application of heat or cold can also relieve postoperative pain (McRee et al., 2003). Transcutaneous electrical nerve stimulation (TENS) has been used successfully to decrease postoperative incisional pain. Other approaches include acupuncture, acupressure, and therapeutic touch. Additional information on pain management techniques is found in Chapter 9.

Opioid dosage requirements vary greatly from one client to another and by the route they are taken. Remember that oral doses of analgesics are not equal to parenteral doses. Oral doses need to be higher to provide equianalgesia. (See Table 9–4 regarding equianalgesics.)

The client’s input and participation in assessing pain and pain relief is essential to a successful pain control regime. For example, the client can rate the pain on a scale of 0 to 10 (where 0 signifies no pain and 10 signifies unbearable pain). Assess and document pain at scheduled intervals to determine the degree of pain control, to observe for drug side effects, and to assess the need for changes in the dosage and/or frequency of medication administration. When a range of dosage is ordered, carefully titrate opioid dosages based on individual assessments of need and response to therapy.

Using NANDA, NIC, and NOC
Chart 4–1 shows links between NANDA nursing diagnoses, NIC, and NOC when caring for the postoperative client.

Community-Based Care
Because the postoperative phase does not end until the client has recovered completely from the surgical intervention, the nurse plays a vital role as the client nears discharge. As the client prepares to recuperate at home, provide information and support to help the client successfully meet self-care demands. All aspects of teaching should be accompanied by written guidelines, directions, and information. This is particularly helpful when a large amount of unfamiliar, detailed information is presented. Because the hospital stay is often brief, make an organized, coordinated effort to educate the client and family. Teaching needs vary, but the most common needs include:

- How to perform wound care. Teaching is more effective if the nurse first demonstrates and explains the procedure for the client and family or other caregiver. The client and family should then participate in the care. To evaluate the effectiveness of the teaching, ask the client or caregiver to demonstrate the procedure in return. Ideally, teaching is carried out over several days, evaluated, and periodically reinforced.

- Signs and symptoms of a wound infection. The client should be able to determine what is normal and what should be reported to the physician.
- Method and the frequency of taking one’s temperature.
- Limitations or restrictions that may be imposed on such activities as lifting, driving, bathing, sexual activity, and other physical activities.
- Control of pain. If analgesics are prescribed, instruct the client in the dosage, frequency, purpose, common side effects, and other side effects to report to the physician. Reinforce the use of relaxation, distraction, imagery, or other pain control techniques that the client has found useful in controlling postoperative pain.

**NURSING CARE PLAN**

Martha Overbeck is a 74-year-old widow of German descent who lives alone in a senior citizens’ housing complex. She is active there, as well as in the Lutheran Church. She has been in good health and is independent, but she has become progressively less active as a result of arthritic pain and stiffness. Mrs. Overbeck has degenerative joint changes that have particularly affected her right hip. On the recommendation of her physician and following a discussion with her friends, Mrs. Overbeck has been admitted to the hospital for an elective right total hip replacement. Her surgery has been scheduled for 8:00 A.M. the following day.

Mrs. Eva Jackson, a close friend and neighbor, accompanies Mrs. Overbeck to the hospital. Mrs. Overbeck explains that her friend will help in her home and assist her with the wound care and prescribed exercises.
NURSING CARE PLAN  A Client Having Surgery (continued)

ASSESSMENT
Gloria Nobis, RN, is assigned to Mrs. Overbeck’s care on return to her room. Ms. Nobis performs a complete head-to-toe assessment and determines that Mrs. Overbeck is drowsy but oriented. Her skin is pale and slightly cool. Mrs. Overbeck states she is cold and requests additional covers. Ms. Nobis places a warmed cotton blanket next to Mrs. Overbeck’s body, adds another blanket to her covers, and adjusts the room’s thermostat to increase the room temperature. Mrs. Overbeck states that she is in no pain and would like to sleep. She has even, unlabored respirations and stable vital signs as compared to preoperative readings.

Mrs. Overbeck is NPO. An intravenous solution of dextrose and water is infusing at 100 mL/hour per infusion pump. No redness or edema is noted at the infusion site. Ms. Nobis notes that the antibiotic ciprofloxacin hydrochloride (Cipro) is to be administered by mouth when the client is able to tolerate a sips. Mrs. Overbeck has a large gauze dressing over her right upper lateral thigh and hip with no indications of drainage from the wound. Tubing protrudes from the distal end of the dressing and is attached to a passive suctioning device (Hemovac). Ms. Nobis empties 50 mL of dark red drainage from the suctioning device and records the amount and characteristics on a flow record. Mrs. Overbeck has a Foley catheter in place with 250 mL of clear, light amber urine in the dependent gravity drainage bag.

When assessing Mrs. Overbeck’s lower extremities, Ms. Nobis finds her feet slightly cool and pale with rapid capillary refill time bilaterally. Dorsalis pedis and posterior tibial pulses are strong and equal bilaterally. Ms. Nobis notes slight pitting edema in the right foot and ankle as compared with the left extremity. She also notes sensation and ability to move both feet and toes, without numbness or tingling (paresthesia).

Ms. Nobis records the above findings on a postoperative flow sheet. After ensuring that Mrs. Overbeck is safely positioned and can reach her call light, Ms. Nobis gives Mrs. Overbeck’s friend, Mrs. Jackson, a progress report. They then go into Mrs. Overbeck’s room.

DIAGNOSES
Ms. Nobis makes the following postoperative nursing diagnoses for Mrs. Overbeck.

- **Risk for Infection** of right hip wound related to disruption of normal skin integrity by the surgical incision.
- **Risk for Injury** related to potential dislocation of right hip prosthesis secondary to total hip replacement.
- **Pain** related to right hip incision and positioning of arthritic joints during surgery.

EXPECTED OUTCOMES
The expected outcomes established in the plan of care specify that Mrs. Overbeck will:

- Regain skin integrity of the right hip incision without experiencing signs or symptoms of infection.
- Demonstrate (along with Mrs. Jackson) proper aseptic technique while performing the dressing change.
- Verbalize signs and symptoms of infection to be reported to her physician.
- Describe measures to be taken to prevent dislocation of right hip prosthesis.
- Report control of pain at incision and in arthritic joints.
- Remain afebrile.

PLANNING AND IMPLEMENTATION
Ms. Nobis develops a care plan that includes the following interventions to assist Mrs. Overbeck during her postoperative recovery.

- Use aseptic technique while changing dressing.
- Monitor temperature and pulse every 4 hours to assess for elevation.
- Assess wound every 8 hours for purulent drainage and odor. Assess edges of wound for approximation, edema, redness, or inflammation in excess of expected inflammatory response.
- Teach Mrs. Overbeck and Mrs. Jackson how to use aseptic technique while assessing the wound and performing the dressing change.
- Teach Mrs. Overbeck and Mrs. Jackson the signs and symptoms of infection and when to report findings to the physician.
- Review and discuss with Mrs. Overbeck the written materials on total hip replacement.
- Convey empathetic understanding of Mrs. Overbeck’s incisional and arthritic joint pain.
- Medicate Mrs. Overbeck every 4 hours (or as ordered) to maintain a therapeutic analgesic blood level.

EVALUATION
Throughout Mrs. Overbeck’s hospitalization, Ms. Nobis works with Mrs. Overbeck and Mrs. Jackson to ensure that Mrs. Overbeck can care for herself after discharge from the hospital. Five days after her surgery, Mrs. Overbeck is discharged with a well-approximated incision with no indications of an infection. Prior to discharge, Ms. Nobis is confident that with Mrs. Jackson’s help, Mrs. Overbeck can properly assess the incision. With minimal help, Mrs. Overbeck is able to replace the dressing using aseptic technique. She can cite the signs and symptoms of an infection, take her own oral temperature, and describe preventive measures to decrease the chances of dislocating her prosthetic hip. Because of her reduced mobility the past 5 days, Mrs. Overbeck says she can tell the arthritis in her “old bones” is “acting up.” She reports less pain in her right hip than before the surgery. Mrs. Overbeck tells Ms. Nobis she will be back the following winter to have her left hip replaced.

CRITICAL THINKING IN THE NURSING PROCESS

1. Describe risk factors for Mrs. Overbeck’s safety; what changes in her home environment would you suggest to promote safety until she recovers more fully?
2. Why is Mrs. Overbeck placed on the antibiotic Cipro although she has no indications of an infection? What teaching would you do?
3. Mrs. Overbeck’s clotting time is slightly elevated as a result of an ordered anticoagulant. Why would this medication be ordered? Consider the client’s age and the area of surgery.
4. Mrs. Overbeck is 30 pounds above her ideal weight and has osteoarthritis. Develop a care plan for the nursing diagnosis Ineffective Health Maintenance related to intake in excess of metabolic requirements.

See Evaluating Your Response in Appendix C.