SUBJECT: Trauma Registry Data Validation **PAGE:** 1 of 3
UPDATED: New **EFFECTIVE: 5/10/2023**

RECOMMENDATION(S): Monica Kimbrell, RN **APPROVAL: 5/10/2023**
CONCURRENCE(S): Trauma Program Office

PURPOSE:

Data Validation is an integral part of maintaining a database. Activities to support the accuracy of the data are incorporated into our registry practices. Below outlines our processes for ensuring the integrity of our data.

DEFINITIONS:

TQIP: Trauma Quality Improvement Program is sanctioned by the American College of Surgeons to serve as a risk-adjusted benchmarking source for verified Trauma Centers.

Q-Source: A quality improvement organization that provides external auditing of the trauma registry and state-level performance improvement assistance.

ITDX: V5 Trauma Registry module which is accessed through the individual patient record and used to validate format and completeness of data on TQIP data elements.

Vendor Aggregator: An external portal that is used to identify file errors that either require correction or review to validate a submission file. It is also used to create the submission file.

ACS Data Platform: This is a portal through which we submit our quarterly data.

POLICY:

- ***Annual and ongoing data education***. Each staff member will participate in annual TQIP training related to the NTDB data dictionary, monthly TQIP quizzes, and the development/revision of tools for data collection.

- ***Data checks at the initial close of each record***. The Trauma Registrar will complete both ITDX and overall data checks with the initial close of each trauma registry record. These processes will pick up date/time sequence issues, establish data checks for some of the TQIP data elements as well as identify required fields that are left blank. If an issue is identified during this process, the Registrar will review the issue, and work with Trauma Program Staff to resolve it.

- ***Batch data checks:***
    - ***Monthly, a series of audits are performed to validate data.*** Specifically, these reports are used to look for the completion of data, incongruences in the data, and to verify the validity of extreme data element values (age, ISS, LOS). Additionally, the reports serve as a checkpoint of selected PI issues that have been identified via the abstraction and data entry processes. Attachment A
    - ***Monthly, 2 ATCC reports are reviewed.***
        - The first report is the "Transfer Patients Received" which list transferred trauma

patients to UAMS by Major/Moderate/Minor categories and includes the date, times, facility, Trauma band, and times which reveal the time to acceptance. This list is reviewed and compared to the registry to ensure that all transfers were picked up. See Attachment B
    - The second report is the "Transfer Patients Sent". This report is also used to validate the capture of all ATCC-applicable transfers. See Attachment B
  - **Quarterly, Arkansas Trauma Registry sends two reports for validation.**
    - The first report is the "Data Submission Report". This report provides counts of records as well as selected elements for a period related to the submission.
    - The second report is the "ATR Data Validation Report" which provides a listing of cases without a trauma band, and ATCC trauma transfer data.
  - ***Quarterly, Vendor Aggregator is utilized to identify errors and create a submission file.*** A file created by the V5 Trauma Registry will be uploaded into the aggregator, and errors related to the case files will be generated. All Level 1 and Level 2 errors must be corrected to have a successful file transmission. Level 3 and Level 4 case file errors are validated.
  - ***Quarterly after submission to the ACS Data Platform, a validation summary report and a submission frequency report are generated by the platform and reviewed.*** Submission to TQIP generates two reports which are reviewed to look at utilization of null values/missing values, general exam of data elements to see if options used reflect population of patients, if similar subsets track by volume, etc. Each of these could indicate data issues.

- **Re-abstraction:**
  - ***Inter-relator Reliability:*** Monthly as allowed by workload, a minimum of 10 % of the trauma charts with an ISS > 15 will be pulled and selected data elements will be re-abstraction. The data will be analyzed and discussed in Trauma Program Staff meetings.
  - ***Semi-annually, Q-source Audit.*** Q-source comes in to compare EMR to Registry data points. A report is provided back to the facility which is used to refine data definitions.

- **Other activities:**
  - ***Performance Improvement Activities:*** Through Secondary and Tertiary review of charts, data validation issues may be identified.
    - Examples can include a timeline of procedures, missing diagnoses, missing procedures, etc. These are tracked as needed in the MEMO section of the applicable tab in the trauma registry. A report from the MEMO section is pulled as needed and discussed in the Trauma Program Staff meeting.
  - ***Focused Data Audits:*** One of the above reviews may identify a data element that needs additional review.
    - Examples: The location of injury is a Nursing Home but Functional Health Status is not marked as a Co-morbidity; Review of charts spurred a concern related to the consistency of vertebral artery coding. All Vertebral Artery Injuries were pulled. A focused review of radiology reports, consult/physician notes related to diagnosis, abstracted information, and coded information reviewed.