

# Incidence of Preventable Postoperative Readmissions Following Pancreaticoduodenectomy: Implications for Patient Education

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**P**ancreaticoduodenectomy (PD), a large abdominal surgery performed for patients with pancreatic cancer, originally was associated with significant perioperative morbidity and mortality; however, multiple studies have shown that this operation can be safely performed at institutions with a high volume of PD surgery and expertise (Kennedy et al., 2007).

Pancreatic cancer is associated with poor prognosis because few clinical warning signs or symptoms occur, resulting in a late-stage diagnosis. Therefore, the associated life expectancy after PD and without significant surgical morbidity is estimated to be less than five years. The five-year survival figures mandate that optimal postoperative care be implemented to maximize positive outcomes and minimize postoperative complications and readmissions in patients with poor life expectancy (Kotwall, Maxwell, Brinker, Koch, & Covington, 2002).

Reasons for readmission to the hospital in the immediate PD postoperative period (90 days postsurgery) are related to disease process or complications arising from the surgery, such as abscess formation, fistulas, or fluid leakage from the pancreas. In some cases, postdischarge complications are a result of complications deemed preventable, such as surgical site wound infections, malnutrition, glucose intolerance, or failure to recognize symptoms warranting additional intervention. The need for patient and family understanding of the care regimen to prevent complications postoperatively creates a therapeutic demand on the patient and family unit. The inability to meet that therapeutic demand also can be defined as a self-care deficit.

Self-care is the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being (Orem, 1995). Anecdotal data show that self-care deficits cause readmissions and may increase morbidity and mortality following PD. The postoperative self-care deficits of patients undergoing

**Purpose/Objectives:** To determine readmission rates post-pancreaticoduodenectomy (PD), readmission reasons following PD, and patients' postoperative education prior to discharge.

**Design:** Retrospective, descriptive study of established medical records of patients who have undergone PD from 2006–2008.

**Setting:** PD cohort from a pancreatic cancer program.

**Sample:** 62 patients aged 18 years or older, diagnosed with pancreatic cancer, who had PD.

**Methods:** Data abstracted from inpatient and outpatient electronic records as per study protocol and entered into Excel® spreadsheet for analysis.

**Main Research Variables:** Incidences of and reasons for readmissions post the PD procedure. Discharge education given to patients prior to discharge.

**Findings:** Patients were discharged at mean postoperative day 11.3. Readmission rate was 28%. Reasons for readmission were dehydration or malnutrition ( $n = 10$ , 16%) and surgical site infection ( $n = 7$ , 11%); 10% of patients ( $n = 6$ ) had documented difficulties with dehydration, malnutrition, and failure to thrive noted at follow-up. PD discharge teaching was documented in a mandatory discharge form. No standard curriculum was used.

**Conclusions:** Patients undergoing PD experience an increase in self-care demand postdischarge. Poor discharge education can lead to high rates of readmission, specifically for dehydration and malnutrition, mandating an assessment of patient education prior to discharge.

**Implications for Nursing:** Close attention must be given to the needs of patients with pancreatic cancer postdischarge. Trying to identify the areas of educational deficit at patient readmission could help nurses identify what they can do to minimize preventable complications. Educational focus for patients undergoing PD should be on prevention of dehydration, malnutrition, and surgical site infections.

PD have received little or no attention in the literature. A pancreatic cancer diagnosis, prognosis, and associated complications can cause distress for patients and family