

Physical Examination Skills of Beginning Third Year Medical Students

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BACKGROUND

Traditionally, medical students' clinical competence was evaluated by faculty observation of the student at the bedside. Because of the time consuming nature of observing 75 MS2s conduct a complete history and physical examination, faculty chose to have MS3s conduct observed focused history and physical examinations. The students then present to a faculty member an oral report of the history and physical findings. In the 2005 TAMUHSC-COM AAMC medical student questionnaire, 10-20% of graduating seniors stated that they had never been observed conducting a complete physical examination. Faculty expectations of students performing history & physicals vary depending on their specialty making this assessment unreliable. Furthermore, the time required to observe the student perform a complete history & physical was perceived by some faculty to be too time consuming. Most of the MS3 clinical clerkship evaluation forms are "A" and faculty members are hesitant to give students lesser grades creating a great inflation. Utilizing the RIME evaluation method, an A reflects residents' level of competence. Given the need to properly prepare students for the USMLE Step 2 CS, the medical director of clinical simulation integrated physical examination stations into the orientation of third year medical students (MS3) to the clinical clerkships.

INTRODUCTION

In response to the 2005 NBME implementation of the USMLE Step 2 CS examination, TAMUHSC-College of Medicines' clinical faculty was encouraged to assure that students are competent in their communication skills and in their ability to perform a basic history and physical examination before they begin their third year clerkships. Clinical faculty questioned the students' abilities in these basic skills and integrated into orientation to the clinical clerkships assessment of these skills using standardized patients.

Medical students at TAMUHSC-COM are taught physical examination skills as part of Becoming A Clinician (BAC). Communication skills, history taking and physical diagnosis are taught in year one (MS1) by family medicine faculty. Student performance in BAC I "Working With Patients" was exceptional with 97% of students receiving A's; three students received a B. An applied family medicine preceptorship in year two (MS2) requires 2 written histories and physical examinations. Preceptorships are not graded. This experience focuses on a global history and generic physical examination.

METHODS & MATERIALS

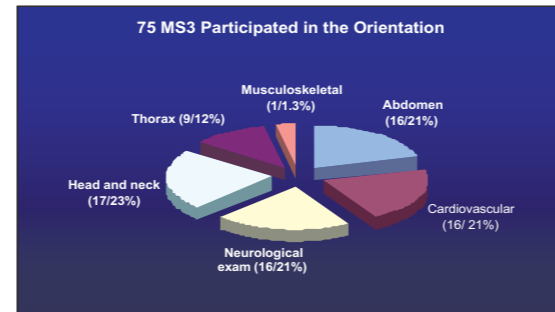
Physical examination check sheets developed from Bates Guide to Physical Examination and History Taking (Bigley, 2002), with established reliability and validity, were reviewed by COM general internists. The internists concurred that the check sheets were appropriate. The check sheets included history taking and assessments of primary systems: cardiovascular, thorax, head and neck, musculoskeletal, neurological, and abdomen with integrated items regarding communication and professionalism. Faculty evaluators were solicited from current and emeritus faculty. Four internal medicine educators volunteered to serve as faculty. Physical examination check sheets were sent in advance of the educational event to each faculty member with an explanation of their role as a non-participant observer. At orientation faculty were asked if they had any questions about the check sheets or their role as non-participant observers. Students were told: 1) to review their physical examination and history taking text book prior to orientation; 2) at the physical examination station they were to randomly draw a focused history and physical assessment; 3) they would take a focused history and complete a physical examination of the identified body system on a standardized patient. Each student had 20 minutes to complete the assignment.



RESULTS

75 MS3s participated in orientation.

Selection of body systems was:



Grades ranged from 36.40 to 96.79 (M 68.2 & SD 12.46). There was no significant difference in mean scores by body system. The most improvement was needed in thoracic (62) and abdominal (64) examinations. Neurological examination (76) had the highest score.

The most common items not asked during history were:

- Abdomen: Previous problems- diagnosis/treatments, change in appetite/thirst
- Head & Neck: Environmental/occupational hazards, last hearing/dental exams
- CV: Last ECG, CV health activities
- MS: Family history MS disorders, MS health activities
- Neurological: Family history neurological disorders, History of problems
- Thorax: Last CXRAY, TB skin test, health activities.

The most common items not examined during the physical examination were:

- Abdomen: Palpation of abdominal aorta, Washed hands prior to exam
- Head & Neck: Frontal Maxillary sinuses, Cranial Nerve VII assessment
- CV: Test capillary refill, Washed hands prior to exam
- MS: Range of Motion spine/extremities, Assess gait
- Neurological: Test stereognosis, graphesthesia, two point discrimination
- Thorax: Washed hands prior to exam, Tactile fremitus



CONCLUSIONS

Many of our third year medical students commented that they had never done a thorough focused history and physical examination, and they appreciated having the opportunity to do so before their clerkships. Benbasset et al (2005) found similar shortcomings in the teaching and assessment of students' clinical skills

Faculty in preclinical and clinical courses identified a need for regular, open communication. A subcommittee was formed of faculty responsible for clinical skills across the curriculum. Expectations of student performance by clinical faculty were articulated to the preclinical faculty. Limitations for clinical experiences in the preclinical years were shared by the preclinical faculty. Creative ways to teach clinical skills across the curriculum were implemented. Preclinical faculty agreed to assess students' performance in global history and generic physical examination in the spring of the MS1 year and assess complete focused history and physical examination in the spring of MS2 year. During academic year 2006-2007, preclinical and clinical faculty will work together during orientation in assessing student's communication skills and their ability to perform a focused history & physical examination.

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