Good Practice Guideline

Obtaining an Accurate Body Weight Measurement in Adults and Children in Primary and Secondary Care Settings (not babies)

September 2013

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Guideline Aim:
The aim of these guidelines is to provide a clear step by step approach, supported with evidence, where available, to ensure that an adult or child in a primary or secondary care setting is weighed using the required standard of calibrated weighing scales, at appropriate time intervals by competent staff.

Throughout this document the terms individual or person will be used to minimise confusion relating to specific healthcare settings.

Introduction:
In adults body weight should be recorded as part of the malnutrition screening process on admission for hospital in-patients, out-patients, people in care homes and people attending GP surgeries. Body weight should be repeated weekly for in-patients and when there is clinical concern for others (NICE 2006) or on home visits if weight is relevant to purpose of visit i.e. person receiving nutritional support or weight management review.

In children body weight should be recorded when attending an acute hospital setting such as a pre-assessment clinic, or when admitted to a ward setting (RCN 2010). If admission is longer than seven days, then the child must be weighed at least weekly (RCN 2006, Shaw & Lawson (2007).

An accurate body weight is required to:
- Assess and monitor fluid and nutritional status
- Calculate safe doses of medication and clinical therapies
- Calculate nutritional and fluid requirements so appropriate nutrition support plans can be devised
Good Practice Guideline – For Accurate Body Weight Measurement Using Weighing Scales in Adults and Children

- Establish and monitor fluid and nutritional status and to calculate safe doses of medication
- When selecting supportive equipment such as pressure relieving beds, chairs and mattresses (NPSA 2010).

Background / Evidence

Weighing equipment are important diagnostic and monitoring tools.

A lack of consistent weight recordings in conjunction with the use of inaccurate or inappropriate weighing equipment hinders optimal care (Clarkson 2012) leading to potential errors in diagnosis, treatment or medication dosage (DH, 2010, LACORS, 2009).

Within this document the term weighing equipment refers to stand on or sit on scales, wheelchair scales, hoist scales or built in bed weighing scales.

Local Authorities Co-ordinators of Regulatory Services (LACORS) audited a number of NHS organisations in 2007 and identified areas where weighing equipment in use was incorrectly calibrated or of the wrong type (LACORS 2007).

This audit was repeated in 2008 and found that 1 in 3 scales in use were inaccurate and many hospital staff were not correctly trained to use them (LACORS 2008).

Medical weighing equipment is covered in Schedule 3 of the Non Automatic Weighing Instrument regulations (LACORS 2008). These regulations make it a legal requirement to have equipment that is accurate and suitable for purpose.

All weighing equipment must carry the green M label as well as the CE mark. They should also carry a 4 digit number which indicates the organisation responsible for verifying the instrument. This is either the manufacturer, if they are verified to do so, or a local trading standards officer (UKWF 2009).
Good Practice Guideline – For Accurate Body Weight Measurement Using Weighing Scales in Adults and Children

The Local Authorities Co-ordinators of Regulatory Services (LOCARS 2009) and the Department of Health (2010) recommend that:

- Class III weighing scales should be used in healthcare premises:
  - When greater accuracy is required e.g. when weight is used to calculate medication doses or therapy or patients are being monitored for fluid retention
  - For the calculation of weight for medication and ongoing treatment or monitoring.
  - Scales may be standing, sitting, hoist, wheelchair or bed scales according to patient need.

- Class IV (less accurate domestic type scales) should only be used for monitoring/recording an individual’s weight:
  - Where weight is not required to calculate treatments or therapies
  - In GP consulting rooms, nursing or residential homes and home visits
  - Where there is no risk the scale will be used to weigh someone under the age of 18.

- All new weighing equipment purchased for the purposes of weighing patients should achieve a Class III standard (or higher).
- Each hospital or healthcare premises should procure all weighing equipment centrally (rather than on a ward-by-ward basis), ideally by the department responsible for maintaining the equipment.
- Healthcare premises should instigate a programme of testing for their equipment on an annual basis.
- All weighing equipment should be recorded on the medical devices inventory and the accuracy checked using traceable calibrated weights.
- If equipment is considered to give inaccurate readings during the intervening period, it should be removed from the clinical area and subjected to an interim inspection.
- All scales used for medical purposes should only display metric units.
Recording Weights in Children
Maximum scale interval for adults is 0.5kg and for children it is 0.2kg (UKWF 2009).

Training and Responsibilities
Basic training in the use of weighing equipment should be given to all healthcare professionals involved in weighing individuals.

If the healthcare professional does not feel competent undertaking and recording body weight additional training should be sought.

If the role of weighing is delegated to non-registered staff the Registered Nurse maintains accountable to ensure the non-registered staff are trained and competent in obtaining accurate weight measurements (RCN 2010).

Changes in Body Weight:
Short term changes in body weight e.g. >0.25kg per day are likely to reflect changes in hydration rather than actual body weight.

If recorded body weight is not as expected then the person should be re-weighed.

Using Proxy Measurements:
If is not possible to weigh a patient a proxy measure of weight such as mid upper arm circumference may be used.
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Equipment needed to obtain body weight:
- Appropriate weighing scales
- Flat even surface
- Cleaning equipment, as per local policy, to clean scales after use
- Weight conversion chart (to inform the person of their weight in stones/pounds if they prefer)

<table>
<thead>
<tr>
<th>No</th>
<th>Action</th>
<th>Rationale</th>
<th>Reference</th>
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</table>
| 1. | Prior to use check:  
  - The calibration date is still valid  
  - Scales have sufficient battery power to weigh the person (if appropriate),  
  - For any signs of damage. | Any equipment found to be faulty or inaccurate should be immediately removed from service and either repaired or replaced. To detect any obvious signs of damage or discrepancy. | LACORS (2009)  
  DH (2010) |
| 2. | Position the scales for easy access and to ensure privacy and dignity. | To ensure the patient can get on and off the scales easily, safely and without being overlooked. | Dougherty & Lister (2011) |
| 3. | Place weighing equipment on a firm, solid surface.  
  Apply brakes to scales (if appropriate).  
  Ensure that no part of the scales is leaning against a fixed object e.g. a wall. | To avoid accidents should the scales move inadvertently. To increase the accuracy of the weight recorded. | Dougherty & Lister (2011)  
  UKWF (2009) |
### Good Practice Guideline – For Accurate Body Weight Measurement Using Weighing Scales in Adults and Children

<table>
<thead>
<tr>
<th>4.</th>
<th>If using:</th>
<th>To avoid accidents should the scales move inadvertently. To increase the accuracy of the weight recorded.</th>
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<tbody>
<tr>
<td></td>
<td>o Stand on scales adjust the legs to ensure scales are level. Check spirit level if present.</td>
<td>Dougherty &amp; Lister (2011) UKWF (2009)</td>
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<td>o Wheelchair weighing scales:</td>
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<td></td>
<td>o Weigh wheelchair</td>
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<td></td>
<td>o Weigh individual in the wheelchair</td>
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<td>o Calculate the individual’s weight</td>
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<td>o If using hoist scales:</td>
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<td>o Ensure scales are compatible with the type of hoist being used.</td>
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<td></td>
<td>o Ensure hoist slings are compatible and of an appropriate size for the person</td>
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<td>If unsure check manufacturers guidance.</td>
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<th>5.</th>
<th>Explain the procedure to the person. Where the person has capacity to consent verbal agreement should be obtained. Where the person does not have capacity a risk assessment should be undertaken and decision regarding safe weight measurement made in the persons best interest.</th>
<th>To demonstrate understanding and agreement with the procedure. To demonstrate wider consultation to ensure an appropriate decision is made.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>To avoid accidents should the scales move inadvertently. To increase the accuracy of the weight recorded.</td>
<td>Dougherty &amp; Lister (2011) UKWF (2009)</td>
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<thead>
<tr>
<th>6.</th>
<th>The individual should be weighed:</th>
<th>Outdoor clothing or shoes, stoma/catheter bags will add additional weight and make it difficult to obtain accurate body weight.</th>
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<td></td>
<td></td>
<td>Dougherty &amp; Lister (2011) UKWF (2009)</td>
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<thead>
<tr>
<th>Requirement</th>
<th>Source(s)</th>
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<tr>
<td>Request the person remove shoes and outdoor garments as appropriate.</td>
<td>Shaw &amp; Lawson (2007)</td>
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<td>If weighing patients with stoma or catheter bags ensure they are emptied before weighing.</td>
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<tr>
<td>If weighing children they should be weighed wearing only a dry nappy or pants. Where this is not possible or in older children the amount and type of clothing should be recorded.</td>
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<td>7. Ensure that the weighing equipment records zero before the person is positioned on it or the hoist sling attached. If the weighing equipment does not show zero reset them before placing the patient onto them. Following a risk assessment provide the appropriate level of assistance if person cannot get on to the weighing equipment independently.</td>
<td>DH (2010) LACORS (2009) UKWF (2009)</td>
</tr>
<tr>
<td>8. The person should remain still as possible whilst being weighed Monitor to ensure that:</td>
<td>LACORS (2009) UKWF (2009)</td>
</tr>
<tr>
<td>- Clothing is not touching any fixed part of the scales or surroundings.</td>
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<td>- Body weight is not supported on an object, e.g. a walking stick or wall and the person does not have their feet placed on the floor (when using sitting scales) or on any part of the hoist</td>
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<tr>
<td>9. Ask the person whether they would like to be informed of their weight. Once the scales register a weight record the reading on the scales and document in the appropriate documentation or nutrition screening tool. Where necessary, or if requested use a weight conversion chart to inform the person of their weight.</td>
<td>NMC (2009)</td>
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<td><strong>10.</strong></td>
<td>If possible check with the person and previous medical records that the weight reflects their expected weight and is similar to previous weights recorded. If the weight is not as expected then the person should be re-weighed. (NB: Also consider deliberate weight loss and fluid balance)</td>
<td>To check that the weight recorded is correct.</td>
<td></td>
<td>NMC (2009)</td>
<td></td>
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<td><strong>11.</strong></td>
<td>Once accurate weight is recorded assist the person to move away from weighing scales. Ensure they are dressed appropriately and comfortable at end of procedure.</td>
<td>To maintain patient dignity.</td>
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<td><strong>12.</strong></td>
<td>Routine cleaning of scales should be undertaken in accordance with the manufacturer’s instructions and local policy, after every patient use.</td>
<td>To maintain hygiene and cleanliness</td>
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<td>RCN (2012)</td>
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<td><strong>13.</strong></td>
<td>Return scales to storage position.</td>
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<td><strong>14.</strong></td>
<td>Record weight in kilograms (Kg) in the appropriate noting system including growth chart, screening tool or medication chart (as appropriate). Record time of day patient was weighed and what clothing was worn.</td>
<td>Standard units should be used to avoid confusion To reduce inconsistencies between weights</td>
<td></td>
<td>NPSA (2010) Vivanti et al 2013</td>
<td></td>
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<td><strong>15.</strong></td>
<td>Repeat weight should be recorded on the same scale, at the same time of day after urinating (if possible).</td>
<td>To minimise the influence of extraneous variables such as using different weight scales resulting in incomparable weight measurements.</td>
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<td><strong>16.</strong></td>
<td>Where weight is recorded as part of nutrition screening tool use it to calculate body mass index (BMI) and percentage body loss.</td>
<td>To initiate an appropriate level of nutritional intervention.</td>
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<td>NICE (2006)</td>
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The NNNG recognises that practice will vary according to individual risk assessments and local policy. However this good practice statement has been published in accordance with available evidence at the time of publication.

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REFERENCES:
NICE (2012) Quality standard for Nutrition Support in Adults Quality Statement1: Screening for the risk of malnutrition

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UKWF (2002) Guidance notes relating to the legal prescription of medical weighing scales, UK Weighing Federation


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