Title:
iHuman Project: Implementation and Evaluation of Cloud-Based, Virtual-Patient, Case-Based Simulation

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Session Title:
Cooperative Simulation Learning
Slot:
Q 11: Sunday, 30 July 2017: 3:30 PM-4:15 PM
Scheduled Time:
3:50 PM

Keywords:
analytics, nursing education and virtual case-based simulation

References:


Abstract Summary:
Research findings from a Duke University School of Nursing pilot project that incorporated a cloud-based, virtual-patient simulation learning platform, iHuman Patients (IHP), in two graduate advanced pathophysiology courses will be presented. Student survey results of experiences with IHP will also be discussed.

Learning Activity:

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
<th>EXPANDED CONTENT OUTLINE</th>
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<tbody>
<tr>
<td>The learner will be able to describe i-Human Patients virtual learning simulation and its core components.</td>
<td>An overview of the cloud-based patient encounter simulator will be presented.</td>
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<td>The learner will be able to analyze iHuman analytics from two nurse practitioner courses.</td>
<td>Data from students and courses involved in virtual patient simulation will be reviewed and its implications for student learning and faculty course design will be discussed.</td>
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<td>The learner will be able to discuss the design and implementation of virtual patient case simulation in an online graduate course.</td>
<td>Survey outcomes of students participating in the iHuman project will be discussed including strengths and challenges of implementing online virtual patient case simulation.</td>
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Abstract Text:

Purpose:

The purpose of this study was to investigate how feasible and effective it will be to integrate simulation-based learning modules, delivered via the i-Human Patient virtual learning platform, into online graduate nursing courses, where feasibility is indicated by level of student and faculty satisfaction; effectiveness is determined by analysis of data generated from the i-Human cases that students completed. An additional interest was related to the students' level of satisfaction with using a virtual patient case simulation.

Methods:

During a 7 week period, students in an online graduate nursing course volunteered to complete 3 virtual patient cases. Students advanced through the virtual patient case simulations while the cloud-based system captured and tracked their clinical decision-making processes. Student participants also attended three WebEx-supported live debriefing sessions to have an opportunity to share their learning experiences with the virtual cases. Additionally, students completed an anonymous survey at the end of the course that assessed their level of satisfaction with the virtual patient simulation.

A second group of students in another online graduate nursing course were required to participate in the i-Human patient simulation as part of a graded activity over a 7 week period. Students selected and completed 4 out of 6 possible cases. Their clinical decision-making processes were also tracked and recorded via i-Human learning platform. Students completed an anonymous survey at the end of the course that assessed their level of satisfaction with the virtual patient simulation.

Results:

Overall, both groups report that they were satisfied with the virtual stimulation experience and that they liked the interactive ability of the case simulation, stress-free learning environment and the clinical experience of patient care. Students disliked not receiving credit for questions they perceived were asked during the case, organization of options and the time it took to complete cases. Data from both groups provided insights to the faculty regarding students' progress and performance on cognitive competencies as well as choices that impact clinical decision making. Overall, students in both performed better or equal to the previously completed cases. Exception reporting allowed faculty to be aware if students fell below a certain threshold in one or more areas of the case(s). Trend analysis identified certain questions or topics that students are not getting correct or topics that all the students are weak.

Conclusion:

Cloud-based virtual patient case simulation was an effective and feasible inclusion in online graduate nursing courses. Students and faculty using the virtual patient case simulation tended to be satisfied with the learning experience.