AbstractID: 7195 Title: Web-Based Computerized Training of Medical Dosimetrists

Creating an effective Web-based curriculum requires more than converting in-class lecture notes to HTML. We're hoping to move past the “book on the Internet” model of Internet medical training. As on-line curriculum authors, we strive to lift our lessons off the page into a completely new learning medium, free from the constraints of ink and paper and the mindset of the static textbook. Students' usual study tools of note-taking, sentence underlining and page turning in thick textbooks can be augmented and even replaced by powerfully dynamic hands-on exercises, motivating animations and instantaneous feedback from computer-assisted quizzes.

In the case of Dosimetry training, printed materials quickly go out of date, students are isolated into small groups, and their daily work is highly computerized. A course with continually updated content that offers collaborative study features and plenty of real-world simulations will serve students better than any textbook can. Medical dosimetrists are in short supply. This threatens to undermine the practice of radiation oncology in the United States and could stall the implementation of technically advanced radiotherapy worldwide. A web-based training tool can address this problem by providing medical dosimetry mentors with a uniform curriculum, self-paced study, drill and practice, and computer automated testing and scoring.

The “Dosimetry Online” program is meeting these needs with 18 web-based courses developed using the newest methods of online instruction. These courses form a distant learning resource for dosimetrists’ training at radiation oncology centers around the country. Designed to be used by mentors and their dosimetry students preparing to pass the Medical Dosimetrist Certification Board, the program emphasizes tools and resources specifically tailored around this learning relationship. Each instruction module includes a set of “learning objectives,” the course content and a pre- and post-test developed by the content authors thereby making student performance evaluation methods integral to the courses.

Authors comprise volunteer experts culled from the ranks of the American Association of Medical Dosimetrists, the American Association Physicists in Medicine, and the American Society for Therapeutic Radiology. An annual workshop will be held to train module authors, to distribute authoring tools and the development methodology, and to evaluate and set goals for improvement and content refinement. Stanford personnel will manage the project, provide a web server and on-going technical support for the authors. Annual revisions and fine-tuning of the computer-aided modules will be based on evaluation tools integrated into the distant-learning resource.

This 30-minute session will give a quick overview of the project, delve into our design tools and outline our design methodology. Attendees who have never encountered online medical instruction can gain an overview of this exciting new teaching tool while those who are somewhat familiar with online pedagogy can take away interesting tidbits that may help to improve their current efforts.

Educational Objectives

1. Outline the "Dosimetry Online" program and explain our objectives
2. Give an overview of the tools of online training
3. Give an overview of the process of creating online curriculum
4. Explain why computer delivery is particularly powerful for Dosimetry training