MEDICAL UNIVERSITY OF SOUTH CAROLINA
CENTER FOR EVIDENCE-BASED PRACTICE
Evidence-Based Practice Summary
Improving Post-operative Outcomes through Patient Education

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ASK THE QUESTION

Question 1: Does patient education improve post-operative outcomes?

Objective: To critically evaluate the evidence about the effect of patient education on post-operative outcomes.

Background: As participants in their care, patients seem positioned to play a critical role in the improvement of outcomes such as readmissions and surgical site infections if provided focused, as well as systematic education related to their plan of care.

SEARCH FOR EVIDENCE

Search strategies included: articles published in English, publications within the last 10 years, research-based articles.

Databases included: PubMed, CINHAL, Ovid

Key words/terms included: Patient Education, Pamphlets, Surgical, Outcome, Surgical Wound Infection/prevention and control, Patient Readmission
CRITICALLY ANALYZE THE EVIDENCE

Question 1: Does patient education improve post-operative outcomes?

Grade Criteria: Implementing standardized patient education (from preoperative phase through to post discharge followup) should be a priority for any clinical pathway. Strong Recommendation, Moderate Quality Evidence.

A 2012 retrospective study of 68 patient records from Jan 2006 to Dec 2008 at a university hospital found that 27% of the patients were readmitted due to preventable complications (dehydration, malnutrition, and infection). Review of postoperative, predischarge teaching revealed inconsistencies with teaching methods, materials, content and documentation. Further, there was no documentation of evidence of learning.

Additionally, a historically controlled 2012 study of 203 patients with new ileostomies found that a new educational pathway reduced the overall readmission rate from 35.4 to 21.4% and readmission rate for dehydration was reduced from 15.5 to 0% over a 7 month period. There was no change in the readmission rate for infection; however LOS was reduced from 7.5 to 6.6 days.

A questionnaire offered to 201 patients and 29 surgeons revealed a disparity between surgeons’ and patients' opinions of what information is important and useful during the preoperative period. The study found that patients' desire for preoperative information was underestimated by surgeons. The article references several studies from 1979-1992 that indicate that “successful exchange of medical information” with patients can positively impact factors such as: reduced treatment time and hospital stay, reduced risk factors, improved patient satisfaction, lower morbidity and mortality, and improved compliance.
<table>
<thead>
<tr>
<th>Author/Date</th>
<th>Purpose of Study</th>
<th>Study Design</th>
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| Hari and Rosenzweig, 2012 | To determine post pancreaticoduodenectomy (PD) readmission rates, reasons and postoperative education. Implications for education. | Retrospective Study     | 62 patients with pancreatic cancer who underwent PD over 3 year period.  | Found inconsistent teaching methods and materials used and no evidence of learning documented. 27% readmission rate due to preventable complications. | Study Limitations =  
  - None  
  - Insufficient sample size  
  - Lack of allocation concealment  
  - Selective reporting of measures  
  - Large losses to F/U |
| Nagle et al., 2012  | To create a pathway to reduce readmission and facilitate patient education and well-being. | Historically controlled study: 7 months of Prospective Data (pathway) compared to retrospective database of previous 4 years. (prepathway) | 203 patients with new ileostomies : 161 prepathway and 42 pathway. | Readmission rates Overall:  
  - Prepathway = 35.4%  
  - Pathway = 21.4%  
  - Dehydration:  
    - Prepathway = 15.5%  
    - Pathway = 0%  
  LOS 7.5d vs. 6.6d | Study Limitations =  
  - None  
  - Insufficient sample size  
  - Lack of allocation concealment  
  - Selective reporting of measures  
  - Large losses to F/U |
| Keulers et al., 2008 | To determine opinions of surgeons and patients about issues of surgical information. | Questionnaire: based on literature search of domains important to patients. | 201 patients- 125 responses 29 surgeons- 24 responses | Surgeons underestimate patients' desire for preoperative information. | Study Limitations =  
  - None  
  - Insufficient sample size  
  - Lack of allocation concealment  
  - Selective reporting of measures  
  - Large losses to F/U |

| Lower Quality Rating if: |  
  - Studies inconsistent  
  - When there are differences in the direction of effect, the size of the differences of effect, and the significance of the differences that cannot be reasonably explained.  
  - Studies are indirect  
  - (Your PICO question is quite different from the available evidence in regard to population, intervention, comparison, or outcome)  
  - Studies are imprecise  
  - (When studies include few patients and few events and thus have wide confidence intervals and the results are uncertain)  
  - Publication Bias  
  - (e.g. pharmaceutical company sponsors study on effectiveness of drug)  
  - Increase Quality Rating if:  
  - Large Effect  

| Level of Evidence (high, moderate, low, very low) |  
  - High  
  - Moderate  
  - Low  
  - Very Low |
APPLY THE EVIDENCE

- There is insufficient data to assess the impact of patient education on SSI specifically and mixed information on readmissions. However, it is well established that patient education improves patient satisfaction. Current research focuses primarily on how best to provide timely and focused education that will result in a positive effect on the desired results and engage patients in achieving best outcomes.
- Implementing standardized patient education (from preoperative phase to post discharge follow up) should be a priority for any clinical pathway.

REFERENCES

