

Clinical Competencies for Burn Rehabilitation Therapists

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Nationally agreed-upon standards for competence are needed for burn physical and occupational rehabilitation therapists (BRTs) to define what constitutes safe and competent burn rehabilitation practice. Currently, consensus regarding the knowledge and skill components needed for the training and evaluation of BRT job performance is lacking. The Rehabilitation Committee of the American Burn Association used a staged, multimethod approach and input from more than 25 experts in the burn rehabilitation community to develop competency standards for BRTs. The result was the “Burn Rehabilitation Therapist Competency Tool” (BRTCT) that defines competency domains required of BRTs to provide physical and occupational therapy to patients with burn injury during their initial acute hospitalization and rehabilitation. This article describes the staged development and validation of the BRTCT. The component parts of the tool itself are presented, and the recommendations for assessment of competence are discussed. The BRTCT provides a common framework and language for expectations of performance in burn rehabilitation. Development of the BRTCT is a critical step in the ongoing process of promoting professional development and consistent practice standards in burn rehabilitation. (*J Burn Care Res* 2011;32:458–467)

Professional competence is the combination of knowledge, judgment, skills, experience, and attitude required to respond adequately to the demands of one’s occupational responsibilities.^{1,2} Models for competence in health care have been used to improve practice standards, accommodate new knowledge, promote professional development, and improve effectiveness of training and education programs.³ Although a competency-based approach to training and staff development is accepted as a central strategy to improve the effective-

ness of healthcare providers, the development and implementation of competencies can be a complex endeavor.

Burn physical and occupational rehabilitation therapists (BRTs) require a specific skill set and supporting knowledge to perform their job safely and competently. American Burn Association (ABA) burn center verification criteria CD 14-51 requires that burn centers provide BRTs with a “competency-based burn therapy orientation program,” recognizing the importance of practice standards in burn rehabilitation.⁴ However, currently, no universally agreed-upon competencies exist to define the skill set essential to BRT job performance.

There is a paucity of supporting research for best practice in burn rehabilitation, and the associated component skills are ill defined.^{5,6} So, many burn centers have developed their own competency-based tools for training BRTs. The criteria for these tools vary throughout burn centers depending on previous education, work experience, treatment philosophies, baseline skill abilities, and cultural background of the BRTs at the given burn center. Without a standard for the skills and knowledge required of BRTs, inconsistent expectations for competence and variations in the training and performance of BRTs will persist.

Nationally agreed-upon standards for competence are needed not only to define what constitutes safe and

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competent burn rehabilitation practice but also to provide a foundation of consensus regarding the knowledge and skill components needed for training and evaluation of BRT job performance. The Rehabilitation Committee of the ABA (ABA-RC) used a systematic, multimethod design to develop consensus on core domains of competency for BRTs. Twenty-five burn rehabilitation experts from 23 different burn care facilities and representatives from an additional 8 burn centers in North America participated in the development and validation of the competency document. The resultant "Burn Rehabilitation Therapist Competency Tool" (BRTCT) represents consensus of expert opinion regarding the knowledge and skills needed by BRTs to treat patients with burn injury during their initial acute hospitalization and rehabilitation. The tool is intended to be used as a guide for burn centers when developing center-specific competency standards for orientation and professional development of BRTs.

The objective of this article was to define a set of knowledge- and application-based competencies for BRTs using review of existing competencies, Delphi questionnaire, and expert panel discussion/revision. This article describes the staged development and validation of the BRTCT. The component parts of the competency tool itself are presented, including level I (minimal) and II (advanced progression) competencies. Recommendations for assessment of competence are also discussed.

METHODS

A staged, multimethod approach was used for the development of competency standards for BRTs. Verified burn centers were initially surveyed to determine local competency criterion used for the training of BRTs. Competencies used at individual burn centers were compiled and used to develop a Delphi questionnaire. The Delphi questionnaire was administered to a panel of experts using a staged process with intermittent expert panel discussion for consensus development. As a final step, the competencies were distributed to participating burn centers for further feedback and validation of application. Each stage is described in further detail below.

Stage I: Compilation and Review of Existing Competencies

A purposive sample of burn centers was determined based on the criteria of having current verification status with the ABA. Identified centers were contacted through email or telephone and asked to submit competency criterion used for orientation and ongoing training of BRTs. If a burn center did not

reply to the initial email, two follow-up phone calls were made to encourage participation.

The items submitted by the respondents were reviewed by a subcommittee of the ABA-RC. Common elements were grouped to form core domains of competency. Specific skill or knowledge items were recorded as subcategories of the related core competency domain. For example, in the core domain of "splinting," subcategories of "fabrication" or "application" were delineated. A second review of the competency items was conducted by the same subcommittee to tally the domains and subcategories and determine frequency of application in verified burn units. Competency statements, including components of both knowledge and application, were developed for the items found to be used by more than 50% of verified burn centers that responded.

Stage II: Staged Delphi Questionnaire and Expert Panel Discussion

A Delphi questionnaire was developed using the above-described competency statements from stage I. The questionnaire was sent to a panel of rehabilitation experts assembled using a purposive sampling of 20 burn care occupational therapists (OTs), physical therapists (PTs), physicians, and researchers from the ABA-RC. An additional five experts were sought using a snowball sampling within the burn rehabilitation community.

The Delphi technique was selected for this stage of the project to elicit consensus of opinion through a series of questionnaires interspersed with controlled feedback.⁷ This technique has been used as a means of establishing evidence in situations where there is a paucity of supporting research.⁸ In addition, the Delphi process has been shown to improve validity when attempting to identify component skills of professional effectiveness.⁹

Experts evaluated the competency statements and rated them based on three factors: 1) statement clarity, 2) relevance to burn therapists, and 3) importance in burn rehabilitation. They used a 1 to 5 Likert-type scale to rate agreement with the statements and provided feedback in open-ended format for each item (Table 1). The format for the questionnaire was derived from a competency development model for disaster training in healthcare workers.¹⁰ In addition to providing feedback on the proposed competencies, experts were given the opportunity to recommend additional competencies for expert panel discussion.

Responses to the initial Delphi questionnaire were compiled and prepared for group discussion of the expert panel. Between each Delphi review, the expert panel met (once in person and twice by telephone conference call) to consider, discuss, and debate the feed-

Table 1. Delphi questionnaire format used for each competency item

Please review each competency statement as written, and select the answer that most closely reflects your opinion.	
Strongly agree (1), Somewhat agree (2), Neutral (3), Somewhat disagree (4), and Strongly disagree (5)	
This competency is worded clearly	(1-5)
This competency is relevant for burn therapists	(1-5)
This competency is important compared to the others	(1-5)
Additional comments:	

back and make necessary amendments to the competency statements. Any statement given a rating of 3 or higher by expert reviewers (indicating disagreement) was discussed in depth and modified or omitted as necessary. New competencies proposed by the panel were also discussed and considered for inclusion in the next round of review. The competency statements were refined based on the panel discussion and redistributed to the panel for reconsideration using the same method until consensus could be achieved. Consensus was achieved following the third round of Delphi questionnaire and panel discussion. The revised competency statements were then developed into the BRTCT.

Stage III: Validation of Competencies

The above-described Delphi process of expert consensus established basic content validity of the BRTCT. However, the ABA-RC further refined the document by determining its applicability in burn centers. The BRTCT was sent to eight burn centers using a purposive sampling of centers not previously represented on the RC. A supervisor or lead therapist representative from each center was chosen to participate in the review of the BRTCT. They evaluated the document and provided feedback regarding clarity and comprehensiveness of the competency statements, applicability of the tool at their burn center, and usefulness of the tool for competency assessment. This feedback was discussed during a final review by the expert panel, and further refinement was made to the BRTCT.

RESULTS

Stage I: Compilation and Review of Existing Competencies

BRT competency assessment tools were submitted by 54% (31/57) of ABA-verified burn centers. The number of competency items included in each tool varied from 9 to 107 items (mean = 47), representing 25 different core domain areas. The competency domains

Table 2. Percentage of verified burn centers that assess core domains of competency

Core Competency Domain	Respondent ABA-Verified Centers (%)
Splinting	87
Contracture management	77
Medical management	77
Wound management	77
Positioning	74
Postoperative rehabilitation management	74
Functional training and assessment	68
Therapy assessment	65
Patient/family education	61
Pressure therapy/compression	58
Equipment use	58
Age specific needs	55
Discharge needs	52
Scar massage	42
Pain management	39
Edema management	32
Modality use	32
Serial casting	32
Sensory evaluation and treatment	29
Psychosocial needs	29
Transparent face mask	29
Scar assessment	29
Strength evaluation and treatment	26
Amputation management	19
Silicone use	19

most frequently reported by respondents included splinting (87%), contracture management (77%), medical management (77%), wound care (77%), positioning (74%), and postoperative management (74%). BRTs were less often required to be competent with silicone application (19%), amputation management (19%), strength training and evaluation (26%), and scar assessment (29%; Table 2). Burn center respondents reported that competence was most often assessed by skill demonstration to a supervisor (71%) or another therapist (68%; Table 3). The number of burn beds in the centers that responded (18.6) was similar to the nonresponding (17) centers.

Stage II: Staged Delphi Questionnaire and Expert Panel Discussion

The BRTCT (Appendix) was developed from the feedback of burn rehabilitation experts using the staged Delphi review process. The tool is divided into 15 core domains of competency. Each domain includes between two and six subcategories of skills, including both knowledge and application components. The BRTCT defines level I competencies,

Table 3. Methods of competence assessment used by verified burn centers

Assessment Method	Verified Burn Centers (%)
Demonstration to supervisor	71
Demonstration to peer	68
Orientation	42
Verbalize understanding	29
Written test	29
Self assess	19
Review of treatment records	16
Educational review	16

which represent the minimal knowledge and skills determined necessary for BRTs to treat patients during acute hospitalization and rehabilitation for burn injury. Level II competencies represent an advanced progression of skill required in level I or require additional skills or advanced training.

Stage III: Validation of Competencies

Eight burn centers participated in validating the BRTCT. All the participants reported that the BRTCT could be applied at their center without limitation. The competency statements were reported as clearly understood, interpreted, and easily applied by 75% of burn center representatives. Two centers requested clarification for the definitions of basic and complex splints. In response, the ABA-RC refined the definition of splinting to include distinction in the type of splint (ie, static, dynamic, and static progressive). Specific examples of treatment interventions were not included in the BRTCT.

During the validation process, four additional competency items were proposed by burn center representatives for inclusion in the BRTCT. These items were discussed by the expert panel, and one new competency (competency 2.15) was added, whereas the other proposed items were incorporated into existing competencies. All eight burn centers reported that the BRTCT assessment guidelines would be helpful in determining BRT competence and that the document would be a useful tool for the training and reevaluation of BRTs. One representative stated, "The competencies provide a plan for professional development with clear learning objectives and criteria for clinical advancement."

DISCUSSION

Scope of Competency Development

The objective of developing the BRTCT was to define what knowledge and skills are central to the job performance of BRTs. The tool is not intended to dictate how

care is provided or answer questions of best practice. In most areas, insufficient evidence in the burn rehabilitation literature and variation in practice among burn centers prohibited recommendation of specific methods of treatment within a given area of competency. For example, it was accepted that burn rehabilitation therapists understand the principles of positioning and are able to develop and implement a positioning program with the goal of minimizing or correcting burn scar contractures (competency 1.6). However, specific positioning methods, devices, or treatment dosages could not be recommended, because there is a paucity of supporting evidence in the literature. Given that the BRTCT was developed using a comprehensive consensus building process, it may serve as a useful tool to help guide the development of practice guidelines or direct future research on which therapy practices are priority to investigate.

Performance of each competency should include relevant knowledge and skill application with consideration for the burn survivor's age, gender, and cultural background. Acquisition of competence, however, encompasses far more than just technical skill acquisition. The full spectrum of competency should also consider problem solving, clinical judgment, interpersonal communication with the patient and their caregivers, and accurate and thorough documentation.

Applying the BRTCT

The BRTCT is intended as a guide for burn centers and may be customized according to the needs, resources, and staffing of individual burn units. Not all areas of competency are relevant for assessment at every burn center. For example, if therapists at a burn center do not participate in wound care and dressing (competency 1.2.3), then that particular competency would be omitted from assessment at that center.

Similarly, each competency may not be applied to all therapists at a given center. OTs and PTs both provide rehabilitation for patients after burn injury. In some burn centers, the job duties of OT and PT overlap, whereas in other centers, they have distinct roles. The BRTCT was developed from the perspective of the patient's needs; therefore, distinction is not made between the therapy disciplines. Performance of competency tasks should be in compliance with discipline-specific practice acts and job descriptions. For example, if policy at a particular burn center is that only OTs provide activities of daily living training (competency 1.11), then that competency would not be applied to PTs.

Assessment of Competence

To assist in the implementation of the BRTCT at different burn centers and ensure that performance standards are measurable and appropriate to the level

Table 4. Framework for assessment of BRT competence

Stage of Competence	Explanation of Stage	Examples of Assessment
Remember	Recall or recognize information	Learner is able to recount information verbally or on a multiple choice examination
Understand	Explain the meaning of the information; be able to describe (in one's own words) the skill	Learner is able to explain treatment options (related to the skill) in a given situation verbally or in a case study examination
Apply	Use or apply knowledge; put theory into action	Learner is able to demonstrate the skill in a controlled environment or during a practical examination
Analyze	Analyze the components of knowledge and skill; interpret the impact of other factors (environment, patient response) on skill application	After observation of a treatment session (of self or a peer), learner is able to analyze skill application and discuss influencing factors verbally or in an essay examination
Evaluate	Critiques one's knowledge and skills	Learner is able to evaluate performance (of self or a peer) and identify alternative approaches verbally or in a written case presentation
Create	Reorganize elements of a skill, create a treatment plan and apply the skill to meet the demands of a variety of situations and settings	Learner is able to independently generate comprehensive treatment plan, demonstrate effective implementation of skill in a variety of situations and settings, and educate others on skill application

Adapted from *Bloom's Revised Taxonomy*.¹¹

of the learner,¹¹ the ABA-RC also developed consensus on recommendations for standard assessment of the competency items on the BRTCT (Table 4). The recommended guidelines were adapted from Bloom's Revised Taxonomy of Learning.¹² Comprehensive assessment involves a six-stage hierarchy of competence: remember, understand, apply, analyze, evaluate, and create. Knowledge and application of the skill identified within each competency are emphasized. However, by using stages of competence for assessment, BRTs are encouraged to reach beyond imitation or reproduction of the skill and analyze or interpret the information in a variety of situations, thus promoting flexibility in thought and action. The stages of competency are progressive, and the clinicians should achieve one stage of competence before moving to the next. Evaluation of competence should include components of self-evaluation and peer or supervisor evaluation. Individual burn centers may determine the most suitable methods of assessing competence at each of the stages of learning. Examples are provided to serve as a framework for assessment and are included in the BRTCT (Table 4).

Essential to assessment are professionals who are skilled in interpreting and analyzing clinical care.¹³ The BRTCT recommends that assessors of BRT competence have at least 2 years of experience working in burn care and have, themselves, achieved the highest level of competency in the proposed stages (create). It is recommended that assessment of competence be conducted for all new burn rehabilitation therapists and reassessment of competence be conducted biennially for exper-

rienced burn rehabilitation therapists. If therapists do not achieve all stages of competence, a learning plan should be put in place to provide the therapist a supported opportunity for growth, and reassessment should be conducted annually until all stages are achieved.

Limitations

There were some limitations to the study design. Only about half of verified centers responded in stage I of the project which could represent a significant bias in the initially identified competencies. In addition, representation of the ABA-RC, expert panel, and validating burn centers was entirely North American. So the scope of the BRTCT does not represent opinion of therapists from other countries with large burn populations such as India or countries with specialized therapists such as Australia and New Zealand.

An inherent limitation of the Delphi method, like other respondent-dependent research designs, is that the results can be influenced by how the feedback is framed and conducted. In compiling expert responses for review, the lead investigator (I.P.) took care that the full breadth and depth of each response was recorded for the others to respond to minimize bias.

Potential limitations also exist in the application of the BRTCT. Although competency-based approach to training potentially leads to uniform training programs, consistent and transparent standards and increased accountability, if applied inappropriately it may lead to demotivation, focus on minimal accepted standards and increased administrative burden.¹⁴ Care must be taken to ensure that clinical competence is not determined by

an exhaustive list of competencies but rather through a thoughtful analysis of BRT performance within the parameters set forth by the BRTCT.

Implementation of the BRTCT does not assure changes in clinical behavior, just as basic knowledge does not guarantee safe practice. However, safe practice cannot exist without basic knowledge.⁹ The development of the BRTCT defines the basic knowledge needed by BRTs, and we believe that it will help enhance the quality and comprehensiveness of burn rehabilitation training programs and consequently improve practice.

Future Work

This project has defined core clinical competencies for BRTs treating patients with acute burn injury. The BRTCT has been validated by community burn centers, endorsed by the Board of Trustees of the ABA, and proposed for incorporation into the ABA Verification Guidelines.

Professional competence is more than just perfecting techniques or acquiring skills, and it should never be viewed simply as a destination or endpoint.¹⁵ Competencies must continue to reflect the scope and progress of burn rehabilitation practice, and therefore, the BRTCT should undergo regular review and refinement as supporting literature provides new evidence for practice.

The next step is to develop competencies for OT/PTs working with patients with burn injury in the later phases of burn recovery (long-term rehabilitation and outpatient). Such competencies could help guide OT/PTs who are referred to an occasional patient with burn injury but have minimal background and training in burn injury. In addition, the methods described in this article for the development of a competency tool can be used to provide a framework for other burn professionals to define their relevant practice competencies.

CONCLUSION

Competency standards have become increasingly important because burn centers manage cost implications of healthcare reform. The development and implementation of competency models is an investment in human resources to achieve a more effective and productive workforce.¹⁵ Performance competencies offer accountability of quality care and can help preserve the integrity of burn rehabilitation.

Establishing expectations for performance excellence not only improves learner performance but also improves learner satisfaction.³ By establishing BRT competencies, we have provided a common framework and language for expectations of performance in burn rehabilitation. The BRTCT can be used to advance the professional development of BRTs and provides a shared

understanding of standards for performance throughout the burn care community.

“Learning is not attained by chance; it must be sought for with ardor and attended to with diligence”—Abigail Adams (1780).

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REFERENCES

1. Roach SMS. The human act of caring: a blueprint for the health professions. Ottawa: Canadian Hospital Association Press; 1992.
2. HRSA grant guidance, Nelson JC, Essien JK, Wiesner PJ. Collaborative competence in the public health agency: defining performance at organizational and individual employee levels, 1997.
3. Verma S, Paterson M, Medves J. Core competencies for health care professionals: what medicine, nursing, occupational therapy, and physiotherapy share. *J Allied Health* 2006;35:109–15.
4. Guidelines for the Operation of Burn Centers. Resources for optimal care of the injured patient. verification guidelines; available from <http://www.ameriburn.org/Chapter14.pdf>; Internet; accessed December 20, 2009.
5. Esselman PC, Thombs BD, Magyar-Russell G, Fauerbach JA. Burn rehabilitation: state of the science. *Am J Phys Med Rehabil* 2006;85:383–413.
6. Richard R, Baryza M, Carr J et al. Burn rehabilitation and research: proceedings of a consensus summit. *J Burn Care Res* 2009;30:543–73.
7. Irvine F. Exploring district nursing competencies in health promotion: the use of the Delphi technique. *J Clin Nurs* 2005;14:965–75.
8. Farrell P, Scherer K. The Delphi technique as a method for selecting criteria to evaluate nursing care. *Nurs Pap* 1983;15:51–60.
9. Caves R. Consultative methods for extracting expert knowledge about professional competence. In: Ellis R, editor. *Professional competence and quality assurance in the caring professions*. London: Croom Helm; 1988. p. 199–229.
10. Hsu EB, Thomas TL, Bass EB, Whyne D, Kelen GD, Green GB. Healthcare worker competencies for disaster training. *BMC Med Educ* 2006;6:19.
11. Toth J, Ritchey K. New from nursing research: the basic knowledge assessment tool (BKAT) for critical care nursing. *Heart Lung* 1984;13:272–9.
12. Anderson L, Krathwohl DE. *A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives [Abridged]*. New York: Addison Wesley Longman, Inc.; 2001.

13. Percival E, Anderson M, Lawson D. Assessing beginning level competencies: the first step in continuing education. *J Contin Educ Nurs* 1994;25:139–42.
14. Leung W. Learning in practice: competency based medical training: review. *Br Med J* 2002;325:693–6.
15. Brosky JA Jr, Scott R. Professional competence in physical therapy. *J Allied Health* 2007;36:113–8.
16. Marrelli A, Tondora J, Hoge MA. Strategies for developing competency models. *Adm Policy Ment Health* 2005;32:533–61.

APPENDIX

Burn Rehabilitation Therapist Competency Tool

All areas of competency should include relevant knowledge and skill application with consideration for patient age, gender, and cultural background. The full spectrum of competency should consider problem solving, clinical judgment, interpersonal communication with the patient and their caregivers, and accurate and thorough documentation.

LEVEL I

Competency 1.1 – Burn Rehabilitation Evaluation and Treatment

For the patient with acute burn injury, the therapist will:

- 1.1.1 *Knowledge:* Describe the relationship between depth, extent, and location of burn on potential functional and aesthetic outcome.
- 1.1.2 *Knowledge:* Verbalize an understanding of the components of a comprehensive rehabilitation evaluation and outcome objectives.
- 1.1.3 *Knowledge:* Describe common complications associated with burn injury and the appropriate rehabilitative management.
- 1.1.4 *Application:* Perform a comprehensive rehabilitation evaluation, including problem identification, treatment goals, and plan of care.
- 1.1.5 *Application:* Perform ongoing reevaluation and progress rehabilitation treatment plan with modifications as needed.
- 1.1.6 *Application:* Develop a patient-specific plan for discharge including home exercise program, scar tissue management, follow-up care, and community reintegration.

Competency 1.2 – Wound Care and Assessment

For the patient with acute burn injury, the therapist will:

- 1.2.1 *Knowledge:* Describe methods of burn wound assessment including size, extent, depth, and location of injury.
- 1.2.2 *Knowledge:* Describe the principles of basic burn wound care and dressing to facilitate healing and control infection.
- 1.2.3 *Application:* Demonstrate basic burn wound care and dressing, including proper techniques for infection control.

Competency 1.3 – Critical management

For the patient with acute burn injury, the therapist will:

- 1.3.1 *Knowledge:* Describe the physiological response of the burn patient to increased activity.
- 1.3.2 *Application:* Demonstrate proper monitoring and response to physiological changes during therapy.
- 1.3.3 *Application:* Demonstrate safe incorporation of critical care equipment during therapy.

Competency 1.4 - Edema

For the patient with acute burn injury, the therapist will:

- 1.4.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for therapy techniques to manage edema.
- 1.4.2 *Application:* Demonstrate safe and effective implementation of therapy techniques for management of edema.

Competency 1.5 – Pain/Anxiety Management

For the patient with acute burn injury, the therapist will:

- 1.5.1 *Knowledge:* Differentiate between pain, anxiety, and other pain-related behaviors and symptoms during therapy with the sedated and alert patient, and understand the options for management.
- 1.5.2 *Knowledge:* Describe positive and negative coping behaviors and potential impact on adherence with therapy and overall outcome.
- 1.5.3 *Application:* Evaluate and/or identify pain, anxiety, and other pain-related behaviors and symptoms during therapy with the sedated and alert patient.
- 1.5.4 *Application:* Demonstrate pain and/or anxiety management in preparation for and during therapy.
- 1.5.5 *Application:* Incorporate assessment of patient adherence and coping into the development of a rehabilitative treatment and discharge plan.

Competency 1.6 – Positioning

For the patient with acute burn injury, the therapist will:

- 1.6.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for patient positioning.
- 1.6.2 *Application:* Demonstrate proper patient position to minimize or correct contractures, and protect vulnerable structures.

Competency 1.7 – Splinting

For the patient with acute burn injury, the therapist will:

- 1.7.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for the use of basic static splints.
- 1.7.2 *Application:* Demonstrate fabrication, revision, and application of basic static splints to minimize or correct contractures and protect vulnerable structures.
- 1.7.3 *Application:* Demonstrate ongoing assessment of proper fit and wearing schedule of basic static splints and facilitate modifications as needed.

Competency 1.8 – Range of Motion

For the patient with acute burn injury, the therapist will:

- 1.8.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for active, active-assisted, and passive range of motion.
- 1.8.2 *Application:* Demonstrate active, active-assisted, and passive range of motion techniques.
- 1.8.3 *Application:* Demonstrate objective measurement of range of motion.

Competency 1.9 – Post-operative Management

For the patient with acute burn injury, the therapist will:

- 1.9.1 *Knowledge:* Describe various types of skin grafts, flaps, and skin substitutes and rationale for their use.

- 1.9.2 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for postoperative range of motion and mobilization.
- 1.9.3 *Application:* Demonstrate postoperative management of skin grafts, flaps, skin substitutes, and donor sites.
- 1.9.4 *Application:* Demonstrate postoperative positioning, splinting, range of motion, and out of bed mobilization.

Competency 1.10 – Functional Mobility and Gait

For the patient with acute burn injury, the therapist will, in compliance with discipline specific practice acts and/or job descriptions:

- 1.10.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for functional mobility training.
- 1.10.2 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for gait training.
- 1.10.3 *Application:* Demonstrate safe and effective bed mobility and transfers.
- 1.10.4 *Application:* Demonstrate safe and effective gait training, including lower extremity vascular support.
- 1.10.5 *Application:* Demonstrate selection and use of appropriate assistive devices for progression of upright mobility and ambulation.

Competency 1.11 – Activities of Daily Living

For the patient with acute burn injury, the therapist will, in compliance with discipline specific practice acts and/or job descriptions:

- 1.11.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for activities of daily living training.
- 1.11.2 *Application:* Demonstrate safe and effective training for activities of daily living.
- 1.11.3 *Application:* Demonstrate selection and use of appropriate adaptive equipment for progression of independence with activities of daily living.

Competency 1.12 – Physical Agents/ Modalities

For the patient with acute burn injury, the therapist will:

- 1.12.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for the use of physical agents/modalities in burn rehabilitation .
- 1.12.2 *Application:* Demonstrate selection and use of appropriate physical agent/modality for designated therapeutic goals.

Competency 1.13 – Scar Assessment and Management

For the patient with acute burn injury, the therapist will:

- 1.13.1 *Knowledge:* Describe the indications, contraindications, precautions, rationale, and expected outcome for pressure therapy, scar massage, inserts, and gel sheeting.
- 1.13.2 *Knowledge:* Describe the methods and tools available for burn scar assessment.
- 1.13.3 *Application:* Demonstrate proper application, fitting, and progression of wear of pressure therapy devices.
- 1.13.4 *Application:* Demonstrate scar massage.
- 1.13.5 *Application:* Demonstrate proper application and use of inserts and gel sheeting.

LEVEL II

Competency 2.2 – Wound Care and Assessment

For the patient with acute burn injury, the therapist will:

- 2.2.1 *Knowledge:* Describe principles of complex burn wound care, debridement, and dressing.
- 2.2.2 *Application:* Demonstrate complex wound care and dressing, including techniques for debridement.

Competency 2.7 – Splinting

For the patient with acute burn injury, the therapist will:

- 2.7.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for the use of complex static, dynamic, and static progressive splints.
- 2.7.2 *Application:* Demonstrate fabrication, revision, and application of complex static, dynamic, and static progressive splints to minimize or correct contractures, and protect vulnerable structures.
- 2.7.3 *Application:* Demonstrate ongoing assessment of proper fit and wearing schedule of complex static, dynamic, and static progressive splints and facilitate modifications as needed.

Competency 2.13 – Scar Assessment and Management

For the patient with acute burn injury, the therapist will:

- 2.13.1 *Knowledge:* Describe the properties and methods of application of burn scar assessment tools.
- 2.13.2 *Knowledge:* Describe the adjustments and modifications necessary to optimize the efficacy of pressure therapy devices.
- 2.13.3 *Application:* Demonstrate objective measurement of scars.
- 2.13.4 *Application:* Demonstrate and/or facilitate measuring and ordering of custom pressure devices.
- 2.13.5 *Application:* Demonstrate ongoing assessment of pressure device fit and facilitate modifications as needed.
- 2.13.6 *Application:* Demonstrate and/or facilitate fabrication, modification, and application of a transparent face orthosis.

Competency 2.14 - Serial Casting

For the patient with acute burn injury, the therapist will:

- 2.14.1 *Knowledge:* Describe the indications, contraindications, precautions, and rationale for the use of serial casting to minimize or correct burn scar contracture.
- 2.14.2 *Application:* Demonstrate proper application, monitoring, and removal of serial casts.

Competency 2.15 – Biomechanics

- 2.15.1 *Knowledge:* Describe skin, scar, soft tissue, and joint biomechanics and how they apply to burn rehabilitation techniques.
- 2.15.2 *Application:* Incorporate understanding of skin, scar, soft tissue, and joint biomechanics in the implementation of rehabilitation techniques.

2010, Rehabilitation Committee, American Burn Association