

## **Hospital and Institutional Practice**

As society's health care needs have changed and expanded, there has been an increased emphasis on provision of care through organized health care settings. As a result, an increased number of pharmacists now practice in hospitals, nursing homes, extended care facilities, neighborhood health centers, and health maintenance organizations. As members of the health care team composed of physicians and nurses, among others, institutional pharmacists have an opportunity for direct involvement with patient care. The knowledge and clinical skills that the contemporary pharmacist possesses make this individual an authoritative source of drug information for physicians, nurses, and patients. In addition to direct patient care involvement; pharmacists in hospitals are responsible for systems that control drug distribution and are designed to assure that each patient receives the appropriate medication, in the correct form and dosage, at the correct time. Hospital pharmacists maintain records on each patient, using them not only to fill medication orders but also to screen for drug allergies and adverse drug effects.

Contemporary hospital pharmacy practice is composed of a number of highly specialized areas, including nuclear pharmacy, drug and poison information, and intravenous therapy. In addition, pharmacists provide clinical services in adult medicine, pediatrics, oncology, ambulatory care, and psychiatry. The nature and size of the hospital helps to determine the extent to which these specific services are needed. Because of the diversity of activities involved in pharmacy departments, there is also demand for management expertise, including finance and budgeting, personnel administration, systems development, and planning. Approximately 38,000 licensed pharmacists work on a full or part-time basis in hospitals or nursing homes. As hospital pharmacists continue to become more involved in providing patient-oriented services, the demand for practitioners in this area of pharmacy continues to grow.

### **Pharmacist Participation in Hospital Rounds Can Reduce Medication Errors**

"Drug-related morbidity is costly to society. Drug-related problems (DRPs) have been associated with between 6% and 28% of hospital admissions in studies in the United States, and the annual costs associated with preventable drug-related morbidity have been estimated to be \$177.4 billion in the United States and \$10.9 billion in Canada... Studies in hospital and clinic settings have shown that pharmacists (usually with PharmDs or other advanced training) can improve prescribing and patient outcomes and decrease hospital and prescribing costs."<sup>1</sup>

Seventy-eight percent fewer preventable adverse drug events (ADEs) occurred among patients in a hospital's general medicine unit when a pharmacist participated in weekday medical rounds, researchers recently reported in the Archives of Internal Medicine.<sup>2</sup> An article in the American Journal for Health System also demonstrated improved patient care outcomes due to increased pharmacist involvement on rounds. From May 1-31, 2000, a clinical pharmacist actively participated in daily rounds (including follow up) involving 19 medical services in a 600-bed academic medical center. Results were compared to a control group with less pharmacist interaction and follow up. When a

pharmacist participated in the daily medical rounds, medication errors were reduced by 51%. The number of patients without a medication error was 40% in the intervention group, compared to 22.9% in the control group. Nearly 80% of the patients in the control group had a medication error, the study found. It noted that the mean length of stay, cost and mortality nearly double for patients with adverse drug reactions.<sup>3</sup>

**Related Resources:**

1. Howard M, Trim K, Woodward C, Dolovich L, Sellors C, Kaczorowski J, Sellors J. Collaboration Between Community Pharmacists and Family Physicians: Lessons Learned from the Seniors Medication Assessment Research Trial. *J Am Pharm Assoc*; 43(5) 2003.
2. Kucukarslan SN, Peters M, Mlynarek M et al. Pharmacists on rounding teams reduce preventable adverse drug events in hospital general medicine units. *Arch Intern Med*. 2003; 163:2014-8.1
3. Scarsi KK, Fotis MA, Noskin GA. Pharmacist participation in medical rounds reduces medication errors. *Am J Health-Syst Pharm*. 2002; 59:2089-92.2  
Leape LL, Cullen DJ, Clapp M et al. Pharmacist participation on physician rounds and adverse drug events in the intensive care unit. *JAMA*. 1999; 282:267-70.

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