

## A New Type of Pharmacist: The Ambulatory Care Specialist

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Nearly 40% of the 3.99 billion prescriptions dispensed in the United States during 2010 were prescribed for the treatment of chronic disease states such as dyslipidemia, hypertension, diabetes, and COPD/asthma.<sup>1</sup> These chronic conditions often require complex and expensive medication regimens, and failure of patients to understand and adhere to prescribed therapies can lead to unnecessary disease progression, diminished quality of life, and even death. Studies have estimated that one third to one half of all patients in the United States do not take their medications as prescribed by their physicians, with adherence rates being particularly low in patients with chronic diseases.<sup>2-4</sup> Unfortunately, such non-compliance leads not only to sub-optimal outcomes for patients, but results in over 100 billion dollars in excess

hospitalizations each year.<sup>5</sup>

The consequences associated with poor medication adherence and drug-related adverse events have clearly defined the necessity of a medication expert on the primary-care team. This need has been met by a new type of pharmacist: the ambulatory care specialist. Ambulatory care pharmacists are specialized healthcare providers who serve as the medication experts for interdisciplinary primary-care teams. These pharmacists are often based in outpatient clinics and typically focus on specialized practice areas ranging from anticoagulation, hyperlipidemia, and heart failure, to diabetes and asthma. As clinical experts working as part of an interdisciplinary team, ambulatory care pharmacists are actively involved with all aspects of medication use, including appropriate medication selection, interaction screening, cost minimization, simplification of complex drug regimens, and therapeutic drug monitoring. Additionally, in select settings, pharmacists are able to enter into collaborative practice agreements with physicians, allowing them to initiate or

modify drug therapy for specific patients as defined by protocols and guidelines.<sup>6</sup> This collaborative effort results in increased medication compliance, safer and more appropriate medication use, less financial waste, and most importantly, healthier patients.

In addition to providing clinical services in collaboration with physicians, the ambulatory care pharmacist also assists patients directly by providing counseling and education on medication therapies. Patients with multiple or complex medical conditions often require many medications, frequently prescribed by several different physicians. In these situations, the risk for adverse effects, drug interactions, and poor adherence is significantly increased. Through direct patient care, the development of long term relationships with individual patients, medication management, and coordination of care in collaboration with physicians, the ambulatory care pharmacist is able to assist in the management of these complex cases. The presence of a health care provider specialized in medication management helps decrease the in-

herent risks of multiple therapies, as well as reduce healthcare costs by preventing many common medication errors. Through counseling and direct interaction with patients, the ambulatory care pharmacist can help decrease patient confusion, increase compliance, and lower the incidence of adverse drug interactions, ultimately resulting in better disease state management and fewer hospitalizations.

Studies have consistently demonstrated that the addition of a pharmacist to a healthcare team results in improved medication use and patient outcomes, especially for chronic conditions.<sup>7-10</sup> For example, one study of patients with heart failure found that medication adherence nearly doubled among patients who received monthly pharmacist counseling.<sup>7</sup> Pharmacists have been found to have a similar effect on the management of diabetes. When compared with patients receiving traditional care, studies have shown that pharmacist-managed patients have significant improvements in not only HgA1c and LDL levels, but also in adherence to preventive care measures.<sup>8</sup> Similar outcomes are found in the area of anticoagulation, where pharmacist-managed clinics have been shown not only to improve patient outcomes, but also to significantly decrease emergency room visits and hospitalizations, thus reducing overall healthcare costs.<sup>9,10</sup>

The health care industry is striving to control spending by encouraging shorter hospital stays and fewer trips to the emergency room. This financial mandate, coupled with an in-

creased population of patients with multiple comorbidities, makes the need for a comprehensive healthcare team critical. As the field of primary care continues to grow and evolve, ambulatory care pharmacists are poised to make significant contributions to collaborative, interdisciplinary primary care models.

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