PYMS
Paediatric Yorkhill Malnutrition Score
Information and User’s Guide
2009
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“Freedom from…malnutrition is a basic human right”

(World Health Organisation, 2008).

Introduction
The Paediatric Yorkhill Malnutrition Score (PYMS) has been developed to assist nursing staff and other health professionals identify hospitalised children, between the ages of 1-16 years, who are at risk of malnutrition and offer them appropriate care. The following explanatory notes offer an overview of malnutrition and provide information on the development and use of PYMS.

Malnutrition
Identification of children at risk of malnutrition is essential in treating disease-related malnutrition and optimising the health of all hospitalised patients. Malnutrition is: “the state of nutrition in which a deficiency or excess (or imbalance) of energy, protein, and other nutrients causes measurable adverse effects on tissue/body function and clinical outcome.” The term malnutrition refers to both over-nutrition and under-nutrition but, for the purposes of this document it only refers to energy/protein under-nutrition.

Malnutrition continues to be a significant health issue in developed countries, with an estimated cost in the UK of approximately £13 billion. Despite this malnutrition continues to be largely unrecognised and under treated. It has been estimated that up to 30% of hospitalised patients are at risk of malnutrition and this figure can be as high as 60% in some paediatric patient groups.

Why is Malnutrition Important?
Malnutrition is undesirable, not only because it leads to weight loss, but also because it is a recognised risk factor for the development of complications of disease. These include increased morbidity and mortality, longer duration of hospitalisation and increased health care costs. In children, there are additional concerns as malnutrition can potentially lead to long-term effects on brain development, linear growth and bone health that impact on health later in life.
Failure to consider nutritional status may also have medico-legal consequences, with an increasing number of cases of nutritional neglect being pursued within the judicial system\textsuperscript{15}.

In the general population approximately 2.5\% of children have a body weight which is below the reference range for their age and gender. However, a much larger proportion (16\%) of children attending hospital are underweight and malnutrition remains largely undiagnosed and untreated amongst hospitalised children\textsuperscript{9-10}. This is mainly due to a lack of nutritional training and awareness amongst staff and can also be attributed to a lack of established protocols for screening, assessment and action\textsuperscript{15}.

\textbf{Introduction to Nutritional Screening}

Food and water are essential elements of care and failure to detect malnutrition or the risk of becoming malnourished has the potential to cause patients considerable harm. The Nursing and Midwifery Council (NMC) Code of Conduct requires all nursing staff to 'protect and promote the health and well being of those their care'\textsuperscript{16}. This responsibility is detailed in NHS Quality Improvement Scotland Guidelines (2003) which state that because high quality nutritional care is crucial for the well being of patients, all patients should be screened using a validated tool that is appropriate to the patient population\textsuperscript{17}. Such screening should be carried out on admission and regularly during a patient’s hospital stay. Nutritional screening provides a means of ensuring that patients, who following screening appear to be at high risk, will be assessed by dietetic staff and managed appropriately.

Screening tools validated in adult patients\textsuperscript{18-19} are inappropriate for use in children, as malnutrition presents differently within the paediatric population. Thus far, nutritional screening in paediatrics has been hindered due to a lack of a valid generic paediatric screening tool\textsuperscript{15}.
Development of the Paediatric Yorkhill Malnutrition Score (PYMS)
A multidisciplinary healthcare team from the Royal Hospital for Sick Children, Glasgow and Royal Alexandra Hospital, Paisley, both part of the Women and Children’s Directorate NHS Greater Glasgow and Clyde, was assigned to develop a local paediatric malnutrition screening tool. The project team consisted of senior nursing, dietetic, research, academic and medical staff.

The primary purpose of the project team was to develop and validate a tool that would be simple, quick to use, user and patient friendly and would detect the majority of children at risk of malnutrition. The tool would be used by nursing staff to screen patients on admission and at intervals during their hospital stay. The tool was developed for use in children aged 1-16 years. A separate tool was considered necessary to assess neonates and infants under the age of 1 year, due to their rapid growth during the first year of life and complex issues surrounding prematurity.

A preliminary malnutrition screening tool was developed based on the guidelines for nutritional screening from the European Society of Clinical Nutrition and Metabolism\textsuperscript{15}. The PYMS was designed to incorporate questions/measurements to address the following four principles:

1. The current nutritional status
2. The stability of nutritional status
3. The recent changes to nutritional status
4. The likelihood of the acute disease condition to affect the nutritional status adversely.

Validation of the Paediatric Yorkhill Malnutrition Score (PYMS)
Following the development of the tool a 4 month validation study was undertaken, within 4 paediatric wards (3 medical, 1 surgical) of a tertiary paediatric hospital and the general paediatric ward of a district general hospital. The diagnostic accuracy and performance of PYMS was evaluated through a four stage validation study, the results of which have been presented\textsuperscript{20-22} and are expected to be published in due course.
PYMS

User’s Guide
Description of the PYMS Form

The PYMS form is presented as a simple structured questionnaire, consisting of four questions (steps) which are strong predictors/symptoms of malnutrition. Each of these steps bears a score from 0 to 2 and an overall nutritional risk score (step 5) is calculated based on the sum of the results of steps 1-4. An action plan follows according to the overall nutrition score. The four steps are outlined below:

Step 1: Body Mass Index (BMI)

- BMI is a useful measure of nutritional risk and is based on height and weight.
- Height and weight should be obtained according to local hospital guidelines.
- Weight must be repeated each time PYMS is carried out and it is recommended that for long term admissions, height/length should be recorded monthly for infants and three-monthly for older children. (N.B. please follow local hospital policy).

Instructions outlining the correct procedure for obtaining weights and heights/lengths are included in this information & users guide (page 21-24) (N.B. please follow local hospital guidelines). Once measurements have been correctly obtained, they should be recorded in the appropriate boxes on the PYMS form. After that, the Body Mass Index (BMI) for the patient can be calculated using a BMI calculation wheel.

The BMI calculation wheel consists of two wheels (see figure 1). To use:

- Locate the weight (kilograms) of the patient on the outer wheel and the height/length (centimetres) of the patient on the inner wheel.
- Rotate the inner wheel until child’s weight and height are aligned.
- The BMI value is displayed in the window by the red arrow, record the value obtained in the appropriate box on the PYMS form.
Normal BMI values vary according to age and gender and therefore a scoring guide located on the back of the PYMS form, gives the minimum acceptable BMI values. The age of the child should not be rounded up when referring to this scoring guide. A BMI below the minimum acceptable value indicates a possible risk factor for malnutrition. The following scoring should be used for step 1:

i. Score 0 if BMI value is greater than that shown for age and gender according to the scoring guide.

ii. Score 2 if BMI value is below that shown for the age and gender according to the scoring guide.

**NB:** If it is NOT POSSIBLE TO OBTAIN A HEIGHT, a member of medical staff should be asked to plot the patient’s weight on a growth chart. If the weight is below the 2\textsuperscript{nd} centile, a SCORE of 2 should be entered for step 1.

The reason why a height could not be obtained should be documented in the comments table on the back of the form.
STEP 2: Recent Weight Loss
Unintentional weight loss may indicate that a child is at nutritional risk. Ask parents/guardians if they have noticed any recent weight loss, or compare current weight with previously documented weights. These should be recorded in the patient’s notes or parent hand held record.

If the child is under 2 years of age, parents/guardians should be asked if they have any concerns about the child’s weight gain recently. Failure to gain weight may also be an indication of nutritional risk in very young children (<2 years).

i. Score 0 if:
   a. Weight is increasing
   b. Weight is static and child is more than 2 years old
   c. Weight loss is intentional as the child has been or is overweight and is on a calorie restricted diet.

ii. Score 1 if:
   a. Unintentional weight loss noticed by the child/carers or has been identified after comparing with previously documented weights
   b. Weight static in a child less than 2 years old
   c. Clothes have become more ill fitting due to noted weight loss
   d. Intentional weight loss because of eating disorders e.g. if the child suffers from anorexia nervosa.

STEP 3: Assess Recent Change in Diet/Nutritional Support (for at least the last week)
A decreased nutritional intake may increase the risk of developing malnutrition. Ask carers/child about food intake for at least the last week. If the child is usually on any artificial feeds (enteral feeds, dietary supplements or parenteral nutrition) then ask whether there has been any change in the amount taken and/or tolerated.

i. Score 0 if:
   a. There has been no change to normal diet or enteral nutrition, dietary supplements or parenteral nutrition
ii. Score 1 if:
   a. There has been a decrease in usual dietary intake, enteral feeds, dietary supplements or parenteral nutrition for a minimum of the last 7 days (unless health professional instructed decrease to restrict calorie intake).

iii. Score 2 if:
   a. There has been no or minimal intake over the last week, including intake from oral feeds, enteral nutrition, dietary supplements or parenteral nutrition.

**N.B.** If there is very minimal intake (only a few sips of feed per day) this should be counted as no intake (score 2).

**STEP 4: Acute Admission/Condition Effect on Nutrition (at least the next week)**

Some patients may be at risk of becoming undernourished during their hospital admission or soon after their discharge, because of the effect of the medical condition on their nutritional status. This may be due to decreased intake, increased gut losses and increased energy requirements.

i. Score 0 if:
   a. The patient’s nutritional status is unlikely to be unchanged during this admission or soon after their discharge.

ii. Score 1 if at least one or more of the following is expected over at least the next week:
   a. Decreased intake from oral, enteral or parenteral nutrition (e.g. orofacial disease or trauma, severe nausea)
   b. Increased gut losses (e.g. significant ongoing diarrhoea or vomiting, large stoma losses)
   c. Increased energy requirements (e.g. major trauma, burns, sepsis, pyrexia).
iii. Score 2 if for the next week:
   a. No or minimal intake is expected from oral, enteral or parenteral nutrition (e.g. major abdominal surgery).

**N.B.** If there is very minimal intake (only a few sips of feed per day) this should be counted as no intake (score 2).

**STEP 5: Total Nutrition Risk Score and Action Plan**
Once all the above scores have been entered onto the PYMS form add them together to provide a total score (step 5). A total score of 2 or more reflects significant nutritional risk.

i. If the score is 2 or more, a request for dietetic review should be made according to the established hospital request system and the medical/surgical team should also be informed. PYMS should be repeated **weekly**.

ii. If the score is 1, then the child should be observed for any further deterioration of intake. The quantity and type of food and fluid consumed should be recorded. PYMS should be repeated in **3 days** and medical staff informed.

iii. If the score is 0, then no further action is required at this time but PYMS should be repeated **weekly**.

**N.B.** If there are clinical concerns about a patient’s nutritional status, a dietetic review **MUST** be requested and medical staff informed even if the child has scored less than 2.
Local policies and clinical judgement are not replaced by this scoring system and children should be managed following local guidelines for nutrition management. This should include plotting of height and weight on a growth chart and any additional nutritional concerns discussed with the medical/surgical team and a request made to dietetics if deemed necessary (e.g. food allergies, special diets etc).

PYMS is designed to detect children at risk of energy/protein under-nutrition (malnutrition) only, and will therefore not detect children with vitamin and/or mineral deficiencies. It is not designed to detect children at risk of over-nutrition (obesity).
The PYMS Form Explained

**Paediatric Yorkhill Malnutrition Score (PYMS)**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Hospital:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surname:</td>
<td>Consultant:</td>
<td>Nurse Signature</td>
</tr>
<tr>
<td>DoB:</td>
<td></td>
<td>Signature:</td>
</tr>
<tr>
<td>Age:</td>
<td>Sex:</td>
<td>BMI</td>
</tr>
<tr>
<td>Ward:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step 1:** Is the BMI below the cut-off value in the table?
- NO: 0
- YES: 2

**Step 2:** Has the child lost weight recently?
- NO: 0
- YES: 1
  - Intentional weight loss
  - Clothes looser
  - Poor weight gain (if <2yrs)

**Step 3:** Has the child had a reduced Intake (including feeds) for at least the past week?
- NO usual intake: 0
- YES: 1
  - Decrease of usual intake for at least the past week
  - No intake (or a few sips of feed only) for at least the past week: 2

**Step 4:** Will the child’s nutrition be affected by the recent admission/condition for next week?
- NO: 0
- YES: 1
  - For at least the next week
    - Decreased intake and/or
      - Increased requirements and/or
      - Increased losses
    - No intake (or a few sips of feed only) for at least the next week: 2

**Step 5:** Calculate Total Score (total of steps 1-4)

**Total PYMS Score**

*PYMS must be completed by a registered nurse*

---

**Age required to calculate BMI and compare against cut off value**

**Measure length/height monthly in infants and 3 monthly in older children**

**Local hospital policy may require that 2 people check weight and height measurements**

**Obtain each time PYMS is calculated**

**Record calculated BMI here - obtain using BMI wheel.**

**Use BMI scoring guide overleaf**

**Obtain each time PYMS is calculated**

**Unless a health professional has instructed reduction in calorie intake.**

**e.g:**
- Major trauma
- Major burns
- Sepsis
- Pyrexia

**e.g:**
- Persistent diarrhoea
- Persistent vomiting

**e.g:**
- Orofacial disease/trauma
- Severe nausea
If you are unable to complete any steps give reasons why here.

If you are unable to obtain a height, the patient’s weight should be plotted on a growth chart and if < 2\textsuperscript{nd} centile a score of 2 should be given for step 1.

Please document reason why a height could not be obtained i.e. cerebral palsy/scoliosis.

****NB: Regardless of PYMS score if you have any nutritional concerns about this patient please refer to dietitians following initial screening.****

**Body Mass Index (BMI) Scoring Guide**

(If the BMI calculated is less than that shown for age and gender, answer Yes for Step 1)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
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<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>15.0</td>
<td>14.5</td>
<td>14.0</td>
<td>13.5</td>
<td>13.5</td>
<td>13.5</td>
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<td>15.5</td>
<td>16.0</td>
<td>16.5</td>
<td>17.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Girls</td>
<td>15.0</td>
<td>14.0</td>
<td>13.5</td>
<td>13.5</td>
<td>13.0</td>
<td>13.0</td>
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<td>16.0</td>
<td>16.5</td>
<td>17.0</td>
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</tr>
</tbody>
</table>

**Notes – Comments**

Use this scoring guide to determine if the BMI obtained is below the normal value, as shown for the age and gender of the patient.

Always round down the age of the patient i.e. if your patient is 3yrs and 9mths, your patient’s age is 3 yrs.
### Paediatric Yorkhill Malnutrition Score (PYMS)

<table>
<thead>
<tr>
<th>Step</th>
<th>Question</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Is the BMI below the cut-off value in the table overleaf?</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Step 2</td>
<td>Has the child lost weight recently?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unintentional weight loss</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clothes looser</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor weight gain (if &lt;2yrs)</td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td>Has the child had a reduced intake (including feeds) for at least the past week?</td>
<td>0</td>
<td>1</td>
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<tr>
<td></td>
<td>Usual intake</td>
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<tr>
<td></td>
<td>Decrease of usual intake for at least the past week</td>
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<tr>
<td></td>
<td>No intake (or a few sips of feed only) for at least the past week</td>
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</tr>
<tr>
<td>Step 4</td>
<td>Will the child’s nutrition be affected by the recent admission/condition for at least the next week?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>For at least the next week</td>
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<tr>
<td></td>
<td>Decreased intake and/or</td>
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<td>Increased requirements and/or</td>
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<td>Increased losses</td>
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<tr>
<td></td>
<td>No intake (or a few sips of feed only) for at least the next week</td>
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<tr>
<td>Step 5</td>
<td>Calculate total score (total of steps 1-4)</td>
<td></td>
<td>Total PYMS Score</td>
</tr>
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</table>

**PYMS must be completed by a registered nurse**

PYMS Dietetic Management Pathway

Total PYMS Score

0
Repeat PYMS Score in ONE WEEK

1
Repeat PYMS Score in THREE DAYS

≥2
Request Dietetic Review

***NB: Regardless of PYMS score if you have any nutritional concerns about this patient please refer to dietitians following initial screening.***

Body Mass Index (BMI) Scoring Guide
(If the BMI calculated is less than that shown for age and gender, answer Yes for Step 1)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>1</th>
<th>2</th>
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Notes – Comments

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<td>Nursing Comments</td>
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<td>Dietitian □ Dentist □ SALT □ Other □ Specify.........................</td>
</tr>
<tr>
<td>(including reason unable to complete PYMS step)</td>
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Health Professional Request made to:

Health Professional Comments

Womens and Children’s Directorate

Nurses Quick Reference Guide to the Paediatric Yorkhill Malnutrition Score (PYMS)

Introduction

- PYMS is a simple and quick scoring system to identify children who are at nutritional risk.
- PYMS aims to identify such children so they can be highlighted to health care professionals eg. Dieticians, so that appropriate advice and support can be given, hence the complications of under nutrition during and after their hospital stay may be minimised.
- Many Children have a short hospital stay but those staying longer than a few days the PYMS should be repeated.
- PYMS consists of 5 steps, the final step provides the total nutritional risk score.

Step 1: Body Mass Index (BMI)

BMI is a useful measure of nutritional risk and is based on height and weight
- Obtain height and weight according to local hospital guidelines and record on the form.
- Use the “BMI calculation wheel” to calculate BMI by rotating the wheels until the child’s weight and height are aligned. The red arrow identifies the BMI value.
- Record the BMI on the form and refer to the table on the back of the form for scoring.

NOTE: If the height is unobtainable then please ask medical staff to plot weight on a growth chart. If the weight obtained is below the 2nd centile please score 2 for step 1. The reason why a height could not be obtained should be documented in the comments box on the back of the form.

NOTE: If it is not possible to obtain height and a weight proceed to step two and document reason in the table on the back of the form

Step 2: Weight Loss (over last 3 months)

- Recent weight loss may be an indication of nutritional risk.
- Ask carers/child about any weight loss noticed during the last 3 months or compare current weight with previous recent weights (in patients notes or parent hand held record).
- If the child is under 2 years of age then carers should be asked if they have any concerns about the child’s weight gain in the last 3 months.

i. Score 0 if:
   a. Weight increasing
   b. Weight static and child more than 2 yrs old
   c. Weight loss is intentional as the child has been/ is overweight and is on a calorie restricted diet

ii. Score 1 if:
   a. Weight loss
   b. Weight static in a child less than 2 yrs old
   c. Carers have noticed clothes becoming looser fitting in the last 3 months
   d. Intentional weight loss because of eating disorders
Step 3: Assess Recent Change in Diet/Nutritional Support (at least the last week)

- In children where nutritional intake is decreased even over a relatively short number of days, this may increase their nutritional risk.
- Ask carers/child about food intake in the last week. If the child is usually on any artificial feeds (enteral feeds, dietary supplements or parental nutrition) then ask whether there has been any change.
  
  i. Score 0 if there has been no change to normal diet, enteral nutrition, dietary supplements or parental nutrition
  ii. Score 1 if there has been a decrease in usual dietary intake, enteral feeds, dietary supplements or parental nutrition in the last week (unless health professional has advised so)
  iii. Score 2 if there has been no dietary intake for the last week including oral feeds, enteral nutrition, dietary supplements and parental nutrition

NOTE: If there is very minimal intake i.e.; only a few sips of feed per day) this should be counted as no intake (Score 2)

Step 4: Acute Admission/Condition Effect on Nutrition (at least the next week)

- Some patients may be at risk of becoming undernourished during their hospital admission or soon after their discharge. This may be due to decreased intake, increased gut losses and increased energy requirements.
  
  i. Score 0 if the patient’s nutrition is likely to remain adequate during this admission or soon after their discharge.
  ii. Score 1 if at least one of the following is expected over the next week
     a. decreased intake from oral, enteral or parenteral nutrition (e.g., orofacial disease, trauma, severe nausea, loss of I.V. access for parental nutrition)
     b. Increased gut losses (e.g., significant ongoing diarrhoea or vomiting)
     c. Increased energy requirements (e.g., major trauma, burns, sepsis, pyrexia)
  iii. Score 2 if during the next week no intake is expected from oral or from enteral or parental nutrition (e.g., major abdominal surgery)

NOTE: If there is very minimal intake (only a few sips of feed per day) this should be counted as no intake (Score 2)

Step 5: Total Nutritional Risk Score and Action Plan

Once all the above have been entered onto the score sheet add them together to provide a total score. A score of 2 or more reflects significant nutritional risk.
  
  i. If the Score is 2 or more a request for a dietetic review should be made according to the established hospital request system and the medical/surgical team should also be informed. PYMS should be repeated weekly.
  ii. If the score is 1 then the child should be observed for any further deterioration of intake. The quantity and type of food and fluid should be documented on the fluid balance chart. The score is repeated in 3 days and medical staff should be informed.
  iii. If the score is 0 then no further action is required but the score should be repeated weekly.

NOTE: Local policies and clinical judgement are not replaced by this scoring system and children should be managed following local guidelines for nutrition management. This should include plotting of height and weight on a growth chart and any additional nutritional concerns discussed with the medical/surgical team and a request made to dietetics if deemed necessary (e.g., food allergies, special diets etc.).

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Weight Measurement Technique

**Always**
- Check that the scales are serviced annually
- Ask another nurse or appropriate health professional to check the weight
- Weight should be measured and recorded in kilograms up to 100 grams (for babies record up to 10 grams). Do NOT round up!
- Record the weight directly in the medical notes and elsewhere as needed
- Clean scales appropriately at the end of the measurement

**Babies less than 2 years (baby scales)**
1. Place disposable paper on the basket and check the tare of the scales to zero
2. Remove the baby’s clothes, including the nappy
3. Lie or sit the baby in the basket of the scales
4. When the baby is as still as possible read the weight

**Children over 2 years (standing or sitting scales)**
1. Ask the child to remove shoes, empty pockets, and stay with minimal light clothing
2. Check that the digital screen on the scales is set at zero
3. Ask the child to sit or stand on the scales and stay still. For sitting scales be sure feet are resting on the bar and are not touching the floor

**Disabled children**
1. Ask the child or help him/her to remove shoes, empty pockets, and stay with minimal light clothing
2. Use a hoist scale to measure weight or if not available the weight can be calculated by weighing the carer and the child together and then the parent alone. The subtracted weight is the weight of the child
Height/Length Measurement Technique

Always
- Check the accuracy of the height/length equipment weekly with the calibration rod.
- Ask another nurse or appropriate health professional to help you
- Height should be measured and recorded in up to 1 mm. Do NOT round up!
- Record the height directly in the medical notes and else where as needed
- Clean equipment appropriately at the end of the measurement
- Use of measuring tapes is not appropriate

Babies & infants less than 70 cm (kiddimeter or supine stadiometer)
1. Place disposable paper on the measuring board
2. Remove the baby’s clothes, including the nappy
3. Lie the baby supine on the board with the head at the headboard
4. One nurse should always hold the head steady against the headboard, facing straight up
5. The second nurse holds feet together and the footboard is brought up to touch the soles of the baby’s feet
6. Ideally both legs should be straight with the ankles at the right angle of the legs and the toes pointing upwards.

Children more than 70 cm (wall mounted stadiometer)
1. Ask the child to remove shoes and thick sport socks
2. Ask the child to stand under the stadiometer with feet together and shoulders back.
3. Ideally heels, buttocks, shoulders and back of head should touch the back plate
4. Slide the headboard gently on top of the head
5. Position the head of the child looking straight ahead with the lower border of the bony orbit and the upper margin of the ear hole in the same horizontal line
6. Read the height
Supine Measurement

- Head steady against the wall facing straight up
- Feet straight together with soles touching the board

Standing Height Measurement

- Bare feet, legs together
- Heels, calves, buttocks, shoulder, head touching the back plate
Measurement Technique
Standing Height

- Remove child's shoes and socks.
- Position child with back against backboard or back-post of measuring device (or against wall if wall-mounted device is used). Heels must be together, legs straight and shoulders relaxed.
- Heels, buttocks and, if possible, scapulae should be against the wall.

- Place headboard gently on top of the head and check that the head is in the correct position. Child should look straight ahead with the lower margins of the eyes in the same horizontal plane as the external auditory meati (ear hole).
  *(This is know as the Frankfurt Plane)*

- Read the height to the last complete millimetre - do not round up or down.
- Plot height on appropriate centile chart. Use simple dot to mark the height.
Reference List


Produced by The Nutrition Tool Steering Group, Women and Children’s Directorate, NHS Greater Glasgow and Clyde.