Curriculum in Radiology Reporting: An Interactive Web-Based Educational and Assessment Program in Communication Essentials

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Abstract

With funding from the RSNA[1], the authors are currently developing a set of Web-based educational modules targeted to radiology residents with the goal of improving reporting and communication skills. These modules will include enhanced self-assessment tools. Validation testing will be done after each module is completed. We believe this integrated education and self-assessment program will help radiology educators address the ACGME Competency Requirement in Communication Skills. Our validated report quality rating instrument should provide a tool that program directors can use to evaluate and document competency in radiology reporting and clinical communication.

Keywords: Education and Training; Computer-Assisted Instruction; Self-Assessment; Radiology

Background and Significance

Radiology reports are the primary work product for non-interventional radiologists. The quality of these important documents is often determined by arbitrary factors and personal "style." A poorly constructed report can be further degraded by poor communication skills on the part of the radiologist or resident. Guidelines and best practices are available, but medical educators face many challenges to affect meaningful change. Progress in this area is now required by the ACGME competencies for resident training.[2]

Description

Two general modules are proposed:

1) The Report – ACR Standard for Communication in Diagnostic Radiology
2) Beyond the Report – Additional Clinical Communication Skills

We are constructing the modules using the "tripod" of tutorial, reference and self-assessment. The framework is flexible and will accept additional modules in the future. The primary unit of instruction is the "case," each of which begins with a study request and one or more images. Before addressing the report proper, the learner must identify the key finding for the study and assign a level of urgency. (This closely mirrors actual radiology practice.) If the learner has misidentified the finding or its implications, constructive feedback is given at this point. Depending on context, the case may proceed as either a tutorial discussion, an unknown for self-assessment, or a formal post-test item. The learner is presented with realistic reports and must identify errors of omission, commission, and structure. Feedback is given incrementally throughout. As the learner becomes proficient with one group of concepts, the system will automatically advance to the next topic. The exact sequence of cases will be different each time as the system adapts to the learner's strengths and weaknesses.

In the validation phase, radiology reports for analysis will be selected from our digital dictation system. We will obtain report text as it exists after resident dictation, editing, and verification prior to attending review. The selected reports will be stripped of any patient identifying information but will be otherwise unaltered. Stringent criteria will serve to restrict the sample with respect to examination, indication, and setting for resident interpretation. We know of no generally available instrument for rating radiology report quality and are currently working to specify candidate items for such a scale. We plan to conduct focus groups with radiology residents, radiology attendings, and referring clinicians. These sessions will serve to narrow down the candidate items based on face and content validity. We will pilot test the reduced set of items with raters/reports similar to those we plan on using for the experiment. Chronbach's alpha of 0.7 - 0.9 and point-biserial correlation above 0.4 will be required for retention of items. The final scale is expected to consist of 5-7 items and will be further tested for test-retest, inter-rater, and intra-rater reliability.

References

[1] Funded by an RSNA World Wide Web-based Educational Program Grant. Accessed July 2003. http://www.rsna.org/research/foundation/r_www.html

[2] ACGME Outcome Project. Accessed July 2003 http://www.acgme.org/outcome/comp/compFull.asp