HiFlo Nasal Cannula Oxygen Delivery for Nurses During Covid-19 Pandemic

Sue McDonald, MSN, RN, CCRN 4/10/2020 Clinical Educator Nursing Professional Development



Who-What-When-Where-Why?



- Who: Patients stable on HiFlo O2 or weaning O2 requirement
 - Nurses who have completed HFNC in-services.
- What: Non-invasive, heated, humidified, nasal cannula. Will require a surgical mask over patient's face and cannula.
- When: When determined by physician to be stable on HiFlo O2 settings during Covid-19 surge plan implementation.
- Where: Medical-Surgical Inpatient units.
- Why: Reduce critical care time and allow for slow and stable wean of 02 requirements-HiFloNC is better tolerated than face masks & helps mobilize secretions.

Positive Airway Pressure

- Improves gas exchange
- Decreases work of breathing
- Reduces risk for treatment-related complications in acute care





It's all about ventilation and oxygenation. Keeping the alveoli open is essential for expelling carbon dioxide.





HiFlo Nasal Cannula



Frequent (every 2-4 hours & prn) Skin Assessments. Watch for HAPI from tubing!

Straps too low!

Orientation of tubing can be changed

Make sure prongs do not occlude the nostrils. If you think they do, speak with RT

Nursing Considerations



- Handoff (RT and nursing) to verify acceptable 02 sat, and baseline respiratory and skin assessments
- Communication with CMU: They will monitor tele and continuous pulse oximetry
- MEWS scores! This includes VS and LOC. These should stay stable.
- Arterial blood gas interpretation. pH 7.35-7.45 PCO2 35-45 HCO3 22-26 PO2 75-100
- Q4 hour & prn respiratory assessments
- Collaboration with Respiratory Therapy
- Respond quickly to alarms and remember to work with CMU!
- IS a continuously aerosolized treatment! Wear the proper PPE!
- Does NOT require negative airflow room,





Please remember to complete your **MEWs scores** by <u>adding Level of</u> <u>Consciousness</u> to your vital signs.

This should be **reviewed**:

- With PCNR
- <u>With FULL assessments</u>
- With FOCUSED assessments
- With a decline in patient condition

This is a great tool to help us recognize clinical deterioration EARLY and intervene EARLY. It is part of the vital signs and you should be adding the LOC with each vital signs in order to obtain a MEWS score.

What to do with the MEWS score?

Actions to prevent patient deterioration: Depending on the total MEWS, the nurse should consider the following actions to prevent deterioration:

- #1: Verify that all components have been entered so you know your score is accurate.
- Normal = MEWS 0 to 1: No additional action steps/interventions required by the nurse.
- LOW = MEWS 2 to 3: Nurse reviews patient's condition and discusses findings with provider during rounds. MEWS of 3 nurse considers increasing patient vital signs monitoring and MEWS to 2-hour intervals. If patient remains with MEWS of 3 for three consecutive readings, nurse considers reviewing patient assessment with facilitator.
- **MEDIUM = MEWS 4 to 6:** Nurse reviews patient's condition with facilitator and considers discussing findings with provider during rounds versus more immediate provider notification. Nurse considers increasing patient vital signs monitoring and MEWS to 1-hour intervals.
- HIGH = MEWS 7 to 8: Nurse reviews patient's condition with facilitator and/or nursing colleagues. Nurse considers immediate provider notification. Nurse considers activing Rapid Response. Nurse considers increasing patient vital signs monitoring (including oximetry) to every 15-30 minutes or more frequently until patient's vital signs and/or MEWS stabilize and/or patient transferred to a higher level of care.
- Critical = MEWS > 8: This potentially constitutes a clinical emergency. Nurse reviews patient's condition with facilitator and/or nursing colleagues. Rapid Response strongly recommended. Immediate provider communication strongly recommended. Nurse considers close (every 5-10 minute) vital signs monitoring (including oximetry) until patient's vital signs and/or MEWS stabilize and/or patient transferred to a higher level of care.

Additional Considerations when assessing clinical deterioration include:

o Communication and collaboration with providers

- o Calling a Rapid Response
- o Code Blue

Make sure your O2 delivery method, percent and liters are documented by you or respiratory.

xpanded View All					≪ 1m 5m 10m 15m	30m 1h 2h 4h 8h	24h Based On: 0700 Res				
	ED to Hosp-Admission (Current) from 12/24/2019 in LGH Nursing 6 North										
	12/26/19										
	1054	1104	12:39:45	14.25.14	1429	1430	Last Filed				
al Capacity mL/kg			12100110	LILULI	2,125	1100	Last filed				
centive Spirometer (IS)						The and the second second					
centive Spirometer Predicted Level							Contraction of the local division of the loc				
Iministration (IS)											
umber of Repetitions (IS)											
vel Incentive Spirometer (mL)											
itient Tolerance (IS)											
C Goal											
C Alert Level							814.5 (calcula				
kygen Therapy											
xygen Therapy Flow (L/min)	60						60 L/min				
cygen Therapy Oxygen Concentration 🔫	70 🔍	60	ter na 1916 de des de la de				60 %				
cygen Therapy O2 Device	high-flow nasal cannula				high-flow nasal cannula		high-flow nasa				
leliox											
elium (%) (Heliox)		1 () () () () () () () () () (BAR BERTHER HER B								
xygen (%) (Heliox)											
ate (L/min) (Heliox)											
elivery Method (Heliox)											
atient Tolerance						1. out of the second second					
erosol Therapy											
eatment (Aerosol Therapy)							given				
oute (Aerosol Therapy)							în line				
atient Tolerance							good				
edication Education Completed											
New Start -											
naler											
eatment (Inhaler)											
ute (Inhaler)											
tient Tolerance											
					the second se	CONTRACTOR OF A DATA					

Avoid charting WDLs! Chart the *specifics* of your assessment of *each* lobe.

Adult Patient Profile Adult PCS Body System	Guideline Assessment Specimen Colleg	ction S Used 5 1		Leg	end Chart Correction - V Cosig	n 👻 🧾 Sidebar
xpanded View All	opennen conte	Heart Failure Questio	CPAP/BiPAP Record Va	ccination Screening ICU Vital Sign	S Daily Cares Falls/Delirium	Adult BCE Body Sut
				e ⁶ 1m 5m 10, 15	i ans/Delinum A	Adult PCS Body Syst
		ED to Hosp-Admission (Current) from 1	12/24/2019 in LGH Nursing 6 N	loth	30m 1h 2h 4h 8h 2	4h Based On: 0700 Rese
		12/26/	'19			
10	054 1104	12:39:45	14.25.14	1400		
spiratory			17.23.14	1429	1430	Last Filed
Respiratory WDL				and a second		
sp					De	ex
Rhythm/Pattern (Respiratory)				20		20
pansion/Accessory						no shortness .
ilbeds						no use of acc.
ugh Frequency						no discoloratio
ugh Type						infrequent
outum Color						fair
Additional Documentation						frank blood
eath Sounds						
Fields Breath Sounds						
I Breath Sounds						Anterior:;Post.
Breath Sounds						Posterior:;wne
Il Breath Sounds						Posterior: whe
AL Breath Sounds						Posterior::whe
L Breath Sounds						Posterior: whe
visity Assocrate Openlagy Patients						THE PARTY OF
xicity Assessment-Oncology Patients						
spnea						
ortness of Breath (Read Only)						
spiratory Pre/Post Treatment						78 heats/min
etreatment Heart Rate (beats/min)						78 beats/min
sttreatment Heart Rate (beats/min)						18 breaths/mi.
treatment Resp Rate (breaths/min)						19 breaths/mi.
sttreatment Resp Rate (breaths/min)						
ak Flow			A STATE OF			
L CL Destisted (L (Min)						
ak Flow Predicted (D/Min)						THE REAL PROPERTY OF
ak Flow Pretreatment (Divini)						the second se

Things to watch for.....



- HAPI
- Rising MEWS scores
- Poorly tolerating mask: Provide support. Check under mask for moisture build-up
- Gastric distention from positive pressure (rare at this level)
- Occlusion from secretions or kinks in tubing
- Interruptions in flow from cracked or disconnected tubing
- Hypotension (rare at this level) from positive pressure in the thoracic cavity
- Respiratory depression in COPD patients. {That's why we must understand ABGs and acid-base balance}
- Rare, but possible pneumothorax

• Oxygen toxicity should NOT be an issue with the less than 50% FiO2 on 8Fred