

# Development of a Clinical Pathway for the Whipple Procedure

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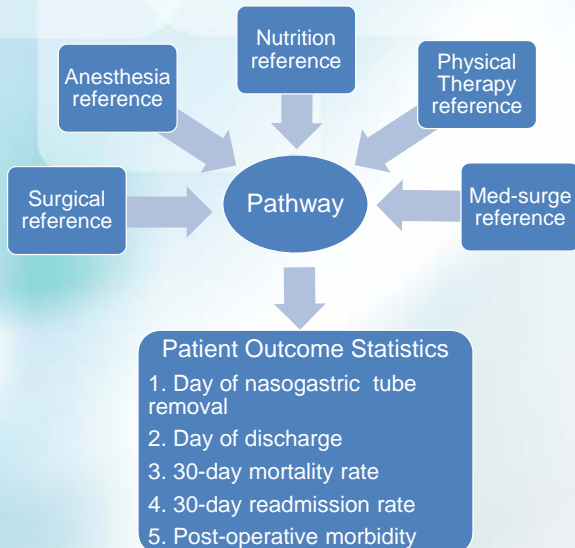
# Development of a Clinical Pathway for the Whipple Procedure

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## BACKGROUND / INTRODUCTION

- By standardizing health care services in the most efficient, safe, and cost-effective way, clinical pathways can be successful in driving healthcare towards the goals of the Triple Aim.
- Patients who undergo a pancreaticoduodenectomy are at a high risk for post-operative complications due to the radical nature of the procedure and the circumstances under which they receive this procedure.
- A patient typically undergoes a Whipple procedure if they are diagnosed with a cancer that resides within the head of the pancreas, ampulla of Vater, the lower end of the common bile duct, or the duodenum.
- During a standard Whipple procedure the head of the pancreas, the gallbladder, a portion of the common bile duct, the duodenum, and the pylorus of the stomach are all removed.
- The purpose of this investigation was to see how the development of a clinical pathway for the Whipple procedure could be beneficial to patients and LVHN.

## METHODS



## OUTCOMES

Pre-Op Clinical Visit	-Malnutrition screening, appropriate assignment of nutritional supplements (Ensures) -Patient education on diet and nutrition; Dietary Manual, The Pancreatic Cancer Diet Education Booklet, Nutrition and Symptom Management Following Whipple Procedure -Cardiology clearance -Anesthesia consult -Basic Mobility Screening
Day of Surgery	-Epidural placed (T8-12 dermatomal distribution) -NG tube placed -Pre-incision antibiotics -Sequential compression devices and spongy pad placed -Standard pancreaticoduodenectomy -PACU recovery -Transfer to surgical floor or ICU -NPO, ice chips ad lib -Administer protonix (PPI) -Antibiotics x 24 hrs for patients with pre-operative stents -Bolus with colloid or crystallite; Ringers lactate 150 ml/hour -Within 24 hours, basic mobility screening
Post-Op Day 1	-Move patient to sit in chair -NPO, ice chips ad lib -Switch IV to dextrose fluid -SQ Heparin -Schedule post-op cardiac consult if needed
Post-Op Day 2	-Basic Mobility screening (PT consult or mobilized immediately) -NPO, ice chips ad lib
Post-Op Day 3	-Remove epidural -IV morphine after removal of epidural -6 hours later, remove Foley catheter -Remove NG tube -Ice chips ad lib and sips of water
Post-Op Day 4	-Clear liquids, nutritional supplement (Ensure Enlive) -Percocet administration (1 at a time)
Post-Op Day 5	-Clear liquids, nutritional supplement (Ensure Enlive) -Percocet administration (1 at a time)
Post-Op Day 6	-Discharge on PPI -Schedule surgical follow up in 1 week -Resume regular diet -Drain management (on per case basis)

## RESULTS

- No patient outcome statistics were produced.
- This was due to the lack of a sufficient amount of time to collect these measures of data after the pathway had been developed.

## DISCUSSION/CONCLUSIONS

- Other studies with similar pathways showed great success in adhering to pathway standards while maintaining patient outcomes.
- University of Virginia (113 patient study):
  - Post-Op Day 3 NG tube removal = 93.0%
  - Post-Op Day 6 discharge = 35.4%
  - 30-day mortality rate = 0%
  - 30-day readmission rate = 15.9%
  - Post-operative morbidity = 48.7%
- An all-encompassing clinical pathway for the Whipple procedure was produced.
- Upon further investigation and data collection, the institution of this clinical pathway may prove to be beneficial to its affected patients and Lehigh Valley Health Network itself, achieving the goals set by the Triple Aim.
- Success of other investigations involving clinical pathways demonstrates the significance in continuing the development of clinical pathways for other procedures.
- Clinical pathways naturally lend themselves to constant reevaluation and further improvement.

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