The effect of improving communication competency on the certifying examination of the American Board of Surgery

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Abstract

Background: Since 1991 the authors have offered a course that identifies content deficits, but only provides instruction directed at improving verbal and nonverbal behaviors. We report the outcome of this 10-year effort as success on the certifying examination of the American Board of Surgery between 1991 and 2001.

Methods: Sixteen 5-day courses were scheduled over 10 years. Participants included those who had not taken the oral examination or had failed at least once and invited senior faculty (n = 26). Sites were chosen to replicate the actual examination setting.

Results: There were 122 participants, with follow-up data available on 88. Success in the certifying examination after completing the course is 96 percent.

Conclusions: Evaluation of communication deficits and training to improve them is strongly associated with success. Clearly, this course is effective at identifying communication behaviors that are interfering with success on the certifying examination of the American Board of Surgery.

Keywords: Oral examinations; Certification; Communication skills; Professional behavior

The American Board of Surgery (ABS) was founded in 1937 specifically to “certify those found to be qualified after meeting specific requirements and completing an examination process . . . and to identify the surgeon who has met a certain standard of excellence.” This examination process is divided into two parts. Part I is the qualifying examination that focuses on factual information in a written format. Part II, the certifying examination, is an oral examination. The purpose of this examination is to provide insight into candidates’ clinical reasoning, problem solving ability, and clinical judgment.

Previous study has determined that the scoring of surgical oral examinations is not strictly dependent upon knowledge base and is significantly influenced by verbal and nonverbal communication skills [1–3].

Based upon these findings, the authors have offered a course that identifies content deficits, but only provides actual instruction directed at improving verbal and nonverbal behaviors. This report documents the outcome of this 10-year effort to enhance success in the certifying examination of the American Board of Surgery.

Methods

There have been two primary goals of this program: a cognitive goal, to increase awareness of the variables that affect oral examination scoring, and; a behavioral goal, to
create individual change (skill development). The primary outcome measure has been successful completion of the certifying examination.

Sixteen 5-day courses have occurred over 10 years with specific activities scheduled throughout the day (Table 1). Enrollees have included those who had not taken the oral examination \( (n = 39) \) or had failed at least once \( (n = 83) \). Twenty-six faculty have participated, representing 14 general surgery programs throughout the United States and Canada. The participant-faculty ratio was at most 16:7.

Course sites have been chosen to simulate the actual examination setting. Hotel suites are used for the examinations and for videotaping. In addition, a “library” room is provided for the candidates to review their videotapes with others. Those registered for the course are instructed to prepare a 10-minute case presentation with a “bad outcomes,” and to bring attire appropriate for the posttest oral examination on day 4. Those whose speech was extremely unclear, due to speaking English as a second language, were not enrolled. Also, those who were taking the western region examination in February were discouraged from enrolling in the January course of the same year.

Day 1 is registration and orientation. Each participant is given a workbook that includes the course schedule, a syllabus, and two blank videotapes (I and II). During the orientation the participants are reminded that the purpose of the course evaluation process is to determine why they have or might have difficulty with oral examinations and how they can improve, not to guarantee success.

Day 2 is pretest day. The pretest consists of two videotaped 20-minute oral examinations followed by 10 minutes of feedback. The faculty fill out an oral examination evaluation form. During nonscheduled times, the participants are required to view their own videotape (I) and those of other course participants. Videotapes of oral examinations with actors are also available for review. Each participant must complete one written evaluation of another surgeon’s presentation. Informal small groups are encouraged to review videotapes and discuss examination variables. Each participant meets with the behavioral scientist to review previous oral examination experience and to gather data relevant to communication skill development and anxiety.

Day 3 is didactic day. On this day the history of the oral examination, especially as it relates to interrater reliability, is presented along with research that shows that knowledge base, verbal and nonverbal communications all influence oral examination scoring. Each participant gives the case presentation mentioned at the time of registration and receives immediate feedback from the other enrollees, as well as the faculty. The fundamentals of communication theory are reviewed with the emphasis that the course should identify verbal and nonverbal communication difficulties in each enrollee that can be diminished, often within a few days [4] and, with continuing practice, can result in a durable improvement (Table 2). A description of the process of the certifying examination, the method of scoring, and behavioral “do’s” and “don’ts” are provided. Finally, the participants apply what they have learned during small group sessions. In these afternoon sessions, the faculty oversee the enrollees as they take on the role of examiner and examinee, evaluate each other’s performance, and emphasize one or two difficulties that deserve special attention. The design of the course is to begin progressing from the skill level of “consciously incompetent” to “consciously competent.”

Day 4 is post test day. Additional faculty arrive on day 4...
Table 2
Most common communication errors

<table>
<thead>
<tr>
<th>Habit phrases</th>
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<tbody>
<tr>
<td>Redundant use of:</td>
</tr>
<tr>
<td>“You know”</td>
</tr>
<tr>
<td>“Uh huh”</td>
</tr>
<tr>
<td>“Um, ah”</td>
</tr>
<tr>
<td>“Ah”</td>
</tr>
<tr>
<td>“Right”</td>
</tr>
<tr>
<td>“Okay”</td>
</tr>
</tbody>
</table>

Eye contact
- Not directed at the examiners

Professional image
- Inappropriate for this encounter

Volume
- Too low

Reaction time latency
- Too long

to participate as examiners in the oral examination sessions. This session is designed to simulate the ABS certifying examination using the 5-point evaluation scale that varies from “severe deficiencies” to “superlative.” New faculty have had no formal contact with the participants until each examination begins. The examinees are expected to arrive on time to each hotel examination room, dressed appropriately for the certifying examination. Three 30-minute sessions with two faculty examiners are videotaped (II). The examiners meet to formally review each examinee and provide details of the performance as well as a consensus score. The participants may review their videotapes (I and II) with other participants in the library during unscheduled times.

Day 5 is dedicated to providing individual feedback to each participant. The results from day 4 are presented along with suggested areas for improvement. An improvement strategy is discussed that may include: specific training courses, psychological counseling, local oral examination practice sessions, and reading goals. A letter summarizing this meeting is mailed to the participant with the improvement strategy. A follow-up plan that includes continuing contact with the behavioral scientist is established to enhance implementation of the improvement strategy. The strategy is for the participant to continuously practice new skills with a goal of reaching the unconsciously competent stage.

Results

There were 122 participants, with follow-up data available on 88. Thirty-nine had never taken the certifying examination, 89 were men and 33 were women, with an age range of 30 to 54 years. Our woman participants reflected 27% of our course population although less than 10% of general surgeons in the United States are women [5]. Eighty-three had failed at least once and 33 (43%) of those had previously taken a review course. Three had taken a modified residency to become reeligible for examination. Only a few (n = 3) denied any communication apprehension. One had failed three times and was appealing his decision to the board.

Eighty-six of the 88 participants (96%) have passed the certifying examination. Of those who took the course before their first certifying examination (n = 39), limited data are available. However, most (n = 86) have passed and a few (n = 2) have failed on their first attempt. Only 1, who we did not predict would have difficulty, was not successful on his first attempt. He repeated the course and was successful on his second attempt. This compares favorably with the pass rate for all examinees since 1995 (Table 3) where 80% of examinees passed in 2000 [6].

Based on faculty evaluations, 4 surgeons were counseled to consider new career paths. Of those, 1 was angry that he had not passed and argued issues of “entitlement” even though his knowledge base was extremely poor. Another 2, with a poor knowledge base, had nontraditional career paths and were not actively practicing surgery. Eight persons were encouraged to participate in professional counseling programs for reasons associated with high levels of stress. Stressors included childhood incidents in a hotel room; marriage difficulties, pregnancy, children, financial issues, new employment, moving, relocation, and previous multiple failures. Oral examinations as a stressor could be classified as mild to moderate on DSM-3 (Diagnostic and Statistical Manual of Mental Disorders) [7]. It is almost equal in stress severity to marital discord and severe financial problems. The more recent DSM classification has eliminated numerical designations and the stressors are classified only as mild, moderate, severe, and extreme [8]. Interestingly enough, oral examinations are also stressful for the examinees. Evaluating lower ability candidates is more dif-

Table 3
Frequency of passing grades on the qualifying and certifying examination

<table>
<thead>
<tr>
<th>Year</th>
<th>Qualifying examination</th>
<th>Certifying examination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of examinees</td>
<td>Pass rate</td>
</tr>
<tr>
<td>1995</td>
<td>1,298</td>
<td>80%</td>
</tr>
<tr>
<td>1996</td>
<td>1,274</td>
<td>77%</td>
</tr>
<tr>
<td>1997</td>
<td>1,300</td>
<td>77%</td>
</tr>
<tr>
<td>1998</td>
<td>1,300</td>
<td>78%</td>
</tr>
<tr>
<td>1999–2000</td>
<td>1,323</td>
<td>78%</td>
</tr>
</tbody>
</table>
difficult and more stressful than evaluating higher ability candidates [9].

All three participants who had completed a modified residency after failing the certifying examination three times, were successful. Almost three quarters of the participants who had failed the certifying examination once reported that it was difficult to find other surgeons willing to devote time for practice sessions.

Three participants were concerned with discrimination issues. Of those, 2 Hispanic participants reported having their accent corrected during separate examinations by the same examiner but passed their next examinations. The third, an African American whose knowledge base and behavior was below our acceptable level, still insisted on pursuing a discrimination complaint with the ABS.

There seems to be a definite correlation between male surgeons who reported a higher level of stress in their households during their critical communication developmental years of 4 to 6 and high communication anxiety in oral communication settings. Most of these individuals did not report a speech impediment (eg, stuttering, hesitation, lisp), which would have been common for male children. These data are under further investigation.

The tuition fees for the course completely fund the program on an annual basis. Participants report the cost to value ratio as extremely high. The costs and fees associated with the American Board of Surgery certification process are relative to the entire cost of medical training. Repetition of the examination and additional review courses can be both emotionally and financially taxing. However, most argue that investing in training “before failure” is relatively a small amount compared with the cost of training.

Comments

Our results demonstrate that communication deficits and apprehension are common in general surgeons who have failed the certifying examination. Many participants reported that they did not anticipate failure on the certifying examination, they were unconsciously incompetent. However, early evaluation of these deficits and training to improve them is strongly associated with success. Wade and Kaminski [10] also found that formal surgical review courses have helped improve ABS examination performance, especially for those at a higher risk of failure, when they reviewed the study methods of 54 categorical surgical residents from 1976 to 1992. And McDermott et al [11] found that the reason for a passing or failing candidates in the oral board certification examination in neurology could be determined by observable behaviors, which is the design of this Dartmouth course. All of our course participants are given immediate verbal feedback and required to review their videotapes so that they can observe their own behavior before practicing a new skill. Unlike other review courses that promise to review 5 years of surgery the week before the certifying examination, we follow the 4-step method to teach new skills in adults: unconsciously incompetent; consciously incompetent; consciously competent; and unconsciously competent.

These skills necessary for the certifying examination in general surgery are different than those needed for success on the written examination, which is similar to the finding by the American Board of Psychiatry and Neurology [12]. Clearly, this course is effective at identifying communication behaviors that are interfering with success on the certifying examination of the American Board of Surgery. Evaluation and training to diminish these deficits is associated with success. The high success rate for course participants taking the examination for the first time, suggests that identification of communication deficits during residency may be especially useful for intervention and avoidance of failure.

In parallel, these same communication behaviors also impact on our surgeon-patient relationships. If those examiners who are trained and directed to focus on surgical information can be influenced by communication skills, imagine how our patients are influenced, since they do not know if we are telling a good story.

References