



# **Certified Specialist in Trauma Registries (CSTR) Candidate Handbook**

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Certified Specialist in Trauma Registries Candidate Handbook

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## About the ATS

The American Trauma Society (ATS) is dedicated to the elimination of preventable death and disability from injury. For over 50 years, the ATS has served as an advocate for the trauma care system, trauma prevention programs, and the survivors of trauma and their families. Our mission is “*Saving Lives. Improving Care. Empowering Survivors.*” Our shared vision is a "world without preventable injuries where survivors thrive."

Our goal is a greater focus on **trauma systems of care** – ensuring that our trauma patients and their caregivers have the resources they need throughout the continuum of care.

## About the CSTR Handbook

This handbook contains necessary information about the Certified Specialist in Trauma Registries (CSTR) Examination. Please retain it for future reference. Candidates are responsible for reviewing all instructions thoroughly.


**Note:** Requirements, policies, and fees associated with this exam are subject to change without notice. The ATS does not discriminate among applicants based on age, sex, race, religion, or national origin. ATS Membership is not required to apply for the CSTR exam.

## About Certification

Congratulations on your commitment to becoming a Certified Specialist in Trauma Registries. The American Trauma Society’s Trauma Registry and Data Council (TRDC) endorses the concept of voluntary certification by examination for all trauma registry professionals. Certification in trauma registry is highly valued, providing national and formal recognition of comprehensive and advanced trauma registry knowledge.

The CSTR credential represents a trauma registry and data expert who has been credentialed through the ATS and demonstrates current competence in the specialized areas of trauma systems, data management, conditions of injury, and coding and scoring concepts.

The certification program is designed to support the delivery of safe, effective care informed by high-quality data prepared by trauma registry professionals. This data influences trauma research,



epidemiology, treatment, performance improvement, and injury prevention. The program establishes and measures a requisite of knowledge required for expertise in building, managing, and enhancing trauma registry practices. The CSTR certification encourages continued personal and professional growth in the practice of trauma registry.

Certification is awarded to candidates who successfully pass the CSTR exam. To maintain certification, recertification is required every four (4) years through continuing education or re-examination to demonstrate evidence of continuing competency and knowledge. Only candidates with current CSTR status are authorized to use the credentials.

## Exam Eligibility Recommendations

The following guidelines are for candidates interested in taking the CSTR exam. While not required, the ATS strongly recommends that those applying to take the CSTR exam meet the following criteria:

1. At least two to three (2-3) years of full-time or the equivalent (4,000 hours) trauma registry experience.
2. A bachelor's degree (B.A., B.S., or equivalent)

## Exam Fees

Fees for each CSTR exam application submitted are:

**Fees:**

- \$275 for ATS Members
- \$350 for Non-Members


Fees include a \$100 non-refundable administrative fee. ATS Membership must be current to be eligible for the discounted pricing.

## Application Process

Please review this handbook carefully to understand all the requirements for obtaining and renewing the CSTR certification. Once complete, please [visit our website](#) to submit your application.

**Note:**

Incomplete applications (i.e., missing required information, signature, date, or fees) will not be processed.



Ensure the name on your application matches the name on your government-issued photo ID (e.g., driver's license, passport) exactly. Do not use nicknames or abbreviations.

The application collects the candidate's personal, demographic, and professional background information. All questions, except questions marked "Optional," must be answered. Unless otherwise indicated, mark only one response.

Optional questions are included to assist in complying with equal opportunity guidelines. These questions are collected for statistical purposes only and do not affect application or exam results.

Upon submission of the completed application and fees, the ATS will review the application and, if approved, will send a confirmation email to the candidate within five (5) business days. Candidates are responsible for ensuring the email address provided on the application is accurate, as all emails will be sent to the email address provided.

## Exam Administration

The CSTR exam is administered by TesTrac, the ATS web-based exam proctoring provider. As of September 1, 2023, exams are ONLY available via live web-based proctoring and must be scheduled in advance. The date and time a candidate may take the CSTR exam is subject to the availability of a virtual proctor. To be eligible for web-based proctoring, candidates must meet the following technical and environmental requirements:

1. Valid government-issued photo ID
2. A quiet room free from distractions
3. A reliable computer with at least 1 GB of RAM or higher
  - a. *Tablets, Chromebooks, and iPads are not permitted.*
4. A stable, wired high-speed internet connection (minimum 3 Mbps)
  - a. *Wireless internet connection is not recommended.*
5. Webcam with a minimum of 1280 x 600 video pixel resolution
  - a. *Built-in laptop cameras are acceptable.*
6. Working speakers connected to the computer
7. Functioning microphone connected to the computer
  - a. *Webcam with a built-in microphone is acceptable.*

## Browser Compatibility:

### Preferred Browsers:

- Microsoft Edge
- Google Chrome

### Other Compatible Browsers:

- Mozilla Firefox
- Safari

Candidates are encouraged to test all equipment prior to the scheduled exam. If using Zoom for the first time, the candidate must ensure the computer has granted the necessary permissions to join the Zoom meeting, share screen, and access the webcam and microphone. Please ensure the following before the exam session:

- The internet connection is stable
- The candidate is able to join a Zoom meeting
- Screen sharing functionality is enabled
- The microphone is turned on and functional
- The webcam is turned on and functional

## Scheduling Your Exam

Upon application approval by the ATS, candidates will receive an email from the ATS within five (5) business days of application submission date with scheduling instructions. All exams must be scheduled online through the TesTrac test portal at [ats.testrac.com/](https://ats.testrac.com/). Candidates are responsible for ensuring the email address provided on the application is accurate, as all emails will be sent to the email address provided.

## Special Accommodations

The ATS and TesTrac provide reasonable and appropriate accommodations (e.g., additional test time) for individuals with documented disabilities who demonstrate a need for accommodations. The purpose of accommodations is to provide exam candidates with full access to the CSTR exam. Test accommodations are individualized and considered on a case-by-case basis. Consequently, no single type of accommodation (e.g., additional test time) would necessarily be appropriate for all individuals with disabilities.

To be considered for accommodations, candidates must submit a [Request for Special Accommodations Form](#) with the application, exam fee, and written documentation of the following:

1. A formal diagnosis by a qualified healthcare professional (e.g., psychologist)
2. Credentials and documentation of the healthcare professional providing the referenced

diagnosis documentation.

3. Supporting diagnosis documentation and findings
4. Current functional limitations
5. Explanation of the specific special accommodations requested.

**Note:** Accommodations are not a guarantee of improved performance or exam completion.

The ATS will make every effort to fulfill special accommodation requests. However, requests that lack the required information or are deemed by the ATS to compromise the security of exam materials or the integrity of exam scores may be denied or postponed. Upon approval, candidates will receive written notification via email outlining the approved accommodations and any specific procedures to be followed by the test provider.

## Rules for Examination

### Pre-Exam Requirements:

Prior to the exam day, candidates must ensure they have access to Zoom and are familiar with all features outlined in the “Exam Administration” section of the CSTR Candidate Handbook.

**Note:** Do not attempt to book a reservation and test in a tight timeframe. Candidates should allocate sufficient time for setting up technology and testing all required features well in advance of the exam.

### Day of Exam Requirements:

To begin the exam, candidates must log in to the exam 10 minutes prior to the scheduled exam start time using the [Calendy](#) link provided at the time the exam was scheduled. The proctor will then:

- Greet the exam candidate
- Validate the candidate’s identification
- Request the candidate to share their screen
- Email the candidate the link to the exam
- Notify the candidate of their Pass/Fail status upon completion of the exam

### Prohibited Items:

The following items are not allowed in the testing area or during the exam:

1. Electronic devices (e.g., cellular phones, pagers, Bluetooth devices, smartwatches, cameras, voice recorders, MP3 players, tablets)
2. Books, papers, or any reference materials

### **Exam Conduct:**

1. Candidates are not permitted to ask questions about the exam content during the session.
  - Carefully review all on-screen instructions provided at the start of the exam.
2. Candidates are prohibited from leaving the testing room during the exam session.
3. Candidates may not read test questions aloud during the exam session.

### **Technical Support:**

For assistance, contact TesTrac support at [admin@tetrac.com](mailto:admin@tetrac.com).

## **Exam Score and Report Results**

Upon completing the CSTR exam, candidates will receive immediate notification of their final score and a detailed summary of their performance by section. The passing score is 71%. The ATS will mail successful candidates their certification credentials to the address on file within four (4) weeks of the testing date.

## **Re-Examination**

Candidates may attempt to take the CSTR exam up to three (3) times per year. A new application and fee are required for each attempt. For greater success at retaking the exam, it is recommended that candidates wait at least one (1) month between testing attempts to allow for studying, application process, and test scheduling.

## **Exam Content**

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The CSTR exam is a computer and web-based exam composed of 165 multiple-choice, objective-based questions (150 scored, 15 pilot questions) with a total testing time of three (3) hours. Questions are developed by trauma registry experts and reviewed for construction, accuracy, and appropriateness. Unless otherwise specified, definitions are based on and aligned with the National Trauma Data Standard (NTDS). The ATS, with the advice and assistance of TesTrac, prepared the exam.

The CSTR exam covers four (4) primary domains:

1. Trauma Systems
2. Data Management
3. Conditions of Injury
4. Coding and Scoring Concepts

# Exam Outline

## 1. Trauma Systems

- a. Trauma Center Levels
  - i. Team response for highest-level activation
  - ii. Verification vs designation
- b. Trauma Team (e.g., trauma program team composition, staffing)
- c. Trauma Injury Prevention
- d. Trauma System Issues (e.g., program, physician, registry issues)

## 2. Data Management

- a. Confidentiality
  - i. HIPAA and HITECH compliance standards
  - ii. Protect data (e.g., encryption, password protection, data release protocols)
- b. Inclusion Criteria
  - i. American College of Surgeons (e.g., NTDS, TQIP)
  - ii. Regional and state requirements
  - iii. Trauma center-specific requirements (e.g., local, hospital-specific criteria)
- c. Data
  - i. Identify required data elements
  - ii. Data element definitions
  - iii. Data structure
  - iv. Data abstraction
  - v. Data validation (e.g., inter-rater reliability, TQIP validation reports, registry audit reports)
  - vi. Mapping
  - vii. Local, county, regional, state, and national compliance requirements
- d. Reporting
  - i. Define report terminology (e.g., query)
  - ii. Identify essential report data elements
  - iii. Report output types
    - a. Tables (e.g., dashboards, spreadsheets)
    - b. Graphics (e.g., graphs, charts, plots)
    - c. Other (e.g., benchmarks, summary, pre-programmed, fishbone diagram, ad-hoc)
  - iv. Report interpretation (e.g., volume, trends, benchmarking)
- e. Statistics (e.g., M-Score, Z-Score, W-Score)
  - i. Population demographics
  - ii. Population sampling methods
  - iii. Statistical metrics (e.g., frequencies, averages, percentages, ranges, ratios, standard deviations)
  - iv. Benchmarking and risk-adjusted modeling
- f. Performance Improvement and Patient Safety (PIPS)
  - i. Hospital events and audit filters (e.g., hospital-specific, ACS, NTDS, TQIP)
  - ii. PI process (e.g., issue identification, event review, corrective action, loop closure/result evaluation)
  - iii. Multidisciplinary PIPS committee
  - v. Levels of review

- g. Electronic Data Transfer (EDT)
  - i. Manage imports, exports, uploads, and downloads
  - ii. Data submissions
- h. Maintenance of the Trauma Registry
  - i. Install registry updates
  - ii. Backup procedures

## 3. Conditions of Injury

- a. Anatomy and Physiology
  - i. Gross human anatomy
  - ii. Trauma physiology (e.g., blood pressure, temperature)
  - iii. Mechanisms of injury (MOI) (e.g., pedestrian injuries, non-accidental trauma, motor vehicle collisions)
  - iv. Signs and symptoms of trauma (e.g., battle signs, paradoxical chest movement, shortness of breath)
  - v. Injury patterns (e.g., flail chest, compound fractures, hemothorax, organ injury scale)
  - vi. Sequelae (e.g., late/long-term effects of trauma)
- b. Testing
  - i. Radiology (i.e., FAST, plain films, ultrasound, CT scan, MRI)
  - ii. Laboratory studies (e.g., toxicology, chemistry, hematology, microbiology)
- c. Interventions
  - i. Airway management (e.g. intubation, ventilator support)
  - ii. Resuscitative interventions
    - a. Cardiopulmonary Resuscitation (CPR)
    - b. Fluid and blood administration (e.g., mass transfusion protocol (MTP), fluid resuscitation, resuscitative medications)
  - iii. Emergency and medical surgical procedures (e.g., thoracotomy, fracture fixation, laparotomy, fasciotomy)
  - iv. Other

## 4. Coding and Scoring Concepts

- a. Basic Coding Conventions, Guidelines, and Code Structure
  - i. Source documents of injury (e.g., trauma flow sheet, H&Ps, autopsies, operative reports)
- b. Abbreviated Injury Scale (AIS)
  - i. Concepts and principles (e.g., whole area vs anatomical components)
  - ii. Derivations of Injury Severity Scores
- c. Current ICD-10-CM/PCS
  - i. Clinical Modification (e.g., diagnoses codes, external cause codes)
  - ii. Procedure Coding System (e.g., surgical procedures)
- d. Injury Scoring
  - i. Glasgow Coma Scale (GCS)
  - ii. Revised Trauma Score (RTS)
  - iii. Injury Severity Score (ISS)
  - iv. Trauma and Injury Severity Score (TRISS) / Probability of Survival Score (Ps)
  - v. Trauma Score (TS) / Pediatric Trauma Score (PTS)
- e. Other Scoring Tools (e.g., GCS 40, GOS, FIM, WEE-FIM)

# Exam Preparation

## Responsive Practice Questions

The ATS offers CSTR candidates the opportunity to take the Responsive Practice Questions (RPQ) as an exam preparation tool prior to sitting for the CSTR exam.

The RPQ helps candidates become familiar with the question format, style, and key content areas of the CSTR exam, including trauma systems, data management, conditions of injury, and coding and scoring concepts. The RPQ consists of over 140 multiple-choice questions and has a 30-day start-to-completion timeframe.

Upon completing the RPQ, candidates will receive an instant score report highlighting their performance in each content area. Incorrect answers will generate an automatic response rationale, which will include the correct answer and an explanation.

**Note:** Performance on the RPQ may differ from actual performance on the CSTR exam. The RPQ is intended as a preparatory tool only and does not guarantee success on the CSTR exam. Candidates are encouraged to review and study areas of weakness highlighted in the score report.

### Fees:

\$65 for ATS Members

\$85 for Non-Members

## ATS Trauma Registry Course (Live, Virtual, or Self-Paced)

The Trauma Registry Course (TRC) provides trauma registry professionals with a standardized understanding of the specialty and necessary skills for maintaining trauma registries. The TRC covers current national standard definitions and methodologies, with lectures designed to build upon experience, program maturity, and institutional needs. The TRC is designed for trauma registry professionals at all experience levels.

Since 1999, the ATS TRC has been recognized by the American College of Surgeons in the *Resources for Optimal Care of the Injured Patient* as a valuable resource for comprehensive trauma registry training.

The TRC course agenda includes the following:

1. Trauma Registry Basics
2. Anatomy and Terminology
3. General Coding Principles
4. External Cause of Injury Coding (E-Codes)
5. Scoring Principles
6. ICD-10-CM and PCS
7. Chart Abstraction and Data Procurement
8. Reports
9. Performance Improvement and Patient Safety (PIPS)
10. Computer and Electronic Technology
11. Confidentiality and Security
12. Data Validation
13. National Trauma Data Standard (NTDS)

**Fees:**

- \$585 for ATS Members
- \$690 for Non-Members

**ATS CSTR Exam Preparation Course (Live or Virtual)**

The CSTR Exam Preparation Course (EPC) is a comprehensive course designed to equip candidates with the essential knowledge and skills to excel on the CSTR exam. Whether candidates are pursuing certification, refreshing their expertise as a CSTR, or transitioning into the trauma registry profession, this course provides a structured and focused approach to exam preparation. The EPC delves into the four (4) primary CSTR exam domains and offers an organized and efficient study plan tailored to thoroughly prepare candidates to achieve certification and elevate their professional standing.

The EPC provides an in-depth review of the four (4) primary CSTR exam domains:

1. Trauma Systems
2. Data Management
3. Conditions of Injury
4. Coding and Scoring Concepts

**Fees:**

- \$550 for ATS Members
- \$650 for Non-Members

## Maintaining Your Certification

Candidates who pass the certification exam are authorized to use the registered designation **CSTR**. The ATS maintains a record of CSTR credentialed professionals and may report on them in its publications.

Certification is recognized for a period of four (4) years. To maintain certification, candidates must meet continuing education requirements or retake and pass the CSTR exam.

## Recertification

Certification is recognized for a period of four (4) years, at which time the candidate must meet the continuing education (CE) requirements or retake and pass the CSTR exam.

To apply for recertification through continuing education, candidates must submit 32 contact hours of continuing education (CE) in trauma registry practice within the four-year certification period. A minimum of 32 contact hours must be in the areas of (I) Trauma Systems (II) Data Management, (III) Conditions of Injury, and (IV) Coding and Scoring Concepts.

Eligible CEs may be accumulated in any combination of the following:


1. **Continuing Education Programs:** Workshops, seminars, professional development courses, home-study courses, and state or national conferences.
2. **Academic Courses:** Undergraduate or graduate-level courses, with each academic credit equating to 10 CE hours. Transcripts of successful completion must be provided.

Candidates must include documentation of all CEs awarded. CE certificates must include the following:

- Applicant's name
- CE provider/sponsor
- CE completion date
- Number of CEs received
- Program title

Applications for recertification must be submitted at least 30 days before certification expiration.

Candidates will be notified of application evaluation within four (4) weeks of application submission. If criteria are deemed fulfilled, a new four-year certificate, effective the renewal date, will be issued to the candidate.



If certification lapses more than six (6) months past the certification expiration date, candidates must meet current eligibility requirements and re-take the CSTR exam.

**Fees:**

- \$100 for ATS Members
- \$165 for Non-Members

## Renewal Notices

CSTR renewal reminders are sent by the ATS via email to the candidate's email address on file. Candidates are responsible for keeping contact information up-to-date in their ATS profile. The ATS does not guarantee delivery of renewal notices; therefore, it is the candidate's responsibility to apply for certification renewal before the application deadline.

**Note:** If you have unsubscribed from bulk emails or use a workplace email address, you may not receive email notifications as intended. Please use a personal email address or request that your employer ensure emails are not blocked.

## Revocation of Certification


The occurrence of any of the following actions will result in the denial, suspension, or revocation of the CSTR certification by the ATS:

1. Falsifying information on initial or recertification application(s)
2. Cheating on the CSTR exam
3. Misrepresentation of certification status
4. Failure to meet certification or recertification criteria
5. Failure to provide the requested materials by the deadlines
6. Non-payment of required fees

**Note:** Fees will not be refunded if the recertification is denied.

**Appeal Process:**

Depending on the reason for recertification denial, candidates may appeal revocation decisions by



submitting a written request to the ATS Trauma Registry and Data Council (TRDC) within 30 days of the denial decision notification.

The candidate is responsible for initiating this process. Appeals should include a detailed justification for reconsideration of recertification. The ATS will review the appeal and issue a decision within 30 days of submission.

## General Information

Certification status is a matter of public record. However, the following information is not of public record and cannot be divulged without written consent from the applicant:

1. Exam enrollment status
2. Exam score
3. Number of exam attempts
4. Number of completed continuing education (CE) activities
5. Personal contact information

## ATS Membership

ATS membership is not required for certification or recertification. However, if you fulfill the eligibility requirements and your membership dues are paid prior to or at the time of application for the exam, you are eligible for the discounted ATS member rate.

To join the ATS, visit [www.amtrauma.org](http://www.amtrauma.org) or contact the ATS Membership department at **800-556-7890 ext. 1701**.

## ATS Contact Information

For questions about the certification process, visit the ATS website, email the ATS Education and Certification department at [education@amtrauma.org](mailto:education@amtrauma.org), or call **703-538-3544 ext. 2**.