



THE NATIONAL BOARD
OF SURGICAL TECHNOLOGY
AND SURGICAL ASSISTING

*Job Analysis Summary
Certified Surgical First Assistant*

prepared by

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Introduction

The job analysis described in this summary was conducted in 2017-2018 at the request of the National Board of Surgical Technology and Surgical Assisting (NBSTSA). The purpose of the job analysis was to describe the surgical first assistant's job in sufficient detail to provide a basis for developing a national certification examination and ensuring that the content of the examination was job-related.

The NBSTSA appointed an Advisory Committee (AC) to assist in the preparation and review of the job analysis survey instrument. The AC developed a comprehensive inventory of activities that surgical first assistants may perform within the performance domain of the job. In addition, demographic variables and a rating scale were selected for use on the survey. After pilot testing, the job analysis survey was distributed to 3,633 surgical first assistants throughout the United States, with a return rate of 26%. The survey responses were analyzed to determine the significance of each task to the surgical first assistant's job.

Job analysis survey data were evaluated to determine the degree of consensus among surgical first assistants on critical aspects of the job. Data were specifically analyzed to answer the following questions:

1. What percentage of surgical first assistants perform each job task?
2. Which tasks are the important tasks of surgical first assistant's job?

Advisory Committee

The Advisory Committee (AC) (*Table 1*) was consulted throughout the survey development stages to ensure that expert judgment was available to PSI Services staff. The members of the AC were experienced surgical first assistants, all thoroughly familiar with the skills and activities of a surgical first assistant, and were chosen to represent a cross-section of surgical first assistants (e.g., years of experience, geographic region, professional roles, work environment, etc.).

Table 1. Advisory Committee

| <i>Name</i> | <i>Location</i> |
|---------------------------------|-----------------|
| Laura Tiffany Harrod, CST, CSFA | Roanoke, TX |
| Tiffany Howe, CST, CSFA | Hill City, SD |
| Doug Hughes, CST, CSFA | Pasco, WA |
| Katie Lukovich, CST, CSFA | Howell, MI |
| Jocelyn Maxwell, CST, CSFA | Kimberly, ID |
| Rebecca McKinney, CST, CSFA | Old Hickory, TN |
| Shannon Smith, CST, CSFA | Evansville, IN |

The responsibilities of the Advisory Committee included the following:

1. Provide PSI current information about the job.
2. Develop the job analysis survey:
 - a. develop a sampling plan for the survey,
 - b. identify tasks for the survey instrument,
 - c. determine the survey rating scales,
 - d. determine the relevant demographic variables of interest, and
 - e. integrate the definition, tasks, rating scales, and demographics into a survey instrument.
3. Review the final form of the survey for completeness, relevance to the profession, appropriate language, and clear instructions.
4. Interpret and review survey results, determine task exclusion criteria, and create the final detailed content outline.

Demographic Information

This section of the survey was designed to gather information about the respondents' demographic characteristics. These questions were used to help evaluate potential bias in the respondent group and to allow the AC to consider responses from relevant subgroups. Some of the key demographic variables are presented below.

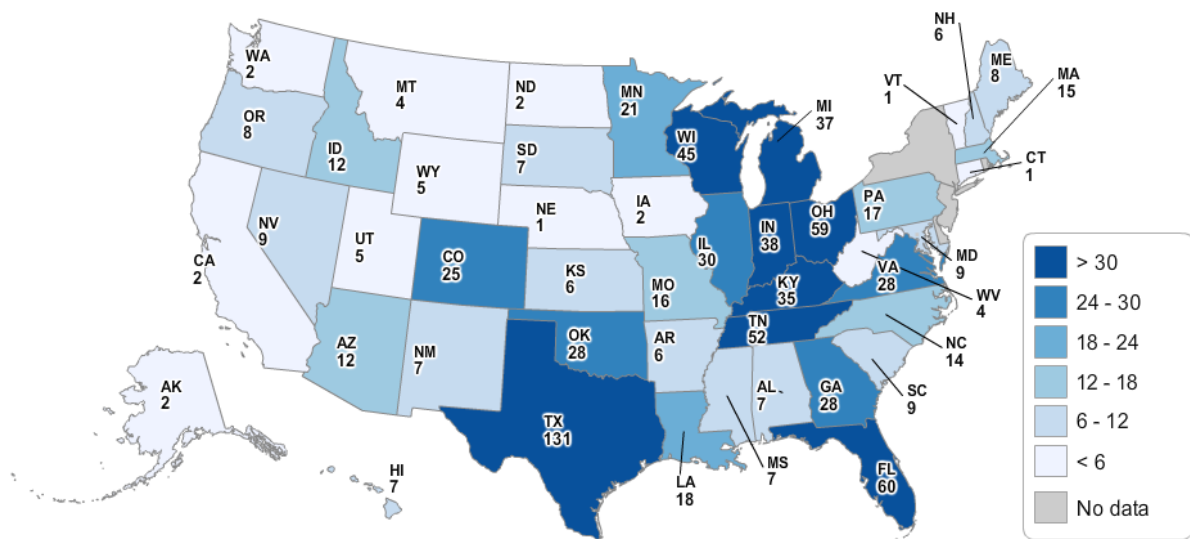


Figure 1. States where survey respondents were employed

Table 2. States recoded into regions

| Region | Frequency | Percent |
|-------------------|------------|--------------|
| East/Mid-Atlantic | 148 | 17.5 |
| South | 395 | 46.6 |
| Midwest | 165 | 19.5 |
| West | 140 | 16.5 |
| Total | 848 | 100.0 |

East/Mid-Atlantic: CT, DC, DE, MA, MD, ME, NH, NJ, NY, OH, PA, RI, VA, VT, WV

South: AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX

Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, SD, WI

West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

Table 3. Place of employment

| Place of Employment | Frequency | Percent |
|---------------------------------|------------|--------------|
| Academic institution | 31 | 3.6 |
| Ambulatory care center | 35 | 4.0 |
| Hospital/Healthcare institution | 544 | 62.5 |
| Medical/Surgical sales company | 3 | .3 |
| Military/Government | 4 | .5 |
| Physician practice | 91 | 10.5 |
| Self-employed | 69 | 7.9 |
| Specialty hospital | 13 | 1.5 |
| Surgical assistant group | 41 | 4.7 |
| Traveling staffing agency | 15 | 1.7 |
| Not employed | 4 | .5 |
| Other | 20 | 2.3 |
| Total | 870 | 100.0 |

Table 4. Employment role

| Employment Role | Frequency | Percent |
|--------------------------------|------------|--------------|
| Administrator | 10 | 1.2 |
| Consultant | 4 | .5 |
| Educator | 16 | 1.9 |
| Practitioner | 561 | 65.2 |
| Both practitioner and educator | 192 | 22.3 |
| Other | 77 | 9.0 |
| Total | 860 | 100.0 |

Table 5. Supervision as part of job responsibility

| | <i>Frequency</i> | <i>Percent</i> |
|--------------|------------------|----------------|
| Yes | 273 | 31.5 |
| No | 593 | 68.5 |
| Total | 866 | 100.0 |

Table 6. Surgical specialties

| <i>Specialties</i> | <i>Frequency</i> | <i>Percent</i> |
|------------------------------|------------------|----------------|
| Bariatrics | 207 | 23.8 |
| Cardiovascular (open heart) | 170 | 19.5 |
| Cath lab | 17 | 2.0 |
| Endoscopy | 121 | 13.9 |
| Endovascular | 198 | 22.7 |
| ENT | 288 | 33.1 |
| General surgery | 621 | 71.3 |
| Genitourinary | 316 | 36.3 |
| Neurosurgery | 306 | 35.1 |
| OB/GYN | 472 | 54.2 |
| Ophthalmology | 81 | 9.3 |
| Oral/maxillofacial | 162 | 18.6 |
| Orthopedics | 574 | 65.9 |
| Pain | 67 | 7.7 |
| Pediatrics | 109 | 12.5 |
| Peripheral vascular | 335 | 38.5 |
| Plastic/reconstructive | 393 | 45.1 |
| Robotics | 321 | 36.9 |
| Tissue/Organ transplantation | 61 | 7.0 |
| Thoracic | 278 | 31.9 |
| Other | 56 | 6.4 |

Table 7. Highest level of education

| <i>Education</i> | <i>Frequency</i> | <i>Percent</i> |
|--|------------------|----------------|
| High school diploma or equivalency diploma | 9 | 1.0 |
| College/vocational certificate/diploma | 262 | 30.2 |
| Some college | 122 | 14.1 |
| Associate degree | 333 | 38.4 |
| Bachelor's degree | 100 | 11.5 |
| Master's degree | 25 | 2.9 |
| Doctoral degree | 2 | .2 |
| Foreign medical degree | 2 | .2 |
| Other | 13 | 1.5 |
| Total | 868 | 100.0 |

Table 8. Training in surgical first assisting

| <i>Type of Training</i> | <i>Frequency</i> | <i>Percent</i> |
|--|------------------|----------------|
| On-the-job | 479 | 55.0 |
| Military | 65 | 7.5 |
| CAAHEP accredited surgical assistant program | 494 | 56.7 |
| Non-accredited program | 31 | 3.6 |
| Other | 35 | 4.0 |

Table 9. CSFA required as a condition of employment

| | <i>Frequency</i> | <i>Percent</i> |
|--------------|------------------|----------------|
| Yes | 626 | 72.0 |
| No | 243 | 28.0 |
| Total | 869 | 100.0 |

Table 10. Compensation increase after earning the CSFA

| | <i>Frequency</i> | <i>Percent</i> |
|--------------|------------------|----------------|
| Yes | 623 | 71.9 |
| No | 244 | 28.1 |
| Total | 867 | 100.0 |

Table 11. Employer incorporates CSFA into clin. ladder system

| | <i>Frequency</i> | <i>Percent</i> |
|--------------|------------------|----------------|
| Yes | 263 | 30.5 |
| No | 598 | 69.5 |
| Total | 861 | 100.0 |

Table 12. Additional credentials

| <i>Credential</i> | <i>Frequency</i> | <i>Percent</i> |
|-------------------|------------------|----------------|
| CHL | 1 | .1 |
| CIS | 1 | .1 |
| CNOR | 4 | .5 |
| CRNFA | 2 | .2 |
| CSA | 82 | 9.4 |
| CSPDT | 1 | .1 |
| CST | 684 | 78.5 |
| LPN/LVN | 22 | 2.5 |
| OAC (OPA-C) | 11 | 1.3 |
| PA-C | 2 | .2 |
| RN | 19 | 2.2 |
| SA-C | 28 | 3.2 |
| TS-C | 11 | 1.3 |
| Other | 101 | 11.6 |

Table 13. Survey coverage of the job of a CSFA

| <i>Coverage</i> | <i>Frequency</i> | <i>Percent</i> | <i>Cumulative Percent</i> |
|-----------------|------------------|----------------|---------------------------|
| Completely | 359 | 47.7 | 47.7 |
| Adequately | 387 | 51.4 | 99.1 |
| Inadequately | 7 | .9 | 100.0 |
| Total | 753 | 100.0 | |

Defining the Work Domain of the Certified Surgical First Assistant

The job of the Certified Surgical First Assistant was defined by examining the importance ratings. Four decision rules were adopted to provide a systematic and empirical approach for the inclusion and exclusion of task statements for the content outline. To be retained for the content outline, a task statement had to meet the requirements of these rules in sequential order. These decision rules were based on various analyses performed on the importance ratings.

The specific decision rules adopted by the AC and their impact on inclusion of tasks are presented below. The first two decision rules are general, and include an analysis of all respondents. The third and fourth decision rules were utilized to compare mean ratings by various subgroups.

Decision Rule 1. The task had to be performed by at least 75% of the survey respondents for inclusion on the content outline

By consensus, the AC decided that for a task to be included on the content outline, it had to be performed by **at least 75% of the respondents**. Stated differently, if more than 25% of the respondents rated a task as zero (“not performed” on the importance scale), then it would not be retained for the content outline. The application of this rule resulted in the exclusion of the following five task statements.

- T04 Obtain diagnostic studies for reference.
- T05 Review diagnostic tests to identify results.
- T73 Apply splints/casts.
- T76 Remove drains.
- T87 Operate sterilizing devices according to manufacturer’s recommendations.

Although all of these task statements were excluded by decision rule no. 1, it was determined that the following three statements were essential to practice and were therefore retained for the content outline by unanimous AC vote.

- T05 Review diagnostic tests to identify results.
- T73 Apply splints/casts.
- T87 Operate sterilizing devices according to manufacturer’s recommendations.

Decision Rule 2. The task had to have an overall mean importance rating of 3.50 or higher for inclusion on the content outline

There were no task statements deleted by the application of decision rule no. 2.

Decision Rule 3. The task had to have a mean importance rating of 3.50 or higher across all geographic regions.

There were no task statements deleted by the application of decision rule no. 3.

Decision Rule 4. The task had to have a mean importance rating of 3.50 or higher across all levels of experience working as a surgical first assistant.

There were no task statements deleted by the application of decision rule no. 4.

Summary

This job analysis was conducted to serve as the basis for the continuing development and content validity of a certification examination program for the Certified Surgical First Assistant. An Advisory Committee (AC) was assembled to provide the content expertise and guidance throughout the project. In an effort to develop a comprehensive survey of tasks performed by the first assistant, background materials such as the current content outline, job descriptions, performance appraisal forms, training materials, and job logs containing duties performed by first assistant were collected. These materials were compiled by PSI, and a master draft task list prepared. This master draft task list was reviewed and discussed with members of the AC.

Upon compiling the meeting results, a draft survey was prepared. This document went through several reviews and revisions that eventually led to the development of a final survey instrument. A nationwide sample of surgical technologists was then surveyed, in an effort to determine the importance of these tasks to the effective performance of the first assistant.

A total of 3,633 links to a web-based survey were distributed by electronic mail for completion. After determining the number of undeliverable e-mails, "opt outs" and various exclusions, 871 usable survey responses were received, which provided for a 26% return rate.

The AC reconvened for a second meeting to review the results of the survey analysis. During this meeting, all data collected from the survey were reviewed, including the demographics, the percent of survey respondents performing a given task, the overall mean importance level of the tasks, the mean task importance level based on geographic region, and the mean task importance level based on the number of years of experience as a surgical first assistant. This decision rule process enabled the AC to determine which task statements to be included on the content outline of the examination. They concluded that the results of the job analysis survey data adequately defined the surgical first assistant's job on a national basis. Moreover, the AC judged the results sufficient for the purpose of delineating the structure and content of a national certification examination.

To determine the complexity levels at which the items should be written for the examination, the AC assigned ratings to the retained tasks. This process helps to ensure that the level of complexity of the examination will mirror the complexity level of the job, and that the content of the examination will be reflective of the job. An examination that is developed in accordance with job-related specifications and so documented will possess strong evidence of content validity. These results were therefore used to develop examination specifications directly related to the tasks that the surgical first assistant performs, and are of direct importance to the objectives of the job.