UNIT 1
Nursing Data Collection, Documentation, and Analysis

THE NURSE’S ROLE IN HEALTH ASSESSMENT

Learning Objectives
1. Discuss why well-developed nursing assessment skills are needed for making clinical judgments in every situation the nurse encounters.
2. Differentiate between a holistic nursing assessment and a physical medical assessment.
3. Describe which phases of the nursing process involve assessment by the nurse.
4. List and describe the steps of the nursing process, explaining how some steps overlap and may have to be repeated many times when caring for a client.
5. Describe the steps of the “analysis phase” of the nursing process in making sound clinical judgments.
6. Compare and contrast the four basic types of nursing assessment: (a) initial comprehensive, (b) ongoing or partial, (c) focused/problem oriented, and (d) emergency.

NURSING CONCEPTS

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Clinical Decision Making</th>
<th>Communication</th>
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CASE STUDY
Mrs. Gutierrez, age 52, arrives at the clinic for diabetic teaching. She appears distracted and sad, uninterested in the teaching. She is unable to focus and paces back and forth in the clinic, wringing her hands. The nurse suspects that Mrs. Gutierrez is upset by her diagnosis of diabetes.

As a professional nurse, you will make accurate clinical judgments on your observation and data collection. Observation of situations and collection of information occur in all settings: hospital, clinic, home, community, or long-term care. You conduct many informal assessments every day. For example, when you get up in the morning, you check the weather and determine what would be the most appropriate clothing to wear. If you check the weather in another city, you will not make the correct clothing judgment for the day. You assess whether you are hungry. Do you need a light or heavy breakfast? When will you be able to eat next? If you have forgotten that breakfast is being served at the meeting you will be attending, you may waste time trying to get breakfast before arriving at work. You may even assess the physical condition of your skin. Do you need moisturizing lotion? What are your family members doing today? Are there special events occurring in your community? You will use this information to assess yourself and make judgments and decisions, and take actions, that will influence your comfort and success for the remainder of the day. Likewise, the professional nursing assessments you make—whether they are of a client, family, or community—determine nursing clinical judgments that will result in client care interventions that either positively or negatively influence their health care and health status.
ASSESSMENT: STEP 1 OF THE NURSING PROCESS

Assessment is the first and most critical phase of the nursing process. If data collection is inadequate or inaccurate, incorrect clinical judgments may be made that adversely affect the remaining phases of the process: diagnosis, planning, implementation, and evaluation (Table 1-1). Although the assessment phase of the nursing process precedes the other phases in the formal nursing process, be aware that assessment is ongoing and continuous throughout all phases of the nursing process. Health assessment is more than just gathering information about the health status of the client. It is analyzing and synthesizing those data, making judgments about the effectiveness of nursing interventions, and evaluating client outcomes (AACN, 2008). The nursing process should be thought of as circular, not linear (Fig. 1-1).

Focus of Health Assessment in Nursing

Virtually every health care professional performs assessments to make professional judgments related to clients. A comprehensive health assessment consists of both a health history and physical examination. However, the purpose of a nursing health history and physical examination differs greatly from that of a medical or other type of health care assessment (e.g., dietary assessment or examination for physical therapy).

The purpose of a nursing health assessment is to collect holistic subjective and objective data to determine a client’s overall level of functioning in order to make a professional clinical judgment. The nurse collects physiological, psychological, sociocultural, developmental, and spiritual data about the client. Thus, the nurse performs holistic data collection.

The mind, body, and spirit are considered to be interdependent factors that affect a person’s level of health. The nurse, in particular, focuses on how the client’s health status affects activities of daily living (ADLS) and how those ADLS affect the client’s health. For example, a client with asthma may have to avoid extreme temperatures and may not be able to enjoy recreational camping. Walking to work in a smoggy environment may adversely affect this person’s asthma.

In addition, the nurse assesses how clients interact within their family and community, and how the clients’ health status affects the family and community. For example, a diabetic client may not be able to eat the same foods that the rest of the family enjoys. If this client develops complications of diabetes and has an amputation, the client may not be able to carry out the family responsibility of maintaining the yard. The client may no longer be able to work in the community as a bus driver. The nurse also assesses how family and community activities of daily living (ADLs) and how those ADLs affect the client’s health status. A supportive, creative family may find alternative ways of cooking tasteful foods that are healthy for the entire family. The community may or may not have a diabetic support group for the client and the family.

In contrast, the physician performing a medical assessment focuses primarily on the client’s physiological status. Less focus may be placed on psychological, sociocultural, or spiritual well-being. Similarly, a physical therapist would focus primarily on the client’s musculoskeletal system and the effects on ability to perform ADLs. And a dietary therapist would focus on assessing the client’s food and fluid intake, preferences, activity levels, and medical diagnoses that would affect nutrition.

Framework for Health Assessment in Nursing

The framework used to collect nursing health assessment data differs from that used by other professionals. A nursing framework helps to organize information and promotes the collection of holistic data. This, in turn, provides clues that help to determine human responses.

Because there are so many nursing health assessment frameworks available for organizing data, using one assessment

<table>
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<th>Phase</th>
<th>Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>I</td>
<td>Assessment</td>
<td>Collecting subjective and objective data</td>
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<tr>
<td>II</td>
<td>Diagnosis</td>
<td>Analyzing subjective and objective data to make and prioritize professional clinical judgments (client concerns, collaborative problems, or referral)</td>
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<tr>
<td>III</td>
<td>Planning</td>
<td>Generating solutions, developing a plan, and determining which outcomes need to be met first</td>
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<tr>
<td>IV</td>
<td>Implementation</td>
<td>Taking action. Prioritizing and implementing the planned interventions</td>
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<tr>
<td>V</td>
<td>Evaluation</td>
<td>Assessing whether outcomes have been met and revising the plan if the interventions did not make a difference</td>
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framework would limit the use of this text and ignore many other valid nursing assessment framework methods. Therefore, the objective of this textbook is to provide the reader with the essential information necessary to perform a comprehensive nursing health assessment. Readers can take the information in this book and adapt it to the nursing assessment framework of their choice. The book is organized around a head-to-toe assessment of body parts and systems. In each chapter, the nursing health history is organized according to a “generic” nursing history framework, which is an abbreviated version of the complete nursing health history detailed in Chapter 2. The questions asked in each physical system’s chapter focus on that particular body system and are broken down into four sections:

- History of present health concern
- Personal health history
- Family history
- Lifestyle and health practices

Following the health history and health promotion sections (see the Using Evidence to Promote Health and Prevent Disease section), the physical assessment section provides the procedure, normal findings, and abnormal findings for each step of examining a particular body part or system. The collected data based on the client’s answers to the questions asked in the nursing history, along with the objective data gathered during the physical assessment, enable the nurse to make informed clinical judgments about the client, including client concern, collaborative problems, referrals, and the need for client teaching. Thus the end result of a nursing assessment is the identification of client problems that require nursing care, the identification of collaborative problems that require interdisciplinary care, the identification of medical problems that require immediate referral, or client teaching for health promotion.

Using Evidence to Promote Health and Prevent Disease

In order to participate in health promotion and disease prevention, the nurse needs knowledge of physiology as well as factors affecting a client’s risk of developing a disease and factors affecting client behavior. Boxes included in most chapters titled “Evidence-Based Health Promotion and Disease Prevention” present common diseases or conditions associated with the topic of the chapter, including risk factors, and suggested client teaching, incorporating information from Healthy People 2030 and the U.S. Preventive Services Task Force (USPSTF).

Healthy People 2030 is a model developed by the U.S. Department of Health and Human Services (DHHS) aiming to increase the life span and improve the quality of health for all Americans. The progress toward this goal is evaluated every 10 years, resulting in the development of new goals and objectives. Specific outcomes are developed for 10 leading “Indicators.” Many tools are available for nurses to use to screen clients for health risks through the National Center for Chronic Disease Prevention and Health Promotion. Screening tools for risks are also available through organizations such as the American Cancer Society (ACS), American Heart Association (AHA), American Diabetic Association (ADA), Centers for Disease Control and Prevention (CDC), and the American Academy of Ophthalmology (AAO), among others. These are referred to in related chapters.

Another resource for the nurse to consider is the USPSTF, which determines risk versus benefit in screenings. According to its website, the USPSTF “is an independent panel of non-Federal experts in prevention and evidence-based medicine and is composed of primary care providers (such as internists, pediatricians, family physicians, gynecologists/obstetricians, nurses, and health behavior specialists) that conducts scientific evidence reviews of a broad range of clinical preventive health care services (such as screening, counseling, and preventive medications) and develops recommendations for primary care clinicians and health systems.” These recommendations are published in the form of “Recommendation Statements.”

Types of Health Assessment

The four basic types of nursing assessment are:

- Initial comprehensive assessment
- Ongoing or partial assessment
- Focused or problem-oriented assessment
- Emergency assessment

Each assessment type varies according to the amount and type of data collected.

Initial Comprehensive Assessment

An initial comprehensive assessment involves collection of subjective data about the client’s perception of their health of all body parts or systems, past health history, family history, and lifestyle and health practices (which include information related to the client’s overall functioning) as well as objective data gathered during a step-by-step physical examination.

The nurse typically collects subjective data and objective data in many settings (hospital, community, clinic, or home). Depending on the setting, other members of the health care team may also participate in various parts of the data collection. For example, in a hospital setting the physician usually performs a total physical examination when the client is admitted (if this was not previously done in the physician’s office). In this setting, the nurse continues to assess the client as needed to monitor progress and client outcomes. A physical therapist may perform a musculoskeletal examination, as in the case of a stroke client, and a dietitian may take anthropometric measurements in addition to doing a subjective nutritional assessment. In a community clinic, a nurse practitioner may perform the entire physical examination. In the home setting, the nurse is usually responsible for performing most of the physical examination (Fig. 1-2).

Regardless of who collects the data, a total health assessment (subjective and objective data regarding functional health and body systems) is needed when the client first enters a health care system and periodically thereafter to establish baseline data against which future health status changes can be measured and compared. Frequency of comprehensive assessments depends on the client’s age, risk factors, health status, health promotion practices, and lifestyle.

Ongoing or Partial Assessment

An ongoing or partial assessment of the client consists of data collection that occurs after the comprehensive database is established. This consists of a mini overview of the client’s body systems and holistic health patterns as a follow-up on health
status. Any problems that were initially detected in the client's body system or holistic health patterns are reassessed to determine any changes (deterioration or improvement) from the baseline data (Fig. 1-3). In addition, a brief reassessment of the client's body systems and holistic health patterns is performed to detect any new problems. This type of assessment is usually performed whenever and wherever the nurse or another health care professional has an encounter with the client, whether in the hospital, community, or home setting. The frequency of this type of assessment is determined by the acuity of the client.

For example, a partial assessment of a client admitted to the hospital with lung cancer requires frequent assessment of respiratory rate, oxygen saturation, lung sounds, skin color, and capillary refill. A total assessment of skin would be performed less frequently, with the nurse focusing on the color and temperature of the extremities to determine level of oxygenation.

Focused or Problem-Oriented Assessment

A focused or problem-oriented assessment does not replace the comprehensive health assessment. It is performed when a comprehensive database exists for a client who comes to the health care agency with a specific health concern. A focused assessment consists of a thorough assessment of a particular client problem and does not address areas not related to the problem. For example, if your client, John P., tells you that he has ear pain, you would ask him questions about the character and location of pain, onset, relieving and aggravating factors, and associated symptoms. However, asking questions about his sexual functioning or his normal bowel habits would be unnecessary and inappropriate. The physical examination should focus on his ears, nose, mouth, and throat. At this time, it would not be appropriate to perform a comprehensive assessment by repeating all system examinations such as the heart and neck vessel or abdominal assessment.

Emergency Assessment

An emergency assessment is a very rapid assessment performed in life-threatening situations (Fig. 1-4). In such situations (choking, cardiac arrest, drowning), an immediate assessment is needed to provide prompt treatment. An example of an emergency assessment is the evaluation of the client’s airway, breathing, and circulation (known as the ABCs) when cardiac arrest is suspected. The major and only concern during this type of assessment is to determine the status of the client’s life-sustaining physical functions.

Steps of Health Assessment

The assessment phase of the nursing process has four major steps:

- Collection of subjective data
- Collection of objective data
- Validation of data
- Documentation of data

Although there are four steps, they tend to overlap and you may perform two or three steps concurrently. For example, you may ask your client, Jane Q., if she has dry skin while you are...
inspecting the condition of the skin. If she answers "no," but you notice that the skin on her hands is very dry, validation with the client may be performed at this point.

Each part of the assessment is discussed briefly in the following sections. However, Chapters 2, 3, and 4 provide an in-depth explanation of each of the four assessment steps. In addition, the four steps of the assessment process format are carried throughout this text. All of the physical assessment chapters contain the following sections: collecting subjective data, collecting objective data, and a combined validation and documentation section.

Preparing for the Assessment

Before actually meeting the client and beginning the nursing health assessment, the nurse should review the client’s medical record, if available (Fig. 1-5). Knowing the client’s basic biographical data (age, sex, religion, educational level, and occupation) is useful. The medical record provides information about chronic diseases, medications, allergies, and so on and gives clues to how a present illness may impact the client’s ADLs. An awareness of the client’s previous and current health status provides valuable information to guide your interactions with the client. This information can also be from the medical record, from other health care team members, and from significant others (client’s family).

After reviewing the record or discussing the client’s status with others, do not assume that all information you find is correct. For example, always verify with the client any known allergies. Also, remember to keep an open mind to avoid premature judgments that may alter your ability to collect accurate data. For example, do not assume that a 30-year-old female client who happens to be a nurse knows everything regarding hospital routine and medical care or that a 60-year-old male client with diabetes mellitus needs client teaching regarding diet. Making these assumptions results in poor clinical judgments. Validate information with the client and be prepared to collect additional data.

Also educate yourself about the client’s diagnoses or tests performed. The client may have a medical diagnosis that you have never heard of or that you have not dealt with in the past. You may review the record, find that the client had a special blood test yielding abnormal results, and realize that you are not familiar with this test. At that time, you should consult the necessary resources (laboratory manual, textbook, or electronic reference resource, such as a smartphone application) to learn about the test and the implications of its findings.

Once you have gathered basic data about the client, take a minute to reflect on your personal feelings regarding your initial encounter with the client. For example, the client may be a 22-year-old with a drug addiction. If you are 22 years old and a very health-conscious person who does not drink, smoke, use illegal drugs, or drink caffeine, you need to take time to examine your own feelings in order to avoid biases, judgment, and the possibility of projecting those judgments. You must be as objective and open as possible. Other client situations that may require reflection time include those involving sexually transmitted infections, terminal illnesses, amputation, paralysis, early teenage pregnancies, human immunodeficiency virus (HIV) infection or acquired immunodeficiency syndrome (AIDS), abortion, obesity, sexual preference (gay, lesbian, bisexual, transgender, etc.), and people with special needs or who are cognitively challenged.

Remember to obtain and organize materials that you will need for the assessment. The materials may be assessment tools such as a guide to interview questions or forms on which to record data collected during the health history interview and physical examination. Most primary care settings use electronic medical records (EHRs) for recording data. Also, gather any equipment (e.g., stethoscope, thermometer, otoscope) necessary to perform a nursing health assessment.

Collecting Subjective Data

Subjective data are sensations or symptoms (e.g., pain, hunger), feelings (e.g., happiness, sadness), perceptions, desires, preferences, beliefs, ideas, values, and personal information that can be elicited and verified only by the client (Fig. 1-6). To elicit accurate subjective data, learn to use effective interview skills with a variety of clients in different settings. The major areas of subjective data include:

- Biographical information (name, age, religion, occupation, etc.)
- History of present health concern: physical symptoms related to each body part or system (e.g., eyes and ears, abdomen)
- Personal health history
- Family history
UNIT 1 Nursing Data Collection, Documentation, and Analysis

- Health and lifestyle practices (e.g., health practices that put the client at risk, nutrition, activity, relationships, cultural beliefs or practices, family structure and function, community environment)
- Review of systems

### Validating Assessment Data

Validation of assessment data is a crucial part of assessment that often occurs along with collection of subjective and objective data. It serves to ensure that the assessment process is not ended before all relevant data have been collected and helps to prevent documentation of inaccurate data. What types of assessment data should be validated, the different ways to validate data, and identifying areas where data are missing are all parts of the process. Validation of data is discussed in detail in Chapter 4 (Fig. 1-8).

### Documenting Data

Documentation of assessment data is an important step of assessment because it forms the database for the entire nursing process and provides data for all other members of the health care team. Thorough and accurate documentation is vital to

#### Collecting Objective Data

The examiner directly observes objective data (Fig. 1-7). These data include:

- Physical characteristics (e.g., skin color, posture)
- Body functions (e.g., heart rate, respiratory rate)
- Appearance (e.g., dress, hygiene)
- Behavior (e.g., mood, affect)
- Measurements (e.g., blood pressure, temperature, weight)
- Results of laboratory testing (e.g., platelet count, x-ray findings)

This type of data is obtained by general observation and by using the four physical examination techniques: inspection, palpation, percussion, and auscultation. Another source of objective data is the client’s medical health record, which is the document that contains information about what other health care professionals (i.e., nurses, physicians, physical therapists, dietitians, social workers) observed about the client. Objective data may also be observations noted by the family or significant others about the client. See Table 1-2 for a comparison of objective and subjective data.

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### Table 1-2 Comparing Subjective and Objective Data

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<th>Subjective</th>
<th>Objective</th>
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<tr>
<td>Description Sources</td>
<td>Data elicited and verified by the client Client</td>
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<tr>
<td>Methods used to obtain data Skills needed to obtain data</td>
<td>Interview and therapeutic communication skills</td>
</tr>
<tr>
<td>Examples</td>
<td>Caring ability and empathy Listening skills “I have a headache.” “It frightens me.” “I am not hungry.”</td>
</tr>
</tbody>
</table>
ensure that valid conclusions are made when the data are analyzed in the second step of the nursing process. Chapter 4 discusses the types of documentation, purpose of documentation, what to document, guidelines for documentation, and different types of documentation forms (Fig. 1-9).

**ANALYZING CUES TO IDENTIFY CLIENT CONCERNS: STEP 2 OF THE NURSING PROCESS**

Analysis of cues (the second phase of the nursing process) requires the nurse to use clinical judgment. During this phase, you recognize, analyze, and synthesize cues to determine whether the cues reveal a client concern (nursing problem), a collaborative concern (collaborative problem), or a concern that needs to be referred to medicine or another discipline (referral). Analysis of the collected data goes hand in hand with the rationale for performing a nursing assessment, which is to make informed clinical judgments about the client’s health.

A client concern is defined in this textbook as a problem of a client who may be an individual, family, group, or community. These concerns are identified and prioritized by nurses to plan nursing interventions to treat and evaluate the client concern. Collaborative problems are defined as certain “physiological complications that nurses monitor to detect their onset or changes in status” (Carpenito, 2017). Nurses manage collaborative problems by implementing both physician- and nurse-prescribed interventions to reduce further complications. Referrals occur because nurses assess the “whole” (physical, psychological, social, cultural, and spiritual) client, often identifying problems that require the assistance of other health care professionals. Chapter 5 provides information about client concerns, collaborative problems, and referrals.

**Process of Data Analysis**

To identify client concerns, collaborative problems, or need for referral, you must go through the steps of data analysis. This process requires diagnostic reasoning skills, often called critical thinking. The process can be divided into six major steps:

- Identify abnormal cues and supportive cues.
- Cluster cues.
- Draw inferences and identify and prioritize client concerns.
- Propose possible collaborative problems to notify primary care provider.
- Identify need for referral to primary care provider.
- Document conclusions.

Each of these steps is explained in detail in Chapter 5. In addition, each assessment chapter in this text contains a section called “Analysis of Data,” which uses these steps to analyze the assessment data presented in a specific client case study related to chapter content.

**FACTORS AFFECTING HEALTH ASSESSMENT**

When performing a health assessment, the nurse must look beyond the individual client to assess each client within the context of the client’s culture, family, and community, which may all influence one’s health status. When you look at a client, you need to consider these contexts and assess how they may be affecting the client’s health. The reverse is also true; the person’s family, community, and even spirituality are affected by their health status, even if only in subtle ways. Understanding or being aware of the client in context is essential to performing an effective health assessment. Remember, though, that you must be aware of any perceived notions you have about the client’s cultural, spiritual, community, or family context.

Many systems are operating to create the context in which the client exists and functions. The nurse sees an individual client, but accurate interpretation of what the nurse sees depends on perceiving the client in context. Culture, family, and community operate as systems interacting to form the context.
A health assessment textbook for nurses focuses on providing a solid baseline for determining normal versus abnormal data gathered in a health history and physical assessment. This text must be supported by knowledge or concurrent instruction in medical–surgical and psychosocial nursing and, of course, anatomy and physiology. In this text, we can provide only a review of key concepts of these subjects.

As with anatomy and physiology, medical–surgical nursing, and psychosocial nursing content, a health assessment textbook can only provide key concepts related to culture, family, spirituality, and community. Many texts on transcultural nursing, family nursing, family therapy, social work, community spirituality, and community are many texts on transcultural nursing, family nursing, family therapy, social work, community spirituality, and community. Many texts on transcultural nursing, family nursing, family therapy, social work, community spirituality, and community education are available on the point. Visit the point to access:

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REFERENCES


SUMMARY

Nursing health assessment differs in purpose, framework, and end result from all other types of professional health care assessments. Interviewing and physical assessment techniques are used independently by nurses to arrive at professional clinical judgments concerning the client’s health.

Assessment is the first and most critical step of the nursing process, and accuracy of assessment data affects all clinical judgments made during all phases of the nursing process. Health assessment can be divided into four steps: collecting subjective data, collecting objective data, validation of data, and documentation of data. There are four types of nursing assessment: initial comprehensive, ongoing or partial, focused or problem-oriented, and emergency.

It is difficult to discuss nursing assessment without taking the process one step further. Data analysis is the second step of the nursing process and the end result of nursing assessment. The purpose of data analysis is to reach conclusions concerning the client’s health. These conclusions are in the form of client concerns, collaborative problems, or a need for referral. To arrive at conclusions, the nurse must use critical thinking skills. Maintaining a focus on the clients in the contexts of their culture, family, and community is emphasized in this text.