



APPLIED MEASUREMENT PROFESSIONALS, INC.

A Job Analysis Study of the Durable Medical Equipment Specialist

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Table of Contents

	Page
EXECUTIVE SUMMARY	1
INTRODUCTION	2
METHODOLOGY	3
Forming the Advisory Committee.....	3
Advisory Committee Responsibilities	3
Resources	3
RESULTS	4
Creation of the Task List.....	4
Verification of Final Task List.....	4
Cognitive Complexity	4
CONCLUSIONS.....	6
REFERENCES	7

List of Tables

Table 1. Job Analysis Advisory Committee.....	3
Table 2. Description of Complexity Levels.....	5
Table 3. DME Specialist Test Specifications	5

List of Appendices

Appendix A. DME Specialist Detailed Content Outline	9
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EXECUTIVE SUMMARY

The job analysis described in this report was conducted in the fall of 2011 at the request of the Entertainment Technician Certification Program (BOC). The purpose of the study was to describe the job activities of the DME Specialist in sufficient detail to provide a basis for the development of a professional, job-related certification examination.

The DME Specialist Advisory Committee (AC) conducted the activities necessary to identify job responsibilities and to develop the test specifications for the DME Specialist certification examination. The AC represented varied national regions and practice settings. All AC members were experts in the duties and activities associated with the profession.

The AC developed test specifications for the DME Specialist examination based on their expert judgment. The AC was responsible for the following tasks regarding the job analysis study:

- defining the purpose of the exam,
- determining how the exam score is intended to be interpreted,
- defining the target practitioner, and
- developing a test content outline to form the basis for future item writing and test construction tasks.

A logical job analysis procedure was used to define the job of a DME Specialist, and the AC used this definition as a basis for the creation of test specifications to be used to construct the DME Specialist exam specifications. Test specifications were developed based on the expert judgment of the members of the AC. These specifications were distributed to a larger group of content experts for additional review and comment.

For each task, the AC used their expert judgment to determine if it was still acceptable for the final detailed content outline. The AC revised the current DCO by reviewing and revising or deleting each current task as necessary. The AC's final revisions were further validated by the results of a verification check of the DCO completed by a random selection of experienced DME Specialist. After review of the results of the verification check of the DCO, the AC unanimously decided to keep the new DCO as modified. The AC decided that a 150-item multiple-choice examination sufficiently sampled the content domain to render a pass/fail decision based on examination scores. The resulting test specifications and detailed content outline will be used by the DME Specialist Examination Development Committee to assemble future test forms.

INTRODUCTION

The job analysis described in this report was conducted in 2012 at the request of BOC. The purpose of the job analysis was to describe the DME Specialist's job in sufficient detail to provide a basis for a national certification examination and ensure that the content of the examination was job-related.

BOC appointed an Advisory Committee (AC) to complete a committee-based job analysis study of the DME Specialist and to draft test specifications to be used in developing the DME Specialist examination. The AC developed a comprehensive inventory of activities that DME Specialist's perform by considering tasks previously listed on the DME Specialist detailed content outline as well as other sources from outside BOC. The AC made its initial judgments on the list of activities and developed a preliminary detailed content outline (DCO). The DCO was included in a verification check that solicited judgments about the tasks from additional expert DME Specialist.

The AC used their expert judgment in determining which tasks were most critical to the competent performance of a DME Specialist's job. All tasks that appear on the final detailed content outline were scrutinized, discussed, and revised or added as necessary by the AC. Also, all tasks that appear on the DCO were determined to be appropriate for assessment based on the unanimous agreement of the experts on the AC.

METHODOLOGY

Forming the Advisory Committee

The AC was consulted throughout the job analysis process to ensure that expert judgment was available to AMP staff. The members of the AC were subject matter experts, all thoroughly familiar with the skills and activities required of the DME Specialist. The AC members are listed in Table 1.

Table 1. Job Analysis Advisory Committee

Name
Carol Lernihan
Tonya Beam
Rod Borkowski
Jon Jasperson
Jorge Gomez
Janet Malinowski
Minerva Mendoza

Advisory Committee Responsibilities

Each member of the AC invested a significant amount of time to help ensure a successful job analysis study. We are grateful to each of these professionals for their guidance, expertise, and devotion to this complex project. The members of the AC were tasked with reviewing a number of sources and determining the content of the DME Specialist's examination. Considering these resources, the AC used their expert judgment and made all final decision regarding content that would be tested on this exam.

Resources

The AC used several resources in making decisions that affected the makeup of the DME Specialist exam specifications. The previous detailed content outline (DCO) for the DME Specialist examination served as the starting point for this study. Additionally, all members were highly experienced DME Specialist in a variety of job settings. Accordingly, they relied on their many experiences to modify and update the current DCO as they deemed appropriate.

RESULTS

Creation of the Task List

The members of the AC carefully considered every task on the DME Specialist detailed content outline. Each task was discussed among the AC, and they unanimously agreed to approve, reject, or revise the task for use on the DME Specialist DCO. Tasks determined to be appropriate were approved and copied directly to the new DME Specialist DCO. Tasks that were deemed outside the scope of practice for DME Specialist were not placed on the DME Specialist DCO. Some tasks were reworded to properly reflect current practice for a DME Specialist examination. Finally, some new tasks were added. Other sources were reviewed to ensure that all necessary tasks were represented on the final detailed content outline. The final DME Specialist detailed content outline had a total of 105 tasks.

Verification of Final Task List

As a verification check of the work performed by the AC, the DCO was sent to an additional group of 100 experienced DME experts. AMP received 19 responses from the additional reviewers. The respondents were asked to review the DCO and respond to three questions: 1) Is there anything missing from this content outline that is essential to the role of an DME Specialist, 2) Is there anything in this content outline that is not performed by an DME Specialist, and 3) Does the number of items assigned to each section of the outline seem appropriate (i.e., are the sections with more items of more importance than sections with lower number of items)? The AC reviewed these comments and made minor changes as necessary. The results substantially confirmed the AC's initial judgments and edits.

Cognitive Complexity

After the number of tasks was determined, the next step involved defining the cognitive complexity of the content. A complexity scale was designed to determine the cognitive level individual tasks were typically performed on the job. The information provided a basis for matching test item complexity to job complexity. The AC discussed every task in each section and considered the typical complexity of task performance using the descriptions described in Table 2. They then determined a distribution for each major category by the categories of recall, application, and analysis. Section and task complexity is based on Bloom's *Taxonomy of Educational Objectives* (1956, pp. 201-207).

Table 2. Description of Complexity Levels

Cognitive Level	Description
Recall	Requires only the identification, recall, or recognition of isolated information, such as specific facts, generalizations, concepts, principles, or procedures. The information generally does not vary relative to the situation.
Application	Requires comprehension, interpretation, or manipulation of limited concepts or data, in which the response or outcome is situationally dependent, but not overly complex (e.g., application of knowledge which varies based on patient characteristics and environment). Tasks that require candidates to recognize elements and relationships among data and to classify, explain, or differentiate are usually application level.
Analysis	Requires the integration or synthesis of a variety of concepts or elements to solve a specific problem situation (e.g., evaluating and rendering judgments on complex problems with many situational variables).

Using their expert judgment, the AC determined the cognitive level at which each task should be assessed. Considering individual cognitive level ratings for tasks within each content area, the AC determined the total distribution of exam questions and cognitive levels, as summarized in Table 3. This step helped to ensure that the new examination would have substantial evidence of job-relatedness. A full copy of the detailed content outline can be found in Appendix A.

Table 3. DME Specialist Test Specifications

Content Area	Recall	Application	Analysis	Total
I. CLIENT INTERACTION	14	21	0	35
II. PRODUCT/SUPPLY SELECTION	7	21	7	35
III. PRACTICE MANAGEMENT	9	18	3	30
Total	30	60	10	100

CONCLUSIONS

The job analysis described in this report was undertaken to provide evidence supporting content valid inferences from examination scores. The study was conducted to determine and comprehensively describe the DME Specialist job, to evaluate this description through the judgment of content experts, and to define areas that should be assessed in this examination.

BOC formed the AC, who prepared a comprehensive list of activities describing the job. The AC used their expert judgment to develop the new DME Specialist test specifications directly related to the important activities performed by DME Specialist. The AC's initial decisions on the new Detailed Content Outline (DCO) were evaluated by 19 additional experienced DME Specialist in a verification process. All comments received were evaluated by the AC, who approved the final DCO and test specifications. The test specifications represent the development plan for a job-related multiple-choice examination. Each form of the examination will contain the specified number of items distributed across the content areas and complexity levels. The test will be compensatory (i.e., the passing score will be based on the cumulative test score). Because each test form will be developed to match these job-related, test specifications, valid content-related inferences can be drawn about candidates' abilities to perform the DME Specialist's job.

REFERENCES

Bloom, B. (Ed.) (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Company, Inc.

Guilford, J. P. (1956). *Fundamental Statistics in Psychology and Education*. New York: McGraw Hill.

Hopkins, K.D., Stanley, J.C., Hopkins, B.R. (1990). *Educational and psychological measurement and evaluation, (7th edition)*. New Jersey: Prentice Hall.

**DME Specialist
Detailed Content Outline**

 Durable Medical Equipment Specialist Detailed Content Outline	Cognitive Level			Total
	Recall	Application	Analysis	
I. CLIENT INTERACTION	14	21	0	35
A. Intake Process	6	9	0	15
1. Obtain/review client/care giver information.				
2. Interview client/care giver and obtain history.				
3. Discuss any related medical treatment(s).				
4. Verify prescription (e.g., authenticity, required elements, and prescriptive authority).				
5. Verify benefits and eligibility.				
6. Discuss financial matters for services/devices with client/care giver.				
7. Confirm the client's medical necessity for the prescribed equipment.				
8. Explain required documentation with client/care giver.				
9. Obtain required documentation and signatures.				
10. Comply with federal, state, and local regulations (e.g., HIPAA, OSHA, DOT, CMS, FDA).				
B. Client Education	8	12	0	20
1. Explain purpose/objective of equipment/supplies.				
2. Discuss client/care giver's expectations.				
3. Review client/care giver's role/responsibilities.				
4. Review DME/supply provider's role/responsibilities.				
5. Inform client/caregiver on use of DME/supply.				
6. Identify the potential hazards of the equipment to the client.				
7. Provide/obtain required documentation/signatures to/from client.				
8. Assure client understands equipment preventative maintenance.				
9. Develop plan of care.				
10. Encourage client to discuss any changes in usage.				
II. PRODUCT/SUPPLY SELECTION	7	21	7	35
A. Product/Supply Selection	3	9	3	15
1. Identify contraindications and potential hazards.				
2. Contact physician for prescription clarification or modification as needed.				
3. Select prescribed equipment per client's physical characteristics.				
4. Discuss DME/supply options with client.				
B. Product Dispensing/Delivery	4	12	4	20
1. Ensure DME/supply facility meets all CMS standards.				
2. Ensure delivery truck meets all applicable requirements.				
3. Assure safety of end user environment (e.g., home assessment).				

 Durable Medical Equipment Specialist Detailed Content Outline	Cognitive Level			Total
	Recall	Application	Analysis	
<ul style="list-style-type: none"> 4. Set-up according to manufacturers' guidelines. 5. Ensure the equipment is working properly. 				
III. Practice Management	9	18	3	30
A. Inventory Management (New, Rental, and Returned)	4	6	0	10
<ul style="list-style-type: none"> 1. Check for equipment/supply recall notices. 2. Store in designated areas (e.g., soiled, cleaned). 3. Sanitize returned equipment. 4. Perform manufacturers' recommended product maintenance. 5. Inspect equipment to refurbish or repair. 6. Assess if equipment is eligible for RMA, quarantine, or disposal. 7. Complete applicable documentation/logs. 8. Label and return equipment to ready inventory. 				
B. Equipment Troubleshooting	2	6	2	10
<ul style="list-style-type: none"> 1. Diagnose equipment issue. 2. Assure manufacturers' recommended product maintenance has been performed. 3. Communicate solution for client resolution. 4. Determine if equipment requires replacement or repair. 5. Provide timely resolution. 6. Complete applicable documentation/logs. 				
C. Billing	1	3	1	5
<ul style="list-style-type: none"> 1. Assure client file is complete and accurate (e.g., prescription, WPO, POD, documentation). 2. Comply with professional billing standards (e.g., CMS, Insurance). 3. Use applicable HCPCS codes with billing modifiers and supporting diagnosis codes. 4. Prevent, identify and report fraud, waste & abuse. 5. Resolve billing and coding errors. 				
D. Practice Management	2	3	0	5
<ul style="list-style-type: none"> 1. Comply with CMS performance management requirements (i.e., client surveys, compliment/complaint, billing errors, employee feedback). 2. Comply with applicable human resource requirements (e.g., HIPAA and OSHA training, background checks, OIG exclusion, job descriptions). 				
TOTALS	30	60	10	100