

Title: Achieving early clinical exposure in a traditional curriculum

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Context and setting: At our medical institution, we follow a traditional, discipline-based curriculum with clinical exposure starting during the third year of study. Students are not provided with any clinical experience applicable to the learning of basic sciences in the first two years of the medical programme.

Why the idea was necessary: Clinical faculty opinion indicated that students starting their clinical rotations could not recall important physiological concepts or could not apply these to patients. Therefore, we designed a course within the cardiovascular physiology module to provide early interaction with patients to give relevance and clinical application to their learning of physiology.

What was done: The course consisted of two skills teaching components: (1) basic physical examination, and (2) history taking, in order to apply physiology concepts to cardiovascular medicine. Weekly physiology practicals, already in place, were redesigned to accommodate the skills teaching; e.g. blood pressure measurement, examination of the heart, arterial pulses and jugular venous pressure. Skills were demonstrated to students in small groups using standardized patients and audiovisual aids, and students were prepared for patient encounters with special emphasis on the importance of professionally appropriate behaviour. Thereafter, students examined real patients under faculty supervision. Clinical application of physiology concepts was further reinforced in large group interactive sessions using role-play and video recordings of patient interviews.

Evaluation of results and impact: Checklists were used to give students feedback during patient encounters as well as role-play where students demonstrated history taking skills and synthesis of their knowledge related to three case scenarios. Summative assessment of practical skills was done using checklists, with three standardized patients per student. Physiology concepts were evaluated using extended matching questions (EMQ). Student opinion (n=45) regarding the teaching strategy was evaluated using a self-administered questionnaire. The response rate was 81%. The survey demonstrated that clinical exposure and interaction with patients was perceived to be the best feature of the course and increased student interest in the learning of physiology (77 %). Most students indicated that the course material was appropriate for their level of study (73 %) and found faculty teaching and feedback helpful (98 %). Most students passed the summative assessment process. The mean (\pm SD) score achieved for clinical skills was 76(\pm 6)% and the mean score for the EMQ was 73(\pm 5)%. The course has provided a framework for the successful integration of the teaching and learning of physiology and bedside clinical medicine in the first year of study of a traditional programme. Similar interventions are being planned for other physiology modules. The long-term implications of the intervention on students' performance in the clinical years should be evaluated.

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Names of all authors and details of the contribution each made to the work described in the paper:

Tara Jaffery: Designing the study, conducted the course sessions, analysis of results, and doing the major write up.

Zareen Zaidi: Making checklists for evaluation of clinical skills and history taking.

Faisal Rahim: Providing educational material for history taking and examination, videotaping of patient encounters.