

Improving Resident Education and Patient Care: A Course in Fiberoptic Laryngoscopy

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Background: Routine fiberoptic laryngoscopy (FOL) is a fundamental physical exam tool used by Radiation Oncologists. Cancer staging, treatment planning, and monitoring for tumor recurrence are dependent on the findings of the FOL. FOL is rarely taught in medical school and residents are seldom formally trained in the procedure. Lack of training can be anxiety-provoking and limit a resident's ability to note changes in the tumor during treatment or detect a recurrent tumor following treatment. The goal of this project was to create a course that trained residents in performing FOL prior to starting clinic rotations and ensure proficiency in the procedure prior to evaluating patients at DVAMC.

Methods: The course included a didactic session, simulation session, and credentialing requirement. The didactic component was given by a senior resident and consisted of a presentation reviewing anatomy, indications for performing FOL, knowledge of the instrumentation, steps of the procedure, necessary documentation, and possible complications.

Following the didactic component, residents were brought to the Duke University School of Medicine simulation lab. Two stations were set-up: a computer-based console with fiberoptic laryngoscope that provided haptic feedback and produced high-resolution images that closely mimicked human anatomy and a dummy patient and screen set-up that closely resembled the clinic setting. During the simulation session, the five-step model for teaching clinical skills was followed.¹ The first step was completed with the didactic session. The second step was a silent demonstration, which provided residents with a reference of the skill being performed correctly. Then a narrated demonstration allowed for further clarification and gave residents time to ask questions. Step three involved the residents talking through the process of performing a FOL. Finally, residents practiced FOL with the simulation equipment. One senior resident and one attending were present to oversee the simulation and provide real-time feedback to the residents.

The final component of the course included evaluation and credentialing of residents. Previous research has shown that a median of six attempts at FOL are required to attain competency.² All first-year residents rotating at DVAMC are now required to perform their first six FOL under the supervision of the attending physician. Each resident receives a credentialing sheet and six signatures are required for the resident to perform a FOL independently. Once completed, this sheet is submitted to the residency Program Coordinator for tracking.

Results: The FOL course was implemented at the start of the 2017-2018 academic year. Feedback from the residents has been very positive. The first PGY-2 resident to rotate through DVAMC received the six required signatures to perform FOL independently. There were no barriers to obtaining the necessary supervision and the resident subjectively felt more prepared to perform the procedure after course completion. Attending feedback has been equally positive, with attendings also more confident in resident skills following course completion.

Conclusion: This new, three-part FOL course with didactic session, simulation lab, and credentialing has been a simple and valuable addition to the Radiation Oncology Residency Program and will be continued each academic year. All residents will be required to perform six FOL procedures under the direct supervision of an attending prior to performing the procedure independently at DVAMC. In the future, pre- and post-course surveys will be collected from PGY-2 residents to assess the usefulness of the course and allow for formalized feedback.

References:

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