



# **A National Job Analysis Study of the Wound Care Associate**

## **Executive Summary**

**Conducted for the  
American Board of Wound Management**

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## Introduction

The purpose of conducting this job analysis was to identify the knowledge requirements (topics) and responsibilities (tasks) of wound care associates in sufficient detail to provide a basis for the American Board of Wound Management (ABWM) Certified Wound Care Associate (CWCA®) certification examination. The ABWM requested the services of AMP, a PSI business (PSI/AMP) to design and conduct a study that would provide the support necessary to develop specifications upon which examinations with substantial evidence of content validity could be developed.

A Job Analysis Study Advisory Committee (AC) was appointed by ABWM to conduct the activities necessary to identify the responsibilities of a professional in wound management and develop examination specifications. The diversity of this 11-member AC was reflective of the wound management professionals. All AC members demonstrated expertise in the knowledge and responsibilities associated with this profession.

## Methodology

Six major tasks were initiated during the AC meeting held in January 2016. These steps included:

### **1. *Developing a sampling plan***

The AC considered various methods of identifying individuals who consider themselves to be practitioners in wound management, or who would be knowledgeable about the duties of practitioners in wound management. In selecting individuals to be sampled, an effort was made to ensure an appropriate sampling of all three groups of wound care associates, wound specialists, and wound specialist physicians. E-mail invitations were sent to a combined list of ABWM credential holders and prospectives for potential respondents.

### **2. *Identifying topics and tasks for the survey instrument***

The draft list was thoroughly discussed during the meeting held in January 2016. Topics of knowledge required in the wound management profession and tasks representing individual job responsibilities of each job covered in the survey were modified, added, and removed. All topics and tasks were verified as being appropriately linked to the associated content category (e.g., Wound Healing Environment). At the conclusion of this meeting, a draft list that included 54 topics of knowledge, 59 tasks of wound care associates, 46 tasks of wound specialists, and 45 tasks of wound specialist physicians were developed for review by the AC. After review of the draft list, the AC authorized development of the final survey.

### **3. Identifying content categories**

The committee identified five content categories, under which the 54 topics were categorized into subcategories. The AC unanimously agreed on the linkage of each topic to the respective content category. The categories were as follows:

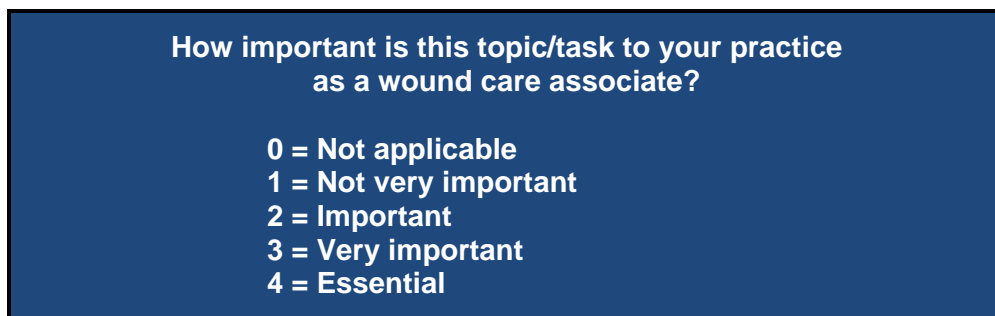
1. Wound Healing Environment
2. Assessment and Diagnosis
3. Patient Management
4. Etiological Considerations
5. Professional Issues

Sixty-five (65) wound care associate tasks were also categorized into the following subcategories:

1. Patient Preparation
2. Patient Assessment
3. Treatment
4. Education
5. Administration

### **4. Determining the rating scales**

The committee discussed the advantages and disadvantages of various rating scales that could be used in responding to the topics and tasks. PSI/AMP suggested the use of a single importance scale. This single scale is intended to solicit judgments on the importance of topics or tasks after first considering the extent to which it is necessary to the performance in practice. The importance scale adopted by the AC is shown below; the instructions for respondents for use of the scale are included in the directions section of the survey instrument.



### **5. Determining the relevant demographic variables of interest**

The AC identified 15 relevant and important demographic survey variables. Since this was a national study, it was important to identify the respondents' geographic regions of employment. Other demographic questions were written to assess characteristics of the representativeness of the respondents, including level of education, primary professional designation, specialty area, board certifications, years of experience, percentage of work that involves wound management, primary place of practice/employment, other practice settings, certifications, gender, age, and ethnicity.

## 6. Integrating demographics, rating scales, topics and tasks into a survey instrument

After the first meeting, all components of the survey (demographics, rating scales, 54 topics, 59 wound care associate tasks, 46 wound specialist tasks, and 45 wound specialist physician tasks) were combined into a draft survey instrument. The survey was designed to direct respondents to complete the topic portion and only the relevant task portion. As a pilot test, this draft was distributed to the AC and other individual content experts via an e-mail message, which included a link to the survey. Following a review of the comments, the final survey with minor edits was prepared and distributed via an e-mail invitation.

## Results

Of the 8,352 e-mail survey invitations distributed, 976 were returned as undeliverable and 4 opted out of the survey, leaving 7,372 potential respondents. There were 1,276 responses included in data analysis, resulting in a 17.3% response rate (1,276/7,372).

### Demographic Information

Out of 1,138 respondents who responded to the certification qualification question, 223 respondents (19.6%) identified themselves as those who would qualify for the CWCA certification examination. Responses to some of the demographic variables are depicted in the following graphs.

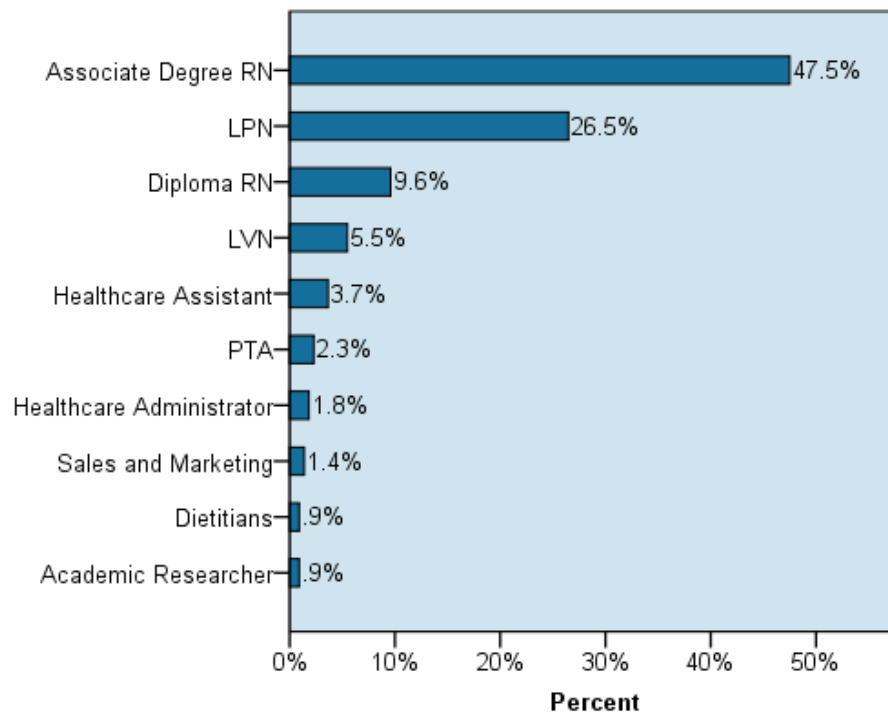


Figure 1. Which category best describes you?

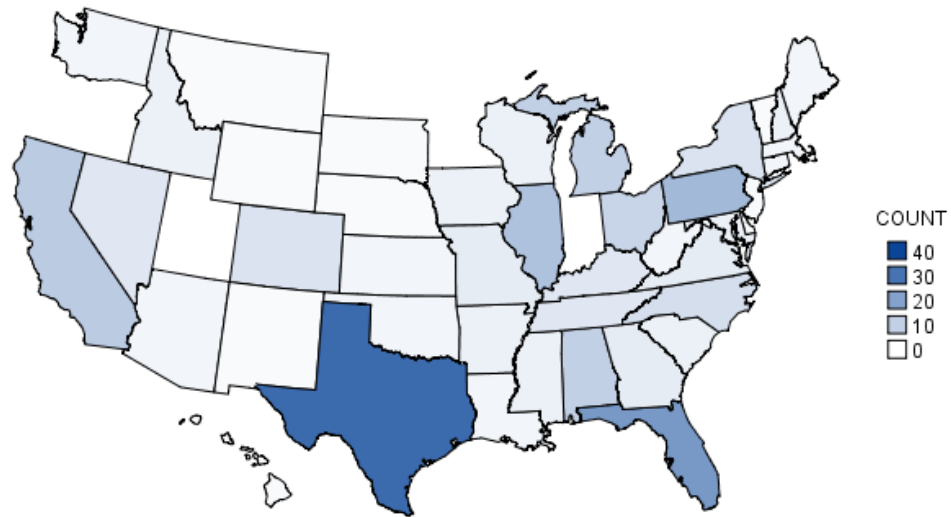


Figure 2. In which state do you primarily practice?

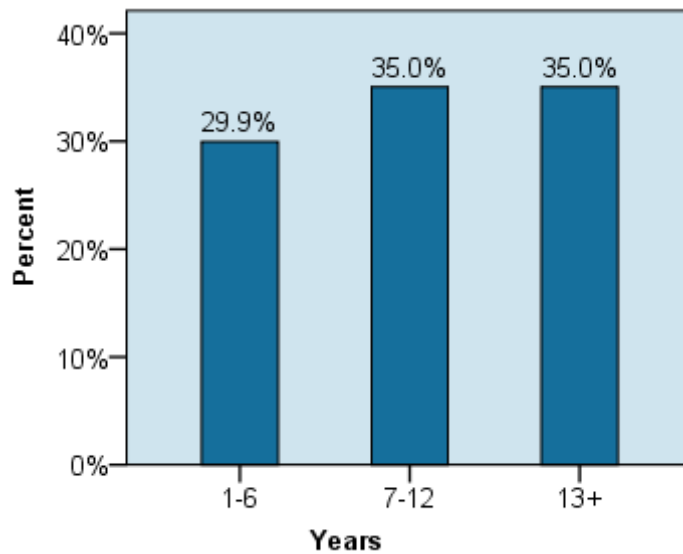


Figure 3. How many years of experience do you have in the field of Wound Management? (Recoded)

Based on discussion of the demographic responses with the AC, the demographic data were as expected, and judged to be representative of the profession. In addition to ensuring that the respondent group was representative, it was important to evaluate whether responses were received in appropriate numbers from relevant subgroups. The AC determined that sufficient responses were received from relevant subgroups for subsequent analysis.

## Adequacy of the Instrument

Among 222 respondents who would qualify for the CWCA® certification and responded to the question, which appeared at the end of the survey, 99% felt that the job analysis study at least adequately addressed the knowledge required to perform critical tasks as a wound care associate. Another aspect of the adequacy of the instrument relates to its reliability.

Topic/task reliability estimates show to what extent each scale "hangs together." A high topic/task reliability value may indicate that the scale represents a consistent collection. Rater reliability estimates are more important and indicate the degree to which raters agree on the importance of an item. Overall, the calculated reliability estimates are quite acceptable. Overall, the calculated reliability estimates were around 0.9 or higher. Since 1.00 represents a maximum reliability coefficient, the survey results can be considered reliable.

## Examination Specifications

In developing Examination Specifications (or a DCO), AC judgment was used in interpreting the data gathered through the job analysis study. Of particular significance to a certification examination program is that the test specifications appropriately reflect the responsibilities of all groups who will participate in that program. Therefore, it is important to ensure that the test specifications and the resulting examination forms sample topics and tasks that are considered to be significant responsibilities of the individuals for whom the examination is intended.


Several decision rules were proposed for consideration and adopted by the AC in determining which topics and tasks should be considered ineligible for assessment, and therefore, excluded from the test content outline. Applying these decision rules provides objectivity in ensuring that the resulting examination reflects the profession of wound care associate, as judged by a demographically representative group of professionals in wound management. The first decision rule helped ensure the content outline would only reflect both topics and tasks that were a part of practice; any that received a high percentage of respondents providing a "0" rating (Not applicable) were eliminated. The second decision rule, which was applied to both topics and tasks as well, established a threshold for the mean significance rating for the overall respondent group, ensuring that what remained on the content outline was clearly significant to practice. Finally, five different decision rules were adopted based on subgroup analyses, to ensure that the remaining topics were significant to practice throughout the United States, for different levels of education preparation, years of experience, percentage of work involved in wound management, and CWCA® certification status. As a result, application of these decision rules eliminated 3 topics and 7 tasks from the test content outline. The AC also unanimously decided to add 1 additional task.

In addition to applying decision rules, the AC examined the respondents' comments and any additional topics or tasks that respondents had listed. Based on this review, the AC decided that no additional topics or tasks were needed to appropriately reflect the profession. In summary, a total of 54 topics and 53 tasks were eligible for assessment on CWCA® certification examination.


## Development of Final Detailed Content Outline and Examination Specifications

The AC reviewed the final task list after application of the decision rules. They considered the mean significance ratings for each of the content categories, the number of remaining tasks in each category, and the number of items suggested by survey respondents for each area to guide their final decisions regarding the number of items for each of the five content areas of practice. The goal was to distribute items in accordance with known working patterns across the content areas.

After the number of items was determined, the next step involved defining the cognitive complexity of the content. A complexity scale was used to determine at what cognitive level individual topics were involved. The information provided a basis for matching test item complexity to job complexity. The AC discussed each topic in each section and considered the typical complexity of each topic. They then determined a distribution for each major content category by the cognitive categories of recall, application, and analysis.

 American Board of Wound Management <b>Certified Wound Care Associate (CWCA)                      Detailed Content Outline*</b>	<b>Total</b>
<b>1. Wound Healing Environment</b>	<b>21</b>
<ul style="list-style-type: none"> <li>A. Anatomy and Physiology                             <ul style="list-style-type: none"> <li>1. Integumentary</li> <li>2. Musculoskeletal</li> <li>3. Vascular</li> <li>4. Neurological</li> <li>5. Lymphatic</li> </ul> </li> <li>B. Wound Healing                             <ul style="list-style-type: none"> <li>1. Phases</li> <li>2. Cell function (e.g., signaling proteins, cellular mediators)</li> <li>3. Acute vs. chronic</li> </ul> </li> </ul>	
<b>2. Assessment and Diagnosis</b>	<b>22</b>
<ul style="list-style-type: none"> <li>A. History</li> <li>B. Physical examination</li> <li>C. Wound and skin assessment</li> <li>D. Pain assessment</li> <li>E. Risk assessment</li> <li>F. Functional assessment</li> <li>G. Laboratory/Imaging</li> <li>H. Nutrition</li> </ul>	
<b>3. Patient Management</b>	<b>26</b>
<ul style="list-style-type: none"> <li>A. Wound bed preparation/debridement</li> <li>B. Dressings</li> <li>C. Topical agents</li> <li>D. Complications in healing (including local and systemic factors)</li> <li>E. Nutrition</li> <li>F. Compression therapy</li> <li>G. Negative pressure wound therapy</li> <li>H. Pressure redistribution (i.e., offloading)                             <ul style="list-style-type: none"> <li>I. Biophysical technologies                                     <ul style="list-style-type: none"> <li>1. Electrical stimulation</li> <li>2. Ultrasound</li> </ul> </li> </ul> </li> <li>J. Hyperbaric oxygen therapy</li> <li>K. Surgical closure or tissue transfer</li> <li>L. Cellular and/or tissue products for wounds</li> </ul>	



 American Board of Wound Management <b>Certified Wound Care Associate (CWCA)                      Detailed Content Outline*</b>	<b>Total</b>
<b>4. Etiological Considerations</b>	<b>21</b>
<ul style="list-style-type: none"> <li>A. Neuropathy</li> <li>B. Diabetes</li> <li>C. Venous insufficiency</li> <li>D. Ischemia</li> <li>E. Pressure ulcers</li> <li>F. Lymphedema</li> <li>G. Trauma</li> <li>H. Surgical                             <ul style="list-style-type: none"> <li>I. Atypical wounds (e.g., malignancy)</li> </ul> </li> <li>J. Dermatological</li> <li>K. Infectious</li> <li>L. Burns</li> <li>M. Edema (i.e., systemic vs. local)</li> <li>N. Pediatric Issues</li> </ul>	
<b>5. Professional Issues</b>	<b>10</b>
<ul style="list-style-type: none"> <li>A. Documentation</li> <li>B. Patient adherence</li> <li>C. Legal concepts</li> <li>D. Reimbursement and medical economics</li> <li>E. Medical ethics (e.g., palliative care, reasonable expectation of outcomes)</li> <li>F. Multidisciplinary teams</li> <li>G. Epidemiology</li> <li>H. Evidence-based practice and research</li> </ul>	
<b>Total Scored Items</b>	<b>100</b>

\*Each test form will include 20 unscored pretest items in addition to the 100 scored items.

***In addition to classifying by topic (above) items will be classified by task. Tasks that are eligible for assessment include:***

## **Patient Preparation**

- A1 Perform safe patient handling techniques
- A2 Assist in obtaining health and medication history
- A3 Obtain recent nutritional history and needs
- A4 Take and monitor vital signs
- A5 Prepare and/or photograph the wound
- A6 Assist with ensuring aseptic or sterile techniques
- A7 Set up equipment for procedures
- A8 Prepare wound for procedures (e.g., cleansing, removing dressings)
- A9 Ensure proper cleaning of examination rooms between patients

## **Patient Assessment**

*Assess, or assist with assessing:*

- A10 blood flow (e.g., perform Doppler, check pulses, ABI)
- A11 for risk of pressure ulcer development
- A12 level of pain
- A13 edema (e.g., limb circumference, volume)
- A14 functional status
- A15 skin (e.g., for color, swelling, and temperature)
- A16 wound and periwound characteristics (e.g., stage, tissue type)
- A17 sensory function (e.g., monofilament testing, vibration testing)
- A18 Identify psychosocial barriers (e.g., cognitive, financial)
- A19 Identify and measure wound tunneling and/or undermining
- A20 Measure wound dimensions – length, width, depth
- A21 Measure the wound using digital methods

## **Treatment**

*Apply and/or remove:*

- A22 dressings
- A23 compression wraps and stockings
- A24 barrier products
- A25 staples or sutures
- A26 offloading systems

*Assist with:*

- A27 application of cellular and/or tissue products
- A28 wound biopsy

*Assist with or perform*

- A29 negative pressure wound therapy application and removal
- A30 debridement
- A31 culture/aspiration
- A32 wound irrigation or cleansing
- A33 biophysical technologies

## Education

*Provide education or demonstrate an understanding of:*

- A34 Offloading and/or pressure relief
- A35 Wound care rationale
- A36 Therapeutic interventions (e.g., dressings, wound products, negative pressure, compression systems)
- A37 Medications
- A38 Lifestyle changes (e.g., smoking cessation, diet, nutrition)
- A39 Disease process
- A40 Diagnostic testing
- A41 Skin care
- A42 Pain management
- A43 Universal precautions
- A44 Positioning and mobility

## Administration

- A45 Document patient information (e.g., medications, progress, billing, photographs)
- A46 Coordinate wound care with supervisor and other team members
- A47 Order and maintain equipment and supplies
- A48 Disinfect equipment
- A49 Follow confidentiality and security regulations
- A50 Read current literature on wound care trends
- A51 Recognize strength of evidence related to research
- A52 Recognize aspects of research methodology
- A53 Adhere to professional ethical guidelines



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