Certified Specialist in Trauma Registries (CSTR)

Handbook
About The ATS
The American Trauma Society is dedicated to the elimination of needless death and disability from injury. For over 50 years, ATS has served as an advocate for the trauma care system, trauma prevention programs, and the victims of trauma and their families throughout the United States. Our mission is to Save Lives. Improve Care. Empower Survivors.

Our goal is a greater focus on the trauma patient – ensuring these individuals and their caregivers have the resources they need throughout the entire 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 reading these instructions carefully. Requirements, policies, and fees associated with this exam are subject to change without notice. The American Trauma Society (ATS) does not discriminate among applicants as to age, sex, race, religion, or national origin. Membership in the ATS is not required.

About Certification
Congratulations on your commitment to becoming certified as a specialist in Trauma Registry. The American Trauma Society’s Trauma Registry and Data Council (TRDC) endorses the concept of voluntary certification by examination for all trauma registry professionals. The CSTR represents a trauma registry and data expert who has demonstrated competence in a specialized area of practice and has been recognized by the ATS. Certification in trauma registry is highly valued and provides national and formal recognition of comprehensive trauma registry knowledge. The Certification program was designed to promote the delivery of safe and effective care and the highest quality of data analysis. It establishes and measures a requisite of knowledge required for expertise in building, managing, and enhancing trauma registry practice. The Certification encourages continued personal and professional growth in the practice of trauma registry. The certification is awarded to candidates who pass the exam. Recertification is required every 4 years by continuing education or re-examination to give evidence of continuing competency and knowledge. The CSTR must have current status in order to use the credentials.

Exam Eligibility
The following guidelines are for those interested in taking the exam. While these are not requirements, the ATS highly recommends those applying to take the exam have a minimum of the following:
1. Have at least two to three (2-3) years of full-time or the equivalent (4,000 hours) experience in trauma registry practice.
2. A bachelor’s degree (B.A., B.S., or equivalent)

**Exam Fees**

Fees for each application submitted for the CSTR Examination:

- $275  ATS Members
- $350  Non-Members

These fees include a non-refundable administrative fee of $50.00. ATS Membership must be current to be eligible for the reduced fee.

**Application Procedure**

Please read through this handbook to understand all the requirements for initial and recertification of the CSTR. Once complete, please visit [www.amtrauma.org](http://www.amtrauma.org) to submit your application. NOTE: The application will be considered incomplete and will not be processed if any requested information or appropriate fees are not provided.

The form on the ATS website collects information specific to you, the candidate. Questions cover personal and demographic information, professional background, and other optional information. All questions (with the exception of ones marked “Optional”) must be answered. Mark only one response unless otherwise indicated.

OPTIONAL INFORMATION: Questions marked optional are included to assist in complying with equal opportunity guidelines and will be used only in statistical summaries. Such information will in no way affect your test results.

PLEASE NOTE: The name you enter on your application must match exactly the name shown on your current government-issued photo ID (driver’s license or passport). Do not use nicknames or abbreviations.

CANDIDATE SIGNATURE: When you have completed all required information, sign and date the application in the space provided.
Once the application and payment have been submitted, the ATS will review the information and, if approved, will send a confirmation email to the applicant within 5 business days. All emails will be sent to the email address provided on the application.

**Exam Administration**

The CSTR exam is administered by TesTrac. TesTrac collaborates with Examity to offer web-based online test proctoring. As of September 1, 2023, exams will only be available via live web-based proctoring. The date and time that you can take the CSTR Exam is subject to availability of the virtual Proctor and appointments must be booked in advance. Please note the below requirements to be eligible for web-based exam proctoring:

- A well-working computer with 1 GB of RAM or higher.
- A wired high-speed internet connection (3 Mbps). A wireless internet connection is not recommended.
- Any webcam with 1280 x 600 video pixel resolution (a laptop camera is acceptable).
- Working speakers connected to the computer.
- A microphone connected to the computer (consider a webcam with a built-in microphone).
- Browser compatibility:
  - Preferred
    - Edge
    - Internet Explorer
  - Compatible:
    - Firefox
    - Chrome
    - Safari.
- Note: Tablets, ChromeBooks, iPads are not allowed to be used. One must have a laptop or workstation.
- Taking this examination will involve connecting to a site outside of your network security settings. If you are planning to take the exam at work, please speak to your IT Department and ask them to open ports 80, 443 and 1935. Please contact the online proctor team technical support if you have any questions.

**Scheduling Your Exam**

Upon approval by the ATS and receipt of initial email from the ATS, TesTrac will send an email to the CSTR Exam Candidate within 5 additional business days with scheduling instructions. All exams must be scheduled online through the Examity test portal. All emails will be sent to the email address provided on the exam application.
Special Needs

The purpose of accommodations is to provide exam candidates with full access to the CSTR exam. However, accommodations are not a guarantee of improved performance or test completion. ATS and TesTrac provide reasonable and appropriate accommodations to individuals with documented disabilities who demonstrate a need for accommodations.

Test accommodations may include things such as additional testing time, etc. 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, exam candidates must submit a Request for Special Accommodations Form (available online here) with the application, exam fee, and written documentation of the following:

1. A formal diagnosis by a skilled evaluator (e.g. a psychologist)
2. The credentials and documentation of the expertise of the evaluator providing documentation referenced immediately above.
3. Specific findings in support of the diagnosis
4. Current functional limitations
5. Explanation of the specific requests for special accommodations

While the ATS will make every effort to fulfill special accommodation requests, we reserve the right to deny or postpone requests which are not submitted as specified above or which, in the judgment of the ATS, would jeopardize the security of the exam material or the integrity of the scores derived from the exam.

Written notification will be provided to the candidate by email detailing the accommodations and any procedures that must be followed by the test provider.

Rules for Examination

1. Prior to the day of testing, you MUST re-enter the exam site and click on “Open Test Portal” to connect to Examity to setup your security profile and test your computers compatibility.
2. On testing day, re-enter site and click on “Open Portal” to connect to Examity to begin your test. Please enter at least 15-minutes before testing.

3. If you need support from Examity, please call 855-392-6489.

4. NOTE: ATS candidates do not attempt to book a reservation and attempt the testing in a tight time-frame. Give yourself a couple of hours to set up security profile and upload your government issued photo ID.

5. No electronic devices (including cellular phones, pagers, Bluetooth devices, smart watches, cameras, voice recording devices, MP3 players, and tablets) may be brought into the testing area or used during the exam.

6. No books, papers or reference materials may be taken into the exam room.

7. No questions concerning content of the exam may be asked during the exam session. The exam candidate should read the directions that are provided on the screen at the beginning of the exam session carefully.

8. Exam candidates are strictly prohibited from leaving the testing room while the exam is in session. Upon approval by the ATS and receipt of initial email from the ATS, TesTrac will send an email to the CSTR Exam Candidate within 5 additional business days with scheduling instructions. All exams must be scheduled online through the Examity test portal. All emails will be sent to the email address provided on the exam application.

**Report of Results**
CSTR Exam candidates will be notified immediately of the score of the exam. The passing score is 75%. Successful candidates will receive certification credentials from the ATS by mail within 4 weeks of testing date. Materials will be mailed to the address provided on the application listed as “home address.”

**Re-Examination**
The certification examination may be taken up to 3 times per year. A new application and fee must be completed for each attempt. It is recommended that candidates wait at least 1 month between testing attempts, to allow for studying, application process, and test scheduling.
Exam Content

The CSTR Exam is a computer and web-based exam composed of 250 multiple-choice, objective questions with a total testing time of four hours. The content of the exam is described in the Content Outlined below. Unless otherwise specified, definitions are based on National Trauma Data Standard. The questions for the exam are obtained from individuals with expertise in trauma registry and are reviewed for construction, accuracy, and appropriateness. The ATS, with the advice and assistance of TesTrac, prepared the exam. The CSTR exam covers four domains including: data management, conditions of injury, coding and scoring concepts, and registry issues.

Exam Outline

1. Data Management
   a. Inclusion Criteria
      i. American College of Surgeons
      ii. County, regional, and state requirements
      iii. Trauma center specific requirements
   b. Data
      i. Identification of required data elements/points
      ii. Data entry and validation
      iii. National, county, regional, and state requirements
      iv. Data definitions
      v. Data structure
   c. Reporting
      i. Essential data elements
      ii. Report terminology (e.g., query)
      iii. Report output types (e.g., tables (dashboard and others) and graphics (graphs, charts, plots))
      iv. Interpretation (e.g., volume, trends)
   d. Performance Improvement, and Patient Safety
      i. Hospital events (e.g., hospital specific, American College of Surgeons, National Trauma Data Bank, Trauma Quality Improvement Program)
      ii. Opportunity improvement
      iii. PI Process (e.g., identification of issues, review of issues, corrective action, result evaluation)
      iv. Loop closure (e.g., result evaluation)
   e. Maintenance of Registry
      i. Installation of updates
      ii. Password protection
      iii. Mapping
      iv. Backup procedures
   f. Electronic Data Transfer (e.g., uploads, downloads, submissions)
   g. Confidentiality (e.g., release of data, password protection, encryption, HIPAA)
   h. Statistics (e.g., M-Score, Z-Score, W-Score)
      i. Population of demographics
      ii. Sampling (e.g., queries, populations, etc.)
      iii. Benchmarking and risk adjustment (established models)
      iv. How to apply appropriate metrics (e.g., frequencies, averages, percentages, ranges, rations, standard deviations)

2. Conditions of Injury
   a. Anatomy and Physiology
      i. Gross human anatomy
      ii. Trauma physiology (e.g., blood pressure, temperature)
      iii. Patterns of injury (e.g., flat check, chance fractures, pedestrian injuries, battle signs, non-accidental trauma)
      iv. Sequelae
   b. Testing
      i. Radiology identification (e.g., plain films, Ultrasound, CT scan, MRI, Other)
      ii. Lab studies (e.g., toxicology, chemistry, hematology, microbiology, other)
      c. Interventions medical/surgical interventions across all phases of care (e.g., airway management, fluid/blood administration)

3. Coding and Scoring
   a. Basic Guidelines and Coding Conventions
      i. Source of documents of injury (e.g., nursing documentation, H&Ps, autopsies)
   b. Abbreviated Injury Scale (AIS)
      i. Concepts and principles whole area vs specific
      ii. Derivations of injury severity score
   c. Current ICD-xx-CM/PCS
      i. Clinical modification (ICD-xx-CM)
         (e.g., diagnoses codes, external cause codes)
      ii. Procedure coding system (ICD-xx-PCS)
   d. Injury Scoring
      i. Injury severity scoring (ISS)
      ii. Revised trauma score (RTS)
      iii. Glasgow coma scale (GCS)
      iv. Probability of survival (TRISS)
   e. Other Scoring Tools (e.g., GCS 40, FIM, WEE-FIM)

4. Trauma Systems
   a. Trauma Prevention
   b. Trauma Center Levels
      i. Team response highest level activation
      ii. Verification vs designation
   c. Trauma Team (e.g., staffing, trauma program team composition)
Exam Preparation

Responsive Practice Questions (RPQs)
The ATS offers prospective CSTR candidates the option of taking the Responsive Practice Questions (RPQs) prior to taking the certification exam. The RPQs provide an experience to review examples of the types of questions and content areas included in the CSTR Exam. The RPQs provide an opportunity to learn more about the question format, style, and level of difficulty. The RPQs consist of over 140 questions which include but are not limited to multiple-choice, fill in the blank, true or false, and matching. The RPQs have a 30 day start to completion timeframe. Content includes the following areas: data management, conditions of injury, coding and scoring concepts, and registry issues. After completing the RPQs, you will receive an instant score report showing performance in each of the content areas. In addition, if any questions is answered incorrectly, an automatic response will be provided which will include the correct answer and an explanation of the answer.

NOTE: Performance on the CSTR RPQs may differ from actual performance on the CSTR Exam. Thus, there is no guarantee that taking the RPQs will help you pass the CSTR Exam. Participants may find it helpful to review content in the areas of weakness indicated on the score report prior to taking the exam.

Fee: $65 ATS Members
     $85 Non-Members

ATS Trauma Registry Course (Live, Virtual or On-Demand)
The Trauma Registry Course (TRC) provides a more standardized understanding of the specialty and approach to the task of maintaining a trauma registry for trauma registry professionals. Lectures are designed to build upon experience, program maturity, and institutional needs. In this manner the TRC is designed and appropriate for trauma registry and data professionals of all levels of experience. The TRC provides the student with national standard definitions and methodologies essential to a comprehensive trauma registry. For over 20 years the ATS TRC has been recognized by the American College of Surgeons in the Resources for Optimal Care of the Injured Patient since 1999 as an avenue for comprehensive trauma registry training.

The comprehensive course agenda includes the following:
1. Trauma Registry Basics
2. Anatomy and Terminology
3. General Coding Principles
4. E-Coding
5. Scoring Principles
6. ICD-10-CM/PCS
7. Chart Abstraction and Data Procurement
8. Reports
9. Performance Improvement/Patient Safety
10. Computer and Electronic Technology
11. Confidentiality and Security
12. Data Validation
13. National Trauma Data Bank

Fee:  
ATS Members  $585  
Non-Members  $690

**Maintaining Your Certification**
Candidates who pass the certification exam are eligible to use the registered designation CSTR. A record of professionals who possess the CSTR credential will be maintained by the ATS and may be reported in its publications.

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

**Recertification**
To apply for recertification through continuing education, 32 contact hours of continuing education (CE) related to trauma registry practice must be submitted for consideration. A minimum of 32 contact hours be in the areas of (I) Data Management, (II) Conditions of Injuries, (III) Coding and Scoring Concepts, and (IV) Registry Issues. All CEs must have been completed during the four years prior to recertification. These CEs may be accumulated in any combination of the following:

1. Continuing Education Programs: These may include workshops, seminars, professional development courses, home-study courses, and state or national conferences.
2. Academic Courses: Each individual academic credit will be considered as ten CE hours. Courses may be undergraduate or graduate level and a transcript of successful completion must be provided.
Candidates who pass the certification exam are eligible to use the registered designation CSTR. A record of professionals who possess the CSTR credential will be maintained by the ATS and may be reported in its publications.

Candidates must include documentation of all CEs awarded. The CE certificates must include the following: applicant name, CE provider/sponsor, date completed, number of CEs received, and program title. Recertification applications must be submitted no less than 30 days prior to expiration date. Candidates will be notified of application evaluation within four week 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 lapsed more than six months past the certification expiration a candidate must meet current eligibility requirements and re-take the CSTR exam.

Fee: $100  ATS Members  
$165  Non-Members

Certification is recognized for a period of four years at which time the candidate must meet continuing education requirements or re-take and pass the CSTR exam.

Renewal Notices
ATS sends CSTR renewal reminders by email. It is important to always keep your contact information current in your ATS profile as notices will be sent to the email on file. Thus, the ATS does not guarantee receipt of renewal notices, it is the candidate’s responsibility to apply for renewal of certification before the application deadline date. If you have unsubscribed from bulk emails or use a workplace email address, you may not receive email messages as intended. Please use a personal email address, or request your employer.

Revocation of Certification
The occurrence of any of the following actions will results in the denial, suspension or revocation of the Certification by the ATS:
1. Falsification of information on initial or recertification application(s).
2. Cheating on the CSTR exam.
4. Failure to meet certification or recertification criteria.
5. Failure to supply requested material by the deadline.
6. Failure to pay any appropriate and required fees.
No fees will be refunded if the recertification is denied. If CSTR recertification is denied, depending on reason for denial, an applicant may appeal the decision. The ATS Trauma Registry and Data Council (TRDC) provides the appeal mechanism for challenging revocation of the certification. It is the responsibility of the individual to initiate this process.

An appeal must be submitted in writing to the ATS TRDC within 30 days of recertification denial notification. The appeal shall state specific reasons why the candidate is entitled to 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 and may be released. The following information is not of public record and cannot be divulged without written permission of the applicant:
1. Exam enrollment status
2. Exam score
3. Number of exam attempts
4. Number of activities listed in continuing education registry
5. Personal information, such as contact information.

**ATS Membership**
Membership in the American Trauma Society is not required for certification or recertification. If you fulfill the eligibility requirements and your membership dues are paid prior to or at the time of application for the exam, then you are eligible for the ATS member rate.

To join the ATS, enroll online at www.amtrauma.org or call the ATS Membership department at 800-556-7890 ext .1701.

**ATS Contact Information**
For answers to questions about the certification process visit the ATS website or contact the ATS Education and Certification department at education@amtrauma.org or call 703-538-3544 ext. 2.