# Improvement of Medical Student e-Professionalism Through Online Web-Tool and Small Group Workshop

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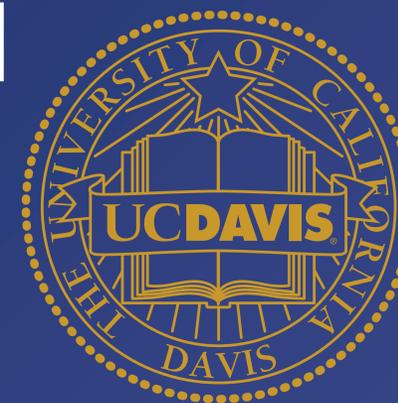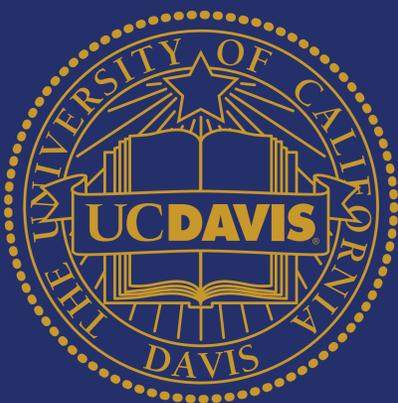
Intro

Within the past 10 years there has been a huge increase in the use of digital technology and social networking. Once thought of as novelty items these tools have become ubiquitous and have shaped the way in which we live our lives and interact with our communities. In medical education digital technology and social networking offer significant opportunities for enhancing instruction in the form of online modules, audience response systems, rapid access to medical resources, etc. When integrated into curriculum, digital technology can be valuable in educating students, enhance instructor teaching as well as student learning and achievement. However it is important to recognize the potential downfall of these technologies to the development of medical student professionalism and the role of the educational institution, faculty, and staff [1].

Due to the rate of growth of technology many schools do not yet have adequate policies in regard to social media and technology or do not offer their students best practice guidelines to properly utilize these tools. Logically those schools with digital technology and social media policies are more likely to effectively address the issues of professionalism [2]. However, even those institutions with policies have "grey areas" in professionalism where there is not a definitive consensus on what the proper policy or recommended practice should be.

Recently state medical boards in the United States were given a series of case vignettes in which they had to rate their likelihood of investigation. While there was consensus in some areas such as patient privacy and safety they found a great variability in many other areas related to personal conduct on social media platforms [3]. This creates a problem in medical education not only in forming policy at the institution but also training students to best identify instances of potential professionalism lapses, which have the potential to have profound influence not only on one's career and personal life but also on the medical institution and community.

Hypothesis

Medical education can be improved to address changes in technology and potential professionalism lapses with the formation of a professionalism online informational module and small group. Small group setting with senior students is the ideal method for opening up and addressing potential issues of social media that are not addressed in the current curriculum.

Goals

1. Create a novel course with short cases to illustrate potential positive and negative consequences of social medial and other electronic device use.
2. Offer suggested best practices and proper use of social medical as outlined by UC Davis and the Professionalism Improvement Committee.
3. Document effectiveness of course by gauging professional knowledge of first year medical students surrounding e-professionalism and virtual online image post course compared to second year medical students.

Materials and Methods

Research Subjects:
Class of 2019, 104 medical students in their first year of medical school.
Class of 2018, 110 medical students in their second year on medical school.

-Students' attitudes towards professionalism will be evaluated based on an evaluation tool by Greysen et al [3]. Short cases will be used to gauge the students understanding by choosing the degree of professionalism they perceive from "Extremely professional" given a score of zero to "Extremely Unprofessional" given a score of 7 and also including "Don't Know" as a possible option.

-We will be using modified validated cases, piloted at Yale University, George Washington University, and the FSMB which were used in a previous study to evaluate e-professionalism [3].

-Likert scores for each question will be averaged for the first year students (class of 2019) before the course and compared to the same survey administered to the second year students (class of 2018) after the course.

-The class of 2018 had 104 students attend the course with 105 students completing the survey. The class of 2019 had 110 students complete the course with 33 students completing the survey.

-Statistics were done using R statistical software using student's t-test to analyze any difference in the groups. "Do not know" answer choice was removed from data set during the scoring process.

Table 1. Number of "Don't Know" responses for each question for each class.

Question #	Class of 2018 Nuber of "Don't Know" Responses	Class of 2019 Nuber of "Don't Know" Responses
Question 1	0	3
Question 2	1	4
Question 3	0	0
Question 4	0	1
Question 5	0	2
Question 6	0	0
Question 7	0	1
Question 8	0	1
Question 9	0	4
Question 10	0	10

Results

Table 2. Class Scores for each professionalism survey question with a score of 0 corresponding to "Extremely Professional" to a score of 7 corresponding to "Extremely Unprofessional"

Question #	Class of 2018	Class of 2019	P-Value
Question 1	6.666667	6.764706	0.4414
Question 2	7	6.851485	0.0008364
Question 3	6.848485	6.894231	0.597
Question 4	6.787879	6.75	0.7143
Question 5	6.545455	6.718447	0.1921
Question 6	6.878788	6.504762	0.0002654
Question 7	6.939394	6.884615	0.3314
Question 8	6.69697	6.504854	0.1386
Question 9	4.333333	4.554455	0.349
Question 10	4.666667	4.2	0.09095

Question 2: A scenario touching on the truthfulness of a physician website where a physician is fraudulently claiming to have training pediatrics.

Question 6: a scenario touching on divulging sensitive information without including a name but including gender, age, color of hair, first letter of last name, place of employment, HIV status, and that he is engaging in extramarital relations on an unprotected blog that can be viewed by patients.

Discussion

- We find from this study that there is an increase in awareness and understanding of e-professionalism issues found in medical students after the small group cases and online module. In the areas of e-professionalism honesty and in the area of patient protected information and privacy.

- Student mediated small groups are effective ways to teach students professionalism curriculum. Student feedback was overall positive and students felt that it was an enriching exercise.

Limitations

- Small study number

- In this study we assume that there is no additional professionalism training for medical students from first year to second year of medical school.

- There was a limited response from the Class of 2018 with responses coming from only a third of the class.

- This test was developed to evaluate program directors at medical institutions and may have benefit from optimization for medical students

Further Work

-Develop a better method of evaluating professionalism in medical students would be the natural next step in this project as would be applying these methods across several medical schools to increase student number and to evaluate the global benefit to medical student education.

Survey

References

1. Goldstein, E.A., et al., Professionalism in medical education: an institutional challenge. Acad Med, 2006. 81(10): p. 871-6.
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