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Evaluation of Registered Nurses’ Knowledge and Confidence in Encouraging Cardiac Surgery Patients to Participate in Digital Education

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**Evaluation of Registered Nurses’ Knowledge and Confidence in Encouraging Cardiac Surgery Patients to Participate in Digital Education**

Katelin Welch BSN, RN; Jewyl Gibson DNP APRN; Dezarae Adam BSN, RN, Kelly Kester DNP, MSN

**BACKGROUND**
- Surgery remains a viable option for the treatment of patients with cardiac disease.  
- Literature establishes that preoperative patient anxiety is increasing, and preoperative education can reduce it.
- Nurses have multiple priorities that compete with preoperative education.
- Data specific to this study at the institution reveals an inconsistency with patient preoperative education.

**LOCAL PROBLEM**
- Cardiac surgery patients are assigned digital education in their Duke MyChart before surgery to standardize the education.
- Patient unpreparedness is a local concern in preoperative education. Evidence has shown that engagement is low.
- Engagement with the digital education platform is low.
- The aims of the project were:
  - To improve nurses’ knowledge of the digital education available to patients undergoing cardiac surgery by 25%.
  - To improve nursing and patient engagement of the educational videos by 25%.

**METHODS**
- The John Hopkins Evidenced-Based Practice Model guided the project.
- A critical appraisal of the literature demonstrated good and consistent evidence supporting the use of preoperative education using digital education to improve patient outcomes.
- Outcome measures of nursing knowledge and confidence in digital education were measured for a 3 months pre-implementation and post-intervention.

**INTERVENTIONS**
- The DNP student attended staff huddles to introduce the project.
- An anonymous Likert survey was shared with nurses to test baseline knowledge and confidence in using digital education.
- The DNP student taught nurses how to access and utilize digital education materials to improve post-cardiac surgery outcomes.
- The nurses again took the anonymous survey to evaluate the impact of using digital education after the intervention.

**RESULTS**
- Statistical significance in every category of the Likert Survey reflected that nurses felt more confident disseminating digital education materials.

**CONCLUSIONS**
- Patient and nurse engagement in digital education increases with education about the process and tools.
- The unit leadership should incorporate education about digital education into nursing orientation and a mandated learning module.
- The hospital can add an admission question asking the patients about engagement with digital education to remind nurses and patients about the education.

**Cardiac surgery nurses were significantly more confident delivering and utilizing patient digital education after receiving education about the standardized educational tool.**

<table>
<thead>
<tr>
<th>LIKERT Survey Questions</th>
<th>Mean Pre/ Post Survey</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel comfortable delivering patient education about what to expect before, during, and after surgery?</td>
<td>3.66 / 4.17</td>
<td>.011</td>
</tr>
<tr>
<td>I know how to access and utilize the CT surgery digital patient education through MyChart?</td>
<td>2.79 / 4.02</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>I know how to use the unit’s iPad for reviewing the patient’s educational videos?</td>
<td>2.64 / 4.04</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>I feel comfortable delivering patient education through technology?</td>
<td>3.39/4.30</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

- A list of the questions sent to the nurses pre- and post- intervention. All questions showed a response in the mean of the question answered as well as the p value.

![Graph showing percent of nurse engagement in digital education](image)

- The number of patients watching the videos peaked during education on the unit and dropped again when there was not active education.

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**Scan for executive summary, Qualtrics survey, and reference list.**