS Service Level
ePayment.51	EMS Condition Code
eProcedure.01	Date/Time Procedure Performed
eProcedure.02	Procedure Performed Prior to this Unit's EMS Care
eProcedure.03	Procedure
eProcedure.05	Number of Procedure Attempts
eProcedure.06	Procedure Successful
eProcedure.07	Procedure Complication
eProcedure.09	Procedure Crew Members ID
eRecord.01	Patient Care Report Number
eRecord.02	Software Creator
eRecord.03	Software Name...
eRecord.04	Software Version
eResponse.01	EMS Agency Number
eResponse.04	EMS Response Number

eResponse.05	Type of Service Requested
eResponse.07	Primary Role of the Unit
eResponse.08	Type of Dispatch Delay
eResponse.09	Type of Response Delay
eResponse.10	Type of Scene Delay
eResponse.11	Type of Transport Delay
eResponse.12	Type of Turn-Around Delay
eResponse.13	EMS Vehicle (Unit) Number
eResponse.14	EMS Unit Call Sign
eResponse.15	Level of Care of This Unit
eResponse.23	Response Mode to Scene
eScene.06	Number of Patients at Scene
eScene.07	Mass Casualty Incident
eScene.09	Incident Location Type
eScene.10	Incident Facility Code
eScene.11	Scene GPS Location
eScene.15	Incident Street Address
eScene.17	Incident City
eScene.18	Incident State
eScene.19	Incident ZIP Code
eScene.21	Incident County
eSituation.01	Date/Time of Symptom Onset/Last Normal
eSituation.02	Possible Injury
eSituation.04	Complaint
eSituation.07	Chief Complaint Anatomic Location
eSituation.08	Chief Complaint Organ System
eSituation.09	Primary Symptom
eSituation.10	Other Associated Symptoms
eSituation.11	Provider's Primary Impression
eSituation.12	Provider's Secondary Impressions
eSituation.14	Work-Related Illness/Injury
eTimes.01	PSAP Call Date/Time
eTimes.02	EMS Dispatch Notified Date/Time
eTimes.03	Unit Notified by Dispatch Date/Time
eTimes.05	Unit En Route Date/Time
eTimes.06	Unit Arrived on Scene Date/Time
eTimes.07	Arrived at Patient Date/Time
eTimes.08	Transfer of EMS Patient Care Date/Time
eTimes.09	Unit Left Scene Date/Time
eTimes.11	Patient Arrived at Destination Date/Time
eTimes.13	Unit Back in Service Date/Time

eVitals.01	Date/Time Vital Signs Taken
eVitals.02	Obtained Prior to this Unit's EMS Care
eVitals.03	Cardiac Rhythm / Electrocardiography (ECG)
eVitals.04	ECG Type
eVitals.05	Method of ECG Interpretation
eVitals.06	SBP (Systolic Blood Pressure)
eVitals.07	DBP (Diastolic Blood Pressure)
eVitals.08	Method of Blood Pressure Measurement
eVitals.10	Heart Rate
eVitals.12	Pulse Oximetry
eVitals.14	Respiratory Rate
eVitals.19	Glasgow Coma Score-Eye
eVitals.20	Glasgow Coma Score-Verbal
eVitals.21	Glasgow Coma Score-Motor
eVitals.23	Total Glasgow Coma Score
eVitals.26	Level of Responsiveness (AVPU)
eVitals.29	Stroke Scale Score
Custom.01(State Elements)	Trauma Triage Criteria
Custom.02(State Elements)	Triage Level
Custom.03(State Elements)	Trauma Referral Center (TreC) Notified
Custom.04(State Elements)	TreC Tracking Number
Custom.05(State Elements)	Destination on Current Run Form Referred by TreC
Custom.06(State Elements)	Intercept Recipient Agency

Deleted Elements

- Twenty data elements that existed in v2 were removed from the v3 data dictionary. The list below identifies these elements and the reason for their removal.

OKEMSIS v2 Deleted Elements

V2 Element	Description	Reason for Removal
E05_13	Unit Back at Home Location Date/Time	Not necessary for research.
E06_13	Ethnicity	Retired by NEMSIS; now a part of ePatient.14 (Race) element in v3.
E09_01	Prior Aid	Retired by NEMSIS; replaced with eVitals.02, eProcedures.02, and eMedications.02 in v3.
E09_02	Prior Aid Performed By	Retired by NEMSIS; replaced with eVitals.02, eProcedures.02, and eMedications.02 in v3.
E09_03	Outcome of Prior Aid	Retired by NEMSIS; replaced with eVitals.02, eProcedures.02, and eMedications.02 in v3.
E10_07	Position of Patient in the Seat of the Vehicle	Retired by NEMSIS; replaced with eInjury.06 in v3.
E14_28	Pediatric Trauma Score	Retired by NEMSIS.
E16_04	Skin Assessment	Removed for v3-at least a medical, trauma, or burn assessment will be required in v3 with patient contact.
E16_21	Eyes-Left Assessment	Removed for v3-at least a medical, trauma, or burn assessment will be required in v3 with patient contact.
E16_22	Eyes-Right Assessment	Removed for v3-at least a medical, trauma, or burn assessment will be required in v3 with patient contact.
E23_08	Required Reportable Conditions	Retired by NEMSIS.
IT05_10 (custom)	Time Intercept Requested	Removed for v3-this is the intercept agencies eTimes.02 (EMS Dispatch Notified Date/Time).
IT05_11 (custom)	Time Intercept Arrived	Removed for v3-this is the intercept agencies eTimes.06 (Unit Arrived on Scene Date/Time).
IT10_02 (custom)	Hospital Team Notified	Removed as custom variable in v3; replaced with eDisposition.24 (Destination Team Pre-Arrival Activation).
IT10_03 (custom)	Time Hospital Team Notified	Removed as custom variable in v3; replaced with eDisposition.25 (Date/Time of Destination Team Pre-Arrival Activation).
IT11_04 (custom)	Time TreC Notified	Removed for v3-can get this from TreC.
IT12_02 (custom)	STEMI 12 Lead Used	Removed as custom variable in v3; replaced with eVitals.04 (ECG Type).
IT12_03 (custom)	STEMI: Transmitted for Interpretation	Removed as custom variable in v3; replaced with eVitals.05 (Method of ECG Interpretation).
IT12_04 (custom)	STEMI 12 Lead Interpreter	Removed as custom variable in v3; replaced with eVitals.05 (Method of ECG Interpretation).
IT12_05 (custom)	STEMI Probable	Removed as custom variable in v3; replaced with eVitals.04 (ECG Type).

New/Updated Elements

6. Several elements were updated or added in the OKEMIS v3 data dictionary. The list below shows the new/updated elements.

<i>OKEMIS v3 Added/Updated Elements</i>		
v3 Element	Description	Reason for Addition/Change
eAirway.01	Indications for Invasive Airway	New Element added to better document Airway procedures.
eAirway.02	Date/Time Airway Device Placement Confirmation	New Element added to better document Airway procedures.
eAirway.03	Airway Device Being Confirmed	New Element added to better document Airway procedures.
eAirway.04	Airway Device Placement Confirmed Method	New Element added to better document Airway procedures.
eAirway.05	Tube Depth	New Element added to better document Airway procedures.
eAirway.06	Type of Individual Confirming Airway Device Placement	New Element added to better document Airway procedures.
eAirway.07	Crew Member ID	New Element added to better document Airway procedures.
eAirway.08	Airway Complications Encountered	New Element added to better document Airway procedures.
eAirway.09	Suspected Reasons for Failed Airway Procedure	New Element added to better document Airway procedures.
eAirway.11	Date/Time Invasive Airway Placement Attempts Abandoned	New Element added to better document Airway procedures.
eDisposition.16	EMS Transport Method	New Element added to air and ground transport methods.
eMedications.02	Medication Administered Prior to this Unit's EMS Care	New element added to replace the v2 Prior Aid elements.
eProcedure.02	Performed Prior to this Unit's EMS Care	New element added to replace the v2 Prior Aid elements.
eVitals.02	Obtained Prior to this Unit's EMS Care	New element added to replace the v2 Prior Aid elements.
eCustom.05	Destination on Current Run Form Referred by TreC	New element added to better document TreC use into Regions 7 and 8.
eResponse.05	Type of Service Requested	Updated element. 2 new codes added besides NEMIS additions to better document inter-facility transfers.
eDisposition.24	Hospital Team Notified	Removed as custom variable in v3; replaces IT10_02 (State custom var.).

eDisposition.25	Time Hospital Team Notified	Removed as custom variable in v3; replaces IT10_03 (State custom var.).
ePatient.14	Race	Updated element. Ethnicity has been added and is not a separate element in v3.
eVitals.04	ECG Type	New Element. Replaces custom element IT12_02 (STEMI 12 Lead Used) and IT12_05 (STEMI Probable).
eVitals.05	Method of ECG Interpretation	New Element. Replaces custom element IT12_03 (STEMI: Transmitted for Interpretation) and IT12_04 (STEMI 12 Lead Interpreter).

Suggested Lists

7. Code lists were updated for several v3 data elements but 7 data elements in particular have greatly expanded code lists. Below is a list of those elements (lists can be found in the appendix of the v3 data dictionary).

<i>OKEMIS v3 Suggested Lists</i>		
v3 Element	Description	Comments
eProcedure.03	Procedure	List compiled using SNOMEDCT Codes. Website: www.nlm.nih.gov/research/umls/Snomed/snomed_main.html
eMedications.03	Medication Given	List compiled using RxNorm (RXCUI) Codes. Website: http://uts.nlm.nih.gov
eScene.09	Incident Location Type	List compiled using ICD-10 Codes. Website: http://uts.nlm.nih.gov
eHistory.06	Medication Allergies	List compiled using RxNorm (RXCUI) Codes. Website: http://uts.nlm.nih.gov
eSituation.11, .12	Provider's Primary and Secondary Impression	List compiled using ICD-10 Codes. Website: http://uts.nlm.nih.gov
eSituation.09, .10	Symptoms/Other Associated Symptoms Codes	List compiled using ICD-10 Codes. Website: http://uts.nlm.nih.gov
eInjury.01	Cause of Injury	List compiled using ICD-10 Codes. Website: http://uts.nlm.nih.gov

Pertinent Negatives (PN)

8. To better document the variant nature of what EMT's encounter in the field, Pertinent Negatives were added to certain elements in v3.
9. Pertinent Negatives were added to better document why something was or was not completed or administered. The below is some examples of the use of pertinent negatives:

Example 1:

If the medication "Aspirin" is part of the agency protocol for Chest Pain but was not administered by the responding crew, the reason why should be documented. This is done through the use of Pertinent Negative Values. If the patient took the Aspirin prior to the EMS arrival on scene, the value "Medication Already Taken" should be documented in addition to "Aspirin".

Example 2:

If the patient was injured by a gunshot the assessment should document not only the entry but the exit of the bullet. In the abdominal assessment if "Gunshot Wound-Entry" was documented in the Right Upper Quadrant the EMS professional should be looking for an exit wound. If upon assessment of the back/spine no "Gunshot Wound-Exit" was identified then both "Gunshot Wound-Exit" and the pertinent negative value of "Exam Finding Not Present" should be documented.

<i>OKEMIS v3 Data Elements That Utilize Pertinent Negatives (PN)</i>	
eHistory.06	Medication Allergies
eHistory.17	Alcohol/Drug Use Indicators
eMedications.03	Medication Given
ePatient.02	Last Name
ePatient.03	First Name
ePatient.17	Date of Birth
eProcedure.03	Procedure
eVitals.03	Cardiac Rhythm / Electrocardiography (ECG)
eVitals.06	SBP (Systolic Blood Pressure)
eVitals.07	DBP (Diastolic Blood Pressure)
eVitals.10	Heart Rate
eVitals.12	Pulse Oximetry
eVitals.14	Respiratory Rate
eVitals.19	Glasgow Coma Score-Eye
eVitals.20	Glasgow Coma Score-Verbal

eVitals.21	Glasgow Coma Score-Motor
eVitals.23	Total Glasgow Coma Score
eVitals.29	Stroke Scale Score

Miscellaneous Updates

10. **Switch from ICD 9 codes to ICD 10 codes** for certain elements (see “Suggested Lists” section above).
11. **Null Values have been pared down to two**, “Not Applicable” and “Not Recorded” unless a pertinent negative is allowed.
12. The v3 data dictionary has been re-organized and updated to include:
 - a. Table of contents.
 - b. Definitions for specific elements and their choices (before Table of Contents) have been added.
 - c. OKEMESIS database usage guidelines were added to help services to administer their sites more effectively.
 - d. An appendix has been added which includes the Destination/Incident Facility Codes, suggested lists, date/time formats, and sample XSD.

If you have any questions about the OKEMESIS v3 data dictionary please contact the Oklahoma State Department of Health, Emergency Systems Division at (405)271-4027 or e-mail Martin Lansdale at martinl@health.ok.gov.