Integrated Nutrition Pathway for Acute Care (INPAC) Implementation Toolkit

Guidance on the ‘what’ and ‘how’ of improving hospital nutrition care

2017
Acknowledgements

This toolkit is the result of many hours of clinical practice and research that occurred during the More-2-Eat implementation study (2015-2017). Learning and best practices in this toolkit are theory, practice and evidence-based. Several peer-reviewed manuscripts resulting from the study are available for more in-depth findings. The following individuals and organizations are acknowledged for their contributions to this toolkit and the More-2-Eat study.

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*Keep it Going*

- Re-energize the Message
- Don’t Lose Focus
- Engage New Staff
- Expand on Your Success

**Become Part of the INPAC Community**

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- **Appendix 1**: Integrated Nutrition Pathway for Acute Care and guidance document
- **Appendix 2**: Subjective Global Assessment form
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INPAC Toolkit

The following information, from the More-2-Eat study, provides you with the knowledge and tools needed to take the very real and practical steps that lead to big nutritional change for patients.

“Food Is Medicine” is more than just a slogan.

It’s a belief. It is an approach to care. It represents a tremendous amount of research that identifies what we need to do to improve nutrition within our healthcare institutions.

Toolkit Overview

This toolkit provides an overview of the ‘what’ and ‘how’ for making change to improve nutrition care practices in your hospital. The ‘What’ section is about key nutrition care activities based on the Integrated Nutrition Pathway for Acute Care (INPAC) (Appendix 1), an algorithm that promotes the prevention, detection and treatment of malnutrition in hospital. The ‘How’ section refers to the implementation and behaviour change strategies used by the hospitals that implemented INPAC and improved their nutrition care processes as part of the More-2-Eat study. Under the Tools section of the Canadian Malnutrition Task Force (CMTF) website are tips, strategies and examples of documents for the INPAC activities (e.g. screening, assessment etc.). The Resources tab will direct you to other materials that will support your knowledge on how to implement INPAC and change practice.

More-2-Eat Study

More-2-Eat is the product of several years of research, initiated by the CMTF in 2010. Beginning with a large cohort study, deficits with respect to nutrition care in Canadian hospitals were identified. Specifically, malnutrition and poor food intake during the first week of admission were identified to lead to a longer length of stay for these patients, a costly $2000-3000/patient. Subsequently, INPAC was developed, using a consensus and evidence-based process and content validated, to improve nutrition care processes. More-2-Eat demonstrated that INPAC was feasible in Canadian hospitals.

“I think this More-2-Eat is just a start, and after the study is over we need to continue and that is something that speaks to me loud and clear, that this isn’t just something that stops after the study is over. We’ve got to keep going and figuring out how we can continue making it important, and that nutrition is important and that food is medicine.”

- Dietitian & More-2-Eat Research Assistant
This innovative implementation study occurred between May 2015 and March 2017, and was funded by the Canadian Frailty Network (CFN), which is supported by the Government of Canada through the Networks of Centres of Excellence (NCE) program. Five Canadian hospitals in four provinces evaluated their own nutrition care practices, identified gaps when compared to INPAC and worked with the hospital unit and team to improve practices. During the one-year of implementation (2016), many practice changes and successes were realized. The learning from the five sites is included in this toolkit. For more information about the study, including summaries of findings and links to published papers, see the More-2-Eat page.

How does the Canadian Malnutrition Task Force define malnutrition?

Malnutrition includes both the deficiency and excess (or imbalance) of energy, protein and other nutrients. In clinical practice, undernutrition, and inadequate intake of energy, protein and nutrients, is the focus. Undernutrition affects body tissues, functional ability and overall health. In hospitalized patients, undernutrition is often complicated by acute conditions (e.g. a trauma), infections and diseases that cause inflammation. Such complications worsen undernutrition and make it more challenging to correct due to extensive physiological changes and increased nutritional needs when appetite is decreased.


Canadian Malnutrition Task Force Recommendations for the Best Nutrition Care

These recommendations are the result of consultation with stakeholders at the annual Canadian Nutrition Society conference in 2011. CMTF undertakes education and advocacy efforts with respect to the prevention, detection and treatment of malnutrition in Canada, focused on these recommendations. More-2-Eat provides the research and best practices to support the implementation of these recommendations.

1. Make standardized screening protocols mandatory in hospitals in Canada

2. Include an interdisciplinary team in the nutrition care process that starts with nutrition screening, subjective global assessment (for at-risk patients), a full nutrition assessment (for malnourished patients), and development of a nutrition care plan by a Registered Dietitian

3. Ensure staff (nursing unit and food/nutrition services) provides patient-focused and protected nutrition through mealtime care that is consistent with the nutrition care plan

4. Establish a national standard for menu planning to ensure quality food is provided in hospitals and requires that food services staff provide adequate nutrients to meet the needs of diverse patients, as indicated in their nutrition care plans

5. Educate hospital administrators, physicians, nurses and allied health professionals on the need to integrate nutrition care as part of quality interdisciplinary practice

6. Effective use of oral nutrition supplementation, enteral nutrition and parenteral nutrition to prevent and/or treat malnutrition
Overview of INPAC Activities

The Integrated Nutrition Pathway for Acute Care (INPAC) is an evidence and consensus based algorithm that supports the prevention, detection and treatment of malnutrition in hospitals. INPAC is considered a minimum standard to meeting the nutritional needs of (medical/surgical) patients. In the ‘What’ section below, each INPAC activity is described. Tools specific to each activity are provided under the Tools tab on the CMTF website. INPAC works best when you build on existing strengths and focus on the activities that meet the needs of your patients.

INPAC: Designed to support nutrition health and care

Nutrition Screening at Admission
Complete the Canadian Nutrition Screening Tool (CNST):
1. Have you lost weight in the past 6 months WITHOUT TRYING to lose this weight?
2. Have you been eating less than usual FOR MORE THAN A WEEK?

Subjective Global Assessment (SGA)
Completed by dietitian or designate

Severe malnutrition (SGA C)

Mild/moderate malnutrition (SGA B)

Well-nourished (SGA A)

Food intake improved
Food intake ≤50%

Comprehensive Nutrition Assessment and Specialized Nutrition Care

Post-Discharge Nutrition Care

Standard Nutrition Care

Advanced Nutrition Care

INPAC: INTEGRATED NUTRITION PATHWAY FOR ACUTE CARE
What

INPAC is a pathway that supports the detection, prevention and treatment of malnutrition.

Activities to reach these goals are: malnutrition screening; assessment to diagnose malnutrition; standard care to ensure all patients access their food and have sufficient food they can eat; monitoring to ensure patients are improving; advanced care strategies to promote food intake with focused treatments; and specialized care, provided by a nutrition professional. Explore each INPAC activity in more detail.

“I think More-2-Eat has improved teamwork. I think because we’re all in it together, it’s not just the nurse that needs to do it, it’s not the healthcare aide, it’s anybody coming and going in that room. Anybody can help, it’s not just one person’s task.”

- Nurse Manager
Screening

Nutrition risk screening is the first step in identifying patients at risk for malnutrition. Screening is also the first step of the Integrated Nutrition Pathway for Acute Care (INPAC) and promotes the detection of malnourished (medical and surgical) patients within 24 hours of admission.

“What screening tool should I use?”

We recommend Canadian Nutrition Screening Tool (CNST) because it is:

- Short (only 2 questions)
- Easy to use
- Valid and reliable for the acute care setting
- Questions can be asked of family or friends
- Does not need to be completed by a nutrition professional
- Nurses agree it is easy to include in their admission assessment

“Everything starts with CNST [screening]. It’s probably the most important thing we did. You can’t make a change, you can’t make an improvement for patients if you don’t identify the at risk people.”

- Nurse

![Identify patients who are at risk for malnutrition](image)
For CNST, a ‘Yes’ to both questions indicates that the patient is at nutritional risk and requires further assessment to diagnose malnutrition. (One yes answer does not denote a positive screen.) Note that a referral to a dietitian may be necessary for other nutrition and health problems that are not malnutrition.

**Who should ask the screening questions and when?**

When planning the screening process, talk to staff about who should ask the questions, and when they should be asked. Having screening questions included in the existing nursing admission forms can be the simplest option. Nursing staff have said it was not hard to ask two more questions and were more likely to ask the questions when they knew it connected to an action that benefited the patient.

The CNST questions can be easily embedded in the current admission forms. Others who interact with the patient within a few hours of admission (e.g. diet technician) could also complete nutrition screening. If your unit has long stay patients, consider weekly rescreening as a potential mechanism to identify patients who have iatrogenic malnutrition. This is especially important if food intake monitoring is not being used for all patients to identify poor food intake during hospitalization and may require intervention to improve.

Adherence to and sustainability of screening can be increased by adding this tool to an electronic medical record (EMR), which can provide automatic flags for screening, referral, and rescreening for long stay patients. If adding the questions into an existing form/EMR is not immediately possible, adding a separate page to the admission package may be an option. This method typically requires more reminders for staff to ask the questions.

**How will screening connect to assessment?**

When a patient is screened at risk, referral for assessment to diagnose malnutrition is always needed. All screening tools tend to over-identify risk for malnutrition, so assessment is essential.

Referrals that can be automated through an EMR can help ensure that this important step of referral for diagnosis after screening occurs. Other ways of ensuring follow through with a positive screen include education about:

- The importance of screening
- The importance of following through with a referral to the dietitian
- Using exact wording of questions (not adapted/simplified)
- What is a positive screen for risk
- How to make a referral to a dietitian
- When not to screen and to go directly to a referral
Other strategies for getting screening into regular practice are:

- Make it easy to refer at risk patients by providing instructions or contact information for unit dietitian on the screening form
- Provide check boxes and other reminders on assessment forms to promote accountability (e.g. initials for those who completed steps)
- Work with staff who conduct the screening to find out what would make the process easier
- Audit screening completion and feed back those results to the staff
- Celebrate successes when screening adherence is high

**What are some practice models for screening?**

The following chart provides an overview of the models tested by More-2-Eat study hospitals. Consider these as examples as to how the process of screening and referral can be tailored to your hospital or unit.

<table>
<thead>
<tr>
<th>Who Screens?</th>
<th>Where are the screening questions?</th>
<th>How is the Dietitian notified?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>Admission paper-based form with dietitian referral instructions included on the form</td>
<td>Referral to dietitian (phone or paper based)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RD (or designate) checks the admission forms for positive screen</td>
</tr>
<tr>
<td>Nurses</td>
<td>Admission form (electronic)</td>
<td>Electronic referral to dietitian or other clinician to complete SGA</td>
</tr>
<tr>
<td>Diet Clerk/Technician</td>
<td>CNST form completed when diets, preferences and other pertinent information collected from patients.</td>
<td>Diet clerk/technician leaves paper CNST for those scoring at-risk in dietitian mailbox.</td>
</tr>
</tbody>
</table>

**Top Tip**

The goal is to screen all newly admitted/transferred patients. If the patient is at nutrition risk, a referral is made to the dietitian (or other trained health professional) to determine the patient’s nutritional status using subjective global assessment (SGA).
Assessment (Subjective Global Assessment)

Patients identified to be at nutrition risk require a diagnosis to confirm malnutrition. Subjective global assessment (SGA) ([Appendix 2](#)) is an internationally recognized ‘best practice’ for diagnosing malnutrition and identifying those who would benefit from nutrition care.

The updated (2015) SGA DVD can be ordered through the CMTF website. SGA training is also available through the CMTF.

**How do I diagnose malnutrition?**

The SGA is recommended by CMTF for triaging nutrition care. SGA is a simple bedside assessment that can be completed in 10 minutes; it provides an accurate diagnosis. SGA has been validated in a variety of patient populations and is used worldwide to diagnose malnutrition.

The SGA assessment includes:

- Changes in recent food/nutrient/fluid intake
- Weight change
- Gastrointestinal symptoms and other reasons for low intake
- Physical exam for wasting of muscle and loss of fat
- Functional capacity

Remember that SGA only determines protein-energy malnutrition; there may be other reasons for a dietitian assessment and treatment of patients.

**When should SGA be used?**

Dietitians or other trained professionals should conduct SGA within 24 hours of a hospital patient determined to be at nutrition risk. SGA should also be used when nutrition risk screening is not possible or necessary (e.g. for those patients with delirium or dementia; high risk conditions such as trauma, pressure injury or SIRS; language or communication difficulties; receiving enteral or parenteral nutrition; or recently transferred from critical care). In these cases, SGA should be completed to rule out malnutrition, preferably on the first day of admission. When developing a screening and assessment process for triaging patients, ensure that staff knows the process and what to do for patients who cannot be screened (i.e. automatic dietitian referral for SGA completion).

“I don’t think I’m seeing more people [because of screening]. I’m seeing probably the same amount of people but more appropriately.”

- Dietitian
How Do I Triage Patients Using SGA?

The SGA score triages patients into Standard Nutrition Care, Advanced Nutrition Care, and Comprehensive Nutrition Assessment and Specialized Nutrition Care. Within INPAC, the path of care for each is:

**Standard Nutrition Care (well nourished/all patients):** Despite a positive screen for nutrition risk, SGA A patients do not require further advanced or specialized care to address protein-energy malnutrition. Re-screen after one week of admission.

**Advanced Nutrition Care (Mild/moderate malnutrition):** It is left to the discretion and clinical expertise of the professional doing the SGA to determine if a more comprehensive nutrition assessment is required to determine cause of protein-energy malnutrition, potential micronutrient deficiency, or other investigations that could change the treatment plan.

**Comprehensive Nutrition Assessment and Specialized Nutrition Care (severe malnutrition and some mild/moderate malnutrition):** Patients should receive a more comprehensive dietitian assessment and individualized treatment plan to address protein-energy malnutrition.

**Key Tips**

The following are tips to facilitate detection and treatment of malnutrition using SGA:

- When the SGA is completed, it is more efficient to immediately continue with the comprehensive nutrition assessment for all severely malnourished patients, and if deemed appropriate, for patients with mild/moderate malnutrition.

- Develop a plan for standardized treatment and follow up of patients. This plan is especially relevant to mild/moderately malnourished patients who may be put on advanced care strategies and do not receive a comprehensive assessment.

- To promote efficiency, mild/moderately malnourished patients can be followed by a diet technician. Some regulatory bodies have determined that treating malnourished patients is a regulated practice for dietitians only.

- At the point of identifying malnutrition, consider what strategies can be put in place for mild/moderately and severely malnourished patients and implement immediately (e.g. liberalizing the diet order, obtaining food preferences, etc.).

- Some advanced care strategies may be useful for well nourished patients and are considered at the discretion of the health professional completing SGA.

- Consider implementing medpass (small amount of oral nutritional supplement provided by nursing, typically at medication administration times) for mild/moderately malnourished and severely malnourished patients.


Standard Care Practices

Standard nutrition care refers to the minimum level of care that should be received by all patients, regardless of their nutritional status. Poor food intake predicts length of stay and affects the patient’s overall hospital experience, which makes food intake monitoring of all patients critical to their well-being. Standard nutrition care practices address patients’ positioning for eating, vision or dentition needs, concerns about pain or nausea, and ability to open food packages. In addition, tasty, appealing food that meets the nutritional needs of patients should be considered a standard of care. Food quality is important to recovery as well as patient quality of life and needs to be a high priority. In the context of illness, food is medicine, and medicine heals.

“There’s so much more awareness and I guess involvement of the nurses [in nutrition]. So it’s not just this tray is arriving for this person. Yes, it’s the correct diet. Excellent, they’re eating. Do they need help? It’s a little bit more involved than that now. So they can look at a patient and identify a patient that’s at risk and maybe even start to feel more comfortable taking actions before the dietitian comes in to see that patient. So I think very impactful.”

- Nurse

The following are a variety of nutrition care strategies to promote food intake for all patients:

- **Increase awareness about the importance of nutrition**
  - Increasing awareness across departments about the importance of mealtimes, recognizing that everyone has a role to play in nutrition care (Appendix 6).
  - Encourage staff to decrease mealt ime interruptions.
  - Encourage staff to assist the patient getting ready for the meal (e.g. a physical therapist finishing their treatment plan could support the patient by encouraging them to use the washroom before the meal).
  - Posters can be used to increase awareness about the patient’s needs at mealtimes.
  - Brief education sessions about the importance of patient food intake can be held during huddles or a Lunch and Learn.

- **Provide positive encouragement to eat**
  - Staff can provide positive encouragement that eating is necessary for recovery.
  - During meal delivery, food service staff can encourage food intake by providing positive feedback about the meal.
  - If staff opinion regarding food is low, provide the opportunity for staff to taste the food, or provide more information about where it is sourced (i.e. locally) etc.
- Encourage family to bring in favourite, nutritious foods from home to stimulate appetite.
- Encourage family to visit at mealtime to inspire the patient to eat. They can bring their own meal so that they both benefit and enjoy each other's company.

**Treat food as medicine**

- Laminated posters that stimulate staff to ensure a patient’s glasses, hearing aid, dentures, etc. are in place at mealtime, can be posted in patients’ rooms. The posters can identify challenges that affect the patient’s intake.
- Unit fridges could be stocked with nutritious food and beverages. This extra supply allows food to be provided outside of mealtime, particularly at night.
- Ensure that a process is in place for nursing staff to communicate, early in a patient's admission, to the food service department that a patient is unable to mark a selective menu.
- Aim to have a meal delivered at a consistent time so that when family comes to help, the meal will arrive at the expected time and family is able to assist.
- When a patient is not eating enough, allow and accommodate for family or friends to bring in food that will be eaten by the patient. Have a system for labelling and storing food brought into the hospital.
- Try to decrease the number of staff on break during patient mealtime to increase the number of people available to assist patients to get ready for their meal and when necessary, provide eating assistance.
- Tray delivery for isolation patients is an issue in some hospitals. Try out some different strategies to ensure isolation patients receive a hot meal. For example, trays can be left at the nurses’ station for distribution in a timely way.

**Involve volunteers**

- Develop a volunteer mealtime program.
- Involve the hospital volunteer coordinator to recruit and train volunteers.
- Recruit existing volunteers, dietetic interns, students, etc. to assist during mealtimes. This is an excellent way for students/interns to gain experience and interact with patients.
- A sample volunteer role description, education material, and other tools are available [here](#).
- Volunteers can help to clear the bedside table, open packages, encourage patients to eat, and provide some social interaction.
- Volunteers can obtain food preferences from patients and communicate them to the diet technician or dietitian through a communication book.
- Volunteers can provide eating assistance (feeding) if adequately trained.
**Volunteer Programs to Support Standard Care**

The chart below provides a few examples from More-2-Eat of mealtime volunteer programs that could be used for standard nutrition care.

<table>
<thead>
<tr>
<th>Recruitment</th>
<th>Training</th>
<th>Role</th>
<th>Time with each Patient</th>
<th>Eating Assistance Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>New or existing volunteers</td>
<td>By the dietitian</td>
<td>To check with <strong>all</strong> patients on the unit to see if anyone requires assistance opening packages etc.</td>
<td>As needed by each patient on the unit.</td>
<td>No</td>
</tr>
<tr>
<td>New or existing volunteers</td>
<td>By the dietitian</td>
<td>Any hospital staff member can enrol a patient as per established criteria. Each volunteer visits at least one patient and provides social support, assistance with meal tray set-up, opening packages etc.</td>
<td>Varies with number of patients enrolled and volunteer availability but generally, longer time with each patient.</td>
<td>No</td>
</tr>
<tr>
<td>Existing volunteers, interns, trainees, students etc.</td>
<td>By the volunteer coordinator (education developed with nutrition &amp; food services team)</td>
<td>To follow the food service worker as they deliver the trays and check to see that each patient has everything they need, open packages etc.</td>
<td>Short. Typically 20 minutes in total following all the trays then returns to their usual volunteer role.</td>
<td>No</td>
</tr>
<tr>
<td>Students in Speech and Language Therapist (SLP) or Nutrition</td>
<td>By an SLP or dietitian</td>
<td>Volunteers check with the nursing staff to see which patients require eating assistance (low risk for choking/not dysphagia patients). Volunteers open packages encourage intake and provide eating assistance (only if trained).</td>
<td>Long. Typically 1 hour per patient.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Monitoring

Why do we need to monitor nutrition in hospital?

Poor food intake, even in a well-nourished patient, can extend the hospital stay. As with body weight, this is a ‘vital statistic’ to understand how the patient is recovering. Obtaining body weight at admission and weekly during the hospital stay is considered a standard of care for all patients. Weight can change quickly due to fluid loss or gain. A rapid weight loss can be an indication of dehydration (unless the patient is edematous), which can cause serious consequences such as delirium, adverse drug reactions and even death. Immobility can also result in rapid loss of muscle tissue, especially if a patient is unwell.

Food Intake Monitoring

Malnutrition can develop quickly in hospital, so it is important that food intake monitoring occurs for all patients. Poor food intake, even in a well-nourished patient, can extend the hospital stay. The My Meal Intake Tool (MMIT) has been developed and tested with older patients, and can be completed by those with adequate cognition, by family or a staff member. Other food monitoring tools are also available for use. The key is ensuring that when poor food intake is identified, action is taken to improve intake.

How do I measure food intake?

Low intake is typically defined as ≤50% of the tray. A variety of methods can be used for food intake monitoring. Many hospitals will already have some form of food intake monitoring (e.g. nurse flow sheets, vital stats reports, etc.), so the focus should be on making sure the form is completed regularly, the portion of food consumed is recorded accurately, and that low intake is connected to an action. One option of monitoring is the My Meal Intake Tool (MMIT). The MMIT has been developed and tested for use with older patients, and can be completed by patients with adequate cognition, family or a staff member.

If it is decided that staff will complete (rather than the patient) food monitoring, education of staff about portion size estimation is particularly important. Pictures of portions of food and beverages consumed are helpful for training and as cues when posted in patient rooms. Education can take many forms including a presentation, reviewing tools, and working with individual staff members on the necessary steps in the process. Remember to include training on what to do with the information on low intake, whether it is recorded from MMIT

“If the patient’s eating poorly then you need to do something about it. It’s not just writing it down and not doing anything about it. ... this way there is a next step to follow, so that should be affecting the patients.”

- Focus Group Participant
or nursing documentation. There is no point in monitoring food intake if an action to improve intake does not occur!

**How do I connect food monitoring to treatment?**

Communication of low food intake is necessary. Work with staff members that are assessing food intake to develop buy-in and then build a process that feasible for improving practice. The key to implementing a food intake monitoring process is to train and motivate staff so they understand the importance of this function, and they can accurately monitor intake and connect low intake to an appropriate action to address the reason for low intake. Low intake does not always mean a referral to a dietitian is necessary. For example, if it is identified that the patient does not like the food, the appropriate action is accommodating food preferences; or if pain is the reason for low intake, pain management strategies should be considered.

**Models for Food Intake Monitoring**

The following are examples of food intake monitoring used in the More-2-Eat Study and actions taken to respond to low intake.

<table>
<thead>
<tr>
<th>Who does the monitoring?</th>
<th>What tool is used?</th>
<th>What values are used?</th>
<th>Who and how is action taken for low intake?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>Nurses Charting /Vital Signs Form</td>
<td>0, 25, 50, 75, 100%</td>
<td>Nurse: refers to dietitian /diet technician when intake is consistently ≤50%. This is charted and discussed in clinical rounds. Dietitian also reviews vital signs forms for intake.</td>
</tr>
<tr>
<td>Food Service Workers (nurses if they move the tray)</td>
<td>Food monitoring section of the whiteboard in each patient’s room</td>
<td>0, 25, 50, 75, 100%</td>
<td>Low intake is documented on the whiteboard and then transferred to the chart and discussed at bedside rounds every day.</td>
</tr>
<tr>
<td>Health care aides (or other unit staff who picks up the tray)</td>
<td>a) Patient Meal Intake Record (for 7 day period) on each patient’s door that is later included as a permanent part of the patients medical chart.</td>
<td>0, 25, 50, 75, 100% or NPO</td>
<td>Intake recorded 3 meals daily for entire admission. If ≤50% is consumed, the person retrieving the tray asks the patient 2 questions (about appetite and mealtime challenges), records patient responses and corrective action taken by the relevant person. Dietitian is consulted if intake is ≤50% for at least 2 days.</td>
</tr>
</tbody>
</table>
Weight Monitoring

Weight monitoring involves taking patient weights and tracking the weights regularly throughout the duration of the hospital stay. This vital statistic is necessary for physicians, dietitians, pharmacists, social workers, occupational therapists, physiotherapists, and nurses, in order to make appropriate decisions about various treatment modalities. Weekly weights should be considered routine care for all hospital patients.

**How do I start regular measurement of body weight during hospitalization?**

> "Honestly, at first, of course, we were kind of overwhelmed [to do weekly weights]. But now I think it's getting better."
> - Focus Group Participant

Obtaining an admission weight and routine monitoring of patients’ weight throughout hospitalization is a standard care practice. If admission weight is not done, start with educating staff on the importance of this objective measure to the care and recovery of the patient. Getting regular weights during hospitalization can be difficult and there will likely be resistance from staff. However, once started, most staff recognize it does not take long, and is fairly easy to do. It is important to stress the benefits of actual patients’ weight for many of health professionals caring for the patient. Having appropriate equipment available is also important (i.e. chair scale). Making weights a routine, such as having a “weigh day” for all patients on the unit, or encouraging friendly competition, is important for sustainability.

|   | b) Laminated reference meal tray poster (with photos of meal trays with standardized % consumed) on wall in each patient room to guide tray assessors. | meals/day for 3 consecutive days. Dietitian also reviews intake record. |
Advanced Care Practices

Some patients need more than standard care to recover. Malnourished patients need strategies that provide enhanced nutrition, more frequently and in a manner that is easy for the patient to tolerate. Advanced care practices are a variety of strategies with the common goal of intensifying the ‘dose’ of energy, protein and micronutrients for malnourished patients who often feel too ill to eat.

Many hospitals have processes for promoting energy and protein dense food intake (e.g. prescribed diets, nourishments) to treat protein-energy malnutrition. Consider liberalizing malnourished patients’ therapeutic diets as a means of optimizing intake. Medication pass (medpass) of supplements (small amount of oral nutritional supplement provided by nursing, typically at medication administration times) is not as commonly used, but can be a vital mechanism for improving intake while also limiting waste of larger portions of the products. It is important to note that systems or processes to implement medpass may need to be worked out with each unit.

For many SGA B patients, these advanced care strategies can be instituted as first order treatment to start the process of improving nutritional status.

Tips to implement medpass in your hospital

- Learn from other units/hospitals in your region if they have already implemented medpass.

- Work with the dietitian on the unit and the nurse manager/ practitioners/ pharmacist/educators to plan how to roll it out on the unit.

- Don’t forget about the budget. Consider prioritizing and standardizing supplement delivery options (i.e., make medpass the first choice if the patient requires a supplement; then, if the patient does not like or tolerate medpass, provide supplements with snacks or meals etc.).

- Create criteria for indications/contraindications and guidelines for ordering /discontinuing, processes for delivery of supplement to unit, storage, consideration of shelf-life of opened product, etc.

- Determine the process for discontinuing medpass promptly when it is determined to no longer be safe due to intolerance of the viscosity (i.e. patient requires thickened fluids) or patient refusal.

- Put medpass on the Medicine Administration Record (MAR). This can take time. Work with existing processes and as part of a team that includes pharmacy, food services, and other unit/hospital members to achieve this goal.
• A paper or pseudo MAR may be suitable if unable to get medpass on the electronic MAR.

• Work with the suppliers of the product to set up a process for procuring it, as well the equipment that will support use (cups, lids, fridges etc.). Contact the supplier to see if they can provide any of the required supplies or training.

• Provide training about what is medpass, why is it important, when it should be provided, and allow staff to sample the product.

• Training may need to be tailored to the specific needs of a unit.

• Continue to provide training, as the process becomes a routine job function. Use creative reminders.

• Track and monitor adherence to, and intake of the product; report this back to the staff.

• Track wastage (from expired/opened product); report this back to the staff. Identify any challenges they experience with administering the product to patients, work as team to solve the problems.

• Database systems (e.g. CBORD) can be used to track/print reports of patients receiving medpass. This is helpful to dietitians to ensure timely follow-up and for Food Services for establishing and monitoring stock levels.

“Patients are more compliant with [nutritional supplement] shots than giving them the whole bottle.”

- Nurse
Comprehensive Nutrition Assessment and Specialized Nutrition Care

Hospital dietitians are a specialist resource and are best positioned to provide specialized care. This specialized care is provided for a wide variety of conditions and in the case of malnutrition, is especially appropriate for those diagnosed as severely malnourished (SGA C). In some malnourished SGA B patients, specialized nutrition care may be needed and clinicians completing SGA are encouraged to use their clinical judgement in these situations.

A comprehensive dietitian assessment is the basis for INPAC Specialized Nutrition Care. This assessment should occur within 24 hours of completion of the SGA. This assessment involves further investigation beyond SGA to understand the cause of malnutrition, such as evidence of micronutrient deficiencies, inflammation, pathologies such as dysphagia, etc. Treatment is typically specialized and requires an individualized nutritional care plan.

“The SGA Cs are the ones we’re paying more attention to and might be taking more of my time, but I wouldn’t have been able to weed all those out. I would have been doing the exact same thing, a full assessment on every single patient, which is time, time lost that I could have been seeing the patient who really needed to see me in a timely manner.”

- Dietitian
Discharge Planning

Patients who are identified to be malnourished (SGA B or C) and who do not fully recover their nutritional status during their admission, require ongoing care in the community. Health care teams should strive to provide a referral for ongoing nutritional treatment when rehabilitation of nutritional status is necessary. Health care teams need to provide the patient and family with community resources that can support their continued recovery in the community, for example, as list of meal programs, on-line grocery services, etc., that are available in the community.

“We need to show that we’re actually making change, and helping patients, and keeping them out of hospital, and putting safety nets in place in the community. That’s our job. I don’t think that up to this point that I really realized that we could do all those things.”

- Dietitian

Tips for developing a nutrition care discharge process

- Work with a team who is actively involved in discharge planning, e.g. discharge planner, social worker, hospital case manager for home care, nurse manager, occupational therapist, physical therapist, etc.

- Consult with other hospital health professionals to determine what they do for discharge planning. For example, occupational therapists may already be making recommendations about grocery shopping assistance or other services that can support food intake for the recovering patient.

- Meet with local/regional outpatient dietitians and health professionals in other facilities, primary care, and home care to identify community resources and discuss how referrals are currently made to their service and how this can be improved.

- Develop a list of services in your community that support food being accessible to patients; for example, meal programs (congregate dining where the patient goes to a location for the meal; meal delivery), grocery shopping and delivery, and food banks. Review this list on a yearly basis to keep it up to date. Provide phone numbers/locations and cost information.

- Develop a handout for patient/family members listing these community services, as well as general recommendations to encourage adequate food intake in the
community. This could also include signs and symptoms to watch out for, such as weight loss and poor appetite/intake.

- Discuss with your unit/hospital team how referrals can be made more consistently for patients leaving the hospital. Identify how communications can be improved (i.e., white board notes needed for referral at discharge; SGA status noted on the patient white boards; sticker on patient chart to note need for dietitian referral post discharge).

- Educate physicians who dictate discharge summaries to list the diagnosis of malnutrition.

- Educate Health Record coders to extract the diagnosis of malnutrition from the discharge summary and code using the appropriate ICD code for protein calorie malnutrition.
How

Necessary ingredients to making change in nutrition care

Now that you have reviewed what needs to happen to improve nutrition care, the next question is how. More-2-Eat helped to identify what ingredients are necessary for success when improving nutrition care. The following sections outline stages of making change, however it is important to remember that change is a dynamic process. With each newly implemented practice, stages will need to be revisited as required. Resources to support making change in your hospital can be found on the CMTF website under Resources.

Key learning points:

- Everyone has a role to play in improving nutrition care.
- A champion can drive the change, but needs a supportive team to make it happen.
- ‘Context rules’ so what works in one unit, may not work exactly the same in another.
- Education alone is not enough to improve care practices – you need to do more.
- Collecting unit level data and feeding back the results is key to stimulate and support the change process.

“What I'm hoping is that people will identify some simple small changes that will have a maximum impact for the patient.”

- Manager
**Behaviour Change**

A variety of behaviour change and change management theories and frameworks were used in More-2-Eat. The team heavily relied on the Michie et al, COM-B model to help make change:

- **Capability:** People need to know what is expected of them and have the skills to do the activity.
- **Opportunity:** Make it easy to implement the new practice.
- **Motivation:** If people do not see the need for the change, and they are not inspired to improve nutrition care of their patients, then just telling them what to do will not be enough.
- **Behaviour:** The changes in practice we are seeking from all health professionals and care providers in our hospitals who have a stake in improving the nutrition care of patients.


*With this knowledge in hand and recognizing that processes and education efforts need to be flexible and tailored, let’s begin.*
Get Ready

Are you ready? Rather than rolling out all of INPAC at once, it is recommended that the team start with one activity on one unit. The unit staff, hospital management and a few key people need to be ready before you start making changes. Staff and management need to understand that improvement is needed, and be willing to start slowly so that progress can be measured. If the unit is not ready, change will be difficult. Readiness checklists may be useful to determine if a unit is ready to take on the implementation effort. Before embarking on improving nutrition care activities, have the mindset that this is a long-term process. Sustained change takes time and dedication. Once each INPAC activity has been tested in one unit, implementation of INPAC can start to slowly be rolled out across the other units/the organization.

Top Tip

Readiness means that the unit has the capacity to take on a new initiative. Tools can help show if the staff are ready for change. A list of readiness checklists are available on the CMTF website under Resources.

Build Your Team

While senior management support is essential, a “champion” is recommended to initiate this change management effort. Champions should work with a dedicated team who is interested in making improvements and can act on decisions. Having a champion with dedicated time to implement change is critical to its success. Time and commitment of the full team will lead to changes being implemented thoroughly and quickly.

In More-2-Eat, the composition of the core change team, led by a champion, varied by hospital, but typically included:

- Unit manager/leadership
- Dietitian at management level
- Unit nurse
- Unit dietitian

“Somebody has to own it. Because if nobody owns it, then it goes by the wayside.”
- Dietitian & More-2-Eat Champion
Other people can be brought in for specific activities, such as pharmacy for starting medpass for oral nutritional supplements (ONS), food service management and staff for monitoring food intake, or discharge coordinators for discharge planning. Education or quality improvement experts are also available in many hospitals and are a key resource for improving practices.

### Top Tip

Talk to people who have made change in other areas of the hospital (outside of the nutrition department). Find out what worked for them. Speak with those involved in hospital improvement, such as implementation specialists or quality improvement committees.

### Talk to the Staff

Unit staff are the experts about what is going to work on the unit and how change can happen. By talking to the staff, you are learning from them and engaging them in the change process. When staff understand why a change is happening, and are part of the process for setting it up, they are more likely to sustain that change.

Some suggestions for engaging staff include:

- Explain why change is needed; several presentations on the aspects of INPAC have been created to support this type of engagement
- Ask what changes they want to see; Appreciative Inquiry ([Appendix 3](#)) is a way for soliciting this input and a way of imagining how nutrition care can improve
- Brainstorm ideas in discussion groups
- Seek recommendations for making that change
- Discuss the importance of adequate food intake in huddles
- Increase participation in education activities by hosting lunch or snack sessions
- Speak at professional group meetings about the initiative; use statistics and your own data to build engagement for change

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"Work with the staff and they become part of the solution to the change. It's easier to get it embedded in their daily work because they helped define what that daily work really looks like."

- Registered Nurse + Manager
• Be present on the unit so staff can ask questions
• Keep the nurse educator informed so staff can go to them with questions

Talking to staff can help improve communication and buy-in so they know what is going on and feel engaged in the process.

**Top Tip**

Want to create positive and productive discussions? “Appreciative Inquiry” uses a strength based approach to help direct these discussions. More information is available in Appendix 3.

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**Collect Unit Level Data**

Data is invaluable! Data can convince senior management that a change is needed. It will help busy professionals realize they need to make improvements for their patients. Find ways to collect unit level data that is relevant to your change efforts. This could be surveys that determine knowledge and attitudes of staff, patient experience with food service, and barriers to food intake or data on what nutrition care practices are currently occurring.

A critical piece of data to collect when implementing screening as a standard practice is to demonstrate how many patients are routinely missed by using routine referral processes. Simply conducting CNST on all patients admitted to one unit for a couple of weeks will demonstrate the gap to staff and management.

Collect baseline data on INPAC activities before starting your change effort. The data will not only demonstrate the gap in care but will allow you to track your progress with making change. Everyone (unit staff, management etc.) wants to see evidence of success. Timely reporting of results is important for keeping staff engaged and for knowing when more effort is needed.

Some ways to collect data include:

• INPAC audit tool ([Appendix 4](#))
• Nutrition knowledge, attitudes and practice questionnaire for staff

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“It [data] needs to be local, it needs to be timely and it needs to be in a format where you can see your trend and your results. The reinforcement is extremely important.”

-Manager
• Physician survey
• Nurse survey
• A patient food experience questionnaire
• Mealtime Audit Tool
• Consider other relevant data that may already be collected on the unit e.g. tray waste audits as part of your change effort

Top Tip
It's difficult to argue against the facts. Unit level data will help to establish that change is needed and help to track progress once implementation has started.

Creating Motivation

Change requires motivating the right people to do the right things at the right time. Take into consideration the values of your organization, hospital, unit and staff. Simply put, values are the things that we view as important and that motivate us. Discuss making change with a variety of stakeholders (both supporters and resistors), to understand their values and motivations. Determine what is motivating their current behaviour. Use your data to make the case for change, considering what they value. For example, if you are trying to convince senior management that nutrition risk screening is needed, show them the gap in your practice for identifying malnourished patients, then the research literature that has demonstrated that malnourished patients stay longer in hospital, and if the patient's nutritional status does not improve they have a considerably longer length of stay than those who improve.

Key questions to consider include:

• What does the stakeholder value?
• How do these values align with your goal?
• Who are the resistors to change?
• Why are they resisting the change?
• What might help them to change?

“People stay motivated when they know they're making a difference.”
- Food Service Manager
• What does your target group rely on for making decisions?
  
  o Published evidence?
  
  o Unit level data?
  
  o National data?
  
  o Potential solutions to the problem?
  
  o The impact of the change on daily routines/workload?
  
  o Cost implications?
  
  o Patient benefit? (Everyone wants changes to benefit the patients!)

*Are you ready?*

This process of getting ready will help you see opportunities and challenges. Understanding what motivates people and where challenges exist will help the group navigate through the next steps. Be flexible and realistic. Small wins will build momentum for continuing nutrition care improvements. Celebrate success with each small win.
Buy In and Engagement

As with any change, you need to get the right people involved. Everyone has a role to play in nutrition care, but not everyone needs to be involved all the time. You'll need initial buy-in from management through to buy-in from front line staff and anyone who will be affected by the changes. Start with the believers. Provide education about the problem. Seek feedback on potential solutions. This will help the team feel engaged in the process, which will facilitate their buy-in. Remind staff why the change is important to patient outcomes. The ADKAR process is one way to build this engagement (Appendix 5).

Keeping Everyone Engaged

The More-2-Eat champions found that demonstrating meaningful changes in patient care was important for engagement. Build a 'we are all in it together’ attitude, so everyone is part of the solution, and it’s not falling on one individual or profession. This engagement is important for both the change management team, as well as the staff affected by the change. Appendix 6 provides an overview of roles that various professionals, volunteers and patients and families can take on to support improved nutrition care for all patients. A questionnaire, to help you understand the nutrition knowledge, attitudes and practices of hospital staff, is available. Completion of this questionnaire before starting the change initiative can identify areas of INPAC to target, as well as the educational needs of staff.

Volunteers, patients, their families and friends should have a say in what needs to be changed to improve nutrition care. Solicit their ideas and feedback about the proposed change. Two standardized questionnaires (Patient Experience and Mealtime Audit Tool) can be used to elicit this information.

Remember:

- Engagement is a continual process

- Continually infuse the team with the necessary support and acceptance that can lead to lasting positive feelings

- Listen and respond to concerns and needs

“I think really asking nursing and staff feedback was a good way to start and a good way to continue on through. I think it kept them engaged.”

- Dietitian + More-2-Eat Champion

“It’s almost like saying every patient needs to walk but that doesn’t mean that physio needs to walk with every patient. Right. Every patient needs proper nutrition care but that doesn’t mean it should necessarily be a dietician.”

- Physiotherapist
• Be respectful and positive in your actions and communications
• Build an environment of trust and cooperation
• Communicate and collaborate with stakeholders to develop the process for each INPAC activity
• Show appreciation and acknowledgment of ideas, change efforts, etc.
• Thank individuals either publicly or personally for their positive actions towards making improvements
• Make sure everyone knows that this is a multidisciplinary approach that does not rely on one profession

**Top Tip**
Proactive actions and interactions will build the necessary ‘warmth’ to make and sustain positive change within the team and the staff overall. A strong team who is ‘in it together’ is kind to each other and forgives when mistakes happen.

**Leadership Buy-in and Engagement**

Typically, leadership wants to see the evidence behind any new initiative, how it will affect patient care and the cost to implement. Demonstrating the benefit for the patient is a strong motivator for staff and management. Use the unit level baseline data collected in “Getting Ready” and other national evidence to demonstrate the problem.

Leadership buy-in may take some ‘selling’ by the champion and change team members. Remember to go back and consider what the stakeholder values. What will motivate them to support your initiatives? What evidence do you have to align with that value? A variety of PowerPoint presentations have been created to support these efforts and are located on the CMTF website under Resources.

“If they think it’s affecting patient care, if they think they’ll make the patients better and if they think it’ll make the care more efficient and less expensive, I don’t think it’s a tough sell at all.”
- Attending Physician
**Breaking Down Silos**

Cross-departmental engagement and communication is needed for most INPAC activities. Consider carefully who needs to be engaged and when. There are many departments and individuals that can be involved, such as food service, pharmacy, occupational therapy, physiotherapy, the volunteer coordinator and many more. Appreciative Inquiry and ADKAR processes can develop the necessary buy-in from a variety of stakeholders.

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**Top Tip**

Start with the believers - those who agree that change needs to be made. Capitalize on their motivation to help build capacity and identify opportunities to make the nutrition care activity the easy and the right thing to do.

"I think it [M2E] has improved teamwork. I think because we’re all in it together, it’s not just the nurse that needs to do it, it’s not the healthcare aide, it’s anybody coming and going in that room. ... Anybody can help, it’s not just one person’s task.”

- Manager

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**Top Tip**

In talking to other departments about the plans, ask what they are already doing and make sure you don’t re-invent something that is already working well.

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**Communication is Key**

Keep your communications with everyone involved simple and focused. Some questions to consider include:

- What does this stakeholder (management, unit staff, etc.) need to know?
- When do they need to know it?
- How much detail do they need?
- What questions do you have that are most applicable to them?
- Is this the right time to ask those questions?
Some ways to communicate your message include:

- One-on-one discussions (preferably face-to-face)
- Huddles
- Team rounds
- Printed reminders/posters (in easy to see areas and changed regularly)
- Brief (one page or less) memos, newsletters or e-mails (don’t expect everyone to read their e-mail)
- Informal chats

Everyone is busy. Respect the stakeholders’ time; be mindful that over-communicating has a downside if too many updates or too much detail is provided. This can be overwhelming and the stakeholder may consider the change too difficult to accomplish or the detail irrelevant so they become disengaged.

There is also a fine balance when seeking feedback. You want several relevant opinions, however if people feel that their ideas are not put into action, this could result in lack of trust for the initiative.

Top Tip
Seeking feedback and keeping everyone engaged is important. However, just as important is incorporating that feedback, deciding, and moving on.
**Adopt**

Changes need to be embedded into the routine. Start small. Make the process as easy as possible. Create realistic goals that include a timeline and target so momentum can be built that will keep the plan moving forward (e.g. by September 1, 80% of all admitted patients will be screened within 12 hours of admission by nursing staff). More-2-Eat sites collected data (i.e. INPAC audits) and reported results to relevant team members to stimulate continued improvements to meet goals. Reward successes and provide continued support to those who need it. Slowly, the changes will become part of the routine.

Now that a motivated, engaged group of stakeholders and team members interested in making improvements has been assembled, remember that change takes time. A slow, careful process is more likely to lead to lasting change. An example of the process for adopting and embedding nutrition screening into routine is provided in Appendix 7.

**Embedding into Routine**

To be sustained, the change should be incorporated into the routine. The Model for Improvement (see Appendix 8) and the Plan-Do-Study-Act cycle (see Appendix 9) are useful for starting your change process. Key points when embedding change:

- Determine who might be the right person/profession to conduct the task/INPAC activity
- Find out the capacity level of that person/profession and how easy/challenging they think it would be
- Find out what process they think would work for getting the change into their routine
- Trial the activity (e.g. screening) with a few of the staff or a few patients (i.e., a Plan-Do-Study-Act cycle)
- Once they have trialed it, talk to those involved to find out what would make it easier to do this new/different activity

“So you have to start small, iron out the kinks if you will and then replicate it.”
- Manager

“I certainly think that people feel a lot less, I think, angst knowing that they’re trialing something for a short period of time and of it is not going to work out we can tweak it and modify it and that it’s not something that’s for you know longer periods of time.”
- Manager
• If needed, adapt the process to make it easier

• Decide what level of education/training is needed to roll out the change (i.e. training on screening can be short and focused, while SGA training will require more time)

• Educate the staff about the change and the impact it may have on their daily roles

Top Tip
To help embed change, use resources, etc. that are available in the hospital, such as a volunteer program, quality improvement specialist or councils, forms committees, decision support, etc.

Standardize the Process

Once a process has been established, standardize it. Educate staff on the process, reinforce by using data to ensure that the process happens the way it was planned (i.e. patients screened at risk are referred). A variety of techniques can be used to influence the opportunity, motivate and build capability with the aim of changing behavior to a standardized process. Examples of techniques used in More-2-Eat sites are provided in Appendix 10.

When the activity is close to being routine, avoid micro-managing, and give over control of the activity to relevant people. For example, once screening is consistently going well, the training for screening can be incorporated as part of routine nursing orientation for new staff. It is important to remember that excellence does not equal perfection. Take pride in the success and consider how far the team has come.

Top Tip
Communicate successes beyond the unit to other stakeholders such as relevant management or regional leaders. This will keep the nutrition care improvements in the forefront and will be a positive change for the unit and hospital overall.

“I feel like it’s becoming a habit now that we’re paying attention to nutrition.”
- Registered Nurse + Manager
**Evaluate Progress and Report Results**

Evaluate progress to determine effectiveness and if additional change is required. Report results to those involved (and management, when applicable). Collecting data means attention is being paid to this new/improved care activity. In the More-2-Eat project, data on incorporation of INPAC activities into routine practice was collected each month. Champions then presented the results in a variety of formats to team members involved in making the change. Activities are perceived as important and relevant when they are tracked (particularly when compared to baseline data that will have been collected). The INPAC audit (Appendix 4) is a key data collection tool for use with making change. Consider other ideas for data collection such as the time it takes to complete food intake monitoring.

Collecting data will also identify those ‘sticking points’ in the process that need to be reconsidered. If your strategy is not working (i.e. change is not becoming embedded), reassess and change your strategy. A strong team that is ‘in this together’ will recognize that sometimes they fail, even when they have consulted and planned. That does not mean they stop. They go back to the beginning, re-think and rework. Passionate champions and core team members stick with it when change is hard.

**Acknowledge All Successes**

Support those making the change. Acknowledge all successes – even the small ones. This recognition will encourage the team overall. Staff will recognize that what they are doing and the effort they are making is valued.

"Well, we have to keep auditing. Audits are a huge thing. If you keep auditing and you see that it's fallen to the wayside then you can talk about it more. And keep trying to sustain everything that we’ve started.”
- Registered Nurse + Manager

"I think we made great strides in terms of making nutrition a priority on the medical units, which is a great thing.”
- Manager

Talk about the strategies used to change practice on the unit and their benefits, which may include the potential for increased job and unit satisfaction. Keep the nutrition care improvements visible and at the forefront for team members, especially those who are influential. For example, display “run charts” of INPAC audits focusing on the specific activity being worked on, so that all staff can see the results. Consider incentives, friendly competition and other ways to motivate unit teams.
Example of a unit level data used to track rates of nutrition screening over one year.
Keep it Going

Congratulations! You have reached your goal and made a new/improved nutrition care activity part of the routine. But, it doesn’t stop here. Once changes are embedded into routine, occasional INPAC audits, reminders, etc. are needed to make sure that the change stays part of the routine. Try not to lose momentum. There may be a drop in performance of the new practice, but this is to be expected. Use data as a reason to re-engage staff on the activity and keep it in the forefront of their routine. Champions need to be tenacious with making and sustaining nutrition care improvements.

Re-energize the Message

Changing a process takes time and effort. Re-energize the message and use various strategies to keep momentum going. Take the long view. For the champion, this may result in a role change to support continued improvements and spread throughout the organization. As with other stages of the change process, conduct occasional INPAC audits and provide timely feedback of the results. Keep acknowledging efforts and celebrate success.

All More-2-Eat champions recognized that INPAC audit data was the most important way of sustaining the nutrition care improvements.

Don’t Lose Focus

Plan for refreshers on the importance of nutrition to re-ignite the unit team. Report back the results to show successes and areas for improvement. Results of small research projects (e.g. dietetic intern or student volunteer tracking mealtime barriers with the Mealtime Audit Tool) presented at medical rounds may be a good way to re-stimulate interest. Consider implementing another nutrition care activity in INPAC once the first one is firmly embedded as routine in the unit.

“So we decided on a date and a process and a communication plan and you roll out and you keep talking about it, keep talking about it, keep talking about it. It takes awhile for people to remember or grasp the change but I think it’s working out pretty well.”

- Registered Nurse + Manager

Top Tip

Make the nutrition care changes a shared responsibility and a normal occurrence and expectation.

Engage New Staff
Plan how to motivate and build capability of new staff for the nutrition care activity. Consider:

- How will you ensure that new staff is aware, sees the relevance of, and knows how to complete the nutrition care activity?
- What standard communication processes for new staff can be adapted?
- Do orientation packages, training checklists for new employees and other organizational processes need to be modified? If so, how?

Use templates for education, reminders etc. that are provided on the CMTF website under Tools so time can be spent on implementation activities rather than development of key messages.

**Expand on Your Success**

Slowly start to roll out the successful changes. Remember, every unit/hospital/region is different and what worked in one unit may not work in another. When starting on a new unit or implementation of another INPAC activity, it may be time to go back to “Getting Ready”. This time, you will already have learned from your previous experience, will have the support of unit staff and management who have experienced the hard work and success, thus will be allies in implementing change beyond the initial unit.

**Top Tip**

When possible, work with the region/hospital so unit change can align with regional/hospital changes.

“... I think this [M2E] is just a start, and after the study is over we need to continue and that is something that speaks to me loud and clear, that this isn’t just something that stops after the study is over. We’ve got to keep going and figuring out how we can continue making it important, and that nutrition is important and that food is medicine.”

- Dietitian + More-2-Eat Champion
Become Part of the INPAC Community

Do you have questions, ideas, or thoughts about changes you want to make? Do you want to learn and share with others? Join the INPAC Community of Practice so we can all learn together.

Contact info@nutritioncareincanada.ca if you would like to join the Community of Practice.
Appendix

Appendix 1: Integrated Nutrition Pathway for Acute Care and guidance document

Appendix 2: Subjective Global Assessment form

Appendix 3: Appreciative Inquiry

Appendix 4: INPAC Audit

Appendix 5: ADKAR Framework

Appendix 6: Involving everyone in nutrition care

Appendix 7: A Step-by-Step Guide to Implementing Change: the example of embedding screening into practice.

Appendix 8: Model for Improvement

Appendix 9: Plan-Do-Study-Act cycles

Appendix 1: Integrated Nutrition Pathway for Acute Care and guidance document (Also available here)

INPAC: INTEGRATED NUTRITION PATHWAY FOR ACUTE CARE

What is INPAC?

An evidence-based algorithm developed by Canadian clinicians and researchers to detect, monitor, and treat malnutrition in acute care patients.

INPAC is based on the key principle that an integrated approach – or involvement from the whole health care team – is required to treat malnutrition. INPAC is a minimum standard; institutions that provide care beyond this minimum should continue to practice at their higher quality standard.

It is recommended that each hospital establishes an interdisciplinary team to promote and sustain the nutrition culture change required to implement INPAC.

INPAC: Designed to support nutrition health and care

Nutrition Screening at Admission
Complete the Canadian Nutrition Screening Tool (CNST):

1. Have you lost weight in the past 6 months without trying to lose this weight?
2. Have you been eating less than usual for more than a week?

See reverse for further detail…
**INPAC Toolkit © December 4, 2017**

**HOW DOES INPAC WORK?**

INPAC involves nutrition screening – followed by a subjective global assessment in individuals deemed AT RISK – to categorize patients according to the level of nutrition care that they require: Standard, Advanced, or Specialized.

### Nutrition Screening at Admission

If patient answers "Yes" to both Canadian Nutrition Screening Tool (CNST) questions listed on reverse side
OR if any of the following apply to the patient:
- Requires enteral/parenteral nutrition
- Unable to complete CNST (e.g., language barrier, altered mental status)
- Transferred from critical care
- Has high nutrient requirement conditions (e.g., trauma, burns, pressure injuries, SIRS, etc.)

...then follow "AT RISK" pathway (on reverse).

If none of the above apply, then follow "NO RISK" pathway.

### Subjective Global Assessment (SGA)

SGA is a gold standard for diagnosing malnutrition in hospitals. Dietitians or other trained professionals assess weight change, food intake, functional status, and body composition. SGA takes approximately 10 minutes.

### Standard Nutrition Care

- Sit patient in chair or position upright in bed
- Ensure vision and dentition needs are addressed
- Address nausea, pain, constipation, diarrhea
- Confirm food is available between meals
- Ensure bedside table is cleared for tray set-up, open packages, provide assistance and encouragement to eat
- Encourage family to bring preferred foods from home
- Monitor and report key clinical observations/measurements:
  - Food intake
  - Duration of NPO/clear fluid intake
  - Hydration status
  - Body weight (preferably at admission and weekly)
  - Signs of dysphagia

### Advanced Nutrition Care

Continue Standard Nutrition Care practices AND
- Assess and address barriers to food intake
- Promote intake with 1 or more of:
  - Nutrient dense diet (high in energy, protein, micronutrients)
  - Liberalized diet
  - Preferred foods
  - High energy/protein shakes/drinks (at/or between meals or as ‘medpass’, a small amount provided at each medication administration)

### Comprehensive Nutrition Assessment and Specialized Nutrition Care

Continue Standard & Advanced Nutrition Care strategies where appropriate. Patient will undergo a comprehensive nutrition assessment completed by the dietitian, which involves:
- More detailed assessment of nutrition status using physical examination, body composition, food intake, clinical history, and biochemical markers
- Further identification of barriers to food intake (e.g., medication side effects, depression, etc.)
- Identification of eating behaviours that will support food intake
- Individualized treatment and monitoring
- Enteral and/or parenteral nutrition

### Post-Discharge Nutrition Care

If patient is malnourished (SGA B or C) upon admission or during hospitalization, nutrition is an active issue in the discharge summary note (completed by dietitian, physician or nurse)
- Education provided to patient and family
- Referral to community resources (e.g., meal programs, grocery shopping)
- Send discharge summary with patient and a copy to family physician/care provider in the community; refer to appropriate resources in the community

### Quality nutrition care and patient safety with INPAC

For more information and details on how to implement INPAC, please visit http://nutritioncareincanada.ca/inpac/inpac-toolkit

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**Food is Medicine**
November 2017

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This research was funded by the Canadian Frailty Network (CFN).
Instructions for the Integrated Nutrition Pathway for Acute Care (INPAC)

The INPAC is:
- an evidence-based, field-tested algorithm for the prevention, detection, treatment, and monitoring of malnutrition
- designed for acute care medical and surgical patients
- designed to detect nutrition risk and malnutrition upon admission to hospital or as they develop during hospitalization, and not other conditions that require nutrition expertise
- a minimum standard for nutrition care; hospitals or units providing care above this minimum are encouraged to continue their high quality practice
- involves the entire healthcare team, and the patient and family in their nutrition care
- an algorithm for all team members which all have a role to play in improving nutrition care; roles are suggested but not exclusive to key professional groups.

To ensure successful implementation and sustainability, it is recommended that each hospital establish champions and an interdisciplinary team to implement the INPAC.

NUTRITION SCREENING AT ADMISSION

Within 24 hours of admission a designated professional completes the Canadian Nutrition Screening Tool (CNST):
1. Have you lost weight in the past 6 months WITHOUT TRYING to lose this weight?
2. Have you been eating less than usual FOR MORE THAN A WEEK?

- The Canadian Nutrition Screening Tool (CNST) is recommended as it is a valid, reliable, and quick tool to assess malnutrition risk.
- Nursing is often the first discipline to complete the patient admission assessment form and these two screening questions can be easily embedded into their current assessment tools.
- Others who interact with the patient within a few hours of admission (e.g. physician, diet technician) could also complete the nutrition screening.
- Page 2 of INPAC includes some situations where screening is not feasible (e.g. patient cannot answer questions) or where high risk factors/situations are present (e.g. patient requires nutrition support, severe cognitive barriers, transfer from intensive care etc.). In these instances, patients should be directly referred to a dietician for nutritional evaluation and determination of nutrition care plan.
- Weekly re-screening is not necessary if monitoring for all patients routinely occurs (e.g. daily food intake, weekly weight).

Patients NOT at nutrition risk:
Standard Nutrition Care path

- Standard Nutrition Care
  - This is a standard of care provided to ALL patients.
  - Standard Nutrition Care promotes food intake and weight monitoring of the patient so that poor food consumption can be identified and attended to early.

Patients AT nutrition risk:
Standard Nutrition Care path

- Subjective Global Assessment (SGA)
  - Patients identified to be at nutrition risk require a diagnosis to confirm malnutrition. SGA is recommended for making a diagnosis and triaging further nutrition care.
  - Dietitians or other trained professionals can conduct SGA.
  - Ideally, SGA is completed within 24 hours of being screened at risk. If the patient is admitted and screened at risk over the weekend, Advanced Nutrition Care procedures can be instituted until the SGA is completed.

November 2017
If patient is confirmed to be malnourished (SGA B or C) they should receive Advanced or Specialized Nutrition Care.

Dietitians will decide, based on their clinical judgment, if a comprehensive nutrition assessment is required for SGA B patients.

Dietitians will decide, based on their clinical judgment, if an SGA A patient requires Advanced Nutrition Care.

**When a patient requires Advanced Nutrition Care**

**Advanced Nutrition Care**

- Continue Standard Nutrition Care procedures, PLUS
- Provide more nutrient dense food to patients at and between meals to optimize oral intake.
- Methods to increase the nutrient density of the diet should be implemented at the next meal for these patients, such as:
  - Provide high energy and high protein food offerings at and between meals.
  - Small amounts of oral nutritional supplements (e.g., 60 mL) can be provided at each medication round.
  - Provide preferred foods.
  - Have nutrient dense snacks available on the ward, and offer frequently.
- Assess barriers to food intake, for example, patient needs to have food packages opened, too many interruptions at meal times, etc.
- Collaboration with and education of the patient/family and health care team to improve intake is essential.
- Monitoring of food intake should be done daily.
- If overall food intake (meals, snacks, supplements) is 50% or less of what is provided, action may be required to address low intake. This action may include referral to a dietitian or nutrition support team to deliver Comprehensive Nutrition Assessment and Specialized Nutrition Care.
- A patient can be returned to Standard Nutrition Care if their intake is significantly improved and the current diet prescription meets their needs.

**When a patient requires Comprehensive Nutrition Assessment and Specialized Nutrition Care**

**Comprehensive Nutrition Assessment and Specialized Nutrition Care**

- Continue Advanced Nutrition Care procedures, PLUS
- A dietitian should conduct a comprehensive nutrition assessment and undertake active treatment to improve nutritional status. This is specifically recommended for SGA C patients.
- Comprehensive nutrition assessment should occur immediately after SGA rating, or ASAP.
- A comprehensive nutrition assessment may include additional physical nutrition examination, body composition, dietary assessment, medical history, biochemical markers, as well as evaluation of swallowing function if required.
- Additional barriers to food intake may need to be investigated (e.g., pain management, nausea, depression)
- Treatment is typically specialized and requires an individualized nutritional care plan.
- Enteral or parenteral nutrition or other treatments that are not provided as part of Advanced Nutrition Care may be required to meet the nutrition needs of patients.
- Collaborate with and educate the patient/family and health care team to help the patient improve their food intake.
- Frequency of follow-up and types of monitoring data collected will be individualized.
- A patient can be returned to Advanced Nutrition Care if their intake is significantly improved and the current diet prescription meets their needs.

**At Discharge**

- All patients receiving Advanced or Specialized Nutrition Care

**Post-Discharge Nutrition Care**

- Patients who are identified to be malnourished (SGA B or C) and who do not fully recover their nutritional status during their admission, require ongoing care in the community.
- Educate the patient and family on key community resources that can support access to food (e.g., meal programs, grocery shopping services).
- Educate the patient and family on key aspects of their nutrition care plan to support continued recovery in the community.
- Provide details for patients, primary caregivers, and other practitioners involved in post-discharge care, about the patient’s nutritional status (e.g., SGA rating, body weight) and treatment provided during hospitalization, as well as recommendations for continuing this care. Request a referral for ongoing nutritional treatment by a dietitian when rehabilitation of nutritional status is on-going.

The Integrated Nutrition Pathway for Acute Care was funded by the Canadian Frailty Network (CFN), which is supported by the Government of Canada through the Networks of Centres of Excellence (NCE).

For more information, and details regarding how to implement INPAC, please visit:

http://www.nutritioncarecanada.ca/inpac/inpac-toolkit

November 2017
Appendix 2: Subjective Global Assessment form (Also available here)

<table>
<thead>
<tr>
<th>Subjective Global Assessment Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEDICAL HISTORY</strong></td>
</tr>
<tr>
<td>Patient name: ___________________</td>
</tr>
<tr>
<td><strong>NUTRIENT INTAKE</strong></td>
</tr>
<tr>
<td>1. ☐ No change; adequate</td>
</tr>
<tr>
<td>3. ☐ Minimal intake, clear fluids or starvation</td>
</tr>
<tr>
<td>4. ☐ Minimal intake, clear fluids or starvation</td>
</tr>
<tr>
<td>5. ☐ Improved but not adequate</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
</tr>
<tr>
<td>Usual weight: __________</td>
</tr>
<tr>
<td>1. ☐ Non fluid weight change past 6 months</td>
</tr>
<tr>
<td>2. ☐ 5-10% loss or weight stability</td>
</tr>
<tr>
<td>3. ☐ &gt;10% loss and ongoing</td>
</tr>
<tr>
<td>5. ☐ None or mild</td>
</tr>
<tr>
<td>7. ☐ Severe</td>
</tr>
<tr>
<td><strong>SYMPTOMS</strong> (Experiencing symptoms affecting oral intake)</td>
</tr>
<tr>
<td>1. ☐ Pain on eating</td>
</tr>
<tr>
<td>3. ☐ Nausea</td>
</tr>
<tr>
<td>5. ☐ Diarrhea</td>
</tr>
<tr>
<td><strong>FUNCTIONAL CAPACITY</strong> (Fatigue and progressive loss of function)</td>
</tr>
<tr>
<td>1. ☐ No dysfunction</td>
</tr>
<tr>
<td>3. ☐ Difficulty with ambulation/normal activities</td>
</tr>
<tr>
<td>4. ☐ Fatigue/weight loss</td>
</tr>
<tr>
<td><strong>METABOLIC REQUIREMENT</strong></td>
</tr>
<tr>
<td>High metabolic requirement: ☐ No</td>
</tr>
<tr>
<td><strong>PHYSICAL EXAMINATION</strong></td>
</tr>
<tr>
<td>Loss of body fat: ☐ No</td>
</tr>
<tr>
<td>Loss of muscle mass: ☐ No</td>
</tr>
<tr>
<td>Presence of edema/ascites: ☐ No</td>
</tr>
<tr>
<td><strong>SGA RATING</strong></td>
</tr>
<tr>
<td>☐ A Well-nourished Normal</td>
</tr>
<tr>
<td>Some progressive nutritional loss</td>
</tr>
<tr>
<td><strong>CONTRIBUTING FACTOR</strong></td>
</tr>
<tr>
<td>☐ CACHEXIA - (fat and muscle wasting due to disease and inflammation)</td>
</tr>
<tr>
<td>☐ SARCOPENIA - (reduced muscle mass and strength)</td>
</tr>
</tbody>
</table>

*See page 2 SGA Rating for more description. April 2017*
### Subjective Global Assessment Guidance For Body Composition

#### SUBCUTANEOUS FAT

<table>
<thead>
<tr>
<th>Physical examination</th>
<th>Normal</th>
<th>Mild/Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under the eyes</td>
<td>Slightly bulging area</td>
<td>Somewhat hollow look,</td>
<td>Hollowed look, depression, dark</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slightly dark circles.</td>
<td>circles.</td>
</tr>
<tr>
<td>Triceps</td>
<td>Large space between fingers</td>
<td>Some depth to fat tissue</td>
<td>Very little space between fingers,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>but not ample.</td>
<td>or fingers touch.</td>
</tr>
<tr>
<td>Ribs, lower back, sides of trunk</td>
<td>Chest is full; ribs do not show</td>
<td>Rib prominence; not marked.</td>
<td>Indentation between ribs very</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>obvious. Iliac crest somewhat</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>prominent. Iliac crest very</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>prominent.</td>
</tr>
</tbody>
</table>

#### MUSCLE WASTING

<table>
<thead>
<tr>
<th>Physical examination</th>
<th>Normal</th>
<th>Mild/Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temple</td>
<td>Well-defined muscle</td>
<td>Slight depression</td>
<td>Hollowing, depression</td>
</tr>
<tr>
<td>Clavicle</td>
<td>Not visible in males; may be</td>
<td>Some protrusion; may not</td>
<td>Prominence/visible bone</td>
</tr>
<tr>
<td></td>
<td>visible but prominent in</td>
<td>be visible all the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>females</td>
<td>way along</td>
<td></td>
</tr>
<tr>
<td>Shoulder</td>
<td>Rounded</td>
<td>No square look; acromion</td>
<td>Square look; bones prominent</td>
</tr>
<tr>
<td>Scapula/ribs</td>
<td>Bones not prominent; no</td>
<td>Mid depressions or bone</td>
<td>Bones prominent; significant</td>
</tr>
<tr>
<td></td>
<td>significant depressions</td>
<td>may protrude slightly</td>
<td>depressions</td>
</tr>
<tr>
<td>Quadriceps</td>
<td>Well defined</td>
<td>Depression/amophy midway</td>
<td>Prominent knee; Severe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>depression medially</td>
</tr>
<tr>
<td>Interosseous muscle between thumb and forefinger (back of hand)**</td>
<td>Muscle protudes; could be fat in females</td>
<td>Slighty decreased</td>
<td>Fat or depressed area</td>
</tr>
</tbody>
</table>

#### FLUID RETENTION

<table>
<thead>
<tr>
<th>Physical examination</th>
<th>Normal</th>
<th>Mild/Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edema</td>
<td>None</td>
<td>Pitting edema of extremities / pitting oedema if bedridden</td>
<td>Pitting beyond knees, sacral edema if bedridden, may also have generalized edema</td>
</tr>
<tr>
<td>Ascites</td>
<td>Absent</td>
<td>Present (may only be present on imaging)</td>
<td></td>
</tr>
</tbody>
</table>

---

A - Well-nourished: no decrease in food/nutrient intake; < 5% weight loss; no/minimal symptoms affecting food intake; no deficit in fat or muscle mass OR *an individual meeting criteria for SG A B or C but with recent adequate food intake; non-fluid weight gain; significant recent improvement in symptoms allowing adequate oral intake; significant recent improvement in function; and chronic deficit in fat and muscle mass but with recent clinical improvement in function.

B - Mildly/moderately malnourished: definite decrease in food/nutrient intake; 5% - 10% weight loss without stabilization or gain; mild/some symptoms affecting food intake; moderate functional deficit or recent deterioration; mild/moderate loss of fat and/or muscle mass OR *an individual meeting criteria for SG A B or C but with improvement (but not adequate) of oral intake, recent stabilization of weight, decrease in symptoms affecting oral intake, and stabilization of functional status.

C - Severely malnourished: severe deficit in food/nutrient intake; > 10% weight loss which is ongoing; significant symptoms affecting food/nutrient intake; severe functional deficit OR *recent significant deterioration obvious signs of fat and/or muscle loss.

Gastrointestinal - If there is an underlying predisposing disorder (e.g. malignancy) and there is evidence of reduced muscle and fat and no or limited improvement with optimal nutrient intake, this is consistent with cachexia.

Sarcopenia - If there is an underlying disorder (e.g. aging) and there is evidence of reduced muscle and strength and no or limited improvement with optimal nutrient intake.

**In the elderly prominent tendons and hollowing is the result of aging and may not reflect malnutrition.
Appendix 3: Appreciative Inquiry

What is Appreciative Inquiry?

The Appreciative Inquiry Change Process
(The 5-D cycle)

- **Definition**: What are we trying to achieve?
- **Discovery**: When did /does this happen?
- **Dream**: What could it look like?
- **Design**: How can we create the change?
- **Delivery**: Implement the change

Appreciative Inquiry (AI) can be used in INPAC implementation to create positive and productive discussions to determine what needs to be changed on the unit and how to plan for this change.

AI uses a **strength-based approach**, using affirmative and positive assumptions of the issue (e.g. providing quality nutrition care) and uses a 5-D cycle to help the team identify how to do things differently and make a change.

*AI starts with identifying what supports nutrition care on the unit instead of what is not working.*

To truly address change, the whole team needs to be engaged.

By directing attention on the positive components, such as best practices or positive experiences, it helps the unit move towards this focus.

Application of Appreciative Inquiry

There are a variety of applications for AI that range from informal (e.g. framing a conversation with a colleague using AI principles) to organization wide interventions (e.g. AI Summit: a face-to-face large group planning meeting, such as a stakeholder meetings)

<table>
<thead>
<tr>
<th>Element</th>
<th>Sample Topics of Inquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>What are you trying to achieve? E.g. Improving meal delivery so that food is hot and patients have all that they need to eat.</td>
</tr>
<tr>
<td><strong>Discovery</strong></td>
<td>Describe a time when patients received exceptional quality mealtime care (e.g. hot food was provided on time, a nurse was available to assist with eating, and the environment was suitable for mealtime).</td>
</tr>
<tr>
<td><strong>Dream</strong></td>
<td>Imagine a system where the majority of patients receive this high quality of care and food is enjoyed and consumed, and patients leave hospital in a better nourished state. What is different in this system? What does this look like on a daily basis?</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>What could you do to create this ‘dream’ mealtime system?</td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td>Design the plan to achieve the goal.</td>
</tr>
</tbody>
</table>
Appendix 4: INPAC Audit

The Integrated Nutrition Pathway for Acute Care (INPAC) Audit

The INPAC is an evidence-based algorithm for the prevention, detection, treatment and monitoring of malnutrition in acute care medical/surgical patients. The algorithm is based on consensus from leading Canadian experts, clinicians and other stakeholders (Keller et al, 2015).

The INPAC Audit is a tool to help healthcare teams track routine nutrition care activities on one unit. Auditing practice will help to determine progress with the implementation of INPAC activities in a unit/hospital (e.g. screening at admission). These audits represent the status of activities as of the audit date/time and may not capture all activities (i.e. some activities may be completed later in the day).

How to complete the audit:

- Any staff member can be trained to complete the audit
- Data can be collected from any of the following sources of information, typically available on the patient health record:
  - Order sheets
  - Assessment forms (physician, nurse, dietitian, other allied health)
  - Diagnostic records/reports
  - Monitoring records
  - Progress notes
  - Department specific documentation

Note: Use the same data sources for each audit. It is also advisable to use the same staff member or a small group of trained staff members to complete audits, to ensure that variability over time is due to improvement and change management practices. Data should only be inputted from written documentation, and should not include verbal sources (i.e. if a staff member verbally mentioned a task was completed, but it is not in the notes, this should not be included).

When to complete the audit:

- To assess baseline levels before implementation of a new care activity begins it is recommended to complete 2-4 audits over a relatively short time span (e.g. 2 months).
- It is recommended to complete the audit once per month after implementation of a new activity has started.
- To complete the audit, data is collected from the documentation for every patient on the unit that day, even if they are just admitted or about to be discharged.
Audit Item Clarifications:

**Auditor initials:** Initials provide an opportunity for auditors to self-identify if any questions arise as a result of the audit.

**Codes:** Codes can be developed for the unit hospital; these should be unique identifiers e.g. Unit 3A at Hudson Bay Hospital.

**A patient identifier:** Keeping this identifier as generic will help to keep patient information confidential; for example, the following identifies the unit and bed that the patient occupied during the audit (3A1D)

**Date of audit and audit number:** These will help to keep track of audits and ensure that data are included in the correct month of implementation.

1. **Patient information:**
   a. **Birthdate:** To keep the data anonymous, only collect the year of birth (not day or month). Age can be calculated from year of birth to provide descriptive information on patients. Record sex for this purpose as well.
   b. **Date admitted to unit:** This should be the date admitted to the current unit on which the audit is being completed.
   c. **Transfer:** Transfer information is useful when practices vary by unit, for example, if screening is not completed on all units. Indicate if the patient has been transferred from another unit in the hospital (not other hospitals). Review documentation from the beginning of this hospitalization to determine if INPAC activities were completed.

2. **Diagnoses:** List all medical diagnoses that are being treated/managed as part of the current hospital visit, not from previous admissions.

3. **Screening:** Indicate if screening was completed and the result of risk/no risk. If not completed, attempt to identify and provide the reason (e.g. new to unit, transfer from ICU/CCU and dietitian treatment already initiated etc.)

4. **Subjective global assessment (SGA):** There are three potential options for this question and one must be completed.
   - **Option 1:** SGA was completed; also provide the result of SGA A, B or C.
   - **Option 2:** Referred for SGA, but yet to be completed.
   - **Option 3:** SGA not completed; identify the reason, either because the patient was not at risk or another specific reason.

5. **Comprehensive dietitian nutrition assessment:** There are four options to this question and one must be completed.
   - No assessment required is checked when the patient is not at risk and/or is an SGA A/or B. In some units/hospitals SGA B patients will be routinely provided advanced care strategies and not automatically undergo a comprehensive dietitian assessment.
• If option of ‘not completed’ is selected, this would indicate the assessment should have been completed (i.e., SGA C or in some units/hospitals also SGA B). Provide a reason for non-completion (e.g. palliative).

6. **Nutrition treatment of SGA B or C patients:** Check all treatments provided to patients identified to be SGA B or C. ONS= Oral nutritional supplement. Fill in additional details if “other” is selected.

7. **Food intake monitoring:** This question has several parts, dependent on the prior answer. If 7a = no, skip to question 8. If 7b= no, skip to question 8. If 7c= no, skip to question 8. For 7d, provide any actions taken that were triggered by low food intake. Some actions may have been in place before food intake monitoring was completed; only record new actions triggered by the food intake monitoring.

8. **Body weight (admission):** Indicate yes if a body weight measurement was completed at admission (not estimated).

9. **Body weight (monitoring):** Indicate yes if a body weight measurement was completed after admission (not estimated).

10. **Discharge:** Nutrition discharge planning can take many forms. What is important to note is if any such planning/education or organizational activities with respect to discharge are noted on the chart and other documentation e.g. discharge planning discussed in rounds and specific to malnutrition, food access etc. To be noted here, this activity has to be specific to nutrition.

*Note: This audit is provided in Word format so that additional nutrition care activities pertinent to the unit/hospital can be included as desired.*

**How to Report Results:**

As the audit tool is meant to track progress over time, report results back to the healthcare team so they are aware of the progress. Below is an example of an audit tracking report created using Word/Excel.

![Graph showing percentage of patients that had screening completed over time](image)
INPAC Audit

Auditor Initials: ________

Unit/Hospital: _______________

Patient Identifier Room/Bed: ________

Date: __________ Audit #: ________

1. Patient Information

Year of Birth (YYYY): _______________

Sex:  □ Male  □ Female  □ Other

Date admitted to unit: (YYYY-MM-DD): _______________

Was the patient transferred?  □ Yes  □ No  If yes, transferred from where? ________

2. Specific medical diagnoses that are being addressed in this hospitalization

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

3. Nutrition Screening

□ Completed;  At Risk:  □ Yes  □ No

□ Not completed: Reason not completed: __________

4. Subjective Global Assessment

□ Completed:
  □ A (well nourished)
  □ B (mild/moderate malnutrition)
  □ C (Severe malnutrition)
□ Referred, not yet completed

□ Not Completed; Specify why:
  □ Not at risk
  □ Other: Specify reason: __________
5. Comprehensive Dietitian Nutrition Assessment Completed

☐ No, not required (not at risk/SGA A and/or B)
☐ Yes, required and completed
☐ Referred, not yet completed
☐ Not completed: Specify why? __________

6. Action taken to improve nutrition for SGA B or C patients (check all that apply)

☐ No action
☐ ONS as medpass (small amount of nutrient dense product)
☐ ONS at other times/with meals
☐ Nutrient dense diet
☐ Liberalized diet
☐ Enteral nutrition
☐ Parenteral nutrition
☐ Other: Specify:________________________

7. a. Food intake monitoring has occurred  ☐ Yes  ☐ No skip to 8

b. Food intake is ≤ 50%  ☐ Yes  ☐ No skip to 8

c. Intake ≤ 50% triggered local action plan  ☐ Yes  ☐ No skip to 8

d. Action taken to improve nutrition when food intake is ≤ 50% (check all that apply)

☐ No new action
☐ RD consult
☐ ONS between meals/at medication times
☐ Nutrient dense diet
☐ Liberalized diet
☐ Other: Specify:________________________

8. Body weight (measured) was recorded at admission  ☐ Yes  ☐ No

9. Body weight monitoring post admission has occurred  ☐ Yes  ☐ No

10. Has a NUTRITION discharge plan/summary, education, and/or recommendation for follow up post discharge been initiated?

☐ Yes  ☐ No  If yes, please specify details:________________________
Appendix 5: ADKAR Framework

**What is ADKAR?**

- ADKAR is a model that can be used in Integrated Nutrition Pathway for Acute Care (INPAC) implementation to support change management. This model specifically supports communication plans with unit staff, leading to acceptance of the changes being implemented as a result of following INPAC.

- **Key belief**: Organizational change is the outcome of cumulative individual change.

- ADKAR occurs in stages **based on how staff experiences change**. For example, awareness comes before desire, as staff needs to first recognize that malnutrition is a problem in their hospital. This recognition will lead to understanding that change is needed, thus create a desire to change.

---

**Current**

- **Awareness** of the need for change i.e. why is a change in hospital nutrition culture needed?
- **Desire** to support and participate in the change i.e. staff willingness to support the change; this is unique to the individual; what motivates staff to change?

**Transition**

- **Knowledge** of how to change i.e. having hospital staff know their specific role in making the change;
- **Ability** to implement required skills and behavior i.e. training is provided so staff know the problem, and are informed on how to make a change (for example, trained on how to screen for risk of malnutrition)

**Future**

- **Reinforcement** to sustain the change i.e. continued reminders of training principles and having change embedded in daily practice so change is sustained. This includes continuous monitoring to see if change is in place, and if not, what can be done to reinforce teaching.

---

**ADKAR is a framework that will...**

- **Help guide a change**. It may help to clarify what steps should be taken to build desire and succeed with the INPAC implementation.

- **Assist in tracking the progress of change**. Each stage’s completion indicates that you are on your way to successful implementation of INPAC with a specific group.

- **Helps you understand where gaps have occurred** in your implementation, and provides ideas for how they may be addressed. For example, if there is resistance to implementation of INPAC, identifying what stage the change and/or the individual staff member is at will help to identify the strategies needed to move them to the next stage of ADKAR.

"The secret to successful change lies beyond the visible and busy activities that surround change. Successful change, at its core, is rooted in something much simpler: How to facilitate change with one person." (Hiatt, 2006, p. 1)
## Application of ADKAR to INPAC Implementation

<table>
<thead>
<tr>
<th>ADKAR Elements</th>
<th>Facilitators</th>
<th>Barriers</th>
</tr>
</thead>
</table>
| **Awareness** | • Awareness of the prevalence of malnutrition (45% are malnourished on admission)  
• Recognizing that those at malnutrition risk need to be diagnosed and those malnourished should receive appropriate care  
• Recognizing that malnutrition and/or low food intake can increase length of stay  
• Recognizing the credibility of INPAC | • Lack of understanding of the importance/prevalence of malnutrition  
• Belief that changes will take a long time  
• Lack of hospital support system (i.e. inability to incorporate a nutrition screening tool into the admission system)  
• Lack of follow-through (i.e. screening results must link to referral)  
• Miscommunication regarding reason for making a change. |
| **Desire** | • Individual motivators for change i.e. belief that malnutrition is a problem in their hospital | • Acceptance or comfort with status quo and change fatigue  
• Individual barriers for change i.e. perception of additional workload |
| **Knowledge** | • Training materials are available for all hospitals regarding:  
  o **Malnutrition**: Definition, prevalence, outcomes and cost  
  o **Identifying Malnourished Patients**: Focus on the Canadian Nutrition Screening Tool and Subjective Global Assessment  
  o **Becoming ‘Food Aware’ in Hospital**: Strategies to improve food intake and the nutrition care culture  
  o **The Integrated Nutrition Pathway for Acute Care (INPAC)** | • Lack of time to attend training.  
• Difficult to access all staff (e.g. night shifts). |
| **Ability** | • The ability to apply what was learned in training to practice  
• The INPAC implementation team will support application of training | • Limited time of all hospital staff (i.e. implementing certain changes may increase the amount of time doing certain tasks)  
• Lack of support from hospital staff and/or management  
• Lack of confidence performing SGA |
| **Reinforcement** | • Reminders of the training  
• Reinforcement of changes  
• The INPAC implementation team will work towards a supportive hospital structure  
• All change will be monitored, and fed back to unit staff/hospital | • Change can be difficult to see, as it may not be immediate  
• Lack of support from the hospital may make change more difficult |

www.change-management.com/tutorial-adkar-overview.htm
Appendix 6: Involving everyone in nutrition care

Involving Everyone in Nutrition Care

Everyone has a role to play in improving nutrition care. Here are a few examples of how ALL staff can be involved.

Leadership

- Select/help recruit champions and a small implementation team
- Redefine roles for champion or other key change agents (e.g. staff member to collect audit of practice)
- Provide/second any necessary resources (e.g. quality improvement expert, IT)
- Clearly support changes, trust the implementation team
- Where required, support the implementation team by addressing resistance to change and overcome resistance by being involved in meetings with opinion leaders
- When a change is successfully implemented, standardize the process through on-boarding of new staff, changing policy and procedures
- Highlight successes of the INPAC implementation team and units that have met targets for improved nutrition care
- Recognize that spread of INPAC throughout the hospital and beyond (i.e. regionally) will require each unit/hospital to tailor each INPAC activity as needed and undergo a change management process

Physician

- Support the implementation of INPAC and specifically screening an assessment with subjective global assessment (SGA) to diagnose malnutrition
- If a physician order is needed for dietitian referral, provide a referral to a dietitian for patients identified to be at nutrition risk from the screening process
- Understand the malnutrition diagnosis provided by the dietitian (including scores based on the SGA) and plan care accordingly
- Order liberalized diets
- Say No to NPO
- Order Medpass (oral nutritional supplement)
- Avoid visiting during meals to decrease interruptions
- Encourage the patient to eat to promote their recovery
- Consider supplemental enteral or parental nutrition when intake is expected to be low for more than a few days
• Consider socioeconomic issues that may have lead to malnutrition at discharge and refer to appropriate community services
• Diagnose and document malnutrition, when applicable
• Include malnutrition and treatment plan in the discharge note to facilitate the transition of care

Nurse
• Screen patients for nutrition risk
• Monitor food intake and take appropriate action for low intake
• Encourage food intake
• Decrease barriers to food intake, such as position patients to eat, opening packages, clearing bedside tables, etc.
• Provide eating assistance when appropriate
• Decrease mealtime interruptions for not-urgent/non-meal related visits
• Encourage patient family and friends to visit during mealtimes
• Support family/friends to bring food from home if patient is not eating well
• Assist with obtaining admission weight and monitoring weekly weights

Dietitian
• Include SGA result as part of the nutrition assessment
• Identify and document malnutrition
• Determine the nutritional care plan
• Order Medpass (oral nutritional supplement)
• Order liberalized diets
• Be visible on the unit, including at mealtimes
• Conduct/recommend required assessments to further define specialized nutrition care plan (e.g. swallowing, self-feeding ability, biochemistry etc.)
• Advocate for improved nutrition care
• When implementing change processes, provide support by auditing care processes and feeding results back to the team
• Champion implementation of the Integrated Nutrition Pathway for Acute Care (INPAC); educate and raise awareness of nutrition
• Work with other disciplines to establish a discharge plan and arrange relevant community support
Health Care Aide/Assistant

- Monitor food intake and take appropriate action for low intake
- Encourage food intake
- Decrease barriers to food intake, such as position patients to eat, opening packages, clearing bedside tables, etc.
- Empty commodes before meals; provide assistance to the patient to the washroom before meals, and to wash their hands
- Provide eating assistance when appropriate
- Encourage patient family and friends to visit during mealtimes
- Support family/friends to bring food from home if patient is not eating well
- Assist with obtaining admission weight and monitoring weekly weights
- Communicate patient food preferences to the food service department

Pharmacist

- Support and facilitate medpass (oral nutritional supplement) program
- Screen patients for drug-nutrient interactions
- Optimize medications when intake is poor (to reduce nausea, vomiting, diarrhea, constipation, pain etc.)
- Collaborate with nutrition support team

Occupational Therapist

- Identify patients who may have physical and/or cognitive impairments that will limit their ability to open food packages, feed self or to prepare food; inform relevant staff if problems are identified and develop a care plan
- Position patient appropriately for mealtimes and assist with opening food packages if present before a meal starts
- Educate/practice with patient and or staff/caregivers regarding the proper position for eating, use of adapted utensils, how to open food packages, walker safety in the kitchen etc.
- Work with other disciplines, including dietitians, to establish a discharge plan to address acquiring groceries, meal preparation, adapted equipment, positioning, environmental set up and support persons as needed

Physiotherapist

- Identify patients with poor muscle mass likely to be related to malnutrition
- Consult dietitian if mobility is a concern that may be related to malnutrition
- Encourage patients to get out of bed to eat meals
- Position patient to eat and assist with opening food packages if present before a meal starts
- Support the team by walking the patient to get an admission or weekly body weight
- Work with other disciplines, including dietitians, to establish a discharge plan and arrange relevant community support

**Social Worker**
- Identify patients at nutrition risk (food security; grocery shopping done by others; supports required for cooking, etc.)
- Work with other disciplines, including dietitians, to establish discharge plan and arrange relevant community support

**Speech Language Pathologist**
- Assess swallowing function and suggest diet consistency appropriate for swallowing function
- Recommend least restrictive diet consistency that will maintain swallowing safety and adequate oral intake
- Work with other disciplines, including dietitians, to establish a discharge plan and arrange relevant community support

**Food Service**
- Procure/develop nutrient dense food options
- Procure nutritionally adequate and appealing food
- Consider the cultural preferences of patients when developing menus
- Ensure food is available throughout the day
- Enable food to be kept on the unit outside of foodservice hours of operation
- Ensure food is delivered on time to preserve food temperature and so family and friends can arrive at the correct time to support patient’s intake
- Obtain food preferences when applicable
- Monitor food intake when applicable
- Ensure presentation of food is appetizing

**Diagnostic Imaging/Laboratory Services/Other diagnostic activities**
- Avoid conducting diagnostic procedures during mealtimes

**Environmental Services**
- Avoid cleaning rooms and floors on the unit when meals are being served
- Encourage patient and family to keep the bedside table clear for meal trays
- Encourage patient and family to keep unconsumed food in the unit fridge
**Patient**

- Tell nurses and doctors if you have lost weight unintentionally and are eating less than normal
- Tell a nurse if you are on a special diet
- Ask for help with setting up your meal tray and opening your food packages
- Aim to eat as much as possible from your meal tray
- If you do not like the food, ask your health providers for other options
- Ask health care providers who come at mealtime for assessments/tests/treatments to come back later so you can finish eating
- If you are not feeling well and have a poor appetite, discuss this with your health care providers

**Family and Friends**

- Talk to the nurse or doctor if your family member/friend has lost weight and has been eating less than normal
- Assist your family member/friend with setting up their meal tray and opening food packages when you are available
- Encourage the patient to eat as much as possible from their meal tray (especially the high calorie and protein foods)
- Bring in their favourite foods at meal time if the patient is not eating well

**Volunteer**

- Decrease barriers to patient food intake by opening their packages
- Encourage the patient to eat as much of their meals as possible (especially the high calorie and protein foods)
- Provide a friendly chat during meal times
Appendix 7: A Step-by-Step Guide to Implementing Change: the example of embedding screening into practice.

1. The champion needs to pull together a small implementation team that can make decisions and has the respect of hospital management and staff e.g. nurse management, physician champion, nurse educator and/or implementation expert etc.

2. Create buy-in from senior management and other stakeholders. Make presentations on the importance of malnutrition, how it is commonly missed without screening and the costs of malnutrition. Present INPAC as best practice and how screening is the key activity that will ensure no malnourished patients are missed. If possible, use your own data on malnourished patients who were not referred by nursing or physicians through current mechanisms.

3. Select one unit to begin screening and test out processes.

4. Select a screening tool (CNST is recommended as it is short, valid and reliable for acute care).

5. Consider who from the unit needs to be included in planning. It is important to include those who are likely to be key players in the activity of nutrition screening and invite these team members to a planning group. Key players could include: unit dietitian, unit nurse(s), IT support person (if considering electronic screening tools), diet technicians (if process will include them), unit clerk, key physicians.

6. Collect some initial data on current practice to demonstrate the need for change and eventually demonstrate improved metrics/outcomes.

7. Provide short presentations to unit staff on the initiative; use your baseline (initial) data to create buy-in and motivation to complete screening. Continue to engage staff throughout the implementation process.

8. Discuss with unit staff how they think screening and subsequent referral forms should be completed (host a discussion group with the champions). Use this information to build the initial screening and referral process.

9. Determine how the tool can be incorporated into practice: Will this be done electronically or on paper? What are the processes and who are the key stakeholders who will need to be involved in order to facilitate this process? (Note: each hospital will be different and it is necessary to work within the system, i.e. the Forms Committee may take a long time, so preliminary plans can be put in place while work is being done at other levels).

10. Train a small number of staff on the screening and referral process and pilot the process on a few patients (keep it small!).

11. Discuss the pilot with those trained; how did it go, what would they change to
make the process of screening and referral work for all patients? Bring their responses back to the unit planning team for discussion.

12. Based on discussion of the unit planning team, revise the process as needed, fix steps that didn’t work.

13. Pilot the improved process on a few more people for a little longer; collect some data on the process and discuss with staff.

14. Discuss results again at the unit planning team and revise the process if needed.

15. Continue to expand screening and referral at a realistic rate; work at embedding the routine on this unit before moving on to other units.

16. Collect data on incorporation of screening into the routine (e.g. % of admitted patients who are screened and referred), report back to the team/staff/management on progress, including specifics on how the team has made a difference on the unit.

17. Identify where there is resistance and work on it (i.e. if the forms are not being filled in properly, reminders may be needed).

18. Provide reminders, re-educating/re-training as needed; occasionally collect screening and referral audit data to demonstrate sustaining of practice.

19. Celebrate successes along the way.

*NOTE: embedding SGA into practice should be done alongside this process however it is not included in this example*
Appendix 8: Model for Improvement

What is the Model for Improvement?

- The Model for Improvement is composed of:
  
  - 3 questions that define the direction, focus and context for the improvement
    
    1. What are we trying to accomplish?
    2. How will we know that a change is an improvement?
    3. What changes can we make that will result in improvement?
    
    - Plan Do Study Act (PDSA) cycles connect planning, action and learning that results from working through these three questions for an improvement (refer to Safer Healthcare Now! Improvement Frameworks Getting Started Kit (SHN) pg.7 for corresponding diagram)

- The Model is designed to be effective in large-scale implementation changes, such as the Integrated Nutrition Pathway for Acute Care (INPAC), which encourages gradual change and continuous testing (through PDSA cycles).

Forming Teams: Who should be involved?

- A champion with a core support team should lead the implementation of INPAC. The Model for Improvement suggests three types of expertise for this team:
  
  - Day-to-day leadership: front-line staff members involved in the day-to-day processes that are affected by INPAC e.g. dietitians, nurses, foodservice
  - Technical expertise: is a subject matter expert that understands key information e.g. site champion, dietitians, IT
  - System leadership: hospital management sponsor that can support the team with time and resources and remove barriers within the unit or hospital

Setting Aims: What are we trying to accomplish?

- Improvement begins with a clearly defined aim, the implementation of INPAC, and the specific activities within INPAC, such as nutrition screening at admission.
The implementation team jointly decides on activities, plans and timelines that will be focused on.

For each activity in INPAC that you are working on implementing, specify goals/objectives and timelines e.g. by this date, 15 nurses will have tested out the process of screening and referral and be ready to implement screening as part of their admission routine.

Details on what activity you are attempting, your goals and a timeline should all be recorded.

**Establishing Measures: How will we know that a change is an improvement?**

- Record evaluation measures, which capture changes made on a patient care unit as it moves towards implementing INPAC.

- These include:
  
  - **Outcome measures:** These measures describe the changes in care that have resulted from implementing INPAC, and how completely INPAC has been implemented. For instance, the INPAC audit captures these outcomes and demonstrates the fidelity of the site to INPAC e.g. proportion of patients screened at risk who are referred to SGA; proportion of SGA-B patients who received Advanced Nutrition Care strategies etc.

  - **Process measures:** These measures describe how the change occurred. For example, a staff knowledge and attitudes at baseline and after the implementation phase can provide valuable information. It is anticipated that improved knowledge and attitudes will lead to improved practices captured in the INPAC audit. Implementation teams can create a variety of process measures as they are implementing a specific activity (e.g. time audit for monitoring food intake).

  - **Balancing measures:** These measures assess other parts of the system to determine whether new problems are being created with the implementation of INPAC and what are barriers to implementation. Discussion groups with staff can be a way to collect this information. Resource utilization tracking (how much time a task is taking, new staff involved etc.) is another means.

- To help implementation teams understand the changes happening within the unit, INPAC audits can be conducted and results discussed with staff on the units.

**Developing and Testing Changes: What changes can we make that will result in improvement?**

The implementation team will meet routinely to identify what and how changes should be made in the unit routine to provide nutrition care in line with INPAC. During their meetings they will review collected data, brainstorm and be creative to consider how to make a specific change they want to implement e.g. how will we monitor food intake for patients? It is important that they
also consult with staff members on the unit about what desired changes and ways of implementing could work.

Observing how a process currently occurs (e.g. tray delivery) can be part of this planning. Hosting a discussion group at lunch with staff to get their input is a way to not only let staff know about the initiative, but also solicit ideas. The site implementation team may also informally interview staff, patients and others to more fully understand a process or get ideas on how routines can be changed towards the best practice of INPAC.

**Testing a Change:** The aim of testing a change is to increase confidence that the change will be an improvement from what is currently done. Testing involves trial and error until a process ‘works’ and is fully implemented. For example, the unit may trial different ways of supporting patient set-up for meals before deciding on the best way to do this activity consistently and in a way that is sustainable. Tests can fail, but implementation should not. PDSA cycles are used to conduct these tests. Refer to *Safer Healthcare Now* Fig 2, p.8 for flow chart depicting sequential flow of knowledge in this process.

**Implementing a change** occurs when the site implementation team believes that they have sufficiently figured out the process with unit staff to carry out a specific INPAC activity. The aim is for the change to become *permanently integrated into the nutrition care processes of the unit*.

PDSA cycles may still be used to manage a change until it is fully implemented. It is important to communicate with those on the unit that have been affected by the change to: understand why they may be resisting a change; to publicize the improved practices and results; and show appreciation for their dedication to improving nutrition care for patients. For example, provide positive feedback when staff is observed making the change and celebrate achievement of milestones.

In the implementation step for the change, it is also important to design the system around the activity so that it is to complete and difficult for staff to return to former routines.

**Sustaining a change** after implementation requires purposeful activities. The goal is to prevent unit staff from returning to old practices. These sustainability activities usually involve:

- Monitoring outcomes (e.g. the INPAC audit will monitor key activities)
- Integrating the change into daily processes (e.g. talking about screening or INPAC food intake monitoring at staff rounds)
- Changing job descriptions or unit/hospital policies
- Assign responsibility for monitoring sustained activities to a leader in that staff group e.g. senior diet technician or dietitian monitors unit and diet technicians process with respect to INPAC food monitoring
Spreading Success: Once INPAC is implemented and sustained in one unit, spreading this improved practice to other units in the hospital is the ultimate goal. Success within individual units will lead to spread throughout the organization. Key to promoting spread is to highlight that:

- The team has tested, implemented and sustained the INPAC on the test unit.
- Senior management desire spread beyond the single unit. The evidence from the More-2-Eat study can support decision making for these leaders.
- The improvement of nutrition care is important in the hospital because quality improvement of nutrition is a priority beyond the test unit.
- A senior leader is assigned accountability to spread INPAC to other units.

Refer to table on Safer Healthcare Now p.33 for common mistakes when spreading changes and strategies to overcome these barriers.

_The Model for Improvement helps to develop, implement and sustain a quality practice, such as the INPAC, to promote patient safety and care._

Appendix 9: Plan-Do-Study-Act cycles

Plan Do Study Act (PDSA) Cycles

- Throughout INPAC implementation, the champion and implementation team can conduct a series of PDSA cycles.

- Record the ‘Plan’ in the PDSA cycle. What are we trying to accomplish etc.

- The ‘Do and Study’ portions of the PDSA cycle are the testing, which allows the unit to attempt to change activities in a small sample, determining how best to implement components of the INPAC before the process occurs for all patients.

- Testing allows for trial and error, with some strategies failing, but providing information to support the next test.

- ‘Act’ in the PDSA cycle is when the unit uses the results of the test to change the activity or move on to implementation.

- A site will move into the implementation phase for an INPAC component when testing (e.g., a few patients are screened) has been sufficient to provide confidence that full implementation will be successful (e.g., all patients are screened at admission.

- Several PDSA cycles will likely occur before implementation of an INPAC component is undertaken.

### Appendix 10: Defining and Matching Behaviour Change Techniques to Intervention Functions: Examples from More-2-Eat.

<table>
<thead>
<tr>
<th>Intervention Function</th>
<th>Most Common Behaviour Change Techniques (BCT)</th>
<th>Definition</th>
<th>BCTs used in M2E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td>Information about outcomes or consequences</td>
<td>Provide detail on what happens as a result of the new activity or behaviour e.g. malnourished patients identified, health improvement, quality of life</td>
<td>Education/ information sessions for staff on consequences of improved screening/ assessment/improved nutrition care practices, etc.</td>
</tr>
<tr>
<td></td>
<td>Feedback on behaviour/activity</td>
<td>Monitor and provide feedback on performance of the activity</td>
<td>Education/information sessions on accuracy of food intake monitoring, SGA.</td>
</tr>
<tr>
<td></td>
<td>Feedback on outcome(s) of the behaviour</td>
<td>Monitor and provide feedback on the outcome when behaviour is performed</td>
<td>Unit audits on number of patients screened, assessed, referred for dietitian assessment, weight tracked, etc.</td>
</tr>
<tr>
<td></td>
<td>Prompts/cues</td>
<td>Introduce a stimulus either environmental or social that prompts or cues the behaviour; done where or at time behaviour is done</td>
<td>Posters on unit to remind staff to screen, remove patient barriers to food intake, monitor food intake. Flags in chart to include malnutrition as a condition for transition note and discharge planning. Posters for family members to encourage staying for mealtimes.</td>
</tr>
<tr>
<td></td>
<td>Self-monitoring of behaviour or activity</td>
<td>Establish a method for the staff to monitor and record their behaviour</td>
<td>Tracking sheets on patient door for staff to fill out after monitoring food intake, and sign for action taken if food intake ≤50%</td>
</tr>
<tr>
<td><strong>Persuasion</strong></td>
<td>Credible source</td>
<td>Verbal or visual communication from a credible source that favours the behaviour</td>
<td>Canadian Malnutrition Task force webinars; Canadian Malnutrition Week videos/materials</td>
</tr>
</tbody>
</table>
| **Information about consequences** | (or against behaviour trying to stop) | **CNST tracking completion data compiled and put on posters in various areas for staff to see; weekly update email sent to staff re: CNST auditing**
**Patient story of negative consequences to a patient, such as longer length of stay, due to not screening.** |
| **Feedback on behaviour** | **As above under Education** | **Friendly competition between unit teams to complete activity for 100% of patients** |
| **Feedback on outcome(s) of the behaviour** | | **Audits of tracking sheets for various INPAC activities e.g. nursing providing initials when make referral to dietitian** |

| **Incentivisation** | **Feedback on behaviour** | **As above under Education** | **Friendly competition between unit teams to complete activity for 100% of patients** |
| **Feedback on outcome(s) of behaviour** | | | |
| **Self-monitoring of behaviour** | | | |
| **Monitoring of behaviour by others without evidence of feedback** | **Observe or record behaviour without staff member’s knowledge** | **Audits of tracking sheets for various INPAC activities e.g. nursing providing initials when make referral to dietitian** |

<p>| <strong>Training</strong> | <strong>Demonstration of the behaviour</strong> | <strong>Observable sample of how the behaviour is to be performed. Can be in–person or video/pictures.</strong> | <strong>SGA training, food intake monitoring training, laminated posters to indicate low food intake when monitoring</strong> |
| <strong>Instruction on how to perform a behaviour</strong> | <strong>Advice or written agreement on how to perform the behaviour</strong> | <strong>Written instructions at nursing station as to how to identify a positive screen with CNST and make a referral to the dietitian</strong> |
| <strong>Feedback on the behaviour</strong> | <strong>As above</strong> | <strong>As above</strong> |</p>
<table>
<thead>
<tr>
<th><strong>Self-monitoring of behaviour</strong></th>
<th>Behavioural practice/rehearsal</th>
<th>SGA training with dietitians, food monitoring by food service staff, volunteer training on opening packages</th>
</tr>
</thead>
<tbody>
<tr>
<td>The staff member is prompted to practice the performance of the behaviour one or more times to increase habit and skill. Done typically in a hypothetical context, not a ‘live run’.</td>
<td><strong>Environmental restructuring</strong></td>
<td>Adding objects to the environment</td>
</tr>
<tr>
<td>Objects added to environment to make it easier to perform behaviour e.g. red tray to signal a person needs assistance with eating</td>
<td>Whiteboards above patient beds to indicate what a patient needs to facilitate eating (ie. Dentures, glasses, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Prompts/cues</strong></td>
<td>As above</td>
<td>Include check-off boxes on CNST for score, date and sign-off by staff that completed.</td>
</tr>
<tr>
<td><strong>Restructuring the physical environment</strong></td>
<td>Change the physical environment in order to make it easier to perform the behaviour on a routine basis; create barriers to undesired behaviour</td>
<td>Embed screening tool into MAR or nursing forms to facilitate routine completion.</td>
</tr>
<tr>
<td><strong>Modelling</strong></td>
<td>Demonstration of the behaviour</td>
<td>As above under Training</td>
</tr>
<tr>
<td>As above under Training</td>
<td></td>
<td>As above under Training</td>
</tr>
<tr>
<td><strong>Enablement</strong></td>
<td>Social support (unspecified)</td>
<td>Frequent staff huddles to encourage staff and praise successes.</td>
</tr>
<tr>
<td>Provide support among colleagues/staff members; encourage, counsel, praise, reward performance of behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social support (practical)</td>
<td>Colleagues/staff provide practical help to support behaviour</td>
<td>All staff/disciplines involved in food intake monitoring, team working together on weight days</td>
</tr>
<tr>
<td></td>
<td>of other staff to do the behaviour</td>
<td>to get body weight completed on all patients</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td><strong>Goal setting</strong></td>
<td>Agree on a goal with the staff; define in terms of behaviour that will be achieved</td>
<td>Teams developed target goals for key activities that were being implemented e.g. time deadline for screening of admitted patients</td>
</tr>
<tr>
<td>(behaviour)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Goal setting</strong></td>
<td>Agree on a goal defined in terms of a positive outcome of desired behaviour</td>
<td>Goal setting to reduce mealtime barriers, reduced average time that a patient is NPO</td>
</tr>
<tr>
<td>(outcome)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Problem solving</strong></td>
<td>Analyse factors that influence the behaviour; consider how to change behaviour with various strategies that overcome barriers or increase facilitators</td>
<td>Gather info from diet clerks regarding current screening processes, barriers, facilitators, and how to make routine; Monitoring rate of NPO meals/day to see if this is a significant barrier to food intake</td>
</tr>
<tr>
<td><strong>Action planning</strong></td>
<td>Detailed planning of how the behaviour will be performed (e.g. situation, frequency, duration, intensity)</td>
<td>Mapping out screening to SGA triaging process; getting staff input on which forms would be preferred to use for food intake monitoring.</td>
</tr>
<tr>
<td><strong>Self-monitoring of</strong></td>
<td>As above</td>
<td>As above</td>
</tr>
<tr>
<td><strong>behaviour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Restructuring the</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>physical environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Review</strong></td>
<td>Review behaviour/</td>
<td>Review of a process not working e.g. food intake monitoring to determine how it can be streamlined and simplified</td>
</tr>
<tr>
<td><strong>behaviour/outcome</strong></td>
<td>outcome goals jointly with the staff member(s) and where required modify the goal or behaviour change strategy based on achievement to date</td>
<td></td>
</tr>
<tr>
<td><strong>goal(s)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For access to the Tools and Resources that accompany this toolkit, please visit: http://nutritioncareincanada.ca/inpac/inpac-toolkit