CHAPTER 1

Approach to the Diagnosis and Management of On-Call Problems

Clinical problem solving is an important skill for the physician on call. Traditionally, a physician approaches the diagnosis and management of a patient's problems with an ordered, structured system (e.g., history taking, physical examination, and review of available investigations) before formulating the provisional and differential diagnoses and the management plan. The history taking and physical examination may take 30 to 40 minutes for a patient with a single problem who is visiting a family physician for the first time and longer still for a patient with multiple complaints. Clearly, if the patient arrives at the emergency department unconscious, having been found on the street, the chief issue is coma, and the history of current illness is limited to the minimal information provided by the ambulance attendants or by the contents of the patient's wallet. In this situation, physicians are trained to proceed concurrently with examination, investigation, and treatment. How this should be achieved is not always clear, although there is agreement on the steps that should be completed within the initial 5 to 10 minutes.

The physician first confronts on-call problem solving in the final years of medical school. At this stage, the structured history taking and physical examination direct the student's approach in evaluating a patient. When on call, the medical student is faced with well-defined problems (e.g., fall out of bed, fever, chest pain) and yet may feel ill equipped to begin clinical problem solving unless the *complete history and physical examination* have been obtained. Anything less is a task only partially completed; however, not every on-call problem can involve 60 minutes or more of the physician's time, because unnecessary time spent on patients with relatively minor complaints may preclude adequate treatment time for patients who are very ill.

The approach recommended in this book is based on a system that is structured but can be logically adapted to most situations. It is intended as a practical guide to assist in efficient clinical problem solving when on call. The clinical chapters are divided into four parts:

1. Phone call
2. Elevator thoughts
3. Major threat to life
4. Bedside

PHONE CALL

Most problems confronting the physician on call are first communicated by telephone. The physician must be able to determine the severity of the problem on the basis of this information because it is not always possible to assess the patient at the bedside immediately. Patients must be evaluated in order of priority. The phone call section of each chapter is divided into three parts:

1. Questions
2. Orders
3. Informing the registered nurse (RN)

The questions are intended to assist in determining the urgency of the problem. Orders that will expedite the investigation and management of urgent situations are suggested. Finally, the RN is informed of the physician's anticipated time of arrival at the bedside and the responsibilities of the nurse in the interim.

ELEVATOR THOUGHTS

The physician on call is usually not in the immediate vicinity when he or she is informed of a problem that necessitates assessment, but the time spent traveling to the ward (up to 10 minutes in some large hospitals) can be used efficiently to consider the differential diagnosis of the problem. Because travel time is often spent in elevators, the term *elevator thoughts* has been coined to summarize the directed differential diagnosis. The lists of differential diagnoses that are presented are not exhaustive; rather, they focus on the most common or most serious (life-threatening) causes that should be considered in hospitalized patients.

MAJOR THREAT TO LIFE

To identify each problem's major threat to life, physicians must consider the differential diagnosis, which provides a focus for the subsequent investigation and management of the patient. Rather than arriving at the bedside with a memorized list of possible

diagnoses, it is more useful and relevant to appreciate the one or two most likely threats to life and use them to direct questions and the physical examination. This process ensures that the most serious life-threatening possibility in each clinical scenario is both considered and sought in the initial evaluation of the patient.

BEDSIDE

The protocols for what to do on arrival at the patient's bedside are divided into the following parts:

- Quick-look test
- Airway and vital signs
- Selective history
- Selective physical examination
- Selective chart review
- Management

The bedside assessment begins with the quick-look test, which is a rapid visual assessment that may enable the physician to categorize the patient's condition in terms of severity: well (comfortable), sick (uncomfortable or distressed), or critical (about to die). Next is an assessment of the airway and vital signs, which is important in the evaluation of any potentially sick patient. Because of the nature of the various problems that must be assessed when a physician is on call, the order of the remaining parts is not uniform. For example, the selective physical examination may either precede or follow the selective history and chart review, and either of these may be superseded by management if the clinical situation dictates.

Occasionally, the "Selective Physical Examination" and "Management" sections are subdivided, allowing the reader to focus on urgent, life-threatening problems, leaving the less urgent problems for later review.

It is hoped that the principles and protocols offered will provide a logical, efficient system for the assessment and management of common on-call problems.