Abstract

Traditional methods allowing medical students and residents to review their work and receive feedback are lacking. We developed a web-based portfolio system that collects all clinical documentation and allows teachers to give feedback electronically. In a randomized control trial, we found that this system significantly increased feedback to students, often exceeding clerkship expectations. Seventy-five percent of students found the system a “valuable teaching tool.” Students in control and portfolio groups agreed that the system increased feedback.

Introduction

Communication via clinical notes is a major goal of medical training. Currently, most trainees are not able to review easily their clinical work. Traditional feedback methods whereby teachers evaluate and revise these write-ups are lacking and inconsistent.

We developed a web-based portfolio system that automatically uploads all student notes written in inpatient wards and clinics from the electronic medical record (EMR) and displays this on a personal web page portfolio. Students can create and print notes in Portfolio via a web-based note writer for off-site clinics. Teachers (attending and resident physicians) may review these notes to give feedback by writing comments online that are saved to the student’s personal portfolio page (see Figure).

Methods

We conducted a randomized trial over six months among third-year medical students at Vanderbilt University School of Medicine who were participating in medicine or pediatric clerkships. Students were randomized to a received feedback on write-ups by usual methods (printing write-ups for their teachers) or via the Portfolio system. Outcome measures included surveys of students and teachers as well as log files.

Results

Fifty-six of 94 invited students (60%) agreed to be in the study. 71% of students in the portfolio group vs. 39% of students in the control group (p=0.001) reported receiving feedback on more than half their write-ups. Seventy-one percent of students who received feedback using Portfolio agreed that the system increased feedback; 95% found Portfolio easy to use. Students in both the control and intervention group said that they felt that there were more frequent and richer interactions between students and teachers in the portfolio group. Teachers viewed 355 student notes and provided 242 comments. Teachers reported giving more detailed and more frequent feedback using Portfolio than traditional means (see Table).

Conclusion

An electronic clinical portfolio provides an automatic repository for student’s clinical encounters and increases teacher feedback on student’s clinical notes, often exceeding clerkship goals. The system provides for a comprehensive catalog of student clinical documentation. In the future, this may allow richer competency evaluation than current methods.