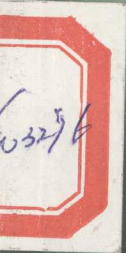


SIXTH EDITION

Clinical Assessment *in* Respiratory Care

ROBERT L. WILKINS
JAMES R. DEXTER
ALBERT J. HEUER



SIXTH EDITION

Clinical Assessment *in* Respiratory Care

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To my two sons Tyler and Nick, thanks for teaching me the joys of being a father.

RLW

To Kaari Dean Dexter, whose fingerprints are all over most of my chapters.

JRD

To my lovely wife Laurel for her patience and support and to RLW
for the privilege of working with him on this text.

AJH

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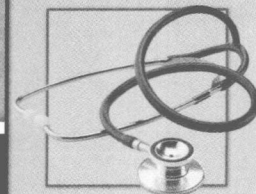
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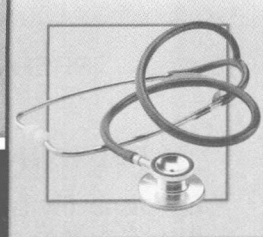
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Preface



The primary purpose of the sixth edition is the same as the previous ones: to provide relevant information related to the knowledge and skills needed for the respiratory therapist (RT) to be competent at patient assessment. The language of this text continues to be aimed primarily at respiratory therapy students, although experienced therapists may benefit from its content as well. By reading this book we hope that students and clinicians gain important insight into the value, purpose, and skills associated with patient assessment. The average RT in the United States is now expected to assist the physician in assessing patients for the treatment needed, the complications that arise, and when the treatment needs to be changed or is no longer needed. Without a solid understanding of the principles in this text, the RT will fail at these duties and patient outcomes will suffer.

Although this project took many months to complete, we took on the task because we each have a passion for patient assessment. We have seen first hand the difference in patient care by RTs when they are competent at patient assessment. In many cases an RT was able to identify the early signs of atelectasis through the use of a stethoscope and evaluation of breathing pattern, the misplacement of an endotracheal tube through the use of a stethoscope and the chest radiograph, or serious abnormalities based on the arterial blood gas. Such skills change the outcome of many patients in and out of the hospital, and that is our motivation for spending countless hours at the computer putting together this book. We hope that the knowledge in this book will help optimize the clinical skills of all RTs and inspire many to develop a passion for patient assessment.

NEW TO THIS EDITION

- Each chapter has been carefully reviewed and updated to reflect the latest standards of practice.
- A new chapter on neurologic assessment has been added. Although most RTs do not perform complete neurologic assessments, they do need to understand the process and how the results may influence a patient's breathing. It is very common for a patient with neuromuscular disease to develop respiratory failure or pneumonia and need the care of an RT. The RT providing this care will better relate to the patient and make sound clinical decisions if he/she reads and comprehends the chapter. The chapter—written by a good friend and colleague, Dr. Ruben Restrepo, from the University

of Texas Health Science Center in San Antonio—does an excellent job of covering a complex topic and focusing on the primary issues that affect RTs.

- The chapter on hemodynamic monitoring now has case studies at the back of the chapter. The case studies will challenge the reader to interpret hemodynamic data and make an accurate patient assessment. The correct interpretation and assessment is provided in the discussion portion of the case study.
- Another major change for this edition is the addition of two new authors/editors: Dr. James Dexter and Dr. Albert Heuer.
 - Dr. Dexter is a pulmonologist from Southern California who has excellent skills at writing, teaching, and patient care. He took on this assignment bravely and served an important role in making all the medical content current.
 - Dr. Heuer is an RT educator from New Jersey who updated numerous chapters and served as a consultant for content on many other chapters. As an RT instructor who also continues to regularly work in a clinical setting, his input was most valuable.
- Bulleted key point summaries have been added to the end of each chapter. While the summary is not a substitute for reading the chapter, it will help the reader more rapidly review and retain the salient points.
- Most of the line drawings have been redrawn or enhanced to better highlight key information.

FEATURES

We continue to use learning features to help guide the student to mastery of the content. This edition features:

- Chapter outlines
- Measurable chapter learning objectives
- Key terms, which are bolded and defined within the text.
- “Simply Stated” boxes are scattered throughout each chapter to succinctly summarize and highlight key points within the text.
- Select chapters include Case Studies, which feature realistic clinical scenarios for student practice and/or classroom discussion.
- “Questions to Ask About” boxes are also included in select chapters. They provide lists of questions that practitioners should ask about certain conditions.
- Assessment Questions conclude each chapter.

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We thank the many contributors to the chapters in this text. Their expertise and willingness to share it is most important to the value of this text. We also thank Dr. Ruben Restrepo and Professor Richard Wettstein for their assistance with the test bank and PowerPoints available at the Evolve web site. Finally we want to acknowledge the excellent work of our editor at Mosby, Mindy Hutchinson, who kept us focused and led us through the journey with a commitment to excellence.

RLW
JRD
AJH



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Preparing for the Patient Encounter

ROBERT L. WILKINS

CHAPTER OUTLINE

Role of the Respiratory Therapist in Patient Assessment

Stages of Patient–Clinician Interaction

Preinteraction Stage

Introductory Stage

Initial Assessment Stage

Treatment and Monitoring Stage

Follow-up Stage

Communicating the Assessment Findings

Use of Space

Social Space

Personal Space

Intimate Space

Territoriality

Confidentiality

Health Insurance Portability and Accountability Act

Expressing Genuine Concern

Face the Patient Squarely

Use Eye Contact Appropriately

Maintain an Open Posture

Consider Appropriate Use of Touch

Be an Active Listener

Universal Precautions

Interpreting Diagnostic Test Results

LEARNING OBJECTIVES

After reading this chapter, you will be able to:

- ♦ Describe the role of the respiratory therapist (RT) in patient assessment.
- ♦ Recognize the purpose(s) of the preinteraction, introductory, initial assessment, treatment and monitoring, and follow-up stages of patient–clinician interaction.
- ♦ Recognize the approximate distances and appropriate activities for proper conduct within the social, personal, and intimate spaces.
- ♦ Recognize the value of the RT being aware of territoriality.
- ♦ Describe techniques that convey genuine concern during patient–clinician interaction.
- ♦ Describe the general premise of universal precautions and methods by which they are practiced.
- ♦ Define the following terms as they pertain to interpreting diagnostic test results:
 - ♦ True positive
 - ♦ True negative
 - ♦ False positive
 - ♦ False negative
 - ♦ Sensitivity
 - ♦ Specificity

KEY TERMS

diagnostic reasoning
false negative
false positive
intimate space

personal space
sensitivity
social space
specificity

territoriality
true negative
true positive

The purpose of this chapter is to describe your role as a respiratory therapist (RT) in patient assessment and to help you develop an appropriate bedside manner. This is vitally important to the process of patient assessment. As a bedside clinician, you must be capable of efficient and accurate assessments and must conduct yourself in a professional manner during all patient encounters. This chapter will help you understand some of the important issues related to professionalism at the bedside of patients needing medical care. A professional bedside manner is the foundation on which each assessment and all quality patient care are built.

ROLE OF THE RESPIRATORY THERAPIST IN PATIENT ASSESSMENT

The role of the RT with regards to patient assessment has changed dramatically over the past several decades. Originally, RTs served as equipment technicians who were not expected to evaluate patients or their response to treatment. Today, however, RTs are often called on to assist the physician in the process of diagnostic reasoning (Table 1-1). **Diagnostic reasoning** calls for cognitive skills in communicating, selecting assessment tests, interpreting results, formulating solutions, and evaluating treatment plans. This is known as critical thinking and is a vital part of the modern health care system. All RTs should be able to apply these skills to their daily care of patients with cardiopulmonary disease.

Although the RT does not determine a medical diagnosis, he/she often does help the physician in selected steps of diagnostic reasoning. For example, the patient who suffers from acute dyspnea with exercise may need pulmonary function testing to rule out or identify possible causes. The RT plays a key role in this case and may assist the physician in selecting specific tests and in interpreting the results. In addition, the RT is often stationed at the bedside of the hospitalized patient and is in a good position to evaluate his/her response to care. This is particularly true of the intensive care unit (ICU) patient who is at high risk for complications. For example, the ICU patient who is being mechanically ventilated may suddenly develop

acute shortness of breath. The RT must implement his/her patient assessment and critical thinking skills to address the problem. Once potential causes and solutions are identified, the RT should consult with the physician before implementing treatment.

In summary, the role of the RT in patient assessment is important. He/she may be called on to assist the physician in making a diagnosis and must be able to apply assessment and critical thinking skills to acute problems that develop in the hospitalized patient. Critical thinking skills are an important part of the assessment process because they help the RT determine the diagnostic procedures to implement and are needed to make conclusions about the findings. In addition, clinical assessment skills are needed to determine the effects, good or bad, of any treatment given to the patient.

STAGES OF PATIENT-CLINICIAN INTERACTION

Preinteraction Stage

The majority of patient encounters begin with a review of the patient's chart to identify details such as the name, age, gender, chief complaints, history of present illness (see Chapter 2), and the physician's initial orders. Use this information to introduce yourself to the patient and for making an initial assessment of the patient. This stage should take only a few minutes but is well worth the time and effort. Finally, clarify in your mind what your role will be with regard to caring for the patient you are about to encounter. Once you have reviewed the patient's chart and clarified in your mind what you will be doing for the patient, you are ready to see the patient.

Introductory Stage

The introductory stage is the stage in which you enter the patient's room and introduce yourself. Your initial introduction should take place in the social space, which is about 4 to 12 feet from the patient (see later discussion of "Use of Space"). This introduction sets the tone for the rest of the visit. You should introduce yourself by greeting the patient with his/her formal name. This is to be followed by a brief description of the purpose of your visit and your role in caring for the patient during the hospitalization.

TABLE 1-1

Steps of Diagnostic Reasoning

Steps	Examples
1. Identify the patient problem(s).	Patient complains of dyspnea.
2. Clarify the problem(s).	Dyspnea occurs only during exercise.
3. Perform additional assessment procedures.	Auscultation reveals wheezing.
4. Formulate list of potential causes.	Asthma, CHF, bronchitis.
5. Obtain specialized test(s).	PFT shows obstructive lung disease.
6. Determine potential solution(s).	Bronchodilators before exercise.
7. Evaluate solution and monitor patient.	Patient states SOB has resolved with bronchodilators.

CHF, Congestive heart failure; PFT, pulmonary function test; SOB, shortness of breath.

This type of formal introduction is to be used in most clinical settings. Even the comatose patient unable to respond deserves this type of respect. An exception would be made for the critically ill patient in need of emergency care such as cardiopulmonary resuscitation.

An important part of the introductory phase is the confirmation of patient identification. The most reliable method for verifying the patient identity is to read the identification (ID) bracelet. The patient name and identification number on the bracelet should match the name and number on your paperwork before you begin any formal assessment or treatment.

Before reading the patient's ID bracelet, you should ask the patient for permission to do so. Simply reaching for the ID bracelet may be misinterpreted by the patient and received poorly. It is more appropriate to ask the following question: "May I look at your ID bracelet to make sure I am working with the correct patient?" This conveys to the patient that you respect his/her privacy and you are committed to providing quality patient care.

Clinicians should take a two-step approach to verifying patient identity in the conscious patient. The first step is to use the patient's name and monitor the response. For example, you walk into the room of a patient you believe to be Mr. Carter and begin by saying, "Good morning. Are you Mr. Carter?" If he responds with "Good morning. Yes, I am," you have some evidence that he is probably Mr. Carter. This step should supplement and never replace reading the patient's identification bracelet (step 2).

The introductory stage is important in establishing a rapport between you and the patient. A positive rapport is necessary to obtain the patient's cooperation with assessment and treatment procedures. Patients usually appreciate and respond positively to a warm, friendly introduction done in a professional manner. Be careful to avoid overly friendly or jovial statements because they may be irritating to those patients who are depressed or upset as a result of their illness. For example, stating "Isn't it a wonderful day?" to a patient dying from lung cancer is likely to be received poorly. Be friendly, but avoid extremes.

During the introductory phase, look for signs of resistive behavior in the patient. This may be seen as crossed arms, refusal to make eye contact, or very brief responses to your questions. These responses represent clues that the patient is not likely to be cooperative or accepting of your suggestions and may not be listening carefully to your questions and instructions. In such cases, you will need to make an extra effort to establish a rapport with the patient and improve communication. Other techniques for establishing a rapport and demonstrating genuine concern are discussed later in this chapter.

SIMPLY STATED

The introductory stage is important for introducing yourself to the patient, confirming his/her identification, and beginning to establish a rapport.

Initial Assessment Stage

The initial assessment stage actually overlaps the introductory stage because you can easily begin visual inspection of the patient during your introduction. Take time to note the patient's general appearance, attitudes, and responses to your statements and questions as mentioned previously. Formal assessment of the patient with a brief interview regarding chief complaints at admission can now take place (see Chapter 2). The interview is followed in most cases by a brief physical examination to determine the pretreatment status of the patient (see Chapters 4, 5, and 6). Your goal at this point is to determine the baseline condition of the patient and to make sure the prescribed treatment ordered by the physician is appropriate. Occasionally, you may evaluate the patient whose condition has abruptly changed since the initial orders were written and who is now in need of different treatment. In fact, the prescribed treatment may be contraindicated. If you skip the initial assessment stage, you will be blindly following orders that may result in inappropriate and possibly harmful treatment. Contacting the attending physician is necessary when your initial assessment reveals a need for different treatment. In addition, determining the patient's baseline values for symptoms, vital signs, and breath sounds will be most helpful to evaluate the effects of the treatment you are about to provide. Significant improvement in these baseline values after treatment provides evidence that the treatment is effective.

Treatment and Monitoring Stage

After your initial assessment of the patient, you are now ready to administer treatment. During the treatment stage you will need to continue to use your assessment skills to evaluate the effects of the treatment. Occasionally, the patient may develop side effects from the treatment, or the therapy may not result in the expected beneficial response. Your ability to identify and document the positive and negative effects of the therapy is crucial to the patient's care. Therapy should be stopped immediately when side effects occur. The respiratory care supervisor, head nurse, and attending physician need to be notified in such cases.

Follow-up Stage

You should take a minute to communicate with the patient once the treatment or bedside procedure is completed. Note any changes in symptoms, attitudes, alertness, and so forth, and document your findings. Let the patient know when you will return and how to contact you if the need arises. Make sure the patient is as comfortable as possible and ask if there is anything you can do to help the patient before exiting the room. This brief stage is useful in developing your rapport with the patient and in building a positive attitude in the patient toward you and your employer.

COMMUNICATING THE ASSESSMENT FINDINGS

After most interactions with the patient, you will need to communicate your findings to other members of the health care team. Written documentation in the patient's chart may be sufficient communication if the patient is stable after routine treatment. Verbal communication is also needed when the patient's condition has deteriorated or when the procedure was not tolerated well. You should communicate your findings to the patient's nurse and physician in such circumstances, in addition to writing your findings in the patient's chart. Documentation in the chart should include specific findings, as well as the details of who was notified about the change in the patient's condition (see Chapter 21).

For example, you enter the room of Mr. Jones to provide treatment for his asthma. On entering the room, you note that he appears much more short of breath than usual and his vital signs have deteriorated significantly. The treatment you give him does not seem to be helping. It is imperative that you document and communicate your findings. Verbal discussion with the patient's nurse is a good place to start. Paging the patient's physician to notify him/her of the change in Mr. Jones' condition is also appropriate

in such cases. Next you must document the patient's condition in his chart and note who you communicated with about the patient and what was said. If you perceive that the patient's condition is serious, stay with him/her and use your diagnostic reasoning and assessment skills to evaluate the problem and develop potential solutions.

SIMPLY STATED

Sudden clinical deterioration of the patient must be documented in the patient's chart and communicated to the appropriate nurse and physician. A record of who was communicated with and when should also be kept.

USE OF SPACE

An important but often overlooked issue related to interaction with patients is the appropriate use of the space surrounding each patient. Proper use of the three zones described next adds to the professionalism of all bedside clinicians.

Social Space

The **social space** (4 to 12 feet) is useful for your introduction to the patient and is where you begin to establish rapport (Figure 1-1). At this distance, you can see

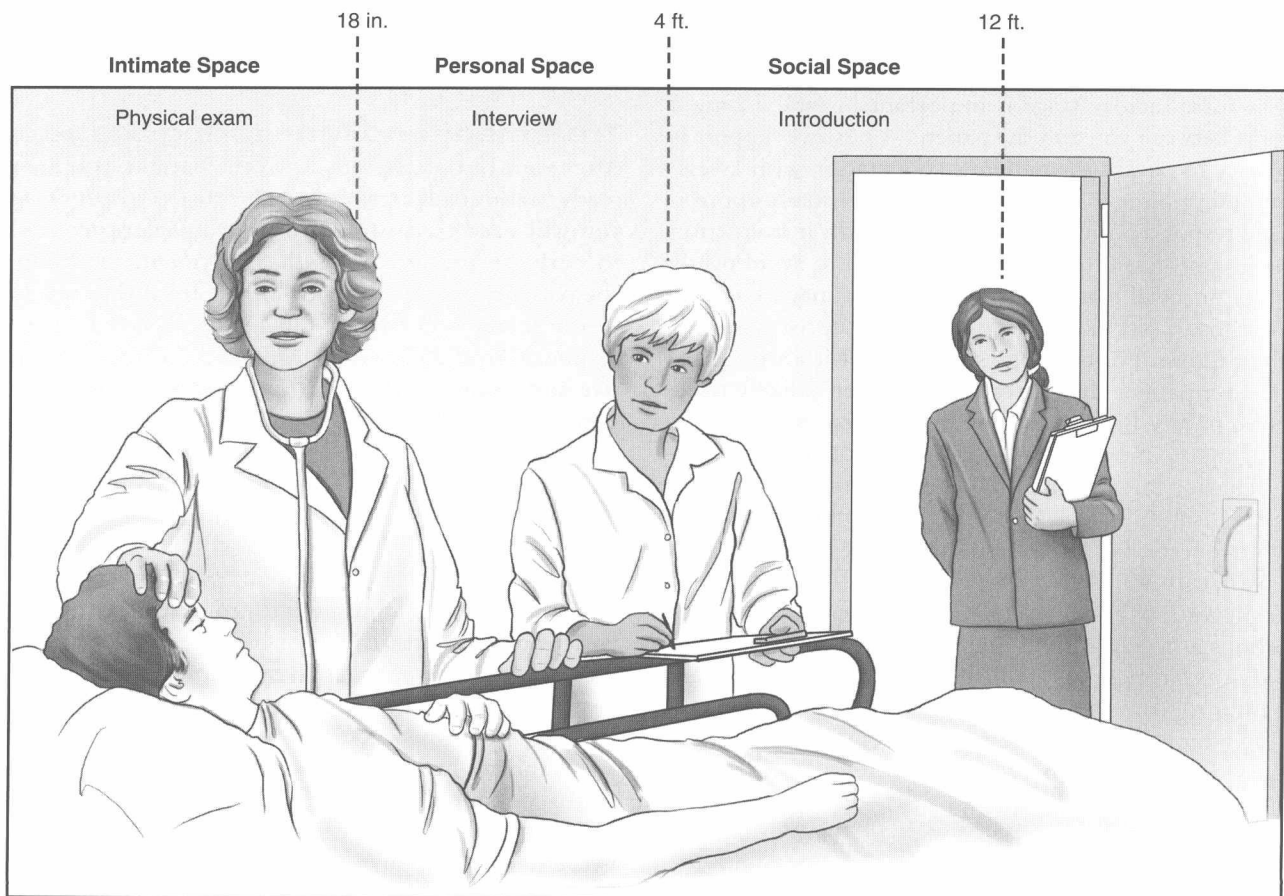


FIGURE 1-1 Illustration of the social, personal, and intimate spaces of the patient needing health care.

the “big picture” and gain an appreciation for the whole patient and his/her environment. Vocalizations are limited to the more formal issues, and personal questions are to be avoided in this space because others in the room can easily overhear the conversation.

Personal Space

The **personal space** (18 inches to 4 feet) is most useful for the interview, especially when more personal questions are to be asked. For example, some patients are uncomfortable when answering questions about their daily sputum production or smoking habits. Answers to such personal questions are more likely to be accurate and detailed when the questions are asked from the personal space. In addition, providing privacy by pulling the bedside curtain may be useful in making the patient feel more comfortable about answering questions. The personal space is best entered only after a rapport with the patient has been established in the social space previously described.

The interview is not only useful for gathering information but also for further development of the rapport between you and the patient. The rapport you have with the patient becomes more important when you invade his/her intimate space, as described in the next section, and when you begin therapeutic procedures. Attention to details regarding your professional appearance is important in the personal space. The patient will often feel more comfortable and confident with you if your appearance is neat, clean, and professional. Appropriate use of eye contact is needed in the personal space because this will increase the patient's trust in you (see Figure 1-1).

Intimate Space

In most cases, invasion of the **intimate space** (0 to 18 inches) is done only after your introduction in the social space and brief interview in the personal space. These initial steps in establishing a rapport with the patient make invasion of the patient's intimate space more comfortable for both of you. In addition, invasion of the intimate space should be preceded by a request for permission to do so. This communicates your respect for the patient as a person and also lets the patient know that he/she has a say in the medical care provided. Permission to invade the patient's intimate space is often obtained simply by requesting permission to listen to breath sounds or check vital signs.

The intimate space is reserved primarily for physical examination of the patient and therapeutic procedures. Minimal or no eye contact is used in this space. Verbal communication with the patient should be limited to simple questions or brief commands such as, “Please take a deep breath.”

Invasion of the patient's intimate space is often met with a variety of responses. Gender, age, race, physical appearance, health status, and cultural background represent a few of the many factors that may influence the comfort level of the patient when you enter the intimate space. Be aware that some patients may respond poorly to

your invasion of their space, and be prepared to move more slowly and communicate very carefully in such cases.

SIMPLY STATED

The social space (4 to 12 feet) is for introductions, the personal space (18 inches to 4 feet) is for interviewing, and the intimate space (0 to 18 inches) is for physical examination.

TERRITORIALITY

Most patients “lay claim” to all items within a certain boundary around their bed. For patients in a private room the boundary will extend to the walls of the room. Removing items from the patient's “territory” should occur only after permission has been obtained. For example, when borrowing a chair from the bedside of Mr. Jones for use at the bedside of Mr. Smith, you should ask Mr. Jones for permission. Although technically the majority of bedside items are owned by the hospital, they temporarily “belong” to the patient while he/she is hospitalized. Being aware of the **territoriality** issue will improve your bedside manner and may avoid upsetting a patient.

CONFIDENTIALITY

While reviewing the patient's chart and conducting the interview, you will learn about the patient's current and past medical history. This information is private and not for public knowledge. Perhaps the patient has a history of alcohol or drug abuse or has been diagnosed with a sexually transmitted disease. You are responsible for respecting the patient's right to privacy by not sharing such assessment information with others who are not in a position of needing to know the patient's medical history. Violations of patient confidentiality are unethical and may be subject to legal recourse. Most often, violations of patient confidentiality occur in the hospital elevator or cafeteria when a clinician discusses a certain patient with other caregivers while being overheard by visitors. A good rule to follow is to discuss your patient's health status only with other members of the health care team who need to know such information and only in a private report room where visitors are not allowed (Box 1-1).

Family members and visitors often ask questions about the patient's diagnosis but should be referred to the attending physician in all cases. This should be done in a way that does not alarm or offend the person asking about your patient. Most people will understand and appreciate an honest response in which you inform them that it is against hospital policy for you to discuss the patient's diagnosis with others.

Health Insurance Portability and Accountability Act

In 1996 Congress passed the Health Insurance Portability and Accountability Act (HIPAA). The purpose of HIPAA

Box 1-1**Ten Golden Rules of Clinical Etiquette****1. Maintain a professional appearance whenever you come into contact with patients or their families.**

Dress codes vary among hospitals, clinics, and home care services and also according to the clinician's role. However, whether appropriate dress includes a white laboratory coat, conventional business wear, or a scrub suit, it (and the person in it) should be clean and reasonably neat.

2. Identify yourself—not only by name but also by role.

Always wear a name tag when dealing with patients and explain why you are there. Attending physicians, residents, students, RTs, nurses, and others use the same medical terms and may dress similarly. Patients may assume that anyone in hospital dress is a doctor, and there can be serious medical, psychological, and even legal consequences if misconceptions are not corrected.

3. Do not call adult patients by their first names.

What may be intended as a means of "breaking the ice" and establishing rapport is perceived by many patients as condescending and insulting. In general, patients older than high school age should be called "Ms," "Miss," "Mrs," or "Mr." Use of a patient's first name requires that person's permission, would generally be considered only after numerous contacts, and would seldom be appropriate on a first encounter.

4. Respect and preserve the patient's modesty.

Draw the curtains. Do not uncover the patient in view of visitors or other patients. Remember that boys and men are often as modest as girls and women.

5. Do not rest your foot on the bed frame or sit on the patient's bed without permission.

Hospitalization renders patients vulnerable in many ways, and uninvited invasions of their "territory" may cause unnecessary distress.

6. Do not talk about patients in the elevator (or in the hallways, in the cafeteria, on a bus, or in other public places).

Being a health professional allows one access to privileged, personal information that should not be shared, intentionally or unintentionally, with anyone not directly caring for the patient. Offhand remarks heard by family members in the elevator can cause great distress and interfere with clinician-patient relationships. Inappropriate use of such information is not only unethical but also against the law.

7. Do not discuss prognosis or other sensitive issues with others in front of the patient.

Patients may misinterpret snatches of conversation or think remarks about another patient apply to them. Terms such as "death," "terminal," and "cancer" are especially upsetting and should be avoided around patients.

8. Do not argue in front of the patient.

Differences of opinion and disciplinary actions should take place well out of a patient's earshot. Displays of anger have no place in patient care areas.

9. Do not criticize the actions of other members of the health care team with or within earshot of the patient.

You may not agree with Dr. so-and-so's diagnosis or treatment plan, but voicing this disagreement in front of the patient or family members is harmful to clinician-patient relationships and indirectly to the team's effectiveness.

10. Keep disagreements and criticism out of the patient's chart.

Disagreements and criticism should be dealt with one-on-one, in person, and not in the permanent (legal) record.

From Pierson DJ, Kacmarek RM: *Foundations of respiratory care*, New York, 1992, Churchill Livingstone.

was to increase the ease with which people could transfer their health care information from one insurer or provider to another. Title II of this law and the accompanying 2002 regulation known as the "Privacy Rule" restrict how health care providers may handle and disclose patient health information. The Privacy Rule took effect April 14, 2003 and establishes regulations for the use and disclosure of Protected Health Information (PHI). PHI is any information about health status, provision of health care, or payment for health care that can be linked to an individual. This is interpreted rather broadly and includes any part of a patient's medical record or payment history. To comply with this law, health care entities must ensure that only approved personnel have access to PHI.

RTs and RT students may have an opportunity to present or publish a unique case study for the purposes of sharing educational information with other members of the health care team. To comply with HIPAA the author of the case study must de-identify the report. The following 18 potential identifiers must be removed from the report before it can be shared with others:

- Names
- Geographic subdivisions smaller than a state
- All elements of dates (except year) related to an individual (including dates of admission, discharge, birth, and death) and for individuals over 89 years old, the year of birth must not be used
- Telephone numbers
- Fax numbers
- Electronic mail addresses
- Social Security numbers
- Medical record numbers
- Health plan beneficiary numbers
- Account numbers
- Certificate/license numbers
- Vehicle identifiers and serial numbers, including license plates
- Device identifiers and serial numbers
- Web URLs
- Internet protocol addresses
- Biometric identifiers (including finger and voice prints)
- Full face photos and comparable images
- Any unique identifying number, characteristic, or code