



**AZ PIERS  
Registry Users Group  
(EMSRUG)**



**Agenda**

**Monday January 26, 2015 - 9:30 a.m. – 11:30 a.m.**

**Arizona Dept. of Health Services**

**150 North 18th Avenue Phoenix AZ 85007**

**5th Floor – 540A Conference Room**

**AZ PIERS Contacts:**

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- A) Welcome & Introductions
- B) AZ-PIERS Version 3 Update
  - 1) State Schematron – short, simplified presentation of schema vs. schematron and what it means to us. Based off presentation by Josh Legler, whose full presentation can be found at: <https://www.nasemso.org/Councils/DataManagers/documents/Data-Validation-in-the-NEMESIS-XML-Standard.pdf>
    - a) An updates, simplified version of the one presented at EMSRUG can be found attached to these minutes.
  - 2) Suggested values – send out current list soon
- C) Agency status: Timeline for Version3 survey results – summary of results (informal)
  - 1) Of the agencies which answered the survey, 50% have a Version 3 transition plan. Of those, approx. half plan to transition to version 3 in the first six months of 2015. Half of the respondents plan to use the ADHS ImageTrend license free software. Of those that are using either another vendor or ImageTrend as a stand-alone system, 2/3 state they are in communication with their vendor regarding transitioning to version 3.
- D) AZ-PIERS version2 Runs per Month scheduled, auto-generated reports – are you all receiving your reports? They should be arriving in your email inbox once per week on Mondays. If you currently submit to AZ-PIERS and are not receiving these reports, please let me know and I will look into any issues. The purpose of these reports is to inform agencies as to their monthly ePCR counts, as received by AZ-PIERS. Please take a quick look each report as it arrives and let us know immediately if you believe the numbers do not reflect your current submissions. These reports were developed to aid agencies in recognizing an issue occurring in uploads to AZ-PIERS.
- E) Data Definitions – Consistency
  - 1) Scene Departure Time: Non-Transporters, or ground transporters when ground sent to air:
    - a) Are you using your unit left scene, or when patient left scene?

- Agencies at the EMSRUG meeting indicate they record the time the patient left the scene (whether transported by their agency or another) when recording a ‘Scene Departure Time’ in their ePCR.

2) Trauma Triage: eInjury.03 & eInjury.04:

- a) eSituation.02 (Possible Injury) is required on all ePCR unless no patient contact. If yes, eInjury.03 (Trauma Center Criteria) & eInjury.04 (Vehicular, Pedestrian, or Other Injury Risk Factor) are required to be filled out.
- Question came up – if “Possible Injury” is yes, but none of the values apply in trauma triage, the correct values for eInjury.03 would be ‘Not Applicable’ and for eInjury.04 would be either ‘EMS Provider Judgment’ (if that is why a trauma center was specifically chosen for destination (not that the hospital just happens to be one but chosen as was closest)) or Not Applicable.
  - Another question: If eSituation.02 is yes but eInjury.03 & eInjury.04 are BOTH ‘Not Applicable’, would there be a reason ever to have: eDisposition.24 - Destination Team Pre-Arrival Alert or Activation = Yes-Adult Trauma or Yes-Pediatric Trauma or Yes-Trauma (General). Answer is yes, there could be a reason, so a validation rule using this to catch inconsistent data in this scenario would not work.

F) 2015 AZ-PIERS version 3 Data Dictionary Update

1) The Cycle for Data Dictionary updates. The standard of AZ-PIERS Data Dictionary, NEMSIS, and vendor annual update cycles reflect this example. NEMSIS releases the finalized changes vendors and systems are expected to make March (2015), vendors & systems have until January 1 (2016) to make the NEMSIS changes, AZ-PIERS Data Dictionary update of variables will be in January (each year). Values in AZ-PIERS (additions, deletions, or updates) can be altered at any time of year and do not need to wait for the annual update.

2) NEW AZ-PIERS Version3.1 2015 Data Dictionary & Change Log

AZ-PIERS V3.1 Data Dictionary at: [AZ-PIERS Data Dictionary 2015](#)

a) NEMSIS national standards that affect AZ-PIERS

- Change log available at: [AZ-PIERS Version3 Data Dictionary Change Log](#)

b) AZ-PIERS changes

- AZ-PIERS specific (non-national NEMSIS change) includes the addition of two new values in data element eInjury.04 Vehicular, Pedestrian, or Other Injury Risk Factor:

(a) it2904.101 Burn, with trauma mechanism

(b) it2904.100 Burn, without other trauma

G) Discussion of Adding stand-alone ERs and Specialty Centers which are part of a hospital, to the Destinations list. Agencies approved the addition of stand-alone ERs and Specialty Centers. Any destinations/facilities missing from the AZ-PIERS destinations list can be added by sending an email to [Anne.Vossbrink@azdhs.gov](mailto:Anne.Vossbrink@azdhs.gov) with the name and address of the missing facility. These can include out of state facilities to which the agency delivers

patients. EMSRUG discussion and recommendations regarding data submission and catastrophic system failures.

1) The updated policy, in effect as of Dec. 1, 2014, has now been revised to include a **Catastrophic data failure exception process.**

- This will allow agencies with extenuating circumstances of data submission (such as server failure or substantial vendor problems) to maintain Premier status while they work to resolve the issue. Agencies that experience a catastrophic failure must submit a copy of the attached document to the EMS Data Manager [Anne.Vossbrink@azdhs.gov](mailto:Anne.Vossbrink@azdhs.gov). The document will also be available at: <http://www.azdhs.gov/bems/data/PEAP.htm>
- Agencies that encountered a catastrophic failure can fill out the application for a retroactive recognition of their premier status. Please note if those previous issues have been resolved.

H) 2015 meeting schedule

- 1) All meetings are on Mondays, with a new time of 10:00am – 12:00pm  
April 27<sup>th</sup>, July 20<sup>th</sup>, & Oct. 26<sup>th</sup>

I) Announcements

J) Questions/Requests

K) Topics of Future Discussion as proposed by group

L) Open floor

# Schema vs. Schematron: a basic explanation

The below explanation was taken from the presentation by Josh Legler titled “Data Validation in the NEMESIS XML Standard: Using the XML Schema and Schematron”, the entirety of which can be found at:

<https://www.nasemso.org/Councils/DataManagers/documents/Data-Validation-in-the-NEMESIS-XML-Standard.pdf>

## Basic overview of Schema vs. Schematron

Schema makes sure data:

Is in the correct format?

- For example: Something like following punctuation rules so that when read, it can be understood

Is valid?

- For example: The value doesn't exceed length limits, or the value is one recognized by the software

Schematron is used to find things Schema cannot. It helps with 'fine tuning' the data:

Are these values valid if they are in the same record?

- For example: 'Male' is a valid Gender. 'Pregnancy' is valid for Patient History. However, together they are not valid.
- For example: All call times can be valid, but Unit Back in Service time cannot be before Unit Notified by Dispatch time.

Helpful Definitions:

The **XML Schema** is sometimes called an “XSD”

The **XML Schema** is written in XML

An **XML document** is the file that one system sends to the other receiving system

(ex: agency system sends file to state system)

## How **XML Schema** validation works...

**First, software checks an XML document to make sure it is “well-formed.”**

By “well-formed” it means following the basic rules of XML: think of it as having all your punctuation correct. This allows the software to know what the file is trying to say. Without this context of 'correct punctuation', the system would not know how to interpret the info being sent. Your software need to know that it can count on the file being sent having 'rules' that help it read what all the letters/numbers/symbols want it to do.

Ex: If you were to read a sentence and need to interpret what it was saying

Without 'schema': hiEms,,us,,.Er.PI//<E/asE\_sEn,,daLLdATA-f++llestOme)(((D.;uEby12215A..t34923sT.

With 'schema': <Hi\_EMS\_User>

<Please\_send\_all\_data\_files\_to\_me>

<Due\_by\_01/22/2015\_at\_349\_23\_St.>

So, if the file isn't 'well-formed', it is rejected as it can't be read by the established rules.

## Second the XML document is checked to make sure it is “valid.”

By “valid” it means that the answers you are sending in the XML file follow the rules. We all know that if a form says use the date format MM/DD/YYYY you need to write Jan. 1<sup>st</sup>. 2015 as 01/01/2015 and not 1/1/15. This “valid” part of the schema is also why you can’t send a code to another system unless that system will also recognize it.

Ex: Not fitting valid schema:

- There is a rule that the Patient’s first name has a maximum length of 50 characters
  - EMS crew types in a name of “Margaret Anne Jenny Laura Mary Nancy Katie Paula Julie Robin Noreen Barbara Christa Rosa Michelle Helen Maria Ruth”
- = that first name is not seen as ‘valid’ by the schema.

Ex: Not fitting valid schema:

- The data element (variable) eVitals.26 - Level of Responsiveness (AVPU) has the following active/valid codes: 3326001 Alert, 3326003 Verbal, 3326005 Painful, 3326007 Unresponsive, 7701001 Not Applicable, 7701003 Not Recorded.
  - Your agency has added an additional code of 3326888 Unknown
  - Your agency sends an XML file with the data element eVitals.26 - Level of Responsiveness (AVPU) with the value of 3326888
- = the receiving system will not see 3326888 as ‘valid’ as it does not recognize the code.

### Why your software vendor uses XML schema and why it cares:

Software developers use the information from the NEMESIS XML Schema to decide how to design their database. This way, your software can potentially catch errors at the time of data entry. And, so that data entered by users won’t be rejected later by State systems or the NEMESIS system.

### **Review**

Schema can catch issues with data files not being ‘well-formed’ (not using correct ‘punctuation’ on the back end) and with data not being ‘valid’ (not adhering to rules and accepted codes).

If only Schema is in place, other validation checks have to wait until later...things that in version2 usually end up caught using validations rules. But, Schema can’t do everything we need.

## Add [Schematron](#)

### How [Schematron](#) validation works...

#### **Schematron can catch what the Schema can’t.**

The inventor of Schematron called it “*a feather duster to reach the parts other schema languages cannot reach.*”

So, it can look at one valid answer (ex: Gender = Male). And compare it to another valid answer (ex: Patient History = Pregnant). Schema would allow both as they are both ‘valid’.

But **Schematron can compare two different variables and their values** and catch errors.

Schematron would see the same situation of gender being male and patient history includes pregnancy, and flag the error.

As with the NEMESIS XML Schema, software developers can use the information from the Schematron file to build validation routines into their interface at the time of data entry:

An EMS unit should not be back in service before the call began, so it makes sense to catch the problem as soon as possible.

**PCR**

Notified:	12:00
En route:	12:04
On Scene:	12:09
Left Scene:	12:23
Destination:	12:38
Back in Service:	11:45

Oops! Back in Service  
Date/Time is too early.

Schematron is more flexible than the Schema...

Schematron can do “warnings” as well as “errors”:

- With the Schema, if an XML document is not well-formed or not valid, it should be rejected by the receiving system.
- But with Schematron, we may designate some rules as only “warnings” and not reject the document.

### Schematron in Review

- Schematron can do everything the Schema can, but it’s generally used to do what the Schema cannot.
- It’s particularly good for cross-checking combinations of data within an XML document.
- It can do “warnings” as well as “errors.”
- Rules can be updated more easily over time.

## **Objective of Schema & Schematron use in ePCR Software**

With both Schema & Schematron, an error that would cause data errors, affect validation scores, and upload failures can be flagged as the crew fills in the ePCR, allowing immediate error correction.

**eTimes.09 - Unit Left Scene Date/Time**

**Definition**

The date/time the responding unit left the scene with a patient (started moving).

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element	E05_09	Is Nillable	Yes
Usage	Required	Recurrence	1 : 1

**Associated Performance Measure Initiatives**

Airway    Cardiac Arrest    Pediatric    Response    STEMI    Stroke    Trauma

**Attributes**

**NOT Values (NV)**

7701001 - Not Applicable                      7701003 - Not Recorded

**Constraints**

Data Type	minInclusive	maxInclusive
dateTime	1950-01-01T00:00:00-00:00	2050-01-01T00:00:00-00:00

**Pattern**

[0-9]{4}-[0-9]{2}-[0-9]{2}T[0-9]{2}:[0-9]{2}:[0-9]{2}(\.\d+)?(\+|-)[0-9]{2}:[0-9]{2}

**Data Element Comment**

DateTime consists of finite-length characters of the form: yyyy '-' mm '-' dd 'T' hh ':' mm ':' ss ('.' s+)? (zzzzzz)

yyyy	a four-digit numeral that represents the year
'-'	separators between parts of the date portion
mm	a two-digit numeral that represents the month
dd	a two-digit numeral that represents the day
T	separator that indicates time-of-day follows
hh	a two-digit numeral that represents the hour
':'	a separator between parts of the time-of-day portion
mm	a two-digit numeral that represents the minute
ss	a two-integer-digit numeral that represents the whole seconds
'.' s+	(not required) represents the fractional seconds
zzzzzz	(required) represents the timezone (as described below)

Timezones, required, are durations with (integer-valued) hour and minute properties in the form: ('+' | '-') hh ':' mm

hh	a two-digit numeral (with leading zeros as required) that represents the hours
mm	a two-digit numeral that represents the minutes
'+'	a nonnegative duration
'-'	a nonpositive duration

State National

**eSituation.02 - Possible Injury**

**Definition**

Indication whether or not there was an injury

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element	E09_04	Is Nillable	Yes
Usage	Required	Recurrence	1 : 1

**Associated Performance Measure Initiatives**

Airway    Cardiac Arrest    Pediatric    Response    STEMI    Stroke    Trauma

**Attributes**

**NOT Values (NV)**

7701001 - Not Applicable                      7701003 - Not Recorded

**Code List**

Code	Description
9922001	No
9922003	Unknown
9922005	Yes

**Data Element Comment**

This data element provides documentation to classify the EMS Reason for Encounter as either injury or non-injury related based on mechanism and not on actual injury. eSituation.02 (Possible Injury), eSituation.09 (Primary Symptom), eSituation.07 (Chief Complaint Anatomic Location), and eSituation.08 (Chief Complaint Organ System) are grouped together to form the EMS Reason for Encounter.

## eInjury.03 - Trauma Center Criteria

## Definition

Field Triage Criteria for transport to a trauma center as defined by the Centers for Disease Control and Prevention and the American College of Surgeons-Committee on Trauma.

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
AZ-PIERS Usage	Required	Recurrence	1 : M

## Associated Performance Measure Initiatives

Trauma

## Attributes

**NOT Values (NV)**

7701001 - Not Applicable

7701003 - Not Recorded

**CorrelationID**

**Data Type:** string

**minLength:** 0

**maxLength:** 255

## Code List

Code	Description
2903001	Amputation proximal to wrist or ankle
2903003	Crushed, degloved, mangled, or pulseless extremity
2903005	Chest wall instability or deformity (e.g., flail chest)
2903007	Glasgow Coma Score < 14
2903009	Open or depressed skull fracture
2903011	Paralysis
2903013	Pelvic fractures
2903015	All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee
2903017	Respiratory Rate < 10 or >29 breaths per minute ( < 20 in infants aged <1 year) or need for ventilatory support
2903019	Systolic Blood Pressure < 90 mmHg
2903021	Two or more proximal long-bone fractures

## Data Element Comment

2011 Guidelines for the Field Triage of Injured Patients - value choices for Steps 1 and 2. For falls, one story is equal to 10 feet.

## Version 3 Changes Implemented

Added to better evaluate the CDC-ACS 2011 Guidelines for the Field Triage of Injured Patients.

Website: <http://www.cdc.gov/FieldTriage/>

## eInjury.04 - Vehicular, Pedestrian, or Other Injury Risk Factor

## Definition

Field Triage Criteria for transport to a trauma center as defined by the Centers for Disease Control and Prevention and the American College of Surgeons-Committee on Trauma.

National Element	Yes	Pertinent Negatives (PN)	Yes
State Element	Yes	NOT Values	Yes
Version 2 Element	E10_04	Is Nillable	Yes
AZ-PIERS Usage	Required	Recurrence	1 : M

## Associated Performance Measure Initiatives

Trauma

## Attributes

**NOT Values (NV)**

7701001 - Not Applicable                      7701003 - Not Recorded

**Pertinent Negatives (PN)**

8801005 - Exam Finding Not Present

**CorrelationID**

**Data Type:** string                      **minLength:** 0                      **maxLength:** 255

## Code List

Code	Description
2904001	Auto v. Pedestrian/Bicyclist Thrown, Run Over, or > 20 MPH Impact
2904003	Fall Adults: > 20 ft. (one story is equal to 10 ft.)
2904005	Fall Children: > 10 ft. or 2-3 times the height of the child
2904007	Crash Death in Same Passenger Compartment
2904009	Crash Ejection (partial or complete) from vehicle
2904011	Crash Intrusion, including roof: > 12 in. occupant site; > 18 in. any site
2904013	Crash Vehicle Telemetry Data (AACN) Consistent with High Risk of Injury
2904015	Motorcycle Crash > 20 MPH
2904017	SBP < 110 for age > 65
2904019	Anticoagulants and Bleeding Disorders
2904021	Pregnancy > 20 weeks
2904023	EMS Provider Judgment
it2904.101	Burn, with trauma mechanism
it2904.100	Burn, without other trauma

## Data Element Comment

Assesses mechanism of injury and evidence of high-energy impact (Step 3) AND Assess special patient or system considerations (Step 4) based on CDC 2011 Guidelines for the Field Triage of Injured Patients Step 3 and 4. Website: <http://www.cdc.gov/FieldTriage/>.

## Version 3 Changes Implemented

Added to better evaluate the CDC-ACS 2011 Guidelines for the Field Triage of Injured Patients. Website: <http://www.cdc.gov/FieldTriage/>

## eDisposition.24 - Destination Team Pre-Arrival Alert or Activation

## Definition

Activation of the Destination Healthcare Facility Team prior to EMS arrival for acute ill or injured patient.

National Element	Yes	Pertinent Negatives (PN)	No
State Element	Yes	NOT Values	Yes
Version 2 Element		Is Nillable	Yes
AZ-PIERS Usage	Required	Recurrence	1 : 1

## Associated Performance Measure Initiatives

Cardiac Arrest    STEMI    Stroke    Trauma

## Attributes

**NOT Values (NV)**

7701001 - Not Applicable

7701003 - Not Recorded

## Code List

Code	Description
4224001	No
4224003	Yes-Adult Trauma
4224005	Yes-Cardiac Arrest
4224007	Yes-Obstetrics
4224009	Yes-Other
4224011	Yes-Pediatric Trauma
4224013	Yes-STEMI
4224015	Yes-Stroke
4224017	Yes-Trauma (General)

## Data Element Comment

## Version 3 Changes Implemented

Added to better document performance measure for acute time dependent illness and injury systems of care.

# Change Log: AZ-PIERS V3 → AZ-PIERS V3.1

**This log only details NEMESIS & Arizona Changes that represent data elements collected by AZ-PIERS version3 with the current NEMESIS 3.3.4 standard**

## Part I Change Log: Changes by Category/Group

### icd10MedSurge

**Pattern Change:** The ICD-10-CM “T” Codes were added to the allowed pattern.

Old Pattern: ([A-QSZ][0-9]{2})(\.[0-9A-Z]{1,3})?

New Pattern: ([A-QSTZ][0-9]{2})(\.[0-9A-Z]{1,3})?

**AZ-PIERS Elements Affected:** eHistory.08 – Medical/Surgical History

### StateCertificationLicensureLevels

Codes Added

**Code:** 9917025 **Description:** Nurse Practitioner

**Code:** 9917027 **Description:** Physician Assistant

**Code:** 9917029 **Description:** Licensed Practical Nurse (LPN)

**Code:** 9917031 **Description:** Registered Nurse

**Codes Definition Modified:**

**Code:** 9917005 **Old Description:** 2009 Emergency Medical Technician

**New Description:** 2009 Emergency Medical Technician (EMT)

**AZ-PIERS Elements Affected:**

dAgency.11 - Level of Service

dConfiguration.06 - EMS Certification Levels Permitted to Perform Each Procedure

dConfiguration.08 - EMS Certification Level Permitted to Administer Each Medication

### LicensureLevels

Codes Added

**Code:** 9911027 **Description:** Nurse Practitioner

**Code:** 9911029 **Description:** Physician Assistant

**Code:** 9911031 **Description:** Licensed Practical Nurse (LPN)

**Code:** 9911033 **Description:** Registered Nurse

**Codes Definition Modified:**

**Code:** 9911005 **Old Description:** 2009 Emergency Medical Technician

**New Description:** 2009 Emergency Medical Technician (EMT)

**AZ-PIERS Elements Affected:**

dConfiguration.02 - State Certification Licensure Levels

### MemberLevel

Codes Added

**Code:** 9925037 **Description:** Nurse Practitioner

**Code:** 9925039 **Description:** Physician Assistant

**Code:** 9925041 **Description:** LPN (licensed practical nurse)

**Code:** 9925043 **Description:** Registered Nurse

**AZ-PIERS Elements Affected:**

eCrew.02 - Crew Member Level

## CommonDataType

### Code Added

**Code:** 9902011 **Description:** Boolean

### AZ-PIERS Elements Affected:

eCustomConfiguration.03 (dCustomConfiguration.03)

## ProtocolsUsed

### Codes Added

**Code:** 9914167 **Description:** Exposure-Carbon Monoxide

**Code:** 9914169 **Description:** Cardiac Arrest-Do Not Resuscitate

**Code:** 9914171 **Description:** Cardiac Arrest-Special Resuscitation Orders

**Code:** 9914173 **Description:** Exposure-Smoke Inhalation

**Code:** 9914175 **Description:** General-Community Paramedicine / Mobile Integrated Healthcare

**Code:** 9914177 **Description:** General-Exception Protocol

**Code:** 9914179 **Description:** General-Extended Care Guidelines

**Code:** 9914181 **Description:** General-Interfacility Transfers

**Code:** 9914183 **Description:** General-Law Enforcement - Blood for Legal Purposes

**Code:** 9914185 **Description:** General-Law Enforcement - Assist with Law Enforcement Activity

**Code:** 9914187 **Description:** General-Neglect or Abuse Suspected

**Code:** 9914189 **Description:** General-Refusal of Care

**Code:** 9914191 **Description:** Injury-Mass/Multiple Casualties

**Code:** 9914193 **Description:** Injury-Thoracic

**Code:** 9914195 **Description:** Medical-Adrenal Insufficiency

**Code:** 9914197 **Description:** Medical-Apparent Life Threatening Event (ALTE)

**Code:** 9914199 **Description:** Medical-Tachycardia

### AZ-PIERS Elements Affected:

dConfiguration.05 - Protocols Permitted by the State

dConfiguration.10 - EMS Agency Protocols

## Part II Change Log: Changes by Element Name (alpha order)

### D Elements

#### **dAgency.05 – Agency Service Area States**

##### Comment Change

**Old:** Element added to document all of the states in which the EMS agency provides services. Each state listed is associated with the counties, census tracts, and ZIP codes within the EMS Agency Service Area for each state. GNIS Codes Website: [http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)

**New:** Each state is captured as a group where the EMS agency provides service. The group includes dAgency.05, dAgency.06, dAgency.07, and Agency.08.

Element added to document all of the states in which the EMS agency provides services. Each state listed is associated with the counties, census tracts, and ZIP codes within the EMS Agency Service Area for each state.

GNIS Codes Website: [http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)

## dAgency.25 – National Provider Identifier

### Definition Change

**Old:** The state assigned Fire Department ID Number for EMS Agency(ies) operating within a Fire Department.

**New:** The National Provider Identifier issued by CMS.

### New Comment

**New:** Only EMS Agencies billing for service will have an NPI number.

CMS (Centers for Medicare and Medicaid Services) NPI Registry lookup:

<https://npiregistry.cms.hhs.gov/NPPESRegistry/NPIRegistryHome.do>

## dConfiguration.02 – State Certification Licensure Levels

### Name change

**Old:** State Certification Licensure

**New:** State Certification/Licensure Levels

## dConfiguration.07 – EMS Agency Procedures

### Comment Change

**Old:** This is associated with the EMS Agency Number (dAgency.02) since each EMS Agency Number may have different capabilities. Each procedure is associated with the EMS professional certification levels permitted to perform the procedure. EMS Agencies may identify additional SNOMEDCT procedure codes based on medical direction and their own need. If an agency resides in a state with statewide approved procedures, they should be listed/implemented here. Code list is represented in SNOMEDCT: Reference the NEMESIS Suggested Lists at:

<http://nemsis.org/v3/resources.html> SNOMEDCT Website:

[http://www.nlm.nih.gov/research/umls/Snomed/snomed\\_main.html](http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html) Product: Product - UMLS

Metathesaurus. The EMS agency should submit "Not Applicable" and "Nil" to the state system for the demographic export. The state EMS system does not need to import this information into their database. It is the responsibility of the state to submit this element to the national EMS database (NEMESIS). Reference the Demographic Dataset Submission Guide for further details.

**New:** This is associated with the EMS Agency Number (dAgency.02) since each EMS Agency Number may have different capabilities. Each procedure is associated with the EMS professional certification levels permitted to perform the procedure. EMS Agencies may identify additional SNOMEDCT procedure codes based on medical direction and their own need. If an agency resides in a state with statewide approved procedures, they should be listed/implemented here. Code list is represented in SNOMEDCT: Reference the NEMESIS Suggested Lists at:

<http://nemsis.org/v3/resources.html> SNOMEDCT Website:

[http://www.nlm.nih.gov/research/umls/Snomed/snomed\\_main.html](http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html) Product: Product - UMLS

Metathesaurus

## dConfiguration.09 – EMS Agency Medications

### Comment Change

**Old:** The medication list is stored as the RxNorm (RXCU) Code. This is associated with the EMS Agency Number (dAgency.02) since each EMS Agency Number may have different capabilities.

The EMS agency should submit "Not Applicable" and "Nil" to the state system for the demographic export. The state EMS system does not need to import this information into their database. It is the responsibility of the state to submit this element to the national EMS database (NEMESIS). Reference the Demographic Dataset Submission Guide for further details.

List of medications based on RxNorm (RXCU) code. Reference the NEMESIS Suggested Lists at:

<http://nemsis.org/v3/resources.html> RxNorm Website - <http://uts.nlm.nih.gov>

Product - UMLS Metathesaurus Website

<http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html> Product - RxNorm Full Monthly Release

**New:** The medication list is stored as the RxNorm (RXCU) Code. This is associated with the EMS Agency Number (dAgency.02) since each EMS Agency Number may have different capabilities.

List of medications based on RxNorm (RXCU) code. Reference the NEMESIS Suggested Lists at:

[http://nemesis.org/v3/resources.html](http://nemis.org/v3/resources.html) RxNorm Website - <http://uts.nlm.nih.gov>

Product - UMLS Metathesaurus Website -

<http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html> Product - RxNorm Full Monthly Release

## dState.01 – State Required Element

### Comment Added

Added: This element was created to document elements required by the state. The TIMESTAMP attribute describes the active date of the element.

## E Elements

### eArrest.01 – Cardiac Arrest

#### Definition Change

**Old:** Indication of the presence of a cardiac arrest at any time.

**New:** Indication of the presence of a cardiac arrest at any time during this EMS event.

#### Comment Change

**Old:** This element is a component of the Utstein Cardiac Arrest Criteria.

**New:** This element is a component of the Utstein Cardiac Arrest Criteria. If the patient has a history of cardiac arrest do not document Cardiac Arrest (eArrest.01) with "Yes, Prior to EMS Arrival" or "Yes, After EMS Arrival" during this encounter.

### eArrest.12 – Any Return of Spontaneous Circulation

#### Comment Change

**Old:** This element is a component of the Utstein Cardiac Arrest Criteria as identified in the American Heart Association journal "Resuscitation" from 2004 entitled "Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports". <http://circ.ahajournals.org/cgi/content/full/110/21/3385>

This element needs to be documented when the patient has been in cardiac or respiratory arrest and transported to a healthcare facility to show the change in patient condition, if any. The cardiac rhythm list has been updated to be the same for eVitals.03 (Cardiac Rhythm Electrocardiography (ECG)). They are using the common type: CardiacRhythm. ST segment changes consistent (or not consistent) with STEMI criteria should be documented as Ischemia in the appropriate location

**New:** This element is a component of the Utstein Cardiac Arrest Criteria as identified in the American Heart Association journal "Resuscitation" from 2004 entitled "Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports". <http://circ.ahajournals.org/cgi/content/full/110/21/3385>

This element needs to be documented when the patient has been in cardiac arrest and transported to a healthcare facility to show the change in patient condition, if any. Any ROSC is defined as any brief (approximately >30 seconds) restoration of spontaneous circulation that provides evidence of more than an occasional gasp, occasional fleeting palpable pulse, or arterial waveform.

## eArrest.18 – End of EMS Cardiac Arrest Event

### Comment Change

**Old:** A resuscitation event is deemed to have ended when death is declared or spontaneous circulation is restored and sustained for 20 minutes or longer.

This element is a component of the Utstein Cardiac Arrest Criteria as identified in the American Heart Association journal "Resuscitation" from 2004 entitled "Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports". <http://circ.ahajournals.org/cgi/content/full/110/21/3385>

**New:** This element is a component of the Utstein Cardiac Arrest Criteria as identified in the American Heart Association journal "Resuscitation" from 2004 entitled "Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports". <http://circ.ahajournals.org/cgi/content/full/110/21/3385>

### Codes Added

**Code:** 3018007 **Description:** ROSC in the Field

**Code:** 3018009 **Description:** ROSC in the ED

**Code:** 3018011 **Description:** Ongoing Resuscitation by Other EMS

## eCustomResults.01 - Custom Data Element Result

### Definition Change

**Old:** The actual value or values chosen (if values listed in dCustomConfiguration.06) or result (free text, Date/Time, or number) documented for the Custom Data Element

**New:** The actual value or values chosen (if values listed in eCustomConfiguration.06) or result (free text, Date/Time, or number) documented for the Custom Data Element

## eDispatch.01 – Complaint Reported by Dispatch

### Code Added

**Code:** 2301083 **Description:** Airmedical Transport

### Comment Change

**Old:** Added Pandemic/Epidemic/Outbreak. Added Automated Crash Notification Added Healthcare Professional Admission Added Interfacility/Evaluation/Transfer - Other entries expanded based on current national EMD Dispatch List

**New:** Added Pandemic/Epidemic/Outbreak. Added Automated Crash Notification Added Healthcare Professional Admission Added Transfer/Interfacility/Palliative Care - Other entries expanded based on current national EMD Dispatch List

## eDisposition.12 - Incident/Patient Disposition

### Code Definition Updates

**Code:** 4212009

**Old Description:** No Patient Contact (Canceled on Scene)

**New Description:** Canceled on Scene (No Patient Contact)

**Code:** 4212011

**Old Description:** No Patient Found (Canceled on Scene)

**New Description:** Canceled on Scene (No Patient Found)

**Code:** 4212031

**Old Description:** Patient Treated, Transferred Care to Another EMS Professional

**New Description:** Patient Treated, Transferred Care to Another EMS Unit

**Code:** 4212033

**Old Description:** Patient Treated, Transported by EMS

**New Description:** Patient Treated, Transported by this EMS Unit

**Code:** 4212043 **Old Description:** Transport of Body Parts or Organs Only

**New Description:** Transport Non-Patient, Organs, etc.

## eDisposition.21 – Type of Destination

### Codes Added

**Code:** 4221021 **Description:** Urgent Care

**Code:** 4221023 **Description:** Freestanding Emergency Department

## eDisposition.24 – Destination Team Pre-Arrival Activation

### Element Name Change

**Old:** Destination Team Pre-Arrival Activation

**New:** Destination Team Pre-Arrival Alert or Activation

### Definition Change

**Old:** Activation by EMS of the appropriate destination healthcare facility team. The activation should occur prior to the EMS Unit arrival at the destination with the patient.

**New:** Indication that an alert (or activation) was called by EMS to the appropriate destination healthcare facility team. The alert (or activation) should occur prior to the EMS Unit arrival at the destination with the patient.

### Code Added

**Code:** 4224017 **Description:** Yes - Trauma (General)

## eDisposition.25 – Date/Time of Destination Prearrival Activation

### Element Name Change

**Old:** Date/Time of Destination Prearrival Activation

**New:** Date/Time of Destination Prearrival Alert or Activation

### Definition Change

**Old:** Date/Time EMS Notified/Activated the Destination Healthcare Facility Team prior to EMS arrival for acute ill or injured patient.

**New:** The Date/Time EMS alerted, notified, or activated the Destination Healthcare Facility prior to EMS arrival. The EMS assessment identified the patient as acutely ill or injured based on exam and possibly specified alert criteria.

## eInjury.04 - Vehicular, Pedestrian, or Other Injury Risk Factor

### Definition Change

**Old:** The kind of risk factor predictors present at the incident

**New:** Field Triage Criteria for transport to a trauma center as defined by the Centers for Disease Control and Prevention and the American College of Surgeons-Committee on Trauma.

### Comment Change

**Old:** Added additional mechanism or risk indicators based on CDC 2011 Guidelines for the Field Triage of Injured Patients Step 3.

**New:** Assesses mechanism of injury and evidence of high-energy impact (Step 3) AND Assess special patient or system considerations (Step 4) based on CDC 2011 Guidelines for the Field Triage of Injured Patients Step 3 and 4. Website: <http://www.cdc.gov/FieldTriage/>.

### Codes Added

**Code:** 2904017 **Description:** SBP < 110 for age > 65

**Code:** 2904019 **Description:** Anticoagulants and Bleeding Disorders

**Code:** 2904021 **Description:** Pregnancy > 20 weeks

**Code:** 2904023 **Description:** EMS Provider Judgment

## Changes exclusive to AZ-PIERS 1,2

**Code:** it2904.101 Burn, with trauma mechanism

**Code:** it2904.100 Burn, without other trauma

### ePatient.05 – Patient's Home Address

#### Definition Change

**Old:** The patient's home mailing or street address

**New:** Patient's address of residence

### ePatient.06 – Patient's Home City

#### Definition Change

**Old:** The patient's home city or township or residence

**New:** The patient's primary city or township of residence.

#### Comment Change

**Old:** Based on GNIS Civil Code or Populated Place code.

GNIS Codes Website: [http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)

**New:** City codes are based on GNIS Feature Class. The primary Feature Class to use is "Civil" with "Populated Place"" and "Military" code as additional options.

Definitions for each GNIS City Feature Class can be found on the GNIS Codes website.

GNIS Codes Website: [http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)

### ePatient.07 – Patient's Home County

#### Definition Change

**Old:** The patient's home county or parish or residence

**New:** The patient's home county or parish of residence.

### ePatient.08 – Patient's Home State

#### Definition Change

**Old:** The patient's home state, territory, or province, or District of Columbia, where the patient resides.

**New:** The state, territory, or province where the patient resides.

### ePatient.09 – Patient's Home ZIP Code

#### Definition Change

**Old:** The patient's home ZIP code of residence

**New:** The patient's ZIP code of residence.

### ePatient.10 – Patient's Home Country

#### Definition Change

**Old:** The country in which the patient lives.

**New:** The country of residence of the patient.

### ePayment.01 – Primary Method of Payment

#### New Codes

**Code:** 2601015 **Description:** Payment by Facility

**Code:** 2601017 **Description:** Contracted Payment

**Code:** 2601019 **Description:** Community Network

**Code:** 2601021 **Description:** No Insurance Identified

**Code:** 2601023 **Description:** Other Payment Option

## eResponse.07 – Primary Role of the Unit

### New Codes

**Code:** 2207011 **Description:** Air Transport-Helicopter

**Code:** 2207013 **Description:** Air Transport-Fixed Wing

## eResponse.09 – Type of Response Delay

### New Code

**Code:** 2209031 **Description:** Mechanical Issue-Unit, Equipment, etc

**Code:** 2209033 **Description:** Flight Planning

## eResponse.10 – Type of Scene Delay

### New Code

**Code:** 2210039 **Description:** Mechanical Issue-Unit, Equipment, etc

## eResponse.11 – Type of Transport Delay

### New Code

**Code:** 2211031 **Description:** Patient Condition Change (e.g. Unit Stopped)

## eResponse.12 – Type of Turn-Around Delay

### New Code

**Code:** 2212033 **Description:** EMS Crew Accompanies Patient for Facility Procedure

## eScene.17 – Incident City

### Comment Change

**Old:** Based on GNIS Civil Code or Populated Place code.

GNIS Codes Website: [http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)

**New:** City codes are based on GNIS Feature Class. The primary Feature Class to use is "Civil" with "Populated Place" and "Military" code as additional options.

Definitions for each GNIS City Feature Class can be found on the GNIS Codes website.

GNIS Codes Website: [http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)

## eState.01 – State Required Element

### Comment Added

**Added:** This element was created to document elements required by the state. The TIMESTAMP attribute describes the active date of the element.

## eVitals.04 – ECG Type

**Code:** 3304015

**Old Description:** Other (Not Listed)

**New Description:** Other (AED, Not Listed)

## eVitals.16 – Carbon Dioxide (CO2)

### Definition Change

**Old:** The patient's end-tidal or other CO2 level.

**New:** The numeric value of the patient's end-tidal CO2 level.

### New Comment

**New:** Generally the numeric CO2 level is measured in millimeters of mercury (mmHg). End-tidal is the same as exhaled.

## **eVitals.GlasgowScoreGroup**

### Documentation Tag Change

**Old:** Group Tag to hold the details of patient's glasgow score.

**New:** Group Tag to hold the details of patient's glasgow coma scale.

## **eVitals.27 –Pain Scale**

### Name Change

**Old:** Pain Scale

**New:** Pain Scale Score

## **eVitals.29 –Stroke Scale Score**

### Definition Change

**Old:** The patient's Stroke Scale Results.

**New:** The findings or results of the Stroke Scale Type (eVitals.30) used to assess the patient exhibiting stroke-like symptoms.

## **eVitals.30 – Stroke Scale Type**

### Code Added

**Code:** 3330013 **Description:** F.A.S.T. Exam

## **eVitals.30 – Stroke Scale Type**

### Spelling Fix

Definition: The type of stroke pain scale used Changed to: Definition: The type of stroke scale used

# **Part III Change Log: Deprecated Codes by Element (alpha order)**

## **dAgency.11 - Level of Service**

**Code:** 9917017 **Description:** Nurse

## **dConfiguration.02 - State Certification/Licensure Levels**

**Code:** 9911017 **Description:** Nurse

## **dConfiguration.05 - Protocols Permitted by the State**

**Code:** 9914039 **Description:** Exposure-Carbon Monoxide/Smoke Inhalation

## **dConfiguration.06 - EMS Certification Levels Permitted to Perform Each Procedure**

**Code:** 9917017 **Description:** Nurse

## **dConfiguration.08 - EMS Certification Levels Permitted to Administer Each Medication**

**Code:** 9917017 **Description:** Nurse

## **dConfiguration.10 - EMS Agency Protocols**

**Code:** 9914039 **Description:** Exposure-Carbon Monoxide/Smoke Inhalation

## **eResponse.07 - Primary Role of the Unit**

**Code:** 2207001 **Description:** Air Transport

## **eCrew.02 - Crew Member Level**

**Code:** 9925021 **Description:** Nurse

## **eArrest.11 - First Monitored Arrest Rhythm of the Patient**

**Code:** 3011003 **Description:** Bradycardia

## **eProtocols.01 - Protocols Used**

**Code:** 9914039 **Description:** Exposure-Carbon Monoxide/Smoke Inhalation

## **eMedications.08 - Medication Complication**

**Code:** 3708027 **Description:** Itching/Urticaria

## **eVitals.30 - Stroke Scale Type**

Spelling Fix

**Code:** 3330011 **Description:** Other Stroke Scale Type

## **Foot Notes**

1 (the NEMSIS code 2904027 will later replace the above code for Burn, with trauma mechanism but is not required nationally until Jan. 1, 2016)

2 (the NEMSIS code 2904025 will later replace the above code for Burn, without other trauma but is not required nationally until Jan. 1, 2016)



**AZ PIERS  
Registry Users Group  
(EMSRUG)**



**Agenda**

**Monday April 27, 2015 – 10:00 a.m. – 12:00 p.m.**

**Arizona Dept. of Health Services**

**150 North 18th Avenue Phoenix AZ 85007**

**5th Floor – 540A Conference Room**

**AZ PIERS Contacts:**

**Anne Vossbrink 602-364-3164 or [Anne.Vossbrink@azdhs.gov](mailto:Anne.Vossbrink@azdhs.gov)  
Rogelio Martinez 602-542-2246 or [Rogelio.Martinez@azdhs.gov](mailto:Rogelio.Martinez@azdhs.gov)**

A) Welcome & Introductions

B) AZ-PIERS Version 2 & Version 3 Timeline Update

1) Updated NEMESIS V2 closing, and V3 3.3.4 to 3.4 transition

Defined: Major v. Minor Revisions

- A major release would be any change to the underlying XML structure and breaks backward compatibility.
- A minor release would be any change that does not change the underlying XML structure and does not break backward compatibility.

National NEMESIS Timelines/Deadlines

- Version 3.3.4 will not close on 12/31/2015 and will now be maintained until 12/31/2017
- Version 3.4 will still be available to move to and will become required effective 1/1/2018.
- Major revisions will occur on a four year cycle (next major change could be 2019).
- It is recommended that NEMESIS continue to collect version 2 from states until 12/31/2016.

2) AZ-PIERS V2 closing/ updating recommendations, comments

- a) A revised closing date was discussed. Proposal to move AZ-PIERS V2 closing out past the current Oct. 2015 date. EMSRUG agreed to move the AZ-PIERS V2 closing out to April 2016. This new closing date will allow for flexibility and additional time for agencies to transition to V3. The primary reason for shifting this deadline is that agencies switching vendors by the end of 2016 will need to build this cost into their new fiscal year, which would start July 1, 2016. To do this, agencies would normally need to anticipate this need by no later than April 2016 in order to build the cost into their budgets.

3) AZ-PIERS V3 update

- a) How will AZ-PIERS work with the national standardized lists NEMESIS requires to be used in Version 3?

Values active in AZ-PIERS v3 are drawn from large standardized national lists. Given the size of these lists, a limited number of these values are active, while the rest are available but remain inactive. How it affects end users:

- Agencies using the AZ-PIERS directly can use only active values. **If a value is needed but is missing, the agency should notify Anne Vossbrink and request it be activated/added.**
- Agencies sending ePCRs from a stand-alone system or 3<sup>rd</sup> party vendor may send any valid value from the national list, whether or not it is active or inactive in AZ-PIERS.
  - o If the code sent is not valid, has no fall back code, or is not mapped to a valid code, the value will not come through. **The record or the entire file may be rejected from the AZ-PIERS system.**

b) V3 Protocols needed

- Please see the current list of ALL POSSIBLE PROTOCOL codes in AZ-PIERS V3. If your agency uses any protocols that are not on this list, please email Anne Vossbrink with what should be added. Otherwise, the code/protocol will either not be available to select, not import into AZ-PIERS, or will cause the ePCR to be rejected.

Code	Value
it9914.017	Abdominal Injuries (Penetrating)
9914001	Airway
9914003	Airway-Failed
9914005	Airway-Obstruction/Foreign Body
9914007	Airway-Rapid Sequence Induction (RSI-Paralytic)
9914009	Airway-Sedation Assisted (Non-Paralytic)
it9914.004	Automatic External Defibrillator (AED)
9914011	Cardiac Arrest-Asystole
9914169	Cardiac Arrest-Do Not Resuscitate
9914013	Cardiac Arrest-Hypothermia-Therapeutic
9914019	Cardiac Arrest-Post Resuscitation Care
9914015	Cardiac Arrest-Pulseless Electrical Activity
9914171	Cardiac Arrest-Special Resuscitation Orders
9914017	Cardiac Arrest-Ventricular Fibrillation/ Pulseless Ventricular Tachycardia
it9914.005	Cardiogenic Shock
it9914.016	Chemical Burns
9914021	Environmental-Altitude Sickness
9914023	Environmental-Cold Exposure
9914025	Environmental-Frostbite/Cold Injury
9914027	Environmental-Heat Exposure/Exhaustion
9914029	Environmental-Heat Stroke/Hyperthermia
9914031	Environmental-Hypothermia
9914033	Exposure-Airway/Inhalation Irritants
9914035	Exposure-Biological/Infectious
9914037	Exposure-Blistering Agents
9914167	Exposure-Carbon Monoxide
9914039	Exposure-Carbon Monoxide/Smoke Inhalation
9914041	Exposure-Chemicals to Eye
9914043	Exposure-Cyanide

9914045	Exposure-Explosive/ Blast Injury
it9914.009	Exposure-Hazardous Material Exposure
9914047	Exposure-Nerve Agents
9914049	Exposure-Radiologic Agents
9914173	Exposure-Smoke Inhalation
it9914.015	General Bariatric Patient Management
it9914.003	General-Air Medical Transport
9914051	General-Back Pain
it9914.002	General-Behavioral/Combative Patient
9914053	General-Behavioral/Patient Restraint
9914055	General-Cardiac Arrest
9914175	General-Community Paramedicine / Mobile Integrated Healthcare
9914057	General-Dental Problems
9914059	General-Epistaxis
9914177	General-Exception Protocol
9914179	General-Extended Care Guidelines
9914061	General-Fever
9914063	General-Individualized Patient Protocol
9914065	General-Indwelling Medical Devices/Equipment
9914181	General-Interfacility Transfers
9914067	General-IV Access
9914185	General-Law Enforcement - Assist with Law Enforcement Activity
9914183	General-Law Enforcement - Blood for Legal Purposes
9914069	General-Medical Device Malfunction
9914187	General-Neglect or Abuse Suspected
it9914.012	General-Non EMS Medical Personnel On-Scene
9914071	General-Pain Control
9914189	General-Refusal of Care
9914073	General-Spinal Immobilization/Clearance
9914075	General-Universal Patient Care/ Initial Patient Contact
it9914.006	Hypothermia (Severe - with No Signs of Life)
9914077	Injury-Amputation
9914079	Injury-Bites and Envenomations-Land
9914081	Injury-Bites and Envenomations-Marine
9914083	Injury-Bleeding/ Hemorrhage Control
9914085	Injury-Burns-Thermal
9914087	Injury-Cardiac Arrest
9914089	Injury-Crush Syndrome
9914091	Injury-Diving Emergencies
9914093	Injury-Drowning/Near Drowning
9914095	Injury-Electrical Injuries
9914097	Injury-Extremity
9914099	Injury-Eye
9914101	Injury-Head

it9914.014	Injury-Hypovolemic Shock (Traumatic Shock)
9914103	Injury-Impaled Object
9914191	Injury-Mass/Multiple Casualties
9914105	Injury-Multisystem
it9914.001	Injury-Sexual Assault
9914107	Injury-Spinal Cord
9914193	Injury-Thoracic
9914109	Medical-Abdominal Pain
9914195	Medical-Adrenal Insufficiency
9914111	Medical-Allergic Reaction/Anaphylaxis
9914113	Medical-Altered Mental Status
9914197	Medical-Apparent Life Threatening Event (ALTE)
9914115	Medical-Bradycardia
9914117	Medical-Cardiac Chest Pain
9914119	Medical-Diarrhea
9914121	Medical-Hyperglycemia
9914123	Medical-Hypertension
9914125	Medical-Hypoglycemia/Diabetic Emergency
9914127	Medical-Hypotension/Shock (Non-Trauma)
9914129	Medical-Influenza-Like Illness/ Upper Respiratory Infection
it9914.010	Medical-Left Ventricular Assist Device Management
9914131	Medical-Nausea/Vomiting
it9914.011	Medical-Newborn Care
it9914.013	Medical-Septic Shock or Spesis
it9914.007	Minimum Landing Zone Area
it9914.008	Respiratory Arrest
it9914.018	Spinal Motion Restriction

C) V3 Validation Rules & Comparisons Draft - & State Schematron

- 1) List of V3 Validation Rules & Validation Rule Comparisons: Validation Rules have been completed. Please email Anne Vossbrink with any questions or issues with the validation rules function or an issue. See #3 below to view V3 rules.
- 2) State Schematron status: The AZ-PIERS State Schematron is up and running. At this time, all State Schematron levels (with the exception of the requirement of a Disposition) are set to 'Warning'. This level will allow vendors and agencies submitting V3 data files to AZ-PIERS to receive warnings on State Schematron errors but will still allow the data to import with the errors. The State Schematron rule level will be upgraded to 'error' or 'fatal' once an initial period has passed, to allow for agency and vendor adjustments. Estimated date is Dec. 2015.
- 3) A separate 'view' only account will be set up for vendors to allow them to see all the validation rules, comparisons, and active data values. Agencies may also use this account to view the Validation Rules.
  - Username: AZView Password: View3

#### D) Hospital Name Changes

For a complete list of destination codes in AZ-PIERS log into:

AZ-PIERS V2: Data Exchange → NHTSA/NISE 2.2.1 XML Data Exchange → Getting Started  
→ Destination (E20.2) Code List

Or

AZ-PIERS V3: Community → Library → select ‘Facilities’ under Find Books and click Search  
→ Select “AZ-PIERS V3 Facilities”

#### Existing Hospitals with name changes (MED Code did not change)

Name	Code	Address	City	County	State	Postal Code
Abrazo Arizona Heart Hospital	MED1442	1930 E. Thomas Rd.	Phoenix	Maricopa	AZ	85016
Abrazo Arrowhead Campus (was Arrowhead Hospital)	MED0209	18701 N. 67th Ave.	Glendale	Maricopa	AZ	85308
Abrazo Central Campus (was Phoenix Baptist Hospital)	MED0228	2000 W. Bethany Home Rd.	Phoenix	Maricopa	AZ	85015
Abrazo Maryvale Campus (was Maryvale Hospital)	MED0224	5102 W. Campbell Ave.	Phoenix	Maricopa	AZ	85031
Abrazo Scottsdale Campus (was Paradise Valley Hospital)	MED2149	3929 E. Bell Rd.	Phoenix	Maricopa	AZ	85032
Abrazo West Campus (was West Valley Hospital)	MED2640	13677 W. McDowell Rd.	Goodyear	Maricopa	AZ	85338
Banner - University Medical Center Phoenix Campus (was Good Sam)	MED0219	1111 E. McDowell Rd.	Phoenix	Maricopa	AZ	85006
Banner - University Medical Center South Campus	MED2863	2800 E. Ajo Way	Tucson	Pima	AZ	85713
Banner - University Medical Center Tucson Campus	MED0257	1501 N. Campbell Ave.	Tucson	Pima	AZ	85724
Greenbaum Specialty Surgical Hospital	MED2568	3535 N. Scottsdale Rd.	Scottsdale	Maricopa	AZ	85251
HonorHealth Deer Valley Medical Center (was JCL Deer Valley)	MED0230	19829 N. 27th Ave.	Phoenix	Maricopa	AZ	85027
HonorHealth John C. Lincoln Medical Center (was JCL North Mountain)	MED0222	250 E. Dunlap Ave.	Phoenix	Maricopa	AZ	85020
HonorHealth Scottsdale Osborn Medical Center	MED0235	7400 E. Osborn Rd.	Scottsdale	Maricopa	AZ	85251
HonorHealth Scottsdale Shea Medical Center	MED0236	9003 E. Shea Blvd.	Scottsdale	Maricopa	AZ	85260

HonorHealth Scottsdale Thompson Peak Medical Center	MED3513	7400 E. Thompson Peak Pkwy.	Scottsdale	Maricopa	AZ	85255
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### New Hospitals with new MED Codes

Name	Code	Address	City	County	State	Postal Code
Dignity Health Arizona General Hospital (Laveen)	MED5829	7171 South 51st Avenue	Laveen	Maricopa	AZ	85339
Dignity Health Arizona General Hospital Emergency (Chandler)	MED6089	2977 E. Germann Rd.	CHANDLER	MARICOPA	AZ	85286
Green Valley Hospital	MED6142	4455 S. I-19 Frontage Rd.	GREEN VALLEY	PIMA	AZ	85614
Phoenix Children's Hospital - Gilbert	MED5828	3555 South Val Vista Drive	Gilbert	Maricopa	AZ	85297
Quail Run Behavioral Health	MED5753	2545 W. Quail Ave.	PHOENIX	MARICOPA	AZ	85027
TMC - Geropsychiatric Center at Handmaker	MED5972	2221 N. Rosemont Blvd., Bldg 3, Suite 200	Tucson	Pima	AZ	85712

### Hospital with new name and new address but same MED Code

Name	Code	Address	City	County	State	Postal Code
Canyon Vista Medical Center	MED0198	5700 E Highway 90	Sierra Vista	Cochise	AZ	85635

Canyon Vista Medical Center is a new name and address but uses the same MED Code as what had been the now closed Sierra Vista Regional Medical Center

### E) Discussion of Premier EMS Agency Program requirements – Jim Bratcher

#### Premier EMS Agency Program (Rogelio)

- EMS Agencies discussed the various levels of the Premier EMS Agency Program. Currently, to achieve participating status, agencies need to meet three of the five requirements, whereas to achieve the premier level agencies need to attain all five requirements for recognition.
- Discussion followed regarding the most difficult step in attaining premier level: data submission. An idea was discussed of using Participating status as a stepping stone to Premier status, with a limited time to reach premier status.
- Also discussed potentially updating the guidelines to include a Provisional premier level and potentially remove Participating status.
- Provisional premier agencies will have a timeline of 6 months to submit data.
- Proposed PEAP policy changes will be distributed on list serve for further feedback.

F) Hospital Hub

<https://azemsis.azdhs.gov/azhub/default.cfm>

- Overview of new Hospital Hub was given in a Demo Destination hospital. Hospitals can remain on Hospital Dashboard or move to Hospital Hub. Eventually all hospitals will need to move to hospital hub as agencies move to the new national Version 3 data standard (AZ-PIERS V3 for Arizona).

Hospital Dashboard allows for viewing of Version 2 format ePCRs only

Hospital Hub allows for viewing of Version 2 and Version 3 format ePCRs

For access, please contact [Anne.Vossbrink@azdhs.gov](mailto:Anne.Vossbrink@azdhs.gov)

G) Version 3 Data Element & Value Usage

- 1) dConfiguration.01-.05 – we will not be importing these values into a state site (per NEMESIS' recommendation). This means each agency can send in whatever they choose because the import into our site will essentially ignore them. When we export to NEMESIS, these values will be configured in our Elite site and will be the same for all agencies.
- 2) Differences between eRecord.01, eResponse.03, eResponse.04, eResponse.13, eResponse.14
  - a) These definitions for and usage of these elements have fallen into the category of frequently asked questions for AZ-PIERS V3 and as more agencies start planning their transition and set up, their proper use will likely come up often. Karen Jacobsen at NEMESIS sent some definitions and examples which are summed up below.

Difference and usage of elements:

1. eRecord.01 - Patient Care Report Number
  2. eResponse.03 - Incident Number
  3. eResponse.04 - EMS Response Number
  4. eResponse.13 - EMS Vehicle (Unit) Number
  5. eResponse.14 - EMS Unit Call Sign
- The EMS Response Number (eResponse.04) is assigned to the unit responding to an incident/event/call. Within ImageTrend it has historically been referred to as the Call Number (V2).
  - The EMS Vehicle (Unit) Number (eResponse.13) is how each particular physical unit is identified. This could be Ambulance 1, Medic 4, Unit 3, Engine 11, Rescue 7, 220, 220, 307, 308, 309, etc.
    - An EMT could work out of multiple ambulances in one shift - ex: 3 ambulances in a 12 hour shift. The EMT's call sign remained the same but the physical vehicle number identifier changed.
  - The EMS Unit Call Sign (eResponse.14) is how dispatch refers to the unit being dispatched. This could be the same as the EMS Vehicle (Unit) Number (eResponse.13).

- It depends on the size of the EMS agency. Smaller EMS agencies frequently use the same identifier for EMS Vehicle (Unit) Number (eResponse.13) as for EMS Unit Call Sign (eResponse.14).
- The EMS Unit Call Sign may also identify the capabilities of the Unit Crew. For example, an ambulance service used the leading number “2...or 200 numbers” to refer to an ALS unit. 500 numbers referred to a BLS unit.
- Some numbering conventions determine time of day the crew is working. There are many various scenarios and implementations across this nation.

#### A Senario

My crew number...or call sign is 223. The EMS Vehicle (Unit) Number (eResponse.13) I'm working in is called 220 (with a vin of 01c09nfd3q4).

I am dispatched to a nursing home with food poisoning... I will have:

- 1) An Incident Number (eResponse.03)
  - a. An identifier for the 'incident'. There may be more than one ambulance dispatched to the event and more than one patient.
  - b. For the same EMS agency the Incident Number should be the same for every EMS Unit dispatched to the incident.
- 2) An EMS Response Number (eResponse.04)
  - a. To differentiate between my unit and other EMS units each unit should have its own Response Number
- 3) EMS Vehicle (Unit) Number (eResponse.13): 220
  - a. The physical identifier of the physical ambulance.
- 4) EMS Unit Call Sign (eResponse.14) : 223
  - a. The radio number for the crew or the EMS agency.
- 5) Patient Care Report Number (eRecord.01): For each patient a unique PCR # will be created

H) 2015 meeting scheduler – 150 N. 18<sup>th</sup> Ave. Suite 540, Phoenix, AZ 85007

Call in and iLinc join information will be sent out prior to each EMSRUG in the agenda

July 20<sup>th</sup> 10:00am – 12:00pm

Oct. 26<sup>th</sup> 10:00am – 12:00pm

I) Announcements

- Ceret Clark from EPIC TBI Project at UofA Emergency Medicine Department will be requesting access to records and will require approval by each agency – just email Anne Vossbrink to add the rights.

J) Questions/Requests

K) Topics of Future Discussion as proposed by group

L) Open floor



**AZ PIERS  
Registry Users Group  
(EMSRUG)**



**Minutes**

**Monday July 20<sup>th</sup>, 2015 – 10:00 a.m. – 12:00 p.m.**

**Arizona Dept. of Health Services**

**150 North 18th Avenue Phoenix AZ 85007**

**5th Floor – 540A Conference Room**

**AZ PIERS Contacts:**

**Anne Vossbrink 602-364-3164 or [Anne.Vossbrink@azdhs.gov](mailto:Anne.Vossbrink@azdhs.gov)  
Rogelio Martinez 602-542-2246 or [Rogelio.Martinez@azdhs.gov](mailto:Rogelio.Martinez@azdhs.gov)**

A) Welcome & Introductions

B) Data Quality

1) New Trauma & EMS Performance Improvement (TEPI) workgroup regarding AZ-PIERS data quality

a) The goals of the workgroup are to increase the number of records that are accepted by AZ-PIERS, identify which agencies are providing ePCR data, and improve the frequency and timing of hospital receipt of e-PCR data. At the conclusion of the workgroup, AZ-PIERS will have established EMS data submission completeness and timeliness guidelines for all ePCRs, EMS data quality guidelines in AZ-PIERS, and corrective steps for agencies not meeting the guidelines.

2) Total record submission: how can we confirm/compare agency totals to AZ-PIERS totals?

a) The issue occurs when not all records are submitted but there is no check for this in AZ-PIERS. Problems arise when hospitals look for records, and also when agency and statewide reports are run, as data does not reflect actual averages.

- Discussion occurred but no solution was formed. The only plan is to continue to send out the weekly record submission count by month and expect the recipient agencies to note if any monthly record counts are below the actual count.

C) AZ-PIERS for Public Information

1) Development of a Public Dataset – Rogelio

a) The proposal of a public dataset was presented. Questions were asked as to what it would contain, and whether or not it was acceptable. Also, a question was asked as to what other states have public datasets and what they contain.

- The public dataset variables list is listed at:

<http://www.azdhs.gov/documents/preparedness/emergency-medical-services-trauma-system/data/users/az-piers-data%20element-list-for-public.pdf>

Comments and suggestions are welcome and can be sent to [Rogelio.Martinez@azdhs.gov](mailto:Rogelio.Martinez@azdhs.gov)

- The dataset has been stripped off all identifiers of patient, organization, and provider per the Health Insurance Portability Accountability Act (HIPAA). The dataset resembles datasets found in other states and NEMSIS.

- 2) AZ-PIERS aggregate incident map planned for the Community Profiles Dashboard
  - a) An example of what it looks like (not AZ-PIERS data) is at:  
<http://www.azdhs.gov/phs/phstats/profiles/>
    - Any map would represent data at the level where the smallest unit that could be viewed would be the PCA level (UPDATE: smallest unit will be the EMS regional level as PCAs may be bias due to a limited data set). Maps are planning to be presented at TEPI, EMS regions, and statutory committees.
    - At this time, the project is on hold.
  
- D) Update on the Premier EMS Agency Program suggested changes – Rogelio
  - 1) An updated PEAP program was discussed. As much of the data quality piece of the PEAP qualifications falls under the newly created Data Quality workgroup under the TEPI committee, the updates to PEAP will be on hold and instead directed under the Data Quality workgroup and TEPI. Please contact Rogelio Martinez at [Rogelio.Martinez@azdhs.gov](mailto:Rogelio.Martinez@azdhs.gov) if you are interested in attending Data Quality committee meetings, for more information.  
Update: The Data Quality and Completeness workgroup will meet on October 2, 2015 at 10:00 am at ADHS 4<sup>th</sup> floor. In person and remote attendance opportunities are available.
  
- E) Call for the agency perspective on V3 transition issues
  - Advice for other states about transitioning to V3? – What would you want them to know as far as best practices with agency transition (some states are not voluntary data submission).
    - Agencies felt that it was valuable to be involved in the development of the AZ-PIERS V3 data dictionary as a collaborative statewide group. This allowed buy-in and consensus.
  
- F) Upcoming AZ-PIERS reports
  - 1) Development of the first EMS Annual Report
    - a) An Annual EMS Report is currently in development. No specific content or format has yet been determined.
  - 2) New PI Benchmark report
    - a) The next PI Benchmark report will cover stroke. It will be based off confirmed stroke diagnosis by linkage to 2014 Hospital Discharge Database diagnosis, making the focus under-triage. .
  
- G) Data Security
  - 1) Discussion on maintaining access to Hospital Dashboard/Hospital Hub
    - a) Currently we require hospital to send in a letter confirming their agreement that they must maintain current users and notify us or inactivate users who should no longer have access
    - b) This measure was put in place to reduce the likelihood of outdated access to the system.

- c) We would like to request that agencies who become aware of a change in staff at a hospital also let the AZ-PIERS Data Manager know.

H) Version 3 Data Element & Value Usage

- 1) Discussion of documentation in the Version 3 fields that pull from standardized lists. As text is not an acceptable format, how can agencies document and transmit information regarding values not listed. Ex: patient has a current medication that is not on the list.
- 2) Image Trend has comment fields available for each standardized list, where these types of values can be listed and tracked. A guide as to how to add these to agency run forms and to the PDF you agency has for your hospital's view of information was presented. Agencies using other vendors need to work with those vendors to make sure the values can be recorded and transmitted. The importance being that without transmission, the hospitals would not see the information on their PDF.

I) Announcements

- 1) Next EMSURG meeting will be Monday, October 26<sup>th</sup> 2015, 10:00 -12:00  
150 N. 18<sup>th</sup> Ave. Suite 540A, Phoenix, AZ 85007

J) Questions/Requests

- 1) Vendor request to attend/call into EMSRUG meetings
  - Vendors have requested to attend/call into EMSRUG meeting. EMSRUG discussed and approved this request. Vendors will be invited to the next EMSRUG meeting.

K) Topics of Future Discussion as proposed by group

L) Open floor



**AZ PIERS  
Registry Users Group  
(EMSRUG)**



**Minutes**

**Monday Oct 26<sup>th</sup>, 2015 – 10:00 a.m. – 12:00 p.m.**

**Arizona Dept. of Health Services**

**150 North 18th Avenue Phoenix AZ 85007**

**5th Floor – 540A Conference Room**

**AZ PIERS Contacts:**

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Rogelio Martinez 602-542-2246 or [Rogelio.Martinez@azdhs.gov](mailto:Rogelio.Martinez@azdhs.gov)**

**A) Welcome & Introductions**

- 1) Welcome vendors - Vendors were invited to this meeting.

**B) Upcoming Reports**

- 1) New Report on Stroke the newly linked outcome data. Find the statewide report at:  
<http://azdhs.gov/documents/preparedness/emergency-medical-services-trauma-system/data/quality-assurance/ems2014-stroke.pdf>  
Agency specific reports to be sent out soon. Reports by Vendor will also be available.

**C) Data Quality**

- 1) Missing Data: Onset &/or Duration of Chief Complaint. Onset time was missing approximately 50% of time for suspected strokes. When Duration of Chief Complaint and Units was reviewed as a potential alternative measure of onset, it was also missing approximately 50% of the time. The consequence is that there is no way to determine the meeting of the three hour window (onset to arrive at patient) in half of the suspected stroke cases. 100% onset time collection is not realistic (there may be reasons it cannot be collected in some cases), but 50% missing is too high.
  - We ask agencies to look at their level of completeness with this variable, and make sure both that the data is being sent over (for 3<sup>rd</sup> party vendor users) and that it be better documented.
- b) A new divided variable in V3.4 - Onset is one variable and separate from Last Known Well (different variable). In the current V3.3.4 it is defined as 'Onset/Last Known Well' combined, which really isn't the same thing. In V2 (analyzed for this Stroke report) it is just defined as 'Onset'.
- 2) Update in the Trauma & EMS Performance Improvement (TEPI) workgroup regarding AZ-PIERS data quality – Robert Corbell
  - a) A copy of the minutes was sent out. If you did not receive a copy and would like one, please email [Anne.Vossbrink@azdhs.gov](mailto:Anne.Vossbrink@azdhs.gov)
- 3) Documenting Naloxone administration by Law Enforcement. Recommended way to documents law enforcement's administration of Naloxone prior to EMS arrival.

## **Recommended Documentation in Version2**

### E09\_02 Prior Aid Performed By

1200 Law Enforcement

### E09\_01 Prior Aid

101 Naloxone (Narcan)

### Narrative

Document as per your agency guidelines

## **Recommended Documentation in Version3**

### eMedications.02 - Medication Administered Prior to this Unit's EMS Care

9923003 Yes

### eMedications.03 - Medication Given

7242 Naloxone (Narcan)

### eMedication.10 - Role/Type of Person Administering Medication:

9905021 Other Non-Healthcare Professional

### Narrative

Include 'police' or 'law enforcement' if applicable. . Document as per your agency guidelines.

D) Review AZ-PIERS Data Dictionary Update (V3.2) for NEMSIS V3.3.4 to V3.4: Draft of updates & suggested changes. Draft of change log will be posted at:

<http://www.azdhs.gov/preparedness/emergency-medical-services-trauma-system/index.php#data-quality-assurance-az-piers>

E) The AZ-PIERS V3 Suggested List Project Update-

- 1) Several draft lists have been returned. Updated deployment lists were also utilized from ImageTrend with 'EMS Friendly' labels and a more EMS set of values. We have been working with agencies to update the labels. This will form an AZ-PIERS 'Arizona Suggested List'. It will be used by direct agencies and modified as needed. It will be available to all agencies and vendors on our public site as a starting point, if they so choose.
- 2) State will request from each outside vendor a list of codes and labels for each of their elements, particularly those variables using standardized lists. If the vendor is doing any 'mapping' to the State AZ-PIERS, we need the mapping sent to us also. This is to reduce orphan codes being received as blanks.

F) National NEMSIS vendor conference: an informal summary of the issues discussed.

- 1) Suggested lists can be cumbersome – some issues can be solved by innovations in products, some by EMS friendly labels and limits for EMS appropriate procedures/meds, and some needs to be addressed by NEMSIS as to how to fill the gap made by missing needed codes (ex: med marijuana)
- 2) Missing values or non-generalizable terms lead to some need for a text field. However, this affects transmission of info. We either need to all agree on one allowed format of comment field (one 'build) so that info can flow, or all text for this needs to be turned off. Vendors and agencies can decide, but the info must flow to AZ-PIERS
- 3) Performance measures seem to be coming from CMS associated with payment – this will all lead back to performance measures in some way and to documentation

- 4) EMS Compass is working on some measures – not related to CMS
- 5) Number E2 above is partially because of what we discovered at NEMESIS meeting – a ‘valid’ code is ex a number string of 2 – 7, that DOES NOT MEAN it is a ‘real’ code representing an actual existing med. EX: 964. Valid non-‘Real’ codes are seen as blank on transmission.
- 6) Discussed use of an eOther field to transmit an ePCR format to State and so to hospital along with data points so the hospital can see the view and info as agency has it.

G) Elite in-Person Training Scheduled

- 1) Wednesday, Feb. 10<sup>th</sup> & Thursday Feb. 11<sup>th</sup>. Will be hosted here at ADHS. We ask that attendees bring their own laptop or etc. We should have Wi-Fi available.
- 2) Yet undecided if the training will be one day and a repeat or two separate content days.
- 3) Taught by a trainer from ImageTrend. Free of charge for agencies.

H) Outcome data in AZ-PIERS

- 1) Several steps were used in the linking process. All parts of a step had to be met for the record to be ‘linked’.
- 2) Linked data is now available on AZ-PIERS V2 for the year 2014. We plan to link years 2013 and possibly 2012 also. The first half of 2015 will be linked once the HDD data is available and finalized. This is estimated to be in January 2016.
- 3) There was a webinar given by ImageTrend on how to access and use the outcome data in AZ-PIERS. Recording should be available soon.

I) 2016 meeting schedule – all Mondays

Monday, January 25<sup>th</sup>, 2016 10:00-12:00

Monday, April 25<sup>th</sup>, 2016 10:00-12:00

Monday, August 1<sup>st</sup>, 2016 10:00-12:00

Monday, October 24<sup>th</sup>, 2016 10:00-12:00

J) Announcements

K) Topics of Future Discussion as proposed by group

- Request to reexamine our agency’s progress toward V3 transition

L) Open floor