Case Studies

Chapter 1

Case study 1

A 50-year-old male, who lives alone in a semi-detached house on a housing estate, is admitted for elective orthopaedic surgery on his knee. Patients are normally discharged 3 days postoperatively with crutches.

• What information do you need to gather so you can plan for discharge in 3 days’ time?

Case study 2

A patient who is critically unstable has just arrived and is being admitted to your ward.

• What are your main priorities in assessing this patient?
• How would your priorities differ if the patient were being admitted for elective surgery?

Chapter 2

Case study 1

Mr Jones, aged 83, had been diagnosed with heart failure 5 years previously and had been taking 40 mg furosemide (frusemide) with his breakfast. He was admitted to hospital with a chest infection. In hospital, the 40 mg furosemide was administered during the early morning drug round, at 8.00 a.m., 60 minutes before breakfast. On his first morning in hospital, Mr Jones suffered an episode of urinary urgency and incontinence during breakfast, which upset him. A few days later, he developed calf pain, and deep vein thrombosis was diagnosed. His fluid balance records were checked and it appeared that Mr Jones had only drunk 700 mL per day over the previous 3 days. There was no record of his fluid output.

• How was absorption of the furosemide related to eating breakfast?
• Could this account for the incontinence and deep vein thrombosis?
• Could Mr Jones’ fluid intake have been linked to a fear of incontinence?
• How could fluid balance management have been improved?

Consider the fact that food decreases the absorption of furosemide, in effect halving the dose received. The sudden increase in absorption caused the adverse drug reactions of diuretics to emerge, including dehydration (Harvey & Jordan 2010).

Case study 2

Jane had been prescribed sodium valproate to control her epilepsy since childhood. She began using the combined oral contraceptive pill at 19, and her epilepsy deteriorated. Carbamazepine was prescribed to control her seizures. Six months later, she was surprised to find herself 16 weeks’ pregnant. An urgent ultrasound scan indicated that the baby had a neural tube defect. Some authorities put the risk of this as high as 1 in 10 (see Sassarini et al. 2010 for a review).

• How could applied pharmacology have improved the outcome?
• Would Jane’s outcome have been different if she had been managed by specialist services?

Consider that the long-term use of valproate can cause menstrual irregularities (British National Formulary 2011), which might delay the recognition of pregnancy. Rifampicin, rifabutin, St John’s Wort, aprepitant, bosentan, modafinil, some antiepileptics (including carbamazepine but not valproate), some antiviral agents and possibly some antifungals render standard-dose contraceptives ineffective, so alternative methods of contraception are advised. For effective contraception, women taking carbamazepine and some other antiepileptic medications who do not wish to use alternative methods need a higher daily dose of oestrogen than is available in most combined oral contraceptives (at least 50 μg rather than 30 μg) (British National Formulary 2011).

Valproate, and to a lesser extent carbamazepine, increases the risk of neural tube defect (Jentink et al. 2010). Sodium valproate is not advised in women of child-bearing age (British National Formulary 2011). However, changing therapeutic regimens risks increasing the number of seizures. In women taking antiepileptic medication, 25% of unplanned pregnancies can be attributed to ‘pill failure’ (Fairgrieve et al. 2000).
Case study 3

Mrs Jones, aged 84, complained of being unable to sleep since her husband’s death a month previously. She appeared anxious and agitated so, in consultation with Mrs Jones’ district nurse, her GP had in the third week of November prescribed a 6-week course of diazepam. In mid-December, Mrs Jones declined her daughter’s usual invitation to stay for Christmas as she had become increasingly troubled by incontinence and unsteadiness. She was admitted to hospital following a fall and a deep cut to her head on Christmas Eve.

• How could these problems have been avoided?
• What nurse-led monitoring should have been undertaken, and when?

Consider that, in the elderly, diazepam has a half-life of about a week. Therefore, if the first dose is taken at the end of November, adverse effects may emerge for the first time over the Christmas period. These include confusion, incontinence, falls and sedation. Unless the time delay between the initiation of therapy and the onset of adverse drug reactions is recognised, it is possible that such problems could be attributed to the effects of ageing, without addressing the adverse drug reaction.

Chapter 3

Case study

Mrs Marsden, an 85-year-old women, is transferred to your ward from the recovery area following gastric surgery. She has a peripheral cannula in her right arm that was inserted by the anaesthetists earlier that day. She requires fluid and electrolyte replacement as she has to remain nil by mouth, and she also requires intermittent antibiotics.

• Discuss the plan of care regarding her parental therapy. Include the frequency of changing all the intravenous equipment, inspection of the site, care of the cannula and whether an infusion device is required.
• How will the risk of potential complications be minimised?

Chapter 4

Case study

Mr Edwin Smith is 75 years old. He recently had a fall at home, resulting in ongoing knee discomfort. This has led him to reduce his walking drastically. Six weeks ago, his wife died and he is adapting to living on his own and caring for himself. He reports being on some tablets for hypertension, some painkillers and a diuretic first thing in the morning but otherwise has no significant past medical history. He has arrived on your ward and, during the admission process, admits that his wife did all the cooking at home and that he misses her company and her home-cooked meals.

• What would your next question be? – What have you been eating at home since your wife died?, Have you bought the wrong size trousers?, Do you think you have lost any weight?, Have you learnt how to cook since your wife died?

Mr Smith tells you that he thinks his weight is around 74 kg; he was weighed when he went to see his GP a month before his wife died.

• Following this discussion, what would your next action be?

On completion of a nutrition screening tool, Mr Smith is highlighted as being at risk of malnutrition. His current weight is 65 kg, his height 1.88 m and his body mass index 18.4 kg/m².

• From the information you have regarding this gentleman, consider the factors that may have led to his becoming at risk of malnutrition.
• Now you know the possible reasons for Mr Smith’s weight loss and recognise that he is at risk of malnutrition, consider what your next actions would be.
### Chapter 5

#### Case study 1

Mrs Brown, a 66-year-old, female was admitted to an eight-bedded bay on a medical ward. On admission, she gave a verbal history of the recent infection of a surgical wound with methicillin-resistant Staphylococcus aureus (MRSA). She also has pyrexia and a productive cough and has experienced weight loss in the past month.

- What type of isolation precautions should be implemented in this case?
- Find out what type of isolation signs are used where you are working.
- During your working day, review whether all the patients who require isolation signs have them in place and whether the appropriate signs are being used for each patient’s condition.

### Chapter 6

#### Case study

Mr Ronald Smith, a 78-year-old married gentleman, is admitted via the accident and emergency department to your medical ward with the diagnosis of an acute urinary tract infection and a history of early-stage Alzheimer’s disease and hypertension. He is accompanied by his wife Alice, who is awaiting surgery for bilateral cataracts. Mrs Smith is upset and reports that her husband has become more confused and generally unwell over the past 24 hours, refusing to take his medications (an antihypertensive agent and an acetylcholinesterase inhibitor) and not drinking enough fluids. Mr Smith is distressed and frightened, and his appearance is a little unkempt. He appears unaware that he is in hospital and is continuously walking around the busy ward asking for his dog Albert.

- How would you conduct an assessment with Mr Smith and his wife?
- What are the immediate priorities of care that might arise for Mr Smith?

### Chapter 7

#### Case study

You are caring for Mr Jones, who is a 70-year-old gentleman. He is aware that he is getting weaker and he asks you how long he has got to live. He was previously receiving intravenous fluids but these have been stopped as his chest was becoming more congested. He is in the late stages of heart failure and has been moving towards death over the past 5 days. He moans intermittently, especially when his position is being altered. You have noticed over a few days that the noise from his chest is becoming more pronounced and he is becoming less responsive. His respiratory rate has also increased, and his breaths are short and shallow. His colour is becoming more ashen.

His wife and sons visit him regularly and are very concerned that he may die in the near future. They ask you how you think he is progressing. You sense that Mr Jones is in pain, and he is unable to swallow. He is commenced on a subcutaneous syringe driver that contains opioids.

- What are the main principles of care for Mr Jones as he approaches the end of his life?
Chapter 8

Case study 1
Michael is 76 years old, lives alone and has a history of type 1 diabetes mellitus and alcohol-dependence syndrome. An infected wound on the big toe of his right foot has not responded to treatment and he has developed gangrene. Michael has been admitted to hospital for amputation of this toe.
On arrival in theatre, the nurse is talking to Michael, and as she goes through his documents she asks him to confirm that he is having the big toe removed from his left foot. He corrects her and says that it is his right big toe.

• What actions do you think the nurse needs to take at this point?
• Identify the possible steps in the process at which the error might have occurred and how this could be prevented in future.

Case study 2
You are a newly qualified staff nurse and have been working in theatre for 3 months. During the first case one morning, when you are acting as the scrub practitioner, you realise that a swab is missing. This has been a long, difficult case and the surgeon is anxious not to run over the time allotted for the case. You count the swabs again but there is still one missing.

• Consider what action needs to be taken now in order to ensure patient safety.

Chapter 9

Case study 1
Mr Adams, a 65-year-old gentleman, visits his GP with severe breathlessness. He has had a productive cough for 1 week, has a respiratory rate of 32 breaths per minute and cannot talk in complete sentences. His GP immediately calls for an ambulance and Mr Adams is taken to the nearby emergency department. He has a history of asthma and has smoked 30 cigarettes a day for the past 30 years.

• Using the ABCDE framework, identify the assessment data that will be collected from Mr Adams in the emergency department.

Airway: Able to maintain own airway? Presence of secretions?
Breathing: Respiratory rate? Pattern and depth of breathing? Respiratory noises? Oxygen saturation levels?
Disability: Level of consciousness? Blood glucose levels? Pain?
Exposure/environment On examination, how does the patient look, feel?
Case study 2

Mrs Jane Cunningham is a 58-year-old woman who was admitted to the surgical high-dependency unit at midday following a total abdominal hysterectomy. During the afternoon, her condition deteriorates, she becomes confused and restless, and blood is noticed seeping from her wound into the abdominal drain. Initial assessment reveals a heart rate of 124 beats per minute, a blood pressure of 105/70 mmHg and a respiratory rate of 26 breaths per minute. Mrs Cunningham appears pale and cool to the touch. She is receiving 100 mL per hour of Hartmann’s solution.

- What assessments would you undertake?
- What additional information would you need at this time?
- What might account for the deterioration?

Despite an increase in intravenous fluids, Mrs Cunningham’s condition continues to deteriorate. Her heart rate has increased to 130 beats per minute, her blood pressure is 90/50 mmHg, her central venous pressure is 3 mmHg, her respiratory rate is 32 breaths per minute, her SpO\textsubscript{2} is 92% on a fraction of inspired oxygen of 0.4, her capillary refill time is 2 seconds, and her tympanic temperature is 35.8°C. Her urine output is 20 mL for the past hour. She is reviewed by the surgical registrar, who prescribes additional fluids. Mrs Cunningham is clearly hypovolaemic following blood loss. Her haemoglobin has fallen to 7.0 g/dL.

- What is an appropriate method of volume resuscitation?

Chapter 10

Case study 1

A 22-year-old male presented to the emergency department complaining of sudden-onset periumbilical pain during the night and nausea and vomiting that occurred after a few hours. He described the pain as being persistent but worse when he coughed or moved suddenly. The patient had increased pain on his right side following a rectal examination and rebound tenderness in the right lower quadrant of his abdomen. He also had a low-grade pyrexia of 38–39°C and was keeping his right thigh flexed to provide pain relief (Small 2008).

An important clinical sign indicating the condition of acute appendicitis, commonly known as McBurney’s sign, is described as tenderness on palpation in an area about 2 inches from the anterior superior iliac spine on a line with the umbilicus. Once these signs and symptoms are present, the patient will be admitted for an appendectomy.

Nursing assessment for patients with acute abdominal pain begins at triage, where the nurse will ask a series of questions relating to the location, type and duration of pain. Questions related to other symptoms such as nausea and vomiting and relevant relieving and aggravating factors may also be asked. Vital signs will include a baseline temperature recording and a pain score based on the patient’s own evaluation of the severity of the pain. A urine sample is also taken to rule out a urinary tract infection.

This patient was handed over by the triage nurse to a nurse who continued with a more detailed assessment and made the patient as comfortable on a trolley. Communication with the patient is vital to alleviate the anxiety and stress often caused by a sudden illness or condition. The patient was placed in a comfortable position on an examination trolley for continuous monitoring and physical examination, and assessment by an emergency clinician.

Intravenous fluids were administered, but the nurse did not give any pain medication until a diagnosis of acute appendicitis had been reached, therefore ensuring that there was minimal delay in seeing the doctor. Assessment using the ABCDE framework was carried out regularly. Prescribed pain medication was administered immediately following diagnosis and the decision to prepare the patient for admission directly to theatre for surgery. The nurse recorded all the treatments and assessment outcomes in the patient’s notes.

- What are the key nursing care priorities in managing a patient in the emergency department with suspected acute appendicitis?
Case study 2

A 60-year-old man with a history of coronary artery disease has a sudden collapse at home. A family member calls the pre-hospital emergency services and states that the man is not breathing and is cyanosed. A fully equipped ambulance and two paramedics are dispatched immediately to attend the patient while the family member is advised to commence chest compressions. Airway, breathing and circulation are the key elements in achieving a return to spontaneous circulation, so it is crucial that all team members, both pre-hospital and in emergency departments, are familiar with their various roles in order to effectively organise a calm, controlled resuscitation effort.

On arrival at scene, the paramedics find the patient lying on the floor with the family member carrying out chest compressions, but the patient is still not breathing and is blue. The paramedics immediately intervene and continue chest compressions in addition to administering oxygen via an ambubag and face mask to assist in ventilating the patient.

An advanced paramedic is dispatched to support the resuscitation, and after 2 minutes of continuous chest compressions and ventilations, he carries out advanced airway management by placing an endotracheal tube into the trachea. Chest compressions and ventilations are continued by the paramedics while the advanced paramedic attaches an automated external defibrillator (AED) to the patient’s chest and inserts an intravenous cannula into the patient’s antecubital fossa to facilitate the administration of intravenous fluid and drugs to support resuscitation. The AED traces heart activity and advises the paramedics that there is a cardiac rhythm that requires an electrical shock. The shock is delivered by the machine to the patient, and this is followed by a further period of cardiopulmonary resuscitation.

At this point, arrangements are made to transport the patient to the nearest emergency department. A pre-alert call is made to the receiving emergency department to advise the medical and nursing staff that a patient suffering from a cardiac arrest is on the way. The senior nurse in charge of the emergency department assigns the appropriate nursing and medical staff to the resuscitation room (area), which will have all the necessary equipment, ready to continue advanced life support.

It is essential to the smooth running of resuscitation that a team leader is appointed to oversee the entire resuscitation. Each team member (doctors and nurses) is assigned to deal with the essential components of airway, breathing and circulation, and it is that team member’s responsibility to manage that component while the resuscitation lead coordinates the effort and adjusts the interventions in tandem with the patient’s response. A verbal handover is given by the pre-hospital personnel to the resuscitation lead while advanced life support is carried on, including the continuation of chest compressions, minimising hands-off time from the chest.

As a patent airway was achieved in the pre-hospital period and intravenous access has already been established, specific drugs are likely to be administered according to the patient’s cardiac activity, which is visible on the cardiac monitor (see the online additional resources for material related to guidelines for cardiopulmonary resuscitation).

- What are the key nursing priorities in relation to the primary assessment of this patient in the emergency department?
- What information is required from the ambulance crew in order for the secondary assessment to take place?
**Case study 3**

A 43-year-old lady, accompanied by her husband, is brought to the emergency department (ED) by ambulance following a road traffic accident. She was hit by a car when she stepped onto the road and is now complaining of severe pain in her right thigh and shoulder. The paramedics report that the bumper of the car hit her right thigh and the lady landed on the bonnet of the car on her shoulder. She was fully conscious throughout and has a Glasgow Coma Scale (GCS) score of 15 on arrival in the ED. An intravenous line was inserted at the scene and 1 L of normal saline commenced. The patient was also given morphine for pain at the scene.

On arrival in the ED, she gives a score of 6 on the pain scale. During the primary survey assessment, her blood pressure is within the normal range at 110/70 mmHg, her pulse is 100 beats per minute, her respiration rate is 15 per minute, her temperature is 36.7°C and her GCS score is 15. She is able to demonstrate almost a full range of movement in her right shoulder but is unable to move her leg, and her thigh is very swollen. X-rays reveal that the patient has soft tissue injury and bruising to her shoulder, and there is also a displaced fracture of her right femur. The key priorities for her treatment are realignment of the femoral shaft, fluid replacement and pain management.

The patient's vital signs need to be monitored frequently as blood loss from a femoral fracture is usually significant (an average of 1000 mL) and she will need to be prepared for traction in the ED, which will relieve the pain and minimise further soft tissue and muscle damage.

The nurse will monitor the patient’s vital signs frequently, assess her response to pain-relieving measures and reassure her and her husband. Preparation for and support while attaching the traction is essential, as is keeping the couple informed of when she will be going to either the ward or directly to theatre for surgery. Frequent communication using a calm, friendly approach is essential in reassuring the patient and her husband and reducing their anxiety.

- Using the Manchester Triage Tool, assign the appropriate triage category to this patient.
- Outline the key priorities in the primary assessment of this patient.

**Case study 4**

A 35-year-old male cyclist has been brought to the emergency department (ED) by ambulance following a road traffic accident. He sustained a head injury when he fell trying to avoid being hit by a motor bike coming in the wrong direction down a one-way street, and he was not wearing a helmet.

On arrival in the ED, the paramedic reports that the patient has full recall of the incident, did not lose consciousness, does not have amnesia and has no history of seizure and no focal neurological deficit (vomiting, nausea, dizziness or diplopia). The cyclist is visibly shocked by his experience – his hands are shaking and he appears pale.

He is reassured by the nurse and given information about what will happen while he is in the ED. He also has multiple superficial abrasions of the face and scalp, which are cleaned by the nurse. The ABCDE assessment by the nurse indicates that his Glasgow Coma Scale score is 15 and his vital signs are all within normal ranges.

Following a review by the doctor, the patient is given two paracetamol tablets for the pain caused by the bruising and the abrasions. An X-ray of his skull does not show any fractures or abnormalities. The patient is then discharged from the ED, and while he is waiting for his friend to collect him, he drinks a cup of tea and reports that he is happy to be discharged.

- What health promotion advice should the nurse give this cyclist prior to discharge?
Case study 5

A 53-year-old man is brought to the emergency department, by ambulance, having been found lying by the roadside apparently intoxicated, according to a passer-by who called the ambulance. He is anxious, trembling, slurring his words and sweating profusely. He does not smell of alcohol. A glucose stick test shows a blood glucose level of 2.6 mmol/L. He responds to voice. The ambulance crew confirm that he has a history of diabetes as he is wearing an SOS bracelet.

On arrival at the emergency department, the patient has an intravenous line in place with fluids infusing and is on oxygen. He is quickly transferred to the resuscitation area and assessed using a systematic approach: ABCDE (Airway, Breathing, Circulation, Disability, Exposure), intravenous access and fluids as appropriate, oxygen, monitoring and Accucheck (for blood sugar).

The patient responds immediately to an intravenous administration of glucose. This is followed by a full physical assessment and a definitive diagnosis. If the cause of hypoglycaemia is other than oral hypoglycaemic agents or insulin in a diabetic patient, other laboratory tests may be necessary.

In diagnosing hypoglycaemia, the Whipple triad is characteristically present. This includes the documentation of a low blood sugar level, the presence of symptoms and a reversal of these symptoms when the blood sugar level is restored to normal. The glucose level at which an individual becomes symptomatic is highly variable, although a plasma glucose level less than 3 mmol/L is considered hypoglycaemic by the Manchester Triage Group (Mackway-Jones et al. 2006). A systematic approach is often required to establish the true cause of hypoglycaemia, using an algorithmic approach.

The treatment of hypoglycaemia consists of correcting the glucose deficiency and directing further treatment to the underlying cause. The consultation is guided generally by a determination of the underlying cause of hypoglycaemia and appropriate referral. The administration of glucose as part of the initial evaluation of an altered mental status often corrects hypoglycaemia. Treatment should not be withheld while waiting for a laboratory glucose value because the brain uses glucose as its primary energy source and neuronal damage may occur if the treatment of hypoglycaemia is delayed.

Admission criteria for patients with acute hypoglycaemia include the following:

- No obvious cause
- Taking an oral hypoglycaemic agent
- Treatment with long-acting insulin
- Persistent neurological deficits
- For patients with no known cause or no previous episodes of hypoglycaemia, admission for further evaluation.

For patients on either short-acting insulin or hypoglycaemic agents who have not eaten and have had their hypoglycaemia rapidly reversed, a high-carbohydrate meal is recommended prior to discharge. Discharge may be considered after a high-carbohydrate meal if an obvious cause is found and treated, or if the hypoglycaemic episode has been rapidly reversed.

- Using the Manchester Triage Tool, assign the appropriate triage category to this patient. Outline the key nursing priorities in the primary assessment of this patient.

Case study 6

An 80-year-old man was brought to the emergency department (ED) having been discovered collapsed in his garden by his wife, who called the pre-hospital emergency services. The paramedics had commenced resuscitation, and the patient was intubated on arrival at the ED, with intravenous fluids in progress. Nursing and medical staff were on standby in the resuscitation area to receive the patient. Despite a prolonged resuscitation attempt, the patient did not survive and was pronounced dead.

During resuscitation, the gentleman’s family had arrived at the ED and were part of family-witnessed resuscitation; they stated that this helped them during this traumatic event. The emergency staff offered support and communicated with the family by being honest and open about events, including the fact that an autopsy was required to be carried out as the deceased had no known medical problems and had died in the ED.

Outline the key nursing priorities for helping this family during and after witnessed resuscitation.
Chapter 11

Case study 1

Mr Wilson was admitted to your ward following a fall. He lives alone with his dog and has a history of chronic obstructive pulmonary disease, malnutrition, alcohol abuse, cigarette smoking and social isolation. Mr Wilson uses steroid inhalers to manage his respiratory problems. On admission, you note that he has a pressure ulcer on his left hip (see the figure). You are asked to develop a care plan for the management of this patient and his wound.

- What is the cause of pressure ulcers?
- What grade of pressure ulcer is this? Note the presence of devitalised (necrotic) tissue in the wound bed; this will help you to determine the grade of pressure ulcer. Also log on to www.epuap.org and look at the pressure ulcer prevention guidelines and EPUAP/NPUAP (2009). pressure ulcer grading system.
- What is the condition of the wound bed?
- What is the condition of the surrounding skin?
- Is the wound wet or dry?
- Is the wound infected?
- How would you assess the patient’s pain?
- What factors that may impede wound healing are likely to be important in this case?
- What is the goal of your treatment?
- How will you cleanse the wound?
- What is the most appropriate topical treatment choice?
- What is the frequency of dressing change?
- What other aspects of care should you consider, for example nutrition or repositioning?
- How will you monitor the progress of wound healing?
Chapter 12

Case study 1

Mr Ryan is aged 68 and lives with his wife. He is retired but previously worked as a farm manager, and he smokes 40 cigarettes a day. He was admitted after falling and sustaining a complicated tibial fracture.

An open reduction and internal fixation of left tibial fracture was performed and Mr Ryan recovered well. He was receiving physiotherapy and was non-weight-bearing on his left leg, but was making good progress walking using crutches. On the third postoperative day, he developed dyspnoea, tachypnoea, pyrexia and a productive cough; his pulse was 98 beats per minute, his temperature 38.7°C, his respiration rate 28 breaths per minute, and he was producing one cup of dirty brown sputum a day. Hospital-acquired pneumonia was diagnosed following a chest X-ray.

- How would you initially assess and care for Mr Ryan? List the immediate and longer term goals of his care plan.
- What underlying conditions might have contributed to his pneumonia?
- How might you address his health promotion needs?

Case study 2

Mr Jones, aged 72, lives with his wife and has chronic obstructive pulmonary disease. He requires frequent admissions to hospital for the treatment of acute exacerbations. He is now admitted again with an acute exacerbation – temperature 38°C, pulse 95 beats per minute, respiratory rate 28 breaths per minute, blood pressure 130/75 mmHg and confusion. He has had a chest X-ray, and his arterial blood gas results show pH 7.4, PaO\(_2\) 7.8 kPa, PaCO\(_2\) 6.5 and SaO\(_2\) 89%.

- What are Mr Jones’s immediate nursing care needs?
- List the immediate and longer term goals of his care plan.
- How might you contribute to the overall assessment of Mr Jones’s chronic obstructive pulmonary disease?
- What do you need to consider before meeting Mrs Jones?
- What education and information support do you need to plan for Mr and Mrs Jones if long-term oxygen therapy is prescribed?
- What are their longer term support needs, and what might you put in place to ensure these needs are met?

Chapter 13

Case study 1

Kevin is a 55-year-old man who presented to accident and emergency (A&E) with central crushing chest pain that was radiating to his jaw and back and down his left arm. The pain had awakened Kevin from sleep and commenced approximately 2 hours prior to his admission to A&E. On admission to A&E, his pulse was 120 beats per minute, his blood pressure 140/80 mmHg, his respiratory rate 24 breaths per minute, his SpO\(_2\) 96% on room air, his temperature 37.3°C and his blood glucose level 10 mmol/L. A 12-lead ECG revealed ST segment elevation, and a diagnosis of acute ST segment elevation myocardial infarction was made.

Observing the indications for and contraindications to thrombolysis, 45 mg of tenecteplase (based on Kevin’s weight of 80 kg) and adjunctive therapy were administered with his consent within 20 minutes of his arrival at A&E.

- What are the key nursing priorities for Kevin during his treatment in A&E?

Case study 2

Margaret is a 69-year-old lady who was transferred to the cardiothoracic ward having had coronary artery bypass grafting 3 days previously. She complained of feeling unwell after mobilising to the bathroom. She was short of breath on exertion and felt dizzy and sweaty.

Her pulse was 140–170 beats per minute and irregular. Her blood pressure was 90/50 mmHg, her respiratory rate 24 breaths per minute, her SpO\(_2\) 89% on air and her temperature 36°C. A 12-lead ECG showed atrial fibrillation.

- Outline the nursing priorities in assessing Margaret’s deteriorating condition and the immediate nursing actions required.
Chapter 14

Case study 1

Sue presents to the accident and emergency department complaining of severe abdominal pain in the upper right quadrant of her abdomen after having been out for a celebratory meal with friends. She describes the pain as intense and spasmodic in nature. She is also complaining of nausea and is found to be pyrexial on admission.

- Outline the nursing assessment that Sue will require on admission.
- List the diagnostic investigations that are likely to be undertaken.

Case study 2

Maria is a 68-year-old lady who has been admitted for investigations into weight loss and altered bowel pattern. A colonoscopy has been ordered. Outline the nursing care and preparation that Maria will require in advance of this procedure.

Chapter 15

Case study 1

A 24-year-old male presents to the emergency department with colic pain in his flank that is radiating to the groin. He is very restless and experiencing intense nausea and vomiting. He is admitted and, following radiological investigations, is diagnosed with a ureteric stone.

- What are the nursing management priorities when caring for this man?

Case study 2

Mr Brown has been admitted to your ward for a transurethral resection of the prostate. He returns from surgery with a urinary catheter and bladder irrigation in place.

- Describe Mr Brown’s postoperative care.

Two days later, he has had his catheter removed and is passing urine with some frequency and occasional leakage.

- What specific discharge advice will you give him regarding his urinary symptoms? What other discharge advice will you give?

Case study 3

Mrs Kapur is a 60-year-old married woman who has been diagnosed with renal cell carcinoma of the right kidney. Owing to the nature of the tumour, she has been admitted for a right open radical nephrectomy. She smokes 15 cigarettes a day.

- What preoperative advice would you give this lady?
- What are the postoperative priorities for Mrs Kapur?
Case study 4
Mr Frank Kelly is a 56-year-old married gentleman who has been diagnosed with bladder cancer. He has smoked 15–20 cigarettes a day for the past 25 years. He has been admitted for radical cystectomy and formation of an ileal conduit.

- What are the key psychosocial issues that Frank will face before and after surgery?
- What is the function of a ureteric stent?
- When receiving Frank from theatre, what potential patient problems will take priority?

Case study 5
Patrick, an 80-year-old widower, has had a 1-year history of urinary frequency, urgency and dribbling follow urination. He presented to the emergency department with severe lower abdominal pain and reports that he has not passed urine in the previous 12 hours. On abdominal ultrasound examination, he has hydronephrosis and a full bladder, and his laboratory results indicate raised renal indices.

- Outline the cause of Patrick’s acute kidney injury.
- Discuss the nursing care Patrick will require.

Case study 6
Phoebe is a 60-year-old lady with diabetic nephropathy who has been admitted to the renal ward to commence haemodialysis.

- Outline the nursing assessment she will require on admission.

Chapter 16
Case study 1
Ms Sandra Lee is a 68-year-old retired accountant who lives alone. Over the past 3 months, she has noticed that her clothes have been getting tighter even though she reports eating less. She believes her lack of food has led to constipation and feeling cold all the time. She is always tired and has stopped attending social outings due to lethargy. Mrs Lee had contributed these changes to getting old until a friend noticed that her facial features had altered and her eyes had become puffy.

- What is the likely cause of Ms Lee’s condition?
- What medical management does this lady require?
- Discuss the education and advice that will be given to Mrs Lee after a full review has taken place and oral treatment for her condition has begun.

Case study 2
Mrs Anita Smith, a 58-year-old housewife from an urban setting, presents to your outpatient department with a recent diagnosis of type 2 diabetes. Her local GP has advised her to lose weight and attend outpatients for a complete check-up and a decision regarding the medical management of her diabetes. She reports that she has lost 3 kg in the last month. On assessment, you find her weight to be 87 kg and her height 163 cm. Her blood pressure is 160/90 mmHg.

- Calculate Mrs Smith’s body mass index and outline a suitable target weight programme for her until her next diabetes review in 3 months. You may find it helpful to visit the following website, which will offer you more information on body mass index and how it can be calculated: www.nhs.uk/livewell/loseweight/pages/bodymassindex.aspx.
- Discuss what education would be beneficial for this lady in relation to the daily management of her diabetes.
Chapter 17

Case study 1

Diane is a 77-year-old lady who was out shopping with friends when she collapsed to the floor with loss of consciousness. Her friend called an ambulance and she was taken to the local accident and emergency department. Following an urgent CT scan, Diane was transferred to the hospital’s stroke unit having been diagnosed with a left-sided stroke.

On examination, Diane was found to have paralysis of the right side of her face and arm, along with a loss of sensation. She was also unable to answer questions but could understand what was said to her.

Diane is a retired cleaner who lives alone in a ground-floor flat. She has been widowed for 5 years and lives a sedentary lifestyle. She used to smoke 30 cigarettes a day but gave up 3 months ago. Her weight has always been a problem, and since losing her husband she has put on even more weight.

- What treatment will Diane receive in the management of her stroke?
- Explain to Diane and her friends the reasons for the paralysis on the right side of Diane’s face and arm, and her communication difficulties.
- What specific lifestyle information and education might you give Diane?
- How might an early supportive discharge be facilitated?

Case study 2

Madge is a 51-year-old widow whose husband died 18 months ago after a progressive illness. They had no children. Madge was the breadwinner and had been working as a typist since she was 16.

About 2 months before her husband's death, her hands started feeling stiff and achy, with occasional cramps. This extended up her arms to her shoulders, and sometimes her neck felt stiff. They were restructuring at work and there was the possibility that she would lose her job. She was also going through the menopause. It was thought that her signs and symptoms were related to stress at work and at home, the menopause and repetitive strain injury (RSI).

Having lost her job shortly after her husband's death, Madge decided to take a few weeks break to sort out her life and home. She was having mood swings and felt emotional, but under the circumstances she regarded this as normal. After being at home for about 2 months and still having what she described as the RSI and menopause symptoms, Madge started work at a call centre, mainly because it would not involve being a typist. She had noticed she was a little clumsy when it came to fiddly things like fastening buttons and pulling up zips.

Since starting her new job, Madge had started feeling weak around the mouth and in the jaw and throat areas and found that she had to drink slowly otherwise she would cough and splutter. She would also have coughing and choking fits, which was becoming a bit of a problem, especially when she was at work. She also noticed she had lost some weight and decided to see her doctor.

The doctor suspected motor neuron disease, but did not tell Madge until she had had further investigations to rule out other neurological conditions. He told her he was referring her to a neurologist and that she would be undergoing a number of tests to find the cause of her problems.

- How would you have explained to Madge:
  - The types of tests she would undergo
  - The various teams involved
  - How you would prepare her for the tests
  - What she could do to prepare herself.

After receiving her diagnosis, Madge decided she would like to get everything in order while she was still in the early stages of the disease. Bearing in mind that she is a widow with no children, consider the following points.

- How can you help Madge and who can you refer to in order for her to implement her wishes?
- How would you explain to Madge about:
  - Symptom management
  - Access to specialist services
  - The later stages of the disease
  - Palliative care.
Case study 3
John is a 73-year-old man who has presented to his GP with a tremor in his right hand and right arm stiffness that have been present for the past 4 months. The GP notes that he has lost facial expression and considers a diagnosis of Parkinson’s disease.

While attending the neurology outpatient department, the patient is reported to have a right-sided ‘pill-rolling’ motion of the thumb and fingers, and rigidity of his arm. He is commenced on a levodopa-based treatment (Sinemet, to replace the dopamine), and is seen 6 weeks later, with much improvement in his tremor and limb stiffness.

- What specific advice should be given to John and his family regarding his prescribed medication?
- What specialist services are available to support John with his diagnosis?

Case study 4
Tom is a 67-year-old retired lecturer who does voluntary work 2 days a week. Tom’s wife and friends had initially noticed that he was becoming forgetful but thought this was part of the ageing process. He would terminate phone conversations suddenly and put the phone down. Later on, his volunteer friends noticed that simple tasks like putting stamps on envelopes were becoming increasingly difficult. His forgetfulness is still increasing and he sometimes appears confused; however, he is able to travel independently to his work.

Tom is aware that he is more forgetful and had decided to tell his wife that he thought he had Alzheimer’s disease. Together, they sought medical help. Tom was referred to a neurologist, and the diagnosis has now been confirmed. Tom is now progressing to the later, more severe stage of the condition.

- What information should health professionals give Tom, his wife and his family and friends in order for them to adequately prepare for this final stage of the disease?

Chapter 18
Case study 1
Mr Marcus Johnson is a 45-year-old man who, after 5 years receiving dialysis, underwent a renal transplant 10 days ago. He is now being prepared for discharge home.

- Discuss the advice that Mr Johnson will require in relation to his medications, compliance with treatment and risk of infection

Case study 2
Mr John Smith is a 22-year-old university student. He is bisexual and has had multiple partners since he became sexually active at 16. He recently attended the university health services complaining of a sore throat, fatigue, lack of energy and bouts of diarrhoea. On examination, it was noted that his cervical lymph nodes were enlarged, and white patches were observed on the mucous membranes in his mouth.

Blood tests and investigations were undertaken and, in light of John’s sexual history, his consent was sought for a rapid HIV test. His initial test was positive for HIV and this was confirmed with a second test. Johns’ CD4+ cell count was found to be $0.475 \times 10^9/L$. John is identified as being at World Health Organization stage 2 of the disease (HIV mildly symptomatic).

- Discuss the psychosocial difficulties that John may face in relation to his diagnosis and what can be done to support him.
- Describe the information John will require about his illness, and discuss the importance of this in relation to his sexual practices.
**Chapter 19**

**Case study 1**

Maggie, a 78-year-old woman with a known history of iron deficiency anaemia, is attending the haematology day unit for a blood transfusion. She suddenly becomes short of breath and experiences palpitations.

- What is happening to Maggie?
- Outline the nursing care for this patient?

**Case study 2**

Five days ago, Andrew had an allogeneic transplant for follicular lymphoma. At his 2 p.m. observation check, his temperature was found to be 38.5°C, his blood pressure 100/60 mmHg and his pulse 105 beats per minute.

- What do these clinical observations indicate, and what action would you take?
- Describe Andrew’s care plan for the next 24 hours.

**Chapter 20**

**Case study 1**

Arthur is a 62-year-old who has always led an active life but is now suffering from left knee pain. As a young adult, he had several skiing injuries to the same knee, including damage to the menisci and collateral ligaments. He used to enjoying walking the family dog, running and playing golf once a week, but these activities are now very restricted by his pain. Prior to admission he was taking a non-steroidal anti-inflammatory and a weak opioid for his pain.

- Consider the potential physical and social implications for Arthur while is living with chronic pain.
- Identify the benefits and potential side effects of his medications.

**Case study 2**

Neil has had a left knee replacement for his osteoarthritis. He was mobilising with elbow crutches and then progressed to walking sticks before going home, and has continued his knee exercises. When seen at his outpatient appointment 6 weeks after surgery, he is complaining that the knee is painful and swollen.

- Identify the signs and symptoms that would indicate a bone infection.
- What potential modes of transmission could have led the infection occurring?

**Case study 3**

Isabella, a 35-year-old staff nurse, is married with an 8-year-old son. Over the last 5 years, she has had increasing discomfort and pain in her hands with early morning stiffness and swelling of her finger joints. Rheumatoid arthritis was confirmed, with bilateral involvement of the metacarpophalangeal and proximal interphalangeal joints, for which she was prescribed a non-steroidal anti-inflammatory drug while waiting to be seen by the rheumatology team. She was then prescribed a combination of disease-modifying antirheumatic drugs and has remained stable since the initial episode settled.

At her recent 6-monthly assessment, the rheumatology specialist nurse and physiotherapist agreed that Isabella’s condition had progressed, with her elbow and shoulder joints now being swollen and painful.

- Consider how her condition will affect Isabella’s home life and her career as a nurse.
Case study 4
Ethel is a very independent 80-year-old who lives alone in a bungalow. She has one adopted daughter and three grandchildren living nearby that she is very close to. As a young woman, Ethel was 1.6 m tall and weighed 48 kg. To keep her figure, she used to smoke, but she gave up when she her eldest granddaughter was born. The family has recently noticed that Ethel has become shorter, is more stooped and occasionally stumbles when walking. Ethel is being treated by her GP for hypertension; she has taken aspirin following a myocardial infarction and also takes an anti-inflammatory for back pain.

• Why should the GP already be aware that Ethel is at risk of falling and be treating her for osteoporosis?

Case study 5
While Ethel was out shopping, she tripped on the pavement, putting her left hand out to break her fall. She sustained a left hip fracture and a Colles’ fracture of her left distal radius; unfortunately, she is left handed so this will affect her recovery from the hip fracture.

• Think how, from Ethel’s point of view, this will affect her in hospital and what your role as her nurse is in maintaining her dignity and independence.

Chapter 21

Case study 1
John Ryan, aged 50 years, has been admitted to your ward with Ménière’s disease.

• Describe the nursing care that you will provide for Mr Ryan.

Case study 2
Susan Smith, aged 25 years, has been admitted following a fall while jogging. She has fractured her nose and has also sustained lacerations to her face and nose.

• Describe the nursing care of this patient.

Case study 3
James Brown, who is aged 19, has had several hospital admissions for acute tonsillitis. He is listed for an elective tonsillectomy tomorrow.

• Describe Mr Brown’s postoperative nursing care.

Case study 4
David Green, aged 67 years, has been admitted for cataract surgery.

• Define what a cataract is, and describe the discharge advice needed for this patient.
# Chapter 22

## Case study 1

Anne, who is 25, has pain when she has intercourse; this is deep in her abdomen and lasts for hours after sex. She also has pain just before her periods. No pathology has been identified. She has now been admitted for a laparoscopy.

At laparoscopy, she is diagnosed as having endometriosis, and the lesions are ablated. She is started on the combined oral contraceptive pill.

- What is the rational for this, and what effect does endometriosis have on future fertility?

## Case study 2

Chris is 44 years old and has a swollen scrotum.

- What conditions may cause this?

On examination, he has a palpable lump in his right testis.

- What other symptoms would you ask about?
- What tests might be arranged?

Chris is later diagnosed with a testicular tumour and undergoes orchidectomy.

- Describe his postoperative care and what other agencies might you involve.