Preparing nurse practitioner students for virtual healthcare with an innovative chat visit simulation
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Background and Significance

• Telehealth is a broad term that includes all health services provided using telecommunications technology.
• Virtual visits are healthcare encounters using video, text-messaging or video chat, for non-urgent illnesses and conditions that be assessed and managed by a healthcare provider without a hands-on physical exam.

Methods

Setting and Sample

• Midwestern public university.
• University IRB approval was obtained.
• Bachelor of Science in Nursing - Doctor of Nursing Practice students in the Pediatric and Family Nurse Practitioner programs.

Design

• Quasi-experimental pretest-posttest design.
• Pediatric case studies were created using presentation software and digital tools (Figure 1).
• Simulation contained caregiver questions and provider responses.
• Accuracy of diagnosis and management assessed by percentage of correct answers.
• 5-point Likert scale pre- and post-survey measured students' self-reported competence with virtual care (Table 1).
• Mean scores from the pre-and post-survey were evaluated using a paired t-test.

Findings

Results for the group of students (N=17) was 91% overall in diagnostic accuracy and management plan. Self-reported competence in virtual visits was improved. PNP students scored 100% vs FNP students who scored 88%.

Table 1. Self-reported competence pre- and post-survey

<table>
<thead>
<tr>
<th></th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>1. I have a good understanding of the role of the APRN in virtual telehealth care.</td>
<td>3.06</td>
<td>.89</td>
</tr>
<tr>
<td>2. I have a good understanding of common health complaints that can be managed virtually using telehealth.</td>
<td>3.12</td>
<td>1.11</td>
</tr>
<tr>
<td>3. I would feel comfortable performing a problem-based assessment of a patient virtually using telehealth.</td>
<td>3.18</td>
<td>1.07</td>
</tr>
<tr>
<td>4. I would feel comfortable formulating a diagnosis based on a virtual history and assessment.</td>
<td>3.06</td>
<td>1.03</td>
</tr>
<tr>
<td>5. I would feel comfortable working for a practice that provided virtual healthcare to patients.</td>
<td>3.59</td>
<td>.93</td>
</tr>
</tbody>
</table>

Implications

This study is unique in that it used a computer-based simulation to model a mobile pediatric chat visit encounter. Additional educational strategies should be explored to provide experience with virtual visits and prepare new nurse practitioner graduates for this contemporary form of healthcare delivery.

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W-7: Preparing nurse practitioner students for virtual healthcare with an innovative chat visit simulation

PURPOSE: The objective of this study was to explore the learning outcomes of nurse practitioner students using a computer-based simulation to model a mobile pediatric chat visit encounter.

BACKGROUND: Virtual visits are healthcare encounters using video, text-messaging or video chat, for non-urgent illnesses and conditions that can be assessed and managed by a healthcare provider without a hands-on physical exam. To meet the workplace demands of innovation within the health care system, educators must prepare nurse practitioner graduates to deliver safe, quality patient care using these modern technologies. Experience with virtual visits may be limited during clinical practicum.

OBJECTIVES: The learning objectives for the activity were: (1) Describe the role of the Advanced Practice Registered Nurse (APRN) in providing care to patients using virtual visit technology; (2) Identify common pediatric health problems that can be managed through virtual visits; (3) Complete an accurate problem-based pediatric assessment, diagnosis and management plan using information from a simulated virtual encounter; and (4) Increase knowledge and confidence with virtual healthcare using a mobile chat visit simulation.

METHODS: This is a quasi-experimental pretest-posttest design study. The study was approved by the University Institutional Review Board. The convenience sample (N=17) consisted of Bachelor of Science in Nursing-Doctor of Nursing Practice students in the Pediatric and Family Nurse Practitioner tracks. The setting was a Midwestern American university. Virtual pediatric case studies were created using common presentation software and freely accessible digital tools. Simulation contained caregiver questions and healthcare provider responses. Student competence was measured by accuracy of diagnosis and management plan. A pre- and post-survey using a 5-point Likert scale assessed students’ self-reported knowledge and confidence with virtual healthcare. Mean scores from the pre-and post-survey were evaluated using a paired t-test.

RESULTS: Accuracy of diagnosis and management plan for the four case scenarios was 91% overall for the group of students. The pediatric nurse practitioner students had a diagnostic accuracy of 100% compared to the family students who scored 88%. The pre- and post-survey showed statistically significant improvement in students’ self-reported knowledge and confidence in virtual healthcare ($p<.05$).

CONCLUSION: This study is unique in that it used a computer-based simulation to model a mobile pediatric chat visit encounter. Additional educational strategies should be explored to provide experience with virtual visits and prepare new nurse practitioner graduates for this contemporary form of healthcare delivery.

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This study was approved by the University of Missouri-St. Louis IRB.