



HANDBOOK OF URGENT CARE MEDICINE

**Michelle H. Biros
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Foreword

Urgent care centers have prospered over the last decade largely in response to a changing medical marketplace. Funding for medical care has encouraged outpatient care and discouraged inpatient care. Cost containment has been encouraged; a free-market system has given patients options with incentives for receiving care at relatively inexpensive facilities such as physicians' offices or urgent care centers. Given the choice, people go where it is most convenient. Successful urgent care centers excel at providing this convenience.

The expanding outpatient market has created a demand for a new kind of physician, the urgent care physician, who is well versed in treating a wide variety of urgent (although typically not life-threatening) medical problems. Urgent care medicine is not a recognized medical specialty nor are there recognized training programs specific to it. Physicians with training in emergency medicine, family medicine, internal medicine, and even some with no specialty training work either full- or part-time in urgent care centers. This diversity in background, training, and experience indicates the need for a curriculum specific to urgent care. This text answers that need.

The *Handbook of Urgent Care Medicine* is written from the perspective of the emergency physician. The material is organized according to patient presentation, differential diagnosis, treatment, and pitfalls to be avoided. It is easy to quickly reference a specific problem, yet topics are covered in enough depth to be informative. The chapters are well referenced for those who would like to pursue a topic in greater detail. The *Handbook of Urgent Care Medicine* is a useful reference for any clinician who cares for patients with minor illness or injuries in the urgent care setting.

Ernest Ruiz, MD
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Preface

This book is designed for use by clinicians as a rapid reference in the diagnosis and treatment of patients who are likely to present to an urgent care center with a broad spectrum of minor illnesses and injuries. The urgent care physician is targeted as the audience because the background and training of these physicians tends to be diverse, strong in some areas yet weak in others. Other physicians, medical students, nurses, and allied health professionals working in a similar medical setting may also find this book useful.

The format of the book facilitates this purpose. The organization is based on presenting symptoms and body systems. The information is presented in a brief and concise manner, with frequent use of tables and figures. The scope is broad, with attention given to many minor problems that may be difficult to research in other texts. Serious illnesses that should be included in the differential diagnosis of presenting complaints as well as complications of minor problems are also described.

This book is not an all-inclusive, authoritative text. It is a reference that can be used quickly and easily to assist the clinician as patient care is being delivered. References are cited in the event that further reading in more detail is desired. The authors are members of the Department of Emergency Medicine of Hennepin County Medical Center. In addition to their Emergency Department experience, they have worked in an urgent care center and have assisted in the development of an urgent care training program.

The editors would like to thank Dr. Ronald B. Goodspeed, MSCH, FACP for his thoughtful review of this book. His comments were helpful in our final evaluation of the scope and intent of our work.

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1 Fielding True Emergencies in an Urgent Care Center

ERNEST RUIZ, MD

Expectations
Preparations
Recognition and Immediate
Management of Emergencies

Transport to an Emergency
Hospital
Conclusion

The public expects medical facilities and personnel to be prepared for emergencies. It is not difficult for an urgent care center (UCC) to attain a satisfactory degree of readiness with some planning and thoughtful preparation.

EXPECTATIONS

Depending on its location relative to other medical facilities and its ease of access to and from population or industrial centers, the UCC can expect certain types of emergency patients to appear occasionally at its door. Some UCCs can count on seeing an occasional severely ill infant or child, whereas other such clinics, depending on their location, would be more likely to encounter a severely injured industrial worker. A UCC that appears to be a free-standing quasi-emergency medical facility probably has a greater obligation, from the public's viewpoint, to be prepared to provide at least basic care for true emergencies than a physician's office or clinic. Adequate preparation for all types of emergencies is not difficult to achieve, and this should be the goal.

PREPARATIONS

The first step in preparing for true emergencies is to assess the availability, capabilities, and equipment carried by first and second responders of the local emergency medical services (EMS) system. As a general rule, the UCC should be supplied at least with the equipment that the first responders carry: oxygen cylinders with masks and nasal prongs, a bag-valve-mask apparatus, nasal and oral airways, esophageal obturator airways, cervical collars, and trauma dressings. Medications, monitors and defibrillators, IV equipment and fluids, and

intubating equipment are generally carried by the second responders (paramedics).

In addition to being familiar with the equipment offered by the EMS system, UCC personnel should be knowledgeable about the rules of operation of the system. In some systems the radio control physician at the base station gives any and all orders to paramedics. Some systems allow physicians at the scene to give orders, and other systems limit this by mandating that any physician who gives orders in the field must accompany the patient to the hospital. It behooves a physician in a UCC to become familiar with the standing orders that paramedics are allowed to follow without physician input as well as those procedures and medications that they are allowed to administer on a physician's order. The paramedics are operating under the medical license of their medical director, who has given them specific orders as to what they can and cannot do. Paying a visit to the medical director of the ambulance service would help familiarize a physician with the rules governing a particular system. Another important aspect of the local EMS system that may affect the UCC is its rules regarding acceptable "Do Not Resuscitate" orders and other such care-limiting orders. EMS systems may require specific forms and procedures to be followed before honoring such directives.

It is obviously important for the UCC physicians and nurses to be familiar with the local EMS system. The best way to activate the system should be thoroughly understood, and the number, usually 911, should be posted for ready reference. In some systems, activation means that fire fighters with full gear will enter the UCC, alarming the patients and personnel. Observers must understand that this is the best way to get immediate response and that the rescue personnel need to be prepared to leave for a fire at any time.

In most situations, at least when the UCC is free-standing, the standard medications and procedures included in the American Heart Association's Advanced Cardiac Life Support course should be available in the UCC.¹ This means that a monitor or defibrillator will be required in the UCC unless the response time of the EMS system is exceptionally short and consistent. Airway management, IV access, dysrhythmia recognition and management, and life support of arrest states in adults and children are included in this course.

RECOGNITION AND IMMEDIATE MANAGEMENT OF EMERGENCIES

Most true emergencies are obvious and should result in the immediate activation of the EMS system. Chapter 18 describes emergency conditions in children. True emergencies in adults are listed in Appendix A with steps that should be taken immediately while preparing for the arrival of EMS personnel and transportation of the patient to a full-service emergency department.

TRANSPORT TO AN EMERGENCY HOSPITAL

Protocols should be established in each UCC regarding the destination of patients being transferred for emergency care. Generally, patients should go to the nearest hospital that has sufficient facilities and expertise for definitive management of their problem.² The emergency physician at the receiving hospital should be called and informed of the patient's condition and estimated time of arrival. The emergency physician may suggest or request further intervention before transfer. Personnel at the receiving hospital can then be fully prepared to manage the patient on arrival.

CONCLUSION

Patients with true life-and-limb-threatening emergencies will occasionally present to the UCC. Planning and preparation can ensure that these patients receive appropriate initial care, enter the local EMS system quickly and efficiently, and are transported to the facility best able to care for them.

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2 Common Lower Respiratory Problems

DAVID PLUMMER, MD

Lower Respiratory Infection

- Acute Bronchitis
Differential Diagnosis
Management
Pitfalls in Practice
- Pneumonia
Differential Diagnosis
Management
Pitfalls in Practice

Wheezing

- Asthma
Differential Diagnosis
Management
Pitfalls in Practice
 - Chronic Obstructive
Pulmonary Disease
Differential Diagnosis
Management
Pitfalls in Practice
-

Minor lower respiratory problems are among the most common presentations in ambulatory medicine. The urgent care physician has the resources to manage most of these problems. Infrequently, these problems are immediately life threatening and require rapid airway intervention.

All patients presenting with respiratory complaints require immediate assessment of life-threatening respiratory failure. The three main principles in evaluating respiratory complaints are (1) assurance of a patent airway for ventilation and removal of secretions, (2) assurance of adequate oxygenation of arterial blood, and (3) assurance of adequate ventilation.

Stridor and sonorous respirations are signs of obstructed airway. Patients with even partial airway obstruction must immediately have a patent airway established. Urgent care personnel must deliver basic life support when upper airway obstruction is evident. Patients needing airway assistance require transport to a hospital by ambulance accompanied by trained personnel.

Accurate assessment of arterial oxygen content requires arterial blood gas sampling. Hypoxia is immediately life threatening, however, and arterial blood gas analysis is often unavailable in the urgent care setting. Supplemental oxygen therapy should not be withheld from the patient with probable hypoxia. Empiric oxygen therapy should be administered to patients with probable hypoxia; this includes patients with asthma, chronic obstructive pulmonary disease (COPD) exacerbations, and toxic pneumonia. Lethargy, cyanosis, or agitation often reflect