

Implementation and Evaluation of a Radiology Boot Camp to Enhance Residency Preparedness for Fourth-Year Medical Students

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Introduction

Medical students entering Diagnostic Radiology (DR) residency often face a steep learning curve due to limited exposure and practical experience in radiology. This study aimed to implement and evaluate the impact of a Radiology Boot Camp for fourth-year medical students who matched into DR residency. The goal was to assess students' perceived usefulness of the boot camp and their preparedness in basic radiology skills to better equip them for residency.

Methods

An agile, student-focused education approach was used to develop the boot camp, adapting content from radiology resident lectures. A post-implementation questionnaire was used to assess the course and gather feedback for improvement. Fourth-year medical students who matched into DR were eligible to participate. Nine course components were covered, addressing key radiology topics such as chest, trauma, and abdominal radiography, abdominal CT, ultrasound, stroke, back pain, and genitourinary emergencies. Following each component, an anonymous electronic survey was administered to participants via Google Forms, with data collected from April 8 to April 12, 2024. Open-ended responses were analyzed qualitatively, while quantitative data were assessed using descriptive statistics. A Likert scale was used to measure agreement (1 = strongly disagree to 5 = strongly agree).

Results

On average, 9.8 (SD 2.2) fourth-year medical students participated in each component, with 88 questionnaires completed. Most (83/88) respondents either agreed or strongly agreed (46/88 strongly agreed, 37/88 agreed) that the topics were relevant to their residency preparation, with four responses neutral and one disagreeing. Additionally, 92% (81/88) agreed or strongly agreed (47/88 strongly agreed, 34/88 agreed) that the content was delivered clearly. Neutral and disagreeing responses primarily referred to the "Abdominal Pain and X-ray/CT Interpretation" component. When asked if the course component was useful for radiology residency preparation, the majority (85/88) of responses either agreed or strongly agreed (50/88 strongly agreed, 35/88 agreed, and 3/88 neutral) and no responses disagreed. Overall, 98% (86/88) agreed or strongly agreed that the course helped them feel more comfortable and prepared for radiology residency.

Conclusion

Results indicate that the Radiology Boot Camp provided useful, relevant content and helped students feel more comfortable and prepared for their transition into DR residency. Recommendations for future improvements include increasing cases, interactivity, and enhancing visual aids.



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