

## **ASHP Statement on Pharmacy Services to the Emergency Department**

### **Position**

The American Society of Health-System Pharmacists (ASHP) believes every hospital pharmacy department should provide its emergency department (ED) with the pharmacy services that are necessary for safe and effective patient care. Although the nature of these services will vary according to each institution's needs and resources, the pharmacist's role may include:

- working with emergency physicians, emergency nurses, and other healthcare professionals to develop and monitor medication-use systems that promote safe and effective medication use in the ED, especially for high-risk ED patients and procedures;
- collaborating with emergency physicians, emergency nurses, and other healthcare professionals to promote medication use in the ED that is evidence-based and aligned with national quality indicators;
- participating in the selection, implementation, and monitoring of technology utilized in the medication-use process;
- providing direct patient care as part of the interdisciplinary emergency care team;
- participating in or leading emergency preparedness efforts and quality improvement initiatives;
- educating patients, caregivers, and healthcare professionals about safe and effective medication use; and
- conducting or participating in ED-based research.

ASHP supports the expansion of pharmacy education and postgraduate residency training to include emphasis in emergency care.

The purposes of this statement are to promote understanding of the ways in which pharmacists contribute to care in the ED and to suggest future directions for the role of pharmacists in providing that care.

## **Background**

EDs across the nation treat approximately 114 million patients annually.(1) They are overcrowded, due to a high percentage of uninsured patients, increased patient volumes, increased complexity of patients presenting to the ED, and a shortage of hospital beds that frequently results in the boarding of inpatients in the ED.(1) The combination of interruptions, intense pressure, and a fast-paced environment can lead to medication errors and fewer error interceptions.(1) In its landmark 1999 report, the Institute of Medicine (IOM) estimated that as many as 98,000 people die each year as a result of medical errors and that adverse drug events (ADEs) occurred in 3.7% of hospitalizations.(2) Other studies have reported a similar frequency of ADEs in the ED.(3) One study reported that 3.6% of patients received an inappropriate medication in the ED and 5.6% were prescribed an inappropriate medication upon ED discharge.(4)

Pharmacy services in the ED have been documented since the 1970s.(5,6,7,8) These services initially focused on inventory control, cost containment, and participation on resuscitation teams, but have since expanded to include clinical pharmacy services.(9) The effectiveness of clinical pharmacy services has been well documented in other settings. The participation of pharmacists in intensive care units and internal medicine teams has demonstrated improved patient outcomes through reduction of preventable adverse drug events by 66% and

78% respectively. (10,11,12) Similar effectiveness with pharmacist participation in emergency medicine teams has also been documented.(13) Despite this evidence, the 2005 ASHP National Survey found that only 3.5% of the hospitals surveyed had a pharmacist “assigned to the ED for any period of time,” and only 5% had “a formal policy requiring that pharmacists review and approve medication orders before administration” in EDs.(14)

### **Pharmacy Services to the ED**

All healthcare professionals share a commitment to and responsibility for providing safe and effective patient care. These shared objectives provide strong incentives for collaboration. Pharmacists and other healthcare professionals can collaborate in developing and monitoring medication-use systems that promote safe and effective medication use in the ED, including medication use in high-risk ED patients and procedures. Working together, pharmacists and other healthcare professionals can ensure that medication use in the ED is evidence-based, cost-effective, and adherent to national guidelines; develop and implement emergency preparedness plans and quality improvement efforts; and, in many cases, foster the institution’s education and research initiatives. The department of pharmacy should play a leadership role in ensuring these collaborations.

When making decisions regarding pharmacy services to the ED, hospitals should consider the ED’s need for medication therapy management services, medication allergy assessment and clarification, medication interaction assessment, reporting and intervention on medication errors and adverse drug events, timely provision of drug information, and participation in formulary decision-making. Institutions should also keep in mind the Joint

Commission's pharmacist first-review requirement (15) and National Patient Safety Goals (16); the hospital's quality indicators relating to medication selection, timing, and delivery; the potential impact of patient flow and technology on medication safety in the ED; and contributions pharmacists can make to continuity of care from ED admission through hospital discharge.

**Patient care.** The IOM report on *The Future of Emergency Care in the United States: Hospital-Based Emergency Care* recommends the inclusion of clinical pharmacists in the ED care team to ensure patient medication needs are appropriately met, to lead system changes to reduce or eliminate medication errors, and to evaluate for cost-effective medication therapy for the patient and hospital.(1) As part of the interdisciplinary ED care team, pharmacists can provide care to critically ill patients by:

- participating in resuscitation efforts;
- providing consultative services that foster appropriate evidence-based medication selection;
- providing consultation on patient-specific medication dosage and dosage adjustments;
- providing drug information consultation to emergency physicians, emergency nurses, and other clinicians;
- monitoring for patient allergies and drug interactions;
- monitoring patient therapeutic responses (including laboratory values);
- continuously assessing for and managing adverse drug reactions; and
- gathering or reviewing medication histories and reconciling patients' medications.

In addition to the above, pharmacists can provide care to ambulatory patients in the ED by:

- modifying medication regimens based on collaborative practice agreements for management of certain patient populations who return to ED;
- offering vaccination screening, referral, and administration;
- providing patient and caregiver education, including discharge counseling and follow-up; and
- providing information on obtaining medications through patient assistance programs, care funds, and samples.

Boarding of patients in the ED until an inpatient bed becomes available poses challenges for patients, caregivers, and healthcare professionals. The department of pharmacy should work with the healthcare professionals involved in the care of these patients to provide a seamless medication-use process.

**Emergency preparedness planning.** ASHP believes that all hospital and health-system pharmacists must assertively exercise their responsibilities in preparing for and responding to disasters.<sup>(17)</sup> ASHP has insisted that leaders of emergency planning at the federal, regional, state, and local levels call on pharmacists to participate in the full range of issues related to pharmaceuticals. Hospital emergency preparedness plans, including ED components, must be developed in coordination with departments of pharmacy. Pharmacists should play a pivotal role in departmental emergency preparedness planning and as a member of the healthcare team that provides care to victims. Because treatment of disaster victims almost always involves the use of pharmacologic agents, ensuring the efficacy and safety of the medication-use process is a natural role for pharmacists. (18, 19)

**Quality improvement initiatives.** The department of pharmacy can collaborate on a variety of quality improvement initiatives in the ED, including:

- guiding the development of evidence-based treatment protocols, algorithms, and/or clinical pathways that are congruent with nationally accepted practice guidelines and quality indicators;
- assisting in the development, implementation, and assessment of various technologies used throughout the ED medication-use process;
- conducting failure mode and effects analysis and root cause analysis on error-prone aspects of the medication-use process;
- participating in ED-based and hospital-wide committees (e.g., P&T, infection control, disaster) that impact medication use in the ED;
- maintaining compliance with standards of national accrediting bodies such as the Joint Commission; and
- assisting in surveillance and reporting of adverse drug reactions.

**Education.** The pharmacy department should support the role of pharmacists in providing education and information to healthcare professionals, patients, and the public they come in contact with in the health systems' emergency service areas. Specific activities could include:

- providing educational forums for healthcare professionals and students on topics such as emergency preparedness, disaster management, poisoning prevention and treatment, immunizations, and use of medications in the ED and emergency situations;

- provision of health literacy-sensitive education to patients and caregivers regarding medication use, disease state management, and prevention strategies; and
- offering ED-based educational opportunities to pharmacy students and residents.

The ED offers an enormous number of services, activities, and opportunities to train future pharmacists in all aspects of the medication use process. Students and residents could participate in longitudinal experiences in ED-based services such as clinics, community services/health fairs, and satellite pharmacies, studying cultural follow-up or adverse drug reaction or toxicology services. Introductory experiences could focus on student training on specific skills or competencies such as medication history and reconciliation or discharge counseling. Residency experiences could provide even greater benefits. Residency training of pharmacists in emergency care would improve the quality of patient care, provide more rewarding educational experiences, and foster pharmacist involvement in emergency medicine research. Such residencies should meet ASHP-accredited residency quality standards.<sup>(20)</sup> The goals, objectives, and expected outcomes of such training support, and their achievement are in turn supported by, round-the-clock clinical or on-call services.

**ED-based research.** Although there has been significant research on and publications about ED pharmacy, it usually focuses on specific clinical settings (toxicology, drug interactions, infectious disease epidemiology). The literature lacks a broad representation of the varied scope and range of ED pharmacy practices. ASHP believes that there should be more research on and publications regarding medication use in the ED and ED-based pharmacy activities. Studies that address process changes are urgently needed. This research should include studies that generate data on therapeutic, safety, humanistic, and economic outcomes.

### **Professional Development of Pharmacists in Emergency Care**

ASHP believes there should be an increase in the number of ED-based training opportunities for pharmacists, pharmacy students, and residents. Schools and colleges of pharmacy are encouraged to provide ED-based educational opportunities for students. Hospitals and health systems are encouraged to support additional ED-based educational programs that produce experts in the field. Postgraduate training of pharmacists will provide a pipeline of clinicians, educators, leaders, and scientists who are expert in and committed to quality emergency care.

### **Conclusion**

Every pharmacy department should provide the ED with the pharmacy services required to ensure safe and effective patient care. These services will vary according to each institution's needs and resources, but each pharmacy department must decide the best way to safely provide medications to their ED patients. ASHP supports the expansion of pharmacy education and postgraduate residency training to include emphasis in emergency care in order to develop an adequate supply of pharmacists trained to deliver these essential pharmacy services.

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