Utilizing A Five-Step "Microskills" Pedagogy To Teach Radiology Residents In The Millennial Age

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Abstract:

Radiology is a distinct medical specialty with little patient interaction that focuses on report generation and image interpretation. In educational institutions, resident read-out sessions with instruction are an essential component of reporting workflow procedures. However, learning experiences differ and the majority of radiologist-educators lack formal training in teaching. Neher developed a five- step "microskills" model, also known as the "one-minute preceptor technique," that is an easily implemented teaching model that enhances the workflow of a typical read-out session. Radiologists with varying levels of seniority and teaching experience can use this model. The procedures are as follows: (a) obtain a commitment; (b) look for proof; (c) impart general guidelines; (d) highlight good work; and (e) fix errors. Two of the five microskills in the model are related to feedback.

Keywords: Education, Microskills, Radiology, Residency.

Introduction

The American Council for Graduate Medical Education has accredited the highly structured model that replaced the apprenticeship system in the Singapore national medical specialty training program. This offers a chance for educational reform that provides the faculty with useful pedagogical strategies for a fresh batch of trainees (Yang , 2015).

The majority of our clinicians rely on their own teaching experiences rather than having received formal training as educators. Staff members at our public healthcare facility also have a lot of clinical responsibilities, which cuts into their time for focused tutoring. As a result, teaching interactions with trainees are frequently not optimal. A different challenge for the faculty is the millennial resident's fast-paced mentality. According to the cliché, millennials prefer brief instruction sessions and group learning because they grew up in the Internet era, where information is available whenever they need it. This is in contrast to teachers who are used to conventional didactic, top-down methods. As a result, we must create cutting-edge, effective training methods for our hospitals (Slanetz , 2013).

Concepts of Radiology Training:

Diagnostic radiology (DR) is a distinct specialty where patient contact is minimal and daily tasks revolve around workstation image analysis, making patient-centered teaching pedagogies impractical. Every day during the read-out session, a resident and a consultant review scan images together with a focus on abnormality detection and interpretation. This is a regular teaching opportunity (Knechtges , 2007). The result is a preliminary radiological report, which the consultant then confirms. For maximum effectiveness and ease of adoption, specific educational techniques should be able to blend in with this workflow and emulate the format of an ideal radiology report (Neher , 1992).

MICROSKILLS: A FIVE-STEP MODEL:

Generally regarded as the "one-minute preceptor" technique, the five- step "microskills" model is a widely accepted approach that can be modified for DR. It was first conceived in 1980 and explains teaching practices associated with five prominent clinical teaching modes: problem-solving, teacher-student relationships, feedback, and role- modeling scholarship (Bosmans , 2011). modified a few of these instructional strategies to create the subsequent sequential method: Obtain a commitment; (b) look for proof; (c) impart general guidelines;
(d) highlight good work; and (e) fix errors (Bott , 2011).

Microskills :

Clinical teaching's five-step "microskills" model is a tried-and-true teaching strategy for medical careers and varying degrees of teaching experience. Some radiology residency programs have implemented it as a fundamental element of their curriculum for training resident teachers, and the outcomes have been encouraging. The main advantages of this teaching approach are its quick learning curve, low time investment per lesson, and smooth integration with the traditional side-by-side checking workflow of radiology reporting. Additionally, the first three microskills explicitly match pertinent sections of the radiology report (Furney , 2001).

Beyond the written report, the radiologist's role is still developing. The majority of radiologists play crucial roles in interdisciplinary teams. The resident will benefit greatly from the verbal sparring and quick thinking that come from using the microskills method when participating in clinico-radiological rounds. Also, these will be helpful for residents taking oral or viva exams (Donovan , 2011).

Recommendations:

Giving the learner positive reinforcement for a suitable action with the goal of establishing it as a competency is known as "reinforcing what was done right." For instance, the preceptor might say to the resident, "It's good that you looked into the patient's clinical details." Our tentative diagnosis of hepatocellular carcinoma is strengthened by the patient's history of chronic hepatitis C. The preceptor hopes that with this feedback, the learner will make it a routine to review the clinical information of patients whenever they undergo a scan in the future.

Error correction calls for discretion and an impartial attitude. The emphasis should be on steps to prevent the error from happening again rather than on the error itself. In the context of radiology reporting, common errors include misinterpreting or failing to detect imaging results. The instructor needs to offer suggestions on how to do better, like assisting the resident in defining review regions for related photos going forward. If there are any mistakes in the report's structure, phrasing, or conclusion, the teacher can immediately revise it and provide feedback.

Conclusion:

The preceptor must change from their traditional role as a subject matter expert to that of an educational facilitator who leads and stimulates discussion in order to educate the

millennial resident. In addition to emphasizing the value and applicability of recently learned material in daily reporting, the preceptor must teach students how to apply their knowledge to real-world situations. Because the five-step "microskills" model is designed to incorporate these ideas, radiologists and educators can use it widely.

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