Analyzing Unplanned Admissions and Readmissions After an Outpatient or Inpatient Interventional Radiology Procedure

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Background

- This project involves the comparison of unplanned admission of patients to the readmissions of patients within 30 days of discharge after an interventional radiology (IR) procedure has occurred using a retrospective data analysis.
- General reasons for readmission include: unclear discharge instructions, lack of proper help for the patient after they are discharged, premature discharge, planning and care goals that aren't fully discussed or made, the patient not attending post-discharge or follow-up appointments, miscommunication with physician, medical malpractice, technical complications, infection, recurrence of illness, therapeutic errors, handoff process failure, and demographic factors.
- The purpose of this research project was to reduce immoderate readmissions in IR by evaluating readmission rates to help improve patient care and to reduce health care expenditures
- The problems associated with readmission include: increased mortality, increased costs, lower satisfaction rates among patients and staff, and increased government penalties.

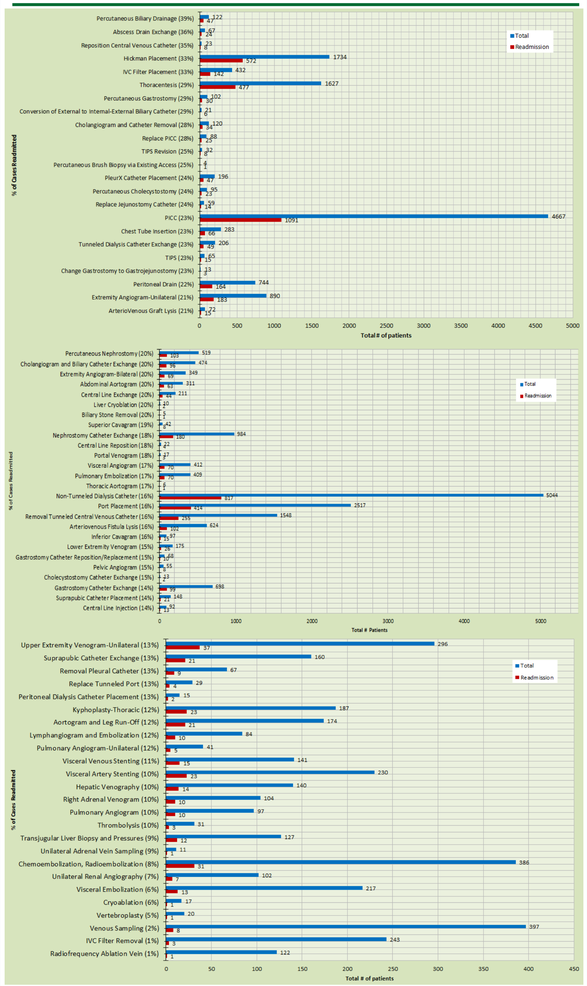
Hypothesis

- If patients with unplanned 30 day admissions and readmissions were compared to the patients not admitted/readmitted within 30 days of discharge of an outpatient or inpatient IR procedure, then responsible factors could be elucidated, and appropriate interventions instituted.

Methodology

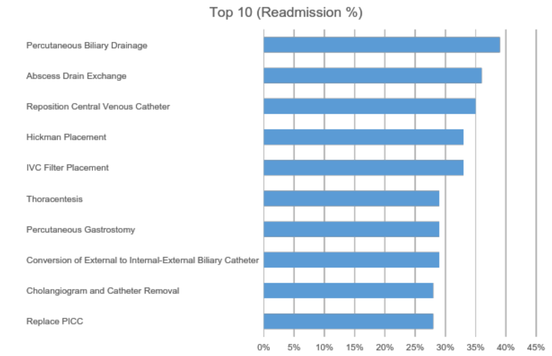
- 83 various IR procedures done in 2016 were comprehensively analyzed.
- The percentage of readmissions within 30 days were extensively calculated while comparing the percent of case readmissions to the total number of patients for each procedure.
- The data were analyzed using a descriptive statistical analysis.

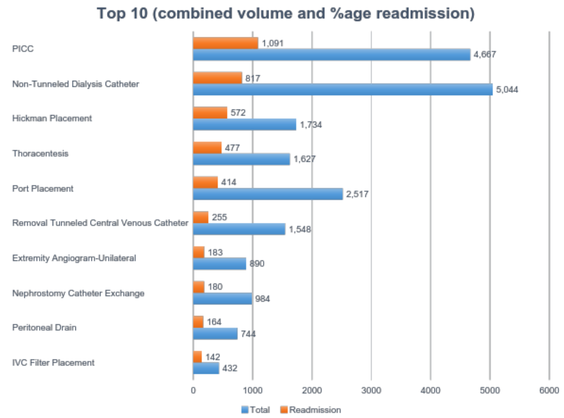
Data



- Graphical representation of the procedure type, volume and 30-day readmissions for all 83 procedures is in the data column. For organizational purposes, the graphs were broken down into 3 sections: 21% and up, 14%-20%, and 1%-13%.
- In the results section we extracted the top 10 procedures for two categories: top 10 by percentage of readmissions, and top 10 by using a combination of the total volume and percentage of readmissions.
- This will give us a list of the top priority procedures to evaluate further for factors associated with readmissions.

Results





Top 5 Readmission Percentages

Index CPT	Readmission?	2016 Total	CPT Group Total	% Readmission and Volume Combination
47532	NO	63	120	47.58
Percutaneous Biliary Drainage	YES	17	47	
47532 Total		80	122	
% Readmitted		21%	39%	
47533	NO	12		
PTHC W/ EXT TUBE	YES	9		
47533 Total		21		
% Readmitted		43%		
47534	NO	45		
PTHC INT/EXT TUBE	YES	21		
47534 Total		66		
% Readmitted		32%		
49423	NO	43		24.12
Abscess Drain Exchange	YES	24		
49423 Total		67		
% Readmitted		36%		
36597	NO	15		8.05
Reposition Central Venous Catheter	YES	8		
36597 Total		23		
% Readmitted		35%		
36558	NO	1,162		572.22
Hickman Placement	YES	572		
36558 Total		1,734		
% Readmitted		33%		
37191	NO	290		142.56
IVC Filter Placement	YES	142		
37191 Total		432		
% Readmitted		33%		

Conclusions

- Disclaimer: These numbers were obtained from raw billing data, and could have changed significantly after chart review for duplications/erroneous inclusion (e.g. planned admission/readmission).
- Reducing readmission rates caused higher satisfaction rates among patients and staff, reduced costs, decreased mortality, increased quality of life, reduced government penalties, reduced healthcare expenditures, and improved patient care.
- The procedures in interventional radiology that have a high percentage of patients being readmitted within 30 days after discharge due to complications could be further evaluated to prevent future drawbacks.

Recommendations

- The ways to reduce readmissions include: educate patients on post-treatment care, provide a coherent discharge plan, communicate, schedule post-discharge appointments before patient is discharged, have the physician provide a medication reconciliation to make sure the patient understands the instructions for their medication, provide follow-up phone calls to patients, have a longer handoff process, schedule home visits, telemonitor, use screening tools, and ensure a safe patient transition.

References

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