

Association for Surgical Education

# The utility of mock oral examinations in preparation for the American Board of Surgery certifying examination



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## Abstract

**BACKGROUND:** Determine the utility of mock oral examinations in preparation for the American Board of Surgery certifying examination (ABS CE).

**METHODS:** Between 2002 and 2012, blinded data were collected on 63 general surgery residents: 4th and 5th-year mock oral examination scores, first-time pass rates on ABS CE, and an online survey.

**RESULTS:** Fifty-seven residents took the 4th-year mock oral examination: 30 (52.6%) passed and 27 (47.4%) failed, with first-time ABS CE pass rates 93.3% and 81.5% ( $P = .238$ ). Fifty-nine residents took the 5th-year mock oral examination: 28 (47.5%) passed and 31 (52.5%) failed, with first-time ABS CE pass rates 82.1% and 93.5% ( $P = .240$ ). Thirty-eight responded to the online survey, 77.1% ranked mock oral examinations as very or extremely helpful with ABS CE preparation.

**CONCLUSIONS:** Although mock oral examinations and ABS CE passing rates do not directly correlate, residents perceive the mock oral examinations to be helpful.

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The American Board of Surgery certifying examination (ABS CE) is an oral examination for residents as a final step to general surgery board certification.<sup>1</sup> Before the ABS CE, residents must pass the written American Board of

Surgery qualifying examination (ABS QE). The ABS CE is challenging for residents not only because of the vast amount of material, but also because of the challenges in identifying and expressing treatment plans in an immediate, clear, and concise manner. As a result of these challenges, general surgery residency programs have a variety of methods to help prepare residents throughout their training for the ABS CE. The most common method is an annual mock oral examination.

Mock oral examinations are useful not only for residents but also for programs to identify weak areas of clinical training.<sup>2</sup> If multiple residents perform poorly on certain

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areas within general surgery on the mock oral examination, this can encourage programs to develop their clinical exposure in these areas, ultimately optimizing their residents' success on the ABS CE.

In 2012, the first-time pass rate on the ABS CE was at a low of 72%.<sup>3</sup> This was a significant decrease from the 84% pass rate in 2006.<sup>4</sup> Although 2013 and 2014 pass rates demonstrated an improvement at 80% and 78%, respectively, the importance of adequately preparing residents for the ABS CE and maximizing their success continues to be paramount. Studies have demonstrated variability in the utility of mock oral examinations and performance on the ABS CE. Aboulian et al<sup>5</sup> identified an improvement in ABS CE pass rates from 88% to 100% before and after the institution of public mock oral examinations, respectively, although this difference was not statistically significant ( $P = .30$ ).

The purpose of this study is to describe the utility of a multi-institutional mock oral examination in preparation for the ABS CE.

## Methods

Sixty-three general surgery residents matriculated at our institution between the years 2002 and 2012. Most residents participated in the annual citywide mock oral examination in the spring of their 4th and 5th years of residency. This mock oral examination involved 3 academic general surgery residency training institutions in Chicago: Rush University Medical Center, Northwestern University and University of Illinois at Chicago. The examination was administered by faculty from all 3 institutions, ensuring that residents were examined by faculty outside their home institution. A mock oral examination committee, consisting of faculty from the 3 institutions, met weekly for 6 months before the examination to write the questions.

The mock oral examination consisted of a total of 9 questions. These questions were administered in 3 different rooms, with 2 examiners, and 3 case scenarios in each room. All examiners were given the same scripted prompts and scoring sheet for each question, and 1 examiner scored whereas the other administered the questions. The topics and questions of the case scenarios covered a broad spectrum of general surgery material, with an attempt to represent the true ABS CE. After the examination, residents were provided a rubric of sections passed for each question. Those who passed 6 or greater of the 9 questions were given a passing score. Feedback was provided on appearance, mannerisms, and medical knowledge on the topics tested. In addition, each question had predetermined responses that were considered critical failures.

For this study, data were gathered by the residency program coordinator from our institution and blinded before data analysis. These data included demographics, 4th and 5th-year mock oral examination scores, American Board of

Surgery In-Service Training Examination (ABSITE) scores, United States Medical Licensing Examination (USMLE) scores, and first-time pass rates on the ABS QE and CE. In addition, all previous residents were e-mailed an anonymous online survey. This survey consisted of 7 questions that inquired about their opinion on the utility of the mock oral examination in their preparation and performance on the ABS CE (Fig. 1).

Categorical variables were compared with Fisher's exact tests. Continuous variables were compared using the 2 sample *t*-tests. Logistic regression was used to evaluate the influence of independent variables on 1st-time ABS CE or ABS QE pass rates. Relationships among other variables were examined, including the mock oral examination scores (4th and 5th years), the ABS QE, the ABS CE, and the proportion of times the resident failed their ABSITE. Spearman correlations were calculated and logistic regressions were run on the binary variables (pass and/or fail of mock oral examinations for 4th and 5th years; pass and/or fail of ABS QE; and pass and/or fail of ABS CE) using proportion of ABSITE failures as predictors. A Holm-Bonferroni procedure was used to control for familywise error rate, which was set at .05. Analyses were conducted in statistical analysis system version 9.2 and R 3.1.1 statistical software.<sup>6</sup>

1. What is your gender
  - A) Female
  - B) Male
2. Did you pursue a fellowship after residency?
  - A) Yes
  - B) No
3. What was your first job out of residency or fellowship?
  - A) Private practice
  - B) Academic
4. When did you take the qualifying and certifying exams?
  - A) Within 1 year after finishing residency
  - B) Greater than 1 year after residency
5. How did you prepare for the certifying (oral) exam?
  - A) Self-study
  - B) Formal preparatory course
6. The month before the exam, on average, how many hours per week did you spend studying for the certifying (oral) exam?
  - A) 1-5 hours
  - B) 6-10 hours
  - C) 11-15 hours
  - D) 16-20 hours
  - E) More than 20 hours
7. On a scale of 1 to 5, how helpful did you think the mock oral exam was in your preparation for the certifying (oral) exam?
  - A) 1 - not at all helpful
  - B) 2 - slightly helpful
  - C) 3 - moderately helpful
  - D) 4 - very helpful
  - E) 5 - extremely helpful

**Figure 1** Anonymous online survey.

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