

2017 myRESEARCH™

**Science Internship Program:  
Applied Medicine**

**Civic Education**  
Office of Government and  
Community Relations



**Lexi Ober**  
**Science Internship Program:**  
**Applied Medicine**

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

**Lexi Ober**

**Charles Martin III, MD, Amanjit Gill, MD,  
Nancy Obuchowski, PhD, Nancy Graham  
Heather Blonsky, Kristaps Daukss, Lauren  
Obman, Anna Wen**

# Abstract

- Evaluation of unplanned admissions and readmissions of outpatients or inpatients within 30 days of discharge after an interventional radiology (IR) procedure has taken place.
- Retrospective data analysis

# Background

General reasons for readmission:

- Discharge instructions aren't clear
- Premature discharge
- Patient not attending post-discharge appointment or follow-up appointments
- Miscommunication
- Medical malpractice

# Background (cont.)

- Technical complications
- Infection
- Recurrence of illness
- Therapeutic errors
- Handoff process failure
- Demographic factors

# Problem/Purpose

Problems associated with readmission:

- Increased mortality
- Increased costs
- Lower satisfaction rates
- Increased government penalties

The purpose of this project was to help improve patient care and to reduce health care expenditures.

# 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.

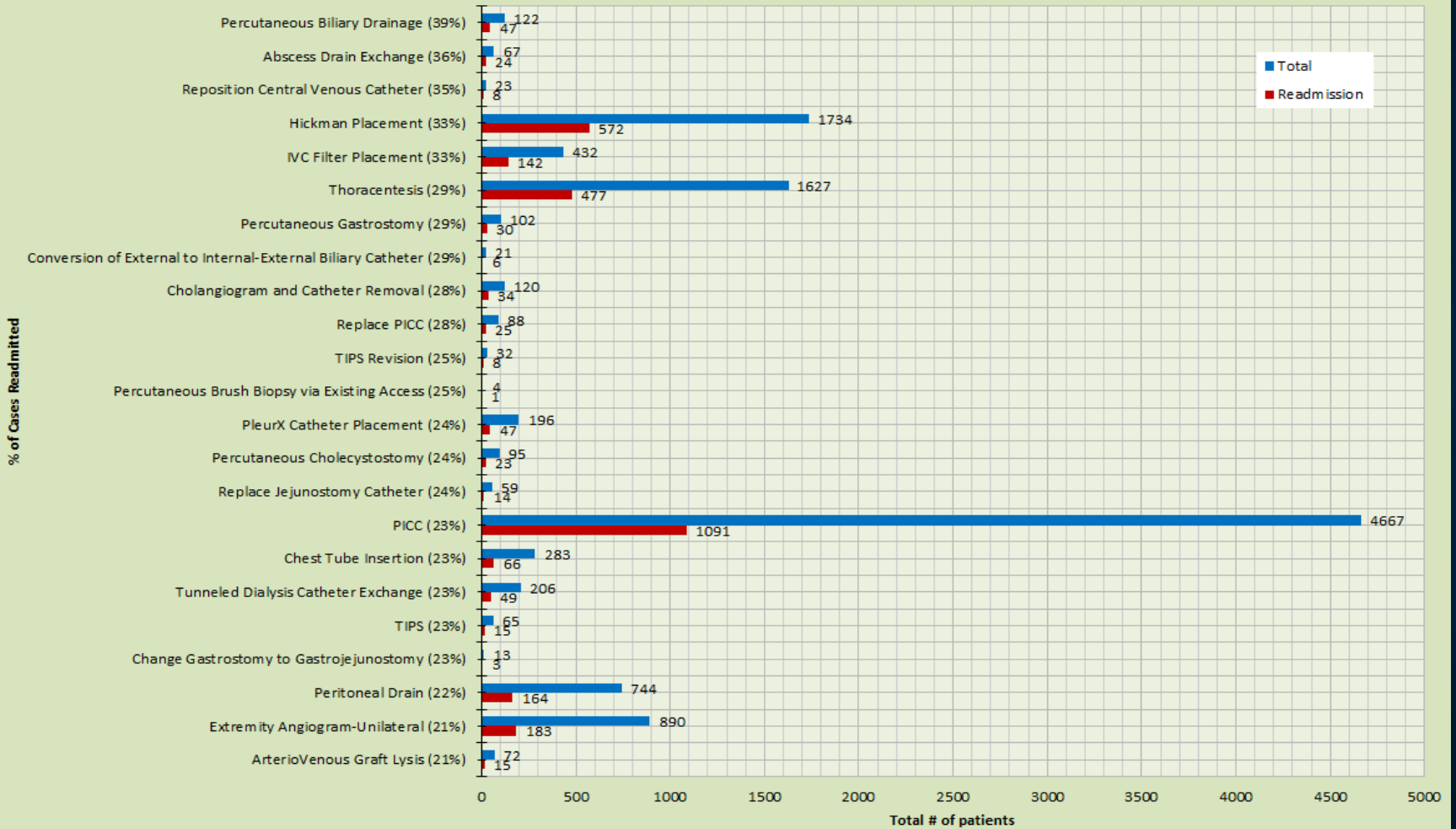
# Methodology

- Analyzed 83 interventional radiology procedures
- 2016
- Calculated the percentage of readmission within 30 days
- Compared the percentage of case readmissions to the total number of patients for each procedure
- Descriptive statistical analysis

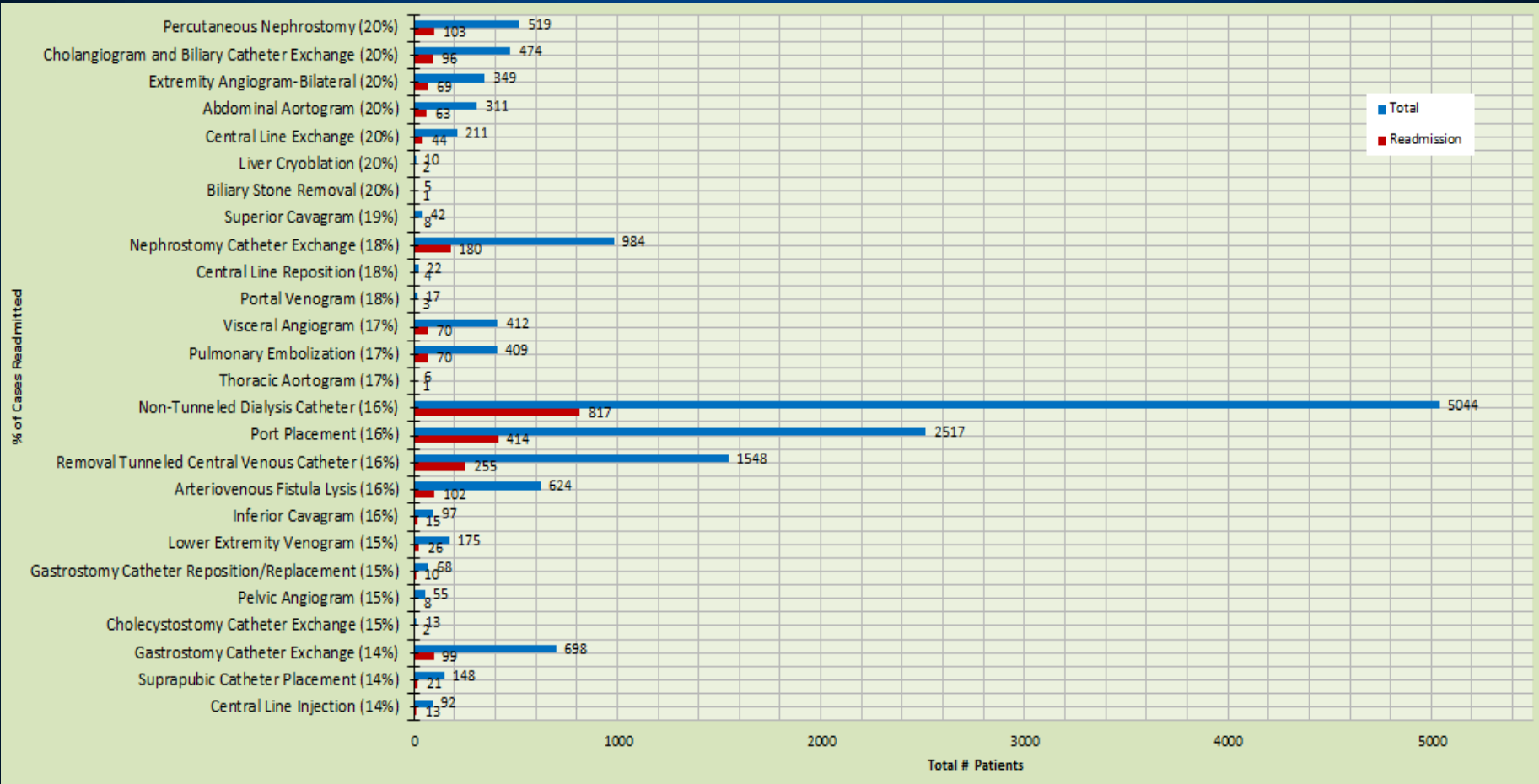
# Data

Top 10 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%		

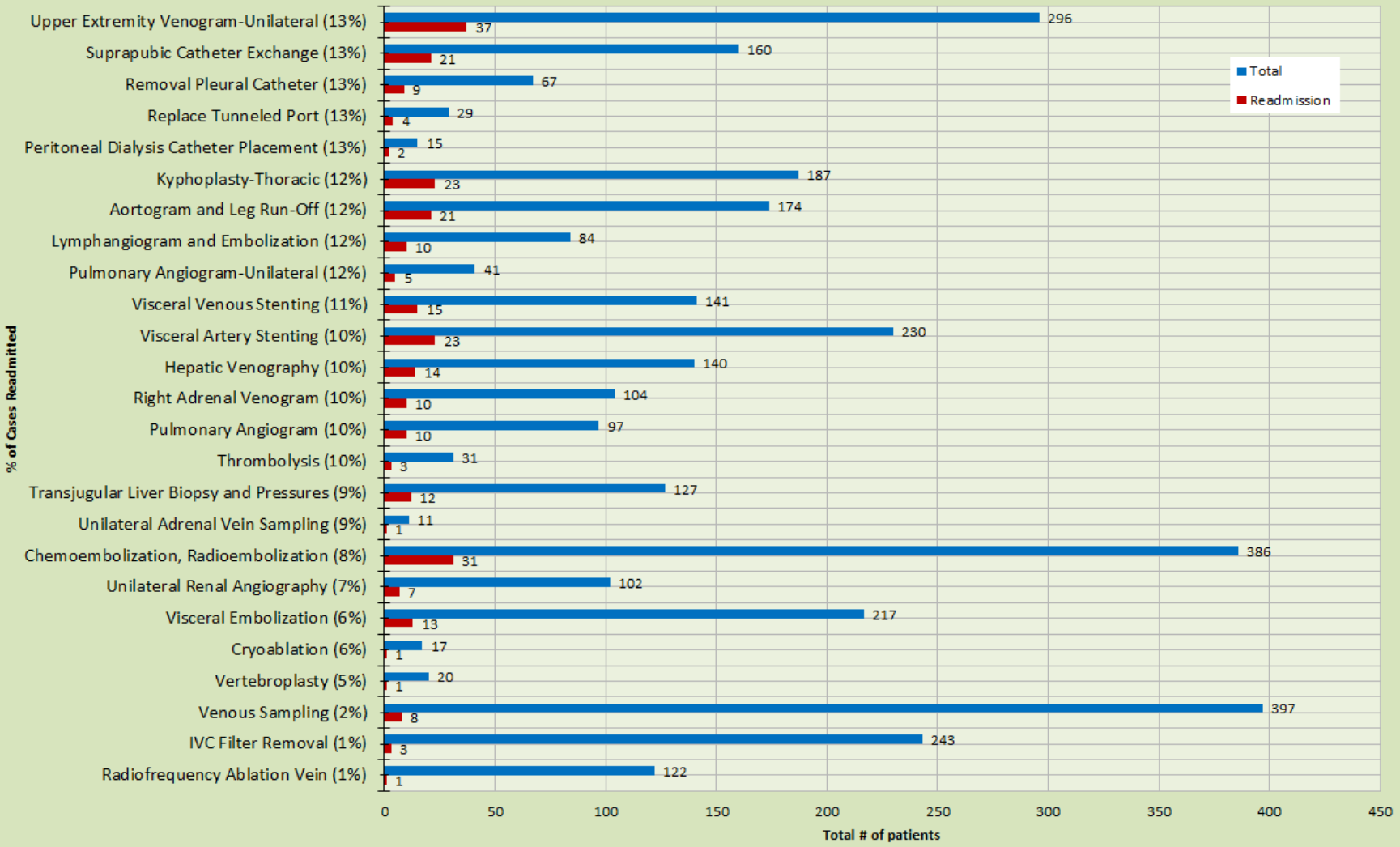
# Data (Cont.)



# Data (Cont.)



# Data (Cont.)



# Results/Outcomes

- Disclaimer: These numbers were obtained from raw billing data, and may change significantly after chart review for duplications/erroneous inclusion (e.g. planned admission/readmission).

# Conclusions

The benefits of reducing readmissions:

- Higher satisfaction rates among patients and staff
- Reduced costs
- Decreased mortality
- Increased quality of life
- Reduced penalties
- Reduced health care expenditures
- Improved patient care

# Recommendations

How to reduce readmissions:

- Educate patient on post-treatment care
- Provide a coherent discharge plan
- Communicate
- Provide follow-up phone calls to patients
- Have a longer handoff process
- Use screening tools
- Ensure a safe patient transition

# References

- Felix, Holly C., Beverly Seaberg, Zoran Bursac, Jeff Thostenson, and M. Kathryn Stewart. "Why Do Patients Keep Coming Back? Results of a Readmitted Patient Survey." *Social Work in Health Care*. U.S. National Library of Medicine, 2015. Web. 19 June 2017.
- Valji, Karim. *Vascular and Interventional Radiology*. Philadelphia: Saunders Elsevier, 2006. Print.
- Ammar Sarwar, MD, Lujia Zhou, MPH, Nihara Chakrala, MD, Olga R. Brook, MD, Jeffrey L. Weinstein, MD, Max P. Rosen, MD, MPH, and Muneeb Ahmed, MD. "The Relevance of Readmissions after Common IR Procedures: Readmission Rates and Association with Early Mortality." *Clinical Study*. Google, n.d. Web. 21 June 2017.
- Alper, Eric, M.D., Terrence A. O'Malley, M.D., and Jeffrey Greenwald, M.D. "REFERENCES." *Hospital Discharge and Readmission*. Ed. Andrew D. Auerbach and Judith A. Melin. N.p., n.d. Web. 13 June 2017.
- Jonathan.govette. "Readmission Rates: What You Need To Know And How To Improve Your Own." *Patient Access, Referral Management & E-Consult Software - ReferraMD*. N.p., 07 Nov. 2016. Web. 28 July 2017.
- Costantino, Mary E., Beth Frey, Benjamin Hall, and Philip Painter. "The Influence of a Postdischarge Intervention on Reducing Hospital Readmissions in a Medicare Population." *Population Health Management*. Mary Ann Liebert, Inc., Oct. 2013. Web. 25 July 2017.

# Special Thanks

Amanjit Gill, MD

Charles Martin, MD

Nancy Obuchowski, PhD

Nancy Graham

Heather Blonsky

Kristaps Daukss

Lauren Obman

Anna Wen

Interventional Radiology Department

Nedra Starling, MA, MPH, DrPH/ABD

Office of Government and Community Relations'

Civic Education Department

[www.civiceducation.clevelandclinic.org/](http://www.civiceducation.clevelandclinic.org/)

© Copyright 2017 Cleveland Clinic Foundation