# Part 1

Common Principles Underlying Medical and Surgical Nursing Practice

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Principles of nursing assessment</td>
<td>2</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Principles of drug administration</td>
<td>12</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Principles of intravenous therapy</td>
<td>26</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Principles of nutritional care</td>
<td>44</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Principles of infection prevention and control</td>
<td>58</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Principles of acute care for older people</td>
<td>78</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>Principles of end of life care</td>
<td>90</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Principles of perioperative nursing</td>
<td>104</td>
</tr>
<tr>
<td>Chapter 9</td>
<td>Principles of high-dependency nursing</td>
<td>124</td>
</tr>
<tr>
<td>Chapter 10</td>
<td>Principles of emergency nursing</td>
<td>142</td>
</tr>
</tbody>
</table>
1

Principles of nursing assessment

Naomi Elliott

School of Nursing and Midwifery, Trinity College Dublin, Dublin, Ireland

Contents

Introduction 3
The purpose of nursing assessment 3
Assessment frameworks 4
Methods of assessment 6
Rapid assessment of the acutely ill patient 8
Documenting patient assessment and record-keeping 9
Conclusion 10
References 10

Learning outcomes

This chapter will examine the WHY, WHAT, HOW questions of nursing assessment. It will enable you to ask:

- **Why** – to explain the purpose of nursing assessment and why it is vital to quality patient care
- **What** – to consider what patient information is collected and the rationale for using an assessment framework
- **How** – to identify a range of methods available to assess patients and collect information that support clinical decision-making and individualised patient care plans.
Introduction

Assessment is the first step in determining the condition of the patient’s health and their immediate and long-term needs. The nursing assessment of patients on admission to hospital or on attendance at clinics is key to clinical decision-making and to planning patient care that takes account of the individual patients’ needs and circumstances. Nurses have responsibility for carrying out the initial and ongoing patient assessments, for initiating interventions that take patients’ needs into consideration and for evaluating the effectiveness of these interventions.

The nursing assessment is one component within a larger, multidisciplinary team assessment during which the patient is assessed by different healthcare professionals as part of the care pathway and patient referral process. A multifactorial assessment of the older person for falls, for example, can involve the nurse, doctor, physiotherapist, occupational therapist, optician and other healthcare professionals working in specialist areas of practice such as cardiac assessment. As a member of the multidisciplinary team, the nurse often plays a key role in coordinating the patient assessment and ensuring that appropriate referrals are made and followed up.

The principles of nursing assessment presented in this chapter are in line with the national guidelines from the professional nursing board in Ireland, An Bord Altranais, and in the UK the Nursing and Midwifery Council (NMC). The principles need to be read in conjunction with local policies and procedures for the nursing assessment, which are usually set by the hospital or healthcare employer. At ward or unit level, more specific assessment procedures may apply; for example, cerebrovascular or stroke units may include an assessment of swallowing and mood as part of the assessment of a patient newly diagnosed with a cerebrovascular accident – a stroke.

The purpose of nursing assessment

Assessment is the first stage in the nursing process and is key to developing a care plan that is tailored to a patient’s individual needs (Figure 1.1).

The purpose of assessment is to achieve the following:

- **Obtain baseline data and track changes.** On admission to hospital or on a first visit to the clinic, it is important to carry out a comprehensive assessment of the patient to establish a set of baseline data against which subsequent assessments can be compared and any changes indicating a deterioration or improvement in the patient’s condition tracked.

- **Early recognition of the critically ill or deteriorating patient.** Identifying patients who are ‘at risk’ is key to initiating a rapid response from the medical emergency or rapid response team. ‘Track and Trigger’ (e.g. Alert® and other early warning systems) incorporate objective physiological and subjective criteria that can be used to support the nurse’s decision about when to call the medical team for help and avert more serious patient emergencies (National Institute for Health and Clinical Excellence [NICE], 2007). If a Track and Trigger system has not been set up in the hospital, a nurse who is concerned about a patient should take urgent action and notify the medical team.

- **Risk assessment.** Assessment is the first step in preventing complications, the aim being to identify patients who are ‘at risk’ of developing complications associated with their healthcare problem, hospitalisation and reduced mobility. Key areas for risk assessment include pressure ulcers, infection, falls and constipation. Local hospital policy may include risk assessment tools as part of the admission procedure, for example the Braden, Waterlow and Norton scores to identify patients at risk of pressure ulcers and to activate an action plan and interventions to prevent pressure ulcers developing.

- **Screening for health problems.** Nursing assessment provides an ideal opportunity for health promotion and for screening patients for risk factors associated with obesity, cancer, cardiovascular disease, diabetes mellitus and other major Irish and UK health problems. It also provides the opportunity to screen for specific problems such as emotional distress or organisms important in infection control (e.g. methicillin-resistant *Staphylococcus aureus* [MRSA] and vancomycin-resistant *Enterococcus* [VRE]).
• **Identify actual and potential problems and prioritise care.** The patient’s current problems (actual problems) and problems that could develop in the future (potential problems) need to be identified so that the care plan can be tailored to individual patient needs. Importantly, once the range of patient problems has been identified, care can be prioritised so that major problems are dealt with first.

• **Care planning, tailored to individual patient needs.** The purpose of assessment is not only to determine and document the patient’s current condition, but also to provide evidence for the planning and provision of nursing care. Although standardised care plans are available in some units or hospitals, the nursing actions that are required to meet a patient’s needs and problems should be tailored to take account of individual patient needs.

• **Discharge planning.** Patient assessment also includes the early identification of patients’ needs for forward planning and organising the supports and community services necessary to facilitate a timely discharge from hospital. Recent trends indicate that patients’ stay in hospital is shortening, the use of day surgery is increasing, and policies on early discharge and discharge planning are setting the standards for healthcare practice (Capelastegui et al. 2008; Szczynski et al. 2010; Shepperd et al. 2010). Although the reasons for a delay in discharging the patient home from hospital are multifactorial, patient assessment that includes information about the patient’s home and social circumstances, family and community supports will help prevent problems arising from a poor knowledge of a patient’s home situation or the support available, and will avert delays related to non-medical reasons.

### Assessment frameworks

An important principle underpinning the nursing approach to patient assessment is that it is systematic, comprehensive and person-centred. Many of the assessment frameworks used in clinical practice are linked to nursing theories such as the activities of living (Roper et al. 2000) or the self-care deficit theory of nursing (Orem 2001), or to other theory including Maslow’s (1999) hierarchy of needs.

Nursing models and theories serve as a guide for clinical practice and provide for a structured approach insofar as they map out what areas to include in a patient assessment. The number of new or modified assessment frameworks for nursing practice is ever increasing, but a common feature across different nursing assessments is the inclusion of the core aspects of physical, psychosocial and spiritual assessment within the context of family, community and environment (Figure 1.2). The decision of which assessment framework to use is made by healthcare organisations and nursing management, who then oversee its implementation in their admission procedures and nursing documentation. This is important because it provides a way of assuring a standardised approach to nursing assessment and quality patient care.
In terms of how this translates into practice and what information is gathered during the nursing assessment, the broad areas to consider include biographical and health data, a systematic review of patient systems and functions, and a social assessment:

- **Biographical and health data.** Obtaining information about the patient’s health history is vital for putting the current problem or illness into context (Kaufman 2008).

<table>
<thead>
<tr>
<th>Assessment of . . .</th>
<th>. . . in relation to the following aspects</th>
</tr>
</thead>
</table>
  | The patient's understanding of the reason for admission  
  | Biographical and contact details  
  | Religion  
  | Past medical and surgical history  
  | Previous history of healthcare-associated infections, e.g. MRSA, VRE and Clostridium difficile  
  | Allergies  
  | Drugs and medications  
  | The patient's knowledge of hospital policy, such as visiting, patients’ property and valuables | Identifying significant information that affects current health status and care-planning |

- **Patient assessment.** This involves a ‘head-to-toe’ systematic review of the patient. A review of systems and functions enables the nurse to elicit information about problems and provide vital clues to support a clinical diagnosis or uncover a problem of which the patient is unaware. The depth of the patient assessment will depend on the patient’s condition and the urgency of the clinical situation (Tagney 2008).

<table>
<thead>
<tr>
<th>Assessment of . . .</th>
<th>. . . in relation to the following aspects</th>
</tr>
</thead>
</table>
  | Breathing; smoking history  
  | Cardiovascular system  
  | Communication  
  | Diet, nutrition and hydration  
  | Elimination  
  | Mobility  
  | Personal hygiene  
  | Skin condition  
  | Sleep patterns  
  | Sexual health  
  | Concerns, anxieties, fears and mood | The key problem as identified by the patient  
  | Changes in function  
  | Coping strategies in dealing with changes  
  | Level of dependence/independence  
  | The patient's normal activity, function and behaviour  
  | Health beliefs and lifestyle behaviour  
  | Preventive health measures including screening and immunisation |
• Social assessment. Taking a social history enables an early identification of patients’ needs and problems that might delay discharge from hospital. Social history-taking is not always considered a priority in acute healthcare services, but it helps nurses to identify the patient’s needs so that appropriate referrals can be made to the health and social services and service delivery is coordinated (Atwal 2002).

<table>
<thead>
<tr>
<th>Assessment of . . .</th>
<th>. . . in relation to the following aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>Impact of the health problem on work,</td>
</tr>
<tr>
<td>Occupation</td>
<td>day-to-day living, lifestyle and family</td>
</tr>
<tr>
<td>Whether the patient is living alone or with others, has a carer or is providing care for another person</td>
<td>Coping strategies – how the patient currently manages to deal with problem</td>
</tr>
<tr>
<td>Social networks and supports</td>
<td>Current supports used by the patient</td>
</tr>
<tr>
<td>Housing or accommodation situation</td>
<td>Identification of unmet support service needs</td>
</tr>
<tr>
<td>Informal support from family, neighbours or voluntary community groups</td>
<td></td>
</tr>
<tr>
<td>Current community or home services – does the patient have a home help or meals-on-wheels, go to a day centre or receive support from a public health (or community) nurse or other personnel?</td>
<td></td>
</tr>
<tr>
<td>Access to shops for food, chemist, doctor, dentist, health clinic, bank/post office</td>
<td></td>
</tr>
<tr>
<td>Access to exercise or sports facilities</td>
<td></td>
</tr>
</tbody>
</table>

Visit [www.wileyfundamentals.com/medicalnursing](http://www.wileyfundamentals.com/medicalnursing) and read Reflective Question 1.1 to think more about this topic.

**Methods of assessment**

The methods of assessment that are used to gather the information for clinical decision-making include interviewing the patient and obtaining a health history, carrying out a physical examination, making clinical observations and using risk assessment tools.

**Interviewing and obtaining a health history**

Taking a patient history is an essential part of assessment as an accurate history can provide over 80% of the information required for diagnosis (Epstein et al. 2008). Obtaining an accurate history is not just about asking a list of questions, but also requires establishing an effective patient–nurse relationship in which the patient feels that the nurse is interested in understanding their healthcare problems (Elliot 2010). This involves putting patients at their ease, providing as much privacy as possible, ensuring the nurse is familiar with any information already gathered, being sensitive to cultural differences and inviting patients to tell their story (Tagney 2008).

Once the introductions have been completed, obtaining a health history begins with inviting the patient to tell their story and using an open question such as, ‘Can you tell me what has brought you here today?’ After an explanation has been given, the nurse moves to asking key and targeted questions to build up a comprehensive picture of the patient’s problem: ‘How has it affected you? Have you noticed what makes it worse or what helps? Have you noticed any changes in . . . ? How does this compare with previous times you have had this problem?’ More targeted questions are used to focus on eliciting whether there are any associated symptoms so the nurse needs to be familiar with the patterns associated with specific health problems.

Investing in the end of the interview and considering the closing questions is vital to ensuring ongoing continuity in the patient–nurse relationship in future consultations. Ending the interview involves
summarising, framing information using the patient’s perspective and providing opportunity for the patient to add further information. A closing question such as ‘Is there anything else we haven’t covered that you would like to discuss?’ enables patients to provide additional information. During the first nurse–patient encounter, some patients may find it difficult to disclose problems and may be unwilling to do so until they know and have established a trusting relationship with the nurse. One helpful way in which the nurse can let the patient know there will be further opportunities to discuss issues is by saying, for example, ‘If you think of anything else later on, let me know and we can have a chat then.’

Physical examination

Physical examination provides objective data and is used to corroborate evidence gathered from the patient interview and clinical observation. Examination involves measurement of the ‘vital signs’, including temperature, heart rate, respiratory rate and blood pressure. The patient’s weight is recorded and, if indicated, the patient’s body mass index may also be calculated to determine whether the patient has a normal weight or is under- or overweight. Urinalysis using a dipstick reagent strip and a clean sample of fresh urine from the patient is used to screen for abnormal substances such as glucose or protein. Any abnormalities detected in the urinalysis should be followed up by more specific laboratory tests to investigate the cause and perhaps detect a previously undiagnosed condition such as diabetes mellitus. The patient’s skin condition is examined; in addition to carrying out a pressure ulcer risk assessment, any abnormalities such as the presence of bruises, rashes and peripheral oedema are noted.

Clinical observation

Observation is an integral part of patient assessment as it provides an additional layer of information gathered during the patient–nurse interaction, physical examination and routine ward-based tests. Observation provides a means of gathering vital indicators about the patient’s condition and well-being, and this information contributes to the overall evidence supporting clinical decision-making.

During the interaction with the patient, the nurse takes note of non-verbal cues. Indicators of patient anxiety or distress can prompt the nurse to investigate further using gentle questioning or to return for a follow-up visit if the patient is unwilling or not ready to discuss their problems at that time. Observing patients as they walk around the ward, move from chair to bed, get dressed and close buttons or zips can provide important information about their mobility, balance and dexterity. Observing the patient’s general appearance includes noting the colour of the face and body and any abnormal signs such as nasal flaring, which can indicate respiratory distress. Abnormal smells or odours such as the odour of ketones on the patient’s breath may indicate fasting or diabetic ketoacidosis. Observing the patient’s behaviour noting inappropriate responses and actions can indicate neurological, metabolic, endocrine or mental health problems.

Information gathered from observing the patient is used along with that assimilated from the patient interview and physical examination to make sense of the patient’s health problem and to support clinical decision-making.

Assessment tools

Nurses can make use of a range of assessment tools and rating scales as part of their assessment of the patient. These provide a standardised approach to assessing specific aspects of the patient’s condition that can otherwise be difficult to measure (Table 1.1).

The Glasgow Coma Scale (Teasdale & Jennett 1974), for example, provides a means of assessing a patient who is becoming increasingly drowsy and unresponsive and, importantly, enables nurses to communicate the findings in a way that other healthcare professionals will understand. Using the Glasgow Coma Scale, the patient is assessed on three specific items of (1) best eye-opening, (2) best verbal response, and (3) best motor response. The patient’s response on each of these items is converted into a numerical score, with the total score used to determine the level of consciousness.

The Early Warning Score (EWS; McGaughey et al. 2007) is an example of another type of tool that not only measures the patient’s status, but also identifies an action plan for the healthcare professional
to follow. In the EWS, the physiological parameters are set and used to initiate further interventions. For example, if a patient’s temperature exceeds a predetermined level, blood cultures will be taken.

Other assessment tools are used to identify patients at risk, for example, of developing pressure ulcers. These predictive tools help nurses to identify at-risk patients so that interventions can be put in place to prevent pressure ulcers occurring. Pressure ulcer risk assessment tools are, however, only one component of risk assessment. Gould et al. (2002) found that tools such as the Braden, Waterlow and Norton scales are not always accurate as they can either over- or underpredict risk. Therefore, pressure ulcer risk assessment tools serve as guides, and the nurse’s own clinical judgement should also be taken into consideration.

Patient self-assessment tools are also available whereby patients use a visual analogue scale or brief questionnaire to assess themselves. The pain thermometer is one example – on this, the patient scores how severe the pain is by using a rating scale of 1–10 where 1 is no pain and 10 is the worst pain imaginable. Another example of such a tool is the patient distress self-assessment tool developed by the National Comprehensive Cancer Network (2011) in America. This uses a distress ‘thermometer’ along with a tick box checklist of practical, family, emotional and physical problems and spiritual or religious concerns encountered with cancer patients.

### Rapid assessment of the acutely ill patient

A full patient assessment that includes a detailed review of physical, psychosocial and preventive health needs, a physical examination and routine tests can take several hours to complete. An in-depth assessment requires time and is appropriate for elective, non-emergency cases and for patients on their first visit or admission to the hospital or clinic. Given that nurses also work in acute care situations, however,
rapid assessment skills are also important, especially as the early recognition of a deterioration in the critically ill or unstable patient is vital to managing the care of such acutely ill individuals. Depending on how acute or unstable the patient’s condition is, some examples of rapid assessment systems are outlined here.

‘Track and Trigger’

Delays in recognising patients who are acutely ill on admission to hospital or in detecting clinical deterioration during their hospital stay can result in serious consequences. An analysis of 425 patient deaths that occurred in UK acute hospitals in 2005 showed that 64 deaths were related to a failure to detect and recognise changes in patients’ vital signs, a failure to act upon the worsening vital signs or delays in the patient receiving medical attention (National Patient Safety Agency 2007).

To avoid delays in the detection and recognition of acute illness and in starting appropriate interventions, NICE (2007) recommends that a physiological Track and Trigger system is used to monitor all adult patients in acute hospital care settings. NICE recommends that the patient’s heart rate, respiratory rate, systolic blood pressure, level of consciousness, oxygen saturation and temperature are monitored and that key changes in these physiological observations are used to trigger a response. The response to a low score involves increasing the frequency of observations and alerting the nurse in charge to changes in the patient’s condition. The response to a medium score involves making an urgent call to the patient’s primary medical team, and the response to a high score involves making an emergency call to the medical team, which includes a doctor skilled in assessing critically ill patients and in advanced airway management and resuscitation skills. In addition to initiating appropriate interventions, the Track and Trigger system includes information about when to transfer the patient to the critical care area for ongoing care.

Alert®

For use in situations in which a patient is deteriorating, some hospitals have introduced the Alert® system for rapid assessment of the critically ill patient. This acts as a decision-making tool to alert healthcare professionals to patients who are acutely ill, to determine the level of urgency and to know when to call the emergency medical team. The Alert® framework (Smith 2003) is just one example of a rapid and systematic approach to assessment that trains healthcare professionals to rapidly assess a patient whose condition is deteriorating. It follows an ABCDE sequence in which A is airway, B is breathing, C is circulation, D is disability (neurological assessment including assessment of the level of consciousness and/or use of the Glasgow Coma Scale) and E is exposure (anything that may contribute to the patient’s deterioration).

Cardiopulmonary resuscitation

In emergency, cardiac arrest and life-threatening situations in which the patient is unresponsive, the immediate priorities are to assess the patient for signs of life (Resuscitation Council UK 2010). If the patient shows no signs of life, the nurse calls the resuscitation team and if no carotid pulse is present, starts cardiopulmonary resuscitation. Once these priorities have been addressed, other important assessments can then be made.

Documenting patient assessment and record-keeping

After assessing the patient, it is important that nurses record their findings and so provide documentary evidence about the patient’s condition. This written information is vital for providing baseline data and ensuring continuity of patient care. It provides information that other nurses and healthcare professionals can refer to when planning and coordinating patient care. Although patient assessment forms and nursing documentation are set by local hospital policy and procedures, the national professional guidelines for recording nursing practice and patient assessment advise the following:
• An accurate assessment of the person’s physical, psychological and social well-being, and, whenever necessary, the views and observations of family members in relation to that assessment’ should be included in a patient record. (An Bord Altranais 2002, p. 2)
• Evidence in relation to the planning and provision of nursing care should be included as part of a patient record. (An Bord Altranais 2002, p. 2)
• Record details of any assessment and reviews undertaken, and provide clear evidence of the arrangements made for future and ongoing care. This should also include details of information given about care and treatment. (NMC 2009, p. 4)

The information gathered from an assessment when the patient is first admitted to hospital or first visits an outpatient clinic needs to be recorded. It provides the evidence to support clinical decisions and a rationale for the individualised patient care plan. Ongoing or continuous patient assessment when monitoring to evaluate changes in a patient’s condition in changing circumstances also needs to be recorded, and nursing actions documented. Nursing assessment may also identify patient problems that need to be referred for further assessment by an appropriate healthcare professional such as a physiotherapist, dietitian, social worker, speech therapist or occupational therapist.

The importance of nursing documentation is emphasised by policy-makers and professionals in Ireland (An Bord Altranais, 2002), the UK (NMC, 2009) and internationally (Wang et al. 2011). However, evidence from a review of quality audits of nursing documentation in actual clinical practice has revealed some deficiencies (Wang et al. 2011). Although documentation does not always capture the full extent of what happens in actual nursing practice, Wang et al. found several studies that revealed insufficient recording of psychological, social, cultural and spiritual aspects of care. Other deficiencies highlighted by these authors included a lack of documentation of the patient’s vital signs, diagnosis leading to hospitalisation, assessment of pressure ulcers and assessment for specific care issues, including older patients with chronic heart failure, the physical characteristics of wounds or patients with pain and cognitive impairment. The implications for practice, therefore, are that if documentation is to serve as a vital communication tool between nurses and other caregivers for the exchange of information gathered at assessment, attention needs to be paid to ensuring there are no gaps in documenting patient assessment.

Conclusion

The nursing assessment of the patient is complex as it involves using different methods to gather information on diverse aspects of patient care across a range of acute and chronic healthcare situations. Nursing assessment generates information that is used to inform nursing actions and interventions. From this information, the patient’s problems are identified, further investigations to determine the cause of the problem are selected, and decisions are made about what observations need to be tracked and which referrals to other healthcare professionals are needed.

The pace at which nursing assessment is carried out is determined by the patient’s condition and whether it is an emergency, the level of patient distress, how quickly the patient’s condition is deteriorating, whether the patient’s condition is stable or unstable, and whether the patient is presenting with an acute or chronic illness. The principles of nursing assessment in this chapter are intended to serve as a framework to guide nurses in organising their patient assessment. The key to nursing assessment, however, is to listen to the patient and work towards an understanding the nature of the healthcare problem from the patient’s perspective.

Now visit the companion website and test yourself on this chapter:
www.wileyfundamentalseries.com/medicalnursing

References


