



Ensuring Adequate Nutritional Intake While Reducing Oral Nutritional Supplement Wastage

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DEFINE OPPORTUNITY

Background:

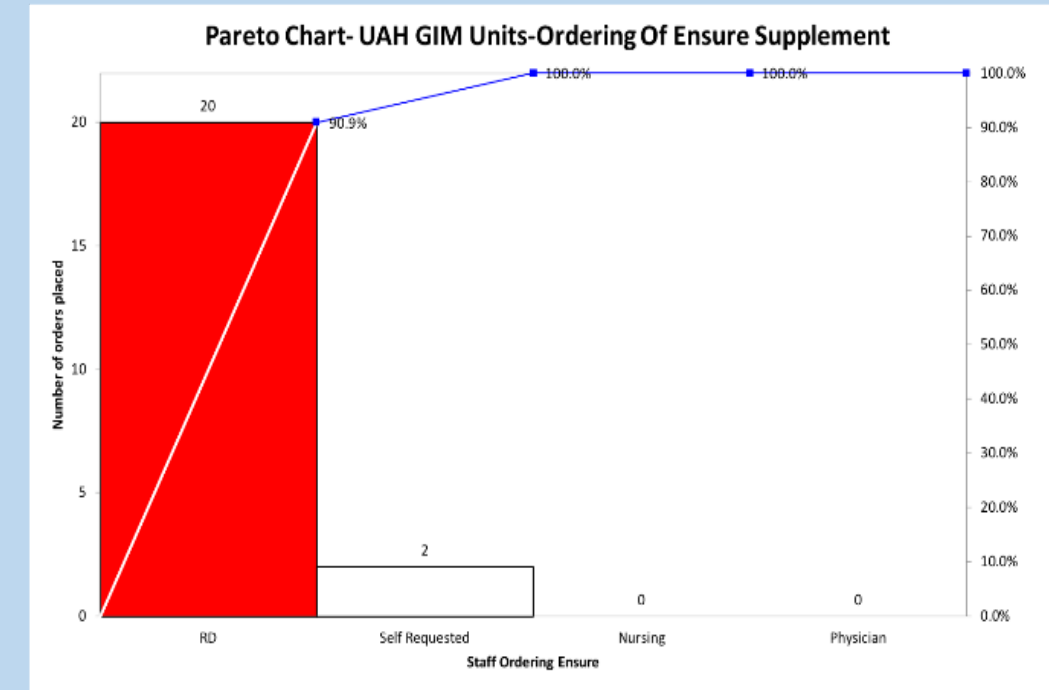
Oral nutritional supplements (ONS) are ordered by the medical team for patients who are malnourished with the intent to improve their nutritional status. ONS can also be requested by the patient. However, there is a proportion of patients who do not consume the supplement for various reasons, such as lack of appetite. Consequently, ONS accumulation and waste follows. The problem is exacerbated by limited follow-ups and overprescribing. The Nutrition and Food Services' drafted a priority Provincial Strategic Improvement Plan to reduce ONS waste. Evidence of waste is supported by the Patient Food Services Financial Report demonstrating UAH spent \$0.78 per inpatient day more on enteral supplements than RAH in 2015.

A quality council/meta council meeting was held between the UAH GIM units (5D2, 5D3, 5D4, 5E2, 5E4) in November 2017 after front-line staff raised concern regarding ONS accumulation. In the same month, a change had been implemented through CBORD to prevent the system from automatically re-using patients' dietary orders from prior admissions. As well, staff on the UAH GIM units became aware of the accumulation and increased their vigilance when prescribing or following up with patients. These interventions have reduced ONS accumulation seen presently. Ex. Unit 5D3: ~6 months ago, 8/18 beds had 4 x unopened ONS bottles/bed. Now 1/18 beds have excess ONS remaining in room.

Problem - April 4, 2018:

ONS accumulation and subsequent wastage continues to be seen on GIM units. The waste increases cost with little impact of patients' nutrition status. A baseline audit in the five GIM units on March 16th 2018 indicated there were 8 Ensure® bottles found unopened at bedside. Ensure bottles range from \$0.56-\$0.81 per bottle, therefore the waste can reach \$135-195 monthly in GIM alone. Nutritional supplements stored in non-patient room areas on the unit were not accounted for during initial baseline audit. However, a random audit was conducted on two separate dates and a total of 8 bottles were found in the five units in staff areas such as the fridge.

Total # of Ensure Ordered to Unit Daily & Associated Cost	Total # of unopened Ensure & Associated Cost
18, \$12.06	3, \$1.80
8, \$4.80	4, \$2.40
2, \$1.20	0, \$0.00
12, \$8.04	1, \$0.81
7, \$4.20	0, \$0.00



Aim Statement:

By Dec. 31st 2018:

- 1) Decrease 75% of unopened ONS bottles on each GIM unit and decrease 25% of ONS spent on each GIM unit.
- 2) Max 1 unopened ONS bottles will be present in each patient room in GIM units.
- 3) 100% of identified malnourished patients who are prescribed ONS with a dietitian consult will be followed up by dietitian on the unit 5D3.

Team Members: Physician, Dietitian, Unit Managers, Nurses, Food Services Manager, Patients, Quality Improvement Consultants.

Collaboration and Communication Strategies:

- Project team included two pharmacy students, senior quality consultants, internal medicine unit managers, dietitian, physician, and food service manager.
- A one-page summary to heighten intervention awareness was developed and posted on the inpatient general internal medicine unit quality boards.
- An ordering job aid was created to assist with mindful supplements prescribing by the patient's care team.
- Project frontline unit staff champions arose sharing the project aim and planned intervention which assisted with change awareness and acceptance.
- Patient education handout was created to improve understanding of nutritional supplements

MANAGE CHANGE

BUILD UNDERSTANDING

Process Assessment:

Direct observation (Gemba) of inpatient units was conducted to determine the current unit process, and a process map was developed. Baseline data was collected (March 1-31 2018) regarding current number of unopened ONS in patient rooms and costing information obtained.

PATIENTS:

- Doesn't like the drink or unable to finish since full
- Cannot drink due to medical hx, cognitive or fxnal status, lab or diagnostic procedures
- Lack of knowledge to refuse supplement
- Perception that ONS replaces their diet
- Asleep when ONS delivered in room
- Patient and/or family requests too many ONS

PROCESS:

- No clear procedure designating responsibility of ONS
- Multiple order entry modes by MD/RD/RN
- Orders continue indefinitely for patient's length of stay
- Food service workers must deliver what is ordered
- ONS cannot be re-used after entering patient room due to food safety/infection control risk

STAFF:

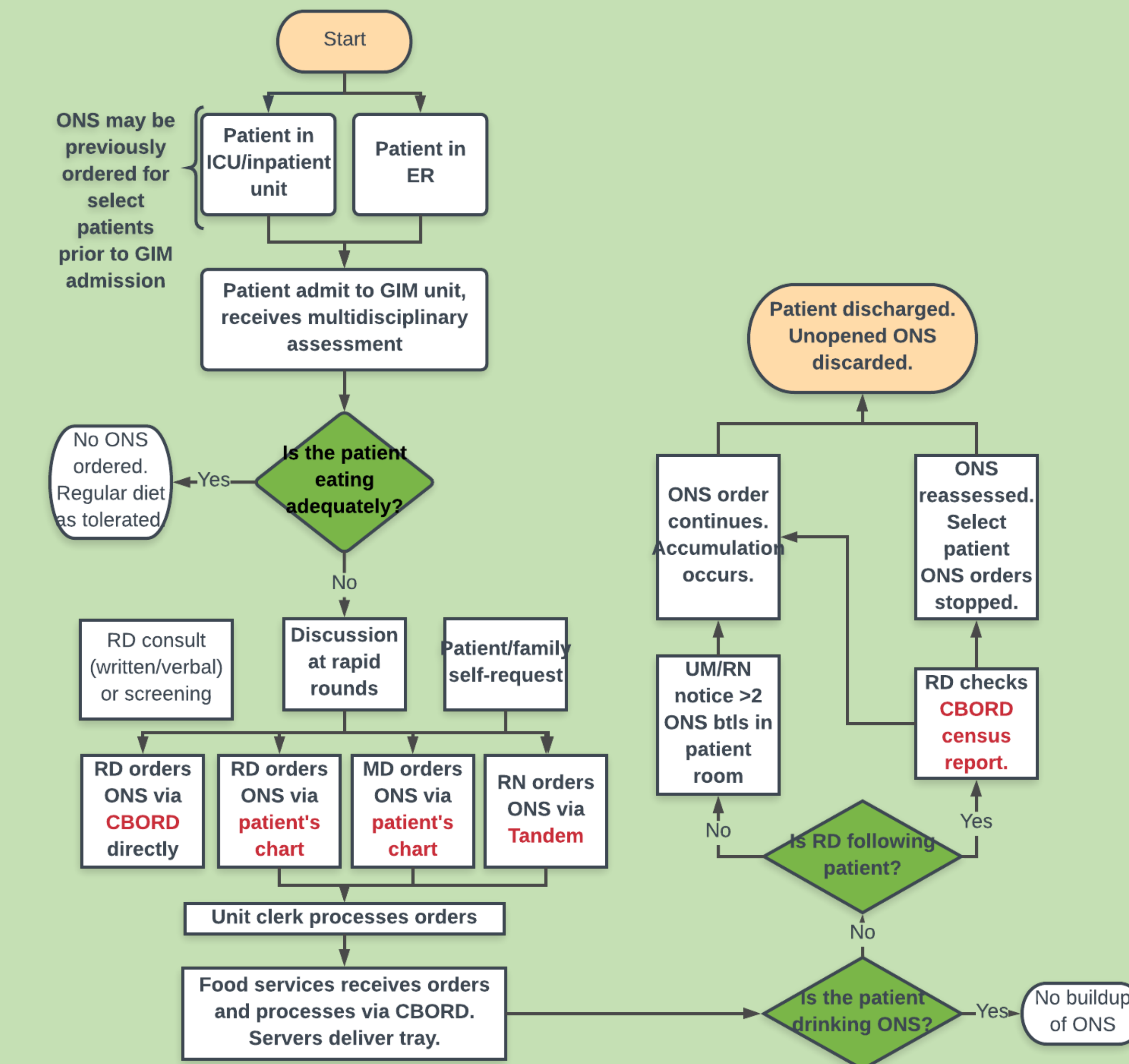
- Lack of role clarification to determine who should re-assess ONS when it is not consumed
- No accountability for ONS order reassessment on a daily basis
- Provider unaware of overprescribing

PLACE:

- Patient units isolated therefore difficult to see accumulation without physically entering room

Problem: On GIM units, at least 8 bottles of ONS wasted daily

Cause and effect diagram



Process map demonstrating how oral nutritional supplements buildup occurs

ACT TO IMPROVE

GAPS	ARISING INTERVENTIONS
Assessment: Limited assessment prior to order of ONS if RD not involved	All disciplines to consult registered dietitian (RD) if patient has poor nutritional status to prevent excess ONS orders.
Ordering: Overprescribing of ONS by medical team leading to patients receiving ONS up to 6 times daily.	All disciplines to prescribe mindfully (i.e. max 1 bottle of ONS daily) as per ordering job aid with reinforcement from dietitian.
Multiple ordering methods: via Tandem directly, CBORD directly, or patient's chart	All disciplines to consult RD (written or verbal) if patient has poor nutritional status to prevent duplicate ONS orders.
Once supplement order is inputted, it is automatically continued for entire duration of hospital stay	All disciplines to consult RD (written or verbal) if after ONS is ordered to ensure there is follow-up in place to continuously assess the patient's nutritional status.
Delivering: Food service worker delivers nutritional supplement despite accumulation of unopened bottles	Food service worker to document # of unopened nutritional supplement bottles onto a tracking sheet during audits. This is completed by the service worker on pick up of 'soiled'/consumed trays after evening snack.
Lack of staff awareness that once ONS enters patient room, it must be discarded even if unused.	Supervisors (including UMs, Dietitian Manager, Attending Physicians) to educate staff that nutritional supplements cannot be returned once it enters patient room due to risk of infection and food contamination.
Lack of patient awareness regarding options such as refusing ONS or changing flavours	RD or UM/Nurse to have conversation with patient if build up of nutritional supplement occurs. Can discuss changing flavours or reducing number of supplements. Or can discontinue supplementation with RD consult.
Patients' preferences and health status fluctuates throughout hospital stay, leading to variable consumption of ONS.	Ongoing conversation required with patient from all disciplines to identify root cause for why patient is not consuming their ONS.
Follow-up Lack of clear follow-up after ONS are prescribed	<ul style="list-style-type: none"> • UM/Nurse to flag patient for RD reassessment if accumulation noticed during Comfort Care Rounds. • UM/Nurse to notify team during rapid rounds if accumulation noticed. • RD to monitor census report for patients on supplements • Weekend process: nurse/MD can order max 1 bottle daily, then consult RD for Monday assessment

PDSA Cycle 1-2 (April 16-July18, Location: 5D3) Measurement & Results		
Interventions:	Results:	Comments:
<ul style="list-style-type: none"> • Food service workers tracking accumulation at bedside, with subsequent RD follow-up • Staff educations to order maximum 1 ONS daily 	RD adjusted ONS for 3 patients in a one week timespan during PDSA #1. 75% reduction of ONS bottles from 4 unopened supplements on 5D3 (on March 16 th 2018 during baseline audit) to total of 1 bottle by end of April. RD on 5D3 followed 100% of patients flagged with ONS accumulation.	Tracking process eliminated by PDSA cycle #2, however food service workers continued to communicate accumulation to RD/RN
PDSA Cycle 3 (July 19-Present, Location: 5D3) Measurement & Results		
Interventions:	Results:	Comments:
<ul style="list-style-type: none"> • Ordering process - ordering job aid provided to internal medicine care team since April, further reinforced. • Education of MedPass process to 5D3. 	1 patient had accumulation at bedside and found to be MedPass candidate. RD/RN found it manageable implementing MedPass process - limited results can be drawn from this patient as they were consuming their diet fairly well and soon taken off MedPass. 75% reduction from initial audit maintained.	MedPass process - RD identifies patient as MedPass candidate (aka unable or unwilling to consume ordered ONS without assistance), records on patient's Kardex as MedPass pt, and bedside RN notified. Patient will then be provided with ONS to be taken with their medication 3-4 times daily.

Financial impact of interventions to be gathered at end of fiscal year by comparing 2017 versus 2018 ONS spending

Reinforce Ownership, Measurement, & Continuous Improvement:

- Interventions of the PDSA cycle will be spread to the entire UAH site via memo**
- MedPass documents will be distributed to UAH site to facilitate MedPass process
 - Day-to-day ownership and consistent follow-up:
 - o Care team to follow ordering job aid
 - o Nurse follow-up with patient regarding supplement consumption during Comfort Care Rounds
 - o RD to adjust orders in response to accumulation
 - o RD highlight patients receiving >2 ONS bottles daily on CBORD census to give to the unit's UM
 - o UM to follow-up with patients receiving >2 ONS and patients' nurse; order will be adjusted accordingly

- Sustaining changes:**
- New staff are made aware to mindfully prescribe supplements through unit orientation and RD education
 - RD will be responsible for regularly assessing patients' ONS and delegating RNs to facilitate MedPass process

- Lessons learned:** "I used to notice more Ensure accumulation, however recently I haven't seen as many" - UM
- 1) Increased awareness of accumulation reduces accumulation and wasting of ONS in GIM units
 - 2) Accumulation of ONS is present throughout UAH
 - 3) Lack of role clarity regarding who is responsible for ONS

- Why this quality improvement project matters:**
- Screening patients' oral nutrition intake allows us to prevent worsening malnutrition
 - Improved education and awareness that nutrition plays a huge role in patient health and their length of hospital stay
 - Reduced cost to the healthcare system

SUSTAIN RESULTS

SHARE LEARNING