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Assessing the use of student-developed clerkship guides for improving clerkship expectations and experiences: An app-based approach.

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Assessing the use of student-developed clerkship guides for improving clerkship expectations and experiences: An app-based approach.

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Abstract

Background: The transition for medical students from pre-clinical education to the clinical learning environment introduces different expectations, methods of evaluation, and new working conditions. A mobile-friendly web application with clerkship specific information was developed to assess whether clinical preparedness increased among third-year medical students at transitioning to their clinical curriculum.

Objectives: To determine whether medical students' clinical preparedness increased as they transitioned into clinical rotations by using a mobile-friendly web application that contained information and advice shared by senior medical students that had already completed their rotations.

Methods: Third-year medical students at the University of Texas Rio Grande Valley School of Medicine were provided access prior to beginning their clinical clerkships to a web application that contained clinical clerkship specific information. An informational webinar was held one week prior to the beginning of students' clinical clerkships. It was at this time that students received a survey questionnaire that assessed their preparedness with regards to the duties and responsibilities of their upcoming clerkships. After completing their respective clerkship, students received a survey questionnaire that sought to assess whether the web application and its contents increased their overall clinical and academic preparedness.

Results: A total of 40 incoming third-year medical students agreed to partake in the study and completed the pre-clerkship survey. The number of students who completed the post clerkship survey was 9/40 (23%).

Conclusion: Preliminary data suggest that clinical preparedness increased for the students that continued to use the application throughout their clinical clerkship. However, there was a substantial drop in students who completed the post-survey questionnaire. Further analysis of the data is required for proper conclusions to be drawn.

Introduction

Background

The transition for medical students from pre-clinical education to the clinical learning environment introduces different expectations, methods of evaluation, and new working conditions. Previous studies have documented that this transition introduces high levels of stress and anxiety for some medical students¹. Students must learn to adapt to the expectations of each clerkship, their respective faculty and working environments. Several medical schools across the country have implemented different strategies to improve the preparedness of students as they transition into clinical training. Some of these strategies included transition courses², peer-to-peer groups and learning communities³, and the facilitation of senior-level students sharing their prior clinical experiences³. To the best of our knowledge there has yet to be an evaluation on the utility of student-developed clerkship guides via a web-application to increase the preparedness of students entering the clinical learning environment.

Why a web application?

Adobe PDFs, Microsoft Word Documents, and other tools such as Google Docs have traditionally been used by medical students at various medical schools throughout the country to share advice and information pertaining to clinical clerkship rotations. These methods were also used by our inaugural class at the University of Texas Rio Grande Valley School of Medicine. They are quick and easy methods of disseminating information and advice, which is perhaps their greatest advantage.

What we feel to be their disadvantage is that they are static in nature, which is to say one must either create a new a document every year or undergo the laborious and time-consuming task of

editing such documents manually. We believe a software application can be a better alternative due to its dynamic methods of updating, sharing, and creating new content.

Methods

Subjects and Setting

After receiving institutional review board approval for this retrospective review, the third-year student cohort of the Class of 2022 at the University of Texas Rio Grande Valley School of Medicine was invited to participate in this study. A total of forty (40/55) students gave consent to be part of the study and agreed to use the web application and complete the corresponding surveys.

Development of the Web Application

Software development took place in the months leading up to academic year 2020-2021. The user interface and user experience were modeled after social media platforms such as Twitter and Quora. The goal of the application design was to make it as user-friendly and modern as possible, similarly to the most used apps currently in circulation. The technological stack included technologies such as MongoDB, Express, React, and Node.

The app consisted of four content feeds that were toggleable through the app menu. The content and information found within all feeds was posted by fourth-year medical students. The feeds were:

Rotations

Posts containing specific clinical site information were found in this feed. Information such as how to dress, what to bring, site location provided by Google Maps, and pertinent clinical site advice composed the majority of the content.

Assignments:

Examples of previous assignments and advice on how to best complete each clerkship-specific assignment was found here. All students using the app were presented with an agreement stating they would honor the UTRGV SOM Student Handbook Policy on plagiarism, academic dishonesty, and misrepresenting the academic work of others.

For the Shelf

This feed contained information on how to best study for the NBME shelf exam for students in their respective clinical clerkship. Study plans developed by fourth-year students were found here in addition to a list study resources that fourth-year students ranked in terms of most useful on a five-star system.

Student Guides

Examples of student guides created previously via PDF or Google docs by UTRGV SOM students or from students at other medical schools made up the content in this feed.

Evaluation

A twelve-item survey questionnaire developed prior to the beginning of clinical clerkship rotations for incoming third-year medical students. A week before they began their first clerkship of the academic year 2020-2021 an informational webinar via Zoom was held to help the students orient themselves to the purpose and to the design of the web application. It was during this webinar that the students then also proceeded to complete the survey questionnaire. A total of 40/55 students in the class of 2022 attended the webinar and all 40 that were present completed the questionnaire. Students were then provided with an access key and a personalized link so that they could log onto the web application.

One week after their initial clerkship concluded the 40 students who signed up for the app were provided with another twelve-item survey questionnaire that aimed to assess whether the app and its contents increased their preparedness during their transition into clinical clerkships.

Results

A total of 40 students who agreed to be part of this study completed the pre-clerkship clinical preparedness survey questionnaire. From this total, 9/40 (23%) students completed the post-clerkship survey questionnaire, which assessed whether the web application and its contents improved their clinical preparedness as they transitioned into their clerkship rotations.

Conclusions

At this time preliminary data is in but further analysis is required for conclusions to be drawn. Of note, the future direction of this study will aim to assess why 78% (31/40) of students who chose to partake in the study did not complete the post-clerkship questionnaire.

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