



Peer Teachers Introducing Anatomy to First Year Medical Students

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Introduction

- Systems approaches to medical education and principles of experiential and contextual learning have reconfigured anatomy from a concentrated “course” to a longitudinal integrated theme in many Medical School curriculum
- As a consequence students approach anatomy region by region without an overall sense of how various body parts and systems relate and work together.
- Peer teaching by more senior students has been found to be an effective educational strategy and can augment faculty resource demands in a small group curriculum.

Statement of Problem or Question

Can a 10 hour introductory anatomy course in the first segment of the curriculum (Block 1 – Becoming a Doctor) improve the preparation of first year medical students for upcoming systems-based anatomy courses and enhance the anatomy experience of second year peer teachers?

Objectives of Intervention

- 1) Provide a basic conceptual framework for the anatomy of major body systems
- 2) Develop modules that illustrate the relationship between anatomic structures, physical diagnosis and radiology
- 3) Promote an interest in anatomy
- 4) Utilize peer teaching



Description of Intervention

The course had **five units**:

- 1) Bony structures
- 2) Thorax and Abdomen
- 3) Introduction to the Gross Lab
- 4) Circulation and
- 5) Nervous System

KEY FEATURES:

Each unit was split into two parts:

- 1) Pre-class **module**: background texts specifically written to prepare students for the hands-on practicum and to be read before the anatomy session
- 2) In-class **practicum (2 hours each)**: written guide that students used with a partner to learn anatomy while integrating corresponding physical diagnosis techniques and/or radiographs

➤ **Volunteer peer teacher** assigned to each group (Year 2 student)

➤ **Anatomy faculty** assigned to 3-4 groups – observing, fielding questions and clarifying

➤ The **sessions** were structured as follows:

Time Allotted	Activity
2-3 minutes	Questions about Module
12-13 minutes	Introduction to Session
90 minutes	Practicum
10 minutes	Review
5 minutes	10 Question Quiz

Main Emphasis of 5 Practicum Activities:

- 1) Locate surface projections of bony landmarks; manipulate individual bones
- 2) Use surface projections to locate thoracic and abdominal organs; draw them on a t-shirt
- 3) Locate major organs of the thorax and abdomen in cadavers
- 4) Trace cardiovascular system with images and locate using pulses
- 5) Introduce nervous system through studying somatic sensation and neuromuscular reflexes

Program Evaluation:

- Optional, anonymous survey eliciting overall feedback as well as specific questions on prior anatomy knowledge, adequacy of preparation, helpfulness of the peer teacher, and time allotment for the practicum
- Quizzes for each section + a final cumulative quiz

Findings to Date

- Block 2 Anatomy Exam mean scores
 - Class of 2011 (Prior class) - 80.7
 - Class of 2012 (Intervention class) - 80.6
- Average score of 14/15 on the cumulative quiz
- Survey results:
 - High satisfaction - “Anatomy is the greatest”
 - Students came to class well-prepared by the prep modules
 - Overwhelmingly positive feedback on peer teachers
 - Average of 90% of each practicum completed in allotted time

Conclusions

- An introductory anatomy course is welcomed by students
- Peer teachers are well-received.
- There did not appear to be any initial impact of the course on subsequent anatomy testing as compared to historical controls

Key Lessons Learned/Future Directions

- 1) Pre/post quizzes might provide a better gauge of knowledge gained than Block 2 Exam scores
- 2) Second year students were key to the program success – need to evaluate their satisfaction and learning experience
- 3) Less is more - Practicums should be trimmed to allow for variable student pacing, questions, and review
- 4) Assessing the potential impact of the program will require ongoing follow-up of this class through exams and surveys.

