

# CROSS TRAINING PROVIDERS AND NURSES IN RURAL HOSPITAL WITH RESPIRATORY THERAPIST SHORTAGES TO DECREASE COPD AND PNEUMONIA READMISSIONS

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# DISCLAIMER

- “The opinions expressed in this presentation and on the following slides are solely those of the presenter and not necessarily those of DNV. DNV does not guarantee the accuracy or reliability of the information provided herein.”





# INTRODUCTION

- Melinda Culp, MSN, RN, CRHCP, OCN
  - Executive Director/Administrator
  
- Amber Lee, BSN, RN
  - Clinical Manager



# SAINT FRANCIS HOSPITAL VINITA



Vinita

OK

★ Designed by TownMapsUSA.com



# SAINT FRANCIS HEALTH SYSTEM





# OBJECTIVE

- Provider ventilator education for orders and equipment management
- Building respiratory documentation for nurses in the EMR
- Respiratory training for immediate change
- Policy review and revision when part of a larger health system
- Long term education and continuing education
- Sustainability and goals



# NON-CONFORMITY IDENTIFICATION

- Respiratory Care NC-1-1
  - Providers not ordering ventilators or documenting the equipment settings
  - Nurses not documenting respiratory treatments
  - Nurses not titrating patient's oxygen
  - Health system policies and procedures did not match the resources at Vinita



# VENTILATORS

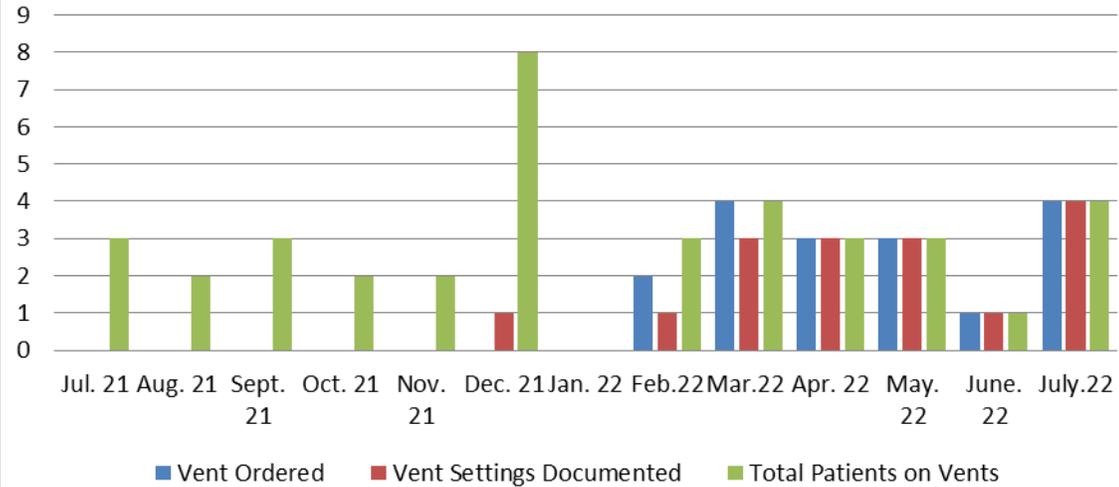
- Litmos: Procedures Airway: Intubation: Post Intubation Management
- Tipsheets for ordering mechanical ventilation
- Quick Start Guide for ventilator placed on each one



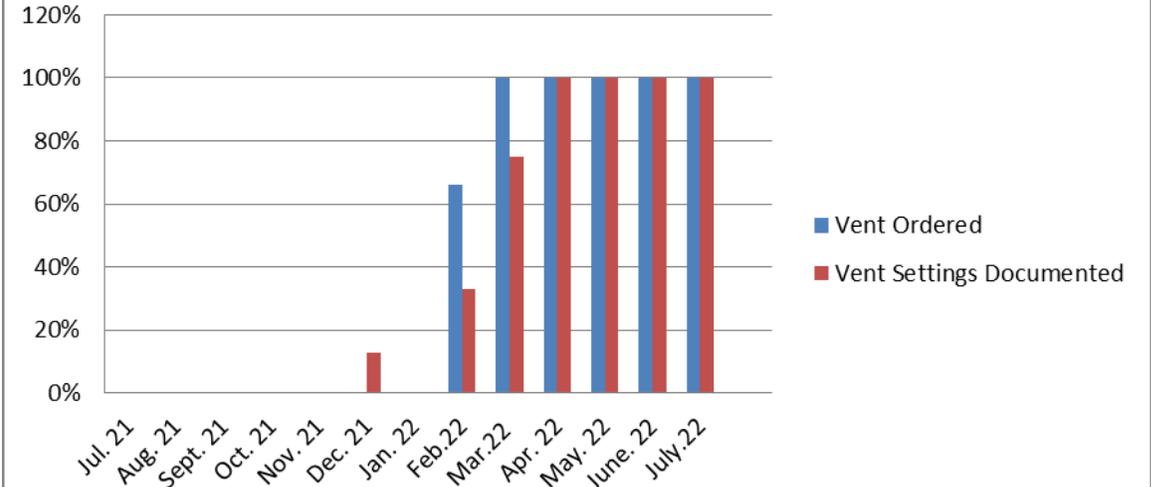
Quick Start for Hamilton C-1			
(This is not education for this piece of equipment. This is intended to be used as a quick guide or refresher for the thorough education provided to the providers of care) 2/22/22			
<b>Initial setup for Vent or Bipap:</b>			
1. Dual limb circuit			
2. Expiratory valve			
3. Bacterial/viral filter			
4. Flow sensor			
<b>New setup for each patient.</b>			
*Expiratory valve is placed in the opening labeled exhaust on the right side of the machine. It will click into place.			
*Filter is connected to the expiratory valve.			
*Straight end of the circuit connects to the filter, bent end to the port with the arrow facing the picture of the patient.			
*Flow sensor connects to the corresponding color ports, blue to blue, clear to white.			
*Funnel shaped adapter placed on the end of the sensor, then to the other end of the circuit.			
*Run the tightness and the flow sensor test. When 2 green checkmarks, may use on a patient.			
<b>Initial Ventilator settings:</b>			
CMV+	Rate: 12-20	Vt: 5-7ml/kg of IBW (most adults 450-550mL)	
Peep: 5	FIO2: 100%, then wean as able for sats 92% or >		
(increase if SpO2 < 90%, 8-10)			
<b>Initial Bipap settings:</b>			
NIV-ST	Rate: 10-12	Pinsp: 5-7	Peep: 5
FIO2: Maintain SpO2 92% or >			
<b>Alarms:</b>			
*When the machine is active, touch the settings tab.			
*In the bottom left, there is a button called auto.			
*This automatically sets the appropriate alarms based on the entered settings.			

# VENTILATOR EDUCATION OUTCOMES

## Ventilated Patients with Orders and Documentation



## Ventilator Order and Documentation Compliance



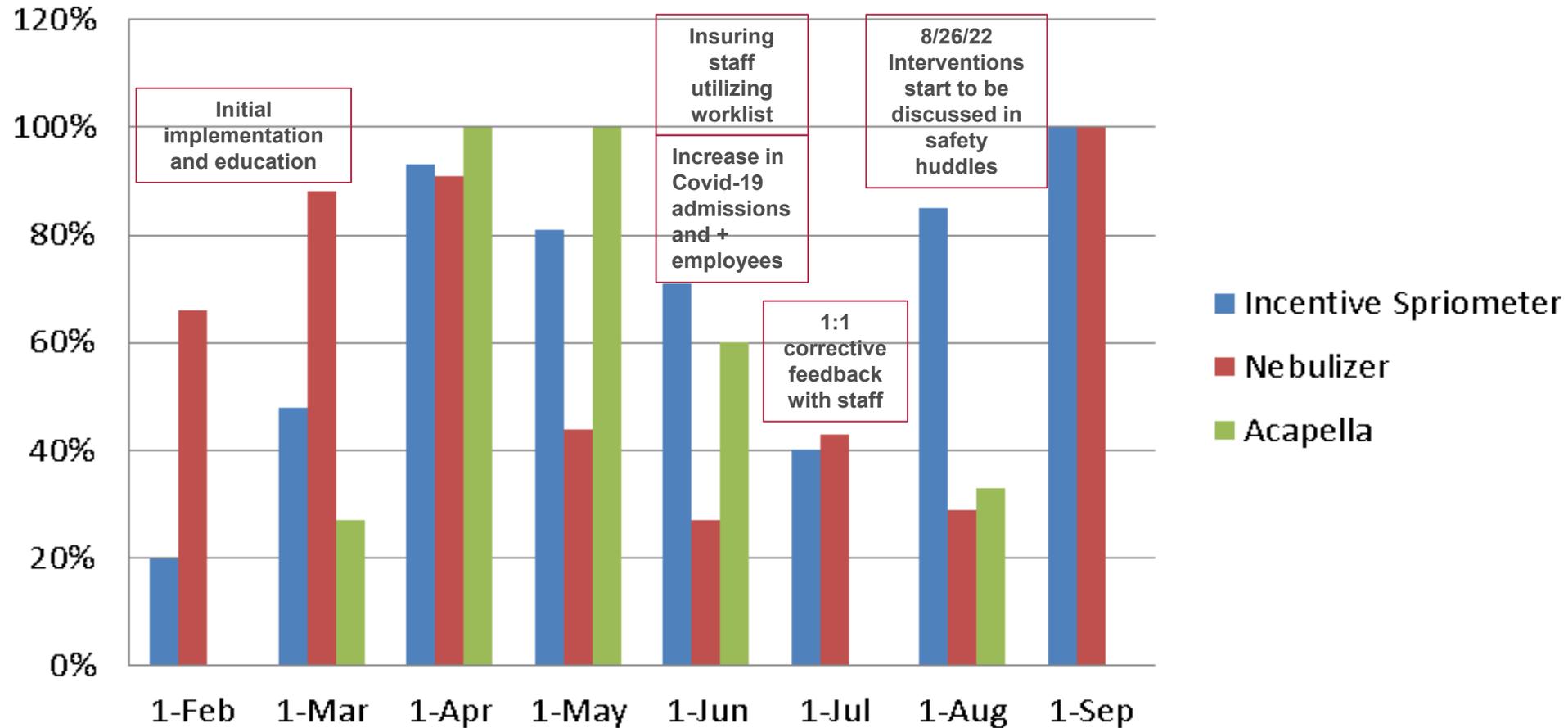
# RESPIRATORY DOCUMENTATION

<b>Respiratory</b>	
NIV Type	<input type="text"/>
O2 Flow Rate (L/min)	<input type="text"/>
<b>Breathing Treatments</b>	
 Medications	<input type="text"/>
 Pre-treatment breath sounds	<input type="text"/>
Pulse	<input type="text"/>
Respirations	<input type="text"/>
 Cough	<input type="text"/>
<b>Incentive Spirometry</b>	
Incentive Spirometry Achieved (mL)	<input type="text"/>
Number of breaths per session	<input type="text"/>
<b>CPT</b>	
CPT Delivery Source	<input type="text"/>



# RESPIRATORY DOCUMENTATION

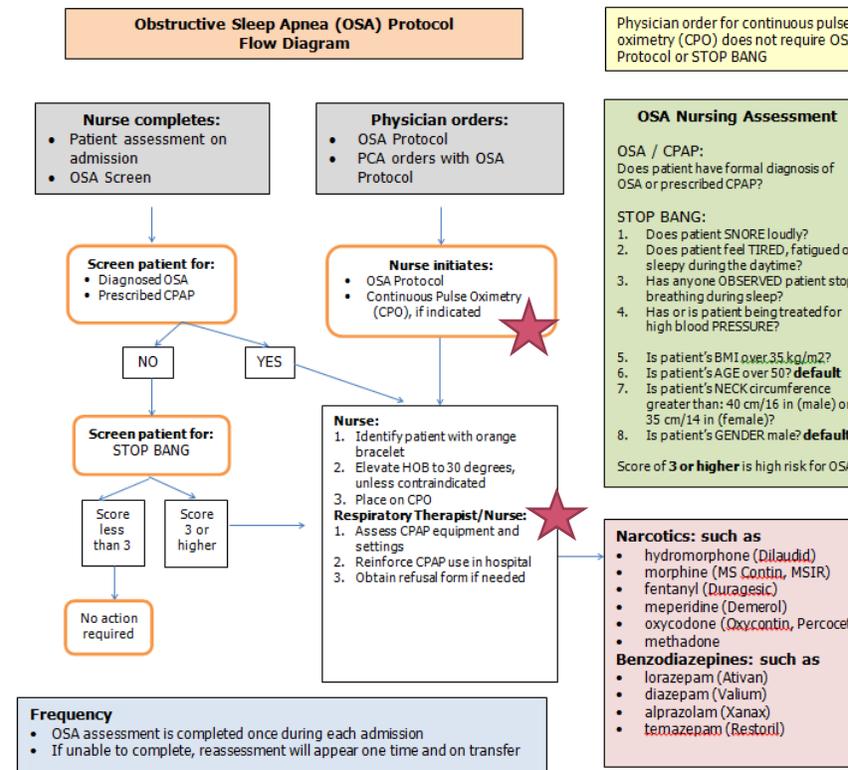
## 2022 Treatment Compliance Rates





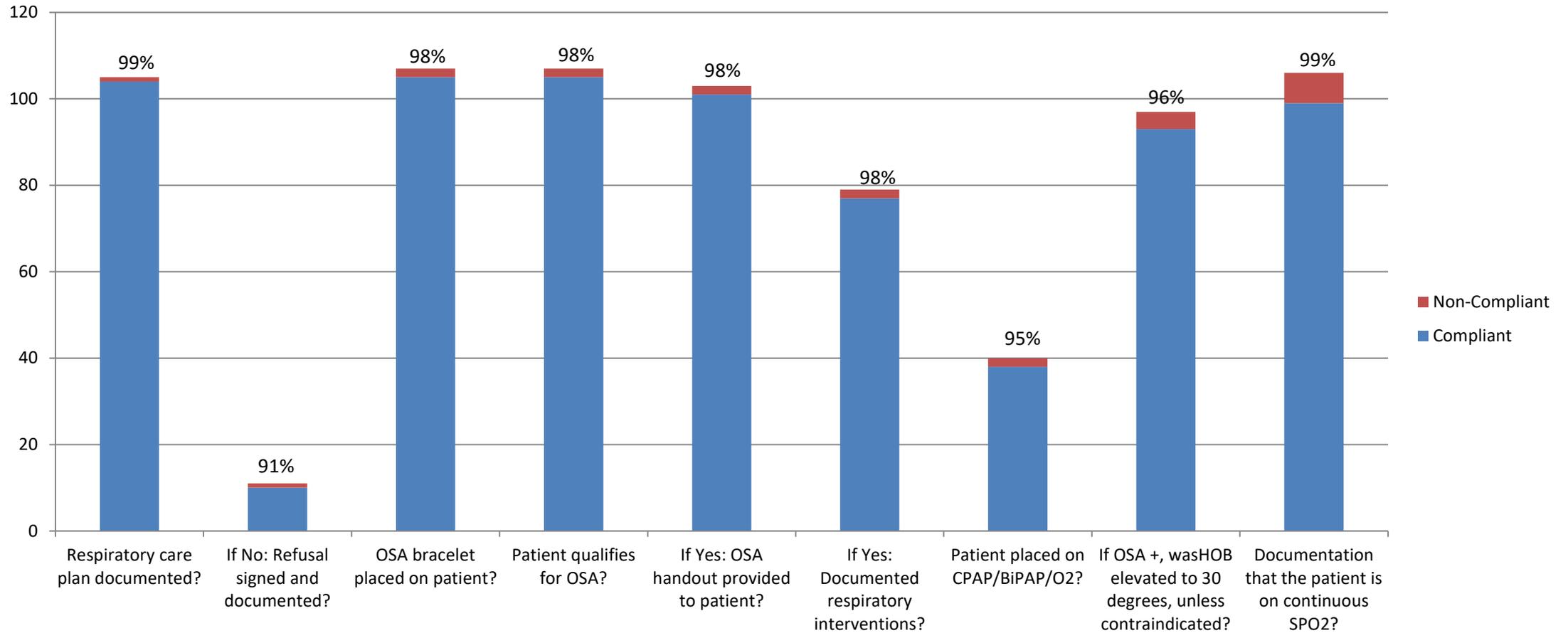
# POLICY AND PROTOCOL REVIEW

- OSA Protocol
- Inpatient Treatment Protocol For Obstructive Sleep Apnea (OSA) or Physician Identified OSA Risk Patients
- BIPAP/CPAP Administration Policy
- BIPAP Protocol



# POLICY AND PROTOCOL REVIEW

- OSA Protocol Compliance Rounding Results:



- New hire education process
- Ongoing education for staff

## Respiratory Education for Nurses at Saint Francis Hospital Vinita

All nurses need to view the following videos, review the information in the respiratory packet and complete the skills checklist and submit to your supervisor/manager.

All videos are found on the [healthnet > training > clinical skills](#):

Hamilton C-1:

[http://sfhs.healthnet.saintfrancis.com/apps/detail\\_view.cfm?MenuID=2000451&CategoryID=9&ID=112](http://sfhs.healthnet.saintfrancis.com/apps/detail_view.cfm?MenuID=2000451&CategoryID=9&ID=112)

Incentive Spirometer:

[http://sfhs.healthnet.saintfrancis.com/apps/detail\\_view.cfm?MenuID=2000451&CategoryID=9&ID=32](http://sfhs.healthnet.saintfrancis.com/apps/detail_view.cfm?MenuID=2000451&CategoryID=9&ID=32)

Oxymask:

[http://sfhs.healthnet.saintfrancis.com/apps/detail\\_view.cfm?MenuID=2000451&CategoryID=9&ID=34](http://sfhs.healthnet.saintfrancis.com/apps/detail_view.cfm?MenuID=2000451&CategoryID=9&ID=34)

Nebulizers:

[http://sfhs.healthnet.saintfrancis.com/apps/detail\\_view.cfm?MenuID=2000451&CategoryID=9&ID=115](http://sfhs.healthnet.saintfrancis.com/apps/detail_view.cfm?MenuID=2000451&CategoryID=9&ID=115)



# SUSTAINABILITY AND GOALS

- Staffing Matrix Review
- Chart Audits
- Hired Respiratory Therapist
- Non-Invasive Cardiology nurses completing patient diagnosis and treatment education



# COPD/PNEUMONIA READMISSIONS AND MORTALITY

## Readmissions Fiscal Year 2022

Chronic Obstructive Pulmonary Disease (COPD)	FY 2019 Jul-Jun	FY 2020 Jul-Jun	FY 2021 Jul-Jun	FY 2022												Total FY 22
				July	Aug	Sept	Oct.	Nov	Dec	Jan	Feb	Mar	April	May	Jun	
Total Outcome Cases	79	58	28	4	4	4	4	5	5	3	2	4	4	4	5	48
Total Readmissions	12	1	2	0	1	0	0	2	0	0	0	0	0	0	0	3
Observed	15.19%	1.72%	7.14%	0.00%	25.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.25%
Expected	14.29%	13.72%	18.84%	12.87%	22.33%	14.79%	15.10%	16.20%	18.59%	20.89%	17.19%	16.04%	12.71%	17.19%	14.79%	16.44%
O/E	1.06	0.13	0.38	0.00	1.12	0.00	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
<b>Pneumonia (PN)</b>																
Total Outcome Cases	110	123	108	4	8	13	15	17	21	18	13	9	10	9	17	154
Total Readmissions	9	10	10	1	1	3	1	3	3	2	1	3	3	2	1	24
Observed	8.18%	8.13%	9.26%	25.00%	12.50%	23.08%	6.67%	17.65%	14.29%	11.11%	7.69%	33.33%	30.00%	22.22%	5.88%	15.58%
Expected	10.75%	11.42%	11.94%	12.08%	14.07%	16.18%	11.63%	10.37%	10.92%	11.53%	12.13%	13.28%	15.51%	15.16%	14.80%	12.85%
O/E	0.76	0.71	0.78	2.07	0.89	1.43	0.57	1.70	1.31	0.96	0.63	2.51	1.93	1.47	0.40	1.21



# COPD/PNEUMONIA READMISSIONS AND MORTALITY

## Mortalities Fiscal Year 2022

Chronic Obstructive Pulmonary Disease (COPD)	FY 2019 Jul-Jun	FY 2020 Jul-Jun	FY 2021 Jul-Jun	FY 2022												
				July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	FY22
Total Outcome Cases	79	58	28	6	4	4	4	5	5	3	2	4	4	4	5	50
Total Mortalities	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Observed	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%
Expected	0.81%	0.53%	1.63%	6.38%	0.64%	0.25%	0.83%	2.52%	0.61%	1.10%	0.22%	0.18%	0.16%	2.39%	1.03%	1.61%
O/E	0.00	0.00	0.00	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.48
Survival Rate	100.00%	100.00%	100.00%	66.67%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	96.00%
<b>Pneumonia (PN)</b>																
Total Outcome Cases	113	123	109	4	10	14	15	17	21	20	13	10	10	9	17	160
Total Mortalities	3	0	1	0	2	1	0	0	0	2	0	1	0	0	0	6
Observed	2.65%	0.00%	0.92%	0.00%	20.00%	7.14%	0.00%	0.00%	0.00%	10.00%	0.00%	10.00%	0.00%	0.00%	0.00%	3.75%
Expected	1.91%	1.52%	2.83%	2.48%	7.74%	4.05%	2.64%	1.86%	1.70%	4.64%	4.27%	2.44%	2.77%	2.30%	1.68%	3.13%
O/E	1.39	0.00	0.32	0.00	2.58	1.77	0.00	0.00	0.00	2.15	0.00	4.10	0.00	0.00	0.00	1.20
Survival Rate	97.35%	100.00%	99.08%	100.00%	80.00%	92.86%	100.00%	100.00%	100.00%	90.00%	100.00%	90.00%	100.00%	100.00%	100.00%	96.25%



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