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Recording accurate body weight is a fundamental part of patient assessment and should be undertaken by trained staff using appropriate equipment

Accurate assessment of patient weight

In this article...

- Why weighing patients is an essential part of assessment
- Why nurses fail to record weight or record it inaccurately
- Best practice in weighing patients and maintaining equipment

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Measuring patient weight is considered a routine assessment that is frequently delegated to unregistered staff. Yet patient weight is a fundamental part of nutrition assessment and may be used to calculate drug dosages and assess fluid balance.

It is vital that staff carrying out this measurement are trained and have access to appropriate equipment that is regularly calibrated.

One in four patients admitted to hospital is already malnourished (Russell and Elia, 2010) so accurate assessment of nutritional needs is essential from admission onwards to ensure the appropriate level of nutritional support is provided.

There has been a lot of publicity on the importance of using nutrition screening tools for patients entering a care setting, and developing and implementing an appropriate individualised plan of care to ensure their nutritional needs are met. Guidance on nutrition support for adults states that all hospital inpatients on admission to hospital and all hospital outpatients on their first visit to a clinic appointment should have a nutrition screening tool completed. It also recommends that all people admitted to care homes be nutritionally screened on admission (National Institute for Health and Care Excellence, 2006).

While anyone admitted to a clinical setting who is acutely unwell could be considered to be at risk of undernutrition, certain groups pose a definite risk and should be identified early. These include:

- Patients with existing acute and long-term conditions such as chronic obstructive pulmonary disease;
- Patients with long-term, progressive conditions such as dementia and cancer;
- Patients who have been discharged from hospital recently; and
- Older people (Elia and Russell, 2009).

Recording an accurate body weight is a fundamental part of any nutrition screening tool as well as other interventions that may arise as part of the patient's treatment, including accurate drug dosage (Clarkson, 2012) and fluid gain (oedema) or loss. An accurate recording of body weight is also important when admitting patients for whom specialist equipment, such as profiling beds for pressure relief, may be needed.

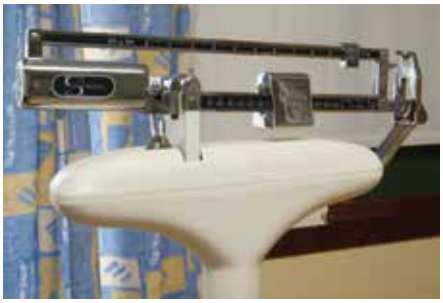
NICE (2006) states that patients in hospital should have their body weight measured weekly and when there is clinical concern. In the community, weight should be assessed if it is relevant to the purpose of the visit, for example when patients are receiving nutritional support or weight management reviews.

Problems with weighing patients

Inconsistencies in recording patient body weight, as well as using inaccurate or inappropriate weighing equipment, can have a negative impact on patient care (Clarkson, 2012). This can increase the risk of errors in diagnosis, interventions, treatment or medication dosage (Department of Health,

5 key points

1. **Recording accurate body weight is a fundamental part of nutrition screening**
2. **Measuring body weight is vital for accurate prescribing of some drugs and monitoring of fluid balance**
3. **Weighing scales in hospital must be Class III category**
4. **Scales should be calibrated every year**
5. **Staff should be trained so they know how to use weighing equipment properly**



Staff should receive training so they can accurately weigh patients

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BOX 1. LACORS RECOMMENDATIONS: KEY POINTS

- Each hospital or trust should procure all weighing equipment centrally (rather than on a ward-by-ward basis), ideally by the department responsible for maintaining the equipment
- Each trust should instigate a programme of testing for their equipment
- Basic training in the use of weighing equipment should be given to all staff who use it
- Any inaccurate equipment should be removed from service for replacement or repair
- All scales that are used for medical applications should be Class III or higher
- All scales that are used for medical applications should only display weights in metric units

Source: Local Authorities Coorinators of Regulatory Services (2008)

BOX 2. LEARNING POINTS

- Who is responsible for calibrating the scales in your clinical area?
- Is it done yearly as recommended?
- Does your organisation have the correct class scales?
- Is there a mechanism in place for ensuring that all staff who weigh patients have had appropriate training?

Source: Local Authorities Coorinators of Regulatory Services (2009)

2010; Local Authorities Coordinators of Regulatory Services (LACORS), 2009).

Lees and Allen-Mills (2009) undertook a small study of nurses involved in weighing patients in an acute medical admissions unit. They suggested weighing patients used to be an integral part of the routine nursing admission assessment but increasing demands on qualified nurses has resulted in delegation to non-registered health professionals. They found some nurses do not attach the same importance to it as other routine assessments and many working on the unit were reluctant to weigh patients. One of the reasons quoted was they felt "uncomfortable" suggesting that patients should be weighed and that, without a good reason, recording a body weight could be perceived as unnecessarily invasive.

When the nurses were asked to explain why it was necessary to weigh patients, the main reason cited was the patient was on medication. Little importance was attached to weighing patients who were frail, underweight or obese to assess their nutritional needs. These results may be due to the specialty where the study was conducted and may have differed if nurses from an elderly care ward, for example, had been included (Lees and Allen-Mills, 2009).

The conclusions of Lees and Allen-Mills' (2009) study appear to be supported by the results of a nationwide nutrition survey carried out in 2011, which highlighted large variations in nutrition screening policies and practices between healthcare settings (Russell and Elia, 2010). The survey identified that less than half of patients were cared for in hospitals where weighing was carried out in all wards – even though most hospitals stated they had a nutrition screening policy.

It also suggested that, in many centres, weighing scales were not calibrated properly – indeed, some had not been recalibrated for over a year. An audit of a number of NHS organisations found that weighing equipment in regular use in clinical areas was often incorrectly calibrated or of the wrong type (LACORS, 2008). All weighing scales should be calibrated on an annual basis (LACORS, 2009), but some centres were not aware this was a national recommendation (LACORS, 2008).

Repeating the audit in 2009, LACORS found a third of all hospital scales tested by council trading standards officers were found to be inaccurate; it also revealed that many hospital staff were not correctly trained to use the weighing equipment (LACORS, 2009).

As a result of these findings, a number of recommendations were made to hospitals (Box 1) and guidance was offered on what to look out for to ensure the correct use and maintenance of weighing apparatus (Box 2).

In the following years, the DH (2010) issued an alert advising hospitals to review the report by LACORS and draw up an action plan if their weighing equipment did not meet the recommendations.

Accuracy of weighing equipment

Medical weighing equipment is covered in Schedule 3 of the *Non Automatic Weighing Instrument Regulations* (LACORS, 2008). In healthcare premises it is a legal requirement to have weighing equipment that is accurate and fit for purpose.

Weighing scales in hospital must be in the Class III category because small changes in weight may be clinically relevant; in GP surgeries, nursing or residential accommodation or in the patient's own home, Class IIII category weighing scales are acceptable (DH, 2010; UK Weighing

BOX 3. WEIGHING A PATIENT: KEY PRACTICE POINTS

- Ensure the scales are balanced, or display zero before weighing the patient
- When weighing a baby, if a protective covering is placed in the weigh pan ensure this is allowed for by pressing the appropriate "tare" or "zero" key
- Ensure that no part of the weigh platform or load receptor is touching a fixed object, such as a wall
- Ensure the patient's clothing is not touching any fixed part of the scales or surroundings
- When using chair scales, ensure the patient's feet are not touching the ground and that their arms are not brushing against an adjacent fixture
- When monitoring periodical weight change ensure the patient always wears clothing of similar weight
- Do not weigh young children on scales of high capacity designed for adults. The weighing interval may be too coarse, resulting in a higher-than-acceptable percentage error

Source: UK Weighing Federation (2002)

Federation, 2002). To clarify this grading, Class I scales provide the highest degree of accuracy, and Class IIII, the lowest. Class IIII scales include bathroom scales aimed at domestic use and should not be used in the hospital environment.

Key points for practice

Organisations should ensure they take note of the recommendations outlined in Boxes 1 and 2. Guidance for individual practitioners is detailed in Box 3.

Alternatives to weighing patients

It is not always possible to obtain an accurate body weight for all patients on admission to hospital. Patient acuity may demand that in some circumstances alternative measures of recording a body weight must be considered. In such cases, practitioners should:

- Ask the patient about their latest recorded weight;
- Check their medical records;
- Ask their relatives for their last recorded weight;
- Undertake a visual assessment – does the patient "look" thin? For example, are rings obviously loose on fingers;
- Use a weighing bed.

These may not give an accurate body weight but may provide the healthcare team with some guidance to be able to plan the level of intervention required for the patient until an accurate weight can be recorded.

Conclusion

Recording and documenting an accurate patient body weight is a fundamental part of any nutrition screening tool and is a valuable tool in monitoring fluid balance and calculating medication doses. Nurses are key in ensuring an accurate assessment of body weight and patient risk and in ongoing monitoring and intervention of appropriate nutritional care. Weight should not be considered as a one-off observation on admission but must be recognised as an important tool for ongoing assessment throughout the patient's health journey and should be carried out by staff who have the appropriate knowledge and training. **NT**

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