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Overgaard, Jenelle, "Heated High Flow Oxygen Therapy Management of Respiratory, Swallowing/Dysphagia and Nutrition Needs" (2023). *Nursing Posters*. 158.

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Heated High Flow Oxygen Therapy Management of Respiratory, Swallowing/Dysphagia and Nutrition Needs

Jenelle Overgaard BSN, RN, CCRN



Plan

Problem

- Patients diagnosed with COVID-19 pose challenges for oxygenation. Often requiring heated high flow oxygen therapy (HHFOT) for days to weeks, with literflow commonly over 40 L/min with maximum of 60 L/min.
- There is minimal research on aspiration risk at higher literflow, therefore practice included decreasing literflow to 20 L/min for oral intake was standard.
- During oral intake, with literflow decreased to 20 L/min, patients' oxygen saturations would quickly trend down.
- Alarms indicating low saturation would create anxiety, cause patients to eat faster potentially increasing risk for aspiration.

Solution

- For adult inpatients meeting criteria, increase maximum literflow allowed during oral intake from to 40 L/min.
- Develop guidelines for:
 - oxygen supplementation during oral intake
 - how/when to consult Speech Language Pathologist
 - inclusion of dietitian earlier in hospitalization.

Do

Information to ICU/CICU staff April 2021



- Current practice is to turn literflow down to 20 L/min for oral intake.
- New literflow will be 40 L/min (or less) for oral intake
 - May supplement with non-rebreather or OxyMask at 10-15 L/min during meals/oral intake (while literflow is decreased).
 - May allow oxygen saturation of 85% for 20 minutes (with at least 5-minute period of recovery at goal saturation) during meals/oral intake
- **Patients MUST meet criteria to qualify:**
 - Have a negative CAM Delirium screen
 - Have a RASS score of 0
 - Be in optimal sitting position (bed/chair) for safe swallowing

Step One N=6:

SLP completed bedside swallow screen with literflow decreased to 40 L/min.

- If pass, subsequent oral intake can be at flowrate of 40L/min
- If fail, SLP would complete a Flexible Endoscopic Evaluation of Swallowing (FEES)

Step Two N=11:

Bedside nurse to complete a bedside swallow screen with literflow decreased to 40 L/min

- If pass, subsequent oral intake can be at flowrate of 40 L/min
- If fail, SLP evaluation ordered.

Act

- HHFOT policy change in progress.
- Bedside swallow screen flowsheet updated in electronic medical record.
- HHFOT order panel implemented September 2021.

Adult Heated High Flow Oxygen Therapy Panel

<input checked="" type="checkbox"/> Request - Adult Heated High Flow Oxygen Therapy	Adjust to keep sats greater than or equal to 92 - For pregnant/postpartum patients keep SpO2 greater than 95% - May supplement with non-rebreather or OxyMask at 10-15 lpm during meals/oral intake (while literflow is decreased). - May allow oxygen saturation of 85% for 20 minutes (with at least 5-minute period of recovery at goal saturation) during meals/oral intake
<input checked="" type="checkbox"/> sodium chloride (OCEAN) 0.65% nasal spray <input checked="" type="checkbox"/> oxymetazoline (AFRIN SINUS) 0.05 % nasal spray	2 Spray, each nostril, Every 4 hours PRN, congestion 1-2 Spray, each nostril, Every 12 hours PRN, congestion
<input type="checkbox"/> Request - Positive Expiratory Pressure <input type="checkbox"/> Incentive Spirometer <input type="checkbox"/> IP Consult Dietitian	Routine, Q2H, Starting today, While awake Q2HWA, Starting today, While awake
<input checked="" type="checkbox"/> Nursing to screen for safe swallow	What type of evaluation should be performed? Other (Do Not Use for Parenteral Nutrition) Assess nutritional status Other (specify): Patient with Heated High Flow Oxygen Therapy, consider nutritional supplement Decrease literflow to 40 lpm (if less than 40 lpm, leave at current literflow) and complete and document bedside swallow screening. If swallow impaired, make NPO and consult speech therapy to evaluate and treat for dysphagia, indicating Heated High Flow Oxygen Therapy. Patient must remain: - RASS 0 and - Must be in optimal sitting position (bed/chair) to continue oral intake while receiving Heated High Flow Oxygen
<input checked="" type="checkbox"/> Oral Intake Restrictions	

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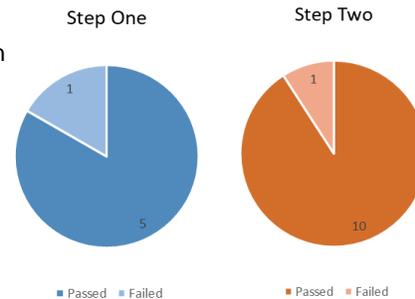
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Study

- **Step One**
 - 5 of 6 patients passed SLP bedside swallow screen
 - Remaining patient did not have FEES. Physician stated patient close to being intubated.
- **Step Two**
 - 10 of 11 patients passed bedside nursing swallow screen
 - Remaining patient did have FEES completed.
- 7 of the 17 patients required intubation at some point during stay.
 - No evidence of aspiration during intubation
 - None believed to be related to oral intake



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