Briefing Paper
ASHP Ambulatory Care Conference and Summit
March 3–4, 2014

Patient Care Delivery and Integration:
Stimulating Advancement of Ambulatory Care Pharmacy Practice in an Era of Health Care Reform

Kelly T. Epplen

Kelly T. Epplen, Pharm.D., BCACP, is Assistant Professor of Clinical Pharmacy Practice and Administrative Sciences, James L. Winkle College of Pharmacy, University of Cincinnati, Cincinnati, Ohio (kelly.epplen@uc.edu).

Abstract

**Purpose.** This paper discusses how to plan and implement an ambulatory care pharmacy service, how to integrate a hospital- or health-system-based service with the mission and operations of the institution, and how to help the institution meet its challenges related to quality improvement, continuity of care, and financial sustainability.

**Summary.** The steps in implementing an ambulatory care pharmacy service include (1) conducting a needs assessment, (2) aligning plans for the service with the mission and goals of the parent institution, (3) collaborating with patients and physicians, (4) standardizing the patient care process, (5) proposing the service, (6) attaining the necessary resources, (7) identifying stakeholders, (8) identifying applicable quality standards, (9) defining competency standards, (10) planning for service payment, and (11) monitoring outcomes. Ambulatory care pharmacists have current opportunities to become engaged with patient-centered medical homes, accountable care organizations, preventive and wellness programs, and continuity of care initiatives. Common barriers to the advancement of ambulatory care pharmacy services include lack of complete access to patient information, inadequate information technology, and lack of payment.

**Conclusion.** Ambulatory care pharmacy practitioners must assertively promote appropriate medication use, provide patient-centered care, pursue integration with the patient care team, and seek appropriate recognition and compensation for the services they provide.
Introduction

This paper focuses on the creation and delivery of ambulatory care pharmacy services in hospital or health-system settings and discusses how to integrate those services with the mission and operations of the entire institution. Also covered are opportunities for ambulatory care pharmacists to help hospitals and health systems meet current challenges in expanding access to care; improving quality, continuity, and outcomes of care; lowering the cost of care; and optimizing payment for care.

Practical considerations in establishing a new ambulatory care pharmacy service

Because of new financial incentives to improve the continuity of care, a growing number of hospitals and health systems will be establishing or expanding ambulatory care pharmacist services. Although pharmacists are well-versed in the therapeutic management of chronic diseases and have extensive training in evidence-based pharmacotherapy, they have little formal training in how to implement and manage an ambulatory care service. The importance of knowledge in practice management is evidenced by the fact that 20% of the Ambulatory Care Pharmacy Specialty Certification Examination by the Board of Pharmacy Specialties is devoted to this domain.

What follows is a brief overview of the steps involved in implementing ambulatory care pharmacist services. Some of these points are covered in more detail in other briefing papers for the ASHP Ambulatory Care Conference and Summit.

(1) Conduct a needs assessment. The first step in establishing a new patient care service is to perform a needs assessment. Health systems should identify patients who are at greatest risk for adverse medication-related outcomes (because of the complexity of their therapy, for example) or high resource utilization or those with chronic disease associated with
significant morbidity and mortality. Example patient populations who would benefit from comprehensive ambulatory care pharmacy services include those with chronic obstructive pulmonary disease (COPD), heart failure, diabetes, and coronary artery disease, and those requiring anticoagulation. Conditions such as these are the focus of efforts by the Centers for Medicare & Medicaid Services (CMS) to reduce hospital readmission rates and can be the target of pharmacy interventions that will most likely be supported by health-system administrators. Transitional care programs also represent a significant opportunity for the development of ambulatory care pharmacy services, as discussed elsewhere in this paper.

The “drug therapy management complexity score” that is being developed and validated by the ASHP Research and Education Foundation might have utility in future needs assessment for ambulatory care pharmacy services.

(2) **Align goals with organizational mission and objectives.** The mission and vision for the program should support the health system’s mission and vision, and the goals of the proposed service should align with the goals of the parent organization. This alignment will improve the potential for approval of the service. Prepare a business plan that explains how the proposed program supports the mission, vision, philosophy, and strategic objectives of the organization.

(3) **Define the scope of the service.** Collaborating with physicians. State authority for pharmacists to engage in Collaborative Drug Therapy Management (CDTM) has advanced the scope of ambulatory care pharmacy practice. CDTM involves partnership between a physician and a pharmacist to develop evidence-based protocols that allow pharmacists to initiate, modify, or discontinue drug therapy for patients between physician visits. CDTM is an important step in an interprofessional approach to optimizing patient care. Forty-seven states and the District of Columbia allow for CDTM. The scope of CDTM varies greatly from state to state and often
does not fully capitalize on the expertise of pharmacists. Ambulatory care pharmacists must be familiar with their particular state’s regulations regarding collaborative practice and develop CDTM agreements that outline the functions they will be performing related to specific medical conditions and medications.

_Collaborating with patients._ Pharmacists continue to be one of the most accessible health care resources for patients and can help advance the level of care provision, enhance the patient’s understanding of appropriate drug use, increase adherence with medication therapy, and improve detection of adverse drug events.\(^7\)

Essential components to the pharmacist–patient relationship include trust, communication, and education. With respect to _trust_, a study by Suliman et al. showed that patient-perceived pharmacist expertise was an independent determinant of relationship quality, patient satisfaction, and relationship commitment.\(^8\) Regarding _communication_, ambulatory care pharmacists must have access to patient health information to facilitate continuity of care; assess the patient’s health literacy and self-sufficiency; include family caregivers in decision-making and communications; identify and avoid medication-related issues; and monitor adherence to medication regimens. With respect to _education_, pharmacists can provide information about the patient’s disease states and related medication therapy. They can continue educational efforts at follow-up appointments and can monitor response to drug therapy, adverse medication-related side effects, adherence, and offer strategies to optimize the outcomes of therapy. In addition, pharmacists can determine if patients are appropriate candidates for self-care, identify any exclusions for self-care, and appropriately refer patients to a physician.

_Prescribing authority._ The ASHP Pharmacy Practice Model Initiative Summit recommended that “through credentialing and privileging processes, pharmacists should include
in their scope of practice prescribing as part of the collaborative practice team.” As this recommendation is pursued, pharmacy can draw lessons from the pioneers of pharmacist prescribing authority, both in the United States and in other countries.

Pharmacists in the Indian Health Service and the Department of Veterans Affairs have had the ability to prescribe under collaborative practice and have achieved the acceptance of patients, practitioners, and prescribers. In New Mexico, the Pharmacist Prescriptive Authority Act has enabled advanced-practice pharmacists to prescribe since 1993. In North Carolina, advanced-practice pharmacists with appropriate credentialing can obtain designation to prescribe and are eligible to apply for a Drug Enforcement Administration number. As of January 1, 2014, pharmacists in California are recognized as health care providers. The state’s pharmacist provider status law gives new authorities to all licensed pharmacists and establishes an Advanced Practice Pharmacist (APP) recognition. APPs have authority to “initiate, adjust, and discontinue drug therapy with an order by the patient’s prescriber and according to established protocols.”

As the health care system continues to evolve and the need for team-based care increases, expansion of pharmacists’ scope of practice to include prescribing will be necessary to optimize medication-related outcomes for patients across the continuum of care.

Successful models of pharmacist prescribing in other countries can be instructive for the United States. For example, in Alberta, Canada, legislation has enabled hospital- and community-based pharmacists to renew, refuse to fill, adjust, or substitute prescriptions. Alberta pharmacists may also initiate drug therapy for certain self-limiting conditions, order and interpret laboratory tests, and administer injections and vaccines. The Canadian Medical Association has stated that physicians have a responsibility to maintain professionalism and collegiality with pharmacists in all aspects of patient care. Each provincial medical code of
conduct in Canada encourages physicians to collaborate with pharmacists to best manage the treatment of their patients.\textsuperscript{12}

A major factor in fostering physician recognition of the benefits of pharmacist prescribing is interprofessional education, which promotes communication and collaboration among the health professions. It is noteworthy that the accreditation standards for pharmacist education focus on the need for interprofessional education “to better prepare pharmacy graduates to practice or deliver care in collaborative health care teams.”\textsuperscript{13}

(4) \textbf{Standardize approach to direct patient care.} The physical setting of the service (e.g., health-system clinic, physician office, outpatient pharmacy, separate independent location) will dictate the most appropriate way to deliver direct patient care. Optimize workflow to allow for direct patient care by pharmacists. Develop processes for recruitment and referral of patients using existing referral systems. Determine a standardized length for appointment times, format for documentation, and evidence-based protocols for specific disease state interventions. When possible, utilize an electronic medical record to standardize documentation; this will allow for enhanced communication with other health care providers, recognition of pharmacists as integral components of patient care, and efficient retrieval of information for purposes of outcome monitoring.

(5) \textbf{Formally propose the service.} When formally proposing the establishment of a new service, it is important to estimate the impact of the service on the parent organization. Be prepared to present a sound business plan. Include information such as the anticipated start date and rationale for the time frame, anticipated financial and volume trends, and previous program history, if applicable. When possible, estimate the number of patients that will be referred to the service. This can be done by examining, for example, claims information, diagnosis codes,
admission data, and medication adherence information for the targeted patients. Often, populations at high risk for poor outcomes are already monitored by the health system for quality measurement and benchmarking purposes, and this information will be useful in estimating patient and referral volumes. Use evidence in the professional literature to estimate the impact of the service. Estimate the return on investment (ROI), reflecting the value of the service in relation to the cost of delivering the service. The literature on pharmacist-provided medication management services has described an ROI of as high as 12:1 (average ROI of 3:1 to 5:1). The ROI value is based on the ability of medication management services to reduce hospital admissions, reduce the use of unnecessary or inappropriate medications, and reduce emergency room admissions and overall physician visits.14

(6) **Allocate necessary resources.** When requesting resource allocation for a new service, clearly communicate the value of the service to health-system administrators. Determine the number of pharmacist full-time equivalents needed to provide the service. Use literature examples to determine pharmacist-to-patient ratios. In addition, identify other personnel that may contribute to the efficiency of the service such as pharmacy technicians, nursing personnel, and patient registrars. Partner with colleges of pharmacy and use pharmacy students and residents to provide direct patient care services and to participate in outcomes research. The use of students and residents can greatly increase the capacity to accept new patients and has been shown to improve patient education rates and decrease hospital readmissions.15 Estimate additional nonpersonnel resources needed to provide the service such as point-of-care devices, alcohol pads, cotton balls, lancet devices, bandages, office supplies, and information technology.

(7) **Identify key stakeholders.** It is imperative to cultivate support for the service from the onset of planning. Identify key physicians with specific expertise or interest in the therapeutic
area you will target for your service (e.g., pulmonology, hematology, cardiology) and gain their buy-in. In addition, identify nonphysician personnel that will be involved in the service (nurses, laboratory personnel, registration staff) and educate them on their role in the service.

(8) **Identify applicable quality standards.** Identify existing quality standards, clinical practice guidelines, and evidence-based treatment guidelines that relate to the targeted therapeutic areas covered by the service. Use these standards to educate administrators and clinicians about the projected impact of the service.

(9) **Develop competency standards.** As the Council on Credentialing in Pharmacy has stated, the complexity of care and the growing differentiation of pharmacy practice necessitates that pharmacists participate in credentialing and privileging processes to ensure they have the needed competency for their scope of practice.14

*Generalization versus specialization.* Historically, there has been a clear separation of pharmacists’ responsibilities between “clinical” and “distributive” roles. Generalized pharmacy practice implied order review and dispensing functions, while the term “clinical pharmacist” implied responsibility for optimizing drug therapy in a specialized therapeutic area. However, this dividing line has become blurred with the evolution of pharmacy education and practice and changing needs in health care. Technological advances have facilitated reduction of pharmacist involvement in the dispensing process. Electronic prescribing, clinical decision-support systems, technician training and certification, robotics, and various telepharmacy applications (e.g., remote order review and remote pharmacist supervision of technicians) have enabled pharmacists to shift their focus from product-centered to patient-centered care.17

Because of the growing complexity of medication therapy in ambulatory care, there will be a need for more pharmacists who have specialized residency training and board certification
in ambulatory care pharmacy. Hospitals and health systems will increasingly include ambulatory care pharmacists in their process for verifying the credentials of clinicians, and they can be expected to include pharmacists in their formal process for granting clinical privileges.

(10) Develop a strategy for compensation of services. Identify available billing methods for your specific practice setting. When providing service within a health system, become familiar with site-specific rules for charge generation and be consistent with billing practices. It is imperative to know Medicare rules and regulations for billing. “Incident-to” billing codes, medication therapy management codes, and use of technical fees associated with facility use by Medicare beneficiaries are commonly used. Identify key stakeholders within the billing department and consult those individuals to ensure appropriate billing practices. Under new integrated care delivery models, pursue other options for compensation such as contracting with health systems to share in revenue gained from decreasing hospital readmissions and improved patient outcomes.

(11) Monitor outcomes. It is advisable to begin outcomes monitoring from the start of a new ambulatory care pharmacy service. Pharmacists must periodically evaluate whether or not they are achieving established benchmarks and identify areas of service provision needing modification to meet those benchmarks. Continuous quality improvement should be practiced to ensure that service goals are being met.

Monitoring economic outcomes is imperative for the success of the service. Although generating revenue to cover costs and create margin is optimal, cost-avoidance and shared revenue models are equally important. As part of assuming a responsible role in an integrated care-delivery model, pharmacy services may also share in penalties associated with failure to prevent high resource utilization and readmission.
Measure humanistic outcomes such as patient and provider satisfaction and quality of life.\textsuperscript{19} Although rarely reported, patient quality of life should ultimately improve as a result of participation in your service. Periodically conduct validated satisfaction surveys to measure the perceived value of your service. Patient and provider satisfaction is an extremely valuable marker of success and can be used as a marketing tool to increase referrals and enhance support of executive and clinical leaders in the organization.

**Opportunities related to patient-centered medical homes**

The joint principles of the patient-centered medical home (PCMH) promote physician-led coordination of patients’ health care needs and an integrated team approach to providing patient-centered care.\textsuperscript{20} Pharmacists in the PCMH model can optimize the use of medications by identifying, resolving, and preventing medication-related problems before they occur, and they can help achieve better outcomes through provision of comprehensive medication management as part of a fully-integrated patient care delivery team.

As summarized by Smith et al.,\textsuperscript{21} approximately 32\% of adverse events leading to hospital admission are attributed to medications; drug interactions are a major contributing factor in medication misadventures at home; and adherence rates to medication regimens for chronic disease are consistently low, averaging approximately 33\% to 50\%.

Smith et al. summarized the role of pharmacists in the medical home as follows:

As a clinical expert working in an interdisciplinary primary care team, a pharmacist can assess whether medication use by patients at home (in between primary care office visits) is contributing to medication-related problems or failure to achieve desirable outcomes. Although pharmacists are seldom mentioned in medical home discussions, the complementary knowledge and skills of pharmacists and prescribers can lead to improved patient care and medication use—especially for chronic conditions.\textsuperscript{21}

Choe et al. reported the development of a “reproducible model” for pharmacist engagement in the PCMH at the University of Michigan, which involved eight general medical
practice sites. The pharmacists’ primary role in this medical home was “to evaluate and optimize therapeutic regimens to achieve treatment goals for diabetes, hypertension, hyperlipidemia, and polypharmacy.” Among the patients who were referred to pharmacists, nearly half were experiencing more than one uncontrolled condition.

At a federally qualified health center in Connecticut, where a pharmacy practitioner-educator received referrals from primary care providers to address medication-related problems, the most common issues addressed by the pharmacist stemmed from poor medication adherence (47% of the problems) and the need for additional therapy (24%).

Among unanswered questions identified by Smith et al. related to pharmacist engagement in PCMHs were (1) how to identify patients for pharmacist services, (2) giving pharmacists complete access to patient information, and (3) payment reform to support a sustainable role for pharmacists. These issues are particularly vexing for practitioners in a community pharmacy setting.

The American Medical Association (AMA), in developing Current Procedural Terminology (CPT) codes for medication management services, identified the following five elements of comprehensive medication management in the medical home:

1. The service (medication management) needs to be delivered directly to a specific patient.
2. The service must include an assessment of the specific patient’s medication-related needs to determine if the patient is experiencing any drug therapy problems. In addition, a care plan is developed to resolve the problems, establish specific therapy goals, implement personalized interventions and education, and follow up to determine the actual outcomes the patient experienced from taking the medications.
3. The care must be comprehensive because any medication affects all other medications and all medical conditions.
4. The work of pharmacists and medication therapy practitioners needs to be coordinated with other team members in the PCMH.
5. The service is expected to add unique value to the care of the patient.
Clearly, the framework exists by which pharmacists can be fully integrated into the health care team as part of a PCMH. Pharmacists can provide an assessment of patients’ medication needs, identify medication-related problems, develop a care plan with individualized therapy goals and personalized interventions, and provide follow-up to determine patient outcomes.

The Patient Centered Primary Care Collaborative has outlined the linkage between the seven principles of the patient-centered medical home and comprehensive medication management (see Table 1 on the next page). This delineation highlights the inherent professional opportunities for pharmacists within the PCMH.
Table 1. 
**Contributions of Medication Management to Fulfillment of the Principles of the Patient-Centered Medical Home**

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description of Principle</th>
<th>Contribution of Medication Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Relationship with Physician or Other Licensed Practitioner</td>
<td>Each person has an ongoing relationship with a personal physician or other licensed health care practitioner.</td>
<td>The therapeutic relationship is established and the patient’s medication experience is revealed and used to improve care.</td>
</tr>
<tr>
<td>Team Approach</td>
<td>The personal physician leads a team at the practice level that collectively takes responsibility for ongoing patient care, including disease or case management or both.</td>
<td>The rational decision-making process for drug therapy is used and the assessment, care plan, and follow-up of drug therapy is integrated with the team’s efforts.</td>
</tr>
<tr>
<td>Comprehensive/Whole-Person Approach</td>
<td>The personal physician or other licensed health care practitioner is responsible for providing for all of the patient’s health care needs or taking responsibility for appropriately arranging for them.</td>
<td>Patients are engaged and empowered in their use and understanding of the medications prescribed in their therapy. All patient medications (regardless of source) are coordinated, evaluated, appropriate, effective, safe, convenient, and linked to clinical outcomes and improved health.</td>
</tr>
<tr>
<td>Coordination and Integration of Care</td>
<td>Care is coordinated and integrated across all domains of the health care system.</td>
<td>The intended therapeutic goals, which are measurable and individualized to the patient, serve to coordinate and integrate the patient’s care with other team members.</td>
</tr>
<tr>
<td>Quality and Safety Hallmarks</td>
<td>Quality and safety are hallmarks of the medical home.</td>
<td>Drug therapy problems are identified, resolved, and prevented in a systematic and comprehensive manner so everyone is working most effectively to realize appropriate, effective, safe, and convenient drug therapy for the patient.</td>
</tr>
<tr>
<td>Expanded Access to Care</td>
<td>Enhanced access to care is available.</td>
<td>Physicians are extended and made more efficient and effective through the optimal management of a patient’s medications.</td>
</tr>
<tr>
<td>Recognition of Added Value</td>
<td>Payment of physician practices appropriately recognizes added value.</td>
<td>Clinical outcomes are improved, ROI is positive, acceptance by patients is high, and physicians support the practice.</td>
</tr>
</tbody>
</table>
Opportunities related to accountable care organizations

While the PCMH model is intended to coordinate care among physicians and other patient care professionals, the goals of accountable care organizations (ACOs) are broader and include coordination along the continuum of health care delivery, from physician to hospital to other clinicians and nonclinicians.25

In March of 2011, CMS proposed rules for the formation of ACOs for Medicare beneficiaries which aim to achieve (1) better care for individuals, (2) better health for populations, and (3) lower growth in expenditures by eliminating waste and inefficiencies. Providers in the ACO can be rewarded for improved care coordination; they also are subjected to financial penalties for poor performance, depending on the structure of the ACO.25

The PCMH can contribute to the success of ACOs by helping decrease hospitalizations, rehospitalizations, and emergency department visits. Improved care coordination and communication among health care practitioners and the development of an efficient primary care network are necessary to achieve these objectives.

Several models of pharmacists’ integration into primary care networks currently exist and support the overarching goals of ACOs. Smith et al.26 recently described different levels of pharmacists’ collaboration with providers in primary care. They pointed out that the scope of ambulatory care pharmacy services varies greatly from minimal collaboration (in which pharmacists work mainly in a pharmacy setting and have limited communication with primary care office staff) to full collaboration (in which pharmacists enter into collaborative practice with providers and accept referrals to perform well-defined services such as medication reconciliation, medication management, and coordination or follow-up across multiple prescribers and pharmacies). To be fully integrated into primary care networks within the ACO model, pharmacists must strive to achieve this higher level of collaboration.
Smith et al.\textsuperscript{26} described four models for integrating pharmacists into accountable care organizations:

1. Employing the pharmacist as a clinician staff member of a large group practice or an integrated delivery system.
2. Embedding the pharmacist in a practice site through a partnership between the practice and a health-system pharmacy or college of pharmacy.
3. Employing the pharmacist (through a health system or physician organization) to serve several practices in a geographic region.
4. Contracting with the pharmacist to provide services for specific patients in a shared resource network model.

Among the challenges associated with full integration of pharmacy services are practice-level considerations (e.g., the need to restructure office work flow to maximize efficient use of pharmacists), the need for patient care quality measures associated with medication management, and the need for payment reform at the policy and practice level.\textsuperscript{25} The current reimbursement environment does not offer sufficient incentives for medication management of complex patients and provision and support of wellness initiatives.

The ASHP Task Force on Accountable Care Organizations published a comprehensive report in January 2013 on how to integrate the services of health-system pharmacists into ACOs.\textsuperscript{27} The following challenges and opportunities related to pharmacist engagement in ACOs were discussed in the report:

1. Prioritizing patients for pharmacy services,
2. Measuring pharmacists’ quality and financial impact,
3. Communicating with patients and influencing patient behavior,
4. Addressing formulary limitations and prior-authorization requirements,
5. Dealing with specialized pharmacies and restricted drug distribution systems, and
6. Collaborating with pharmacists and other health care professionals outside of health systems.
Opportunities related to immunization

Exercising pharmacist responsibility for patient outcomes must include preventive care and wellness programs. The provision of immunization against diseases such as influenza and pneumococcal disease can have a profound impact on health outcomes and should be an integral component to promoting wellness. Pharmacists in all 50 states have authority to administer immunization. In addition, CMS no longer requires a physician order for pneumococcal and influenza vaccination in participating hospitals, long-term care facilities, and home care facilities, which presents an important opportunity for health-system pharmacists. Collaborative practice agreements, utilization of standardized order sets, and heightened awareness and education of health care professionals and patients have been shown to increase immunization rates and subsequently decreased morbidity associated with preventable diseases. Despite the widespread ability to participate in immunization programs, pharmacists remain an underutilized resource in decreasing morbidity and mortality from preventable diseases.

Opportunities related to wellness initiatives

As of January 1, 2011, the Affordable Care Act provides for an Annual Wellness Visit (AWV), including Personalized Prevention Plan Services (PPPS) for Medicare beneficiaries. The initial AWV consists of the following components:

1. Medical and family histories,
2. List of medical providers,
3. Cognitive impairment screen,
4. Depression screen,
5. Functional status, and

Subsequent AWVs are covered as long as a minimum of 12 months have passed since the last AWV.
Many of the items covered in the AWV are activities already offered by ambulatory care pharmacists, which provides an avenue for pharmacists’ integration in wellness initiatives. CMS has ruled that the AWV may be performed by

1. A physician who is a doctor of medicine or osteopathy,
2. A physician assistant, nurse practitioner, or clinical nurse specialist, or
3. A medical professional (including a health educator, registered dietitian, or nutrition professional or other licensed practitioner) or a team of such medical professionals, working under the direct supervision of a physician.29

Although not specifically identified in this list, pharmacists certainly fall into the third category above. A recent report from North Carolina presented the results of an AWV service provided by an advanced practice pharmacist to 98 Medicare beneficiaries cared for in an internal medicine clinic.30 The pharmacist made 441 interventions (4.5 interventions per AWV completed), and the clinic billed Medicare for the pharmacist’s service (maximum billable amount of $159.38).

**Opportunities related to transitions of care**

Patient care outcomes are often compromised because of inappropriate medication use during the transition from one health care setting to another. Inadequate communication between providers and insufficient care coordination contribute to poor patient outcomes.31 In addition, lack of a communication infrastructure to disseminate vital patient health information between providers during transitions of care can lead to poor outcomes.32

Pharmacists are often an underutilized resource during transitions of care. Although adverse drug events (ADEs) can occur at any point along the continuum of care, they are at greater risk of occurring during care transitions.

The 2013 Hospital National Patient Safety Goals established by The Joint Commission state that a hospital must

1. Record and pass along correct information about a patient’s medicines,
2. Find out what medicines the patient is taking,
3. Compare those medicines to new medicines given to the patient,
4. Make sure the patient knows which medicines to take when they are at home, and
5. Tell the patient it is important to bring their up-to-date list of medicines every time they visit a doctor.33

Pharmacists are the most appropriate health care professional to evaluate medication use at all points of care and can prevent avoidable adverse drug-related events.

Under the Affordable Care Act, which places high priority on the prevention of hospital readmissions, many governmental agencies have promoted programs that focus on decreasing adverse drug events and subsequent hospitalizations. In April 2011, CMS announced the Community-Based Care Transition Program (CCTP), which provides funding to test models for improving care transitions for high-risk Medicare patients by using services to manage patients’ transitions effectively. To date, 102 participating organizations are in the project.34 CCTP funding will be available through 2015. Pharmacists have an opportunity through this program to demonstrate the value of pharmacy services in decreasing the incidence of preventable ADEs and unnecessary resource utilization during transitions of care.

**Identifying and overcoming challenges**

Among the current imperatives facing pharmacy are integration of pharmacist services into team-based care and expansion of ambulatory care practice to optimize medication-related outcomes and establish the pharmacist as an integral member of the patient care team. The following challenges must be addressed in order to achieve these imperatives.

**Mechanisms for communication.** Ambulatory care pharmacists must have the ability to communicate with other members of the health care team. Although use of the electronic medical record (EMR) has improved access to patient information and provides avenues for effective communication for health-system pharmacists, communication processes between community pharmacists and physicians are often cumbersome and must be streamlined to
facilitate seamless patient care. Pharmacists often lack the information needed to make medical decisions and recommendations to providers; access to pertinent patient health information is essential to optimize medication-related outcomes.

**Information technology.** Critical to the success of full integration of pharmacists as part of an interprofessional care delivery team is optimization of the use of health information technology (HIT). HIT has the potential to (1) provide critical patient information to the entire care team working to coordinate care at all points along the continuum, (2) support enhanced communication among health care providers and patients, (3) enable performance measurement and improvement, and (4) improve accessibility of health care information to the patient.

To address the need for further development of an HIT infrastructure that supports integration of pharmacy services, the Pharmacy Health Information Technology Collaborative (www.pharmacyhit.org) created a strategic plan for the use of pharmacy HIT. The focus of the Collaborative is to assure the meaningful use of a standardized electronic health record (EHR) to support safe, efficient, and effective medication use, continuity of care, and access to the patient care services of pharmacists with other members of the interdisciplinary patient care team. The Collaborative seeks to assure that the pharmacist’s role of providing patient-care services is integrated into the national health IT interoperable framework. It has identified 10 goals for pharmacy HIT (see Table 2 below).

Table 2.

<table>
<thead>
<tr>
<th>Ten Goals for Pharmacy Health Information Technology (HIT)³⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ensure that HIT supports pharmacists in health care service delivery</td>
</tr>
<tr>
<td>2. Achieve integration of clinical data with electronic prescribing (e-prescribing) information</td>
</tr>
<tr>
<td>3. Advocate pharmacist recognition in existing programs and policies</td>
</tr>
<tr>
<td>4. Ensure that HIT infrastructure includes and supports medication therapy management services</td>
</tr>
<tr>
<td>5. Integrate pharmacist-delivered immunizations into the EHR</td>
</tr>
<tr>
<td>6. Achieve recognition of pharmacists as meaningful users of EHR quality measures</td>
</tr>
<tr>
<td>7. Advance system vendor EHR certification</td>
</tr>
<tr>
<td>8. Promote pharmacist adoption and use of HIT and electronic health records</td>
</tr>
<tr>
<td>9. Achieve integration of pharmacies and pharmacists into health information exchanges</td>
</tr>
<tr>
<td>10. Establish the value and effective use of HIT solutions by pharmacists</td>
</tr>
</tbody>
</table>
**Compensation models.** Inadequate compensation remains a major barrier to implementing and expanding pharmacy services in ambulatory care settings. Ideally, pharmacy services provided to ambulatory Medicare patients should be covered under Medicare Part B, similar to other outpatient health care services. However, because pharmacists lack provider status in the Social Security Act, they have had to use back-door approaches to receive compensation for services rather than direct billing, including the generation of a facility or technical fee, or “up-coding” a physician office visit. With the advent of the Medicare Part D benefit, pharmacists are considered providers of medication therapy management (MTM), which presents opportunities for generating revenue. Another opportunity for revenue generation is contractual agreements with private payers to provide MTM services.

Reimbursement models need to adapt to the changing health care environment. Contracting with health systems under a shared revenue/shared risk model may be the focus of future reimbursement strategies for ambulatory care pharmacy programs. Compensation for services may be linked to patient outcomes and not based solely upon the fact that a service was provided.

**Conclusion**

It is an exciting time to be an ambulatory care pharmacist. As we embrace the changing face of health care brought about by the Affordable Care Act, so too must we embrace the responsibilities bestowed upon us as primary providers of medication management. Ambulatory care pharmacists must continue to expand their scope of practice to promote appropriate medication use, provide patient-centered care, focus attention on prevention and wellness, foster integration into the health care delivery team, and assume increased responsibility for patient outcomes. As a profession, we must continue efforts to enhance collaboration with other health
care professionals with the goal of improving patient outcomes. We must advocate for the pursuit of provider status to ensure recognition and compensation for our services while exploring new opportunities to share in revenue generated by improved patient outcomes and decreased resource utilization.

To ensure their acceptance as an essential component of patient care delivery, ambulatory care pharmacists must become forceful instruments of constructive change in the evolving health care environment.

References


