Identifying residents at risk of care complications in care homes

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Conflict of interest
None declared

Abstract
Care complications are common conditions which affect residents in care homes and often arise from risks associated with their illness. They can be serious and affect the health and quality of life of residents. It is important that nurses are able to assess an individual's risk of developing complications of care, and determine appropriate prevention and treatment measures. This article discusses three common care complications for residents in care homes: pressure ulcers, malnutrition and falls. Assessment tools commonly used to identify these conditions are discussed, as well as the use of clinical reasoning to assist nurses in implementing appropriate care. Nurses have a central role in risk assessment, identifying problems, planning interventions and monitoring complications of care.

Keywords
assessment tools, care complications, care homes, falls, falls risk, malnutrition, pressure ulcers, risk assessment

Aims and intended learning outcomes
This article is aimed at nurses and other healthcare professionals who provide care for residents living in care homes. It considers how to identify residents who are at risk of developing complications of care and how these complications can be assessed, prevented and treated. After reading this article and completing the time out activities you should be able to:
» Discuss the importance of assessing care complications.
» Explain how assessment tools are used to identify care complications.
» Describe how clinical reasoning assists nurses in deciding appropriate care for a resident.
» Discuss the role of the nurse in preventing and treating care complications.

Introduction
Care home residents are at increased risk of developing care complications. Care complications are common conditions in care home residents and often arise from risks associated with their illness. Care complications can affect the health of the resident, reduce the person’s quality of life and are usually accompanied by pain, which may result in disability, social isolation and increasing care dependency (Tannen et al 2009, Care Inspectorate and NHS Scotland 2011). Therefore, interventions are required to prevent or treat these conditions (Hallens et al 2011). This article discusses three common care complications: pressure ulcers, malnutrition, and falls (Box 1). Other care complications, such as incontinence, intertrigo and physical restraint are beyond the scope of this article.

TIME OUT 1
Ask your colleagues which care complications are most commonly encountered in care homes or hospital settings. Identify which of these conditions were present at admission and which have developed during the person's stay in the care home or hospital?

Assessment tools for care complications
Assessment, in particular risk assessment, is an essential aspect of nursing care...
Risk assessment is an objective evaluation of risk in which assumptions and uncertainties are considered and documented. In risk assessment, the use of a structured approach to identify individuals at risk of developing care complications is recommended as the first step in prevention and early awareness of potential care complications (Dijkstra et al 2015). Assessing a resident’s risk of developing care complications raises awareness of these potential issues, which can improve the effectiveness of nursing care.

Validated and reliable assessment tools are important in nursing practice, since they can be used to assess care complications such as pressure ulcers, malnutrition and falls (Dijkstra et al 2005). A range of risk assessment scales are available, some of which have been developed for use in long-term care settings. For example, there are several assessment tools that may be used to determine a resident’s risk of developing pressure ulcers, such as the Norton scale (Norton et al 1962), the Waterlow score (Waterlow 1996) and the Braden scale (Bergstrom et al 1987a). The most commonly used tools to identify the resident’s risk of malnutrition are: the Short Nutritional Assessment Questionnaire for Residential Care (SNAQRC) (Kruizenga et al 2010), the Malnutrition Universal Screening Tool (MUST) (British Association for Parenteral and Enteral Nutrition (BAPEN) 2011), and the Mini Nutritional Assessment (MNA) (Vellas et al 2006). When assessing risk of falls, the most commonly used tools are: the Falls Efficacy Scale (FES) (Tinetti et al 1990) and the Falls Risk Assessment Tool (FRAT) (Department of Health and Human Services 1999).

The availability of such a range of scales may mean that it is difficult to decide which assessment tool is suitable for which purpose (Eichhorn-Kissel 2011). Therefore, it is important for nurses to evaluate the assessment tools available to determine which is most appropriate and useful for their patient or resident group and clinical setting. Risk assessment involves calculating two areas relating to risk: the extent of the potential loss and the probability of this loss occurring. However, these areas can be difficult to measure. Therefore, the instructions of an assessment tool can provide information that may help nurses to determine the absence (‘not at risk’) or presence (‘at risk’) of risk factors for developing care complications.

TIME OUT 2
Discuss with colleagues the importance of the risk assessment tools used in your clinical setting in determining the absence (‘not at risk’) or presence (‘at risk’) of risk factors for a care complication.

Clinical reasoning
Clinical reasoning assists nurses in deciding appropriate care for a patient or resident. Clinical reasoning is an ongoing and cyclical process of assessment, risk identification, determining and planning interventions, monitoring and evaluation (Figure 1). It is used to understand a patient or resident’s healthcare needs and circumstances, and thus provide effective care.

For nurses working in care homes, the clinical reasoning process should commence when the resident is admitted. Following the resident’s admission to a care home, the resident and the nurse should communicate and work cooperatively to identify the resident’s needs for nursing care. Determining which care complications are present and which care complications may develop during a resident’s stay in the care home are aspects of this assessment.

The nurse should assess the presence and extent of the resident’s actual and potential care needs and review their state of health. Assessment is necessary and valuable, providing essential information for individual care planning and to support the clinical reasoning process (Bartholomeyczik 2009).

**BOX I. Definitions of the most common care complications**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Pressure ulcer</td>
<td>A localised injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure, or pressure in combination with shear.</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>Often caused by less than normal food intake or enhanced need. It is indicated by unintentional weight loss, combined with a body mass index (BMI) lower than 18.5, or for those aged 65 years and over a BMI lower than 20.</td>
</tr>
<tr>
<td>Falls</td>
<td>An unintentional change in position that results in a person coming to rest on the ground or other lower level.</td>
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</tbody>
</table>

(Halfens et al 2011, National Pressure Ulcer Advisory Panel et al 2014)
Nurses should not only attend to the actual care needs and health problems of the resident, but also explore ways of preventing further healthcare difficulties by identifying potential needs and health conditions. This is particularly important when these healthcare difficulties increase the risk of care complications. Risk factors in care homes include: increased age, cognitive impairment, physical impairment and comorbidities that adversely affect healing or recovery, such as cardiovascular conditions and malnutrition.

Nurses should use risk assessment tools to gain information about the risk of a resident developing care complications (Schuurmans et al 2012). However, nurses should not rely solely on the outcomes of these tools. Their clinical judgment, based on their experience and intuition, is also essential in reaching an informed decision about the appropriate prevention or treatment measures for care complications. Communication with residents is essential for an accurate assessment, who because of personal experience become experts in their own health. Communication with other healthcare professionals is also important to select suitable interventions for existing and potential care complications (Kazimier-van der Zwaag et al 2014). The outcome of the risk assessment should be discussed with members of the interdisciplinary team. Essential questions to be answered, as part of the clinical reasoning process, are:

- Is the resident ‘at risk’ or ‘not at risk’ of developing the identified care complication?
- Does the resident have a potential or actual care complication?
- What preventive or treatment interventions should be initiated as part of the care plan?

The outcome of the interdisciplinary team discussion will determine the selection of effective preventive or treatment interventions for the resident. Guidelines are available for the prevention and treatment of care complications, such as Prevention and Treatment of Pressure Ulcers: Quick Reference Guide (National Pressure Ulcer Advisory Panel (NPUAP) et al 2014) and Falls in Older People: Assessing Risk and Prevention (National Institute for Health and Care Excellence (NICE) 2013). It is important to consider that guidelines offer advice
on best practice; the strength of these recommendations depends on the scientific evidence obtained from research. These recommendations should be linked to local policies and care home procedures. They should be implemented as part of the clinical reasoning process, and should be suited to meet the needs of the individual resident. After determining the appropriate interventions for a resident, these should be recorded in their care plan. Regular monitoring of the effects of interventions is important to determine if they contribute to the prevention and treatment of care complications, as documented in the care plan. Dependent on the outcome, the clinical reasoning process may be repeated.

TIME OUT 3
Compare the schematic representation of clinical reasoning in Figure 1 with the decision-making process used in your organisation. List the similarities and differences and discuss these with one of your colleagues.

Pressure ulcers
Assessment
The most commonly used pressure ulcer risk assessment tools are the Norton scale (Norton et al 1962), the Waterlow score (Waterlow 1996) and Braden scale (Bergstrom et al 1987a). Table 1 shows a comparison of these tools. It is recommended that a skin assessment is included as part of risk assessment screening for pressure ulcers, since this can indicate early signs of pressure damage. A full skin assessment consists of an assessment for localised heat, oedema and induration (hardness) (NPUAP et al 2014). Guidelines for preventing and treating pressure ulcers are available from NICE (2014) and NPUAP et al (2014).

Prevention
Pressure ulcers are caused by pressure. Therefore, the most effective way to prevent pressure ulcers is to reduce or relieve potential pressure, for example using a pressure-relieving mattress or cushions and regularly changing the resident’s position (Halfens et al 2011). Preventive skin care measures should be undertaken, following a skin assessment. Skin care involves protecting the skin from pressure ulcer development. This may include avoiding positioning the individual onto a surface of their body that is still reddened from a previous episode of pressure loading, and avoiding vigorous rubbing of skin at risk of pressure ulceration.

Regularly changing the resident’s position to relieve or redistribute pressure is another preventive measure that should be performed at agreed intervals. It is also important to prevent dehydration and malnutrition, since unintentional weight loss, undernutrition and dehydration are known risk factors for pressure ulcer development (Dorner et al 2009). The use of barrier cream is an additional preventive measure (Halfens et al 2011, NICE 2014, NPUAP et al 2014).

Treatment
It is recommended that the International NPUAP/EPUAP Pressure Ulcer Classification System is used to categorise the pressure ulcer each time it is assessed. The four main categories are (NPUAP et al 2014):

- Category 1: Non-blanchable erythema. Intact skin with non-blanchable redness of a localised area, usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area.
- Category 2: Partial-thickness skin loss. Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled or serosanguinous filled blister. Presents as a shiny or dry shallow ulcer without slough or bruising.
- Category 3: Full-thickness skin loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling.
- Category 4: Full-thickness tissue loss. Full-thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present. Often includes undermining and tunnelling. ‘Unstageable’ and ‘Suspected deep tissue injury’ are additional categories (NPUAP et al 2014). Depending on the category of pressure

KEY POINT
'It is recommended that a skin assessment is included as part of risk assessment screening for pressure ulcers, since this can indicate early signs of pressure damage. A full skin assessment consists of an assessment for localised heat, oedema and induration (hardness)’
Ulcer, intensive intervention may be necessary. For example, an important follow-up step can be cleansing in preparation for the pressure ulcer wound bed to heal. Cleansing involves removing surface debris and dressing remnants to enable a better visualisation of the wound for assessment. It is also important to focus on ulcer measurement, by documenting the surface area and estimating the depth of pressure ulcers, and reducing pain. Nutritional supplements and hydration should also be included as part of the resident’s treatment. If necessary, the nurse should discuss with the resident and their family which type of dressing should be used. It is important to consider the position of the ulcer, the degree of pain tolerance and the frequency of changing the dressing (NICE 2014, NPUAP et al 2014). Treatment measures should be discussed with the interdisciplinary team and documented in the care plan.

TIME OUT 4

Sandra is 80 years old, and was recently admitted to a care home following a hip replacement. She developed a venous ulcer in the lower part of her leg. Skin assessment shows that her leg is oedematous, feels warm and that the wound has an irregular border and shape. What preventive and treatment measures would you discuss?

### TABLE 1. Risk assessment tools for pressure ulcers

<table>
<thead>
<tr>
<th>Norton scale (Norton et al 1962)</th>
<th>Comprises five risk factors that are rated on a scale of 1 to 4, with 1 representing the most severe condition. It is calculated as the total of the scores in all five areas. A score &lt;14 indicates a high risk of pressure ulcer development.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical condition</td>
<td>Mental condition</td>
</tr>
<tr>
<td>4 = Good</td>
<td>4 = Alert</td>
</tr>
<tr>
<td>3 = Fair</td>
<td>3 = Apathetic</td>
</tr>
<tr>
<td>2 = Poor</td>
<td>2 = Confused</td>
</tr>
<tr>
<td>1 = Very bad</td>
<td>1 = Stupor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Braden scale (Bergstrom et al 1987b)</th>
<th>Comprises six risk factors. Possible total scores range from 6 to 23, with low scores signifying higher risk. The precise score that signifies an individual being ‘at risk’ varies; this may be between 16 and 18, depending on the clinical setting in which the tool is used.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory perception</td>
<td>Moisture</td>
</tr>
<tr>
<td>1 = Completely limited</td>
<td>1 = Constantly moist</td>
</tr>
<tr>
<td>2 = Very limited</td>
<td>2 = Very moist</td>
</tr>
<tr>
<td>3 = Slightly limited</td>
<td>3 = Occasionally moist</td>
</tr>
<tr>
<td>4 = No impairment</td>
<td>4 = Rarely moist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waterlow score (Waterlow 1996)</th>
<th>The Waterlow score identifies seven risk factors. This results in a possible total score ranging between 4 and 40. High scores signify a high risk of pressure ulcers. A score of ≥10 = at risk, ≥15 = high risk; ≥20 = very high risk.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build or weight for height</td>
<td>Visual assessment of the skin</td>
</tr>
<tr>
<td>Visual assessment of the skin</td>
<td>Malnutrition Screening Tool</td>
</tr>
<tr>
<td>Sex and age</td>
<td>Continence</td>
</tr>
<tr>
<td>Malnutrition Screening Tool</td>
<td>Special risk factors: tissue malnutrition, neurological deficit, major surgery or trauma, and medication</td>
</tr>
</tbody>
</table>

Further information about how to use the Waterlow score is available at: [www.judy-waterlow.co.uk/downloads/Waterlow%20Score%20Card-front.pdf](http://www.judy-waterlow.co.uk/downloads/Waterlow%20Score%20Card-front.pdf)

with your colleagues and the interdisciplinary team to prevent further complications? Explain the rationale for your choices.

**Malnutrition Assessment**

Older people are at increased risk of malnutrition. A large survey of older people in the UK found that 37% of those who had recently moved into care homes were at risk of malnutrition (Russell and Elia 2015). The main reasons for malnutrition are insufficient energy intake and weight loss, which can lead to increased functional impairment and increased care dependency (Tannen and Lohrmann 2012). Nurses have an important role in the assessment of nutritional status, and information about each person’s food preferences should be included in their care plan (Heath and Sturdy 2009). Commonly used malnutrition risk assessment tools are SNAQRC (Kruizenga et al 2010), MUST (BAPEN 2011), and MNA (Vellas et al 2006) (Table 2).

**Prevention**

The Department of Health, Social Services and Public Safety (2015) state that nurses should regularly discuss the resident’s preferences for food and drinks with them; ensure the menu offers residents a choice of meals; serve food in a way that it is appealing to residents; use suitable portion sizes for meals and present meals according to the habits and wishes of the resident; and provide appropriate assistance with meals in a discreet, unhurried and sensitive manner. In addition to these daily care activities, NICE (2012) quality standards, Nutrition Support in Adults, recommend that resident’s height and weight are monitored and their body mass index (BMI) is calculated. To identify malnutrition at an early stage, regular screenings for weight loss should be carried out (NICE 2012).

It is important to raise awareness among residents, relatives and staff of tools and strategies to prevent malnutrition, and to work cooperatively with residents, relatives, and caregivers to improve their nutritional status.

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**TABLE 2. Risk assessment tools for malnutrition**

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Nutritional Assessment Questionnaire for Residential Care (SNAQRC)</strong> (Kruizenga et al 2010)</td>
<td>The Short Nutritional Assessment Questionnaire for Residential Care (SNAQRC) is a quick and easy screening instrument which can be helpful to identify malnutrition. The SNAQRC traffic-light system combines measurement of the resident’s body mass index (BMI) with the following questions: 1. More than 3kg in the last month (red) 2. More than 6kg in the last 6 months (red) 3. Are you only capable of eating and drinking with help? (orange) 4. Have you experienced a decreased appetite over the last month? (orange) A red score (yes to questions 1 and/or 2 or a BMI &lt;20) alerts healthcare staff to consider consulting a dietician in the treatment of the resident. An orange score (yes to questions 3 and/or 4 or a BMI of 20-22) alerts healthcare staff to increase monitoring of the food intake of these residents and their weight. A green light (no to all questions and a BMI of 22-28) indicates the patient is considered ‘safe’ and no action is required.</td>
</tr>
<tr>
<td><strong>Malnutrition Universal Screening Tool (MUST)</strong> (British Association for Parenteral and Enteral Nutrition 2011)</td>
<td>The Malnutrition Universal Screening Tool (MUST) is widely used and comprises three components to be scored: BMI, unplanned weight loss, and acute disease. The overall risk can be calculated by totalling the scores: 0: no risk, score 1: medium risk, and score 2 or more: high risk of malnutrition. Among care home residents who had been admitted in the previous 6 months, the prevalence of malnutrition (medium and high risk using the MUST) was 35% (Russell and Elia 2015).</td>
</tr>
<tr>
<td><strong>Mini Nutritional Assessment (MNA)</strong> (Vellas et al 2006)</td>
<td>The Mini Nutritional Assessment (MNA) is an 18-item questionnaire that identifies patients at risk of malnutrition and provides information for planning interventions. The MNA total score identifies three categories for older adults: normal nutritional status (24 to 30 points); at risk of malnutrition (17 to 23.5 points), and malnourished (less than 17 points).</td>
</tr>
</tbody>
</table>

healthcare staff and catering staff to deliver individualised care. Nurses should monitor and evaluate the effects of care and support in terms of the resident achieving a healthy weight (Malnutrition Task Force 2013).

TIME OUT 5
Find out which guidelines for malnutrition are used in your organisation. What interventions would you consider implementing for a resident who appears malnourished?

Treatment
Significant changes in weight should be reported to an appropriate healthcare professional for advice. If the resident experiences unintentional weight loss of ≥5% in 1 month or ≥10% over the last 3-6 months, further treatment interventions should be planned (Stajkovic et al 2011). Halfens et al (2011) recommended a protein-rich diet, energy-enriched snacks in-between meals and supplementary oral nutrition, for example liquid nutrition and supplements. Two complications require particular consideration: swallowing difficulties and the risk of choking. Measures for treating these risks include ensuring appropriate positioning of the resident while they are eating (sitting upright, not tilted back or slumped to the side); supervision for safe eating; providing small pieces, pureed, minced or moist foods and adequate hydration (Sayadi and Herskowitz 2010). Dietary recommendations should be based on a referral to a dietician. In exceptional cases, when a resident is unable to eat or drink, enteral or parenteral feeding may be prescribed.

Falls Assessment
Older people may be at increased risk of falls as a result of chronic health conditions, such as heart disease, dementia and low blood pressure, and impairments, such as poor vision or muscle weakness (Neyens 2007). Fall and fall-related injuries often have negative effects on residents. These include decreased mobility, restrictions in daily activities, increased dependency on others and serious injury, for example a hip fracture. These effects may reduce the resident’s quality of life. In care homes, fall risk factors can be divided into two categories: intrinsic and extrinsic (Neyens 2007). Intrinsic risk factors are those attributed to the resident’s state or health conditions, and include advanced age, high level of dependency, previous falls, muscle weakness and health conditions. Extrinsic risk factors are those attributed to the environment, and include raised thresholds, stairs, low or inadequate lighting, slippery floors and inappropriate footwear (Neyens 2007). Two tools are available to assess falls risk in long-term care settings: the Falls Efficacy Scale (Tinetti et al 1990) and the Falls Risk Assessment Tool (Department of Health and Human Services 1999) (Table 3).

In long-term care settings almost every resident is at high risk of falls (Perell et al 2001). Therefore, a falls risk screening may not be beneficial. When identifying the prevalence of falls, the International Prevalence Measurement of Care Problems protocol uses simple screening that asks the resident how often they have fallen in the last 30 days (van Nie-Visser et al 2013).

<table>
<thead>
<tr>
<th>TABLE 3. Risk assessment tools for falls</th>
</tr>
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<tbody>
<tr>
<td>Falls Efficacy Scale (Tinetti et al 1990)</td>
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<tr>
<td>Falls Risk Assessment Tool (Department of Health and Human Services 1999)</td>
</tr>
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</table>

(Tinetti et al 1990, Department of Health and Human Services 1999, Stapleton et al 2009)
Prevention
The aim of falls prevention is to minimise the risk of falls and fall-related injuries. Care homes have a duty to establish an adequate and effective fall prevention policy to decrease the number of falls and fall-related injuries. Guidelines on falls prevention, Falls in Older People: Assessing Risk and Prevention (NICE 2013), provide recommendations for assessment and prevention measures that can help nurses to develop ways to reduce falls in their patient or resident group and clinical setting. These include what to do after a resident has a fall and how to document fall incidents and near-fall accidents. It is important to note that fall prevention guidelines are only effective if they are integrated within daily care.

Measures to prevent this care complication can be divided into two categories: general fall prevention measures, which are institution-related, and specific fall prevention measures, which are resident-related. The focus of institutional preventive measures may be on continual vigilance to prevent fall incidents, such as ongoing considerations for fall prevention in daily care, safe lifting and transfer techniques and the safe use of assistive and protective devices (Neyens 2007). Creating a safe environment is another institutional prevention measure which may include: creating spacious and safe walking areas, placing handrails at strategic points, effective lighting and an alarm system (Neyens 2007).

Specific fall prevention measures should be tailored to the resident’s needs. Exercise programmes that focus on balancing, walking and muscular strength training are recommended to prevent first and recurrent falls. Assistive devices such as sticks, walking frames, wheelchairs and personal alarm systems can be helpful in preventing falls. The intake of calcium and vitamin D supplements is also an effective strategy for reducing falls and should be incorporated into the clinical practice of care homes.

Vitamin D and calcium should be added to treatments for osteoporosis (Ringe 2012). The nurse’s clinical judgement gained through ongoing observation of the resident, should be used in combination with information identified from the falls-risk screening (The Victorian Quality Council 2004).

Treatment
Serious injuries as a result of falls, such as a hip fracture, necessitate admission to a hospital emergency department. After the resident is discharged from the hospital, their treatment will be continued in the care home. Treatment of falls should be primarily preventive. However rehabilitation is fundamental to improve the resident’s motor skills, postural control and muscle strength (Pasquetti et al 2014). Education is an important aspect of rehabilitation, and may include providing information about how to cope with the fear of falling and how to use ergonomic and assistive devices correctly.

TIME OUT 6
What information would you discuss with a resident to encourage them to adopt measures to prevent falls? Include an explanation of how fall prevention measures work and how they benefit residents.

Conclusion
Residents living in care homes have specific needs that usually result from their healthcare requirements. Nurses in care homes have a complex role in balancing residents’ care needs with their quality of life, alongside performing the measures necessary to reduce the risk of developing care complications. Care complications are common conditions which affect care-dependent residents and often arise from risks associated with their illness. Clinical reasoning assists nurses to choose appropriate care for residents with potential and actual care complications. Using clinical reasoning, nurses have a central role in risk assessment, identifying care needs, planning and determining interventions and monitoring care complications. Guidelines are available for common care complications, including pressure ulcers, malnutrition and falls. These offer best practice advice for prevention and treatment. The recommendations from these
evidence & practice / CPD / risk assessment

Guidelines should be linked to local policies and procedures, implemented as part of the clinical reasoning process and as appropriate to meet the needs of the individual resident.

TIME OUT 7

Now that you have completed the article, you might like to write a reflective account as part of your revalidation.

References


0

This self-assessment questionnaire was compiled by Henrietta Cole

The answers to this questionnaire will be published on 21 September

The answers to SAQ 858 on intravenous cannulation, which appeared in the 24 August issue, are:


This self-assessment questionnaire will help you to test your knowledge. It comprises ten multiple choice questions that are broadly linked to the article starting on page 54. There is one correct answer to each question.

You can test your subject knowledge by attempting the questions before reading the article, and then go back over them to see if you would answer any differently.

You might like to read the article before trying the questions. The correct answers will be published in Nursing Standard on 21 September.

Subscribers making use of their RCNi Portfolio can complete this and other questionnaires online and save the result automatically. Alternatively, you can cut out this page and add it to your professional portfolio. Don't forget to record the amount of time taken to complete it.

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