The Effectiveness of a Virtual Interprofessional Team Collaboration Simulation Exercise for Interprofessional Students at the University of Hawaii

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ABSTRACT

Evaluating The Virtual Interprofessional Team Collaboration Simulation (HIPTCS) exercise since 2014. It has been regularly offered to all students working at one site, collaborating with pharmacy students at a distant site. To date, the course has been offered 6 times to all students, student evaluations consistently report high satisfaction and learning of interprofessional core competencies.

Students at the University of Hawaii Inter-Professional Team Collaboration Simulation (HIPTCS) exercise since 2014. It has been regularly offered to all students working at one site, collaborating with pharmacy students at a distant site. To date, the course has been offered 6 times to all students, student evaluations consistently report high satisfaction and learning of interprofessional core competencies.

Objectives: To compare the efficacy of the entirely virtual format of HIPTCS to the original format, and to determine its impact on interprofessional core competencies.

METHODS

Participants: 340 students from different professions participated in the exercise during 2019-2020. Four categories (e.g. values, roles and responsibilities, teamwork, communication, etc.) for both in-person and online students were compared.

Design: The HIPTCS exercise was conducted on two days to accommodate the volume of students. During the 2019-2020 academic year, 113 students from different professions participated in the exercise in person at University of Hawaii. This year, the exercise was conducted entirely online as a virtual format. For evaluation, we conducted the Interprofessional Competency Assessment Survey (ICCAS), which is a validated and reliable instrument to assess interprofessional core competencies.

RESULTS

Table: ICCAS Scores - Pre-Post Comparisons Paired T-Tests (Mean = N=235)

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre Score Mean</th>
<th>Post Score Mean</th>
<th>Change Score Mean</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Summary (Q1-5)</td>
<td>3.67</td>
<td>4.29</td>
<td>0.62</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Collaboration Summary (Q6-8)</td>
<td>3.52</td>
<td>4.34</td>
<td>0.83</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Roles and Responsibilities Summary (Q12-14)</td>
<td>3.61</td>
<td>4.38</td>
<td>0.76</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Collaborative IT/Family Centered Approach (Q15-17)</td>
<td>3.54</td>
<td>4.40</td>
<td>0.86</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Conflict Management/Resolution (Q18-16)</td>
<td>3.85</td>
<td>4.45</td>
<td>0.60</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Team Functioning (Q19-20)</td>
<td>3.57</td>
<td>4.33</td>
<td>0.76</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>MEAN TOTAL ICCAS SCORE (Q21-20)</td>
<td>3.63</td>
<td>4.36</td>
<td>0.73</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Comparison of Evaluation Scores

<table>
<thead>
<tr>
<th>Person Online</th>
<th>Person In-Person</th>
<th>Online Person</th>
<th>Online Pre Score</th>
<th>Online Post Score</th>
<th>Online Change Score</th>
<th>Online P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.001</td>
<td></td>
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</tbody>
</table>

DISCUSSION

Strengths:

- Innovative changes were made quickly to adapt to the COVID-19 pandemic.
- Validated tool (ICCAS) to assess interprofessional competencies.
- We believe that the strength of the exercise that enabled both in-person and entirely virtual formats to be equally effective was the repeated opportunity for debriefing, feedback, and practice of IPE skills (ce-activity, team meeting and debrief).
- Limited strengths of this study: Self-report, not all disciplines experienced high levels of satisfaction.

Areas for improvement:

- The question about whether participation in the activity would affect their future practice should be explored.
- There were no comments that stated they did not believe that collaboration interprofessionally was somewhat better after the event, virtual learners expressed lower benefit.
- Reasons were unclear, perhaps they felt that virtual team meetings would not be relevant in the future after pandemic restrictions were lifted.
- Perhaps incorporating more time into the event, to allow for fewer instructions, and online communication to unmuting, use of Google docs, etc.
- Objectively measuring competency in interprofessional collaborative skills by facilitator observation.

Opportunities:

- The virtual format allows students to continue interprofessional education despite COVID-19 physical distancing requirements.
- This exercise allowed interactions with other disciplines, giving students the opportunity to practice virtual teamwork skills, which may be required even after pandemics are lifted.

Disclosures: The authors have no relevant financial disclosures to report.

REFERENCES

- The University of Hawaii Health Sciences Schools have been conducting the Hawaii Inter-Professional Team Collaboration Simulation (HIPTCS) exercise since 2014.
- Original idea: Deepening with integrative students working at one site, collaborating with pharmacy students at a distant site.
- Due to the COVID-19 pandemic, this exercise was converted to an entirely virtual format.

OBJECTIVE

To compare the efficacy of the entirely virtual format of HIPTCS to the original format, and to determine its impact on interprofessional core competencies.