Billing for pharmacists’ cognitive services in physicians’ offices: Multiple methods of reimbursement

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Abstract

Objectives: To evaluate the charges and reimbursement for pharmacist services using multiple methods of billing and determine the number of patients that must be managed by a pharmacist to cover the cost of salary and fringe benefits.

Setting: Large teaching ambulatory clinic in North Carolina.

Main outcome measures: Annual charges and reimbursement, patient no-show rate, clinic capacity, number of patients seen monthly and annually, and number of patients that must be seen to pay for a pharmacist’s salary and benefits.

Results: A total of 6,930 patient encounters were documented during the study period. Four different clinics were managed by the pharmacists, including anticoagulation, pharmacotherapy, osteoporosis, and wellness clinics. “Incident to” level 1 billing was used for the anticoagulation and pharmacotherapy clinics, whereas level 4 codes were used for the osteoporosis clinic. The wellness clinic utilized a negotiated fee-for-service model. Mean annual charges were $65,022, and the mean reimbursement rate was 47%. The mean charge and collection per encounter were $41 and $19, respectively. Eleven encounters per day were necessary to generate enough charges to pay for the cost of the pharmacist. Considering actual reimbursement rates, the number of patient encounters necessary increased to 24 per day. “What if” sensitivity analysis indicated that billing at the level of service provided instead of level 1 decreased the number of patients needed to be seen daily. Billing a level 4 visit necessitated that five patients would need to be seen daily to generate adequate charges. Taking into account the 47% reimbursement rate, 10 level 4 encounters per day were necessary to generate appropriate reimbursement to pay for the pharmacist.

Conclusion: Unique opportunities for pharmacists to provide direct patient care in the ambulatory setting continue to develop. Use of a combination of billing methods resulted in sustainable reimbursement. The ability to bill at the level of service provided instead of a level 1 visit would decrease the number of patients needed to pay for a pharmacist.

Keywords: Billing codes, reimbursement (pharmacist), pharmacy services, clinical pharmacist practitioners.
Medication therapy management (MTM) services positively affect patient care. Positive outcomes described in the literature include improved quality indicators for patients with chronic diseases and decreased health care costs. Despite the benefits of MTM services for individual patients and the health care system, these services are not consistently reimbursed.

Historically, pharmacists have billed for product delivery but not for cognitive services. During the past decade, the profession has focused on obtaining provider status for pharmacists and developing sustainable reimbursement models for direct patient care services. Core components of MTM have been defined by national organizations, and most states allow pharmacists to deliver immunizations. The Health Resources and Services Administration has developed the award-winning Patient Safety and Clinical Pharmacy Services Collaborative to integrate clinical pharmacy services into the care of high-risk patients. Current Procedural Terminology (CPT) codes for MTM services have been developed; however, these codes are not recognized by all payers. The Asheville Project developed a care model that improved outcomes for patients with chronic illnesses such as diabetes, asthma, hypertension, dyslipidemia, and depression.

Health care reform and the growth of the patient-centered medical home (PCMH) model and accountable care organizations increase the need for pharmacists in ambulatory care settings. The role of the pharmacist in PCMH has been previously described. The 2007 joint principles focused on the foundational elements of PCMH, including the following: (1) every patient has a personal physician, (2) care is provided in a physician-directed medical practice that includes a health care team, (3) whole person care is provided, (4) care is integrated and coordinated, (5) enhanced access to care and services is provided, and (6) reimbursement models recognize the value of PCMH. According to the joint principles, payers should pay for services related to coordination of care, for face-to-face services, and for care provided outside of an office visit; practices for improving the quality of care should be rewarded; and practices to share in health care savings from decreased hospitalizations should be allowed. Currently, the most common methods for billing for pharmacist services in physician offices involve facility fees in hospital-based clinics and the "incident to" model in private practice. Use of MTM codes has not been widely adopted in ambulatory care because of lack of reimbursement by third-party payers. An analysis of pharmacist charges for services in ambulatory clinics noted that the mean charge per visit using the "incident to" model was $37 for a level 1 visit. Moreover, the authors demonstrated that conversion from established "incident to" billing to use of pharmacist MTM codes would be cost prohibitive. This article describes the charges and reimbursement rates associated with billing for pharmacist services in a family health center.

Objectives
The objectives of this study were to (1) evaluate charges and reimbursement for pharmacist services in an outpatient family health center recognized as a PCMH and (2) determine the number of patients that must be managed by a pharmacist to cover the cost of salary and fringe benefits. A sensitivity or "what if" analysis was performed to examine the impact of visit charges on patient volume that is needed to pay for the cost of the pharmacist.

This study was a retrospective analysis of financial data during a 4-year period (2006–10) in an ambulatory care practice with well-established clinical pharmacy services in western North Carolina, the authors evaluated the charges and reimbursement rates associated with billing for pharmacist services. They considered multiple billing methods to determine the number of patients that must be seen by a pharmacist to cover the cost of a pharmacist's salary and fringe benefits. A sensitivity or "what if" analysis examined the impact of visit charges on patient volume that is needed to pay for the cost of the pharmacist. The authors found that the ability to bill at the level of service provided instead of a level 1 visit would decrease the number of patients needed to pay for a pharmacist.

Analysis: Cognitive services in an ambulatory care pharmacy are billed using a variety of methods, but because pharmacists do not have provider status, insurance companies do not routinely allow Current Procedural Terminology (CPT) codes higher than a level 1 visit. This study used a "what if" sensitivity analysis to evaluate how CPT code charges affect the number of patients that must be seen daily to pay for the cost of the pharmacist's salary and fringe benefits. The "what if" analysis demonstrated that if pharmacists were able to bill a CPT code at higher levels, the number of patients needed to be seen daily to pay the pharmacist would decline. Although ambulatory care pharmacists routinely provide the level of care that would warrant billing a higher level of service, lack of provider status limits the profession from appropriate reimbursement for services rendered.

Setting
Mountain Area Health Education Center (MAHEC) Family Health Center provides medical care for approximately...
12,000 patients in western North Carolina each year. MAHEC is part of the North Carolina AHEC system, whose vision is to provide education for professionals in health careers throughout the state. The practice is home to a family medicine medical residency program, pharmacy practice residency program, and geriatric fellowship program. Preceptors provide experiential education for a multitude of learners, including medical, pharmacy, behavioral medicine, nursing, and physician assistant students. Providers include 13 faculty physicians, 27 family medicine residents, 3 faculty pharmacists, 2 pharmacy residents, and 3 behavioral medicine faculty. The practice received recognition as a level III PCMH by the National Committee for Quality Assurance in 2010, and the role that the pharmacists played in achieving this status has been previously described. Inpatient pharmacy services began in the 1980s, and pharmacist-managed clinics were implemented in 2001. The most common third-party payers for the practice are Medicare, Medicaid, and Blue Cross/Blue Shield.

Three pharmacists and two pharmacy residents are integral members of the PCMH health care team and provide direct patient care services to patients, deliver evidence-based education to patients and health care providers, provide assistance with transitions of care, and participate in quality improvement initiatives. The amount of direct patient care services provided by the faculty pharmacists in clinic is equivalent to a 0.7 full-time equivalent (FTE) and is equal to 7 half-days of clinic each week. Because the pharmacists are considered academic pharmacists and are affiliated with a school of pharmacy, other responsibilities include teaching, service, and scholarship. Anticoagulation visits are 20 minutes in length, whereas pharmacotherapy, osteoporosis, and wellness visits are 30 minutes. Typically, 10 anticoagulation patients are seen during each clinic session, whereas the other clinics schedule 5 patients per clinic. The most frequent reasons for visiting the pharmacotherapy clinics include diabetes management, polypharmacy consults, and medication assistance triage. The pharmacists serve as clinical pharmacist practitioners (CPPs) and provide comprehensive services in collaboration with primary care providers. The North Carolina Boards of Medicine and Pharmacy define a CPP as a “licensed pharmacist ... who is approved to provide drug therapy management under the direction of, or under the supervision of, a licensed physician who has provided written...”

Table 1. Types of billing for cognitive services used

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Services provided</th>
<th>Billing method</th>
<th>Provider(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoagulation</td>
<td>Warfarin and low–molecular weight heparin management</td>
<td>“Incident to” level 1</td>
<td>Pharmacists and pharmacy residents</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Consult clinic for patients with abnormal DXA scan</td>
<td>Level 4</td>
<td>Physician and pharmacist</td>
</tr>
<tr>
<td>Pharmacotherapy</td>
<td>Medication therapy management referral clinic</td>
<td>“Incident to” level 1</td>
<td>Pharmacists and pharmacy residents</td>
</tr>
<tr>
<td>Wellness</td>
<td>Wellness services for employees with diabetes, dyslipidemia, and/or hypertension</td>
<td>Negotiated fee for service</td>
<td>Pharmacists</td>
</tr>
</tbody>
</table>

Abbreviation used: DXA, dual-emission X-ray absorptiometry.

Table 2. CPT evaluation and management codes for outpatient visits

<table>
<thead>
<tr>
<th>Code</th>
<th>Documentation requirements</th>
<th>Problems</th>
<th>Time involved (minutes)</th>
<th>Comments</th>
<th>North Carolina Medicare reimbursement ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>99211</td>
<td>No requirements; may not require the presence of a physician</td>
<td>Minimal</td>
<td>5</td>
<td>“Level 1” or nurse visit</td>
<td>19.06</td>
</tr>
<tr>
<td>99212</td>
<td>At least two of the following: problem-focused history, problem-focused examination, straightforward decision making</td>
<td>Self-limited or minor</td>
<td>10</td>
<td>“Level 2” visit</td>
<td>40.04</td>
</tr>
<tr>
<td>99213</td>
<td>At least two of the following: expanded problem-focused history, expanded problem-focused examination, medical decision making of low complexity</td>
<td>Low to moderate severity</td>
<td>15</td>
<td>“Level 3” visit</td>
<td>66.83</td>
</tr>
<tr>
<td>99214</td>
<td>At least two of the following: detailed history, detailed examination, medical decision making of moderate complexity</td>
<td>Moderate to high severity</td>
<td>25</td>
<td>“Level 4” visit</td>
<td>99.21</td>
</tr>
<tr>
<td>99215</td>
<td>At least two of the following: comprehensive history, comprehensive examination, medical decision making of high complexity</td>
<td>Moderate to high severity</td>
<td>40</td>
<td>“Level 5” visit, typically involves a complete physical examination</td>
<td>133.56</td>
</tr>
</tbody>
</table>

instructions for a patient and disease specific drug therapy which may include ordering, changing, substituting therapies or ordering tests.\textsuperscript{15} The role of CPPs includes adjusting drug therapy, monitoring drug therapy outcomes, educating patients, ordering and interpreting laboratory studies, ensuring access to medications, and coordinating care. All clinics serve as interprofessional teaching clinics for students and residents (medical and pharmacy).

**Practice innovation**

Billing for cognitive services for ambulatory care pharmacy services occurs using a variety of methods (Table 1). Patient encounters in pharmacotherapy and anticoagulation clinics are billed using the “incident to” method and are coded as a 99211 or level 1 visit. The osteoporosis clinic is billed at the level of service provided (typically a level 4 visit) because each patient is seen by a physician/pharmacist team and the decision making is considered to be moderately complex (Table 2). Charges for the wellness clinic are based on a negotiated fee-for-service model with one self-insured employer. Claims are submitted for faculty pharmacist visits as well as resident pharmacist visits.

“Incident to” is a billing model that can be used by pharmacists (and other health professionals) located within a physician’s office. The claim is submitted under the physician’s name (hence “incident to”), and a physician oversees the work of the pharmacist. Medicare has a strict set of criteria for use of “incident to” rules.\textsuperscript{16} The service provided must be “part of the physician’s personal services in the course of diagnosis or treatment of an injury or illness,” and the non-physician provider must be an employee of the physician. The physician must perform the initial visit and continue to see the patient at a frequency that demonstrates active involvement in the patient’s care. During the pharmacist visit, a supervising physician must be on the premises, when “incident to” services are performed. “On the premises” is defined as being immediately available to assist the nonphysician provider. The supervising physician is not necessarily the same provider who performed the initial visit. In addition, pharmacists cannot be reimbursed for visits when greater than 50% of the time is spent on counseling or coordination of care, and the pharmacist and physician cannot bill for separate visits that occur on the same day.\textsuperscript{16}

Billing codes for physicians are based on the level of complexity of the care provided to the patient,\textsuperscript{6} whereas pharmacist MFM codes are time based.\textsuperscript{7} CPT codes for evaluation and management for outpatient visits commonly used in physician practices include 99211, 99212, 99213, 99214, and 99215 and may be referred to as level 1–5 visits.\textsuperscript{6} Table 2 describes the characteristics of CPT codes used by physicians for established patients as well as the 2011 Medicare fee schedule for CPT codes in North Carolina.\textsuperscript{17} Level 1 visits have the lowest fee ($19.06), whereas level 5 visits have the highest charge ($133.56).\textsuperscript{17} Because pharmacists do not have provider status, CPT codes higher than a level 1 visit are not routinely allowed by most insurance companies.

**Main outcome measures**

Outcomes measures included annual charges and reimbursement, patient no-show rate, clinic capacity, and number of patients seen monthly and annually. Data were collected from monthly and annual productivity reports published internally by the practice’s business office. The productivity reports are the practice’s way of monitoring budgetary goals and productivity for the practice as a whole as well as for individual providers in all disciplines. Number of patient visits, no-show rates, and capacity estimates were verified in the electronic medical record.

An additional outcome measure included an estimate of the number of patients that must be managed by a pharmacist to pay for pharmacist salary and fringe benefits. The break-even estimate was based on the assumption of a pharmacist’s salary of $100,000 and fringe benefits of 20% ($20,000). A “what if” sensitivity analysis was calculated using Excel to evaluate how CPT code charges affect the number of patients that must be seen daily to pay for the cost of the pharmacist. The variable that was adjusted in the “what if” analysis included the 2011 North Carolina Medicare fee structure for level 2 through level 4 visits. Level 5 visits were not included in the sensitivity analysis because they require a complete physical examination, which is beyond the scope of practice for pharmacists.

**Results**

A total of 6,930 patient encounters in pharmacotherapy, anticoagulation, and osteoporosis clinics were documented over the course of 4 years (Table 3). The vast majority of encounters occurred in pharmacotherapy and anticoagulation clinics (96%). The wellness clinic was not implemented until after the study period; consequently, encounter data were not available. The number of annual encounters increased from 1,201 in 2007–08 to 2,036 in 2010–11, indicating growth in services over time by 58% (Figure 1). The slowest months of the year were July and December, likely because of the start of new medical and pharmacy residents in July and the December holiday season. The mean number of monthly patient visits ranged from a low of 115 in July to a peak of 155 in September. Overall, only 3% of available visits were not filled, indicating that the pharmacy clinics were scheduled to capacity. Consequently, additional clinic days would be necessary to increase patient volume. The patient no-show rate was 7%. The capacity and no-show rates for pharmacist visits were the same as for the practice as a whole.

Charges billed to third-party payers using the “incident to” method for anticoagulation and pharmacotherapy clinics ranged from $36,036 in 2007–08 to $70,925 in 2009–10 (Figure 1), with a mean annual charge of $51,322 (Table 3). If pharmacists could bill at the level of service provided, estimated mean annual charges increased to between $66,416 and $164,565 (Table 3). Collections for services ranged from $20,387 in 2009–10 to $25,432 in 2007–08 (Figure 1). Mean annual collections over 4 years were $23,340 (Table 3). The mean reimbursement rate was 47%, with a range of 29% to 67% (Table 3). Decreases in reimbursement from primary pay-
ers over time negatively affected the reimbursement rate for the entire practice during the study period. Data for collections for 2008–09 were not available. Overall, the mean charge and reimbursement per encounter over 4 years was $41 and $19, respectively. These charges are higher than the 2011 North Carolina Medicare fee structure because of the additional fees associated with laboratory studies routinely ordered by the pharmacists, particularly in the anticoagulation clinic.

The osteoporosis clinic generated an additional $9,000 in charges per year. The exact reimbursement rate for the osteoporosis clinic is not known because revenues were credited to the collaborating physician’s overall productivity; however, based on the mean reimbursement rate of 47%, approximately $4,300 in actually revenues were likely received in this clinic each year. Preliminary projections in the business plan for the wellness clinic estimated potential charges for a panel of 30 employees who enroll in the program to be $9,000 annually. In this clinic, charges are equal to reimbursement because fees were negotiated with the insurer up front. Consequently, the total annual charges for anticoagulation, pharmacotherapy, osteoporosis, and wellness clinics were $65,022, and reimbursement was approximately $30,560. To completely cover the cost of a 0.7 FTE pharmacist using the previously stated salary assumptions requires $84,000 in charges; consequently, other sources of funding were necessary to support the pharmacists.

Despite the fact that the practice is recognized as a PCMH, additional revenues related to pay for performance have not been fully realized. Small, one-time bonuses related to improvements in quality of care for diabetes have been received from some third-party payers. Additional opportunities for increased reimbursement related to implementation of a new “meaningful use” electronic medical record are currently being sought.

Based on the assumption that a full-time pharmacist’s annual salary and fringe benefits approximate $120,000 and using the mean charges generated, 2,926 encounters per year (or 12 encounters per day) would be necessary to generate enough charges to pay for the cost of the pharmacist. However, taking into account the mean reimbursement rate of 47%, the number of patient encounters necessary increased to 6,315 annually, or 24 encounters per day. These numbers assume billing a level 1 visit “incident to.” A “what if” sensitivity analysis demonstrated that if pharmacists were able to bill a CPT code at higher levels, the number of patients needed to be seen daily to pay the pharmacist would decline (Table 4). For instance, billing level 2 visits for 11 patients per day would generate enough fees to cover the cost of the pharmacist, whereas only five level 4 visits are needed. When accounting for the 47% reimbursement observed in this study, billing level 2 visits necessitate that 23 patients be seen daily, whereas level 4 visits would require only 10 patients per day. If billing at the level of service

**Table 3.** Clinic encounters, charges, and reimbursement in anticoagulation and pharmacotherapy clinics

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>No. of encounters</th>
<th>Actual charges using level 1 billing ($)</th>
<th>Actual reimbursement ($)</th>
<th>Actual reimbursement rate (%)</th>
<th>Theorized charges if level 2 billed ($)a</th>
<th>Theorized charges if level 3 billed ($)a</th>
<th>Theorized charges if level 4 billed ($)a</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007–08</td>
<td>1,142</td>
<td>36,036</td>
<td>24,201</td>
<td>67</td>
<td>45,726</td>
<td>76,320</td>
<td>113,297</td>
</tr>
<tr>
<td>2008–09</td>
<td>1,515</td>
<td>41,131</td>
<td>NR</td>
<td>NR</td>
<td>60,660</td>
<td>101,247</td>
<td>150,303</td>
</tr>
<tr>
<td>2009–10</td>
<td>2,025</td>
<td>70,925</td>
<td>20,387</td>
<td>29</td>
<td>81,081</td>
<td>135,330</td>
<td>200,900</td>
</tr>
<tr>
<td>2010–11</td>
<td>1,953</td>
<td>57,195</td>
<td>25,432</td>
<td>45</td>
<td>78,198</td>
<td>130,519</td>
<td>193,751</td>
</tr>
<tr>
<td>Mean</td>
<td>1,658</td>
<td>51,322</td>
<td>23,340</td>
<td>47</td>
<td>66,416</td>
<td>110,854</td>
<td>164,565</td>
</tr>
</tbody>
</table>

Abbreviation used: NR, not reported.
aBased on 2011 North Carolina Medicare reimbursement rates.17

**Table 4.** Number of patient encounters needed per day to pay for cost of pharmacist

<table>
<thead>
<tr>
<th>CPT code</th>
<th>No. of patients needed to generate adequate chargesb</th>
<th>No. of patients needed to generate adequate collectionsc</th>
</tr>
</thead>
<tbody>
<tr>
<td>99212 (level 2)</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>99213 (level 3)</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>99214 (level 4)</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>


Based on a salary of $100,000 plus 20% fringe benefits.

Based on a 47% reimbursement rate

**Figure 1.** Charges and collections for “incident to” billing

No collection data were available for 2008–09.
provided instead of level 1 visits, the majority of anticoagulation encounters would likely be level 2, whereas the majority of pharmacotherapy visits would be either level 3 or 4, depending on the number of chronic problems and the complexity of decision making. It is important to note that ambulatory care pharmacists routinely provide the level of care that would warrant billing a higher level of service but that lack of provider status limits the profession from appropriate reimbursement for services rendered.

**Conclusion**

Pharmacists are an integral part of the health care team, and unique opportunities to provide direct patient care services in the ambulatory care setting continue to develop. Improving reimbursement for services continues to be a priority for the profession. Although billing “incident to” is a frequent method for reimbursement for pharmacist services, the low reimbursement for this CPT code prevents this model from being the sole source of funding for a pharmacist. The current report indicates the need for pharmacists to see 24 patients per day in order to generate adequate reimbursement to pay for their services when billing level 1 visits “incident to” in a physician’s office. This volume is not feasible except perhaps in the most efficient clinics that include large volumes of patients, such as anticoagulation management services. Consequently, additional sources of funding for pharmacists embedded in physician practices is warranted when using the level 1 “incident to” model. However, a sensitivity analysis indicated that the volume of patients needed to be seen daily if pharmacists could bill at the level of service provided would be more sustainable. Clearly, it is important for the profession to continue to advocate for appropriate reimbursement for patient care.

In the future, it is hoped that pharmacists will be recognized as providers and/or receive adequate reimbursement, but until then, practices should not shy away from hiring a pharmacist. PCMHs that wish to incorporate a pharmacist into their practice should consider using multiple models for reimbursement to allow for sustainability. Developing an employee wellness program and providing collaborative care with a physician generated higher fees compared with “incident to” billing. In addition, as pay for performance evolves, improved reimbursement rates or bonus payments for improvements in the quality of care provided and decreasing health care costs within a practice could offset some of the pharmacist personnel costs.

**Note added in proof**

Recently, the American Academy of Family Physicians published a position paper supporting collaborative practice with pharmacists in the PCMH.

**References**


