IMPLEMENTATION AND EVALUATION OF COMPUTER SIMULATION NEUROLOGY CASES FOR YEAR 2 STUDENTS IN A PBL CURRICULUM

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Introduction: This presentation will focus on application of computer-based neurology cases (DxR cases) for second-year medical students. Implementation included use as PBL cases in group and for individual work-up, and as part of student evaluation in the course. Feedback from students will be described.

Methods: During the second-year neuroscience course, we included DxR interactive case simulations in three ways. One DxR case was used as a PBL case for initial discussion in the group; one case was assigned for individuals to work through with discussion of hypotheses, learning issues and content in the group; and one case was required for students to complete individually as part of the grade. Students completed a survey and a focus group was conducted to determine subjective effectiveness. Individual student records were examined to analyze the extent of work-up and problem-solving strategies used.

Results: During PBL sessions, there was variation in comfort level and attitude of both preceptors and students. Students were very positive about having computer simulation cases available for individual practice. Analysis of student records indicated more variability than expected in physical exam and lab tests requested.

Conclusions: Using DxR cases or other types of computer simulations for neurological problem-solving practice is an effective approach to reinforce concepts and give students practice in integration of patient history and neurological exam findings to determine location and type of lesion. It is important to integrate the cases into the course objectives and to provide appropriate feedback to students.