

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

DNV 2022

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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

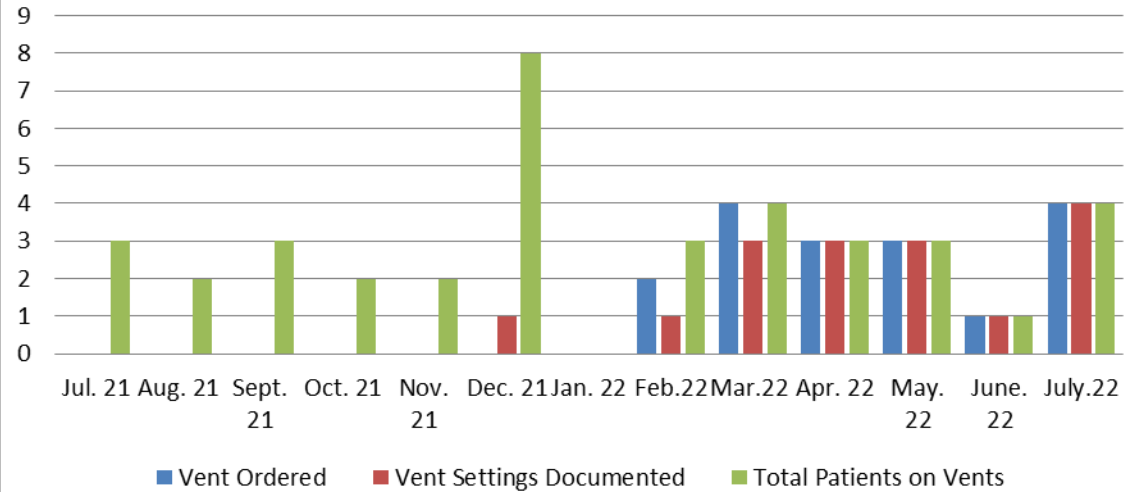
- Litmos: Procedures Airway: Intubation: Post Intubation Management
- Tipsheets for ordering mechanical ventilation
- Quick Start Guide for ventilator placed on each one



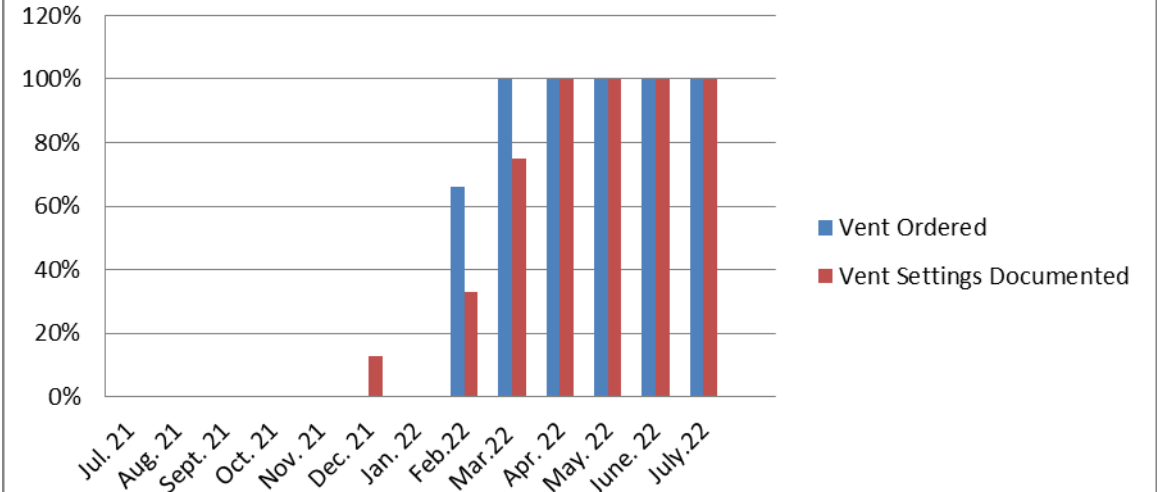
Quick Start for Hamilton C-1			
(This is not education for this piece of equipment. This is intended to be used as a quick guide or refresher for the thorough education provided to the providers of care) 2/22/22			
Initial setup for Vent or Bipap:			
1. Dual limb circuit			
2. Expiratory valve			
3. Bacterial/viral filter			
4. Flow sensor			
New setup for each patient.			
*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.			
Initial Ventilator settings:			
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)			
Initial Bipap settings:			
NIV-ST	Rate: 10-12	Pinsp: 5-7	Peep: 5
FIO2: Maintain SpO2 92% or >			
Alarms:			
*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



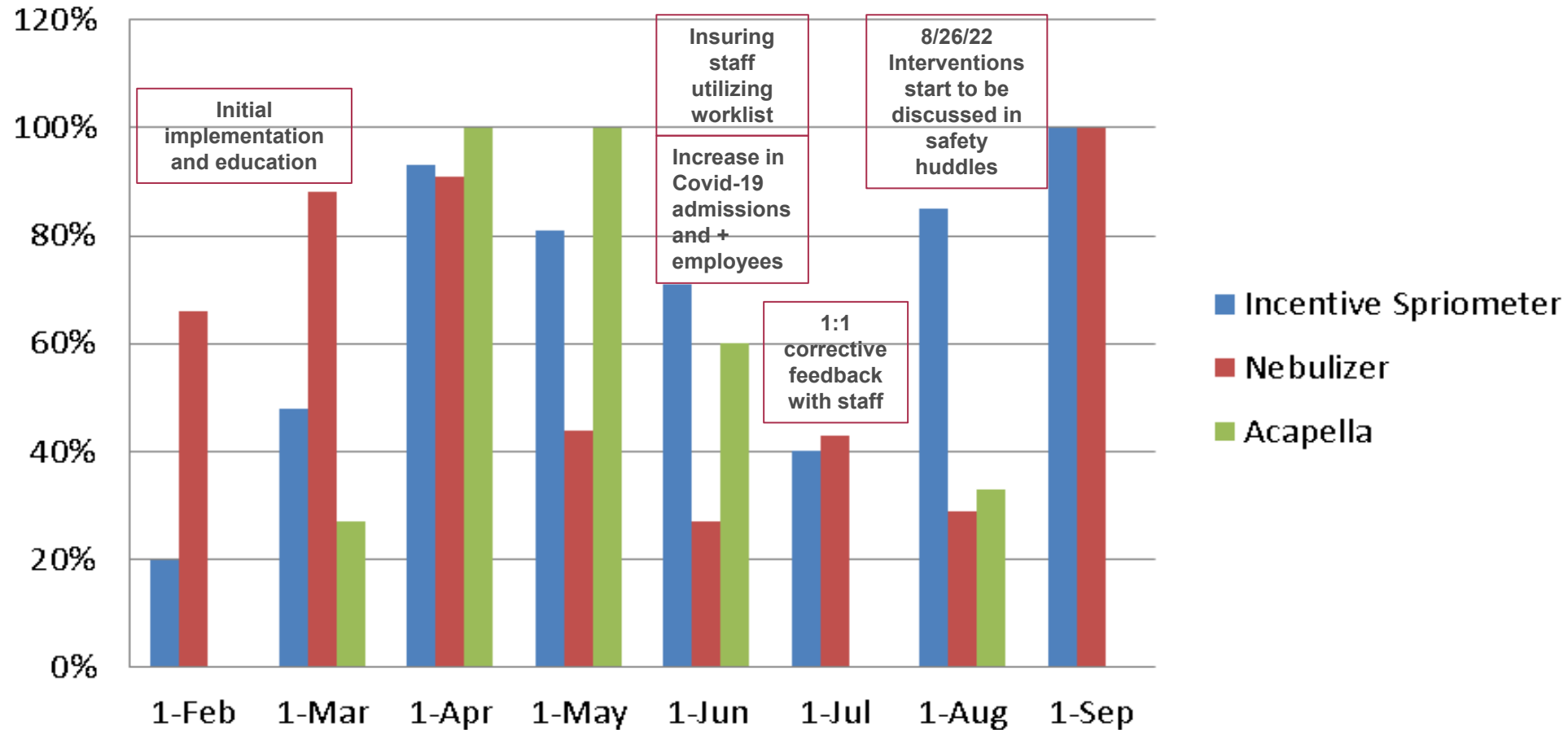
RESPIRATORY DOCUMENTATION

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



RESPIRATORY DOCUMENTATION

2022 Treatment Compliance Rates



RESPIRATORY TRAINING

- In-person training by respiratory therapist educator
 - Hands on training
- Education packets
- Nursing respiratory skills checklist

Saint Francis Hospital Vinita Nursing Skills Checklist: Respiratory Care

Employee Name _____ Employee ID # _____

Please write date and initial when employee demonstrates/understands skill. Write NA if skill does not apply.

BIPAP/CPAP

_____/_____/_____/_____ Oral Care
_____/_____/_____/_____ Set-up equipment with circuit/supplies
_____/_____/_____/_____ Select and fit mask and headgear
_____/_____/_____/_____ Parameters and alarms
_____/_____/_____/_____ Document/Charges in the EMR

Home CPAP

_____/_____/_____/_____ Evaluates for safe use (cleanliness, damage, frayed power cord, damaged supplies)
_____/_____/_____/_____ Document in the EMR

Respiratory Care

_____/_____/_____/_____ Oxyimizer
_____/_____/_____/_____ Nasal Cannula, w/wo humidification
_____/_____/_____/_____ Simple O2 Mask
_____/_____/_____/_____ Venturi Mask
_____/_____/_____/_____ Non-Rebreather
_____/_____/_____/_____ Nebulizer equipment
_____/_____/_____/_____ Spacers
_____/_____/_____/_____ CPT: Acapella/Percussor

Ventilator (Emergency Room Nurses)

_____/_____/_____/_____ RSI Kit
_____/_____/_____/_____ Set-up equipment with circuit/supplies
_____/_____/_____/_____ Recalibration
_____/_____/_____/_____ Modes/Alarms
_____/_____/_____/_____ ABG interpretation
_____/_____/_____/_____ Suctioning
_____/_____/_____/_____ ETCO2 Monitoring

Nurse/RT Trainer Signature: _____ Date: _____

Nurse/RT Trainer Signature: _____ Date: _____

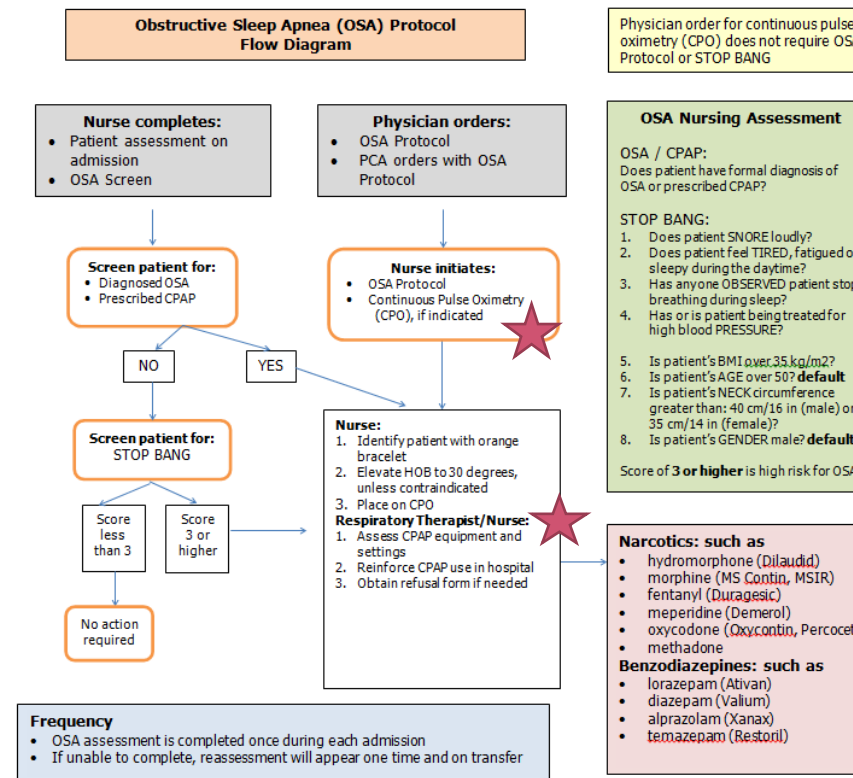
Employee Signature: _____ Date: _____

Supervisor/Manager Signature: _____ Date: _____



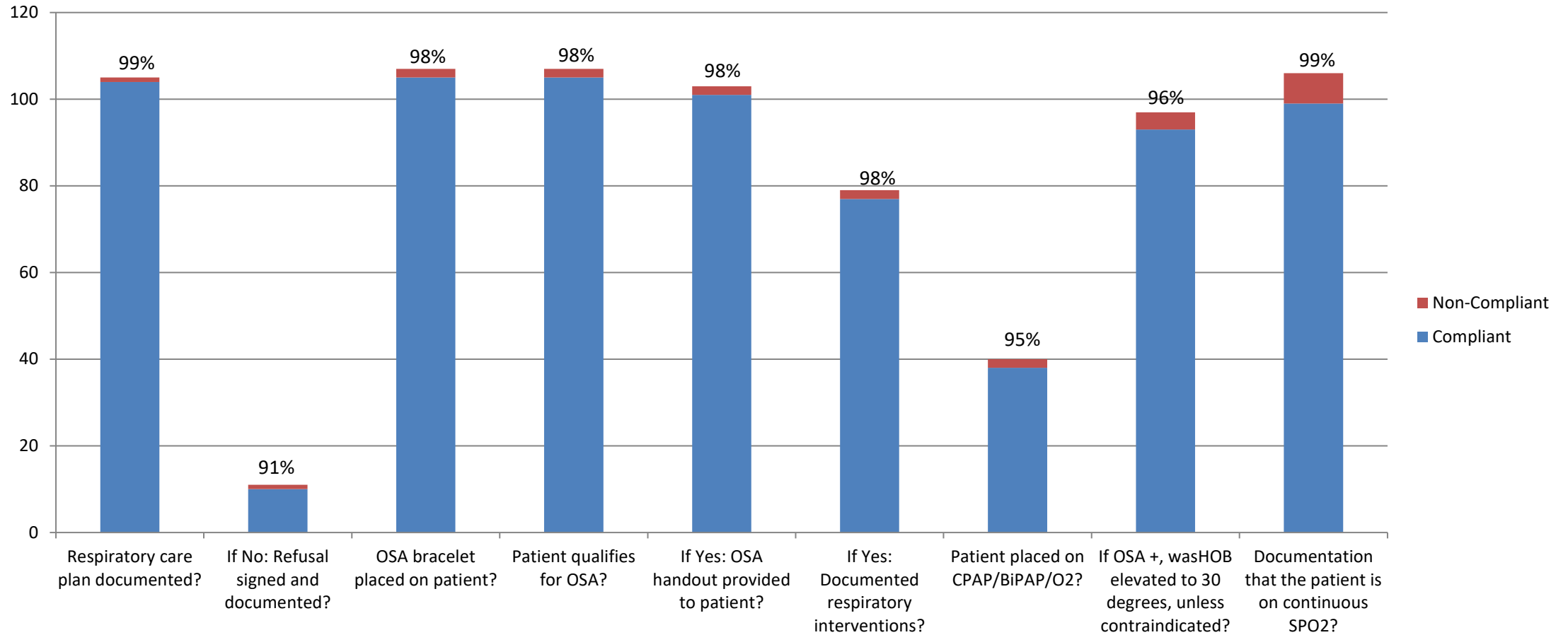
POLICY AND PROTOCOL REVIEW

- 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

Incentive Spirometer:

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

Nebulizers:

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												
				July	Aug	Sept	Oct.	Nov	Dec	Jan	Feb	Mar	April	May	Jun	Total FY 22
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
Pneumonia (PN)																
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	FY 2020	FY 2021													
	Jul-Jun	Jul-Jun	Jul-Jun	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%
Pneumonia (PN)																
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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