

# Patients Eat and Recover (PEAR) A Nutrition Model of Care

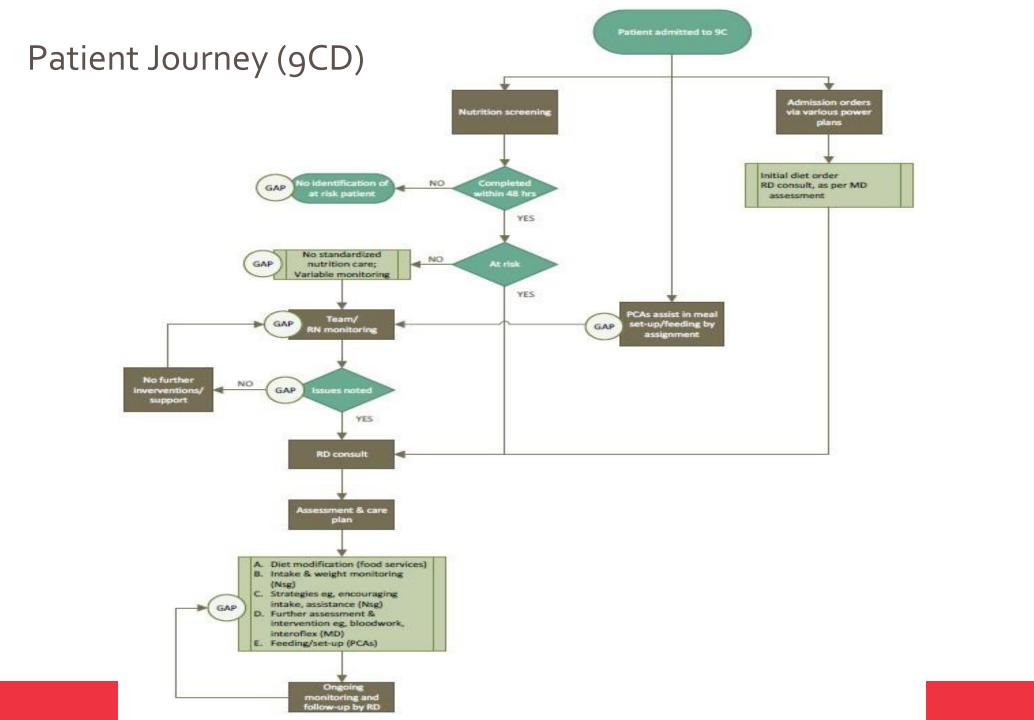
July, 2023



PHC requires a collaborative, system-based, approach to identify and address malnutrition

# Background

- Poor nutrition status has been linked to many negative health outcomes.
- Results from the Canadian Malnutrition Task Force (CMTF) Nutrition Care in Canadian Hospitals Study showed a malnutrition prevalence of 45% in Canadian hospitals
- Evidence that nutrition status often worsens during hospitalization
- Malnutrition and poor food intake have been associated with:
  - increased risk of complications
  - mortality
  - Increased rate of infections
  - number of readmissions,
  - length of stay and
  - decreased functional recovery



# Current Gaps

#### **Challenges in Patient-Centred Nutrition Care**

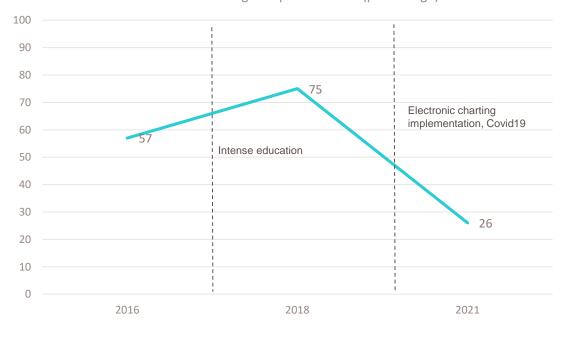
- No comprehensive approach to support patientcentered nutrition care at PHC
- Nutrition screening on admission to identify those at risk is not consistently done
- Poor monitoring of critical nutrition parameters (e.g., food intake, body weight)
- Limited availability of food in between meals (ward stock)

#### Knowledge and Workforce Related Challenges

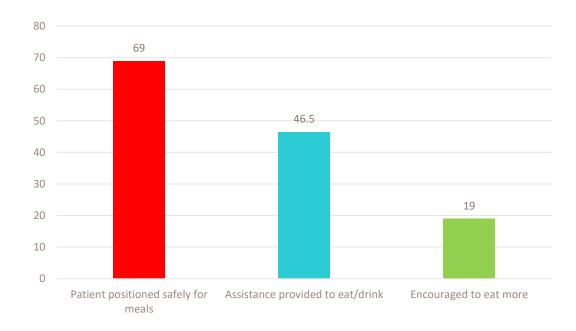
- Variability in knowledge related to nutrition and malnutrition, exacerbated by a novice workforce, high staff turnover and provider bias
- Patients who need assistance at meal times often do not receive support (e.g., opening packages, sitting up, putting in dentures)

# Data – KT Challenges and RD Audits





### Nutrition care for patients at risk of malnutrition (Urban Health and ACE, 2016) (percentages)



## Impact of Malnutrition

On average, malnourished patients **stay in the hospital three days longer** than nourished patients (Agarwal, et al 2010)

Malnutrition has significant impact on patient outcomes and cost

Malnutrition can result in a cost at SPH of over **40 million dollars annually,** based on increased LOS

- 2022 Census Data = 52,453 patients admitted to SPH
- 45% of patients are malnourished (from CMTF) = 23,604 patients
- 3 day longer LOS = 23,604 patients x 3 days = 70,812 days
- Cost = 70, 812 days x \$528 (7AB) to \$620 (7CD) = \$40,220,960 to \$43,903,161

If we optimize our model of care, we could reduce the LOS in specific patients with malnutrition, resulting in positive outcomes

#### Patients Eat and Recover (PEAR) Model of Care

The **PEAR Model of Care** is a patient-centred, comprehensive, and evidence informed model that recognizes the crucial role of food in supporting patients' recovery during hospitalization.

The approach emphasizes the prevention, identification and treatment of malnutrition, and outlines clear responsibilities for the interdisciplinary team

The model aims to ensure comprehensive nutritional care that addresses both the fundamental and specialized nutrition needs of patients

Key components of this model are:

- 1. Delivering care that matters to patients
- 2. Improving **knowledge** about nutrition and malnutrition
- 3. Adding a Clinical Diet Technician (CDT) to the staffing mix to address gaps in basic nutrition care
  - Specific nutritional training allows the CDT to help with screening, monitors weight and intake, assist at mealtimes, offers snacks, ensure proper dental care for meals, encourage patients to sit up or go to the dining room for meals
  - The CDT alleviates workload for Nursing and RDs, allowing these professionals to deliver specialized care
- 4. A team-approach with clearly defined roles for dietitians, nursing, CDT and interdisciplinary team
- 5. **Implementation of best practices** such as consistent, and timely nutritional screening and monitoring, strategies to increase food intake, as well as specialized assessments and interventions

#### PEAR Pilot

Utilize surplus dollars from unfilled dietitian positions to hire a CDT; post and hire CDT

Trial PEAR model on 9 C/D: September to March, 2023

#### Goals:

- Increase team knowledge related to nutrition and malnutrition
- Improve identification of patients with malnutrition, and monitoring of patients at risk of malnutrition by measuring food intake and body weight
- Improve patient intake during hospital admission as a means to reduce risk of malnutrition
- Utilize CDT role to address current gaps in care and reduce workload for nursing and dietitians, allowing them to deliver specialized care
- Evaluate patient outcomes and staff satisfaction
- Develop a sustainment plan if evaluation indicates positive results

#### References

Agarwal E, Ferguson M, Banks M, Batterham M, Bauer J, Capra S, et al. Malnutrition and poor food intake are associated with prolonged hospital stay, frequent readmissions, and greater inhospital mortality: results from the Nutrition Care Day Survey 2010. Clin Nutr. 2013;32(5):737-745. doi: https://doi.org/10.1016/j.clnu.2012.11.021

Allard J, Keller H, Jeejeebhoy K, Laporte M, Duerksen D, Gramlich L, et al. Malnutrition at hospital admission – contributors and effect on length of stay: a prospective cohort study from the Canadian Malnutrition Task Force. J Parenter Enteral Nutr. 2016;40(4):487-497. doi: https://doi.org/10.1177/0148607114567902

Allard J, Keller H, Jeejeebhoy K, Laporte M, Duerksen D, Gramlich L, et al. Decline in nutritional status is associated with prolonged length of stay in hospitalized patients admitted for 7 days or more: a prospective cohort study. Clin Nutr. 2016;35(1):144-152. doi: https://doi.org/10.1016/j.clnu.2015.01.009

Curtis L, Bernier P, Jeejeebhoy KN, Allard JP, Duerksen DR, Gramlich L, et al. Costs of hospital malnutrition. Clin Nutr. 2016;36(5):1391-1396. doi: https://doi.org/10.1016/j.clnu.2016.09.009

Hiesmayr M, Schindler K, Pernicka E, Schuh C, Schoeniger-Hekele A, Bauer P, et al. Decreased food intake is a risk factor for mortality in hospitalised patients: the Nutrition Day survey 2006. Clin Nutr. 2009;28:484-491. doi: https://doi.org/10.1016/j.clnu.2009.05.013

Imoberdorf R, Meier R, Krebs P, Hangartner P, Hess B, Stäubli M, et al. Prevalence of undernutrition on admission to Swiss hospitals. Clin Nutr. 2010;29(1):38-41. doi: https://doi.org/10.1016/j.clnu.2009.06.005

INPAC (Integrated Nutrition Pathway for Acute Care) Implementation Toolkit. Canadian Malnutrition Task Force, Canadian Nutrition Society (2017)

Li HJ, Cheng HS, Liang J, Wu CC, Shyu YI. Functional recovery of older people with hip fracture: does malnutrition make a difference? J Adv Nurs. 2012;69(8):1691-1703. doi: https://doi.org/10.1111/jan.12027

Thornhill J, Spears A, Zamora E, Henri-Bhargava M. Addressing Malnutrition in Acute Care at Providence Health Care: Implementation of an Interdisciplinary Nutrition Care Pathway. Knowledge Translation Challenge. Providence Health Care, 2019.