

2022

STRONGER

vizient. CONNECTIONS SUMMIT

Sept. 19–21, 2022

#vizientsummit



# Decreasing 30-day Readmissions for Pleural Effusions After Lung Transplant

**Nataliya Budanova, RN**  
Sr. Quality & Performance Improvement Specialist

University of California San Francisco

# Disclosure of Financial Relationships

Vizient, Inc., Jointly Accredited for Interprofessional Continuing Education, defines companies to be ineligible as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

An individual is considered to have a relevant financial relationship if the educational content an individual can control is related to the business lines or products of the ineligible company.

No one in a position to control the content of this educational activity have relevant financial relationships with ineligible companies.

# Learning Objectives

- Identify key strategies to improve patient outcomes and reduce or prevent 30-day readmissions.
- Describe methods used in identification, early detection and treatment of pleural effusion post-lung transplant.



# Decreasing 30-day Readmissions for Pleural Effusions After Lung Transplant

**Nataliya Budanova, RN**  
Sr. Quality & Performance Improvement Specialist

University of California San Francisco



**UCSF Health**  
Redefining possible.™

- Adult and Pediatric Care
- Women's Specialty
- Cancer Center

1,276

Licensed beds

3,056

Physicians

11,665

Employees

#vizientsummit



# UCSF Health

Redefining possible.™



Home to **5 Nobel laureates** who have advanced the understanding of cancer, neurodegenerative diseases, HIV/AIDS, aging and stem cell research



We are the nation's **top public recipient of research funding** from the National Institutes of Health



With more than **1,800 total active inventions**, UCSF continues to translate innovations into real-world patient treatments

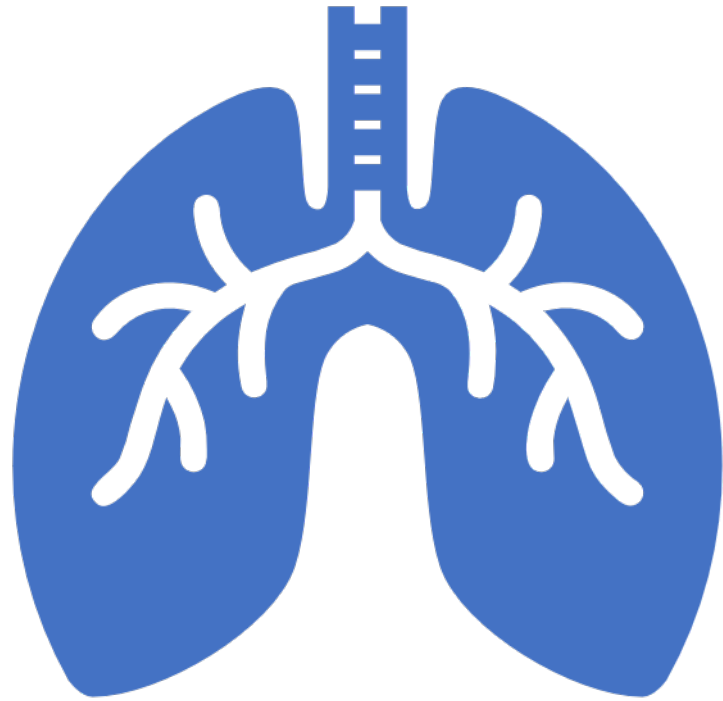


UCSF generates nearly **43,000 jobs** and produces an estimated **\$8.9 billion in economic impact**



UCSF has spawned more than **185 startups**

# Lung Transplant Program



**UCSF Health**  
Redefining possible.™



Figure C23D. Adult (18+) 1-year patient death HR estimate (deceased donor grafts)

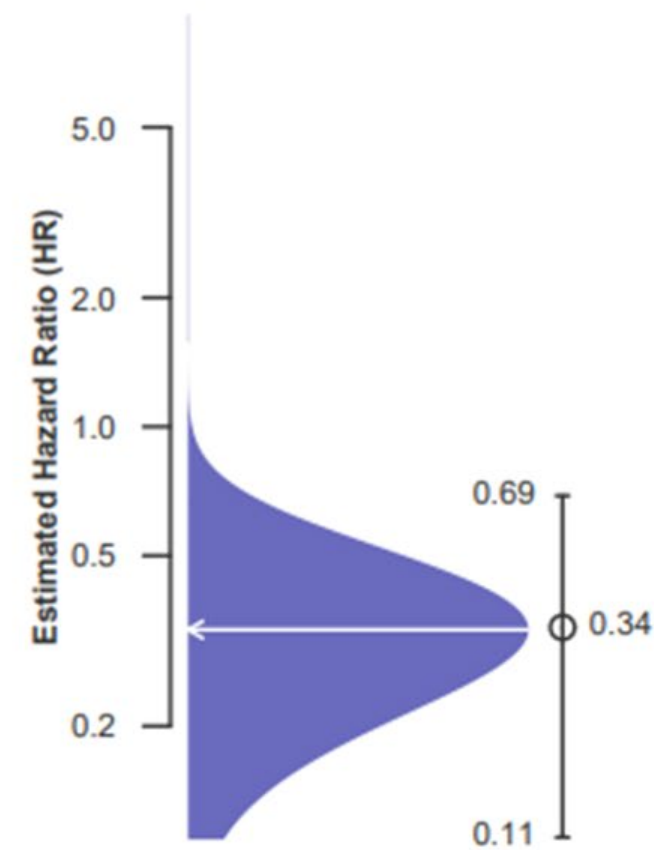
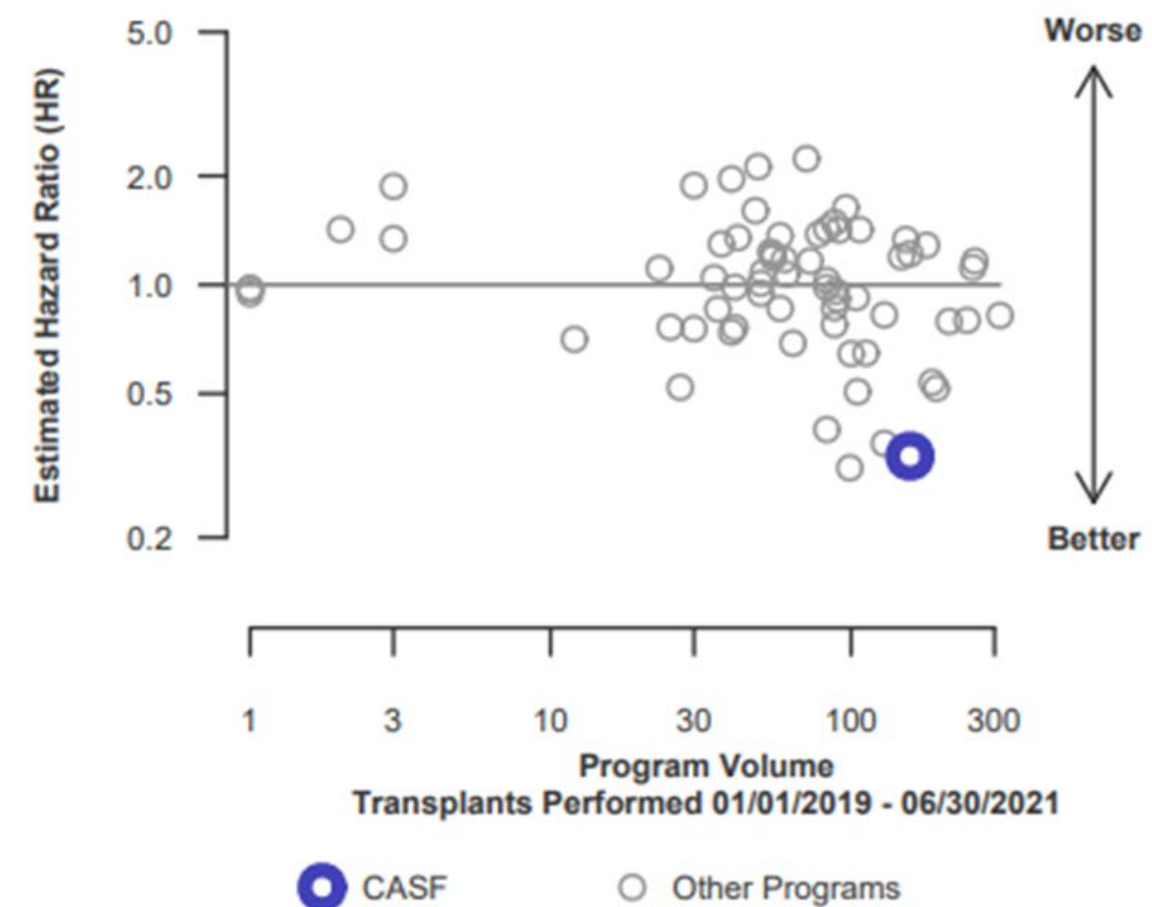
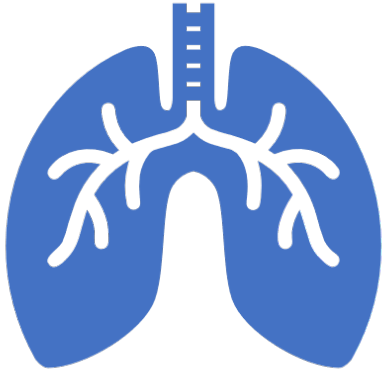


Figure C24D. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts)

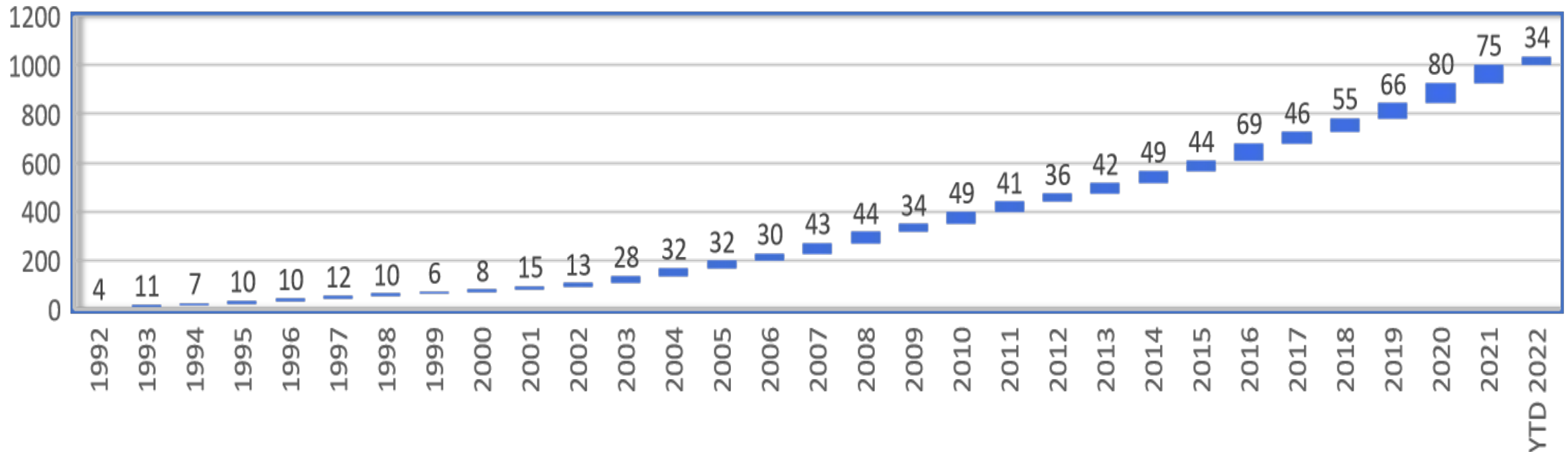


# Thirty Years & One Thousand Lungs



**UCSF Health**  
Redefining possible.™

June 9, 2022



# Decreasing 30-day Readmissions for Pleural Effusion after Lung Transplant

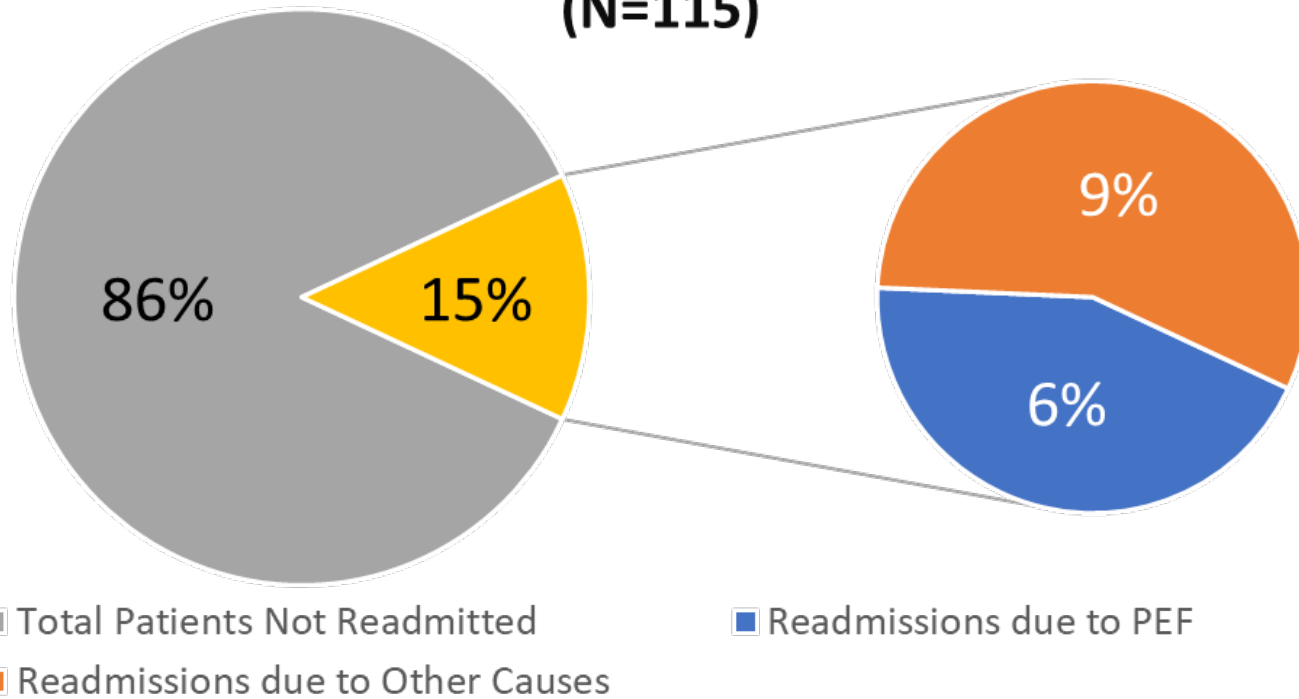
## Background/Significance

- Readmissions after lung transplantation are highest in the first year and can reduce the quality of life for recipients and increase health care costs
- Pleural effusion is a buildup of excessive fluid in the pleural cavity and is a common complication of lung transplants
- Post-operative pleural effusions cause:
  - Discomfort, dyspnea, and impaired mobility
  - Require thoracentesis or chest tube drainage
  - Median readmission length of stay of 3 days
  - Average cost of \$200,000 per readmission

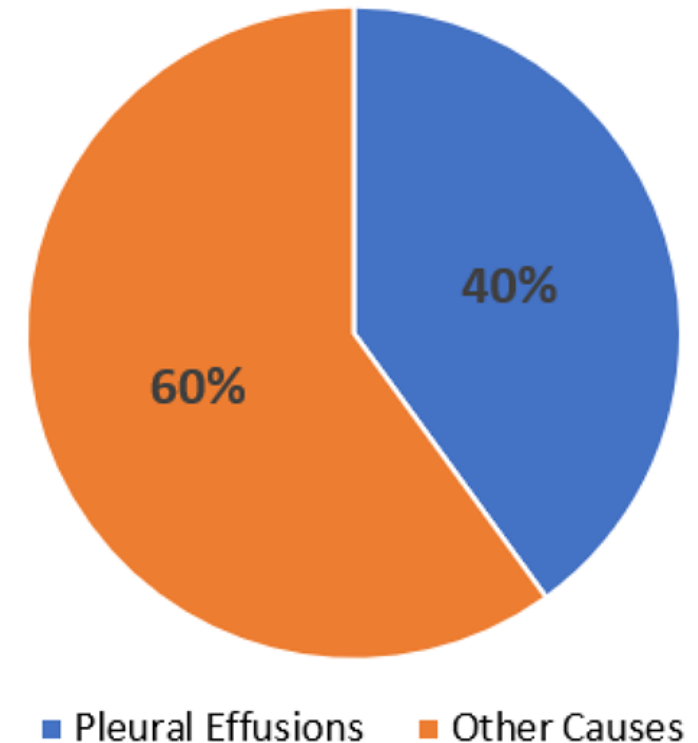


# Decreasing 30-day Readmissions for Pleural Effusion after Lung Transplant Baseline Conditions

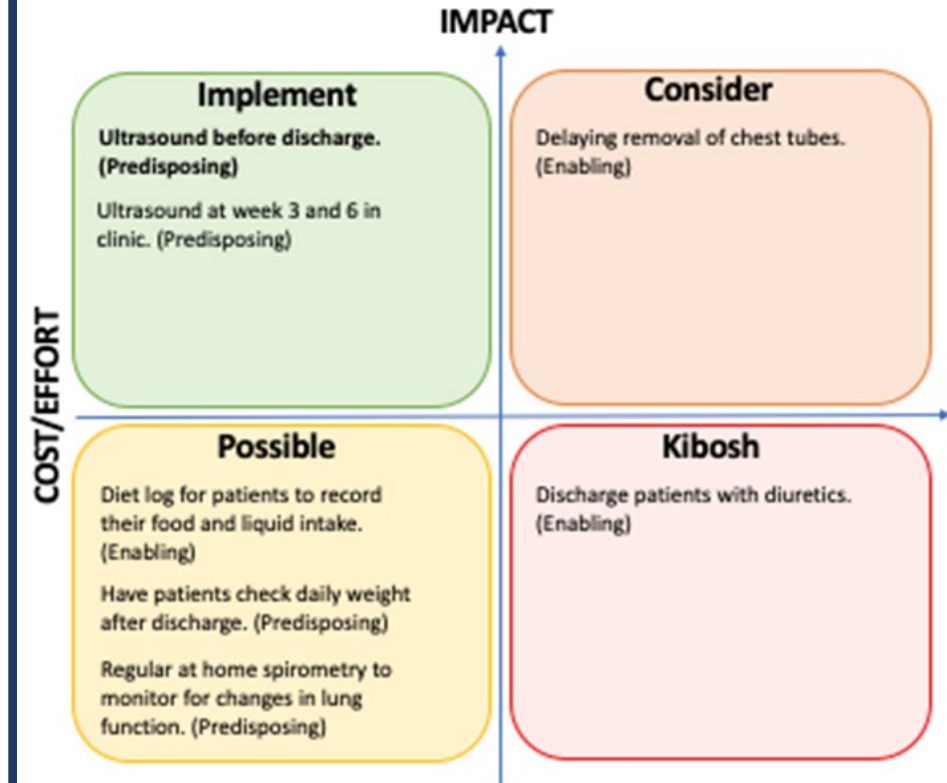
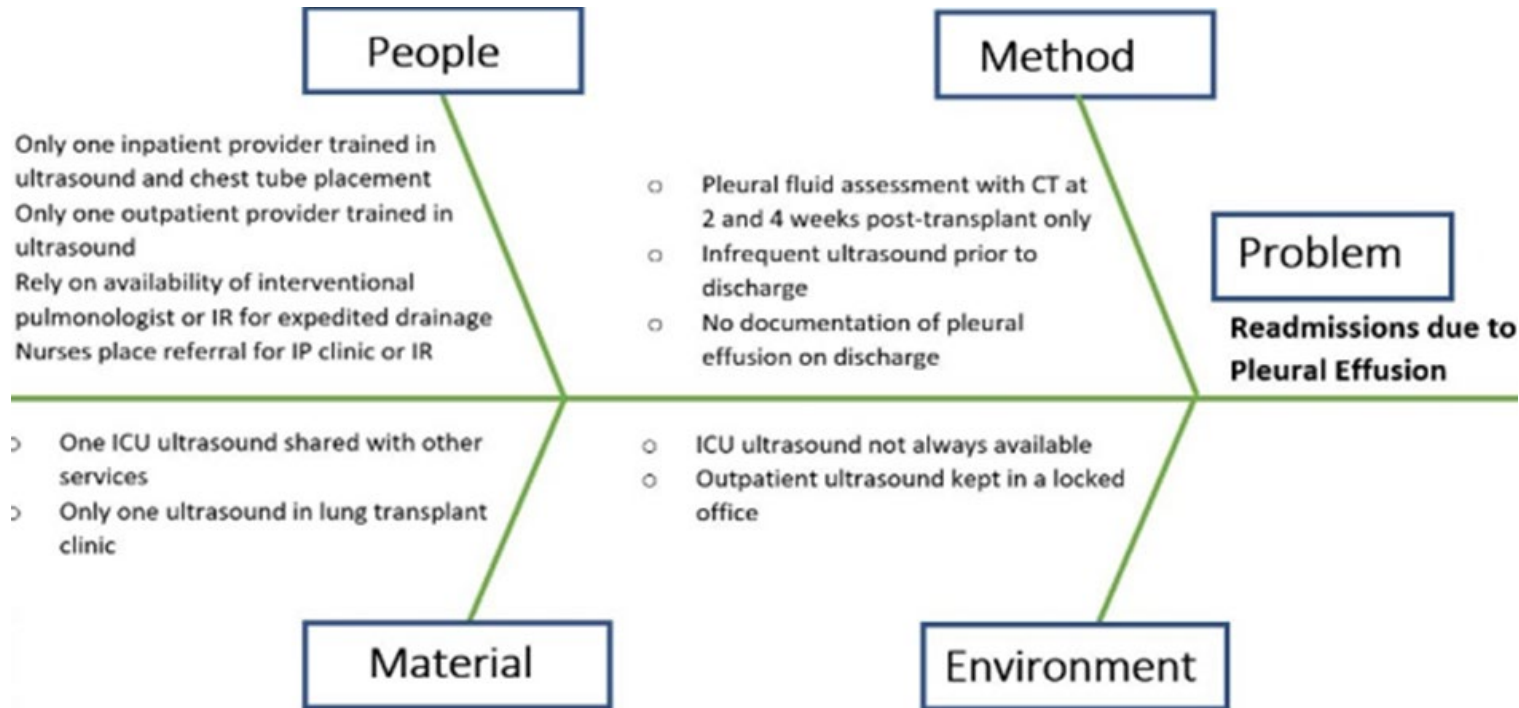
30-day Readmissions after lung transplant in  
2018 and 2019  
(N=115)



UCSF Proportion of Readmissions within 30 Days  
After Discharge



# Decreasing 30-day Readmissions for Pleural Effusion after Lung Transplant Gap Analysis and Hypotheses



# Hypotheses

Lack of awareness of pleural effusion size at the time of discharge

No systematic method to assess and document it



# Interventions

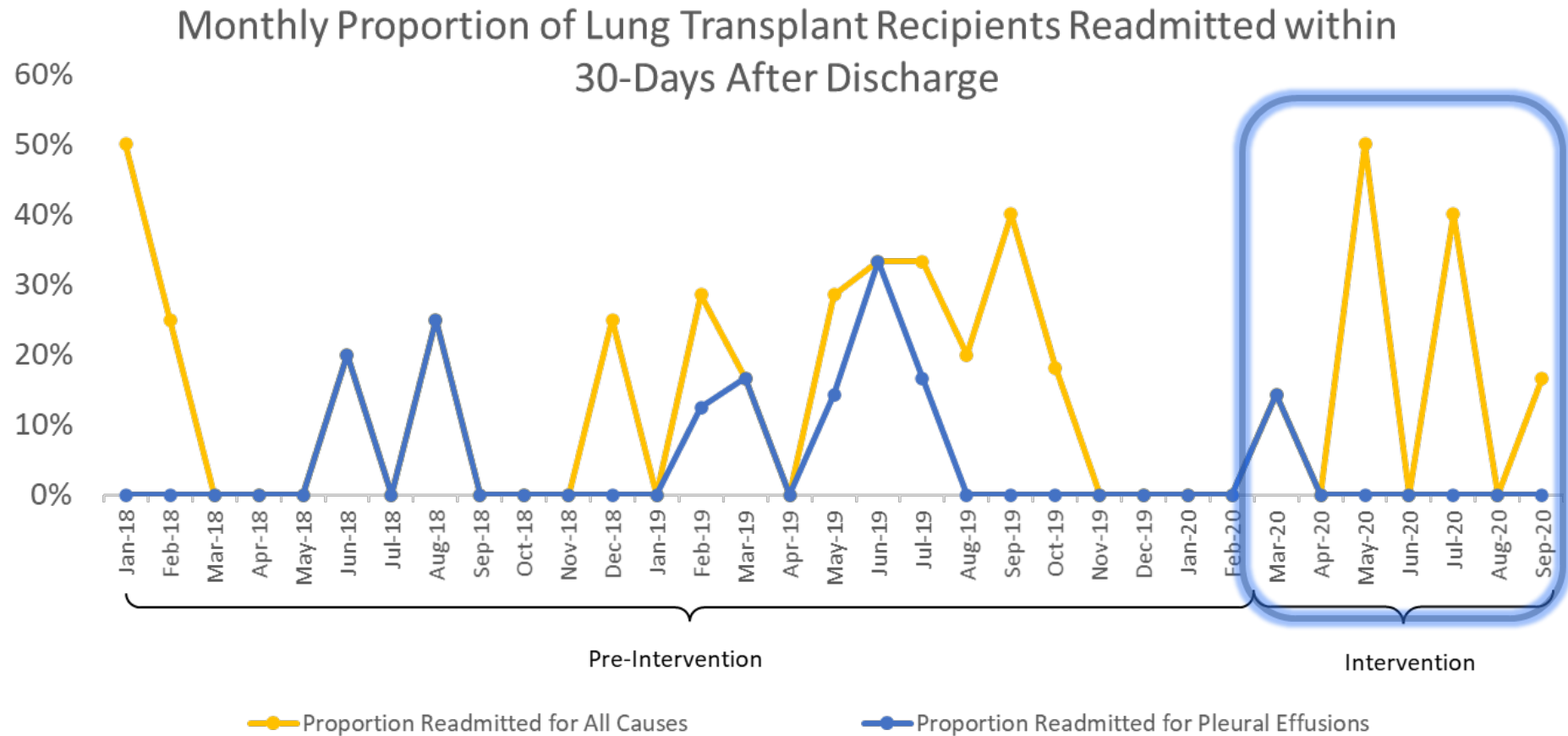
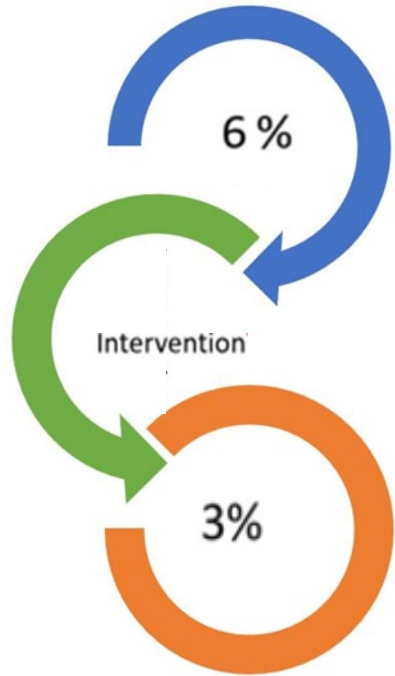
## Awareness of Pleural Effusion size

- Ultrasound procedure
- Surveillance protocol
- Training and education

## Lack of Systematic Documentation

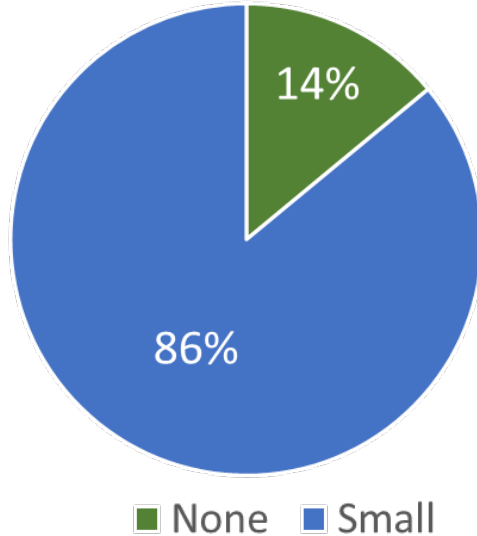
- Templated note within the discharge summary
- Diagnostic pictures
- Training and education

# Decreasing 30-day Readmissions for Pleural Effusion after Lung Transplant Post Implementation Analysis

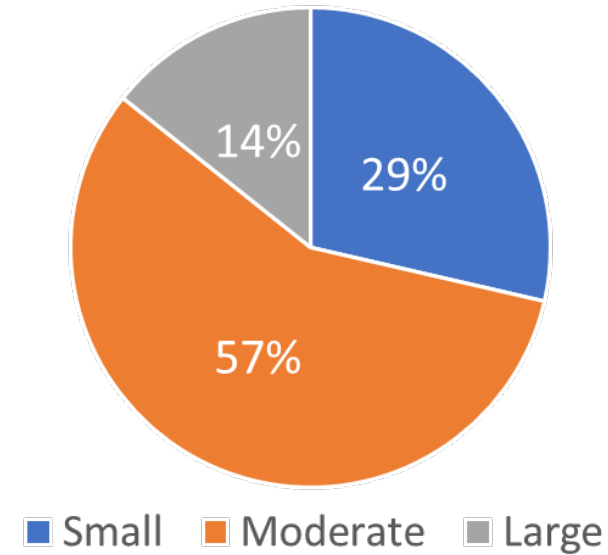


# Decreasing 30-day Readmissions for Pleural Effusion after Lung Transplant Results

Pleural Effusion Size at 2 weeks CT Scan



Pleural Effusion Size at 4 weeks CT scan



# Lessons Learned



## Pleural Effusions are common

- Present at 78% to 84% of patients within 4-weeks after discharge
- Only small subset effusions will enlarge
- **Surveillance & documentation at discharge can identify at risk patients & prevent 30-day readmission**

## Preventing the readmissions

- The intervention prompted initiation or increase of:
  - ✓ Diuretics in 39% of the patients prior to discharge
  - ✓ Referral to thoracentesis prior to discharge in one patient
  - ✓ Referral to drainage after the discharge in two patients

# Key Takeaways

- Small pleural effusions are common and expected after lung transplant
- Enlargement of pleural effusions places lung transplant recipients at risk for 30-day readmissions
- Surveillance of pleural effusion size and standardized documentation at discharge can identify at risk patients that may benefit from timely interventions and prevent unneeded readmission.
- Systematic documentation allows focused continuation of care after the discharge

# Questions?

## Contact:

Nataliya Budanova, [Nataliya.Budanova@ucsf.edu](mailto:Nataliya.Budanova@ucsf.edu)

Thank you Dr. Aida Venado Estrada, Assistant Professor of Medicine Director of Quality and Safety, Pulmonary & Sleep Medicine & Dr. Katherine Malcolm, Fellow in Pulmonary and Critical Care Medicine, University of California San Francisco for your leadership and support to this project.

