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Scott-Thomas, Jeanette, Hayes, Catherine, Ling, Jonathan, Fox, Ann, Boutflower, Ralph and Graham, Yitka (2017) A practical guide to systematic wound assessment to meet the 2017-19 CQUIN target. *Journal of Community Nursing*, 31 (5). pp. 30-34. ISSN 0140-0908

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A practical guide to systematic wound assessment to meet the 2017–19 CQUIN target

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Improvement of wound outcomes is a priority for the NHS if the cost of wound management is to be reduced. Failure to undertake a full holistic wound assessment can result in inappropriate and ineffective treatment, resulting in delayed healing, which can have a negative effect on patient quality of life and healthcare resources. NHS England has commissioned a CQUIN scheme for 2017–19. This comprises 13 indicators which seek to improve quality and outcomes of care for NHS patients, while supporting local areas in delivering their sustainability and transformation partnerships (STPs). The tenth national indicator focuses on 'improving the assessment of wounds'. This article provides a practical guide to systematic wound assessment for community nurses so that CQUIN targets can be met, and also introduces a new tool from BSN medical, an Essity company, to help nurses in this area.

KEYWORDS:

- Wound assessment
- Tissue viability
- Community nursing
- CQUIN target

The management of wounds incurs a significant and increasing annual cost to the NHS. The Burden of Wounds study (Guest et al, 2015), which assessed wound care service delivery and associated costs for the year 2012/13 in the UK, estimated that the annual cost of treating wounds, based on 2013/14 prices, amounted to £4.5–5.1 billion; equivalent to the cost of treating obesity.

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Following a retrospective analysis of the medical records of 1000 patients with wounds held within the Health Improvement Network (THIN) database, Guest et al (2015) identified that the majority of wound care takes place in the community and is nurse-led. Unfortunately, they also highlighted shortcomings in wound assessment and documentation despite the existence of national guidelines, which were attributed to the practical difficulties in the delivery of wound care in the community.

Of the 2.2 million wounds managed during the study year, 30% lacked a differential diagnosis. Of the 730,000 wounds recorded as being a leg ulcer, 19% were not further classified as being venous, arterial or mixed. Despite being a recognised requirement of leg ulcer and diabetic foot ulcer management, only 16% of all cases with a leg or foot ulcer had a Doppler ankle brachial pressure index (ABPI)

recorded in their records. Twelve percent of all wounds included in the study had no diagnosis recorded at all, rendering the wound type unknown (Guest et al, 2015).

Seven percent of the wounds treated during the study year were pressure ulcers (Guest et al, 2015). It is recognised that pressure ulcers pose a major burden to healthcare systems, with almost 4% of the total NHS budget being spent on their management (Dowsett and Shorney, 2010). This burden, along with the cost of other chronic wounds, is set to increase exponentially with a growing elderly population (National Institute for Health and Care Excellence [NICE], 2015).

In patients who are restricted to bed, pressure ulcers are a common secondary condition occurring on the gluteal and sacral region, hip joint and heels (Bezerra et al, 2017). Such ulceration can severely limit attempts to remobilise patients who have been non-ambulatory during, for example, a period of systemic illness (Azuh et al, 2016).

For immunocompromised patients, or those living with long-term conditions, such as diabetes mellitus and rheumatoid arthritis,

Practice point

CQUINs focus on three areas of quality where innovation should be seen:

- ▶ Safety
- ▶ Effectiveness
- ▶ Patient experience.

pressure ulcers can become a key route for opportunistic colonisation by viruses and bacteria (Hayes and Barbaro-Brown, 2017), leading to infection and complications that can be life-threatening. Thus, wound assessment that allows the early identification of skin at risk of pressure damage is crucial to pressure ulcer prevention (Benevides et al, 2017).

Indeed, Guest et al (2015) identified that comprehensive holistic assessment, diagnosis, accurate documentation and early intervention are key components to reducing the burden of all wounds. A lack of thorough, holistic assessment can trigger problems from the start of treatment onwards. Despite this, the study revealed that 57% of chronic wounds remained unhealed during the year.

With an increasingly ageing population with multiple co-morbidities that put patients at risk of wounding and delayed healing, along with a diminishing number of district nurses and community workforce, the delivery of effective wound care has become critical to contain costs and reduce demands on nursing time (Vowden and Vowden, 2016).

The findings of Guest et al (2015) highlighted the need for change, and this was actioned by the inclusion of wound assessment as a key indicator in the Commissioning for Quality and Innovation (CQUIN) framework for 2017–19.

OVERVIEW OF CQUIN

The CQUIN framework sets out targets for providers to improve the quality of patient care and encourage transformational change. The scheme supports the strategic aims of the *Five Year Forward View* (NHS England, 2014).

‘Improving the assessment of wounds’ is the tenth of 13 national indicators, and it aims to reduce the number of wounds which have failed to heal after four weeks of treatment by focusing on wound assessment (Wounds UK, 2017).

HOLISTIC WOUND ASSESSMENT

Detailed history-taking, assessment of the patient’s overall health, and examination of the wound should take place at the initial consultation. Assessment should involve collecting and documenting a minimum data set; that is the minimum information needed to act as a baseline to monitor the success or failure of wound management decisions.

Coleman et al (2017), on behalf of NHS England, have outlined a minimum data set that is needed to underpin wound assessment. It is anticipated that this will facilitate a consistent approach to wound assessment and support providers and commissioners of care to develop and re-focus services that promote improvements in wound care, with the potential for improved patient outcomes.

WOUND ASSESSMENT MINIMUM DATA SET

The collection of a minimum data set during wound assessment should focus on the following key domains (Coleman et al, 2017):

- ▶ General health
- ▶ Baseline information

Remember...

Hidden costs to the patient of having a wound, such as pain, social isolation and depression should also be considered (Dowsett, 2009; Green et al, 2014), as well as the negative impact that wounds can have on the patient’s family and carers (Miller and Kapp, 2015).

- ▶ Wound assessment
- ▶ Wound symptoms
- ▶ Specialist referral.

General health

During wound assessment, the general health of the patient and their full surgical and medical history should be considered to identify any factors that may result in wounding and/or delayed healing.

Any risk factors that could result in delayed healing — both intrinsic and extrinsic — should be considered, identified and eliminated, or optimally managed where possible (Chamanga, 2016). Risk factors for wounding and delayed healing may include problems with systemic and/or local blood supply to the wound, such as peripheral vascular or

Table 1: Systemic conditions impacting on tissue viability (adapted from Wall, 2017)

Condition	Examples
Vascular pathology	Arterial (macrovascular and microvascular disorders), venous and lymphatic disease
Arthropathies	Rheumatoid arthritis, leading to deformity, potential reduced sensation, vasculitis and anaemia
Haematological disorders	Anaemia (reduces oxygen carriage), leucocyte dysfunction (which can actively compromise immunity)
Immunological conditions	Primary: e.g. AIDS, disorders of complement cascade, neutrophils or macrophages Secondary to drug therapy, e.g. corticosteroids, antimetabolites
Metabolic and endocrine dysfunction	Disorders of the thyroid or adrenal glands Diabetes mellitus
Neurological disease:	Peripheral and central nervous system disease leading to motor, sensory and autonomic signs and symptoms
Nutritional deficiency	Malabsorption or reduced intake of essential nutrients, e.g. proteins, vitamins and minerals
Oedema	Oedema is associated with many pathologies (venous incompetence, congestive cardiac failure, renal disease) Oedema increases diffusion distance between vessels and tissues. The excess fluid compresses microvessels
Psychosocial issues	Depression, and other states where the person is unable to care for themselves

arterial disease; susceptibility to infection, e.g. due to use of immunosuppressants or other medication affecting wound healing, and breach in skin integrity (Coleman et al, 2017) (Table 1).

Consequences of delayed healing can range from minor ulceration to gangrene, and in comorbid conditions, such as diabetes mellitus, can be a prognostic indicator of systemic infection, amputation and death. However, despite recognition of the risk factors and the effects of chronicity on morbidity and mortality, the prognosis for non-healing wounds is poor (Guest et al, 2015). While, it may be difficult to identify all the factors contributing to delayed healing in some patients, they should be considered and identified where possible during holistic wound assessment so that they can be managed optimally as part of an overall management plan.

Neglecting to address these issues could result in failure to heal or repeated wound recurrence despite best practice wound care.

Baseline information

The baseline information collected and recorded during assessment should include:

- ▶ Number of wounds
- ▶ Wound location
- ▶ Wound type/classification
- ▶ Wound duration
- ▶ Treatment aim
- ▶ Planned reassessment date.

This basic information relating to the patient and their wound management plan is critical if the effects of treatment are to be monitored effectively.

Wound assessment

The following information should be collected during wound assessment:

- ▶ Wound size: maximum length, width and depth should be measured and recorded. Before measuring the wound dimensions, any necrotic and sloughy tissue should be removed to get a clear picture of the size of the wound
- ▶ Wound stage (pressure ulcers only)

Table 2: Stages of normal wound healing (Wall, 2017)

Stage 1: Proliferation	<ul style="list-style-type: none"> ▶ Clotting occurs on the wound surface (N.B. platelets have a growth factor effect as well as a haemostatic action — platelet derived growth factor-PDGF) ▶ Exudate accumulates on the wound surface ▶ Inflammation occurs in surrounding tissues ▶ Neutrophils migrate into the wound followed by macrophages ▶ These cells are important in removing debris ▶ Epithelial cells begin to move over the wound surface within 24 hours ▶ Fibronectin forms a 'scaffold' for epidermal cell movement
Stage 2: Granulation	<ul style="list-style-type: none"> ▶ 'Buds' from surviving surrounding vasculature grow into the wound (neo-angiogenesis) ▶ For this to be efficient debris must be cleared by macrophages and other cells ▶ Low oxygen tension within the wound and resultant acid (low) pH also encourage vessel growth (via growth factors) ▶ After about five days fibroblasts produce type III collagen and matrix in response to cytokines ▶ Myofibroblasts (modified fibroblasts which possess contractile protein within their cytoplasm) stimulated by cytokines cause 'shrinkage' of the wound ▶ Type III collagen is produced in large quantities ▶ Capillaries within the wound atrophy and are obliterated by collagen ▶ Fibroblasts, which during activity are plump and large, become smaller
Stage 3: Remodelling	<ul style="list-style-type: none"> ▶ This can last for months ▶ There is continual rebuilding and breaking down of collagen, in order to make the wound as strong as possible with type I replacing type III collagen

- ▶ General appearance of the wound and surrounding tissue, e.g. note should be made of signs of local or spreading infection (cellulitis, lymphangitis, lymphadenitis)
- ▶ Description of the wound margins/edges. When the wound margins undermine viable tissue, or if cavities or sinuses are present, the true extent of ulceration must be assessed. This should be done by a specialist with careful use of a sterile probe
- ▶ Wound bed tissue types. The amount and type of tissue within the wound bed should be identified and recorded as a percentage of the whole wound. Several tools exist to assist the clinician with this. As the wound progresses to healing, the presence of slough and necrotic tissue should reduce, and the presence of granulation tissue should increase. Deeper structures, such as bone or tendon, may be seen on the wound bed in some cases. Radiographs should be obtained if deeper structures are thought to be involved

- ▶ Colour and condition of surrounding skin
- ▶ Whether the wound has healed.

Wound symptoms

For many patients, wound symptoms are the most distressing part of living with a wound. Pain, exudate and odour all affect quality of life, and the management of these symptoms are often more of a priority for patients, ahead of wound healing. For this reason, the following should be discussed and documented:

- ▶ Pain:
 - Presence of wound pain
 - Wound pain frequency
 - Wound pain severity. These should all be measured using a visual analogue scale (VAS) and recorded. A sudden increase or change in the nature of pain experienced can indicate a change in general or wound health and should trigger reassessment.
- ▶ Exudate volume
- ▶ Exudate consistency/type/colour:
 - The colour, consistency and odour of wound fluid should be noted. The quantity may be

CASE — for better care and wound healing outcomes

The acronym CASE (cause, assess, select, evaluate) has been developed by BSN medical, an Essity company, to support healthcare professionals when undertaking holistic wound assessment.

By using this simple guide to identify wound conditions, advice on treatment priorities and dressing selection are then given to guide management decisions (advancedwoundcare.uk@bsnmedical.com).

The use of the tool is underpinned by bespoke training through BSN Educational Academies, which provide optimum flexibility and advice, without compromising learning content.

BSN Educational Academies are CPD accredited



assessed by inspecting dressings and ascertaining how often dressing changes are taking place. A sudden change in volume, colour, or consistency may indicate infection, or a low volume for the wound type may indicate dehydration

- ▶ Odour occurrence
- ▶ Signs of systemic infection
- ▶ Signs of local wound infection
- ▶ Whether a wound swab has been taken. Any discharge should be noted and a specimen sent for microscopy and culture, in accordance with local protocol.

Specialist referral

In some cases, patients will require referral to specialist teams for further investigation. For example, all patients with leg ulceration should be referred for Doppler ABPI to rule out the presence of arterial disease before compression therapy is started. This should then be routinely carried out at 3-, 6- or 12-month intervals (NICE, 2013).

For patients with, or at risk of, DFU, referral to a podiatrist for

Box 1

Practical points for consideration during holistic assessment

- ▶ Ambulatory wellbeing, as immobile patients are more susceptible to ulceration than those who are able to mobilise independently
- ▶ Pressure points, which may be susceptible to pressure from footwear, hosiery
- ▶ If the patient has adequate laundering facilities for clothing and that they are physically able to change their hosiery and underwear on a daily basis
- ▶ Skin care by encouraging patients to apply aqueous cream/emollients regularly
- ▶ Checking for and treating any minor skin abrasions with basic antiseptics and dressings so that these can be healed and secondary opportunistic infection avoided
- ▶ Checking shoes for small objects, such as pebbles, which in patients with a degree of neuropathy may be undetected yet cause mechanical trauma to the feet, which, left unnoticed, can subsequently degenerate into ulceration, gangrene and lead to amputation
- ▶ Aiding patients with poor or failing eyesight to check skin integrity
- ▶ Discouraging patients from using talcum powder between the toes and in skin folds where abrasion can make the patient susceptible to secondary infection and tissue breakdown due to micro-trauma.

vascular assessment should be made so that a thorough specialist assessment can be performed.

FOLLOW-UP

At each visit, subjective and objective holistic assessment of the patient's health and wellbeing should be undertaken, alongside a detailed status of the wound

(Gupta et al, 2017) to evaluate if it is progressing to healing in a timely manner (*Table 2*). It is important to note that different wounds heal at different rates and clinicians should be familiar with the healing rates of the wounds they most commonly treat.

Using a systematic approach to holistic assessment can ensure that

the minimum data set is collected to inform management decisions, track progress and allow clear communication between caregivers.

In addition, healthcare professionals should also listen to and involve the patient and consider the practical points outlined in *Box 1*. Patients should also be empowered with sufficient information to take prophylactic measures to help prevent tissue breakdown.

This support and facilitation is central to the role of the multi-disciplinary team, where the expertise of allied and medical healthcare professionals can be used collaboratively to maintain skin integrity and avoid skin breakdown.

CONCLUSION

The new CQUIN target aims to provide effective wound care. By improving wound assessment using a systematic holistic approach, the target can be met, i.e. improved wound outcomes and reduced associated costs.

Full documentation of assessment findings allows continued care planning and clear lines of communication within and between allied healthcare professionals responsible for care (Lagerin et al, 2017). This facilitates early identification of problems and a rapid review of management, thus avoiding unnecessary patient suffering and associated costs. Tools, such as those available from BSN medical, an Essity company (e.g. CASE), can help to ease the burden of wound assessment. **JCN**

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KEY POINTS

- The Burden of Wounds Study (Guest et al, 2015) highlighted inconsistencies in wound assessment that could have a negative impact on wound outcomes and associated healthcare spend.
- This has been addressed by NHS England who have set a CQUIN indicator to 'improve the assessment of wounds' from 2017–19.
- This is designed to ensure more consistent, systematic wound assessment is carried out and the findings documented to focus treatment and thus improve outcomes.
- Improvement in these processes should improve efficiency and reduce the burden of wounds on the workload for clinicians in the community.