



Subject Examination Program

INFORMATION
GUIDE

*Available
Globally*



High-Quality Assessment Tools for Use in Medical Education

SUBJECT EXAMINATION PROGRAM

Transition of Paper Basic Science Subject Examinations to a Web-based Format

The NBME is transitioning its subject exams to a web-based format. In addition, several new subject examinations which are available in a web format only have been introduced.

All basic science subject examinations are now available in either web or paper format; the clinical science subject tests will be available in both formats by July 2011. **Examinations delivered in both web and paper formats are identical in content.**

After the transition phase is complete, new forms of all subject examinations will be implemented only as web-based tests. Paper subject examinations will continue to be available, but by 2015 it is likely that the NBME paper subject examinations will be phased out.

Table of Contents

Mission of the Program	2	Score and Analytical Reports	9
Background	2	Scoring, Scaling, and Equating of Exams	9
Subject Exam Program Goals	2	<i>Scaled Scores</i>	9
Policy on Use of Subject Exams	2	<i>Percent Correct Scores</i>	9
Executive Chief Proctor (ECP)	3	Score Report Components	10
Primary Responsibilities of the ECP	3	Score Interpretation Guide	10
Security of Exams	3	USMLE Equivalents for Comprehensive Exams	10
<i>Paper Exams</i>	4	Norm Tables	10
<i>Web-based Exams</i>	4	Grading Guidelines	10
Description of Subject Exams	4	Item Analysis Reports	10
Content Outlines and Sample Items	5	Performance Profiles	11
Description of Item Forms	5	<i>Individual Performance Profiles</i>	11
List of Subject Exams	5	<i>Summary Performance Profiles</i>	11
NBME Services Portal (NSP)	6	Year-End Reports for Clinical Science Exams	11
Online Ordering System	6	Accessing Score Reports on NSP	11
Online Ordering of Exams	6	<i>Paper Exam Score Reports</i>	12
<i>Placing Orders for Paper and Web Exams</i>	6	<i>Web Exam Score Reports</i>	12
<i>Revising and Cancelling Orders</i>	6	<i>Year-End Reports</i>	12
Payment Policy and Procedures	7	Score Reporting Processing	12
<i>Billing Accounts</i>	7	<i>New Forms of Existing Exams</i>	12
<i>Exam Fees</i>	7	<i>New Exams</i>	12
<i>Payment Terms</i>	7	<i>Transition from Paper to Web</i>	12
<i>Payment Options</i>	7	Agreement Analysis for Irregular Behavior	13
Administering Subject Exams	7	Score Recheck Service	13
Administration Support	8	Research	13
Examinees with Disabilities	8	Faculty Review of Subject Exams	13
<i>Arranging for Enlarged Print Exams</i>	9	Additional Resources	13
<i>Arranging for an Audio Version of a Paper Exam</i>	9	Contact Us	14
<i>Requesting an Additional Time Web Exam</i>	9		

SUBJECT EXAMINATION PROGRAM - OVERVIEW

This guide provides general information about the Subject Examination Program offered by the National Board of Medical Examiners® (NBME®).

Mission of the Program

The primary mission of the NBME Subject Examination Program is to serve medical education by providing high-quality assessment tools as well as information and assistance to medical educators. NBME subject exams are achievement tests in a broad sense, requiring medical students to solve scientific and clinical problems. Although students' performance on the exams will reflect the learning specific to their course and clerkship experiences, their test scores will also reflect educational development resulting from their overall medical school experiences. These exams are constructed to be appropriate for a broad range of curricular approaches.

Background

The NBME offers standardized, objective, discipline-based exams for use in assessment throughout the medical school curriculum. The exams are designed to provide institutions with effective evaluation tools and useful examinee performance data that can be compared with a large representative group of examinees at the same stage of training. Subject exams are cost-effective, available globally, and provide faculty with valuable feedback on the performance of their examinees.

Subject exams are developed and reviewed by committees of content experts following the same rigorous protocol used to build Step 1 and Step 2 Clinical Knowledge (CK) of the United States Medical Licensing Examination® (USMLE®). NBME subject exams have distinct advantages over locally constructed exams in the assessment of student achievement:

- The exams provide national norms and relevant descriptive information. These norms reflect the performance of examinees from Liaison Committee on Medical Education (LCME)-accredited medical schools.
- Items are selected only after extensive review and pretesting.
- Item formats are similar to those used on Step 1 and Step 2 CK.

- The exams concentrate heavily on application and integration of knowledge rather than on recall of isolated facts. Many items are framed in the context of clinical vignettes.
- Multiple forms of each exam are available for use in successive courses or clerkships.
- Several basic science exams are divided into modules to accommodate course structure.

NBME subject exams are intended to complement other sources of information about the educational progress of medical students and others who take these exams. The results of NBME subject exams should not be viewed as the beginning and end of evaluation. They should be interpreted in light of other available information, just as curriculum evaluation cannot be based on exam results alone. The quality of teaching can and should be evaluated by frequent peer observation and personal feedback, not inferred solely from the level of test scores.

Subject Examination Program Goals

Our multifaceted program goals are to provide:

- high-quality assessments that are efficient and cost effective
- new forms of assessment that promote improvements in learning and instruction
- opportunities to conduct and disseminate research that informs faculty and policy makers and promotes their understanding of assessment
- information on student educational accomplishments to help advance educational improvement and equity
- support services for a range of assessment and educational programs

Policy on Use of Subject Examinations

The NBME provides subject exams in the basic and clinical sciences for the purpose of assessing the educational achievement of individuals in specific content areas. These exams may be provided to



medical schools and other institutions with a legitimate interest in the education of physicians or other health professionals. All institutions using these exams must comply with test administration standards, including security protocols.

Subject exams are primarily designed for use as final exams after courses, clerkships, or other units of instruction. Scores achieved on NBME subject exams **cannot** be used by examinees for credit toward the examination requirements for medical licensure in the United States.

The Executive Chief Proctor (ECP)

The NBME requires that a single individual be designated to oversee all NBME examination services used by an institution.

At medical schools, the ECP is nominated by the dean and approved by the NBME. The ECP role is usually filled by someone in the Dean's Office (eg, an associate dean) who has a commensurate level of authority. At residency programs or other organizations, these responsibilities may be carried out by a designated individual approved by the NBME.

Primary Responsibilities of the ECP

ECP responsibilities will vary according to the exam service provided.

The following list outlines the primary duties of the position:

- Ensure the security of all exam materials.
- Oversee administrative tasks for the local provision of services, particularly online ordering of all exams.
- Ensure that all staff responsible for administering exams prepare for and conduct the test sessions in strict compliance with the procedures and regulations outlined in the *Test Administration Handbook* and *Chief Proctor's Manual*.
- Establish and monitor local financial accounts for services.
- Nominate an Associate Executive Chief Proctor (AECPP) for any location other than the main institution where subject exams are also administered.

NOTE: If your institution would like to administer subject exams at other campuses, the ECP **must** designate an AECPP to receive and return test materials and administer the exams at the campus location. AECPPs must follow the same procedures as ECPs to maintain the security of test materials.

Security of Examinations

To ensure the integrity of the NBME Subject Examination Program and the validity of the scores reported, it is essential to maintain the security and confidentiality of test materials at all times. All items used in NBME subject exams are owned and copyrighted by the NBME. Any reproduction of these materials, in whole or in part, by any means including, but not limited to, photocopying, dictation, or memorization, and/or dissemination of these materials is strictly prohibited. Appropriate action, which may include legal proceedings, will be taken to enforce copyright. The NBME retains the right to discontinue subject examination services in the event of a breach or suspected breach in the security of test materials.

PAPER AND WEB-BASED SUBJECT EXAMINATIONS

Paper Examinations

To maintain the security of the test materials, specific procedures for administration of paper subject exams have been established by the NBME. Individuals authorized to have custody of paper subject exams (the ECP, AECP, or department staff authorized to administer the tests) are required to be familiar with NBME regulations governing use of this material and to abide by and enforce the regulations as outlined in the *Test Administration Handbook* and the *Chief Proctor's Manual*. The *Test Administration Handbook* is a general guide of best practices for administration of NBME subject exams. A *Chief Proctor's Manual* is also included with each shipment of test materials.

For security reasons, subject exam administrations should take place on the date originally requested and acknowledged by the NBME. Test books should not be held for delayed administration to students who could not be tested on the scheduled date. This practice increases the risk of a breach in the security of the test materials and could compromise the validity of scores reported for the delayed administration.

While your institution may allow students to retain test materials from faculty-developed exams, this is *not* the case with NBME subject exams materials. Test books must be collected from every examinee at the conclusion of each test administration and returned to the NBME.

Web-based Examinations

Web-based exams must be administered in a secure, proctored setting. The Chief Proctor (CP) will have access to a centralized Chief Proctor Resource Site, which houses all the system applications in support of test administration. The CP must conduct the exam in strict compliance with the procedures outlined in the *Chief Proctor's Manual*.

The NBME provides a web-based utility that checks both hardware and software configurations and downloads a plug-in that “secures” the browser. The computer is “locked down,” preventing the examinee from accessing applications such as e-mail or notepad.



It also includes a function designed to detect any applications and programs that may be running on workstations or examinees’ personal laptops.

Description of Subject Examinations

The **Basic Science and Clinical Science Examinations** are designed to assess performance at the end of a course, clerkship, or other unit of instruction.

The **Introduction to Clinical Diagnosis Examination** is designed to measure student performance at the end of history-taking and physical diagnosis courses.

Adult Ambulatory Medicine and Adult/Pediatric Ambulatory Medicine Examinations were developed in collaboration with the Clerkship Directors in Internal Medicine and a task force of clinical faculty from several US medical schools. They are intended for assessment at the end of an ambulatory clerkship in the third or fourth year.

Advanced Clinical Examinations: Internal Medicine and Surgery Examinations (formerly subinternships) are designed to measure the effectiveness of the fourth-year internal medicine and surgery subinternship experiences. NBME staff members collaborated with a task force of clinical faculty from medical schools and teaching hospitals to develop these exams.

Comprehensive Examinations: the **Comprehensive Basic Science Examination** and the **Comprehensive Clinical Science Examination** are achievement tests covering material typically learned during basic science education and core clinical clerkship. They reflect the

SUBJECT EXAMINATION CONTENT OUTLINES AND ITEM FORMATS

content of the USMLE Step 1 and Step 2 CK and are typically used to identify areas of strength and weakness prior to taking USMLE.

The **Musculoskeletal Examination** was developed in collaboration with the 2002-2011 United States Bone and Joint Decade for the subject examination program. The Bone and Joint Decade is an independent, global, nonprofit organization with a mission to improve the health-related quality of life for people affected by musculoskeletal disorders. The exam is intended for those who have completed third-year required clerkships and who may have recently taken a musculoskeletal-related rotation.

Content Outlines and Sample Items

Subject exam outlines developed by NBME committees of content experts are used to construct each test. Items are selected based on content and performance statistics. The final form of each exam is reviewed and approved by the appropriate committee chair prior to release. Multiple forms of each exam are typically available at any time so that alternate forms may be used for successive courses and clerkships or for makeup exams. **Content outlines and sample items are available for both paper and web exams on the NBME website under *Services for Schools and Residency Programs* at www.nbme.org.** Use of sample materials is intended for exam preparation or practice by individuals who are scheduled to take the exams.

Item Formats

For all examinations: In keeping with USMLE trends, test designers have increased emphasis on application of knowledge rather than recall of isolated facts for all subject exams. Clinical science items are framed in the context of clinical vignettes, and this is increasingly true for the basic science disciplines.

One-best-answer (A-type) items, used in all subject exams, make explicit the number of options to be selected and are the most widely used multiple-choice item format. Each item consists of a focused item stem (eg, a clinical vignette) and a lead-in question, followed by a series of options with one correct answer for each item.

Extended-matching (R-type) items are also used in the clinical science exams and in the Comprehensive Clinical

NBME SUBJECT EXAMINATIONS

Basic Science

Behavioral Sciences

Biochemistry

Gross Anatomy only

- *Gross Anatomy + Embryology*

- *Gross Anatomy + Embryology + Human Developmental Biology*

Histology and Cell Biology

Microbiology only

- *Microbiology + Immunology*

Neuroscience only

- *Neuroscience + Neuropathology*

- *Neuroscience + Neuropathology + Psychopathology/ Psychopharmacology*


Pathology


Pharmacology



Physiology only


- *Physiology + Neurophysiology*

Clinical Science

Adult Ambulatory Medicine 

Adult/Pediatric Ambulatory Medicine 

Clinical Neurology  

Family Medicine 

Family Medicine Modular 



- *Core only*


- *Core + Chronic*



- *Core + Musculoskeletal*

- *Core + Chronic + Musculoskeletal*



- *Core + Chronic + Musculoskeletal + Obstetrics*


Medicine  

Musculoskeletal 

Obstetrics and Gynecology  

Pediatrics  

Psychiatry  

Surgery  

Advanced Clinical Examinations

Internal Medicine

Surgery


Comprehensive Examinations

Comprehensive Basic Science

Comprehensive Clinical Science

Introduction to Clinical Diagnosis

 *Paper and pencil exam*

 *Web-based exam*

Exams delivered in both paper and web formats are identical in content.

NBME SERVICES PORTAL AND ONLINE ORDERING

Science Examination. Extended-matching items are organized into sets that use one list of options for all items in the set. Examinees are instructed to select the one best answer.

F-type (unfolding) items are used in the Internal Medicine and Surgery advanced clinical web-based exams. These are formatted as sequential item sets that unfold and challenge examinees to manage patients over time. Examinees are instructed to select the one best answer.

The NBME Services Portal (NSP)

Services and reports related to subject exams are available through the **NBME Services Portal (NSP)**. This is a secure website and a primary source for authorized users to obtain information about their students for a variety of activities related to USMLE, NBME subject exams, and other services. It provides access to the Online Ordering System, Customized Assessment Services, and subject exam score and year-end reports.



A major feature of the NSP is the capability for an institution to create and manage its own users and to assign privileges to access specific areas of the portal. Each institution has at least one User Account Manager who is accountable for assigning users the privileges they need to access areas of the portal appropriate for their responsibilities.

Online Ordering System

Subject examination program services for all exams are requested through the Online Ordering System. The online ordering system allows the user to enter order

information, select one of four different payment methods, review the status of orders and receive e-mail notifications at specific points during the ordering cycle.

Online Ordering of Examinations

Detailed information and instructions for ordering both paper and web exams are available in the Online Ordering System. Essential ordering information for each type of exam is listed below:

Paper exams must be ordered in a time frame that allows sufficient time for processing and shipment of test material.

- Orders may be placed up to and including 22 calendar days prior to the test date.
- Orders cannot be placed online within 14 calendar days of the test date.
- An expedited order fee is charged for orders placed 15-21 calendar days before the exam date.
- New order requests within 5 calendar days of the test date cannot be honored.
- All orders lock 21 calendar days before the test date.

Web exams must be ordered in a time frame that allows the NBME to schedule administrative and technical support for the test date.

- Orders may be placed up to 6 calendar days prior to the test date.
- Orders cannot be placed online within 5 calendar days of the test date.
- Orders lock 5 calendar days before the test date.

Revising and Cancelling Orders

- All examination orders can be revised or cancelled any time prior to the lock date.
- After the lock date, the NBME must be contacted to make order changes.
- A fee will be charged if an order for a paper subject exam is changed after the lock date.

BILLING ACCOUNTS, PAYMENT TERMS AND ADMINISTERING EXAMS

Payment Policy and Procedures

Billing Accounts

The NBME requires that accounts be set up for the purpose of applying fees received and for computing any credit or payment due after scores have been reported.

There are two types of accounts: an institutional or **ECP Account**, which is required, and **department accounts**, which are optional. Typically, these accounts reflect funding sources at an institution. **Accounts carry credits only – no refunds are provided.**

The NSP features a “My Billing Accounts” portlet through which those who order or arrange for payment of exam services can view up-to-date information about the status of invoices, access monthly summaries, and pay for services directly.

Exam Fees

The fee per examinee is the same for both paper and web subject exams. However, for web exams, there is a test administration support fee for each order. **Current fees for subject exams are listed on the NBME website under *Services for Schools and Residency Programs: Subject Examination Fees* at www.nbme.org.**

Payment Terms

NBME policies for payment are as follows:

- Prepayment of invoices generated for NBME exam services is due upon receipt.
- **Payment must be received by the NBME prior to the scheduled test date.**
- Payment must be in US currency only.
- Checks and/or money orders from examinees will not be accepted.
- No refunds are provided.
- Score reports will not be released unless payment for an order has been received.
- If an account accrues more than \$1,000 in invoices that remain unpaid for 91 days following the test date, all score reports associated with that account will be held until the account is brought current.

This applies even if other orders for that account were prepaid.

Payment Options

Payment for exam services may be made by:

- Credit card (Visa or MasterCard only)
- Check or money order
- Wire transfer
- Institution account with a credit balance

Administering Subject Examinations

The ECP has overall responsibility for management and planning of the test administration events for both paper and web-based exams. The ECP is also required to recruit Chief Proctors and other support staff as required to perform the tasks necessary to ensure a successful and secure test administration.

Paper Administrations

Test materials are shipped to the ECP or to the AECP to arrive several days prior to the scheduled test date. Upon receipt of a shipment, the ECP, AECP, or designated staff should open the box as soon as possible to verify that the shipment is complete and then reseal and store the materials in a secure location until the test date.

The NBME must be notified **immediately** if a discrepancy in the number of test books is found at any time before, during, or after test administration, or if any breach in security is suspected.

The ECP/AECP may personally direct the test administration or release the exams to the department for administration. The ECP/AECP must assure that department staff administers the exam according to the procedures specified in the ***Test Administration Handbook*** and the ***Chief Proctor's Manual***.

The ***Chief Proctor's Manual***, included with each shipment, provides the information necessary to administer a subject exam according to standardized procedures and maintain security. This ensures that all examinees have the same opportunity to demonstrate

TEST ADMINISTRATION SUPPORT

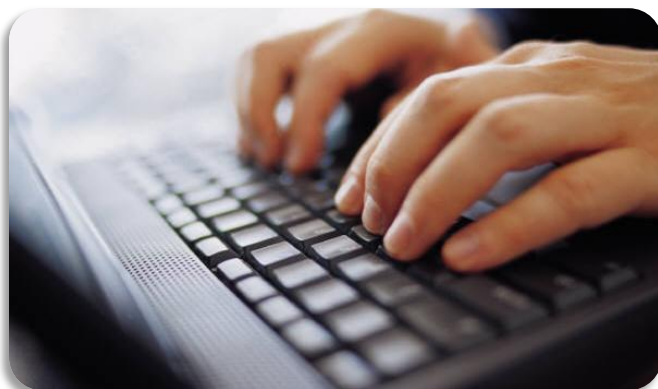
their understanding of the topics covered by the exam. Strict compliance with these instructions is required.

Test books are to be opened only by the examinee at the time of the administration. Faculty are not permitted to review used or unopened test books. An answer sheet is enclosed in each test book. Each examinee must write his/her name, a unique identification number, birth date, and test book number on the answer sheet. This information is needed to ensure accurate score reporting and to provide data for analyses. The Examinee Acknowledgement Statement at the top of the answer sheet must also be signed. Any unsigned statements will cause a delay in reporting scores.

Web Administrations

The NBME provides the tools necessary to administer a web-based exam in a secure, proctored setting. These features include:

- A centralized **Chief Proctor Resource Site** that provides resources to support all test administration tasks associated with the test administration cycle. This includes access to the **Chief Proctor's Manual**, tutorials, a practice exam, and features for managing the test session online.
- Software that “locks down” the browser during testing, preventing examinees from accessing any other applications (such as e-mail or notepad), during the test session.
- An automated compatibility check that ensures every computer used for testing purposes is properly configured to deliver the exam.



A variety of test delivery environments are supported: both wired and wireless networks, PC and Mac operating systems and laptops or fixed workstations. Also, it is possible to schedule multiple separate testing sessions on the same day or to run testing sessions in different buildings or at separate campuses at the same time.

Administration Support

Paper Examinations

NBME staff will be available for test administration support for paper subject exams from 8:00 AM to 5:00 PM US Eastern Time. If you have any questions during a paper administration, please contact us at **SubjectExams@nbme.org** or **(215) 590-9258**.

Web Examinations

NBME staff will be available for test administration support on your test date to respond to technical or procedural issues that may arise. NBME support hours are shown in the table below.

NBME Test Administration Support Hours		
	US Eastern Time	US Eastern Time (Extended)
Monday to Friday	7:00 AM to 6:00 PM	6:00 PM to 8:00 PM
Saturday/Sunday	—	8:00 AM to 5:00 PM
NBME Holidays	—	—

Note: The NBME supports web-based test administrations scheduled to occur during extended or other hours (exclusive of NBME holidays), but only if the order is placed *at least 15 calendar days in advance of the test date*. Otherwise, the NBME cannot guarantee that support will be available.

Examinees with Disabilities

Individuals with disabilities may be entitled to accommodations under federal and state law, including the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973. If an examinee applies for test accommodations in the administration of a subject examination on the basis of a disability, the school will determine whether any accommodations are warranted, decide what specific accommodations may be reasonable for a particular examinee and bear all costs associated with any such accommodation.

TEST ACCOMMODATIONS FOR EXAMINEES

The NBME will make a good faith effort to provide such reasonable test accommodations that the school determines are warranted for the examinee. For additional information, contact us at SubjectExams@nbme.org or (215) 590-9258.

Arranging for Enlarged-Print Test Books

The request for an enlarged-print test book should be made at the time the order is placed. The request can be made on the same order that is placed for the rest of the testing group.

The enlarged-print test book will be shrink-wrapped with a regular test book (to be used for interpretation of pictorial items) and shipped to the ECP or AECF separately. An additional fee is charged for enlarged print test books.

Arranging for an Audio Version of a Paper Examination

Requests to create an audio version of a subject exam should be made at the time the order is placed and noted in the Comments section of the online order. Two test books will be sent to the school: one for the person doing the oral rendering and one for the examinee. The institution must follow the **Protocol for Oral Rendering of Subject Examinations** as set forth by the NBME. The person selected to record and/or read the subject exam must sign the nondisclosure form provided by the NBME prior to accessing any test materials. The audio version created by the school (e.g., tape or CD) must be returned to the NBME immediately after the test administration.

Requesting an Additional Time Web Examination

Additional testing time forms may be generated upon request. Requests for additional time forms can be placed on the same order form as other exams. Those with visual impairments may use their own screen magnification software or use the browser's text size feature to enlarge the font.

Score and Analytical Reports

The NBME provides a variety of performance feedback depending on the subject exam and mode of administration. Performance feedback includes score reports, item analysis reports, performance profiles, and year-end reports.



Scoring, Scaling, and Equating Subject Examinations

Scaled Scores

Scaled scores continue to be the primary score scale for these exams. For exams that have been administered to a sufficient number of examinees, scaled scores are computed. These scores are statistically equated across exam administrations. Equating practices ensure that all scores have the same meaning on different forms of the same exam, despite potential differences in overall exam difficulty. Scores are scaled to a reference group of examinees from medical schools accredited by the LCME who took the exam for the first time under standard testing conditions. Scaled scores provide a consistent way to measure performance on multiple exam forms administered at the same or different times.

Percent Correct Scores

For exams that have not been administered to a sufficient number of examinees (eg, when new exams or new forms of existing exams are introduced), percent correct scores may be reported initially.

The NBME provides tables for converting scaled scores to percent correct scores for institutions using either the paper or web-based versions of the basic science subject exams. **However, percent correct scores, by themselves, can be misleading – especially when used to compare performance**

across time, different exam forms, or different exam versions (paper or web-based). **For a given version, only scaled scores are interchangeable across time or across different exam forms.**

Score Report Components

For each administration, an alphabetic roster of examinees with corresponding scores, the number of examinees tested, and the number of items scored are provided. The score report set also includes the following:

- score interpretation guide
- norm tables
- grading guidelines (if available)
- summary information
- the roster of total test scaled scores
- content area subscores (if available)

The scores on the roster also appear in a comma-separated text file that can be downloaded and used to export scores. Summary information includes the examinee group tested, the examination purpose, the number of items scored, mean score, and standard deviation. If at least two examinees were tested, descriptive statistics on all scores and a scaled score frequency distribution on the total test score are also provided.

Score Interpretation Guide

A score interpretation guide is available for each subject exam for which scaled scores are computed. It provides detailed information about the computation of scores, including the score scale for the exam and the reference group used to scale the scores. Information about the exam development, precision of scores, score report components, norms, item analysis reports, and performance profiles (if available) is also provided.

USMLE Score Equivalents for Comprehensive Examinations

For the Comprehensive Basic Science and Comprehensive Clinical Science examinations, a table with the approximate score equivalents on the USMLE Step 1 and Step 2 CK scale is also included.

Norm Tables

Norms are provided to aid in the interpretation of examinee performance. These norms reflect the performance of examinees from LCME-accredited medical schools who took the exam for the first time under standard testing conditions. Norms enable you to compare your examinees' performance with a nationally representative group of examinees at the same stage of training. Descriptive statistics on the scaled scores for each norm group are also provided.

Norms for new web exams or web forms of existing paper exams may not be available until they have been administered to a sufficient number of examinees.

Norms for the comprehensive exams are based on the performance of examinees who took them for the first time under standard testing conditions over several academic years.

Grading Guidelines

The NBME provides guidelines for analyzing examinee performance for the clinical science and pathology subject exams. These guidelines assist clerkship and course directors in determining passing and honor grades for their examinees. Periodically, the NBME facilitates a review of the guidelines with faculty members and updates them to assure their continued appropriateness. Grading guidelines are included with the score reports and can also be accessed separately on NSP.

Item Analysis Reports

An item analysis report is provided for any subject exam with at least 10 examinees and for which scaled scores are available. This report provides a keyword phrase or content area description summarizing the content of each item on the exam, the proportion of examinees from your institution, and the projected proportion of examinees nationally that answered each item correctly. Item analysis data and descriptors of the items, when reviewed together, can be helpful in determining the extent to which your examinees have learned the content of individual items.

SUBJECT EXAMINATION SCORES, REPORT COMPONENTS AND PROFILES

These reports are provided for institutional use in assessing the performance of examinees. The written authorization of the NBME must be obtained prior to any additional use of the data (eg, in research papers).

Performance Profiles

Individual Performance Profiles

Individual performance profiles are available for many subject examinations. Profiles are intended for distribution to examinees as an aid in self-assessment and are similar to the USMLE Step 1 and Step 2 CK examinee score reports. For each major content area on the exam, performance bands graphically represent strengths and weaknesses. An examinee version of the **Score Interpretation Guide** is provided with each profile.

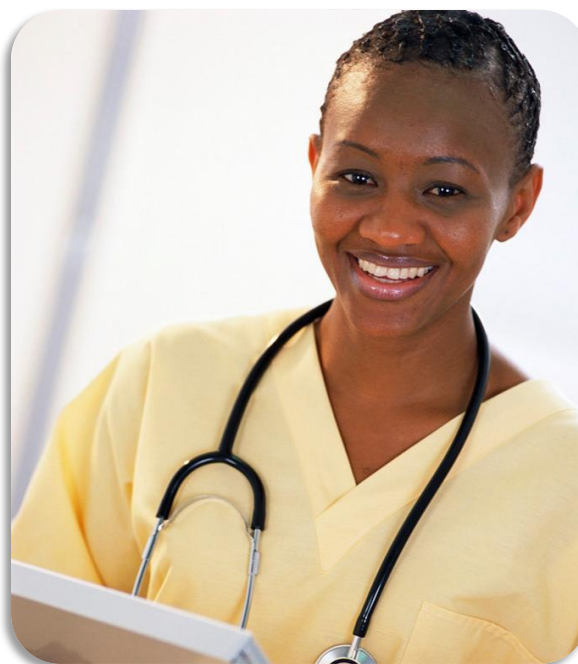
Summary Performance Profiles

Summary performance profiles are also available for many subject exams. The summary performance profile is an aggregate report of examinee performance for the major content areas on the exam for a specific test administration. The score distribution of examinees is presented graphically with performance bands representing strengths and weaknesses in each major content area. This report is provided when there are at least ten examinees.

Year-End Reports for Clinical Science Examinations

The NBME provides year-end reports for most clinical science subject exams to institutions that administered them in the previous academic year. Each report compares the performance of first-time takers from the institution with comparison group examinees from LCME-accredited medical schools who took the exam for the first time under standard testing conditions during the previous academic year.

The year-end report also provides summary information regarding the performance of comparison group examinees divided into several groups as a function of the most common clerkship rotation lengths for that discipline and the clerkship rotation type (traditional



and combined, with one or more disciplines and/or sub-specialties). Each report also includes a table of the most recent set of norms available for the exam based on the previous academic year.

If there were at least 15 first-time takers during the previous academic year, a graph is also included in the report. The graph provides information regarding the performance of first-time takers from your institution on the major content areas of the exam. This information is provided to assist in curriculum evaluation or to address other relevant educational issues.

Accessing Score Reports on NSP

Subject exam scores and related performance reports are available through the NSP after each test administration. Score reports are posted daily on an hourly basis. Access to this feature can be assigned by your institution's User Account Manager.

Subject exam scores will not be faxed or reported by telephone. Score reports will not be posted until payment has been received. Subject exam scores will not be faxed or reported by telephone. Score reports will not be posted until payment has been received.



Score reports for a specific academic year remain on the website for approximately four academic years for all exams. Users will be notified about a month in advance before information is removed to allow time for final download of reports if necessary.

Paper Examination Score Reports

All score reports are usually posted within 5 business days after the NBME receives the completed answer sheets. If this will not allow you to meet grading deadlines, the NBME offers a 48-hour score reporting service for an additional fee. **This service must be requested in advance through the online ordering system.** You will be given specific instructions for the return of answer sheets, and score reports will be posted within 2 business days of receipt of the answer sheets.

Web Examination Score Reports

Score reports are posted within 2 to 3 business days following the close of a test session. **Expedited score reporting is not available.**

Year-End Reports

Year-end reports for clinical science exams are usually posted in November.

Score Report Processing

New Forms of Existing Examinations

New forms are introduced periodically and go through a process of scaling, equating, and quality control before score are posted. In order to complete this process, response data must be collected from initial admin-

istrations of the new form at several institutions. Score report posting usually occurs within three weeks of the close of these initial administrations for institutions that agree to participate in this process. After the initial score report release of a new form, score reports are posted within the usual time frame for paper or web exams.

New Examinations

When NBME introduces new exams, scaled score reporting will be delayed for an indeterminate period of time until sufficient data have been collected. If deemed appropriate, percent correct scores will be reported until the process of scaling, equating, and quality control can be completed. After scaled score reports from initial administrations have been posted, scaled scores will be reported within the usual time frame for web exams.

Existing Examinations in Transition From Paper to Web Format

Existing exams transitioning to the web require additional processing time before scaled score reports can be posted. For initial administrations of basic science web forms, percent correct score reports are posted approximately 1 week following the close of each test session. Scaled score reports will be posted for these initial test sessions as soon as sufficient data have been collected to complete the quality control process. After that, scaled scores will be reported within the usual time frame for web examinations.

Percent correct scores are not reported for comprehensive or clinical science examinations.

For initial web administrations of comprehensive exams, scaled score reports are posted approximately 1 week following the close of a test session. For clinical science web forms, preliminary scaled score rosters will be posted for an indeterminate period of time until sufficient data have been collected to complete the quality control process. Once this process is complete, preliminary scaled score rosters will be replaced with the final scaled score rosters, and complete performance feedback will be posted. Please note that

preliminary scaled score reports are posted for your convenience, and although score changes are unlikely, small changes in score are possible. Preliminary scaled score reporting will be discontinued after final scaled score rosters are generated. For subsequent test administrations, scaled scores will be reported within the usual time frame for web exams.

Agreement Analysis for Irregular Testing Behavior

An agreement analysis may be requested and conducted for a pair(s) of examinees suspected of irregular testing behavior, such as copying or collaboration. Agreement analysis is a statistical tool that can provide helpful, supportive information for the investigation of observed behaviors that may compromise the validity of examinees' scores. The agreement analysis compares the degree of agreement that is observed between the incorrect responses of two examinees (pair) with the degree of agreement that would be expected to occur between two randomly chosen examinees taking the same examination independently. Agreement analysis uses only those items that both examinees in the pair answered incorrectly.

Score Recheck Service

The NBME is confident that each reported subject test score is an accurate reflection of the responses that an examinee marked on the answer sheet for paper exams or recorded in the testing interface for web exams.

This is based on reliable scoring and reporting techniques backed by a variety of quality control and verification procedures. However, if a score is believed to be in error, manual scoring of the answer sheets or a review of the response record generated for a web exam can be requested.

Requests for score rechecks must be initiated by the institution, either by the ECP or appropriate staff in the department (eg, course or clerkship director) administering the test. A **Score Recheck Request Form** is available to download from the NBME website. **Since the Subject Examination Program is a service provided to an institution, the NBME will only accept checks or money orders from the institution. Requests will not**

be processed if the check or money order is provided by the examinee. Results are provided approximately two weeks after receipt of the request. It should be noted that the sole purpose of the score recheck service is to verify that the score originally reported is correct. For paper exams, score rechecks **cannot** be requested to investigate the possibility that an examinee may have recorded responses out of sequence. Paper subject test answer sheets are retained for six months after their receipt by the NBME. Score recheck requests received after that time cannot be accommodated.

Research

Faculty may use performance data for curricular evaluation and medical education research from either the paper or web-based subject examinations. For information contact the NBME at **(215) 590-9259** or **MedicalSchoolServices@nbme.org**.

Faculty Review of Subject Examinations

Medical school faculty or other medical education institution staff may preview an exam to determine if it is appropriate for use.

- A free, online service that allows the review of web-based subject exams is available via the NBME Services Portal.
- A faculty review session for paper copies of the clinical science exams.

For a list of paper and web-based subject exams, reference the chart on page 5.

Additional Resources

The resources listed below are available online at **www.nbme.org**:

- Arranging for and Administering an NBME Web-based Exam
- Best Practices for Web-based Testing on Wireless Networks
- Fees, Payment Options and Policies
- Sample Score Reports

CONTACT LIST

- Subject Examination Quick Guide (details number of items and timing for each exam)
- Subject Examination Content Outlines and Sample Items
- Test Administration Handbook

Contact Us

Please feel free to contact us if you have any questions. Various NBME staff can provide the information you need or help solve a problem.

NBME Contact List	
NBME Billing Accounts and Invoice Questions Only	NBMEAccounts@nbme.org
Operational Support for Paper and Web-Based Subject Exams (<i>questions about ordering exams, faculty review, shipment of test materials and test administration</i>)	SubjectExams@nbme.org 215-590-9258
All Other Inquiries	MedicalSchoolServices@nbme.org 215-590-9259