USE OF DIGITAL VIDEO IMAGES TO TEACH AND ASSESS VISUAL DIAGNOSIS IN PEDIATRICS: ASSESSING INFANT DEVELOPMENT

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**Background:** The practice of Medicine, in general, and of Pediatrics, in particular, relies heavily on visual diagnostic skills. Medical students and residents in training must achieve particular competency in physical diagnosis to optimize care and to reduce errors. During clinical rotations, it can be difficult to standardize exposure of trainees to core topics and to evaluate their competency in particular clinical skills. Typical simulation approaches using standardized patients cannot be as readily applied in Pediatrics due to age considerations.

**Objectives:** The objective of this project was to develop an educational tool that would facilitate the acquisition of visual diagnostic skills for medical trainees.

**Methods:** Digital video imaging was used to focus trainees’ learning on normal infant development, a core topic in General Pediatrics. Using a digital video camera, an iMac computer, and software/technical support, normal infants were video recorded to produce both teaching and testing modules on two compact disks (CDs). Principles of adult learning were incorporated into the design of this project.

**Results:** The first interactive CD module is dedicated to teaching and consists of video case presentations of normal children between birth and 18 months of age with accompanying text. Each video clip is presented together with a list of age-appropriate milestones. Selected milestones are specifically demonstrated, along with identification of critical indicators of potential abnormal development. During the review component of this module, students answer multiple-choice questions about different video clips for each age group, and receive feedback prompts to encourage review of incorrect answers. The second CD module displays another set of video case presentations with text in a test format, to assess learner competency. Initially, 150 third-year medical students enrolled in a combined ambulatory care clerkship will use this tool to complement their clinical experiences.

**Conclusions:** Use of digital video imaging to develop case-based teaching and testing tools in Pediatrics offers the potential for both self-instruction and teacher-facilitated learning. This approach can also facilitate objective, reproducible student evaluation in a more relevant context than typical written examinations. Recent advances have dramatically reduced the technical difficulties associated with developing sophisticated learning tools that can stimulate interest among busy trainees.