National Registry of Emergency Medical Technicians® THE NATION'S EMS CERTIFICATION

Policy Name	Examination Development	
Policy Number 61.07		
Approval Required By Board of Directors		
Version Number 01		
Version Effective Date	TBD	

Intent

The Examinations Content Administrator, Standards and Examination Committee, and Test Development Councils, Task Forces, and Item Writing Workshops for each certification work in partnership with psychometrician(s) to ensure all National Registry examinations are developed and maintained in a manner consistent with generally accepted psychometric principles, recognized educational testing standards and practices, and accreditation standards for certification programs.

Scope

Establishes the development process used for all National Registry examinations.

Definitions

Not applicable

Policy

All National Registry examinations are developed and maintained based on approved examination specifications using the process outlined below.

Frequency

Examination development activities are conducted annually, or more often as needed; to maintain a sufficient item bank for each certification and launch new test forms, as needed; to ensure adequate security and maintain accreditation compliance.

A schedule or timeline for key examination development activities is developed and updated annually.

Item Writing

Each Item Writing Workshop develops examination items, scenarios, skill evaluation sheets, and skill evaluator instructions as assigned. Items for each examination are directly linked to the approved examination specifications/content outline for the examination.

All Item Writing Workshop members sign confidentiality agreements and receive sufficient training prior to participating in item writing activities.

Item Review

Each Test Development Council reviews, edits, and approves examination items as assigned.

All Test Development Council members sign confidentiality agreements and receive sufficient training prior to participating in item review activities.

Item Development Meetings

Item writing and review activities may occur during in-person meetings and/or via teleconference/ screen sharing or other technologies that allow everyone present to participate fully, items to be seen by participants, and for all participants to be heard. To ensure that the content of the examinations remain relevant and accurate, all items and scenarios are reviewed every time new evidenced-based guidelines are released as well as every time a new Practice Analysis is conducted.

<u>Item Bank</u>

An item bank is maintained for each examination.

The Examination Content Administrator ensures item bank oversight. Item banking may be outsourced to a vendor.

Examination Form Assembly and Approval

Examination forms are assembled by the psychometrician to meet examination specification requirements with respect to content and weighting. Program Managers and/or the Test Development Council members are responsible for reviewing and approving examination forms prior to launch, or for approving items for CAT examinations.

Retired Items

Items permanently retired from use may be used for practice tests or as sample questions. Once an item has been retired and published it cannot be used on any examination.

Item Exposure

The Standards and Examination Committee, based on recommendations from the Test Development Councils and the psychometrician, develop a schedule to establish the number of test forms and the frequency for developing and releasing new examination forms for each certification. This schedule is determined based on factors including examination volume and the risk associated with item overexposure.

For linear exams, in any given year, at least two forms of each examination should be available so that failing candidates will re-test on a different examination form. The psychometrician will determine the amount of acceptable overlap across examination forms, if an overlap is deemed necessary.

A sufficient number of forms for the psychomotor examinations should be available to ensure administration security and so that failing candidates will re-test on a different examination form / set of scenarios.

Item performance statistics will be monitored by the psychometrician for any signs of item overexposure. If evidence warrants, examination forms may be replaced earlier than scheduled.

Skill Sheet and Scoring Rubric Development

Skill sheets are developed, reviewed and revised by Program Managers, Psychometrician(s), and Subject Matter Experts for any new psychomotor station, or every time a determination is made that new skill sheets are required (e.g., new evidence-based guidelines). The skill sheets are developed in accordance with best practices in the testing industry and the required accreditation standards.

Establishing a Passing Standard

The passing standard for each examination is established using a criterion-reference technique. Trained Standard Setting Task Force members, working with the psychometrician, develop a recommended passing standard. The passing standard recommendation is considered by the Standards and

Examination Committee. The Standards and Examination Committee is responsible for reviewing the examination passing standard for each examination and referring the passing standard to the Board of Directors for approval.

Specific methodologies for establishing examination passing standards and ensuring test forms are equivalent are selected and documented by the psychometrician based on compliance with accreditation standards. As such, a standard setting study is conducted for new examination forms developed following practice analysis studies and the resulting revisions to the examination specifications to establish the passing standard for the base forms. The passing standard for subsequent test forms is equated to the base forms.

The process used to determine the passing standard for each examination is documented as part of a technical report. Any adjustments to the recommended passing standard made by the Standards and Examination Committee are documented in the report along with the rationale for such changes.

Item and Test Form Analysis

Performance statistics are calculated and retained for examination items and examination forms. A statistical analysis is performed by the psychometrician at the conclusion of each publication cycle. As needed, items may be removed from scoring or other adjustments made, as approved by the psychometrician.

Measures of interrater reliability will be used to identify levels of consistency across examiners, whenever possible.

Rationale

The National Registry promotes valid and reliable decisions based on examinations and mitigates liability by ensuring all examinations are developed and maintained in a manner consistent with generally accepted psychometric principles, recognized educational testing standards and practices, and accreditation standards for certification programs.

Related Policies and Procedures

61.01 Examination Development Task Force, Council, and Workshop Structure

61.02 Examination Development Roles and Responsibilities

- 61.05 Practice Analysis
- 61.05.01 Practice Analysis Procedures
- 61.05.02 Examination Specifications
- 61.07 Item Writing
- 61.07.02 Item Review
- 61.07.03 Form Assembly
- 61.07.04 Form Publishing
- 61.07.05 Standard Setting
- 61.07.06 Item and Test Form Analysis

61.07.07 Pilot Items

61.07.08 Item Parameter Drift

References

Document History				
Version #	Approval date	Effective date	Revision Summary	
01	x.xx.xxxx	x.xx.xxxx	Policy created and approved	