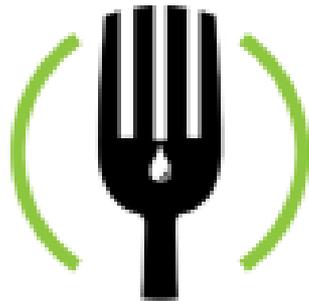# The Integrated Nutrition Pathway for Acute Care (INPAC)

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What is INPAC?

An evidence-based algorithm for the detection, treatment and monitoring of malnutrition amongst acute care medical and surgical patients.

- Developed through consensus from leading Canadian experts, clinicians and other stakeholders.

- A **minimum standard;** if a hospital/unit provides care above this minimum, they are encouraged to continue their high quality practice.

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Keller et al, 2015

Who is involved?

- **Everyone!**

- Requires the involvement of the **whole healthcare team**, as well as the patient and their family/friends in supporting nutrition care in and post hospitalization.

- INPAC recommends key disciplines taking the lead with specific care activities, but this does not mean that other disciplines cannot take on these roles as well.

Admission

Nutrition Screening at Admission
Admitting nurse 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?

Day 1

AT RISK
("Yes" to both questions)

NO RISK
("No" to one or both questions)

Well-nourished (SGA A)

Subjective Global Assessment (SGA)
Completed by dietitian or designate

Mild/moderate malnutrition (SGA B)

Severe malnutrition (SGA C)

Day 1+

Level A:
Standard Nutrition Care

If food intake <50%

Level B:
Advanced Nutrition Care

Food intake improved

If food intake <50% after 3 days

Level C:
Specialized Nutrition Care

Post-Discharge Nutrition Care

Keller et al, 2015

Nutrition Screening at Admission

- CNST is recommended for nutrition screening, as it is **valid, reliable, and quick and easy to use in practice**

- These 2 questions can be embedded into current admission forms/EMR

Admission

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Admitting nurse completes the Canadian Nutrition Screening Tool (CNST):
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Canadian Nutrition Screening Tool

Identify patients who are at risk for malnutrition

| Ask the patient the following questions*	Date: Admission		Date: Rescreening	
	Yes	No	Yes	No
Have you lost weight in the past 6 months **WITHOUT TRYING** to lose this weight? If the patient reports a weight loss but gained it back, consider it as NO weight loss.				
Have you been eating less than usual **FOR MORE THAN A WEEK**?				
Two "YES" answers indicate nutrition risk†				

* If the patient is unable to answer the questions, a knowledgeable informant can be used to obtain the information. If the patient is uncertain regarding weight loss, ask if clothing is now fitting more loosely.

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Laporte et al, 2015

Patients NOT at risk of malnutrition

This is a minimum *Standard Nutrition Care* provided to **ALL** patients.

This *Standard Nutrition Care* promotes food intake and monitoring of the patient so that challenges to food consumption can be identified readily and treated.
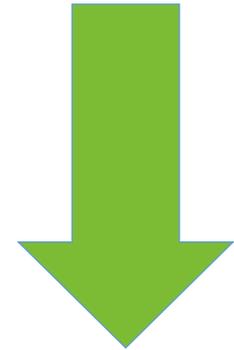
Level A:
Standard Nutrition Care

Standard Care Actions

- Sit patient in chair or position upright in bed

- Ensure vision and dentition needs are addressed

- Encourage family and friends to bring preferred foods from home

- Food intake monitoring

- Etc.

Food Intake Monitoring

- **Monitoring is essential** to ensure that adequate food intake occurs and malnutrition does not develop in the hospital.

- **Eating less than or equal to 50%** of the meal was shown to **predict and extend length of stay,** even in well nourished patients. (Allard et al., 2015)

- **My Meal Intake Tool (MMIT)** is recommended to be completed twice per week for a single meal. (McCullough & Keller, 2016)

- If food intake ≤ 50% at a single meal = patient moves up to *Level B: Advanced Nutrition Care* **procedures.**

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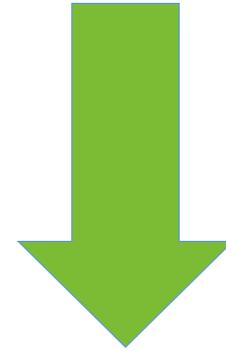
Patients AT RISK of malnutrition

SGA is the **gold standard** for diagnosing malnutrition in hospital.

Trained professionals assess food intake, functional status, and body composition with SGA.

The assessment takes approximately 10 minutes.

Subjective Global Assessment (SGA)
Completed by dietitian or designate

Diagnosing Malnutrition

- Patients identified to be at risk for malnutrition require a **diagnosis** to confirm malnutrition.

- If malnutrition is confirmed they should receive *advanced* or *specialized* nutrition care.

- **Subjective Global Assessment (SGA) is recommended** for making a diagnosis and triaging further nutrition care.

- Dietitians or other trained professionals can conduct SGA.

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Diagnosing Malnutrition – Routes of Care

- SGA A (well nourished) = *Level A: Standard Nutrition Care*

- SGA B (mild/moderate malnutrition) = *Level B: Advanced Nutrition Care or Specialized Care*

- SGA C (severe malnutrition) = *Level C: Specialized Nutrition Care.*

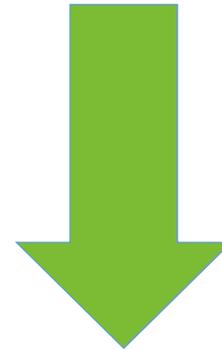# Patients at SGA B or Level A with ≤50% food intake

Continue **Level A: Standard Care**

AND

provide more nutrient dense food to patients at meals and between meals to **optimize oral intake.**

Level B:
Advanced Nutrition Care

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Advance Nutrition Care Actions

- Continue Standard Nutrition Care

+

- Assess and address other barriers to food intake

- Monitor food intake at least 1 meal/day

- Promote intake with oral nutritional supplements, preferred foods, energy and protein dense foods, snacks between meals etc.
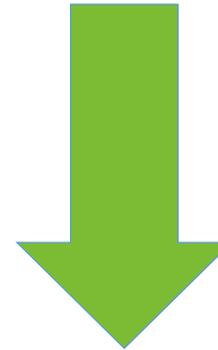
Patients at SGA C or Level B with ≤50% food intake after 3 days

A comprehensive dietitian assessment is the basis for *Level C: Specialized Nutrition Care.*

This should occur within 24 hours of SGA or after 3 days of low food intake for those originally Level B.

Level C:
Specialized Nutrition Care

Specialized Nutrition Care Actions

- Continue Standard & Advanced Nutrition Care strategies

➕

- Comprehensive Nutrition Assessment
- Further identification of barriers to food intake
- Strategies to improve intake; consider non-volitional feeding
- Individualized treatment and monitoring

At Discharge: All patients receiving Level B or C 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.**
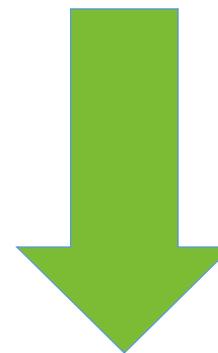
Post-Discharge Nutrition Care

Post Discharge Nutrition Care

- If SGA B or C, nutrition should be flagged in discharge notes

- Before discharge, **educate** the patient and family on:

  o Key community resources that can support access to food (e.g. meal programs)

  o Key aspects of their nutrition care plan to support continued recovery in the community

  o Monitoring of body weight and food intake and what to do if problems arise

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If food intake <50% after 3 days

Level C:
Specialized Nutrition Care

Post-Discharge Nutrition Care

Acknowledgements

These slides were created and approved by:

Heather Keller
Celia Laur
Bridget Davidson
The More-2-Eat Education Group*

* Includes input from the UK Need for Nutrition Education/Innovation Programme (NNEdPro) Group

References

Allard, J.P., Keller, H.H., Teterina, A. Jeejeebhoy, K.N., Laporte, M., Duerksen, D. et al. Factors associated with nutritional decline in hospitalised medical and surgical patients admitted for 7 d or more: a prospective cohort study. *BJN*. 2015, 114(10), 1612-1622.

Allard JP, Keller H, Jeejeebhoy KN, Laporte M, Duerksen D, Gramlich L, Payette H, Bernier P, Vesnaver E, Davidson B, Terterina A, Lou W. Malnutrition at hospital admission: contributors and impact on length of stay. A prospective cohort study from the Canadian Malnutrition Task Force. J Parenter Enteral Nutrition. 2016;40(4):487-97.

Keller H, McCullough J, Davidson B, Vesnaver E, Laporte M, Gramlich L, Allard J, Bernier P, Duerksen D, Jeejeebhoy K. The integrated nutrition pathway for acute care (INPAC): Building consensus with a modified delphi. *Nutrition Journal*. 2015;14(63).

Laporte M, Keller H, Payette H, Allard JP, Duerksen DR, Bernier P, Jeejeebhoy K, Gramlich L, Vesnaver E, Teterina A. Validity and reliability of the new canadian nutrition screening tool in the 'real-world' hospital setting. *Eur J Clin Nutr*. 2015;69(5):558-64.

McCullough J, Keller HH. The My Meal Intake Tool (M-MIT): Validity of a patient self- assessment for food and fluid intake at a single meal. The journal of nutrition, health & aging. 2016;