



Reducing Inappropriate NPO Orders for Scheduled Transthoracic Echocardiograms

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Background

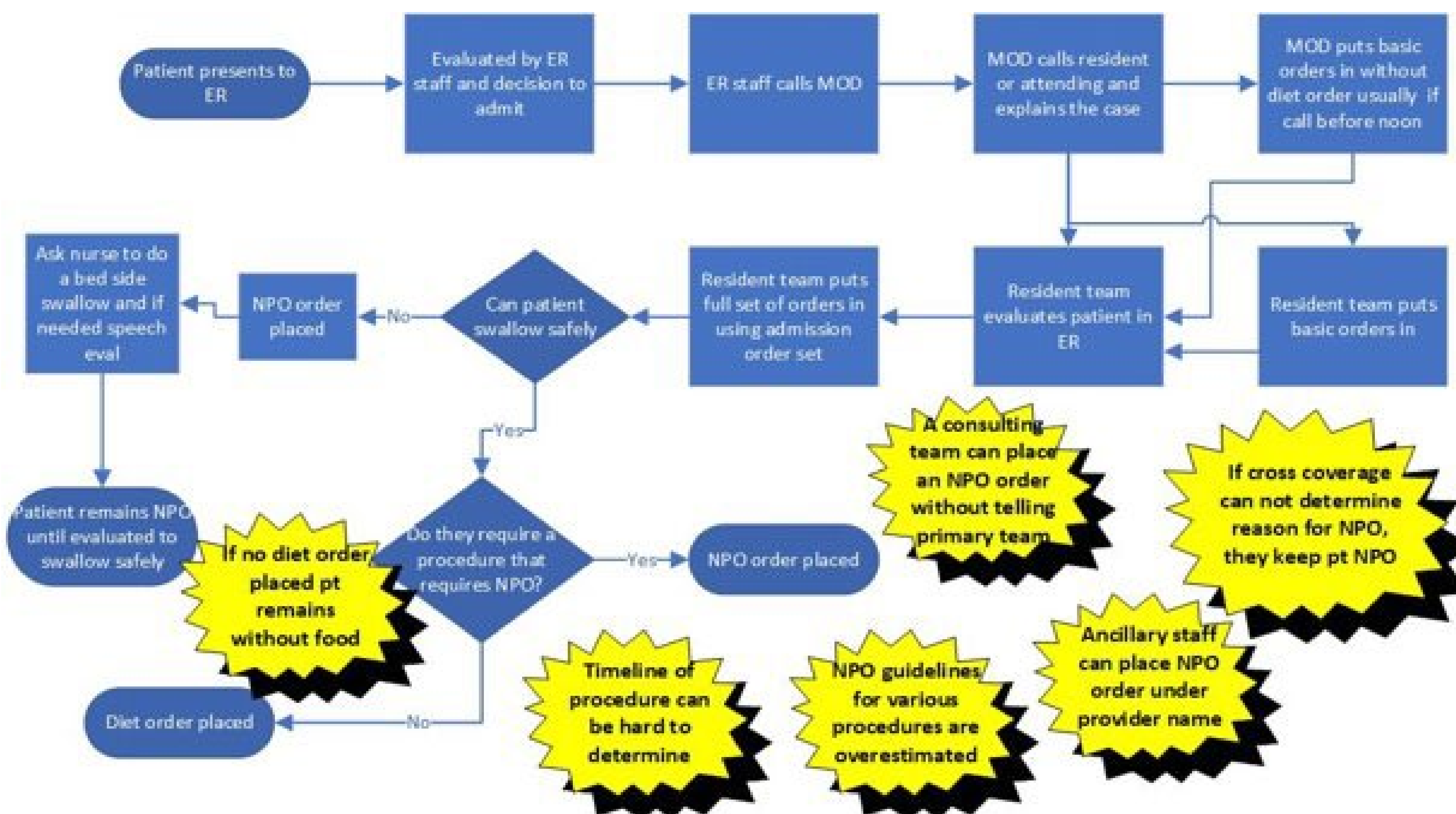
- Patients are made NPO to prevent adverse reactions by minimizing the volume and acidity of gastric contents. This helps decrease the risk of regurgitation and aspiration in procedures that require anesthesia. However, a problem arises when patients are inappropriately made NPO for transthoracic echocardiogram's (TTEs).
- Patients are made NPO in anticipation of a possible transesophageal echocardiogram (TEE), which is not completed in the same day.
- Currently, there are no guidelines requiring NPO status for scheduled for TTEs.
- When patients are inappropriately made NPO this can lead to a myriad of adverse outcomes including: patient dissatisfaction, irritability, dehydration, acute kidney injury, hypoglycemia, decreased hospital rating scores, emotional toll, and increased length of stay.
- Three residents were on service in November 2022 and personally oversaw care of 5 patients who inappropriately had NPO orders for TTE's. Overall patient satisfaction is impacted by unnecessary NPO orders. In October 2022, one resident cared for a patient who left AMA due to being NPO for a TTE.

Objective/AIM Statement

Reduce the number of patients who are NPO inappropriately for a scheduled TTE by 50% by 10/1/2023. This will be tracked every 5 weeks via spot checks of charts for residents patients scheduled for TTEs.

Methods & Process Map

- We conducted a retrospective chart review of 36 TTE orders placed the week of 1/28-2/3/23 for patients admitted to HCA Florida Osceola GME Medicine Service to capture the percent with inappropriate NPO Orders.

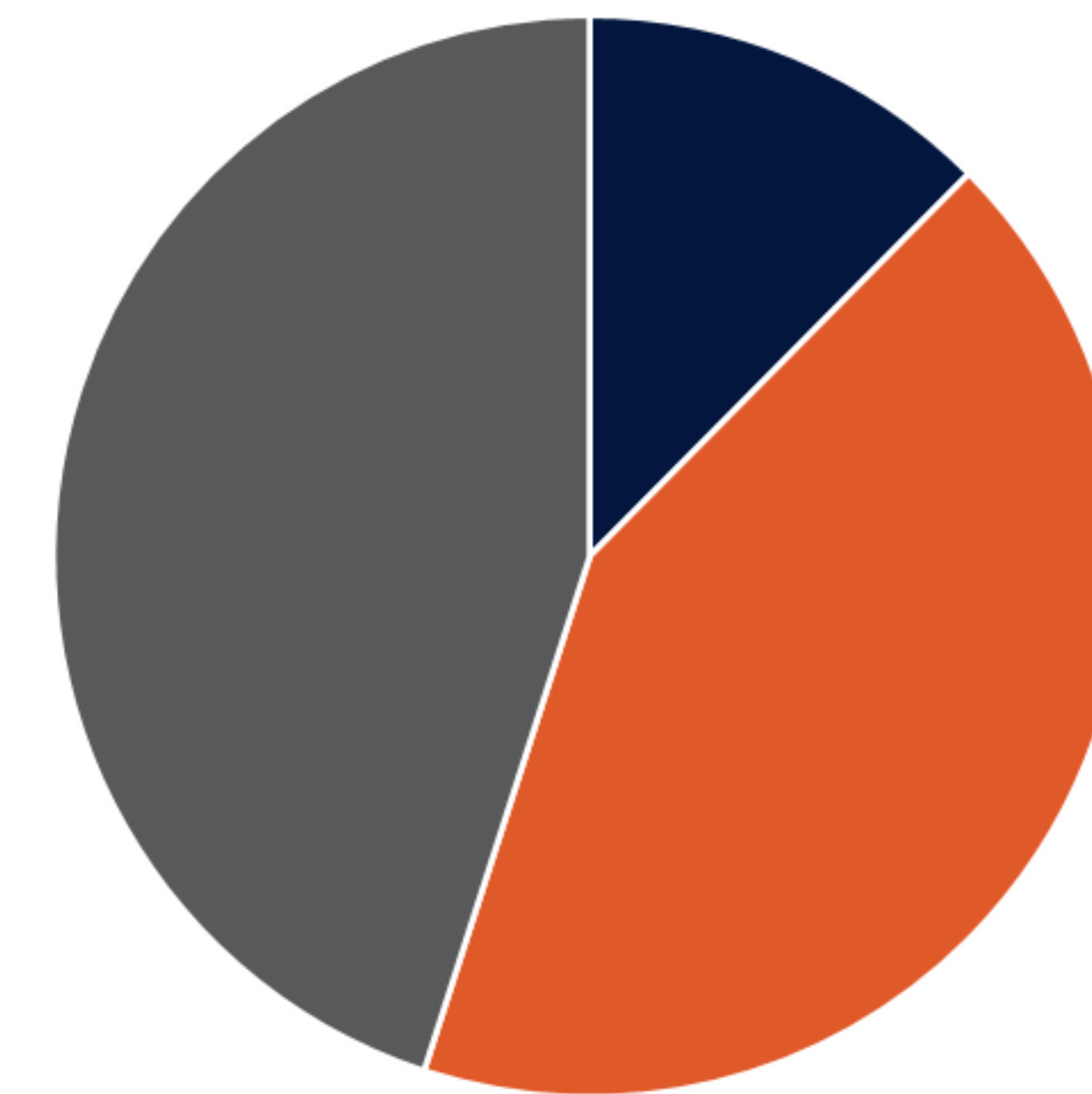


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Results

- Out of 36 patients, 18 patients were NPO
- 13/18 Patients had documented explanations for appropriate NPO orders
- 5/18 were made NPO for unknown reasons and had a TTE. The orders were placed by:
 - 1 Resident who did not put any diet order in
 - 2 Cardiology Provider
 - 1 ED Provider
 - 1 Resident team
- Reason for TTE was chest pain in 2 patients, congestive heart failure in 2 patients, and atrial fibrillation with rapid ventricular response in 1 patient

Diet Orders for TTE's



■ No appropriate reason for NPO (5) ■ Not NPO (17) ■ Reason for NPO Documented (18)

- *NPO orders do not have a documented reason in the electronic medical record system. Reason for NPO was assessed using physicians' notes, chart review, and patient's clinic scenario to gauge appropriateness of the order.

Discussion

- There is no need for NPO status for TTEs even though it may be necessary for TEE (Transesophageal echocardiogram). TEEs are typically scheduled days later.
- Our retrospective chart review revealed in some cases there is no clear documentation on why a patient is NPO.
- Given these results, it is important to document the reasons for an NPO order before medical procedure. This can help ensure that patients do not undergo unnecessary prolonged fasting.
- Based on this limited review, it does not seem that patients are NPO for a possible follow up TEE, but rather for unknown cardiac reasons.
- It has been reported that fasting can improve quality of imaging in echocardiogram, but there is not much evidence to support this claim. Otherwise, fasting can cause patient dissatisfaction and lead to complications in some cases.
- Our biggest challenge going forward is to reapproach the problem of inappropriate NPO orders, but not necessarily from perspective of TTEs.

Next steps

- Broaden our scope to all NPO orders for GME patients and look at situations where there is a high number of NPO orders that are not justified.
- Track total NPO orders or time NPO if permitted by EMR
- Possible interventions:
 - free text reason for NPO.
 - Warning or banner in EMR if a patient has been NPO for >1 or 2 days

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