# Paediatric malnutrition screening: first pilot in Hong Kong

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## Background & Objective

Nutrition screening is essential in clinical care to identify patients at nutrition risk for timely implementation of appropriate nutrition intervention. Routine screening of paediatric inpatients at malnutrition risk is not common in Hong Kong. Different paediatric nutritional screening tools[1-4] have been developed but no consensus has been reached for use in clinical practice. The key considerations for choice of a screening tool include skill level, time to undertake which affected by number of questions, measurements and equipment required. The aim of this pilot study is to find a simple, easy to use screening tool to identify paediatric patients at nutrition risk on admission at Prince of Wales Hospital, Hong Kong.

## Method

The Paediatric Nutrition Screening Tool (PNST) developed and validated by Melinda White [5] et al in 2016 was chosen for this pilot. The PNST consists of 4 simple questions that required a "yes" or "no" answer. Two positive answers indicate nutrition risk. Care plan relevant to the risk categories was developed via consultations with paediatrician and nursing staff. A user satisfaction survey was also conducted to collect feedback on using PNST.

**Paediatric Nutrition Screening Tool (PNST)** ***Melinda W, 2016***

| Patient, parent or carer can answer the following questions: | |
|---|---|
| ① Has the child unintentionally lost weight lately? | Yes / No |
| ② Has the child had poor weight gain over the last few months? | Yes / No |
| ③ Has the child been eating/feeding less in the last few weeks? | Yes / No |
| ④ Is the child obviously underweight? | Yes / No |

## Result

All patients admitted to the paediatric wards including general, surgical and oncology between 13th Feb and 24th Feb 2017 were screened using PNST. A total of 239 patients were screened. 229 patients (95.8%) were classified as low risk and 10 patients (4.2%) as high risk. In the satisfaction survey, users were asked to rate the tool's easiness to use from scale 1 to 5 (1=most difficult, 5=most easy). Out of 40 feedback forms collected, 68% rated the tool for scale ≥ 4.

**Feedback from Nurses on using PNST**

Number of feedback collected: 40

| The tool in general is easy to use | | | | | | |
|---|---|---|---|---|---|---|
| Difficult | 1 | 2 | 3 | 4 | 5 | Easy |
| | 0 | 4 (10%) | 9 (22.5%) | 17 (42.5%) | 10 (25%) | |

| Q1 "Has the child unintentionally lost weight lately" is easy to ask | | | | | | |
|---|---|---|---|---|---|---|
| Difficult | 1 | 2 | 3 | 4 | 5 | Easy |
| | 1 (2.5%) | 3 (7.5%) | 18 (45%) | 9 (22.5%) | 9 (22.5%) | |

| Q2 "Has the child had poor weight gain over the last few months" is easy to ask | | | | | | |
|---|---|---|---|---|---|---|
| Difficult | 1 | 2 | 3 | 4 | 5 | Easy |
| | 1 (2.5%) | 6 (15%) | 12 (30%) | 12 (30%) | 9 (22.5%) | |

| Q3 "Has the child been eating/ feeding less in the last few weeks" is easy to ask | | | | | | |
|---|---|---|---|---|---|---|
| Difficult | 1 | 2 | 3 | 4 | 5 | Easy |
| | 0 | 4 (10%) | 8 (20%) | 18 (45%) | 10 (25%) | |

| Q4 "Is the child obviously underweight?" is easy to ask | | | | | | |
|---|---|---|---|---|---|---|
| Difficult | 1 | 2 | 3 | 4 | 5 | Easy |
| | 0 | 5 (12.5%) | 11 (27.5%) | 16 (40%) | 8 (20%) | |

## Discussion & Conclusion

This study is the first "Paediatric Nutrition Screening Tool" pilot study in Hong Kong. The results can be used to evaluate the feasibility of applying PNST and approaches to implement nutrition screening in paediatric patients in Hong Kong

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