Underpinning assessment with intuition and a tested model

With more people living longer, an increasing amount of care and support is being given in people’s homes. The Department of Health (DH, 2012) has highlighted how complex care, which was previously only delivered in hospital, is now being provided by district nursing teams and other multidisciplinary agencies.

As a senior staff nurse in the community, I have been qualified for 15 years, 14 of which have been spent as a community nurse. My current role involves visiting patients in their homes, delivering a wide range of clinical skills, supporting patients with long-term conditions to maintain independence, and providing complex care through effective assessment, planning, and implementation of care (Royal College of Nursing [RCN], 2012).

This piece focuses on the respiratory assessment and care of Mary, a 78-year-old female patient.

CASE REPORT

Mary was referred to the district nursing service by her GP to assess her pressure areas. When a pressure ulcer is suspected, our team aim to assess within 24 hours, following National Institute for Health and Care Excellence guidelines (NICE, 2015), which recommend that pressure ulcer risk assessment should be completed at first face-to-face contact (in hospital this is within six hours of admission).

Assessment

As Mary was not known to the district nurses, I requested a GP’s summary to understand her patient history. As Kaufman (2008) suggested, information gathered before an assessment is an important part of preparation, highlighting any previous problems and influencing decision-making. I used the Calgary-Cambridge model to guide my assessment, as this provides an easy-to-follow structure which complements an holistic approach (Munson and Willcox, 2007). Failure to use a model can lead to vital information being missed, which may be essential to diagnosis (Silverman et al, 2005).

Effective communication is a core skill for nurses, and is vital to the nurse-patient relationship, helping to develop rapport and trust (Bramhall, 2014; DH, 2012). Thus, I began the assessment by introducing myself and explaining the reason for my visit. I then asked Mary what her problems were. By encouraging her to be open and listening attentively, I hoped to allow her to clarify her needs (Munson and Willcox, 2007).

Mary explained that she had fallen two weeks before, resulting in an overnight hospital stay. Since the fall, her mobility had reduced and she was reliant on a Zimmer frame. She said that she was experiencing discomfort to her sacrum and that she had had a cough for the past week and was coughing up thick, yellow sputum.

Initial physical assessment found her blood pressure (BP) to be 130/79mmHg, pulse 74 beats per minute, and respiration rate 14, all of which were within normal limits (Akunjee et al, 2012), except for slight pyrexia of 37.5 celsius, which possibly indicated infection (Douglas et al, 2013).

Nurses need to be effective decision-makers (McDonald, 2005), as clinical decision-making is essential to care delivery (Pearson, 2013). McDonald (2005) suggested using four main decision-making concepts:

- Hypothetic deduction
- Decision analysis
- Pattern recognition
- Intuition.

Hypothesis is based on information gained through knowledge, pattern recognition or intuition (Banning, 2008). Bryan and McIntosh (1996) reflected how this model provides structure which, for a novice community nurse, is vital. Hypotheses generated are then tested to confirm or rule out findings through examination and investigation (Thompson and Dowding, 2009).

My initial hypothesis was that Mary had developed a pressure ulcer due to reduced mobility. This was based on intuition through experience and existing knowledge. Tiffen et al (2014) suggested that intuition is something an expert nurse relies on for quick problem-solving, drawing on...
previous experience and knowledge to aid decision-making. However, without a skin assessment, I could not rule out a moisture lesion, as moisture lesions are often mistaken for pressure ulcers (Voegeli, 2012). My second hypothesis was a possible chest infection which might be contributing to Mary’s slow recovery.

I used the Waterlow (2005) pressure ulcer risk assessment tool to measure Mary’s risk of developing pressure damage and support the supply of pressure-relieving equipment (Jones, 2013). It is a widely used tool consisting of a list of risk factors: age, sex, build/weight, mobility, skin type, malnutrition, continence and special risks (Kelly, 2005). Each risk factor is given a score, with the total score indicating if a patient is at risk, high risk or very high risk. Mary scored 24, indicating very high risk.

However, as suggested by NICE (2015), pressure ulcer risk assessment tools should always be used in conjunction with clinical judgement.

To enable examination and maintain Mary’s privacy and dignity, we went into the bedroom. On mobilising, I noticed that Mary was short of breath. I conducted a head-to-toe skin assessment, particularly focusing on bony prominences, and observing and documenting colour, temperature, texture, heat, oedema, blanching response and moisture (Bickley et al, 2012).

From the skin assessment, there was no evidence of a moisture lesion, particularly over the sacral area where Mary had been experiencing pain. Had there been any sign of inflammation and skin breakdown from contact with urine or faeces, a moisture lesion would have been visible (Voegeli 2012). I diagnosed a category two pressure ulcer to her coccyx, based on finding a superficial wound with 100% granulation tissue and a shiny, shallow wound bed (Yates, 2012).

Previous experience lead me to believe that Mary was at high risk of developing pressure damage, due to her reduced mobility and a possible chest infection.

During the skin assessment, Mary coughed and expelled thick yellow sputum, which can be a sign of infection as normal sputum is white or clear (Woodrow, 2002). With this and her slight pyrexia, I decided to undertake a respiratory assessment, using techniques taught on a physical assessment module, namely: inspiration, palpation, percussion and auscultation. This technique is considered systematic, limiting the potential to miss vital signs (Simpson, 2006).

I positioned Mary in the sitting position, i.e. the best position to assess chest and lungs, making lung expansion easier (Bickley et al, 2012), and she agreed to remove her upper clothing, which can be a barrier to percussion and auscultation as it can confuse sounds (Moore, 2007).

I inspected Mary’s hands, looking for nail clubbing, peripheral cyanosis and fine tremor, which can indicate carbon dioxide retention, lung cancer or heart failure (Bickley et al, 2012). No abnormalities were found. Moving up to her head and neck, I also checked the conjunctiva for anaemia, and mouth for central cyanosis, as the tongue and mucus membrane are the most reliable areas to check for cyanosis, as a cold person can have colour change to their fingers, which is not related to a respiratory condition (Comerford and Hodgson, 2013). Mary’s conjunctiva was pink and healthy and there was no bluish tinge to her under tongue. Considering both my clinical knowledge and findings, Mary’s breathlessness was unlikely to be secondary to anaemia or respiratory disease (Douglas et al, 2013).

I systematically palpated Mary’s neck noting for enlarged lymph nodes, which can be a sign of lung cancer (Douglas et al, 2013). There was no visible raised jugular venous pressure (JVP), which I examined at a 45° angle with head turned to the left. A raised JVP, can be a sign of right heart failure (Akunjee et al, 2012).

I also assessed Mary’s chest, observing shape and visible scarring. There was no evidence of a barrel shape, which can indicate lung hyperinflation in chronic obstructive pulmonary disease (COPD) (Douglas et al, 2013). There was also no curvature of the spine, as in kyphosis or scoliosis, which can reduce lung expansion (Comerford and Hodgson, 2013). Assessing chest expansion establishes depth and quality bilaterally, and chest movement should be equal and symmetrical (Moore, 2007). I placed both hands, palm down, on Mary’s left and right upper then lower chest, anteriorly and posteriorly, while she inhaled and exhaled, checking for equal rise and fall (Akunjee et al, 2012). Unilateral expansion may indicate pleural effusion or pneumothorax (Douglas et al, 2013). Mary had bilateral equal expansion, and her trachea palpated, supporting no risk of pneumothorax or pleural effusion (Simpson, 2006).

I performed tactile fremitus, by placing the ulnar side of my hands on Mary’s chest asking her to say ‘99’ while feeling for vibration and moving my hands anteriorly and posteriorly from upper chest to the base of her lungs (Bickley et al, 2013). If consolidation is present, increased vibrations would be felt over the area as fluid transmits sounds and vibrations better than air-filled lungs (Akunjee et al, 2012). A slight increase in vibrations was felt over her lower left lobe, compared to the right, indicating possible infection.

Percussion causes the chest wall tissue to move, producing sounds and palpable vibrations (Simpson, 2006). Indeed, Bickley et al (2013) suggested that percussion is one of the most important aspects of physical examination, helping clinicians to distinguish if underlying tissue is air, fluid-filled or solid. Normal lung tissue produces a resonant sound (Douglas et al, 2013). I detected dullness to the left lower lobe, which could indicate fluid in the lung (Akunjee et al, 2012).

The final part of the examination was auscultation, which involves listening to and differentiating different breathing sounds (Simpson, 2006). I used the same technique as for percussion, listening over the same areas, alternating between
left and right, comparing each for differences while Mary inhaled and exhaled through open mouth, as nose breathing alters the pitch and open mouth breathing, if tolerated, allows better air entry (Akunjee et al, 2012). Normal breath sounds are described as vesicular and heard when air flow passes through the upper airway (Douglas et al, 2013). The sound is usually a soft pitch, louder on inhalation and quieter on expiration (Akunjee et al, 2012). I identified fine crackles (clicking sounds caused by opening closed, small airways; Simpson, 2006) mid-inhalation to Mary’s left lower lobe, which can be indicative of fluid or infection (Thomas and Monaghan, 2007). No wheeze or pleural friction was detected.

On completion of the respiratory assessment, I suspected a chest infection, confirming my hypothesis generated at information-gathering. I discussed my findings with Mary, but requested a GP house call that afternoon for confirmation and antibiotics to be prescribed, if needed.

Following the first three stages of the Calgary-Cambridge model, I had gathered information, generated hypotheses and, through physical assessment, confirmed a sacral pressure ulcer and chest infection. This led to prompt and timely treatment, as the GP visited and confirmed the diagnosis and prescribed antibiotics.

Mary remains on the district nursing caseload. Her pressure ulcer has almost healed and, following antibiotic treatment, her mobility has increased and she is no longer reliant on a Zimmer frame.

CONCLUSION

This case report shows how comprehensive holistic assessment and early identification of a sacral pressure ulcer and chest infection led to prompt and timely treatment, as the GP visited and confirmed the diagnosis and prescribed antibiotics.

REFERENCES


Available online: www.england.nhs.uk
Royal College of Nursing (2012) District nursing – harnessing the potential: The RCN’s UK position on district nursing. RCN, London
Journal of General Practice Nursing

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