

Methods: A literature search was conducted to examine validated pediatric nutrition screening tools. A committee of inpatient pediatric dietitians determined criteria for a new pediatric nutrition screening tool to capture nutrition risk for all patients admitted. The included criteria for the new screening tool were: (1) diagnosis and risk factor list, (2) nutritional intake, and (3) the growth-related ASPEN/AND pediatric malnutrition criteria. A scoring system was assigned to each criterion. The total score determined the level of nutrition risk and course of action (timeline for assessment). Once developed, dietitians tested the new tool by scoring each new admission as well as recording the outcome from current screening practices. Screening outcomes were compared to the gold standard of a dietitian assessment. Inclusion criteria included ages of newborn to 18 years. Patients were excluded if they discharged within 24 hours of admission. Data was analyzed using BlueSky Statistics LLC.

Results: Total sample size (N = 396) was collected from the general pediatric floors, PICU, cardiovascular ICU, level III and IV NICUs, psychiatric unit, and nursery at Mayo Clinic Children's Center from March 13, 2022 – April 22, 2022. Using the new screening tool, three patients (0.8%) were inaccurately screened. This was statistically significant from the number of patients inaccurately screened using the automatic portion of current screening practices (n = 189, 47.7%, p < 0.001). It was also statistically significant from the number of patients screened inaccurately using all current screening practices, manual and automatic (n = 35, 8.8%, p < 0.001). The new screening tool had a sensitivity of 99.6%, a specificity of 98.6%, positive predictive value of 99.2%, and a negative predictive value of 99.3%.

Conclusion: The new pediatric nutrition admission screening tool was significantly different in accurate screening from current screening practices. Development of a new pediatric nutrition admission screening tool allowed for more timely and accurate identification of nutritionally at-risk patients.

Financial Support: n/a

P124 - Development of the Pediatric Integrated Nutrition Pathway for Acute Care (P-INPAC) Using a Modified Delphi Technique

Jessie Hulst, MD, PhD¹; Zujaja Tul-Noor, BSc, MSc²; Koen Huysentruyt, MD, PhD³; Robert Bandsma, MD, PhD¹; Leah Gramlich, MD, PhD, FRCPC⁴; Bonnie Fleming-Carroll, RN-EC/Paediatric, MN, CPedN (C)¹; Brenda Hotson, RD, MSc⁵; Heather Lovelace, BSc, MSc⁶; Rabin Persad, MD, FRCPC⁷; Daina Kalnins, MSc, RD¹; Andrea Martinez, FAAP, FRCPC⁸; Valérie Marchand, MD⁹; Mélanie Vachon, MSc, RD¹⁰; Marlis Atkins, RD¹¹; Kim Brunet-Wood, MSc, RD¹²

¹The Hospital for Sick Children, Toronto, Ontario; ²The Hospital for Sick Children, Vaughan, Ontario; ³UZ Brussel, Jette, Brussels Hoofdstedelijk Gewest; ⁴University of Alberta, Alberta, Ontario; ⁵Health Sciences Centre, Winnipeg, Manitoba; ⁶BC Children's and Women's Hospital and Health Centre, Vancouver, Ontario; ⁷University of Alberta, Edmonton, Alberta; ⁸BC Children's Hospital, University of British Columbia, Vancouver, British Columbia; ⁹CHU Sainte-Justine, Montréal, Quebec; ¹⁰CHU de Québec-Université Laval, Quebec, Quebec; ¹¹Alberta Health Services, Edmonton, Alberta; ¹²Canadian Nutrition Society, St Albert, Alberta

Background: While it is identified that up to 1 in 3 hospitalized children are malnourished upon admission to hospital, and at risk for further deterioration during hospital stay, standardized approaches to detect malnutrition are lacking. A pediatric inpatient nutritional care pathway based on available evidence, feasibility of resources, and expert consensus is required.

Methods: The pediatric working group of the Canadian Malnutrition Taskforce are researchers and clinicians from dietetics, medicine and nursing, including management and frontline personnel from across Canada with a special interest/expertise in pediatric malnutrition. The membership of the working group (n = 14) undertook a total of four meetings: a face-to-face meeting to draft the pathway based on existing literature by the working group, followed by three online surveys and three rounds of on-line Delphi consensus meetings to achieve agreement on the draft pathway. In the first Delphi survey, 30 questions were asked, in the second round 15 questions and, in the 3rd, round 6 questions were asked. Consensus was defined as any question/issue in which at least 80% agreed (totally, or somewhat agree, or yes).

Results: The face-to-face meeting was attended by 92% of the working group members, and a pathway was drafted for consideration. In the first Delphi survey 75% of invited members participated. Nutritional risk assessment using Subjective Global Nutrition Assessment (SGNA) and components of the nutrition care plans were established. No consensus was achieved on method of screening for malnutrition or on exclusion criteria for screening. In the second round of modified Delphi survey, 61% of invited working group members participated. A screening tool plus anthropometric measures were determined to be needed for screening, although the specific tool to use did not reach agreement. Agreement on exclusion criteria for screening was reached in the second round. The final round included participation from 71% of members and consensus was reached on all pathway elements. The finalized pathway incorporates malnutrition screening using validated pediatric nutritional screening tools and measurement of standard anthropometric parameters; performance of SGNA to diagnose malnutrition when children screen at nutrition risk, and nutritional care plans that can be triaged for the level of malnutrition identified.

Conclusion: The modified Delphi process allowed the development of an evidence-informed, consensus-based pediatric pathway for in-patient nutrition care. It includes screening, assessment, prevention, and treatment of malnutrition. With a focus on feasibility, along with agreement on current best practices, the Pediatric Integrated Nutrition Pathway for Acute Care (P-INPAC) (Figures 1 and 2) has greater implementation potential. Research is necessary to explore feasibility of implementation and evaluate the effectiveness by integrating P-INPAC into clinical practice.

Financial Support: Canadian Malnutrition Task Force and the Delphi rounds resulting in the P-INPAC pathway were funded by Canadian Nutrition Society

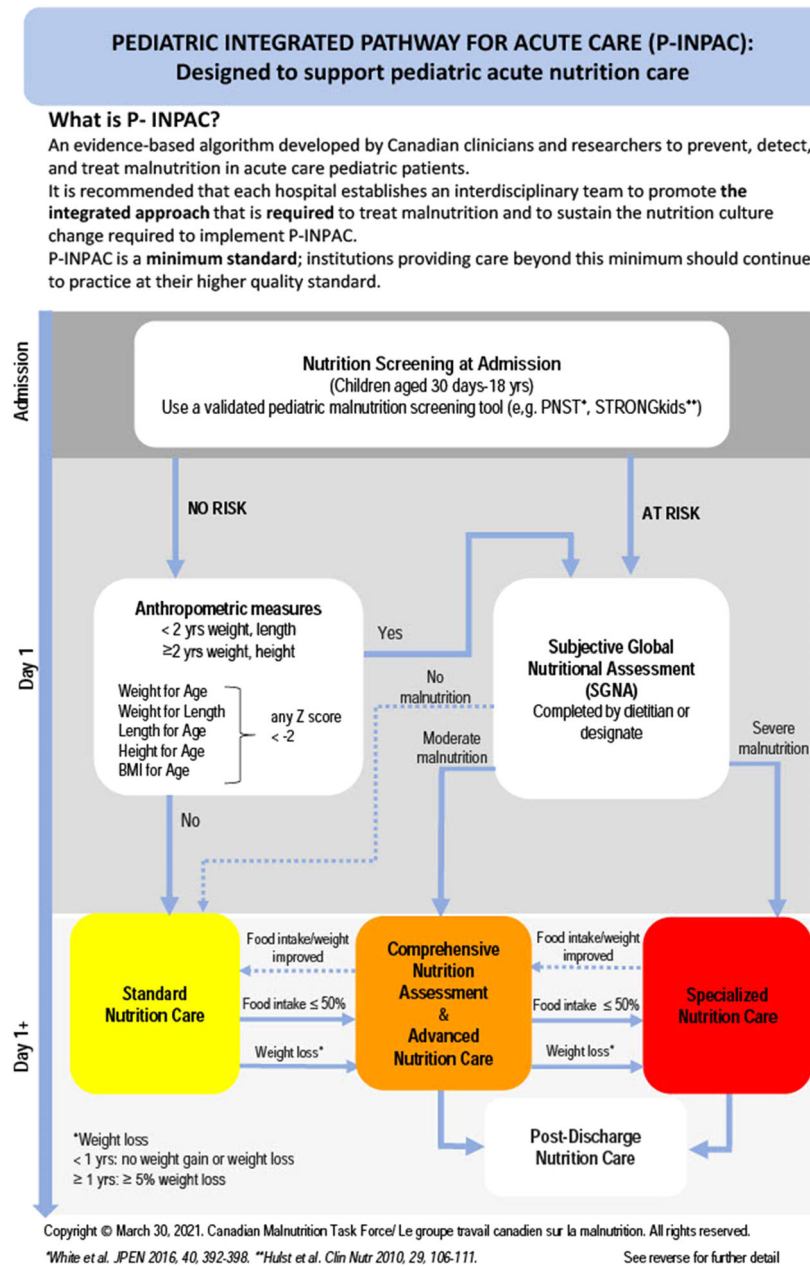
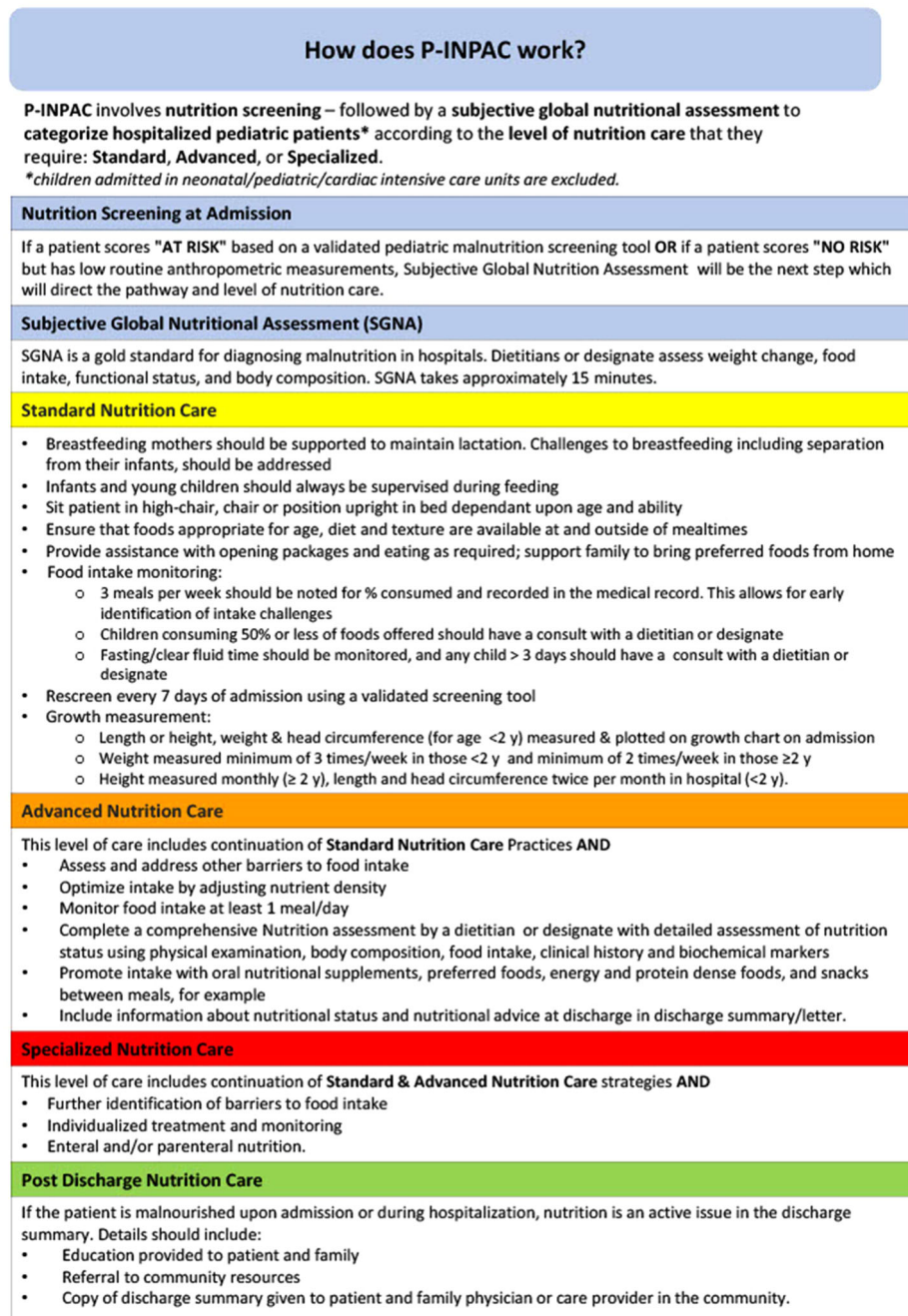


Figure 1. Pediatric Integrated Nutrition Pathway for Acute Care.



March 30, 2021 Copyright Canadian Malnutrition Task Force

Figure 2. Pediatric Integrated Nutrition Pathway for Acute Care.

P125 - Evaluation of a Novel, Evidenced-Based, Pediatric Nutrition Status Screening Protocol at a Tertiary Care Military Medical Center

Nathan Kolasinski, MD¹; Allison Brewer, RD, LD, CNSC²; Peter Broughton, MD³; Eric Pasman, MD⁴; Jennifer Geracht, MD²; Philip Rogers, MD²
¹Walter Reed National Military Medical Center, Clarksburg, Maryland; ²Walter Reed National Military Medical Center, Bethesda, Maryland;
³National Capital Consortium Pediatrics, Bethesda, Maryland; ⁴Naval Medical Center San Diego, San Diego, California

Background: Malnutrition is an unfortunately common condition afflicting US children, associated with increased morbidity and mortality. Accordingly, the Academy of Nutrition and Dietetics and the American Society for Parenteral and Enteral Nutrition recommend that a standardized set of diagnostic indicators be used to identify and document pediatric malnutrition in routine clinical practice. Several pediatric nutritional screening tools have been developed and are commercially available for clinical use, and hospitalization has been identified as a paramount opportunity for malnutrition screening.