

**Created:** August 2006  
**Reviewed:** September 2023  
**Revised:** September 2023

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## Data Quality Plan

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**Purpose:** To define a process for validating data entered into the trauma registry. Per the American College of Surgeons (ACS) Resources for the Optimal Care of the Injured Patient 2022 Standards, high-quality data is necessary to direct quality improvement efforts.

**Goals:** To ensure that Deaconess Regional Trauma Center has a continuous process that measures, monitors, identifies, and corrects data quality issues in order to optimize care of the trauma patient.

**Definitions:** Deaconess Trauma Services maintains a registry of trauma patients using commercially licensed trauma registry software.

In-house traumatic injuries are those sustained after initial ED/Hospital arrival and before hospital discharge at the reporting hospital and includes all data associated with that event.

Acute Care Hospital: Hospital that provides inpatient medical care and other related services for surgery, acute medical conditions or injuries (usually for short-term illness or condition).

The Deaconess Trauma Center Data Dictionary (Data Dictionary) contains a complete list of definitions regarding data entry, complications, and performance improvement criteria.

### Guidelines:

- A. Deaconess uses the most current inclusion and exclusion criteria of the National Trauma Data Standard (NTDS), found at [www.ntdsdictionary.org](http://www.ntdsdictionary.org)
- B. The Trauma Registry data may be used for the following
  - a. Facilitate the recording and analysis of injury-related data for patients who meet inclusion criteria
  - b. Facilitate the process of continuous performance improvement and care for the injured patient
  - c. Trending and optimizing care and resources through comparative analysis and benchmarking by using quantitative and qualitative data
  - d. Supporting public health and legislative initiatives related to the implementation and participation in local, regional, state and/or national registry

### C. Trauma Patient Population Criteria

- a. Each business day, the Data Quality Coding Coordinator (Trauma Registrar) identifies appropriate trauma patients through various reports using the electronic medical record (EMR)
  - i. Reports include transfers, admissions, discharges from the Emergency Department (ED), direct admissions, and review of patient discharges
  - ii. The number of patients serves as the denominator for enabling Trauma Services to monitor resource and service utilization, morbidity and mortality rates, and other metrics
  - iii. The incidence of complications and variances in care are used to establish the need to develop or revise practice guidelines
  - iv. Criteria for determining which patients undergo monitoring and evaluation of care is correlated to the ACS and hospital-specific indicators

### D. Data Collection and Analysis

- a. Primary data collection is accomplished through the trauma program's registry and is the responsibility of the entire Trauma Services department
  - i. See Deaconess Hospital Trauma Center Data Dictionary for list of collected data
- b. Data collection includes all of the NTDB data elements and state requirements for Illinois and Indiana
- c. Quality indicators for continuous or periodic evaluation of care are determined by ACS specific audit filters and those determined by the Trauma Performance Improvement Program (PIPS)
  - i. See PIPS guideline
- d. Data abstraction is collected concurrently during the patient's hospitalization
  - i. Abstraction is finalized no later than 60 days post patient discharge
  - ii. Data abstraction resources include but are not limited to
    1. Pre-hospital patient care reports
    2. Hospital EMR, including scanned documents
    3. Referring hospital records if applicable
    4. Autopsy findings if applicable
    5. Indiana Donor Network (IDN) information relating to organ and/or tissue donation if applicable
  - iii. Any changes to registry data points or changes in collection of the data will be recorded in the Department Activity Log for record keeping purposes

### E. Internal Validation Procedure

- a. Trauma Registry has built in validation for the registry software
  - i. These validators do not replace abstracted data validation
- b. Data validation measures the consistency between what exists in the data element according to the parameters outlined in the Data Dictionary and/or NTDS

- c. Data Validation may include:
    - i. Audits
      - 1. High level overview consisting of periodic reports designed to identify potential errors in data entry
        - a. Registrar who completes audit will review all information and provide feedback to appropriate Trauma Services staff
          - i. If more than 5% of the chart is found to contain data errors, the TPM will be advised and a full chart review will take place
      - 2. Case studies and/or group extraction to compare use of codes and data entry in order to have more consistency in registry data
      - 3. NTDS Dictionary review annually upon the issuance of revised NTDS Dictionary
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- F. External Validation Procedure allows centers to compare their processes and outcomes with other centers.
  - a. This may include but is not limited to:
    - i. Trauma Quality Programs (TQP) Data Center Validation Summary Report:
    - ii. Trauma Quality Programs TQP Data Center Submission Frequency Report
    - iii. TPQ Vendor Aggregator
  - b. Validation Process:
    - i. Pre-Submission Report
      - 1. Registrar will complete the pre-submission report prior to quarterly submissions to NTDB/TQP, State of Indiana, and State of Illinois
        - a. Errors are identified and corrected by the trauma registrar.
    - ii. TQP Data Center Validation Report:
      - 1. Once the data is successfully uploaded, Registrar will perform comprehensive review to validate the number of records in the TQP Validation Summary Report matches the number of records in the registry that meet the NTDS inclusion criteria
        - a. The pre-submission report will be used for the comparison.
      - 2. Elements with high null values/unknown will be validated and corrected if needed
      - 3. Records with discrepancies will be corrected and data will be re-submitted to the TQP Data Center
      - 4. Any findings from the Submission Frequency Report are recorded on the TQP Data Validation Tool and will be communicated to Registrars and TPM to identify opportunities for improvement
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- G. TQIP Benchmark Reports
  - a. Registrar will export the benchmark report into an Excel file at the request of TMD or TPM and will identify patients who fall into the high outlier categories
    - i. TMD, TPM or designee will review and identify an action plan as appropriate
  - b. Registrar will validate records for correct capture of pre-existing conditions, hospital events, and additionally review for trends, opportunities for improvement, and closure accuracy

- i. All discrepancies are discussed and corrected with/by the appropriate Trauma Services staff
  - c. TQP Benchmark Report will be shared periodically at Trauma Mortality and Morbidity Committee meetings and at Trauma Operational Committee meetings
- H. Confidentiality Protection and System Back Up
  - a. The Trauma Registry is maintained in a confidential manner
    - i. Registry is password-protected
    - ii. Access to the Trauma Registry is limited to the TPM, TMD, Trauma Performance Improvement Nurses, Registrars, and Injury Prevention Coordinator
  - b. Informatics and Technology (IT) Services will back up the trauma registry software nightly and archive files weekly
  - c. Before any updates to the trauma registry are completed, a data backup will be completed by IT
  - d. IT will be responsible for performing all updates to the trauma registry software
- I. Internal Department Reports
  - a. Periodic reports are compiled and information shared at various trauma-related meetings
- J. External Request for Reports
  - a. Generated from the Trauma Registry
  - b. External Requester is described as
    - i. Any department at Deaconess Hospital other than Trauma Services
    - ii. Any outside entity (i.e. State Department of Health, Insurance Agencies, Injury Prevention Organizations, etc.)
  - c. All external requests must use the Trauma Data Request
    - i. Trauma Registry Data Request form will be given to the requestor by the Registrar
      - 1. Registrar will be responsible for maintaining confidential files of the data forms
      - 2. These report requests will require at least a 72-hour notification to the Registrar
    - ii. The following information should be included on the form
      - 1. Date of request
      - 2. Requestor name
      - 3. Requester affiliation
      - 4. Description of data requested
      - 5. Intended use
      - 6. Intended audience
    - iii. TPM will review the form and will approve, approve with conditions, deny release of the report, or ask the Privacy Officer to review the request prior to approval and release
      - 1. Any approval communications from the Privacy Officer will be kept with the request and report electronically

2. All of this information will be recorded on the Data Request Form
  - i. All Trauma Registry Data Request forms and a copy of the released data/report will be saved electronically in the Trauma Share folder for future reference or questions

**References:**

- Resources for Optimal Care of the Injured Patient 2022
- National Trauma Registry for the American College of Surgeons
- National Trauma Data Standards (NTDS) Data Dictionary ([www.ntdsdictionary.org](http://www.ntdsdictionary.org))
- State of Indiana Data Dictionary
- State of Illinois Data Dictionary
- ICD-10 Coding Reference Book
- Deaconess Trauma Center Data Dictionary
- Trauma Performance Improvement Program guideline