

X. Examination Development Process

A. General Information

1. Throughout this policy, the term psychometric consultant refers to a firm or individual qualified to provide comprehensive examination development and administration services, under contract to BPS. Currently the psychometric consultant used by BPS is the Professional Examination Service of New York, NY.
2. BPS' psychometric consultant is required to act in the best interests of BPS and its candidates and certificants. Appropriate security provisions are required to be maintained with regard to BPS proprietary information at all times. The psychometric consultant is also responsible for securing appropriate documentation of confidentiality from BPS specialty council members and other subject matter expert volunteers who participate in BPS activities that are managed or conducted by the consultant's staff.
3. Unless specifically stated, all of the policies and processes of BPS and the psychometric consultant described herein apply to every specialty certification offered by BPS.
4. All five BPS specialty certification examinations are currently administered in English only, in paper-and-pencil format, with 200 4-choice multiple choice items per examination. All exams are administered on a single date annually, the first Saturday of October, using a single form of the examination for each specialty. The 200 items are randomly distributed between two books. The first 100 items are administered in a morning session on test day, and the second 100 items are administered in an afternoon session on the same day. Candidates for recertification by examination take only the first 100 items during the morning session.

B. Task Analysis/Role Delineation

1. General Policy

- a. Each BPS specialty examination is supported by a psychometrically sound, legally defensible Task Analysis or Role Delineation Study, which is conducted by an established testing company or consultant, in conjunction with the relevant BPS Specialty Council or other group of subject matter experts convened by BPS or other interested group.
- b. This study is conducted initially when a new specialty is being considered for recognition by BPS, and its findings must be referenced in the Petition for the new specialty which is submitted to BPS.
- c. This study is repeated periodically as needed to ensure that the specialty remains current. Frequency of resurveys depends on the rate of change in practice and other factors, but generally they occur no more than five years apart.
- d. The results of these surveys directly determine the "Content Outline" or "Examination Specifications" of the related BPS specialty examination.
- e. The psychometric consultant issues a comprehensive report at the conclusion of each Job Task Analysis study or update, which includes the following information:

- i. Introduction
 - ii. Methodology
 - iii. Results of the Survey of xxx Practice
 - iv. Development of Test Specifications
 - v. Appendices, including Survey Instrument, Narrative responses, Survey user comments, etc.
- f. An Executive Summary of the Job Task Analysis report is made available by BPS to interested parties upon request.

2. BPS Role

- a. For newly proposed specialties, prior to development of the petition document to BPS, an interested organization may commission the initial Task Analysis study. In that case, the organization is responsible for all aspects of the study, conducted in a psychometrically sound and legally defensible manner. Documentation of the process and results are part of the petition, and are subject to scrutiny by BPS, the profession, and psychometric experts as part of open hearings on the new specialty.
- b. All other Task Analysis and update studies are commissioned and funded by BPS in accordance with General Policy above. A separate contract for service to cover each study is negotiated with a psychometric consultant
- c. In accordance with terms of the contract and a mutually-agreed timetable, BPS will:
- d. Convene one or more face-to-face meetings or teleconferences with Specialty Council members and other subject matter experts and the psychometric consultant(s) to identify new/changed parameters of the practice. Efforts are made to ensure the participation of a cross-section of the community of interest within the pharmacy profession.
- e. Convene one or more face-to-face meetings or teleconferences with Specialty Council members and other subject matter experts and the psychometric consultant(s) to draft knowledge and task statements and other components for the survey instrument;
- f. Convene one or more face-to-face meetings or teleconferences with Specialty Council members and other subject matter experts and the psychometric consultant(s) to pilot test the survey instrument;
- g. Convene one or more face-to-face meetings or teleconferences with Specialty Council members and other subject matter experts and the psychometric consultant(s) to review and endorse survey results and recommend approval of new/modified Content Outline to the BPS Board;
- h. Facilitate Board review and approval of recommended Content Outline;
- i. Publicize the new Content Outline via News Release, BPS Web Site, and other media;
- j. In cooperation with the psychometric consultant, utilize the new Content Outline for subsequent examinations of the specialty, until replaced.

3. Psychometric Consultant(s) Role and Activity

- a. Following discussion with the BPS Executive Director concerning needs, the Consultant will draft a contract covering needed work in conjunction with the Task Analysis. This will be signed by BPS and the Consultant.
- b. Job Task Analysis studies will be planned and conducted by the psychometric consultant in accordance with accepted practice in the field, with appropriate quality control measures in place. BPS will monitor this process for procedural quality by having staff and Board members review survey questions, and take the on-line survey.
- c. Psychometric consultant(s) will facilitate all meetings and prepare reports of all activity with Specialty Council members and other subject matter experts identified in above.
- d. Consultant will develop, refine as needed, and distribute the Task Analysis survey to a mutually agreed upon sample, identified by BPS or other appropriate sources. The sampling methodology will be psychometrically defensible.
- e. Consultant will collect and analyze surveys, and submit a detailed written report to BPS of the conduct of the survey and its results.
- f. Consultant will propose a psychometrically defensible new or modified examination Content Outline, based on results of the Task Analysis process. When approved by the Specialty Council and BPS, this will become the blueprint for subsequent examinations until formally modified by another Task Analysis.
- g. At the conclusion of each initial or update Job Task Analysis study, psychometric consultant will facilitate a Passing Point Study standard-setting process. Participants include Specialty Council members and other representative BPS-certified specialists in the specialty (if possible, those who participated in the rest of the Job Task Analysis development). The psychometric consultant provides detailed instruction to participants, and leads them through at least one psychometrically appropriate and justified methodology (Modified Angoff, Direct Standard Setting Method, Direct Consensus Method) to establish a new passing point for the new exam form. The consultant documents the results of this process.

C. Item Development/Maintenance Process

1. BPS role and responsibilities for item writer/reviewer recruitment and workshop organization
 - a. Specialty Council subject matter experts, in conjunction with the Psychometric Consultant, identify rubrics in which items are most critically needed.
 - b. BPS and its Specialty Councils develop plans for generation of needed item bank items from certificants and other practitioner subject matter experts.
 - c. BPS staff works with Specialty Councils to recruit volunteers representative of the area of interest to submit draft items to the psychometric consultant. Item development panels may be organized by BPS staff and specialty council members to help generate needed items.
 - d. Item writers are normally board certified pharmacist specialists. However, non-board certified pharmacist specialists may submit items for review but they are not permitted to attend Item Development Workshops or to be members of Item Writing Panels.

- e. The use of proprietary/trade names for drugs, delivery systems, manufacturers, publications, publishers, etc. should be avoided when developing items for specialty certification examinations.
 - f. BPS maintains a section on its web site with instructions and resources (including submission forms) for use by item writers.
 - g. BPS convenes Item Development Workshops, frequently at national meetings of subject matter experts, where invitees review draft items under guidance of the psychometric consultant and BPS staff. Items are accepted, rejected, or corrected, and rubrics are developed or verified for items to be placed into the item bank.
 - h. Logistic Policy for Item Development Workshops
 - i. BPS contracts for meeting space, and group meals (usually breakfast and lunch) for the meeting.
 - ii. When the Workshop is held in conjunction with another national meeting, BPS reimburses attendees for one night's lodging at single rate, plus taxes and non-provided meals for the meeting day only.
 - iii. BPS arranges for internet connectivity for item research and PowerPoint projection system for Psychometrician's orientation session.
 - iv. If subject matter experts wish to bring or arrange for research materials to be available at the meeting, they may do so, with reasonable expenses reimbursed by BPS.
 - v. Upon recommendation of the psychometric consultant and/or Specialty Council members, Bank Maintenance Workshops are convened and funded by BPS, and led by the psychometric consultant. Here, the specialty's entire item bank is reviewed by Specialty Council members and other BPS-certified specialists, and items are endorsed, modified (or marked for future modification) or discarded from the bank as appropriate. Rubrics are also verified or modified.
2. Psychometric consultant's role in collecting items, leading workshop, editing and storing items
- a. In accordance with an established contract with BPS, the psychometric consultant staffs and leads Item Development Workshops and Item Bank Maintenance meetings for BPS and provides other services related to items and banking.
 - b. Consultant is responsible for secure shipping, handling, and oversight of all draft and approved items throughout all phases of Item Development and Bank Maintenance meetings.
 - c. Consultant collects, records, and photocopies all items submitted in advance for a Workshop. Items may be submitted in hard copy with references attached, or

using electronic means. Draft items are also accepted or drafted at the Workshop.

- d. Consultant provides PowerPoint overview of the item-writing process, a tutorial on writing multiple-choice items, and other materials (specialty-specific style guides, content outlines, rubric tables, etc. as needed) to attendees.
- e. Consultant provides procedural, non-subject matter assistance to item writers and reviewers as needed and collects approved, disapproved, and amended items for tallying and further processing.
- f. Psychometric consultant, in conjunction with Specialty Council members, develops and maintains a specialty-specific Style Guidelines document for reference by item developers and consultant's editorial staff.
- g. Consultant provides editorial review/correction of accepted items, verifies completeness of rubrics, and enters them into the appropriate item bank within the consultant's secure database.
- h. Consultant maintains the BPS item banks in its secure database, while BPS retains intellectual property ownership of content in accordance with contractual terms. Consultant staff and any subcontractors are bound by confidentiality requirements of the service contract with BPS.
- i. Consultant provides reports annually or as requested by BPS of the status of each specialty's item bank by rubric.
- j. Upon recommendation of the consultant and/or Specialty Council members, Bank Maintenance Workshops are staffed and facilitated by the consultant. At these meetings, the specialty's entire item bank is reviewed by specialty council members and other BPS-certified specialists, and items are endorsed, modified (or marked for future modification) or discarded from the bank as appropriate.
- k. Bank Maintenance Workshop logistics are similar to those for Item Development Workshops (i.e., above), except that they may be of 2-3 day duration as needed.

D. Examination Preparation

1. Role of BPS

- a. BPS is responsible for determining at the beginning of an exam cycle (usually in January) whether an ongoing specialty's annual examination will be a "new" exam (approx. 40% replacement), scramble (approx. 4%) or other variation. This determination will be made in consultation with the psychometric consultant, specialty council members, and others as appropriate. BPS will notify the consultant, in accordance with its service contract, to construct draft examinations in agreement with this decision.
- b. BPS is responsible for convening an Examination Assembly Meeting each spring, for each specialty. This meeting is customarily held just preceding the Council's annual business meeting, and lasts from one-half day to a full day. At the Examination Assembly Meeting, Specialty Council members review the

draft examination prepared by the psychometric consultant, and recommend acceptance, modification, or replacement of individual items as appropriate. Replacements are customarily drawn from the current item bank, although new items may be written at the meeting if needed. BPS staff handle meeting logistics, as for Item Development Workshops but the psychometric consultant leads the meeting and is responsible for all record-keeping and follow-up.

2. Role of Psychometric consultant in developing exams from banked items
 - a. Following guidance from BPS about the extent of change needed from the previous forms, the psychometric consultant develops a draft examination, drawing items from the item bank based on rubric in accordance with the current examination blueprint/content outline.
 - b. Draft examinations are shipped by the psychometric consultant, using secure methodology, to Specialty Council members approximately two weeks prior to the specialty's Examination Assembly meeting, along with instructions to review the exam and be prepared to discuss problematic items at the meeting.
 - c. At the Examination Assembly Meeting, the psychometric consultant leads discussion of each item and notes needed changes in content, separation of items, or any other necessary changes.
 - d. At the end of the Examination Assembly Meeting, the psychometric consultant collects all draft examinations, and returns all materials using secure shipment methodology to the consultant's offices.
 - e. Psychometric consultant utilizes meeting input to further revise the draft examination and develop a final draft.
 - f. Psychometric consultant ships final draft exams to the Chair and Vice Chair of the appropriate specialty council by secure means, with return packaging and instructions.
 - g. Upon receipt back, psychometric consultant makes final changes and sends exam books for secure printing and storage for shipment to sites.