Infectious Disease Faculty and fellow perceptions of EMR documentation—Baseline survey

Figure 2: Baseline survey of faculty and fellows on their perceptions towards existing EMR documentation. N=25, 11 fellows and 14 faculty. Results are expressed in percentage.

Figure 3: Results expressed as daily note efficiency score average. Note efficiency scores listed all of the following key elements with 1 point awarded for each active problem in the subjective section, updated hospital course under assessment, active problem prioritized first under assessment and non-relevant problems removed from assessment. SD refers to standard deviation.

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1311. Incorporating an “Escape Room” Game Design in Infectious Diseases Instruction
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Background. As health professions education evolves toward active learning environments, interest in using games as an educational tool is increasing. One contemporary commercial game that has design potential for learning activities is an “escape” or “breakout” room. Escape rooms are live-action games where teams of players work to achieve a common goal in a set amount of time. Limited literature is available assessing this type of gaming format for education design. This study investigated the design and implementation of an escape room learning activity in a third-year pharmacy infectious disease elective course at the University of Kentucky College of Pharmacy.

Methods. During a Gram-positive antimicrobial resistance module, third-year pharmacy students participated in both patient case-based instruction and an escape room learning activity. Three IRB-approved surveys were distributed electronically to students; the first was completed prior to class and functioned as a standard teaching tool to assess mastery of content based on pre-assigned reading and previous coursework. Two surveys were completed after the session to assess knowledge and perceptions gained during each learning activity. Students answered multiple-choice knowledge-based questions and then responded to five statements using a Likert scale to indicate perceptions of each instructional activity.

Results. Nineteen students participated in the study. The mean correct scores for knowledge-based assessment were 90.5% in the pre-class survey, 82.1% in the post-case survey, and 90.5% in the post-escape room survey. There was an overall positive perception of both learning activities based on results of the survey questions. The escape room learning activity was preferred by 18 of 19 students (94.7%), but only 11 of 19 (57.9%) indicated they learned better from the escape room.

Conclusion. This study illustrates an escape room designed to meet lecture learning objectives is a feasible active learning technique. While students demonstrated knowledge gained from the activity and indicated positive perceptions, this approach warrants further evaluation.

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1312. Division Divided: Using Debate as an Educational Tool to Teach Evidence-Based Clinical Decision-Making
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Background. In medical education, there has been a push to implement innovative teaching techniques that encourage critical thinking rather than just knowledge dissemination. Debate promotes critical thinking by challenging individuals to consider alternate viewpoints, which could make it an ideal format to review the evidence relevant to common clinical dilemmas in infectious diseases (ID). We describe a pilot of one such debate format in our ID fellowship program.

Methods. We reviewed literature regarding the effectiveness of ceftriaxone for outpatient antibiotic therapy (OPAT) in methicillin-susceptible Staphylococcus aureus (MSSA) osteoarticular infections. The evidence was presented as a structured debate in place of our weekly case conference. Pre- and post-session surveys containing multiple choice questions and Likert items were administered to assess the impact of the debate on attendees’ knowledge, attitudes, and practices on this topic along with their attitudes toward the debate format. Differences between pre- and post-session surveys were analyzed using paired t-tests and McNemar’s test.

Results. At the first debate 33 residents, fellows, and faculty members were present, and 24 (73%) completed both the pre- and post-session surveys. Attendees demonstrated significant improvement between the pre- and post-session knowledge questions, which covered the following topics: study design of articles supporting ceftriaxone use (31% vs. 62%, P = 0.008), an appropriate method to assess ceftriaxone susceptibility (64% vs. 100%, P = 0.004), and whether the incolum effect applies to ceftriaxone (35% vs. 77%, P = 0.003). After the debate, attendees were more willing to use ceftriaxone (P = 0.001) and felt more familiar with the literature (P < 0.001). The post-session survey showed that individual students enjoyed the game format and found it effective (Figure 1). Most individuals stated that they were either extremely likely (85%) or likely (8%) to attend if this format was used again. Written comments included “strongly recommend continuing this format” and “much better than regular case conference with more discussion and critical thinking.”

Conclusion. Debate appears to be an effective and enjoyable format to teach clinical controversies in ID.

Figure 1.

Disclosures. All authors: No reported disclosures.

1313. Does Time Fly When Having Fun? A Study Assessing the Relationship Between Estimated Time on Task and Enjoyment of Infectious Diseases Serious Games
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Background. Mastering the fundamentals of infectious diseases (ID) requires students to memorize large volumes of material about pathogens, antibiotics, patients, and the interactions between the three. It is hypothesized that there is a positive relationship between time on task and engagement. The objective of this study was to explore the relationship between enjoyment of a serious game and the estimated time spent playing.

Methods. During a one-time session, students from two colleges of pharmacy engaged in three ID game-based active learning strategies each lasting a pre-specified time. These strategies included a card game about calculations (Fightin Figures, FF), a time estimation activity and a serious game about antibiotic susceptibility (Staphylococcus aureus (MSSA) osteoarticular infections). The estimation activity was designed by dividing the estimated time by the actual time for each game was 0.9 ± 0.5 for FF, 1.5 ± 0.6 for RR, and 1.0 ± 0.4 for PP. The percentage of students who underestimated time spent playing was 57% for FF, 8% for RR, and 41% for PP. There were no differences in time estimation ratio based on sex, age, or GPA.

Results. Thirty students participated. Demographics of the sample included female 53%, mean age 26.7 years, and mean GPA 3.6. Using a Likert scale from 1–10 (1 = not enjoyable, 10 = very enjoyable) student rated each game: FF 6.5 ± 2.2, RR 7.4 ± 2.3, PP 8.4 ± 1.8. The time estimation ratio was demonstrated significant improvement between the pre- and post-session knowledge questions, which covered the following topics: study design of articles supporting ceftriaxone use (31% vs. 62%, P = 0.008), an appropriate method to assess ceftriaxone susceptibility (64% vs. 100%, P = 0.004), and whether the incolum effect applies to ceftriaxone (35% vs. 77%, P = 0.003). After the debate, attendees were more willing to use ceftriaxone (P = 0.001) and felt more familiar with the literature (P < 0.001). The post-session survey showed that individual students enjoyed the game format and found it effective (Figure 1). Most individuals stated that they were either extremely likely (85%) or likely (8%) to attend if this format was used again. Written comments included “strongly recommend continuing this format” and “much better than regular case conference with more discussion and critical thinking.”

Conclusion. Debate appears to be an effective and enjoyable format to teach clinical controversies in ID.

Figure 1.
Conclusion. Although a small study, there was no trend toward association of time underestimation and enjoyment of these teaching methods. Students enjoyed the board game PP the most yet the time estimation ratio was 1.0, indicating estimated and actual time on task were the same. Students enjoyed FF the least but this was the only game they underestimated time spent on task.

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1314. From Book to Bedside: Theoretical and Applied Knowledge on the Topic of Healthcare-Associated Infections in Second-Year Nursing Students from a Croatian University Tomsiljar Mestrovic, MD, PhD1,2; Goran Kozina, PhD3; Marijana Neuberg, PhD4 and Kostana Ribic, PhD5; 1Clinical Microbiology and Parasitology, University of Dubrovnik; 2Clinical Microbiology and Parasitology Unit, Polytechnic University of Dubrovnik; 3Dr. Zora Profozic, Zagreb, 4University Centre Varaždin, University North, Varaždin, Croatia

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Background. Adequate training of health workers is pivotal in the prevention of healthcare-associated infections (HAI). Our aim was to assess the theoretical and applied knowledge about the risk factors and effective measures of HAI prevention (most notably the use of standard precautions and hand hygiene practices) in second year undergraduate university nursing students that have already completed obligatory courses in microbiology, infectious diseases and epidemiology.

Methods. This study included a whole generation of second year undergraduate nursing students, comprised of 161 female and 25 male participants (186 in total), from a public university in Croatia (University Centre Varaždin, University North). They were given an anonymous questionnaire (developed on the model used by Tavolacci et al. in 2008) covering three domains: General Knowledge of HAI, Standard Precautions (SP) and how Hggy. Hygiene are accepted, at least in the uninfected (max. 30) and for each area (max. 10) was arbitrarily set at ≥ 20 and ≥ 7, respectively (in accordance with prior research).

Results. The age range of surveyed students was 19–37 (mean: 21.97, median: 21, mod: 20). An accurate definition of nosocomial infections was provided by 98.92% students (with 60.75% of them defining it as the infection occurring 48 hours after hospital admission). The overall score was 21.5, which indicates sufficient level of applied knowledge of healthcare-associated infections. Very high level of knowledge was observed for the SP area (total score of 9.5); however, the level of knowledge in HAI and HH domains was inadequate (5.9 and 6.1, respectively). There was no statistically significant difference in the overall or specific scores between male and female students (P > 0.05). Formal teaching during the curriculum was students’ primary source of information (60.22%), followed by practical learning in the ward during work (59.5%). Risk factors for HAI were mostly recognized for the individual (69.8%) and self-learning (64.5%).

Conclusion. Periodic checking of nursing students’ knowledge on HAI and corresponding curriculum modifications in obligatory courses tackling this topic are advised in order to fill the knowledge gaps, improve training, reduce infection rates and increase compliance with prevention measures.

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1315. Mind the Gap: Medical Trainees Require Training in Hepatitis C, Drug Use and Mental Health to Help Address the Opioid Crisis Garber, MD1;2; Isabelle Ares, PhD1; Nicholas Schubert, MA2; Jason Altenberg, MSW1; Melanie Willows, MD2;3; Mark Kaluzienski, MD2;4 and Gary Reisner, MD1;2;3;4; Clinical Microbiology and Parasitology Unit, Polytechnic University of Dubrovnik; 1University of Ottawa Institute of Mental Health Research, Ottawa, ON, Canada; 2Rush University Medical Center, Chicago, Illinois; 3University of Ottawa, Ottawa, ON, Canada; 4University of Toronto, Toronto, ON, Canada

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Background. Inaccurate training during the curriculum was students’ primary source of information (60.22%), followed by practical learning in the ward during work (59.5%). Risk factors for HAI were mostly recognized for the individual (69.8%) and self-learning (64.5%).

Conclusion. Periodic checking of nursing students’ knowledge on HAI and corresponding curriculum modifications in obligatory courses tackling this topic are advised in order to fill the knowledge gaps, improve training, reduce infection rates and increase compliance with prevention measures.

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1316. An Integrative Approach to Teaching History of Medicine in Medical School Magdalena Slosar-Cheah, MD4, MD5; Joshua Nosanchuk, MD, FIDSA1 and Lise- Anne Foret, MD, FIDSA1; 1Infectious Disease Division, Montefiore Medical Center, Bronx, New York; 2Medicine (Infectious Diseases), Albert Einstein College of Medicine, Bronx, New York; 3Department of Medicine, Division of Infectious Diseases, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York

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Background. Medical history plays a foundational role in shaping the characters and habits of thought of developing physicians. Specifically, it cultivates an ability to assess the quality and durability of knowledge that contributes to the growth of resilience, humility and intellectual curiosity. Especially for Infectious Diseases, knowledge of its history fosters an appreciation for our evolving understanding of the field and an opportunity to spark interest in a future career. Nevertheless, it is hard to find the space for this content amid competing priorities in the medical school curriculum. An integrative approach has been described as a way to introduce history as a longitudinal component of the existing curriculum. Our aim, using this approach, was to pilot the incorporation of history modules into the Microbiology and Infectious Disease (Micro/ID) course at Albert Einstein College of Medicine (Infectious Disease Division, Beth Israel Deaconess Medical Center, Boston, Massachusetts)

Methods. Students participating in Micro/ID were shown four history modules integrated into the existing course. The first was embedded within the introductory lecture and the remaining three were prerecorded videos available through the virtual learning environment. The videos dealt with infectious disease diseases that link to contemporary Infectious Disease Division, Beth Israel Deaconess Medical Center, Boston, Massachusetts

Results. The first examination, 99% and 68% of students answered correctly. On the second examination, 92% and 54% answered correctly. Student evaluation of the content was positive overall with 91% rating the content satisfactory, very good or excellent. However, some questioned the value of the material while others requested expansion of the modules to include topics such as history of research ethics (Tuokgeese and syphilis) and more recent history (the HIV epidemic).

Conclusion. An integrative approach to teaching medical history is largely well-received by students and offers a way to introduce historical topics to an entire class. Comments from residents serve as a guide to topics of interest for future iterations of the course.

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