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Estimated Potential Financial Impact of Pharmacist-Delivered Disease Management Services Across a Network of Pharmacies in Rural Colorado

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Abstract

BACKGROUND—This study summarizes the potential financial impact of a 3-year collaboration focused on delivering disease management services through pharmacies in 12 rural Colorado communities.

OBJECTIVES—To (a) identify components within the disease management program that would be billable and generate revenue to each pharmacy and (b) estimate the revenue amount that could be generated based on these services across the 3-year project.

METHODS—Reimbursable services included diabetes self-management education; medication therapy management services, including the comprehensive medication review; and improvements in Medicare star ratings through pharmacy interventions.

RESULTS—An estimated total of $117,800 could have been generated by services provided to patients across the 12 pharmacy sites. After subtracting the estimated cost of labor for a pharmacist to provide these services, an estimated net profit of $60,023 resulted over 3 years. Star rating impacts were discussed but were not able to be included as specific revenue based on the complex contracting between pharmacies and third-party insurers.

CONCLUSIONS—Based on these estimates, delivery of chronic disease management could represent a financially feasible option for community pharmacists. Some credentialing and changes to the mode of delivery would be required to meet billing requirements. Further research is needed to better estimate the cost savings resulting from these services to possibly expand pharmacists' reimbursement opportunities.

Pharmacists have delivered patient-specific services for years, under terminologies of *clinical pharmacy services* and *pharmaceutical care*. It was not until 2003, however, when opportunities for pharmacists across the nation to participate in patient-management services

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allowed for reimbursement through the implementation of medication therapy management (MTM) as part of Medicare Part D services.[1] Under the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, pharmacists can provide individualized medication-focused counseling to patients and receive reimbursement from Medicare Part D and Medicare Advantage plans. This legislation opened up opportunities for pharmacists to expand their role as medication specialists and improve outcomes for patients they serve.[2–5]

MTM has been defined as a distinct service or group of services that optimizes therapeutic outcomes for individual patients.[6] Currently, many of these interventions are completed in community pharmacies, often by using a third-party software program to identify patients who are eligible for consultations based on their medication lists, cost of medications, and/or diagnoses. MTM also encompasses disease management services, including educating patients about high blood pressure or diabetes or making disease-specific interventions. Pharmacies can receive direct reimbursement for some of these services and can also indirectly benefit from efforts that help improve specific quality measures that produce a positive effect on the star rating for a Medicare plan.[7]

Star ratings are a quality rating system established by the Centers for Medicare & Medicaid Services as part of the Healthcare Effectiveness Data and Information Set measures and are used by Medicare to measure performance and make comparisons across plans.[8,9] Plans with higher star ratings are given incentives by Medicare, such as the ability to enroll patients throughout the plan year, and rebates that can be used to lower out-of-pocket costs for plan members.

Diabetes self-management education and training (DSMT) is another potential area where pharmacists can receive revenue for providing counseling services. Pharmacists are one of the recognized providers who can become certified to deliver DSMT and receive reimbursement through Medicare Part B and other third-party plans. While the majority of this education occurs in group sessions, there is an allowance for individual education sessions as well.

Rural and underserved areas provide unique challenges and opportunities for pharmacists. There are less health care resources available for rural Americans to access and even fewer that are available at a low cost.[10,11] These communities often have high rates of chronic illnesses, with disproportionate numbers of poor and underinsured people, along with an overall shortage of health care providers.[10] Pharmacists can play an important role in helping to educate and manage these patients' chronic diseases.

This article summarizes the potential financial impact on participating pharmacies from a 3-year partnership between the Colorado Department of Public Health, a rural Colorado Regional Care Collaborative Organization (RCCO), and the University of Colorado Skaggs School of Pharmacy, based on services provided by pharmacists and student pharmacists at 12 rural Colorado community pharmacy locations. This collaboration was designed specifically to pilot a model for expanded pharmacy care services in rural areas. The program was implemented using a dedicated pharmacy student workforce with the goal of demonstrating positive patient health outcomes. These outcomes were used to justify fee-

for-service reimbursement to pharmacists providing this expanded care and to better approximate what this reimbursement would need to be to enable a pharmacist to carry out this work.

Methods

This project was designated exempt by the Colorado Institutional Review Board. The Colorado public health partnership has been previously described in detail.[12] Students in the fourth year of their pharmacy curriculum were placed into a network of 12 rural Colorado pharmacies year-round to support pharmacy operations, providing education and management for patients with cardiovascular disease and diabetes in these rural communities. The services provided through these clinics were offered to all interested patients at no charge. Recruitment occurred face to face at each pharmacy, and referrals were encouraged through the primary care medical offices in each community.

All members of the pharmacy staff were trained to understand the nature and intent of these sites in offering chronic disease state management, such that any patients dropping off or picking up prescriptions that included cardiovascular disease and/or diabetes medications were informed of the program and encouraged to engage with the pharmacist or student pharmacist and register for sessions. The intention was to establish a solid experiential training model for student pharmacists and to pilot services focused on improving patients' health and their ability to manage their chronic diseases with pharmacy education and management. Year-round student support provided the substantial time committed to these patients, while also challenging the students to manage complex patients and work to improve health outcomes.

The one-on-one disease management sessions lasted for an hour or longer and occurred roughly monthly for 6 months. Specific elements of the education were identified that could be generate revenue in an effort to quantify what type of reimbursement a pharmacist could receive for performing these services and compare that to the cost of labor involved.

Within disease management program services, DSMT services and specific MTM elements were identified that were provided across the population of patients during the 3-year funding period. Table 1 summarizes these services and provides some descriptive characteristics. The effect that these disease management services potentially had on insurance plan star ratings was discussed but not quantified because of the indirect nature and lack of formal payment structure these agreements generally represent.

For DSMT services, 506 patients with diabetes were seen for an initial education session across the sites, and these patients returned for 773 follow-up visits. These numbers were used to estimate the reimbursement for providing this education if it was performed in the correct format of 1 individualized education session and follow-up group sessions, each lasting 60 minutes. It was estimated that each group class would include 5 participants, leading to 155 group classes, with each one lasting an hour.

With regard to MTM, all patients who were seen within either the cardiovascular disease education or diabetes education sessions received a comprehensive medication review

(CMR) as part of the education, so the 779 patients who participated in these education sessions were included for an estimated CMR consultation, under the assumption that every patient would be eligible to receive CMR reimbursement through Medicare Part D or their commercial insurance plans. The time spent on these CMR interventions ranged from 15–60 minutes, so an average of 30 minutes was used to calculate the pharmacist's time engaged with patients.

Since DSMT reimbursement varies regionally, Medicare Part B rates for Colorado were used to estimate the reimbursement generated from these services,[13] which included individual initial consultation and education delivered to groups, based on 30-minute time blocks. The reimbursement for a CMR varies but has a regional range of $35-$75 per encounter depending on time and complexity, so the value of $50 per CMR consultation was chosen to estimate the revenue generated from the MTM services.[14] Pharmacist payroll was estimated based on geographic region (rural Colorado) from an online salary estimator service and was calculated at $55 per hour.[15]

Results

Table 2 outlines the calculated reimbursement for DSMT and MTM CMR services, along with the pharmacist's time involved to deliver this education. For the DSMT services, a total revenue of $78,850 was calculated across the sites, with pharmacist labor costing an estimated $36,355. This cost was based on the pharmacists optimizing the group classes to 5 participants or more and delivering 155 hour-long classes. There was a difference of $42,495 after subtracting pharmacist labor costs. For CMRs, the $50 average was used to calculate a total revenue of $38,950. Using the 30-minute average time spent on these CMRs, the cost in estimated pharmacist labor came out to $21,422, yielding a difference of $17,528. The 2 revenue streams together totaled $60,023 after labor costs.

Discussion

This study estimated potential revenue-generating services identified in a chronic disease management program delivered to people in rural Colorado through pharmacy services. The program was designed as a pilot to establish care services to people in rural Colorado, expanding each pharmacy's scope of practice in rural community locations to include cognitive education services. Student pharmacist support was provided to help pilot these programs and share in the time it took to establish them, as well as to create a challenging experiential learning environment.

In order to build a sustainable pharmacy care program, it is important to demonstrate that the services offered can generate revenue that will, at a minimum, cover the labor to provide them. The initial structuring of these services was based on the student pharmacist learners, and while the education followed national guidelines, including the national DSMT criteria, the nature of the visits and the flow of the education was not designed to optimize revenue. It is recognized that in order for the services to receive revenue amounts reaching or exceeding the estimates shown here, a number of changes would need to occur in the overall care

delivery. Diabetes education would need to fit the detailed format that is described in the DSMT reimbursement guidelines by Medicare.[13]

The assumption that all patients in the programs who received CMRs would be identified ahead of time as candidates for these services is unrealistic, since currently, most of the MTM services provided in community pharmacies rely on a third-party platform that helps identify MTM candidates who are eligible for CMRs. Many of the patients seen, however, were complex cases with multiple disease states and medications, so it is reasonable to expect a good number of these to be identified through these platforms. In addition, the MTM platforms may identify additional patients who did not participate in the education programs, balancing any patients who may not have been flagged for MTM services.

The calculated revenue from the billable portions of the education programs is modest at best. A profit of just over $60,000 may appear reasonable at first glance, but putting the numbers in the context of a 3-year period of time and 12 different pharmacies quickly reduces the overall value of providing these services to just over $5,000 per pharmacy. Also of note is the overall simplistic approach used to calculate these numbers; while the pharmacist's time is accounted for, there are a number of logistical considerations (e.g., class materials, personnel time to schedule the various appointments and remind attendees of classes, and follow-up work to actually put through the billing claims) associated with care delivery. It should be also noted that there were other revenue-generating opportunities (e.g., targeted interventions to increase adherence, change to more affordable medications, and implementation of standard therapies such as statin therapy for patients with cardiovascular disease) that were not accounted for in these estimates.

The intention of this article is to recognize the changing landscape that allows pharmacists to bill through various avenues previously unavailable and to demonstrate improved patient health outcomes with cognitive pharmacy services that may promote better future reimbursement. It is also important to highlight the role of pharmacists in direct patient care and their participation in managing patient health rather than dispensing product. It appears that current opportunities for in-depth patient counseling are limited by the reimbursement opportunities, but this landscape is better than it has been in the past, and as more cost-saving models are established, perhaps opportunities for pharmacist reimbursement will continue to emerge. There have been several examples of direct contracts between pharmacy networks and payer systems that have shown significant effect economically and on patient health outcomes, suggesting this is a viable role for pharmacists to play.[16–19]

One element that was mentioned but was not quantified because of its overall complexity is pharmacy's role in affecting Medicare Part D star ratings. There are a number of factors included in third-party star ratings that pharmacists can positively affect (examples listed in Table 1) to improve a third-party plan's overall ranking and help attract new members to the plan. Currently, there are examples where pharmacies have received incentive payments for their performance on these measures and national contracts where a specific pharmacy chain agrees to focus on identified measures and may receive compensation if they successfully attain the goals mutually agreed on with the insurer. The complex relationship between insurance companies and pharmacies is likely to continue and evolve, but agreements are

often made on a national basis, so identifying how 1 pharmacy or even a small network of pharmacies affect the overall scores would be very difficult to quantify.

Limitations

There were a number of limitations to this project, most stemming from the fact that the program was originally designed for the student pharmacist learner to interact individually with patients. A cognitive services model where the pharmacist provides the majority of the education should be based on lucrative services that not only cover the cost of the program but also include appreciable profits. An example of this model is the provision of immunizations, where the pharmacist receives reimbursement for the vaccine, as well as a fee for administering the vaccine, which together would more than cover the time involved to vaccinate.

It has already been noted that the calculations used to estimate potential revenue were overly simplistic and generalized and that the nature of the care delivery would change substantially to fit into the billable formats.

Accreditation is another requirement for a pharmacy site before it could start to submit Medicare Part B claims for DSMT. Marketing and promoting DSMT group settings to continually achieve class sizes of 5 or more participants could be challenging, and it would be important to balance the pharmacist's time in teaching the classes.

Further research should be performed that would specifically evaluate what cognitive services a pharmacist could provide, tracking actual time involved with these services and overall revenue generated across the time period. Nevertheless, pharmacists engaging directly with patients regarding their medication-related needs is an important, evolving role for the profession and is now somewhat recognized as a service for which pharmacists should be reimbursed.

Conclusions

This study estimated potential revenue streams for pharmacy services that would generate profits while covering the pharmacist's direct patient care time. Modifications would need to be made to better fit the services into billable opportunities. Currently, there are limited opportunities for reimbursement for pharmacist-delivered cognitive services, but the landscape is beginning to expand. Establishing a contracted partnership with a specific insurer prospectively would greatly aid in the process of reimbursement. Further research is needed to better estimate the financial impact that these expanded cognitive services represent, possibly leading to expanded reimbursement opportunities for pharmacists.

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DISCLOSURES

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What is already known about this subject

- Following the Medicare Prescription Drug Act of 2003, pharmacists are able to bill for cognitive services under medication therapy management.
- Pharmacists are included on the list of providers eligible for billing insurance plans for diabetes self-management education and training in patients with diabetes.
- Pharmacy services can improve the star ratings of insurance plans.

What this study adds

- This pilot project used student pharmacists as a workforce to deliver expanded individual education to patients with diabetes and cardiovascular disease.
- Elements within the disease management program are currently eligible for reimbursement for pharmacists, with proper credentialing and modification of the education delivery.
- Estimated cost savings and current reimbursement suggests that this type of education is feasible in community pharmacy practices.

TABLE 1

Services Currently Available for Reimbursement to Pharmacists

Pharmacy Service	Description of Service	Revenue Source	Estimated Revenue
Diabetes self-management education and training	Diabetes patients can receive 10 hours first year, 2 hours each subsequent year 1 hour of the initial 10 can be individual education, 9 hours would be group sessions	Direct reimbursement through Medicare Part B and third-party commercial plans	Reimbursement set by Medicare and varies regionally *Current CO rates:* Individual: $55 per 30 minutes Group: $15 per 30 minutes
MTM services	Comprehensive medical review	Direct reimbursement through Medicare Part D and third-party commercial plans	Tiered reimbursement: pharmacist paid for working up a case Higher amount for completing CMR with patient Rates vary depending on time and complexity: $35–$75 per CMR
Star ratings	Improvement to third-party Medicare rating system through direct pharmacy services Pharmacy star ratings examples: • Targeted adherence intervention • Healthy lifestyles • CMR completion • Discontinuation of high-risk medications • Blood pressure monitoring and education • Recommended self-monitoring blood glucose for eligible patients with diabetes • Annual eye exam recommended for patients with diabetes • Annual influenza vaccination	Indirect contracting between pharmacies/ pharmacy network and third-party insurers Star ratings assigned as a quality ratings system to Medicare Part C and Part D plans	Complex contracts between insurance and pharmacy groups: incentive pay for achieving measures, or “scale back” punitive charges for failing to attain measure

CO = Colorado; CMR = comprehensive medical review; MTM = medication therapy management.

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TABLE 2

Estimated Insurance Reimbursement for Pharmacy Services

Class Revenue and Salary Hour Estimates	Estimated Dollars
Diabetes self-management education/training	
Initial individual education: 506 participants × $110 for 60 minutes (estimated $55 per 30-minute individual education)	55,660
773 × $30 per 60-minute group session (estimated $15 per participant per 30 minutes)	23,190
Pharmacist's time to provide education classes (506 1-hour individual sessions, 773 group participants, estimate 5 participants per group class = 155 1-hour group classes) 661 hours total time spent (assume $55 per hour salary)	<36,355>
Comprehensive medication reviews	
779 participants × $50 (reimbursement range ~$35–$75)	38,950
Pharmacist time (30 minutes per review) = 389.5 hours × $55 per hour estimated salary	<21,422>
Total estimated profit	**60,023**