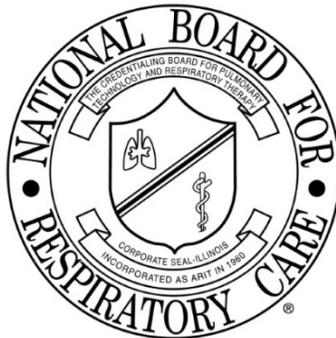# A National Job Analysis Study of Respiratory Therapists Who Specialize in Sleep Disorders Testing and Therapeutic Interventions

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Conducted for the

Prepared by

Robert C. Shaw, Jr., PhD
Program Director, Psychometrics

and

Lily Chuang, MS
Research Associate

Executive Summary

This job analysis study was conducted to identify important tasks performed by respiratory therapists who specialize in sleep disorders testing and therapeutic intervention. Study results will influence examination content for the ongoing Sleep Disorders Specialty (SDS) credentialing program of the National Board for Respiratory Care (NBRC). The job analysis study was conducted in 2014 and was the second study of this job.

Members of the job analysis committee (the Committee) supervised the study and made the decisions affecting data gathering and results evaluation. These included selection of tasks included in the detailed content outline and determination of test specifications. Committee members represented various regions across the U.S. and practice settings.

This survey-based study was conducted in phases including survey development, distribution, and response analysis. The Committee developed task statements and items to collect background information about respondents. The Committee developed sampling plans for survey distribution after consulting with Applied Measurement Professionals, Inc. (AMP) staff. After survey response analyses were completed by AMP, the Committee created exclusion rules by which tasks were classified as important or not important. The Committee also specified item distributions by content domain and cognitive level for a test specifications table. The intent will be to follow these specifications when assembling forms of the examination starting in February of 2016.

An invitation asking recipients to participate in the online survey was distributed by emails and postcards to 10,067 potential respondents, including 278 SDS credential holders. Potential respondents were encouraged to share the survey with other respiratory therapists who specialized in sleep disorders testing and therapeutic intervention. The final page of the survey permitted respondents to send an email containing the survey link to other therapists. Hence, the response rate among those who were solicited could only be estimated. A volunteer sample of 162 chose to provide usable responses in time for the analysis. The approximate response rate among potential respondents was 2%.

The electronic survey was set up to require a response to each task on a page before progressing to the next page of tasks. After respondents had rated each task, at least 94.2% found that the list of tasks had adequately covered the scope of their job activities. The lowest intraclass correlation value among the domains under which tasks were organized was .939. Therefore, the same results were highly probable among other potential samples from the population. The lowest coefficient alpha value among the content areas was .923 indicating tasks within each content domain had received ratings that were highly consistent.

The Committee assessed the degree to which the study sample had represented known subgroups (for example, by region, by institutional setting) within the population of therapists. Committee members detected no disproportionate representation. Still, the Committee decided to use a task exclusion method that would give sample subgroups opportunities to exclude tasks in case representation bias was present, but undetected by the Committee.

After examining task-rating results, the Committee established exclusion rules designed to narrow the full list of 141 tasks to a subset of those tasks that were important to practice. These rules were designed to first identify the tasks that were extensively performed. The average importance of surviving tasks was assessed next with the intent to only retain tasks of high importance.

Surviving tasks were labeled important to the practice of respiratory therapists who specialize in sleep disorders testing and therapeutic intervention. Applying 9 decision rules excluded only 1 task and retained 140 tasks across 5 content areas. Subsumed under these major content areas were 15 sub-domains for which examination items were specified.

Committee members assigned cognitive complexity designations by consensus to each important task according to their perceptions of the mental process by which practitioners behaved competently. Hence, items linked to these tasks will be expected to closely align with the complexities of the critical competencies. The Committee was confident that candidates' scores should reflect important job content associated with the demands of the job when an examination comprised of multiple-choice items are developed to the new specifications.