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Post Procedural Care of Patients Receiving Percutaneous Transhepatic Biliary Drainage Catheter Placement

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ABSTRACT

Background:

- Percutaneous transhepatic biliary drainage (PTBD) procedures are associated with high rates of 30-day readmissions, a significant number of which are unplanned and Interventional Radiology (IR)-related.
- The purpose of this project was to create standardized post procedure care for patients having PTBD catheter placements in order to:
 - Improve patient outcomes
 - Increase patient satisfaction
 - Reduce 30 day readmission rates

Methods:

- Conducted a five year retrospective review of all primary PTBD catheter placements to determine readmission rates and causes
- Current practices surrounding the PTBD patient population were assessed to identify areas for improvement
- Researched recent literature to compile best practices and locate data from previous studies
- Created a new interdisciplinary standard of care for the PTBD population based on findings

Post Procedural Care Models

In the review of this patient population, it was found that these patients did not receive consistent care related to their drain management. Neither the primary team or the IR team took sole responsibility to ensure the patient had adequate knowledge and supplies to care for the PTBD catheter. Below is an outline of our previous practice compared to our newly implemented practices.

Previous Practices	New Practices
IR nurses had various knowledge levels on biliary drains	All IR nurses were re-educated on biliary drain management
Inconsistent drain dressings were applied depending on the provider performing the procedure	A more simple dressing was selected for consistency and ease of patients finding the medical supplies
Documentation from the IR nurses and physicians was inconsistent and sometimes non-existent	Standardized documentation templates were created for nurses and physicians
Patient education was outdated and was only added to some patients	Our education was updated and includes QR codes to videos. An IR nurse goes to the bedside prior to discharge to perform hands on teaching.
Care Coordination was not contacted post procedure to set-up home care services and supplies	Care Coordination is contacted immediately post procedure to ensure proper home care is set-up
Post Procedure care orders were not placed	A standardized order set was created to ensure consistent care while the patient is admitted
Supplies were not given to primary PTBD catheter placements since they are always admitted	Two week supply kits are given to every patient so they have supplies to bridge them until home care arrives
Inpatient nurses and care coordinators (RNCC) were not knowledgeable about care requirements for the biliary drains	A one page tip sheet was created for bedside nurses and education was disseminated to all RNCC's about proper management
Follow-up calls were not completed the next day since the patients were admitted	Follow-up calls are completed two and seven days after discharge from the hospital



Results from a five year retrospective review of all primary PTBD catheter placements

Total number of procedures	238
Malignant obstruction	51.3%
Benign obstruction	48.7%
All-cause 30-day readmission	28.2%
IR-related readmissions	49.3% of readmissions (13.9% of total)
Unplanned IR-related readmissions	90.9% of IR-related readmissions (12.6% of total)

Conclusion:

- New processes were implemented for all primary PTBD patients effective September 1, 2019.
- Ongoing data collection is in process and rates will be reassessed one year post implementation.

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