



**Arizona Department of Health Services
Bureau of EMS & Trauma System
Trauma Registry Users Group (TRUG)**

**Trauma Registry Users Group (TRUG) Minutes
Wednesday, July 22, 2009 - 9:30 a.m. – 11:30 a.m.
Location: Arizona Dept. of Health Services
150 North 18th Avenue Phoenix AZ 85007
5th Floor – 540A Conference Room
Contact: Anita Ray Ng 602-542-1245 raya@azdhs.gov**

Attendees:

Joel Bunis	Jane Burney	Vicki Conditt	Starre Haney	David Harden
Karen Helmer	Julie Herrera	Claire Holmes	Xan Hummel	Rose Johnson
Tara Kennedy	Beth Latrell	Kelley Lewellyn	Alice Magno	Cynthia Marks
Angela Minchella	Melissa Moyer	Donna Quay	Anita Ray Ng	Eugenia Sims
Erzsebet Szabo	Linda Tuck	David Villa	Anne Vossbrink	Bianca Wade
Cristina Wong	Heather Young			

A) Welcome to our new Bureau of EMS & Trauma System staff member:

Anne Vossbrink, MS
EMS & Trauma Data Manager, Data & Quality Assurance Section
Bureau of EMS & Trauma System 150 N. 18th Ave, Ste. 540 Phoenix, AZ 85007-3248
Anne.Vossbrink@azdhs.gov 602-364-3164 (office) 602-364-3568 (fax)

Anne will be assisting with both the Trauma and EMS Databases. Anne and Joel will cover for Anita while Anita is on maternity leave (leave tentatively scheduled for mid-August through November).

Contact information for Joel Bunis, BEMSTS Data & QA Section Chief:
bunisj@azdhs.gov 602-364-3189

- B) 2008 data checks are done and the 2008 trauma data is now closed out
- 1) Thank you for your hard work getting the data cleaned up and re-exported!!!
 - 2) Joel Bunis discussed many examples of how the trauma data is being used and why your hard work entering the data is important. ADHS and the trauma advisory boards are using the trauma data to assess the trauma system. Many data reports are being reviewed in hopes of improving EMS and trauma resources/protocols. Data requests are being processed. Having complete and accurate trauma data will make a difference in the care and services that are available.
- C) Reminder on data entry of 2009 prehospital vital signs
- 1) As discussed at previous meetings, the prehospital vital signs were updated for 2009 so that each leg of EMS care now has its own set of vitals. These vitals are stored in different database fields than in the 2008 data. Use your AZ blank check report to make sure that your 2009 prehospital vitals are being entered in the correct 2009 location. If you have problems, please contact Lancet.
- D) Updates to ASTR data dictionary
- 1) The ASTR 2008-2009 data dictionary has been updated to reflect a few schema-related field name changes and the new City picklists. Hospital data entry screens are often different

- than the ASTR database, and the request was made for an expanded index that makes it easier to find the data elements. Trauma Registry Manager agreed this is a good idea.
- 2) The dictionary has been re-titled to "ASTR 2008-2010 Data Dictionary". We will not be making data entry changes for the 2010 reporting year. The dictionary will be emailed out soon – please print it out and refer to it often to ensure that your data entry matches the state requirements. Following the dictionary instructions while you enter the data will save you a lot of corrections at validation time.
 - 3) The Bureau of EMS & Trauma System website will be updated with the most current trauma registry documents:
<http://www.azdhs.gov/bems/ASTRDataSubmission.htm>
 - 4) City of Residence and City of Injury picklists
 - a) The state city picklist and the Lancet zip code city autofill do not match. The Lancet AZ city list (plus a few additional AZ cities) has been adopted as the AZ state picklist for City of Residence and City of Injury. 2008 ASTR data (for AZ cities) has been converted to the new format.
 - b) The City picklists should be the only state required picklists in Trauma One that allow a user to enter a value that is not found on the list. Registrars will still have the ability to enter cities outside of Arizona or to enter smaller AZ towns not found on the picklist. A city picklist update will be sent out for hospitals to import.
- E) Quarter 1 2009 data was due July 15th. Thank you for your data submission.
- 1) The next submission deadline is October 1, 2009. Hospitals will send ED/Hospital Arrival Dates 1/1/2009 – 6/30/2009 (to include the 1st quarter 2009 updates).
- F) Updated 2009 Blank check report (for state-required fields)
- 1) Reminder: Hospitals should make sure the Data Completeness button on the discharge page has been updated by Lancet for 2009. During data entry, registrars can click the button to run the blank check for that specific record.
 - 2) Hospitals should be running blank checks on a regular basis to make sure the required fields are completed. The blank check exception report can be run by day, week, month, quarter or year.
 - 3) The 2009 AZ blank check report is found under Exception Reports and is called "09 AZ BLANK_LVL 1" for Level I Trauma Centers or "09 AZ BLANK_NOT_LVL 1" for non-Level I facilities. The only difference is that the Level I report checks for the AIS 2005 data.
 - 4) The blank checks will be incorporated into the AZ Data Validation Tool, but for now hospitals should use the exception report to check their data completeness.
- G) 2009 Invalid Picklist Entry/QA reports
- 1) If database or data entry issues were identified in your 2008 QA checks, please make sure these issues are not happening in your 2009 data. 2009 records cannot contain invalid picklist entries and will be run through state QA validation.
 - 2) Trauma Registry Manager will export the Report Batch that checks for "invalid picklist entries" so that hospitals can run these reports on their 2009 data and correct any problems. Because there are about 90 picklists to check and a lot of state data, we had to create separate reports and add them to a reporting batch. When you run a batch in Trauma One[®], you can either print the report from the screen or save to Excel. If you save to Excel, be sure to check every tab of the report, as results for each required picklist will be listed in a separate tab.
- H) Status update on AZ Data Validation Tool
- 1) Timeframe estimates from Lancet - After the meeting, the Trauma Registry Manager was informed that Lancet expects a release of the AZ Validation Tool by early September. Anne and Joel will facilitate review of the tool, and hospital input will be critical during the testing phase to identify any corrections needed. Please share your feedback with ADHS and Lancet to make sure that the tool is accurate.

- 2) The validation program will incorporate a combination of the blank field checks, invalid entry checks, NTDB/NTDS checks, and any AZ state-specific checks. The goal of this tool is to help hospitals check and correct data on a regular basis, thus eliminating the stress of cleaning it all up all at once at the end of the year.
- I) Diagnosis fields – ICD-9-CM and AIS 2005
- 1) Lancet is supposed to contact each hospital to ensure that the diagnosis autofill problems with body region and severity are fixed. They should correct any data already entered for 2009 so that it comes over correctly by the October export.
 - 2) Lancet is also working on an updated AIS 2005 picklist, since the current list is missing a few of the updates that were sent out by AAAM in 2008. We will likely have some clean-up of the 2009 AIS 2005 codes to make sure the codes match the AAAM 2008 updates. A picklist update for AIS 2005 will be sent out as soon as it is received from Lancet.
- J) Data Entry Education
- 1) Review of most common QA issues observed in the 2008 data – refer to handout.
 - 2) As time permits, ADHS will be developing data entry fact sheets to help registrars.
- K) Alcohol and Drug Use fields
- 1) Reminder from previous meeting: The “Drug Use Indicator” and “Toxicology Substances Found” are not to be entered positive for drugs administered by EMS or hospital personnel. If you have already entered some of your 2009 data to include EMS/hospital medications, you must go back and correct your 2009 data. We need these fields to accurately reflect drug use by the patient.
 - 2) Hospital question regarding Blood Alcohol results from referring facility - After discussion, it was discovered that a couple of reporting hospitals are not entering first recorded blood alcohol results into the state required blood alcohol field. Some hospitals have a separate referring toxicology field and others are not entering referring facility results at all.
 - 3) Per the ASTR data dictionary, “Blood alcohol concentration (BAC) may be documented at any facility (or setting) treating this patient event, including referring facility lab results. Only one BAC value is submitted to ASTR. If multiple results are available, submit the first recorded result (blood draw closest to the time of injury).” At both the state and NTDB level, the purpose of the alcohol/drug fields is to indicate if substance use may have played a role in the injury event. This is an important public health reporting topic. Blood alcohol values decline as you get further from the injury event, so a referring facility alcohol result is likely to be more reflective of the patient’s status at injury than a result taken after you received the referral patient. ASTR does not have many referring facilities reporting information to the state. If your hospital does not test the patient again for alcohol/drugs and decides not to enter the first results, ADHS will never know that substance use was involved.
 - 4) Trauma Registry Manager agreed to discuss this issue with Lancet to determine the best solution for: 1) hospitals to be able to capture hospital-specific alcohol data in one field and 2) ADHS to receive the data that is needed for state reporting purposes. The conclusion after the meeting was this: Lancet will contact our AZ hospitals, and if needed, add a second alcohol lab field for hospitals to capture and report on only hospital specific testing. The state alcohol field requirements and schema (and the state export/import) will not be changed. Lancet can copy the previous alcohol data from the state-required field into the new field, so that hospitals will be able to report on both old and new hospital alcohol data. For hospitals that already capture toxicology data per the data dictionary, no change will be required.
- L) Please check your database to make sure “ED LOS(Hours)” is recalculating if the ED arrival and exit dates/times are updated. This field did not always re-calculate when edits were made and caused several validation errors for the 2008 “ED LOS(Hours)” data.
- M) We were unable to schedule Lancet report training for June, but will consider future trainings as the budget allows.

- N) Any other user questions on quality checks, database changes, data entry?
- 1) There were some questions raised regarding blank check reports. If your data is complete, but it shows up as blank on the state blank check report, please contact Lancet to have them check your database.
 - 2) Question was asked about the Interfacility Transfer section of the Inclusion Criteria when a patient is discharged to Mexico via EMS, but the transfer is NOT for higher level of care. Discussion was held. To meet the interfacility transfer section of the criteria, a patient would need to be transferred for higher level of care or specialty care.
- O) Remaining 2009 TRUG meeting schedule (posted online):
- Wednesday, September 30 - 9:30 am - ADHS Conference Room 540-A
 - TRUG members will be notified as soon as the 2010 meeting schedule has been set

ARIZONA STATE TRAUMA REGISTRY (ASTR)

COMMON QA EDITS FOR 2008 ASTR DATA

1) Invalid Picklist Entries:

a) **Wrong picklist in hospital database**

If any of your state required fields have a picklist that does not match the ASTR data dictionary, there is a problem with your database that you must fix ASAP!

b) **Incorrect autofills in hospital database**

Examples:

- (1) State required Complications field autofilling incorrectly from your own hospital complications field.
- (2) Data entry of ED Disposition automatically entering a corresponding Hospital Disposition. This is incorrect – ask Lancet to stop this! This will cause you a lot of ED/Admission data entry errors.
- (3) E-code autofilling the Position in Vehicle field. This is incorrect – ask Lancet to stop this! This will cause you data entry errors and will prevent us from capturing the level of reporting detail that we need.

c) **Incorrect Data Links / Interfacing**

- i) Data Links must be updated any time there is a change in the data imported from billing/medical records or if there is a change in the state required picklist. To update your data links, please contact Lancet. Lancet will not know that a change is necessary unless you tell them.
- ii) Examples of common data link errors:
 - (1) ED Disposition
 - (2) Hospital Discharge Disposition
 - (3) Primary or Secondary Method of Payment

2) Common Data Entry QA Edits:

a) **Distinction between ED and Admission fields**

- i) All records must have an ED/Hospital Arrival Date and Time. This is why these two fields are labeled as “ED/Hospital Arrival” and not just “ED Arrival”. These fields cannot be Blank, Not Applicable or Not Documented.
- ii) The Admission Status field (from the Demographics Page) indicates if the patient received ED care only, Admission (inpt) care only, or ED + Admission care. This field is being used to validate data entry of the ED/Admission fields.
- iii) Only patients that were treated in the ED will have an ED Exit Date, ED Exit Time, ED LOS and ED Disposition. For Direct Admits, these fields will be flagged as Not Applicable (*NA).
- iv) Only patients that were transferred to an acute care facility from your ED should have an ED Discharge Destination Hospital, ED Discharge Transport

Agency or ED Transfer Reason. Otherwise, these fields should be flagged *NA.

- v) Only patients that were admitted to your hospital will have a Hospital (Inpt) Discharge Date, Hospital (Inpt) Discharge Time, Hospital (Inpt) Discharge Disposition, and Admission LOS. If treated only in the ED, these fields should be flagged as *NA.
- vi) Only patients that were transferred to an acute care facility after hospital admission should have a Hospital Discharge Destination Hospital, Hospital Discharge Transport Agency or Hospital Transfer Reason. Otherwise, these fields should be flagged as Not Applicable (*NA).
- vii) Even if the patient was not admitted, all records should have a Final Outcome and Total Hospital LOS entered.
 - (1) The Total Hospital LOS will automatically calculate based on what you enter for the Hospital (Inpt) Discharge Date. Thus it is important to consider whether the patient was admitted or not, when entering this field. Please do not leave this field blank and do not enter an inpt discharge date if the patient was not admitted.
 - (a) If you enter a valid date for Hospital (Inpt) Discharge Date, the system will assume the patient was admitted and use the ED/Hospital Arrival dates/times and the Hospital (Inpt) Discharge Dates/Times to calculate a Total LOS.
 - (b) If you flag the Hospital (Inpt) Discharge Date as Not Applicable (*NA), the system will use the ED Arrival and ED Exit dates/times for the Total LOS calculation.

b) Date/Time errors

- i) A day change happens at midnight, but the dates entered do not reflect this
- ii) Alternating between military and AM/PM time formats – always use military time (1:00 in the afternoon should always be 13:00 never 01:00)
- iii) We have noticed several records where the Injury dates/times, Prehospital dates/times, Referring dates/times, and ED/Hospital Arrival dates/times do not make sense as entered. Please pay special attention to the dates/times as you change from one page to the next. Note: We did not correct these for 2008 data, but they are likely to come up in the 2009 validation.

c) System Access (Inclusion Criteria) field

- i) Please make sure you have the correct picklist choices:
 - EMS_TRIAGE - Triaged from Scene to your facility per EMS Trauma Protocol
 - INTERF_TRNSFR - Acute care injury transfer in or out of your facility by EMS
 - ACTIVATION - Trauma Team Activation at your facility
 - ICD9_REVIEW - Admission or Death and met ASTR ICD-9-CM Inclusion Codes
- ii) Please enter all that apply. A patient may meet one or multiple inclusion criteria. The completeness of this field is important for state reporting.
- iii) This field should never be Blank (*BL), Not Applicable (*NA) or Not Documented (*ND). A patient must meet at least one of these criteria in order to be submitted to ASTR.

- d) Injury Date/Time is later than ED/Hospital Arrival Date/Time**
- i) Injury Date/Time should typically occur before the patient arrived at your hospital. In some cases, the injury and arrival may be the same (if patient was injured at your hospital), but this occurrence should be rare.
- e) Disposition and Outcome don't match – one field says the patient lived and the other says the patient died.**
- i) Final Outcome refers to the patient's lived/died status at exit from your hospital. This should match the patient's discharge disposition from your hospital.
- f) ICD-9-CM and AIS 2005 Diagnoses / ISS fields**
- i) A blank diagnosis or ISS = 0 are considered invalid. Per data dictionary, if a patient meets the ASTR inclusion criteria but does not have any diagnosed injuries, the Injury Diagnosis and ISS fields should be flagged as Not Applicable (*NA). If diagnosis documentation is unavailable, you would use Not Documented (*ND) instead of Blank.
 - ii) Reminder: ICD-9-CM and AIS 2005 diagnoses may display in the same scrolling window, but these fields are no longer linked for 2008 data forward. You do not need to insert *NA or blank rows to line up the coding systems. One diagnosis section may have a couple more rows entered than the other.
- g) E-codes**
- i) Primary (1st) E-code cannot be Not Applicable (*NA) or Blank (*BL).
 - ii) The E849 location code is captured in a separate field, not as the 1st or 2nd E-code. If a 2nd E-code does not apply, you should flag that field as *NA.
- h) Prehospital Transport Documentation**
- i) **Transport Type = INTO_REPT_HOSP** - Arrival/transport of pt INTO YOUR FACILITY (EMS & non-EMS)
 - (1) Every record must have one and only one leg of transport that pertains to how the patient arrived at your facility. This leg of transport must be entered, even if the patient came in by POV. If you cannot determine how patient arrived at your facility, you would still enter a row for Transport Type = INTO_REPT_HOSP and then use Not Documented (*ND).
 - (2) Transport Type, Transport Mode, and Transported From(Origin) are completed for all patients, even if the patient did not have any EMS care. For a POV arrival into your facility, the Transport Type would be INTO_REPT_HOSP, Transport Mode would be POV_WALK-IN and the Transported From(Origin) would be where the patient came from.
 - ii) **Transported From(Origin) = INJ_SCENE** - From Injury Scene
 - (1) The majority of patients should have only one row where Transported From(Origin) pertains to the transport of the patient from the Injury Scene.

- (a) If transport originated from a referring facility or EMS rendezvous point, you would not select Injury Scene as the origin.
- (b) When documenting First Responder(non-transport) care, transportation of the patient does not apply, so the Transported From(Origin) would be flagged as Not Applicable (*NA).

i) Total Reimbursements greater than Hospital Charges (overpayments to hospital not yet returned/processed)

j) Use of Not Documented (*ND) key. Please do your best to obtain missing/unknown data, even if it requires checking multiple sources.

Examples of important state reporting fields:

- Age (give best estimate even if DOB is unknown)
- Primary E-code (try to determine at least some basic info on injury event)
- Zip Code of Injury (look up address in www.usps.com, Google maps)
- City of Injury (use best approximation/nearest town)
- County of Injury, State of Injury, Country of Injury
- Injury Date/Time (if no EMS report, look for hospital documentation, patient report or law enforcement report)
- Protective Devices (if no EMS report, look for hospital documentation, patient report or law enforcement report)
- Alcohol and Drug Use (EMS info, referring facility labs, patient report, your hospital labs)
- Interfacility Transfer (Yes/No), Referring Facility LOS
- ED/Hospital Arrival Date/Time (mandatory), ED Exit Date/Time, Hospital Discharge Date/Time
- ED LOS, ED Disposition, Hospital LOS, Hospital Discharge Disposition
- Injury Diagnoses
- Method of Payment