CORRESPONDENCE

Improving medical students' competencies: using longitudinal ambulatory setting preceptorship [version 1]

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Abstract
This article was migrated. The article was marked as recommended.

Keywords
ambulatory clinic, preceptorship, medical students

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Letter
A preceptorship is an optional experience in which an experienced physician gives a personal guide and supervision to medical students during the first or second year of medical school. Preceptorships offer the preclinical medical student good opportunity to track a patient over time and to experience a real clinical setting. The results of previous articles about preceptorship showed that the students report that this method can be an effective way of preparing them for clinical training and motivation for studying basic sciences. Besides it provides a unique opportunity to see the patients in follow up visits. (Tan 2011, Willoughby 2016).

The present experience was carried out in Shiraz medical school that is one of the oldest and best ranked medical school in south Iran (Nasr 2009). In this experience, a combination of shadowing program for first year medical students, Individual preceptorship (IP) stage 1 for second and third year medical students and IP stage 2 for clinical students was done. All of the preceptorship supervision was done by an experience full professor cardiologist who was also an expert in the field of medical education. A well-educated general practitioner was also selected as a perceptor. A total number of 8 first years and 8 second and third years and 10 medical students in clinical setting participated voluntarily in this program.

For first year medical students shadowing program was designed by observing doctor-patient communication. This shadowing experience offers the first year medical student a chance for seeing their future career, knowing the realities of medicine, and realizing the importance of professionalism.

IP during stage 1 pairs each second or third year medical student with the general practitioner to work in an ambulatory patient care setting every week for four hours.

Students communicate with patients to get medical histories, perform correct physical examinations and advice patients under the supervision of the general practitioner. Students learn through observation and supervision from this general practitioner, who provides them feedback to help them develop the capabilities in effective communication with patients. Each patients encounter was recorded after written permission from the patients, so students are able to see the recorded encounters and understand their mistakes.

Another purpose for these sessions for medical students is to motivate them for learning basic science. For example, as students are learning cardiovascular physiology, they get a detailed history from a real patient with cardiac disease and they examine the heart in the clinical setting. An interactive e-learning material about electrocardiogram was developed by experienced cardiologists to help them understand the normal and abnormal cardiac rhythms. They also learn about the social determinant of health in the real setting.

IP during stage 2 pairs students in the clinical setting with an experience full professor clinical faculty. In this stage, the students obtain the history, perform the physical examination, suggest the differential diagnosis and write prescription under the direct supervision of the experienced faculty. This ambulatory setting has a large electronic database of patients, so there is an opportunity for these students to do research based on electronic patients registry by ethically approved proposals. The experienced faculty also teaches students about illness scripts to improve their critical thinking and clinical reasoning ability. He divides teaching sessions into short segments to help teaching and learning fit a busy schedule. He Reviews each patient para clinic test results and treatment plans with the student, and then have the student give the follow-up and educational instructions to the patients. The students were asked to write their reflections after visiting a patient and review important learning points (Audétat 2017).

There is a good opportunity for all medical students in this ambulatory clinic to longitudinally observe the patients and learn about the continuity of care.

The results of the present study showed some important points. The students reported that this opportunity prepared them for improving clinical skills. They also believed that this program helped them to correlate the basic sciences concepts with patient care. Students reported a sensation that they were a respected part of the health care team and required the capability to reflect on their own achievements. Students reported six areas of this program that they thought were beneficial: the experience of different types of clinical practices, differential diagnosis, patient electronic records, professionalism, role modeling and visiting varieties of patients. Preceptors ascertained the value of educating students in the early years of medical school. They pronounced acquisition of self-appreciation for their teaching and were invigorated by the achievement of the students. These two preceptors showed interest in to recruit other preceptors among their colleagues.
In conclusion, our preliminary results showed that focused preceptorship in the ambulatory setting with frequent observations of patients as well as supervision with preceptor physicians will help our future doctors in their future career. Larger samples and future data collection is needed to measure these students’ success in doing their future responsibilities as a physician.

Notes On Contributors

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Dr. Solmaz Zare and Dr. Leila Bazrafcan have a Ph.D. in medical education. Other authors are medical students except for Mr. Morteza Akbari and Mr. Sajad Kargar who are engineers.

Declarations

The author has declared that there are no conflicts of interest.

Ethics Statement

The students participated voluntarily.

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Bibliography/References

Audétat, M-C, Laurin, S, Dory, V, Charlin, B, Nendaz, M, (2017). Diagnosis and management of clinical reasoning difficulties: part II. Clinical reasoning difficulties: management and remediation strategies. Medical Teacher. 39, 8, 797-801. Reference Source

Nasr, K, (2009). Shiraz University School of Medicine: Its Foundation and Development. Arch Iranian Med. 12, 1, 87-92.

Tan, K, Feuz, C, Bolderston, A, Palmer, C, (2011). A literature review of preceptorship: a model for the medical radiation sciences? Journal of Medical Imaging and Radiation Sciences. 42, 1, 15-20. Reference Source

Willoughby, K A, Rodriguez, C, Boillat, M, Dove, M, Nugus, P, et al., (2016). Assessing students’ perceptions of the effects of a new Canadian longitudinal pre-clerkship family medicine experience. Education for Primary Care. 27, 3,180-187. Reference Source
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Ken Masters
Sultan Qaboos University

This review has been migrated. The reviewer awarded 4 stars out of 5

A short and interesting letter on improving medical students' competencies using a longitudinal ambulatory setting preceptorship. The letter gives details of how the preceptorship functions across the medical degree, and is specifically tailored to the medical students' current levels. One can surmise (and, indeed, it appears to be supported by the results) that such an exercise will allow students to more easily relate their current work to medical practice, and to gain deeper insight into what will be expected from them as qualified health professionals. One point of criticism: there are many, albeit minor, language errors, and these frequently interfere with the communication; it would have been a good idea if the authors had more carefully proofed their letter to avoid these errors. In spite of this, an interesting letter, and I look forward to seeing a more detailed and fully-fledged research article on the topic.

Competing Interests: No conflicts of interest were disclosed.

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Trevor Gibbs
AMEE
This review has been migrated. The reviewer awarded 4 stars out of 5

This paper describes what many might consider to be a standard approach to a curriculum; an interactive programme that combines structured learning within a community setting, over a period time during undergraduate medical education. Although not wishing to degrade either the school or its faculty, nor its international setting, I feel that this is a major development in its geographical setting and was probably not an easy activity to create, with many obstacles. I would wish to congratulate them on this initiative and would hope that the authors would now provide a more descriptive paper which explores the obstacles to and the solutions the authors provided to develop such an important programme.

**Competing Interests:** No conflicts of interest were disclosed.