



# The State of Tracheostomy Care

US Perspective

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10,000 Employees  
1,110 volunteers  
2,500 physicians  
1,000 residents  
5,000 researchers & staff

Serving 540,000 patients  
Contributed \$315.1 M community benefit  
\$58.7 M charity care



894 inpatient beds  
2,400 research studies  
46,000 inpatient admissions  
84,090 ER visits

Ranked # 6 in nation (US News & World Report)  
Ranked # 1 in Chicago & Illinois  
Magnet



Average 227 tracheostomy  
placements per year

Multiple readmissions



## Multiple practitioners place tracheostomies

ENT, thoracic, trauma, transplant, plastics,  
pulmonary





## Extended lengths of stay for tracheostomy patients

Added hospital reimbursement for patients with a tracheostomy



**FIN#:**   
**Patient Last Name:**   
**Patient First Name:**

**Room #:**   
**Gender:**   
**Race:**   
**DOB:**   
**Age:**

**Hosp Adm Date:**  **Admit Age:**   
**Date of Trach:**    
**Placed in OR or BS:**   
**Service Requested By:**   
**Technique:**    
**Reason for Trach:**   
**Complications, If Any:**

**Co-Existing Disease:** fungal sinusitis, NSTEMI, anemia, pericardial effusion, ARDS, myxedema coma, OSA  
  
  
  
**Past Medical History:** OSA, anemia

**Date Downsize Began:**   
**Date of Wean:**   
**Decann Date:**   
**Capped Before:**   
**Date of 2nd Trach:**   
**Reason for 2nd Trach:**

**1st ICU Adm Date:**   
**1st ICU Disch Date:**   
**2nd ICU Adm Date:**   
**2nd ICU Disch Date:**   
**Date of Intubation:**   
**Date of Mech Vent:**   
**2nd Vent Start Date:**   
**Total Days on Vent:**   
**Hosp Disch Date:**   
**Discharge Disposition:**   
**Cause of Death:**

**Tube Changes:**

Tube Change Date	One Way Valve Used?
08-Jan-14	
*	

Record: 1 of 1

**Times Tube Changed:**

**Comments:**

## Trach Database

Wednesday, April 16, 2014

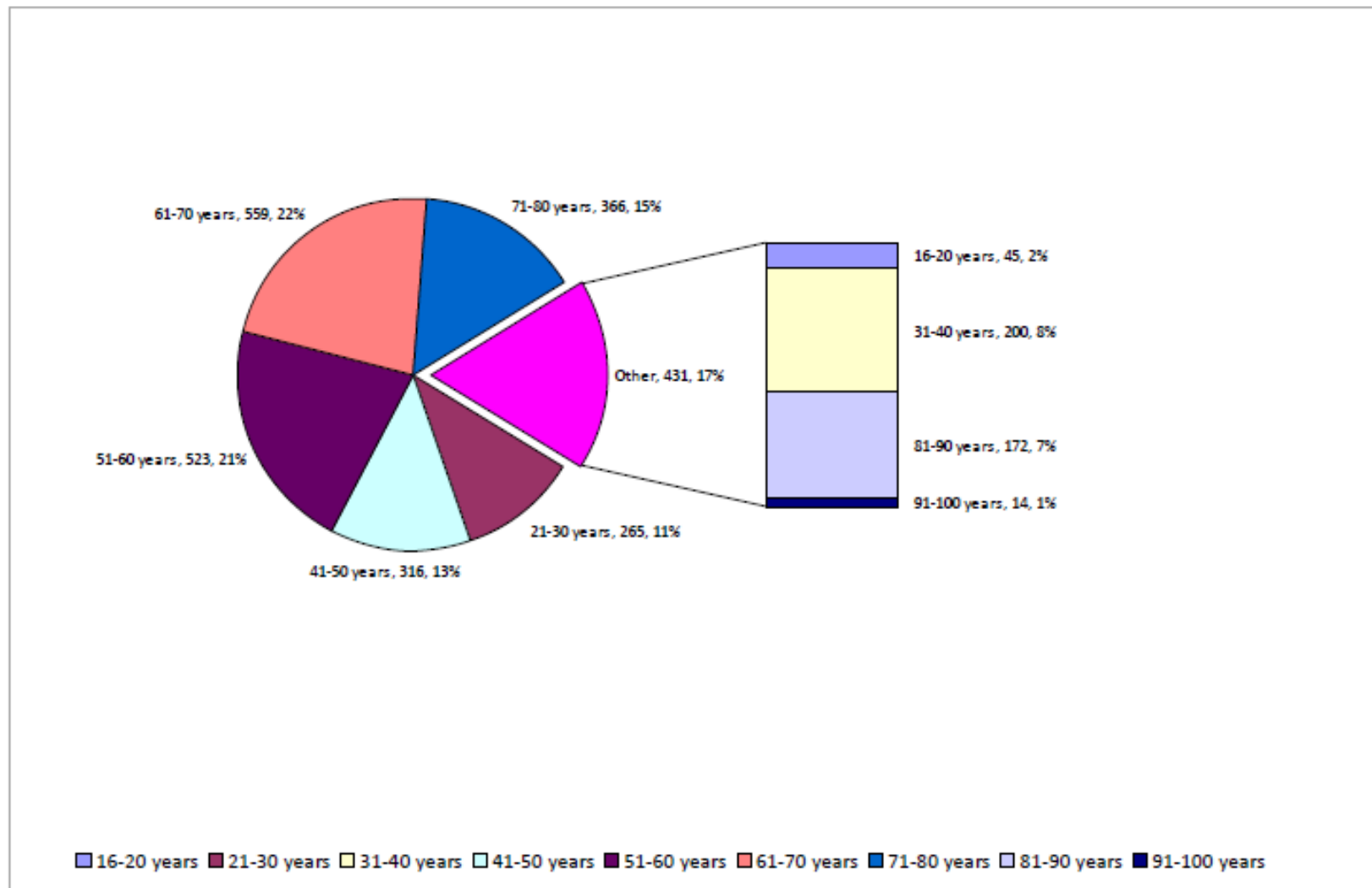
### Reports & Charts

Tracheostomy Consultation (Current Patient)	Tracheostomy Consultation (Not Discharged)
Total Patients	Days In Hospital
Average Patient Census	Admit to Intubation Days
Patient Visits	Intubation to Trach Days
Avg Minutes Per Patient	Admit to ICU Days
Trach Changes	Days In ICU
Trach Evaluations	Admit to Trach Days
Trach Teaching	Trachs Placed
Age	Trach to 1st Change Days
Gender	Trach to Downsize Days
Race	Trach to Vent Wean Days
Initial Reason for Trach	Trach to Decann Days
Discharge Disposition	
Readmission by Reason	
Readmission Per Patient	

Navigation Pane

## Age

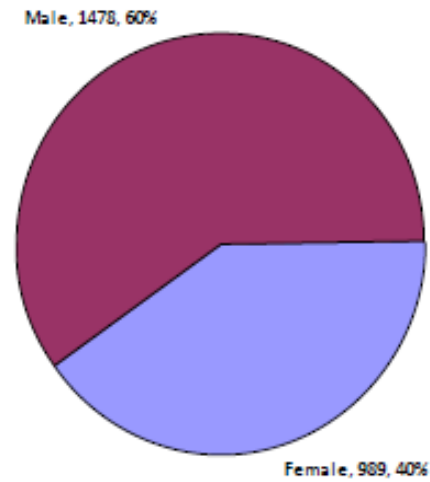
Total Patients: 2460





## Gender

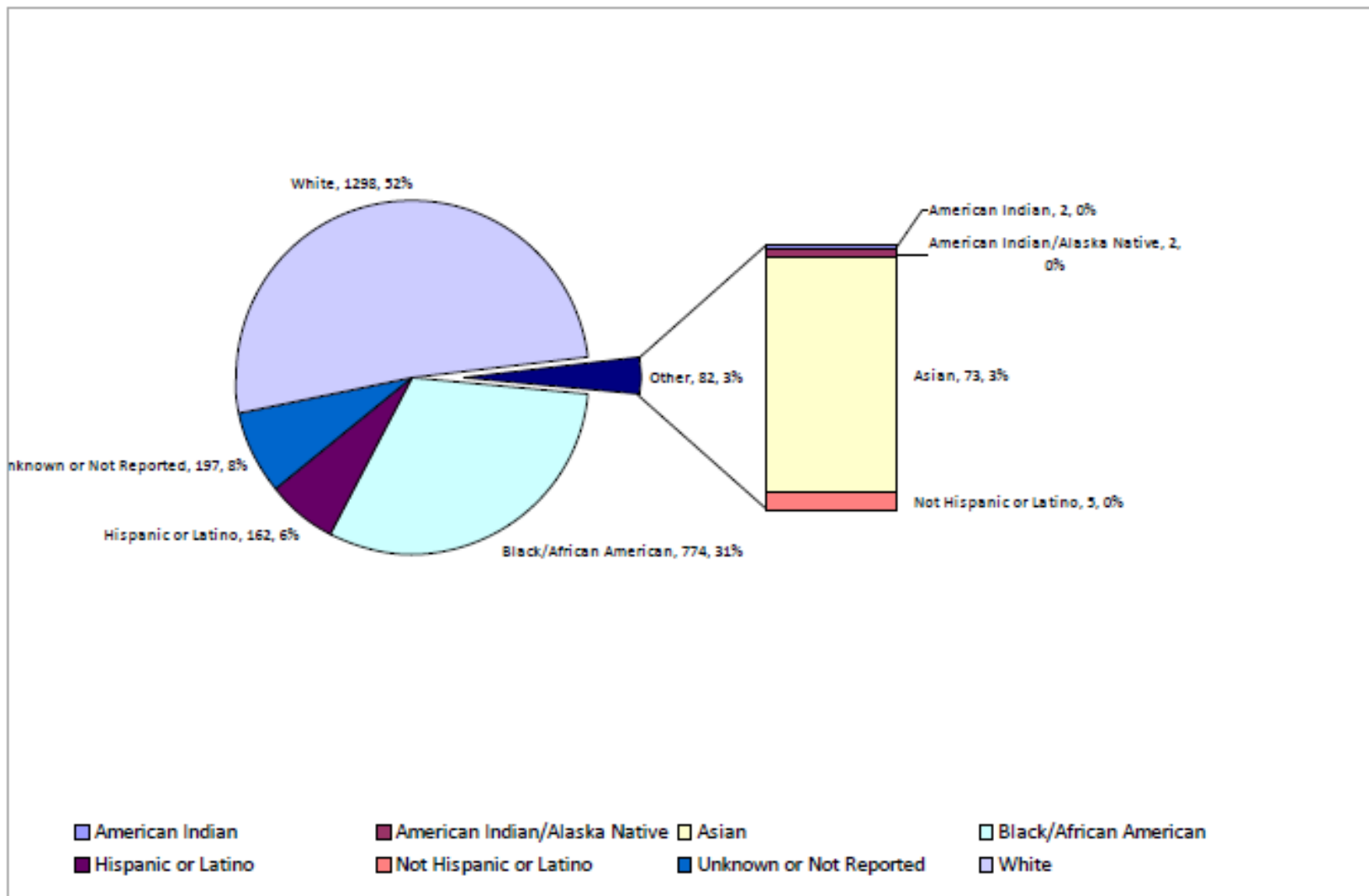
Total Patients: 2467



■ Female ■ Male

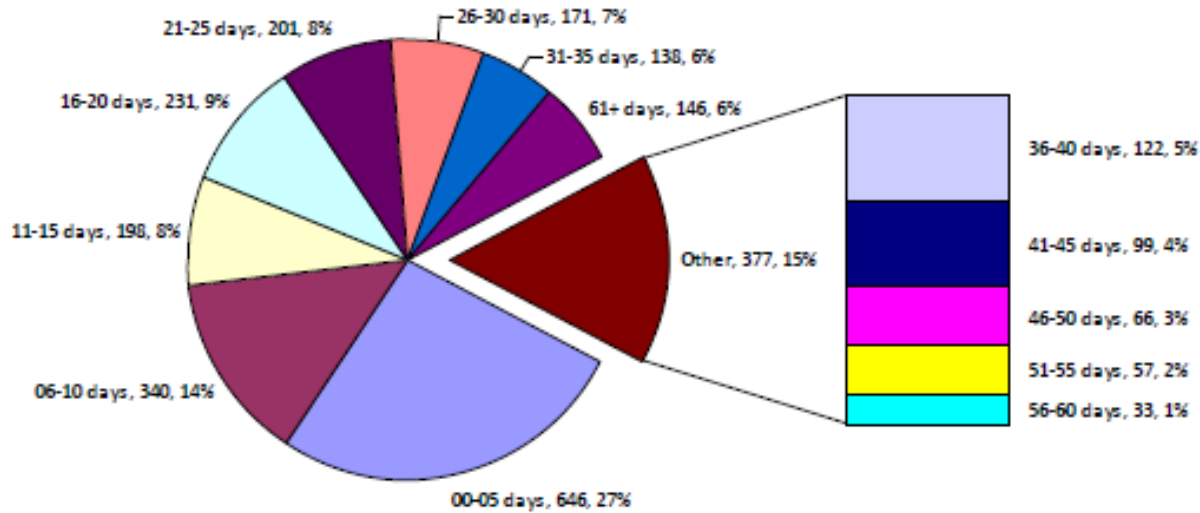
# Race

**Total Patients: 2513**



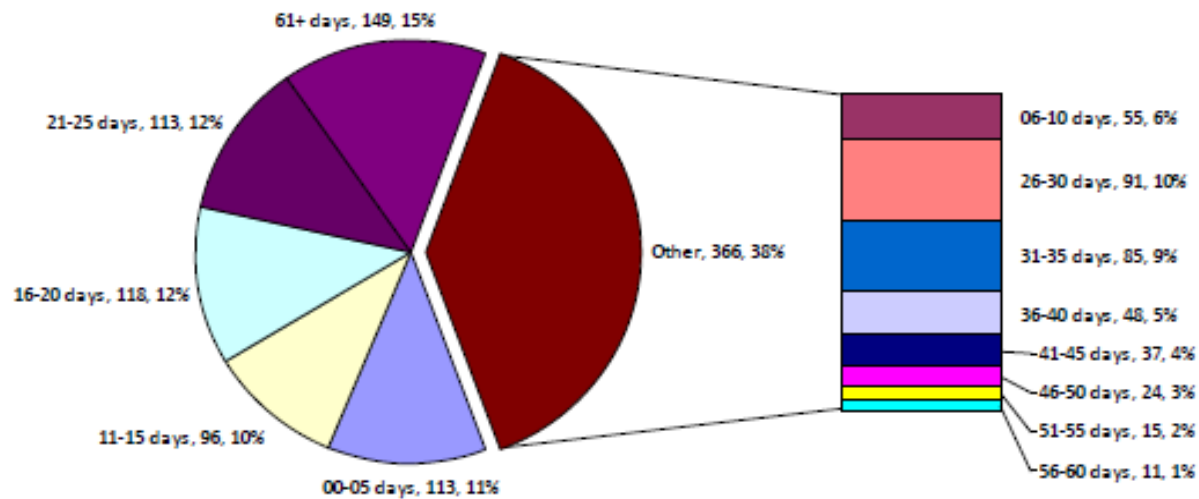
# Days In Hospital

Total Patients: 2448



■ 00-05 days 
 ■ 06-10 days 
 ■ 11-15 days 
 ■ 16-20 days 
 ■ 21-25 days 
 ■ 26-30 days 
 ■ 31-35 days 
 ■ 36-40 days 
 ■ 41-45 days 
 ■ 46-50 days 
 ■ 51-55 days 
 ■ 56-60 days 
 ■ 61+ days

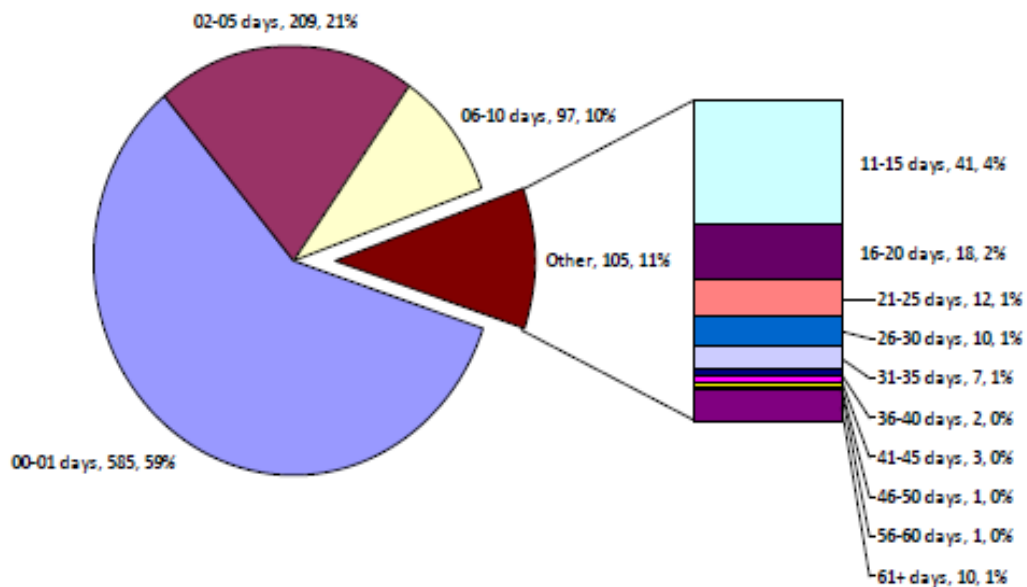
## Days In ICU Total Patients: 955



■ 00-05 days 
 ■ 06-10 days 
 ■ 11-15 days 
 ■ 16-20 days 
 ■ 21-25 days 
 ■ 26-30 days 
 ■ 31-35 days 
 ■ 36-40 days 
 ■ 41-45 days  
■ 46-50 days 
 ■ 51-55 days 
 ■ 56-60 days 
 ■ 61+ days

## Admit to Intubation Days

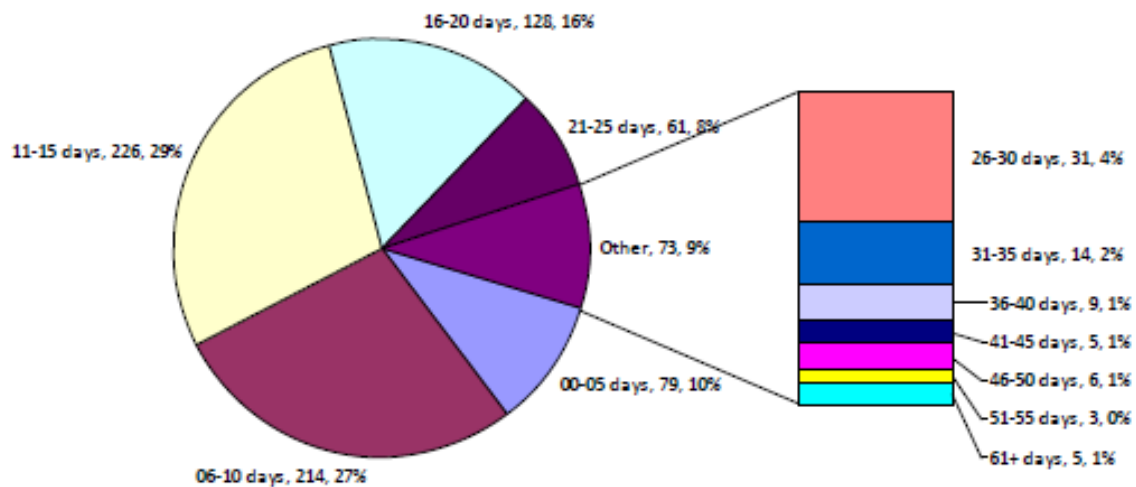
Total Patients: 996



■ 00-01 days 
 ■ 02-05 days 
 ■ 06-10 days 
 ■ 11-15 days 
 ■ 16-20 days 
 ■ 21-25 days 
 ■ 26-30 days 
 ■ 31-35 days 
 ■ 36-40 days  
■ 41-45 days 
 ■ 46-50 days 
 ■ 56-60 days 
 ■ 61+ days

## Intubation to Trach Days

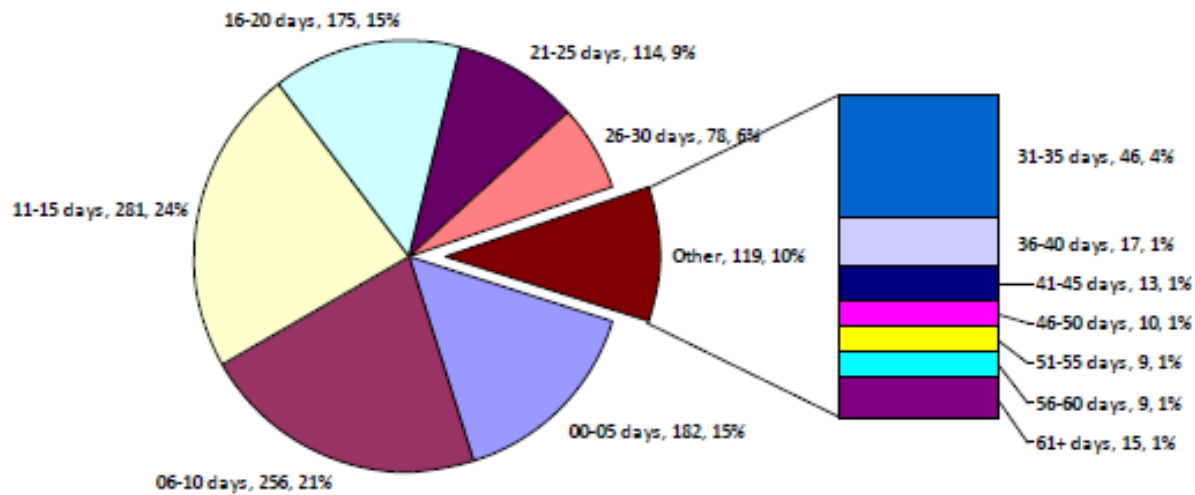
Total Patients: 781



■ 00-05 days 
 ■ 06-10 days 
 ■ 11-15 days 
 ■ 16-20 days 
 ■ 21-25 days 
 ■ 26-30 days 
 ■ 31-35 days 
 ■ 36-40 days 
 ■ 41-45 days 
 ■ 46-50 days 
 ■ 51-55 days 
 ■ 61+ days

# Admit to Trach Days

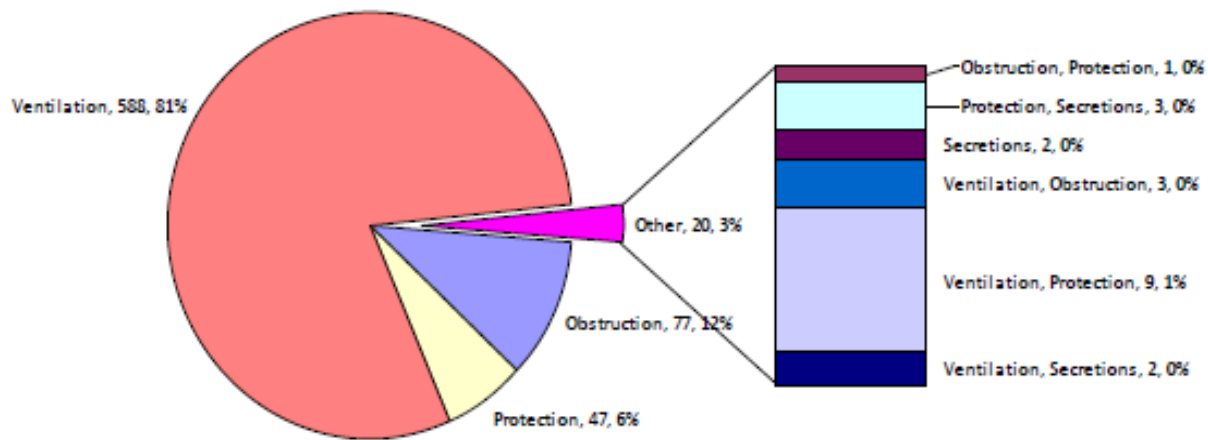
Total Patients: 1205



■ 00-05 days 
 ■ 06-10 days 
 ■ 11-15 days 
 ■ 16-20 days 
 ■ 21-25 days 
 ■ 26-30 days 
 ■ 31-35 days 
 ■ 36-40 days 
 ■ 41-45 days 
 ■ 46-50 days 
 ■ 51-55 days 
 ■ 56-60 days 
 ■ 61+ days

# Initial Reason for Trach

Total Patients: 732

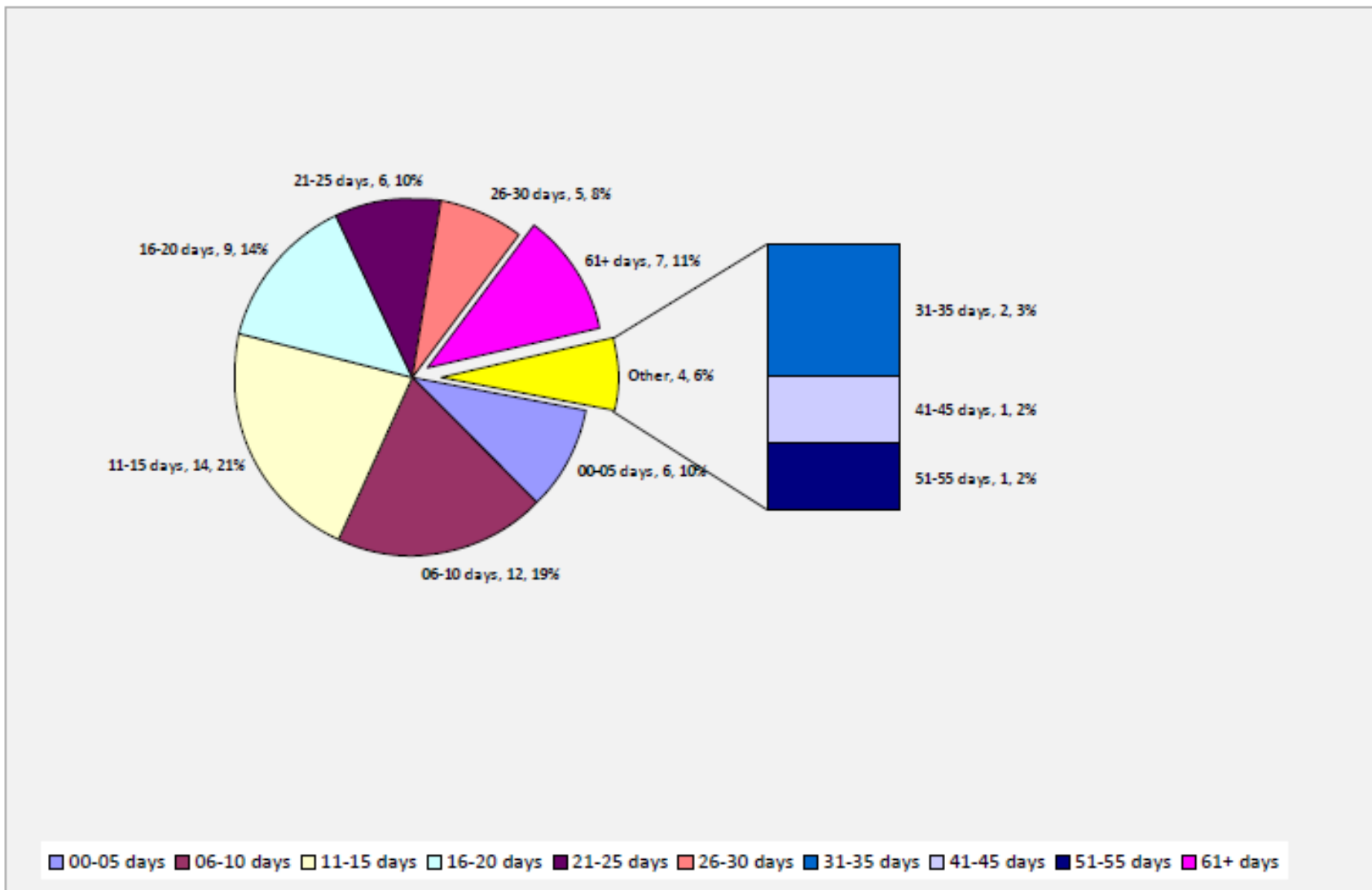


- Obstruction
- Ventilation
- Obstruction, Protection
- Protection
- Protection, Secretions
- Secretions
- Ventilation, Obstruction
- Ventilation, Protection
- Ventilation, Secretions



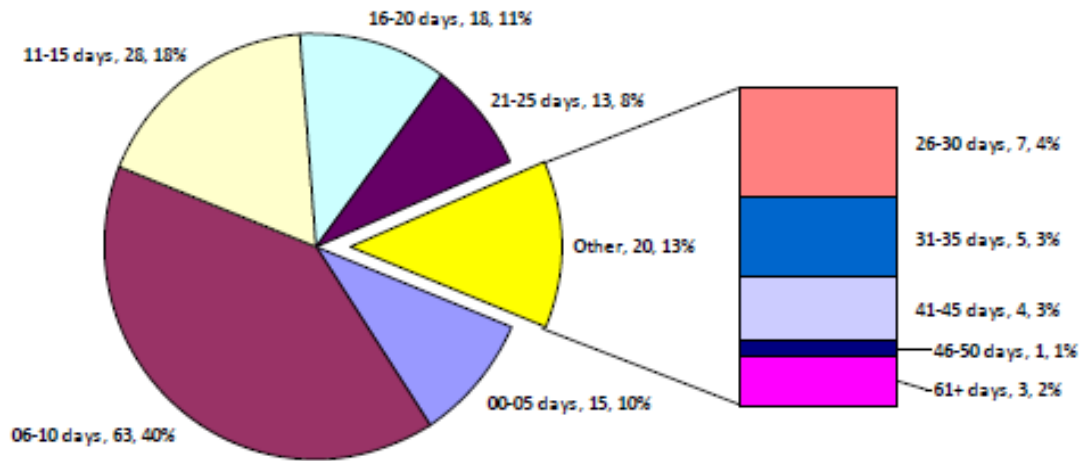
## Trach to Decannulation Days

Total Patients: 63



## Trach to Downsize Began Days

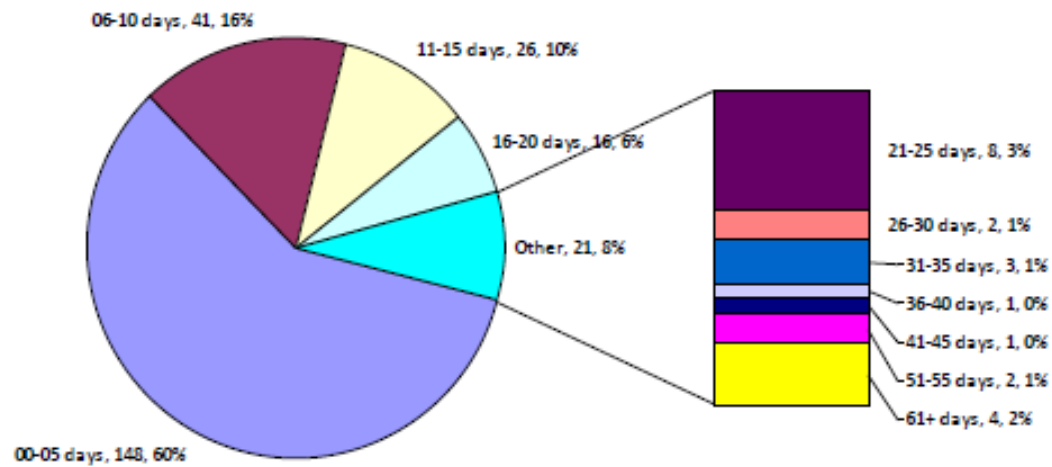
Total Patients: 157



00-05 days 06-10 days 11-15 days 16-20 days 21-25 days 26-30 days 31-35 days 41-45 days 46-50 days 61+ days

## Trach to Vent Wean Days

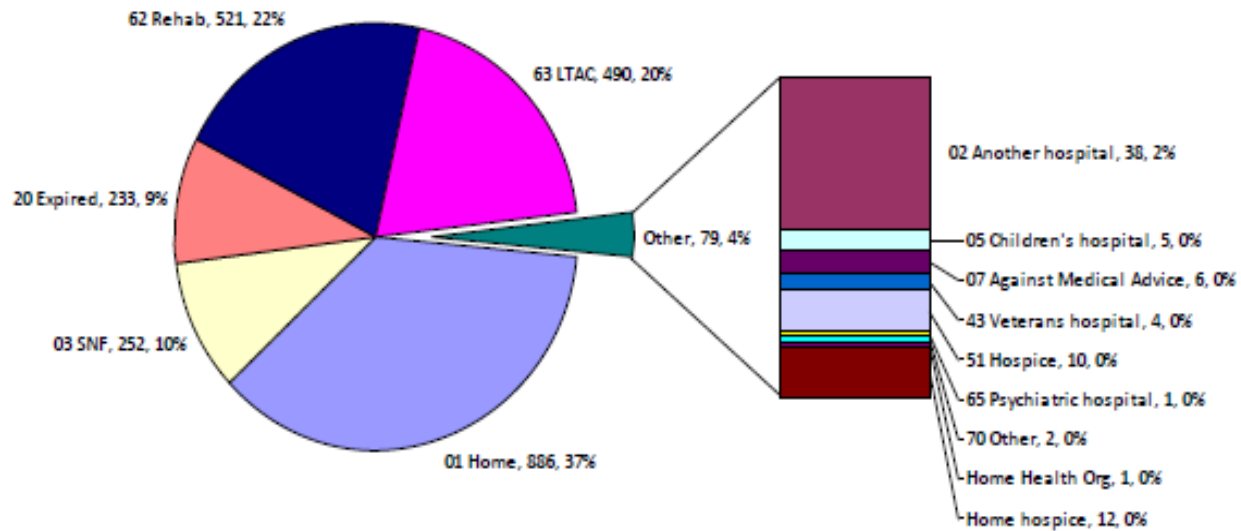
Total Patients: 252



■ 00-05 days 
 ■ 06-10 days 
 ■ 11-15 days 
 ■ 16-20 days 
 ■ 21-25 days 
 ■ 26-30 days 
 ■ 31-35 days 
 ■ 36-40 days 
 ■ 41-45 days 
 ■ 51-55 days 
 ■ 61+ days

# Discharge Disposition

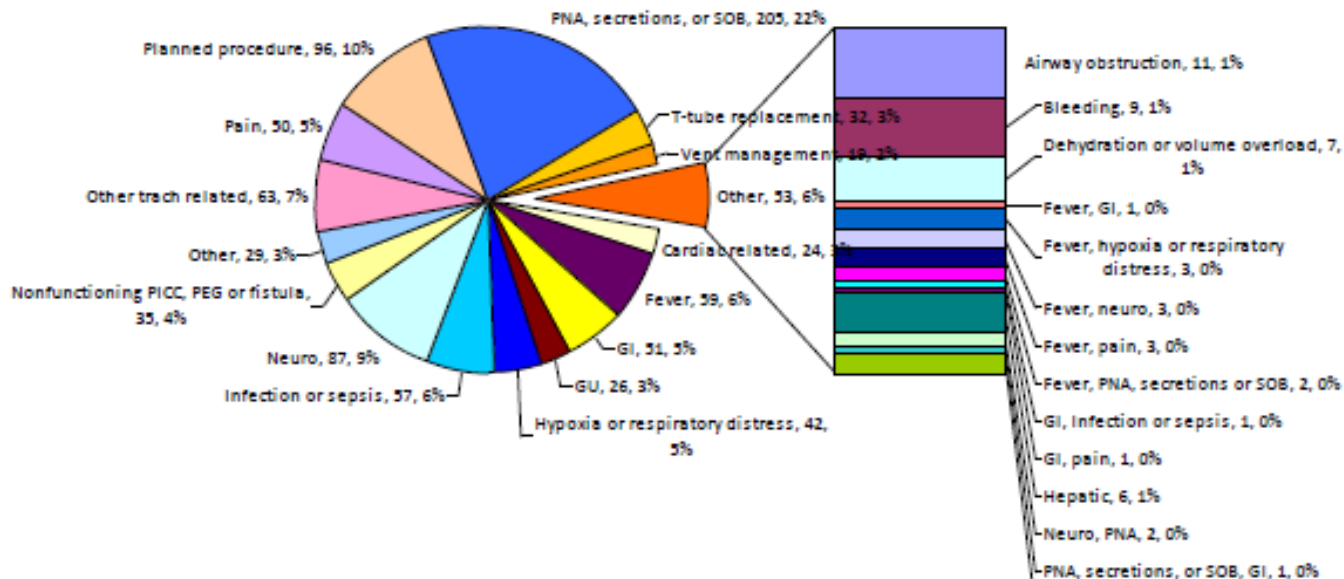
## Total Patients: 2461



- |                         |                      |                 |                        |                           |
|-------------------------|----------------------|-----------------|------------------------|---------------------------|
| 01 Home                 | 02 Another hospital  | 03 SNF          | 05 Children's hospital | 07 Against Medical Advice |
| 20 Expired              | 43 Veterans hospital | 51 Hospice      | 62 Rehab               | 63 LTAC                   |
| 65 Psychiatric hospital | 70 Other             | Home Health Org | Home hospice           |                           |

# Readmission by Reason

Total Patients: 928

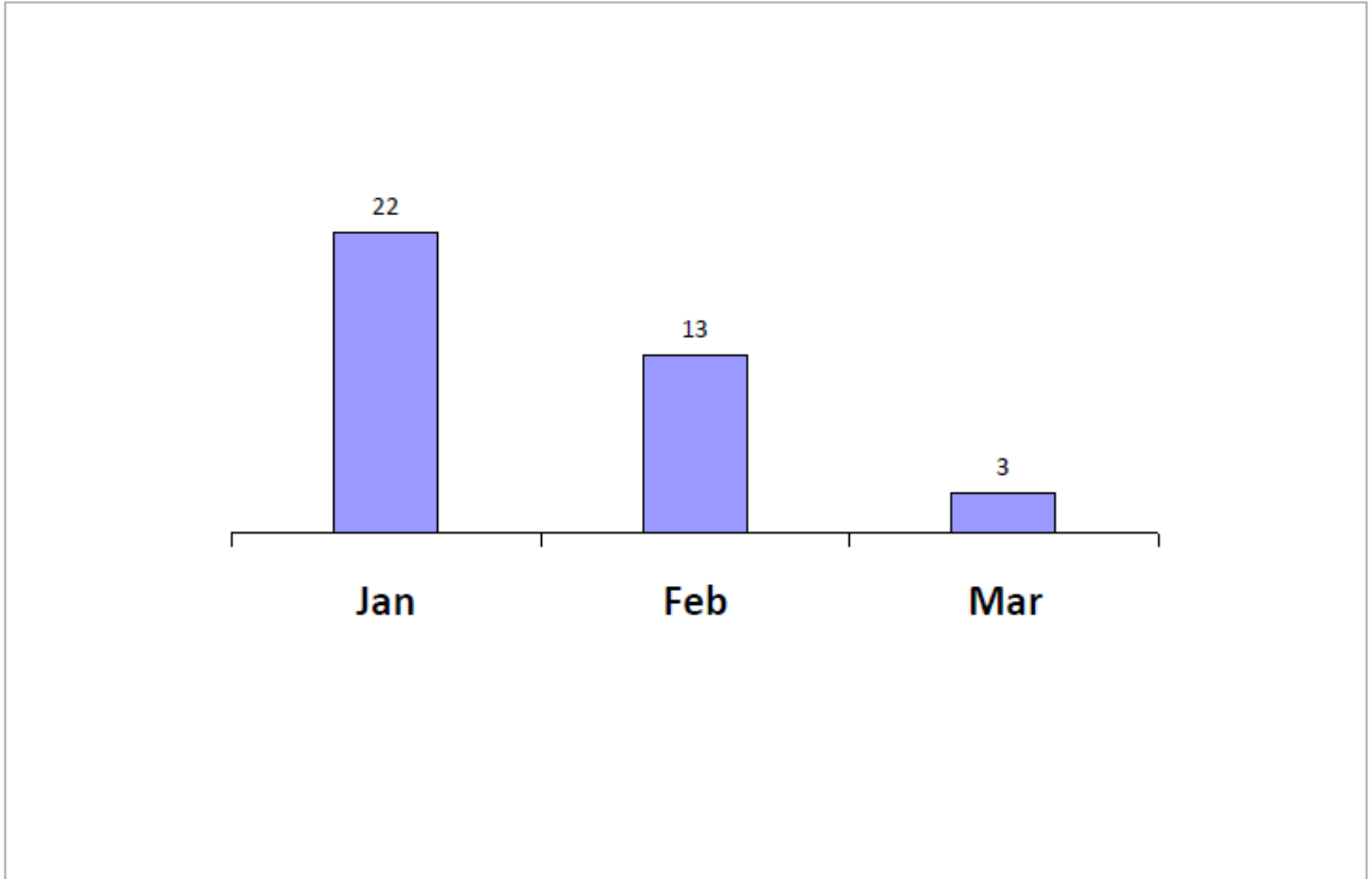


- |  |   |   |
|--|---|---|
| <span style="color: blue;">■</span> Airway obstruction                     | <span style="color: purple;">■</span> Bleeding                            | <span style="color: lightblue;">■</span> Cardiac related    |
| <span style="color: cyan;">■</span> Dehydration or volume overload         | <span style="color: darkred;">■</span> Fever                              | <span style="color: orange;">■</span> Fever, GI             |
| <span style="color: blue;">■</span> Fever, hypoxia or respiratory distress | <span style="color: lightgrey;">■</span> Fever, neuro                     | <span style="color: darkblue;">■</span> Fever, pain         |
| <span style="color: magenta;">■</span> Fever, PNA, secretions or SOB       | <span style="color: yellow;">■</span> GI                                  | <span style="color: cyan;">■</span> GI, Infection or sepsis |
| <span style="color: purple;">■</span> GI, pain                             | <span style="color: darkred;">■</span> GU                                 | <span style="color: teal;">■</span> Hepatic                 |
| <span style="color: blue;">■</span> Hypoxia or respiratory distress        | <span style="color: cyan;">■</span> Infection or sepsis                   | <span style="color: lightblue;">■</span> Neuro              |
| <span style="color: lightgreen;">■</span> Neuro, PNA                       | <span style="color: yellow;">■</span> Nonfunctioning PICC, PEG or fistula | <span style="color: lightblue;">■</span> Other              |
| <span style="color: pink;">■</span> Other trach related                    | <span style="color: purple;">■</span> Pain                                | <span style="color: orange;">■</span> Planned procedure     |
| <span style="color: blue;">■</span> PNA, secretions, or SOB                | <span style="color: cyan;">■</span> PNA, secretions, or SOB, GI           | <span style="color: green;">■</span> Psych                  |
| <span style="color: yellow;">■</span> T-tube replacement                   | <span style="color: orange;">■</span> Vent management                     |   |

## Trachs Placed

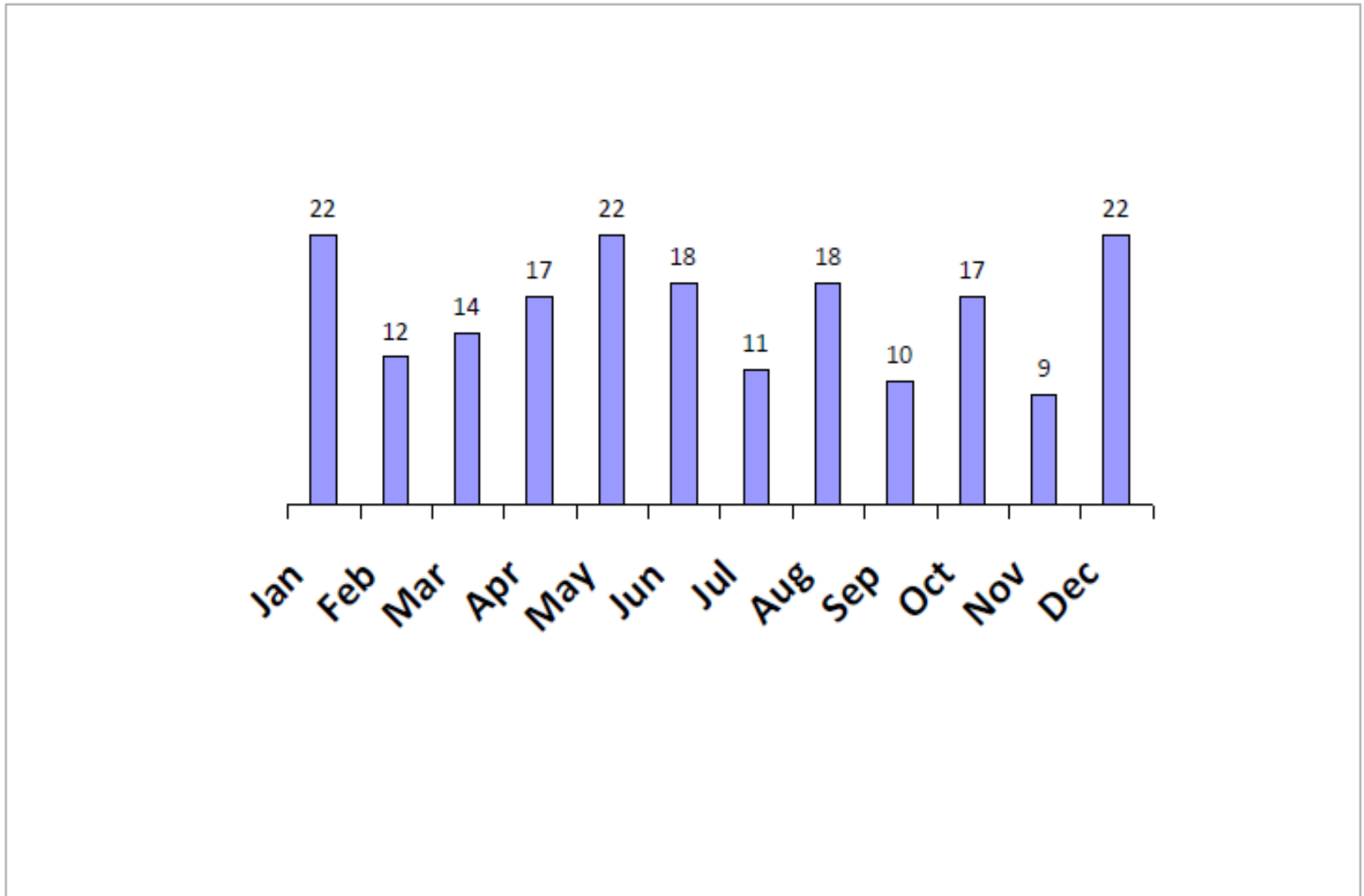
Total Patients: 38

Year: 2014



## Trach Changes

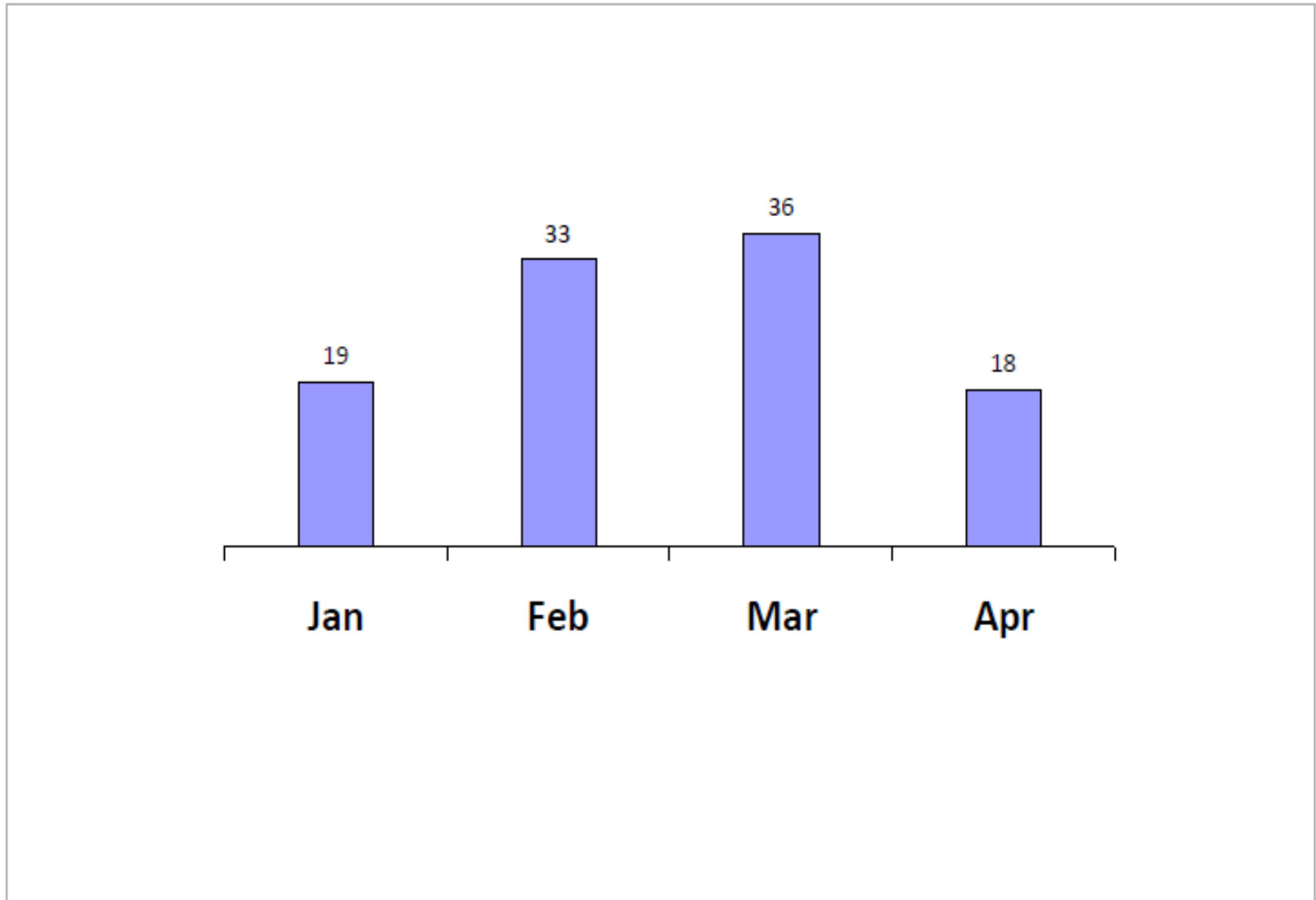
Total Patients: 192      Year: 2013



## Trach Evaluations

Total Patients: 106

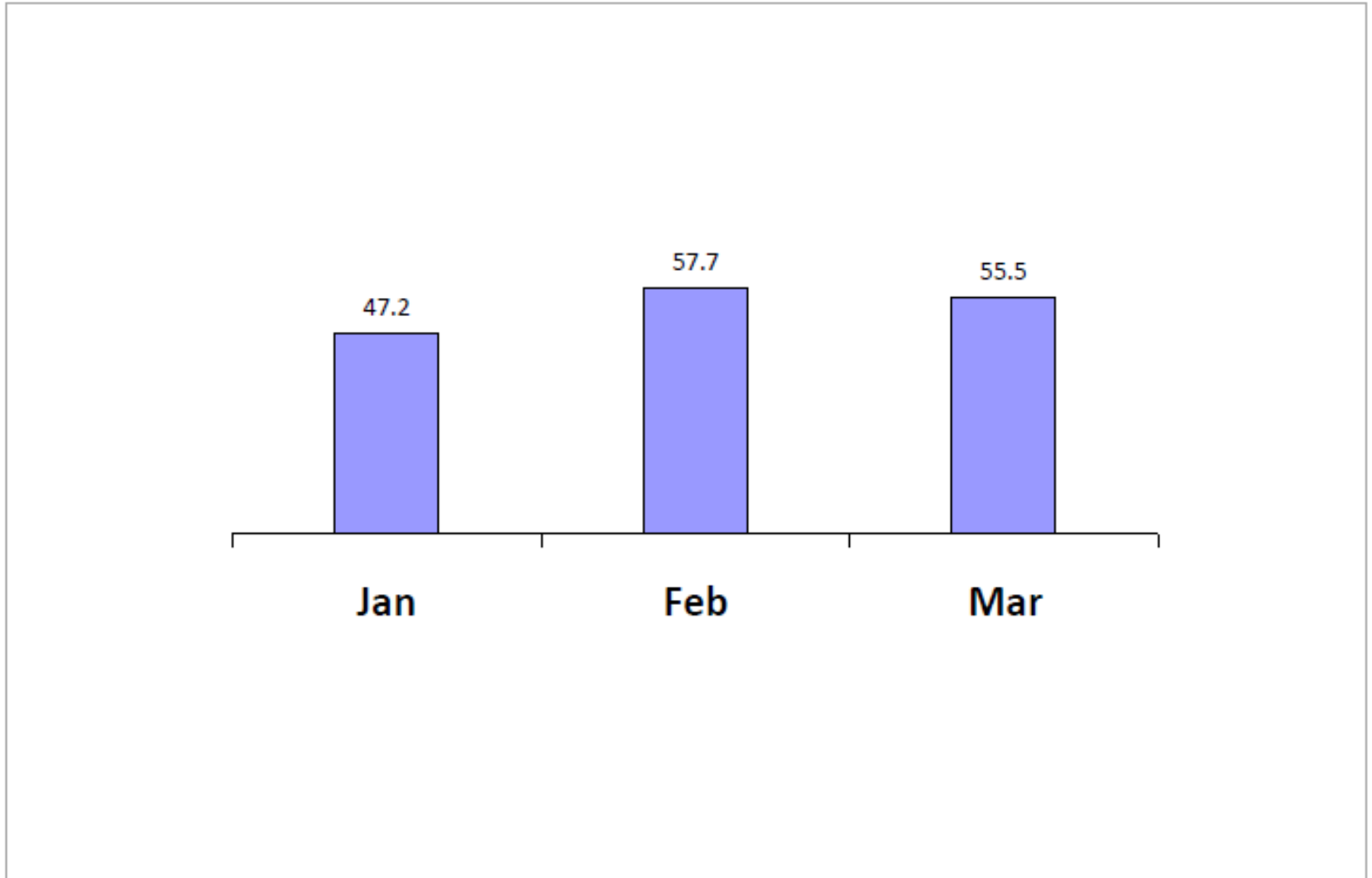
Year: 2014





## Average Minutes Per Patient

Yearly Average: 53.5    Year: 2014



# Strategies for Success

- Multidisciplinary Trach team

- Decreased LOS

- 60-41.5 days (Cameron et al. 2009, *Crit Care Resusc*, 11, 16-19)
    - 50-27 days (Parker et al., *J Clin Nurs*, 2010, 19: 1275-1283)
    - ICU stay 39.4% (Pandian et al. *Otolaryngol Head Neck Surg*, 2012, 147(4) 684-691)

- Decreased incidence of tube blockage 25% v. 5.5% (de Mestral et al. *Can J Surg*, 54(3), 167-172)

- Decreased calls for respiratory distress 37.5% v. 16.7% (de Mestral)

- Increased use of speaking valves

- 35% to 82% (Cameron)
    - 19.4% to 67.4% (de Mestral)

- Decreased time to downsizing 26 to 9.4 days (de Mestral)

- Decreased time to decannulation 50.4 to 28.4 days (de Mestral)

## More Strategies

- Bedside tracheostomy kit
  - Includes extra trachs, suction catheters & system, syringe, trach cleaning tray, trach ties, dressings, etc.
- Trach bundle (Arora et al.)
  - Safety equipment
  - Adequate humidification
  - Check inner cannula q 2 hr
  - Check cuff status each shift
  - Dressing change daily
  - Weaning plan documented
  - Care plan documented

# Barriers (or “Push-Back”)

- Limited budgets:
- Other responsibilities
- People already stretched to the limit
- Training unit ‘champions’
  - Need to staff for trained personnel
- Reimbursement issues
  - Inpatient vs. outpatient
  - Early post-op vs. chronic

# Thank You

- Eleanor Wood Prince Grant: A project of the Woman's Board of Northwestern Memorial Hospital
- Christine Milano
- Venson Kuchipudi

A small group of thoughtful people could change the world. Indeed, it's the only thing that ever has.

Margaret Mead

# Questions?

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