Twas the night before clinical, and all through the house not a creature was stirring... except for you! There you are, with books piled high around you, trying to get ready to give safe and competent nursing care to the patients you have been assigned in the morning. It is late, and you are tired. What if there was a way for all the information you have gathered on your patients to just “come together”, make perfect sense, and form a simple, complete care plan? If you have ever found yourself in this situation, this book is for you. It was written to help you quickly and efficiently organize and analyze patient data and develop a working care plan that is referred to as a concept “care” map. A concept “care” map is the plan used to give daily nursing care to a patient. The concept care maps you develop will be practical and realistic; they will be implemented and evaluated during the clinical day. And best of all, there is very little writing to do! No more tedious writing of nursing care plans.

OBJECTIVES

1. Define concept “care” maps.
2. List the purposes of concept care maps.
3. Identify the theoretical basis for concept care maps.
4. Relate critical-thinking processes to the nursing process and to concept care maps.
5. Identify steps to develop a concept care map.
6. Describe how concept care mapping corresponds to the nursing process.
7. Identify how concept care maps are used during patient care.
8. Describe the purpose of standards of care as related to concept care maps.
9. List health-care providers and agencies responsible for developing and enforcing standards of care.
10. Describe the purpose of managed care.
The purpose of this book is to teach you how to develop a concept care map, which is to be carried in your pocket on the clinical area and used in the direct care you provide your patient and in communication with members of the health-care team. In addition, it is very important for you to understand how your performance and your concept care map will be evaluated by your clinical faculty.

The purpose of this chapter is to describe the theoretical basis for concept care maps and to provide an overview of what they are, how they are developed, and how they are used during patient care. In addition, the chapter introduces general standards for guiding and evaluating patient care within managed care systems. Managed care principles are used in almost all health-care delivery systems. The purpose of managed care is to decrease costs while maintaining the quality of health-care services. The implications of managed care are far-reaching, and they guide the development of nursing care plans. Later chapters will lead you step by step through each aspect of developing and using concept care maps.

What Are Concept Care Maps?

Concept care mapping is an innovative approach to planning and organizing nursing care. In essence, a concept care map is a diagram of patient problems and nursing strategies to eliminate those problems. Your ideas about patient problems and treatments are the “concepts” that will be diagrammed. In this book, the term concept means idea. Developing clinical concept care maps will enhance your critical thinking skills and clinical reasoning, because you will visualize priorities and identify relationships in clinical patient data clearly and succinctly. Concept care maps result in a clear mental model of the patient’s health state and situation. Students must learn to share relevant information with the specific aim of creating a shared mental model with members of the health-care team to prevent errors that result in patient injuries and death.1 In 2000 the Institute of Medicine2 first reported 48,000 to 98,000 deaths per year due to errors—an average of one death every 5 to 10 minutes—spawning the patient safety movement in health-care delivery over the past decade. The concept care map is a strategy that can be used to delineate what needs to be communicated among caregivers about the patient’s health state and situation.3

Concept care maps are used to:
- Organize patient data
- Analyze relationships in the data
- Establish priorities
- Build on previous knowledge
- Identify what you do not understand
- Enable you to take a holistic view of the patient’s situation
- Participate in developing a shared mental model of the patient’s health status and situation with members of the health-care team to prevent harmful events

The templates for the concept care map are located in Figures 1.1, 1.2, and 1.3.4 Take a few minutes to study them. You will be using these templates to outline patient problems; organize patient data on abnormal results of physical and psychosocial assessment, treatments, medications, and laboratory results; develop goals and outcomes; and list what you will be doing to address each problem. Figure 1.1 is the “sloppy copy,” where you will be writing down short notations about a patient’s problems by grouping data under problem areas. It does not have to be perfect; it takes time to think critically about how to categorize data correctly under problems, and sometimes you may change your mind about where data fit into the clinical picture you are developing about your patient. The “final edition” in Figure 1.2 is the care plan you submit after the clinical day is over, after you have had more time to critically evaluate what happened during your clinical experiences with the patient. Bring your sloppy copy and the goals, outcomes, and nursing strategies in Figure 1.3 to the clinical agency.

The Theoretical Basis of Care Mapping

Concept care maps have roots in the fields of education and psychology.5,6 Concept maps have also been called cognitive maps, mind maps, and meta-cognitive tools for teaching and learning.7,8
They have been used in many classroom settings as teaching tools to get important ideas to stick in the minds of students. Nursing educators have recognized the usefulness of this teaching and learning strategy in summarizing and visualizing important concepts, and there is a growing body of knowledge on this topic.9-13

From the field of education, Novak and Gowin5 developed the theory of meaningful learning and have written about “learning how to learn.” They have theoretically defined concept maps as “schematic devices for representing a set of concept meanings embedded in a framework of propositions.” They further explain concept maps as hierarchical graphical organizers that serve to demonstrate the understanding of relationships among concepts. This theoretical definition and explanation is highly abstract; simply stated, concept maps are diagrams of important ideas that are linked together. The important ideas you need to link are patient problems, abnormal physical and psychosocial assessment data, medications, laboratory results, and treatments for the patient’s problems. The concept maps you will be developing are for patients in clinical settings, so they are named concept “care” maps. You will use this special concept “care” map to guide your nursing care of patients, and during communications with all members of the health-care team to develop a shared mental model of the patient situation.

Figure 1.1  Sloppy copy pre-conference. Carry this in your pocket at all times!
The educational psychologist David Ausubel has also contributed to the theoretical basis of concept mapping through the development of assimilation theory. Concept maps help those who write them to assimilate knowledge. The premise of this theory is that new knowledge is built on preexisting knowledge, and new concepts are integrated by identifying relationships with those concepts already understood. Simply stated, we build and integrate new knowledge into what we already know. By diagramming, you build the structure about the relationships between important concepts related to the care of your patient. Concept maps help to identify and integrate what you already know and help reveal what you do not understand. This means that although you have ideas about patient problems or treatments, you may not be sure of how those problems and treatments should be integrated into a comprehensive plan. Once you recognize what you do not understand and can formulate questions, you can seek out information. Concept care maps help identify what you know and what you need to learn to provide quality patient care. The concept care map you create will evolve as you continue to assess and intervene with your patient. You will be adding to the concept care map throughout the clinical day, and using it to communicate with your clinical faculty and other members of the health-care team.
Concept Care Mapping and Critical Thinking Yield Clinical Planning

Concept care mapping requires critical thinking. A widely accepted view of critical thinking by many nurse educators was developed by the American Philosophical Association: “Critical thinking is the process of purposeful, self-regulatory judgment. This process gives reasoned consideration to evidence, contexts, conceptualization, methods, and criteria.”14 In developing a clinical concept care map, critical thinking is used to analyze relationships in clinical data. Thus, critical thinking used in developing concept care maps builds clinical reasoning skills. Critical thinking and clinical reasoning are used to formulate clinical judgments and decisions about nursing care. In 2000, the National League for Nursing Accrediting Commission’s Report on Planning for Ongoing Systematic Evaluation and Assessment of Outcomes defined critical thinking specific to the discipline of nursing as “The deliberative non-linear process of collecting, interpreting, analyzing, drawing conclusions about, presenting, and evaluating information that is both factually and belief based.”15 In the 2010 edition of Nursing: Scope and Standards of Practice, the American Nurses Association (ANA) explains that the “nursing process in practice is not linear as often conceptualized. . . . Rather, it relies heavily on the bi-directional feedback loops from each component”16(p3) Concept care maps are non-linear and will be used to collect, interpret, analyze, draw conclusions about, present, and evaluate patient information, and to communicate with members of the health-care team.

Although concept maps have been used in a number of different ways in various disciplines, including nursing, the focus of this book is on developing concept “care” maps for the purposes of clinical nursing care planning. You need to organize the concept “care” map prior to the care of the patient, which will help you organize and prioritize what needs to be done to promote optimal patient outcomes for the clinical day of care. The important ideas that must be linked together are the medical and nursing diagnoses, along with all pertinent clinical data, including the subjective and objective physical and emotional problems and the underlying pathology, medications, laboratory data, and treatments. Concept care maps can be used to promote critical thinking and clinical
reasoning about patient problems and treatment of problems. Through concept care mapping of diagnoses and clinical data, you can evaluate what you know about the care of a patient and what further information you need to provide safe and effective nursing care.17

Take, for instance, a situation where a certain drug or treatment may not make any sense to you as you analyze the entire clinical picture. It is very important to ask questions of your clinical faculty about what does not seem to fit the clinical picture, because the questions you ask can result in avoiding medication or treatment errors. In the past, there have been times when patients have needed changes in their medications or treatments based on the findings of nursing students. So never hesitate to ask questions of your faculty and other members of the healthcare team. This is so important, in fact, that a special place has been provided on the care map template, labeled “I don’t know how this fits with the clinical problems.” Place any information that you do not understand in this box. Perhaps there are drugs you cannot find in your references the night before clinical, or you may wonder why a patient needs a particular drug or treatment. The visual concept care map diagram of relationships among diagnoses allows you, your clinical faculty, and members of the healthcare team to exchange views on why relationships exist among the problems and treatments and to construct a shared mental model of the patient’s health state and situation. It also allows you, your faculty, and other members of the health-care team to recognize the need for further assessment and questioning, to avoid medication or treatment errors.

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**Overview of Steps in Concept Care Mapping**

The nursing process is the foundation of the concept care map or any other type of nursing care plan. The nursing process involves assessing, diagnosing, planning, implementing, and evaluating nursing care. These steps of the nursing process are related to the development of concept care maps and the use of care plans during patient care in clinical settings. Subsequent chapters will give the details of care mapping with learning activities, but it is important for you to have an initial overview.

**Preparation for Concept Care Mapping**

Before developing a concept care map, the first thing you must do is gather clinical data. This step corresponds to the assessment phase of the nursing process. You must review patient records to determine current health problems, medical histories and chronic illness, abnormal physical and psychosocial assessment data, medications, and treatments. This assessment must be complete and accurate, because it forms the basis for the concept care map. You may have the opportunity to meet a patient briefly the day before you begin care. In just 5 minutes of interacting with a patient—even by simply introducing yourself and watching the patient’s response—you can gain a wealth of information about the patient’s mood, level of comfort, and ability to communicate. Chapter 2 will focus on how to gather clinical data.

**Step 1: Develop a Basic Skeleton Diagram**

Based on the clinical data you collect, you begin a care map by developing a basic skeleton diagram of the reasons your patient needs health care. The initial diagram is composed of your clinical impressions after you have reviewed all the data initially collected on a patient. In the first case study, the patient is admitted to the nursing home long term care facility because he has Alzheimer’s disease and can no longer take care of himself at home. As shown in Figure 1.4a, the reason for seeking care is in the middle of the template, in the box labeled “Reason for needing health care.” The health care this refers to may include the reason for hospitalization, extended care, or a visit to the outpatient center. Sometimes the focus of a visit may be on high-level wellness; for example when a patient is seen for a screening examination and the aim is to maintain wellness and prevent problems.

Then, around this reason for seeking care, arrange the clinical problems that were determined based on the initial patient assessments—these problems are associated with the reason for seeking health care. In this case study,
The problems identified include confusion, self-care deficits, urinary incontinence, risk for falls, impaired vision, insomnia, and anxiety. The general statements of patient problems will eventually be written as nursing diagnoses.

The American Nurses Association (ANA) Social Policy Statement indicates that the focus of nursing practice is on the diagnosis and treatment of human responses to health states. The concept care map diagram reflects the ANA practice policy statement because the human responses are located around the health state of the patient. Nursing care will be focused on the human responses.

The concept care map diagram is primarily composed of nursing diagnoses resulting from the health state, flowing outward from the central figure like spokes on a wheel. The concept care map diagram focuses strictly on real nursing care problems based on collected data; it does not focus on potential problems. At this stage of care planning, it is most important to recognize major problem areas. You do not have to state the nursing diagnosis yet. Write down your general impressions of the patient after your initial review of data.

Labeling the correct diagnosis is difficult for many students. At this point, it is more important...
to recognize major problem areas than to worry about the correct nursing diagnostic label. If you recognize that the patient is confused, write that down. You are first looking for the big picture. Later, you can look up the correct nursing diagnostic label and decide if the diagnosis should be *Chronic Confusion or Impaired Memory*. Initially, just write, in whatever words come to mind, what you think are the patient’s problems. Recognizing that something is wrong with the patient is more important than applying the correct label. Chapter 3 will expand on step 1 on formulating basic diagrams of problems.

**Step 2: Analyze and Categorize Data**

In this step, you must analyze and categorize data gathered from the patient’s medical records and your brief encounter with the patient. By categorizing the data, you provide evidence to support the medical diagnoses and nursing problems/diagnoses. You must identify and group the most important assessment data related to the patient’s reason for seeking health care. The data you are collecting will depend on your level in the nursing program and the patient population. In this first example, you are in your first semester in nursing, learning fundamentals, and are providing care to a patient in a nursing home.

In Figure 1.4b, study the nursing problems/diagnoses flowing outward from the patient’s reason for seeking health care. Listed under each problem/nursing diagnosis is the clinical evidence that led you to conclude that the problem or diagnosis was appropriate to this patient with Alzheimer’s disease.

When making a concept care map, you must write important clinical assessment data; that may include pathophysiology, treatments, laboratory values, medications, and medical history data related to each patient problem/diagnosis. The assessment data collected depends on your course level in the nursing program. As you advance, you will be sifting through and sorting out the often voluminous amount of data that is available on a patient. The sicker the patient, the more complex the analysis. You need to list assessment data regarding physical and emotional indicators of problems or symptoms of pathology under the appropriate problem/diagnosis. For example, physical indicators of problems from the data on the Alzheimer’s disease patient include “oriented to name only,” “thinks his father is still alive,” and “thinks he is currently a construction worker building the dining room in the nursing home.” These are listed under the problem of *Confusion*. Emotional indicators of problems are “apprehension about daily activities” and “feeling lost when his wife is not present.” These are listed under the nursing diagnosis *Anxiety*. Depending on your course level, you must also list current information on diagnostic test data, treatments, and medications under the appropriate problems. For this case study, you are in fundamentals and have not yet taken pharmacology; you have a limited knowledge of diagnostic testing and medications, so these are not included on this concept care map.

When beginning to use concept care maps with medical and nursing diagnoses that are new to you, you may not always know how to categorize abnormal assessment findings. If you do not know where such information should go, list it in the “I don’t know how this fits the problem” box of the template and ask for clarification from your clinical faculty. (This box is located in the upper right corner of Figure 1.4b.) At least you recognized that the patient data was important, even if you do not yet have the experience to see where it fits in the overall clinical picture of patient care. After discussion with the clinical faculty, you become aware that the data of history of hypertension and venous insufficiency, cold fingers, pale nail beds, and pacemaker, along with edema of the extremity, indicate a nursing diagnosis of *Ineffective Peripheral Tissue Perfusion*—beyond the level of your current fundamentals course—and that you should check further in a care plan book for details.

Sometimes you may think that symptoms apply to more than one nursing diagnosis, and they often do. You recognize that the patient is confused, but that observation could go under *Risk for Falls* or *Self-Care Deficits*, and is also a separate problem. It makes sense to place this symptom in more than one area. Therefore, you can repeat a symptom in different categories if it is relevant to more than one category.

Finally, you must determine the priority assessments that still need to be performed regarding the primary reason for seeking care; write them in the box at the center of the map.
under “Key assessment” in Figure 1.4b. In deciding what the most important assessments would be if you were responsible for assessing a group of six to eight patients, as you one day will be as a nurse. These key assessments are your priority and must be done on first contact with the patient and carefully monitored throughout the clinical day. Focus on the key areas of assessment that must be performed to ensure that the patient’s outcomes on the day of care are as expected. For the patient with Alzheimer’s disease, you would assess his neurological status and the safety of his environment. This step in the concept care mapping process appears in detail in Chapter 3.

Step 3: Label and Analyze Relationships Among Nursing Diagnoses

Next, you need to label nursing diagnoses and analyze the relationships among them, as shown in Figure 1.4c. You need to determine the correct diagnosis for the problem of confusion that may be
labeled **Chronic Confusion or Impaired Memory**. After looking up definitions of these diagnoses, you conclude that **Chronic Confusion** is the most appropriate diagnosis.

You will need to prioritize your nursing diagnoses by numbering them. Your priorities are going to be what you think are the most important problems. All the problems you have identified are important, but attempt to number them. Priorities do change throughout the clinical day; you may do your sloppy copy thinking that **Chronic Confusion** is going to be a top priority, but it may turn out that for your patient **Anxiety** is the major problem of the day. Therefore, use your sloppy copy to guess at the order of priority, but then use your final edition to accurately prioritize your diagnoses based on what happened during the clinical day.

**Figure 1.4c** Step 3: Draw lines between related problems. Use numbers to prioritize problems. Lastly, label the problem with a nursing diagnosis.
You will also be drawing lines between nursing diagnoses to indicate relationships, as shown in Figure 1.4c. In this example, *Chronic Confusion* is related to *Risk for Falls, Anxiety, and Insomnia*. Be prepared to explain to your clinical faculty why you have made these links. Your faculty may want you to add the words that describe the relationship linkages. For example, why *Insomnia* and *Chronic Confusion*? In this case, the explanation is that the patient who is not sleeping will have decreased ability to function and increased confusion, and that will contribute to the state of disorientation. You will soon recognize that all the problems the patient is having are interrelated. You and your clinical faculty can see the whole picture of what is happening with the patient by looking at the map. Thus, concept care maps are a holistic approach to patient care. These issues will be expanded upon in Chapter 3.

**Step 4: Identify Goals, Outcomes, and Nursing Strategies**

On the template in Figure 1.4d you will write patient goals and outcomes and then list nursing strategies to attain the outcomes for each of the numbered diagnoses on your concept care map. General goals and behavioral outcome objectives are at the top of the template, with nursing strategies listed in the first column.

You will carry the sloppy copy of the care map, goals, outcomes, and strategy lists in your pocket as you work with the patient, and you will either check off nursing strategies as you complete them or make revisions in the diagram and strategies as you interact with the patient. The concept care maps with strategies are used during the implementation phase of the nursing process.

The nursing strategies include key areas of assessment and monitoring as well as communication strategies needed to establish effective nurse-patient relationships or collaborate with other members of the health-care team. To decrease paperwork, rationales for nursing strategies are not written down. Come prepared to verbally explain the rationales for your identified nursing strategies if you are asked by your clinical faculty. It is of course a professional responsibility to know why you are using each strategy, even though you are not writing it down.

Be prepared to review nursing strategies during the clinical preconference. Nursing strategies include what you are supposed to be carefully monitoring and includes a list of all appropriate treatments, medications, and patient teaching, depending on your level in the nursing program. Step 4, on goals, outcomes, and nursing strategies, will be expanded on in Chapter 4.

**Step 5: Evaluate the Patient’s Responses**

This step is the written evaluation of the patient’s physical and psychosocial responses. It is shown in the second column of Figure 1.4d. As you perform a nursing strategy, write the patient’s responses. For example, you say in step 4, under the nursing diagnosis *Chronic Confusion*, that you will assess the patient’s neurological status. In step 5, you will record orientation to person, place, time, and circumstances data across from your assessment of neurological status. Step 5 also involves writing your clinical impressions and inferences regarding the patient’s progress toward expected outcomes and the effectiveness of your strategies to bring about these outcomes. This is an evaluation statement written to summarize progress toward the outcome objectives for each nursing diagnosis, found at the bottom of the template in Figure 1.4d. Step 5, on evaluation of outcomes, will be expanded on in Chapters 5 and 6.

As you progress in the nursing program, you will be required to build upon your knowledge of patient care and integrate knowledge of medications and laboratory data into the concept care map. The purpose of the following case study is to illustrate an acutely ill hospitalized patient and demonstrate how concept care maps may be used to simplify and summarize data for a more complex patient.

**Complex Patient Step 1**

In step 1 of concept care mapping, you develop a skeleton diagram with the reason for needing health care in the central box of the diagram and the patient problems fanning out around
### Problem # 1: Chronic Confusion

**General Goal:** Patient remains safe from harm in protected environment

**Predicted Behavioral Outcome Objective(s):** The patient will . . . be free of injury, wear wander guard, follow simple directions, remain calm on the day of care.

<table>
<thead>
<tr>
<th>Nursing Strategies</th>
<th>Patient Responses (Evaluation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Neuro Assessment</td>
<td>1. Alert &amp; oriented to person only, PERRLA</td>
</tr>
<tr>
<td>2. Make sure alarm attached to leg, alarm on exit door</td>
<td>2. Alarms remained intact, toxic substances locked in top bedside drawer</td>
</tr>
<tr>
<td>3. Give single simple instructions</td>
<td>3. Followed instructions</td>
</tr>
<tr>
<td>4. Speak in quiet tones</td>
<td>4. Seemed more relaxed &amp; less frustrated</td>
</tr>
<tr>
<td>5. Use consistency &amp; repetition</td>
<td>5. Understood most of conversation &amp; all instructions</td>
</tr>
<tr>
<td>6. Use distraction</td>
<td>6. Easily distracted by change in conversation when became frustrated due to confusion</td>
</tr>
<tr>
<td>7. Make sure glasses are clean</td>
<td>7. Wore glasses all day except when getting shaved</td>
</tr>
<tr>
<td>8. Orient to place &amp; time</td>
<td>8. Listened attentively while explained the time of day (morning), season (winter), and showed him which side of room was his</td>
</tr>
</tbody>
</table>

**Summarize patient progress toward outcomes objectives:** Patient remained free of injury, wore the wander guard, was able to follow simple directions, and remained calm. Need to continue assessment of neurological functioning and orient to place and time. Improvement in understanding directions and remaining calm by using communication strategies.

### Problem # 2: Risk for Falls

**General Goal:** Patient does not fall

**Predicted Behavioral Outcome Objective(s):** The patient will . . . remain free from falling on day of care.

<table>
<thead>
<tr>
<th>Nursing Strategies</th>
<th>Patient Responses (Evaluation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assess risk for falls</td>
<td>1. Patient at risk due to age, confusion, insomnia, edema, &amp; leg brace</td>
</tr>
<tr>
<td>2. Assist with ambulation</td>
<td>2. Ambulated to PT and lunch</td>
</tr>
<tr>
<td>Wear brace</td>
<td>Wears brace all day</td>
</tr>
<tr>
<td>3. Make sure glasses are clean &amp; in place</td>
<td>3. Wore glasses all day except while shaving</td>
</tr>
<tr>
<td>4. Keep one side rail up</td>
<td>4. Side rail remained up</td>
</tr>
<tr>
<td>5. Dangle before standing</td>
<td>5. Always sat up with feet on ground before rising to a standing position</td>
</tr>
<tr>
<td>6. Use wheelchair if weak or tired</td>
<td>6. Did not have to use wheelchair, ambulated safely</td>
</tr>
<tr>
<td>7. Room clear of hazards</td>
<td>7. Room with obstructing furniture, no small items on floor</td>
</tr>
<tr>
<td>8. Shoes, slippers socks, nonskid</td>
<td>8. Nonskid shoes worn</td>
</tr>
</tbody>
</table>

**Summarize patient progress toward outcomes objectives:** The patient ambulated safely and remained free of falls, protective environment was maintained.

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**Figure 1.4d** Step 4: Identification of goals, outcomes, and strategies. Step 5: Evaluation of patient responses.

that reason like spokes on a wheel. The skeleton diagram of a concept care map diagram for a complex patient is shown in Figure 1.5. In this case study example, the reason the patient was admitted to the health-care setting was for an abdominal abscess with bowel obstruction and for surgery. His problems include pain, skin integrity, elimination, cardiac output, mobility,
nutrition and fluid and electrolyte balance, gas exchange, and anxiety.

**Complex Patient Step 2**

In step 2, you analyze and categorize specific patient assessment data. Figure 1.6 shows the skeleton diagram of the reason for admission and resulting patient problems with assessment data to support each problem listed in the box under each problem. In this case study, physical and psychosocial assessment data, chronic illnesses, diagnostic test results, treatments, and medications are listed under the appropriate problems.

For example, physical indicators of problems from the data include labored respirations at a rate of 22 per minute, fatigue, and decreased breath sounds. These are listed under the patient problem of **Impaired Gas Exchange**.

Emotional indicators of problems include the patient crying and verbalizing that he is nervous and saying that he knows he is going to die. These are listed under the patient problem of **Anxiety**.

You must think critically to place diagnostic test data, treatments, and medications under the appropriate category. For example, diagnostic tests include blood studies of white blood cells,
In this case, the white blood cells are listed with **Impaired Skin Integrity** and the abscessed wound, the hemoglobin with **Impaired Gas Exchange**, and the potassium with **Decreased Cardiac Output**. Oxygen and respiratory treatments are categorized with **Impaired Gas Exchange**. The medication morphine is categorized with **Pain**, albuterol (Ventolin) is categorized with **Impaired Gas Exchange**, and digoxin (Lanoxin) is categorized with **Decreased Cardiac Output**.

The medical history information is also listed under the patient problems. All chronic illnesses must be integrated on the care map. In this example, the patient has a history of chronic illness related to bone and lung cancer, atrial fibrillation, and an enlarged prostate. The bone and lung cancer chronic illnesses are listed under the nursing diagnoses of **Pain**, **Impaired Gas Exchange**, and **Impaired Physical Mobility**; atrial fibrillation is under **Decreased Cardiac Output**, and the enlarged prostate is listed under **Elimination**.

In step 2, you identify what you do not know by asking for clarification in the “I don’t know how this fits with the problems.”
how this fits the problem” box of the template, located in the right corner of the diagram. In this example, note that the reason for the medication Demerol is in question.

Symptoms often apply to more than one nursing diagnosis. The patient is lethargic and fatigued, but that observation could go under *Decreased Cardiac Output*, *Impaired Physical Mobility*, or *Impaired Gas Exchange*. A symptom may be placed in different categories under patient problems if it is relevant to more than one category.

Step 2 also involves determining the priority assessments that need to be performed regarding the primary reason for seeking care; these are written in the box at the center of the map under “Key assessment,” as shown in Figure 1.6. For this patient, key assessments include pain, bowel sounds, abdominal distention, intake and output, the wound and drainage from it.

**Complex Patient Step 3**

In step 3, you label patient problems as nursing diagnoses, prioritize them, and indicate relationships between them, as shown in Figure 1.7. For example, it is important to distinguish whether respiratory and breathing problems should be labeled *Impaired Gas Exchange* or *Ineffective Airway Clearance*.

Next you prioritize problems/diagnoses by numbering them, in this situation the problems have been prioritized from 1 to 8. Priorities do change throughout the clinical day, you may do the sloppy copy thinking that Pain is going to be a top priority, but it turns out that your patient does not have any, and for him Anxiety is the major problem of the day. Therefore, use your sloppy copy to guess at the order of priority, but then use your final edition to accurately prioritize what happened during the clinical day.

Lines are drawn between nursing diagnoses to indicate relationships as shown in Figure 1.7. In this example, *Pain* is related to *Anxiety, Impaired Physical Mobility, Impaired Skin Integrity*, and *Imbalanced Nutrition*. Be prepared to explain to your clinical faculty why you have made these links. You may explain by writing the critical thinking that led you to conclude that the diagnoses were related. For example, why are pain and nutrition related?

In this case, the explanation is that the patient has mouth ulcers and an uncomfortable nasogastric tube, contributing to pain.

**Complex Patient Steps 4 and 5**

Steps 4 and 5 of this case study are shown in Figure 1.8. In step 4, you develop patient goals and outcomes and nursing strategies for each nursing diagnosis. Goals and outcomes are listed, followed by the listing of nursing strategies that include what needs to be assessed in addition to treatments and medications. Patient teaching should be listed under nursing strategies as appropriate for each problem. For example, patient teaching may involve slow, deep breathing and guided imagery under the nursing diagnosis *Anxiety*.

In step 5 it is important to list in the nursing strategy column when the nurse assigned to oversee the patient’s care will be doing a treatment that you have not yet learned how to do. For example, under *Imbalanced Nutrition*, you may write that the patient needs total parenteral nutrition and care of the nasogastric tube but that these strategies will be done by the staff nurse since you have not yet learned how to provide them. By writing the treatments in the appropriate column, you demonstrate that you have recognized these nutrition-related treatments and their importance to the total care needed by the patient. Be prepared to discuss the basic purpose of the nursing strategies, even those you do not perform yourself.

In step 5, you evaluate the patient’s response to each specific nursing strategy and summarize your clinical impressions. This step is the written evaluation of the patient’s physical and psychosocial responses, shown in the second column in Figure 1.8. For example, you say in step 4, under the nursing diagnosis *Impaired Skin Integrity*, that you will monitor the patient’s temperature. In step 5, you record those temperatures across from the nursing strategy. Step 5 also involves writing your clinical impressions and inferences regarding the patient’s progress toward expected outcomes and the effectiveness of your strategies to bring about these outcomes. The box to write evaluation statements in to summarize progress toward the outcome objectives for each nursing diagnosis is found after the nursing strategy and patient response lists for each nursing diagnosis.


During Clinical Care: Keep It in Your Pocket

Throughout the clinical day, you and your clinical faculty will have an ongoing discussion regarding changes in patient assessment data, effectiveness of nursing strategies, and patient responses to those strategies. Keep the concept care map in your pocket; this way, everything that must be done and evaluated is listed succinctly and kept within easy reach. As the plan is revised throughout the day, take notes on the
Problem #1: Imbalanced Nutrition/Deficient Fluid Volume
General Goal: Improve nutrition

Predicted Behavioral Outcome Objective(s): The patient will...have patent NG, TPN, & JP drains, intake of fluids and electrolytes will balance outputs...on the day of care.

Nursing Strategies | Patient Responses
--- | ---
1. Assess abd (BS, distention) | 1. Hypoactive, nondistended (has NG tube)
3. Assess skin turgor | 3. Poor & dry (moisturizer applied with bath)
4. Assess FBS & new lab values | 4. 6:00 109, 11:00 110, no new lab values
5. Assess NG placement & drainage | 5. Nurse checked (not learned yet)
7. Give ice chips | 7. Small amounts sucked on for sore throat
8. NPO | 8. NPO except ice and meds
9. Mouth care with nystatin mouth wash | 9. Liked the taste, said "It helped a lot."
10. Monitor intake and output | 10. Intake 600/Output 650 for shift

Evaluation: Summarize patient progress toward outcome objectives: Nutritional status maintained with intake equal to output, electrolytes stable, tubes remain patent

Problem #2: Pain/Acute and Chronic
General Goal: Control Pain

Predicted Behavioral Outcome Objective(s): The patient will...report pain of <3 throughout the day of care.

Nursing Strategies | Patient Responses
--- | ---
1. Assess pain | 1. 8:30 Grimacing, moaning, states abdominal pain "5"/10
2. Medicate with MS or Meperidine | 2. 8:40 MS given, pain "2" at 9:15
3. Positioning | 3. Positioned on pillows on turning schedule q2h
4. Limit noise, adjust lighting | 4. Decreased lights and fell asleep
5. Guided imagery | 5. Visualized a beach
6. Backrub | 6. Stated it hurt to be touched

Evaluation: Summarize patient progress toward outcome objectives: Needs narcotics to control pain and the non-drug measures of positioning, noise and light control and guided imagery are useful in helping the patient to control pain.

Problem #3: Impaired Skin Integrity (has infection)
General Goal: Prevent further infection

Outcome: The patient will...have temperature of less than 99° and have no increasing S/S of further infection (localized redness, edema, pain, warmth, decreased movement)

Nursing Strategies | Patient Responses
--- | ---
1. Assess temperature | 1. 8:00 96.2°F, 12:00 97.9°F
2. Assess WBC | 2. No new values
3. Assess wounds, drain | 3. Intact, no redness or edema, drains above
4. Assess skin integrity | 4. No signs of additional breakdown
5. Bed bath | 5. Cooperated with bathing, skin intact
6. Oral care | 6. Mouth ulcers, used nystatin
7. Foley care | 7. Patent, skin intact

Evaluation: Summarize patient progress toward outcome objectives: Incision intact without S/S of infection, temperature WNL, although JP drainage purulent (above)

Problem #4: Impaired urinary elimination
General Goal: Maintain elimination

Predicted Behavioral Outcome Objective(s): The patient will...have a urine output >60 cc/h

Nursing Strategies | Patient Responses
--- | ---
1. Assess Foley patency | 1. >600 cc/h.
2. Assess color, amount, smell | 2. Patent, draining
3. Call physician if urine output <60 cc/h | 3. Clear, yellow, no smell
4. Monitor BUN, creatinine | 4. No new labs drawn

Evaluation: Summarize patient progress toward outcome objectives: Patient’s urinary elimination maintained about 60 cc/h

Figure 1.8
Steps 4 and 5 of the concept care map. Complete step 4 the night before clinical. Step 5: Evaluation of patient responses. Complete the day of clinical.
Concept Mapping: A Critical-Thinking Approach to Care Planning

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Step 5</th>
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| Problem #5: Impaired Gas Exchange  
General Goal: Maintain oxygenation  
Predicted Behavioral Outcome Objective(s): The patient will...cooperate with RT, use oxygen, and breathing remains non-labored...on the day of care.  
Nursing Strategies | Patient Responses |
| 1. Assess breath sounds  
2. Assess VS, especially respirations  
3. Maintain oxygen administration  
4. Monitor hemoglobin  
5. Do CDB with respiratory therapy (RT)  
6. Perform incentive spirometry q2h | 1. Cracks throughout lung fields especially rt. base  
2. 8:00 156/80 112-20; 12:00 126/58 88-20 (temp. above)  
3. Oxygen on at 5L continuous  
4. No new labs  
5. RT did CDB after treatments  
6. Pt. performed IS q2h |
| Evaluation: Summarize patient progress toward outcome objectives: Breathing non-labored but cracks present, cooperative with treatments, elevations in pulse and BP may be due to pain as above. |
| Problem #6: Impaired Physical Mobility/Risk for Falls  
General Goal: Moves without injury  
Predicted Behavioral Outcome Objective(s): The patient will...perform ROM, get up to the chair, and not fall...on the day of care.  
Nursing Strategies | Patient Responses |
| 1. Assess fatigue and strength prior to movement  
2. Safe environment (Fall protocol)  
3. Side rails, low bed, call bell in reach  
4. Compression devices used in bed  
5. Perform ROM q2h  
6. Get up in chair at bedside | 1. Weak and tired  
2. Personal items in reach  
3. At all times  
4. On while in bed  
5. Done with bath & q2h  
6. Got up for 1h then became fatigued |
| Evaluation: Summarize patient progress toward outcome objectives: Got up for an hour but is weak and tired. Performed ROM. High risk for falls due to weakness and fatigue. |
| Problem #7: Decreased Cardiac Output  
General Goal: Maintain cardiac output  
Predicted Behavioral Outcome Objective(s): The patient will...have pulse and BP remain stable and electrolytes WNL...on the day of care.  
Nursing Strategies | Patient Responses |
| 1. Check VS q4h, especially BP & P  
2. Apical check with Lanoxin  
3. Assess circulation in extremities  
4. Listen for arrhythmias  
5. Monitor | 1. As above  
2. 10:00 112  
3. Radials and pedals 3+ bilaterally  
4. Atrial fibrillation  
5. K=3.8 |
| Problem #8: Anxiety  
General Goal: Decrease anxiety  
Predicted Behavioral Outcome Objective(s): The patient will...verbalize concerns...on the day of care.  
Nursing Strategies | Patient Responses |
| 1. Therapeutic communication, especially empathy, distraction, active listening  
2. Guided imagery  
3. Teach slow deep breathing  
4. Comfort touch | 1. Verbalizes concerns about dying  
2. States it helps him relax  
3. Appeared more relaxed, less grimacing  
4. Held my hand when talking |
| Evaluation: Summarize patient progress toward outcome objectives: Patient responded to anxiety interventions by verbalizing concerns. |

**Figure 1.8 Continued**
concept care map diagram, add or delete nursing strategies, and write patient responses as you go along. As your clinical faculty makes rounds and checks in on you and your patients, they can also refer to the concept care maps with goals, outcomes, and strategy lists you have developed as the basis for guiding your patient care.

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**Documentation**

The concept care maps with strategies and patient responses will become the basis of your documentation. You will be using the revised plans and outcome evaluations as guides to make sure you have adequately documented patient problems, strategies, and your evaluation of patient responses. Documentation involves correctly identifying patient assessment data to record a problem, determining what to record about the strategies to correct the problem, and describing the patient’s responses to the strategies. Assessment, strategies, and responses are all present in the concept care map. Concept care maps as the basis of documentation will be described in more detail in Chapter 7.

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**Medication Administration**

Your concept care map will also be useful as you prepare to administer medications. By organizing the drugs to be administered under the correct problems, you demonstrate your knowledge of the relationship of the drug to the problems. You can also see the interactive effects of the drug related to the total clinical picture. For example, as you discuss digitalis (Lanoxin) administration under *Decreased Cardiac Output*, you and your clinical faculty can also see that the patient’s potassium level is low. What is the relationship between low levels of potassium and digoxin administration? The answer is an increased risk of a toxic reaction by the patient to digitalis. Be prepared for your clinical faculty to ask you for the current value of potassium from the morning blood draw. Low potassium levels have to be corrected; in the meantime, you can be assessing the patient carefully for adverse reactions to the drug. You can more easily integrate medications with laboratory values and pathology if the information is all neatly categorized under *Decreased Cardiac Output*.

In addition, you should write down scheduled times of medication administration next to the drugs. You may also highlight drugs on the map. Writing down administration times and highlighting drugs helps to organize information and remind you of the importance of the medication administration times. It also decreases the chance of medication errors.

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**Nursing Standards Of Care**

Concept care maps are individualized plans of care built on critical analysis of patient assessment data, identification of medical and nursing diagnoses, determination of nursing strategies to be implemented, and evaluation of patient/healthcare consumers outcomes. Development, implementation, and evaluation of safe and effective nursing care are contingent upon nurses’ knowing and following accepted standards of care. As you plan care for a patient, a primary question you must address is: What are the standards of care pertinent to my patient and specific to the applicable medical and nursing diagnoses? Nursing students often wonder, “Have I included everything necessary in this care plan? Am I doing everything I should be doing? Am I missing something?” Following standards of care ensures that you are doing everything possible to provide appropriate care to the patient. These standards may stem from several organizing agencies or principles.

**Standards of the American Nurses Association**

By law, nurses must follow guidelines for the safe and effective practice of nursing. These legal guidelines are called *standards of professional nursing practice*. The ANA has developed general standards of nursing practice, shown in Box 1-1. Concept care maps are in compliance with these general standards of care.
Standards for Accreditation of Health-Care Organizations

Since July 2010, laws were enacted that placed accrediting agencies under the jurisdiction of the Centers for Medicare and Medicaid Services (CMS). CMS makes decisions to grant deeming authority to accrediting organizations and determines the term. One example of an accrediting organization with deeming authority is the Joint Commission. The Joint Commission will only accredit hospitals that have written policies and procedures for nursing care. You must follow these specific policies and procedures for any nursing care you administer in order for the health-care agency to maintain its accreditation. Representatives of The Joint Commission travel the country and review these policies and procedures. If they are not current, The Joint Commission requires that they be updated if the agency desires to maintain its certification as an accredited health-care agency.

Fortunately for you as a student, fundamentals and medical-surgical textbooks provide general descriptions of procedures that are similar to what is required by your clinical agency. Your clinical faculty will inform you of any specific requirements of the clinical agency in which you are placed, either by explaining those requirements verbally or by referring you to the agency’s procedure manual.

Standardized Nursing Care Plans

Many organizations have developed standardized nursing care plans for specific medical diagnoses. These standardized nursing care plans are based on typical nursing diagnoses of patients with particular medical problems. Many facilities have general nursing care plans for nursing care of patients that are commonly seen. For example, an orthopedic unit probably has a standardized care plan for the patient with a fractured hip, and the urology unit probably has a standardized care plan for the patient undergoing a transurethral resection of the prostate gland. In addition, hundreds of standardized care plans have been written and published, and many have been computerized for easy accessibility.
Therefore, while you are gathering data from a patient’s records to prepare your care map, you also need to find out whether the agency has any standardized care plans available for you to use. If these plans are not available on the unit to which you are assigned, you can use published books of standardized care plans to make sure you have not missed any important aspects of care.

**Health-Care Literacy and Patient Education Standards**

All patients have the right to know what is wrong with them and how to manage their own care. Health literacy is the aim of patient education. Nurses play a key role in educating patients and ensuring that health-care literacy is attained. Most agencies have patient education materials available that are specific to various types of problems. You need to collect these materials when you collect information from patient records. As with standardized care plans, standardized teaching materials, such as booklets and movies, have been published that may be available for you and the patient as references. Teaching materials are usually geared toward a fifth-grade reading level. Materials given to patients must be carefully screened for content that is appropriate for the patients’ individual needs and ability to comprehend the materials. Detailed information about integrating teaching materials with care maps appears in later chapters.

**Insurance Company and Government Care Standards**

The high cost of health care has led to a concerted effort by the government (which pays for Medicare and Medicaid) and health-care insurance companies to control costs. At the same time that costs are being controlled, the quality of health care is supposed to be ensured through careful management by health-care providers. The government and insurance companies have developed specific criteria for which services will and will not be reimbursed, depending on diagnoses. All medications, treatments, surgeries, and rehabilitation programs (literally everything done by health-care providers) has to be provided and documented according to government and insurance company criteria for care, or the bills will not be paid. When bills are not paid by the government or insurance companies, health-care providers may never receive payment for services provided. In some cases, patients may be left with the bill. In that situation, patients may decide to go without needed health-care services because they cannot afford them.

Insurance companies and the government pay predetermined amounts of money to agencies or physicians providing care to patients. For example, if a patient has knee replacement surgery, the providers will receive a fixed amount of money for that service. Case managers, typically advanced practice nurses, are hired by insurance companies and health-care agencies to evaluate the types of care given to inpatients and outpatients, to monitor patient progress, and to coordinate the care of patients to guide their recovery while minimizing costs. These case managers are also known as resource managers, because they coordinate all services available to the patient. They must be aware of all resources available so they can make the appropriate linkages between patients and needed health care services.

Teams of health-care providers including physicians, nurses, pharmacists, dietitians, physical therapists, and social workers have developed standards that guide the treatment of patients. Instead of separate plans of care from the physician, dietitian, and others, the trend is for health-care providers to collaborate and develop one unified plan of care. This multidisciplinary plan is commonly called a clinical pathway or a critical pathway. There is careful sequencing of clinical patient care strategies over a specific period of time that all parties involved in the care of the patient agree to follow. Clinical pathways outline assessments, treatments, procedures, diet, activities, patient education, and discharge planning activities. Although clinical pathways are becoming a popular method of collaborative care planning, they are unfortunately not available for every diagnosis. Clinical pathways also vary slightly among clinical agencies.

As you prepare for a clinical care assignment, it is important that you know about the clinical pathway your patient is supposed to be following based on the patient’s health condition. Because nurses often spend more time with patients than other health-care providers, nurses’ clinical roles
include communicating between caregivers to make sure that the patient is making steady progress in the expected direction toward the health goals enumerated on the clinical pathway. The nursing care plan and assessment is focused on identifying complications and quickly intervening to get the patient back on the clinical pathway, to resume rapid progress toward health goals.

Currently, a battle is raging between health-care providers and those who pay the bills for services, namely the government (for Medicare and Medicaid) and the insurance companies. At one time, physicians ordered whichever tests they felt necessary to diagnose problems and whichever treatments they deemed necessary to fix those problems. If a physician felt that a patient would benefit from an extra day in the hospital, the patient stayed in the hospital. If a physician ordered certain medications to treat the patient’s problem, the patient received them. Now, physicians have been forced to use criteria established by insurance companies and the government for diagnosing, treating, admitting, and discharging patients—or the bill is not paid. In essence, the view of the insurance company and government is that physicians are free to treat patients as they deem necessary. However, if physicians deviate from the established standards and criteria for treatment, they are not paid. A few years ago, the standard used by those paying the bills was that patients were required to leave the hospital 24 hours after vaginal childbirth. The outcry from the public and from health-care providers grew so loud that the length of stay for vaginal delivery has now increased to 48 hours.

Although this is a simple explanation of the current state of affairs regarding payment for services and maintaining quality of care, it is a very complex problem. The complexity exists because the government and insurance companies differ on the types of payment plans and criteria that form the standards of care. In addition, the criteria are under constant revision.

Utilization Review Standards

Documentation of detailed assessments, accuracy of diagnoses, and appropriateness of treatments and follow-up are constantly reviewed in all health-care settings (such as private physicians’ offices, outpatient facilities, and hospitals). Everything and everyone is under utilization review—the process of evaluating the care given by nurses, physicians, and all other health-care providers and agencies. It is nurses, primarily, who manage utilization reviews, armed with specific criteria for auditing individual health-care providers and the delivery of services in each health-care setting. These nurses are hired by health-care agencies and by insurance companies. Utilization reviewers do not usually have direct contact with patients; they review charts only. They judge the necessity and appropriateness of care and the efficiency with which care is delivered.

Managed Care in Hospital Settings

There is a direct relationship between the care standards described above and the management of care. Currently, nearly all patients who enter hospitals find themselves in managed-care delivery systems. Typically, patients entering health-care facilities have nurse case managers assigned to monitor and coordinate their progress through the health-care system. These case managers are experienced nurses, most of them holding advanced degrees or specialty certifications. These nurses manage hospital resources carefully and coordinate discharge planning. With strict criteria imposed by government and insurance companies to ensure rapid discharge from acute care facilities, all nurses must carefully document and justify complications and additional problems with patients to ensure that quality care is rendered and financial obligations are met (that is, the bills are paid by the government and insurance companies). These nurses monitor patient progress and especially track high-risk patients, as well as all patients with complications. These hospital-based nurse case managers interact with service providers and insurance providers; thus, they are considered resource managers. It is essential to make links for patients to home health services, transitional care units, long-term care facilities, and other agencies to provide quality care.
CHAPTER 1 SUMMARY

The purposes of concept care maps include assisting you with critical thinking, analyzing clinical data, planning comprehensive nursing care for your patients, and providing the basis for communication with members of the health-care team to create a shared mental model to prevent patient harm. A concept care map is based on theories of learning and educational psychology, and is a diagrammatic teaching/learning strategy that provides you with the opportunity to visualize interrelationships between medical and nursing diagnoses, assessment data, and treatments. The visual diagram of problems and the list of anticipated outcomes and strategies are personal pocket guides to patient care, and they form the basis for discussion of nursing care between you and your clinical faculty.

Before developing a concept care map, you must perform a comprehensive patient assessment. Then, in step 1 of concept care mapping, you develop a skeleton diagram of health problems. In step 2, you analyze and categorize specific patient assessment data. In step 3, you label diagnoses, prioritize them, and indicate relationships between nursing and medical diagnoses. In step 4, you develop patient goals, outcomes, and nursing strategies for each nursing diagnosis. In step 5, you evaluate the patient’s response to each specific nursing strategy and summarize your clinical impressions.

The development of concept care maps is based on understanding and integrating accepted standards of patient care. Standards of care are derived from the nursing practice standards of the ANA and The Joint Commission, standard nursing care plans and standards of patient teaching, clinical pathways, insurance agency and government payment standards, and utilization review standards. As a result of these standards, hospitals have become centers for managed care and are employing nursing case managers as patient care resource coordinators. All parties involved with health-care delivery, including health-care agencies, health-care providers, insurance companies, and the government, are finding ways to reduce costs while attempting to maintain quality services through managed care.

LEARNING ACTIVITIES

1. Identify the names and locations of books and computer software that contain standardized nursing care plans that you can use as resources for patient care.

2. Locate samples of standards of care at your assigned clinical agency. For discussion, bring to class a standard nursing care plan from a local agency, a clinical pathway, a standardized specific procedure, and patient education materials.

3. Locate the procedure manual from a local health-care agency and compare a procedure you are currently learning from your procedures text to the same procedure in the manual.

4. Identify the person or people at your agency who perform case management, discharge planning, and utilization review. Invite one of them to a clinical post conference to describe their role in decreasing costs while maintaining quality of care in the managed care environment.
REFERENCES


