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# Emergency Medicine Pharmacotherapy: An Introduction

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**A**LTHOUGH EMERGENCY MEDICINE (EM) pharmacy practice as an area of specialization for pharmacists has existed since the 1970s,<sup>1</sup> recent changes in the health care market have created a new and growing market for pharmacists in the emergency department (ED). In a recent survey of hospitals with accredited pharmacy practice residencies, pharmacy directors reported that only 11% of EDs had clinical pharmacy services and 4% had pharmacy satellites for drug distribution in place. However, 52% of respondents stated that they had planned to implement pharmacy services in the ED.<sup>2</sup>

This resurgent interest in EM pharmacy practice comes at a time when pharmacotherapy and patient safety issues in the ED have garnered the attention of the Joint Commission on Accreditation of Health Care Organizations, the Institute of Medicine, and the Institute for Health Care Improvement.<sup>3-5</sup> The medical literature repeatedly shows that medication-related problems due to lack of efficacy or compliance and presence of adverse effects and toxicity of prescription and nonprescription medications account for as many as 28% of all visits to the nation's EDs and contribute a significant cost to the health care system.<sup>6</sup> Medication-related problems in the ED are further exacerbated by a nationwide problem of ED overcrowding and bottlenecks due to closure of many EDs, as well as a shortage of intensive care unit (ICU) beds secondary to a nationwide shortage of ICU nurses and other personnel.

All of these factors have contributed to an increased demand for EM pharmacy clinicians. Although more and more pharmacists are practicing in the ED, few are formally trained, even though they may be experienced in other complementary areas such as critical care or toxicology. Many also are young pharmacists who have recently completed a pharmacy practice residency. For all of these pharmacists, there is a need to develop the necessary knowledge base in pharmacotherapy issues in the ED as well as the culture and practice of EM as a medical specialty. For all of these reasons, the *Journal*

of *Pharmacy Practice* has dedicated this, its first such issue, to Emergency Medicine Pharmacotherapy.

Since the ED is the gateway between the community and the hospital (or health care system), EM as a medical specialty and EM pharmacy practice encompass the care of both critically ill and ambulatory patients. The goal of this "Emergency Medicine Pharmacotherapy" issue is to provide an in-depth review of several of the most common and important issues encountered in the management of all ED patients. Our ultimate goal with this group of articles is to provide state-of-the-art discussions on topics that EM clinical pharmacists will encounter and in which they should excel.

In this issue, leaders in EM pharmacy practice cover a wide range of topics. "Drug-Related Visits to the Emergency Department" discusses the incidence and nature of medication-related problems with which patients present to the ED. "Antibiotics for Life-Threatening Illness" and "Current Concepts in Severe Sepsis and Septic Shock" are 2 articles focusing on the most common infectious disease in the ED. In addition, the articles titled "An Emergency Department Approach to Drug Treatment of Hypertensive Urgency and Emergency," "Initial Appraisal of Acute Coronary Syndromes," and "Pharmacotherapy Overview of Seizure Management in the Adult Emergency Department"

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*JOURNAL OF PHARMACY PRACTICE* 2005, 18;5:327-328  
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DOI: 10.1177/0897190005282169

discuss the most common areas of cardiovascular and neurologic emergencies of import in the ED.

In all of these articles, the authors have covered not only a brief pathophysiology of the disease or the differential diagnosis of the common chief complaints or presenting problems but also a state-of-the-art evidence-based review of the pharmacotherapeutic issues and general management of these patients. The authors also address issues that commonly arise in decision making and issues regarding patient disposition from the ED.

There is a multitude of pharmacotherapy issues that we do not have the space to address in this issue. Examples include the management of stroke, withdrawal syndromes, trauma, and orthopedic injuries; management of endocrine emergencies such as diabetic ketoacidosis, thyrotoxicosis, and myxedema coma; hematologic and oncologic emergencies; and pulmonary emergencies such as status asthmaticus and chronic obstructive pulmonary disease exacerbations. And, lastly, a recent issue of the *Journal of Pharmacy Practice* has been dedicated entirely to the topic of toxicology.

I trust that with these excellent articles, pharmacy clinicians practicing in the ED will use this issue as a

method to increase the depth of their knowledge. I also hope that those not practicing in the ED will become aware of the breadth and scope of medication-related problems and how pharmacotherapy can be optimized by the specialized and focused knowledge of a pharmacist. And last, I envision that this issue will spark interest in some *Journal of Pharmacy Practice* readers to consider what is a very rewarding and exciting career in EM pharmacy practice.

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