



Contents lists available at ScienceDirect

Journal of the American Pharmacists Association

journal homepage: www.japha.org

ADVANCES IN PHARMACY PRACTICE

Financial impact of patients enrolled in a medication adherence program at an independent community pharmacy

Cody L. Clifton, Ashley R. Branham, Harskin “HJ” Hayes Jr, Joseph S. Moose, Laura A. Rhodes, Macary Weck Marciniak*

ARTICLE INFO

Article history:

Received 16 September 2017

Accepted 10 April 2018

ABSTRACT

Objectives: To determine the financial impact of attributed patients enrolled in a medication adherence program at Community Pharmacy Enhanced Services Network (CPESN) pharmacies.

Setting: Five independently owned Moose Pharmacy locations in rural North Carolina, which are CPESN pharmacies.

Practice description: Moose Pharmacy has a longstanding history of innovative change. Each Moose Pharmacy location provides enhanced pharmacy services, including adherence packaging, medication synchronization programs, immunizations, home visits, home delivery, comprehensive medication review, disease state management programs, point-of-care testing, and compounding.

Practice innovation: Certain CPESN pharmacies, including Moose Pharmacy, were attributed complex Medicare or Medicaid patients having at least 1 chronic medication and at least 80% of medications filled at a CPESN pharmacy. Patients were included if they were attributed to a study location and enrolled in the Moose Medication Adherence Program (MooseMAP) for more than 12 months. Patients were excluded if they were younger than 18 years of age or had less than 12 months of prescription fill data. Reviewed data included patient demographics, chronic and acute medications, immunizations, MooseMAP type, number of chronic medication prescribers, chronic medication class, payer, and patient health risk indicators. Yearly profit for prescriptions filled was determined per patient. Independent-samples *t* test was used to assess data.

Evaluation: Yearly profit per prescription was \$10.35 for combined chronic, acute, and immunization prescriptions, \$10.57 for chronic prescriptions, \$26.95 for acute prescriptions, and \$27.69 for immunizations. Mean profit for strip packaging was \$1561.82 per year compared with \$1208.01 per year with bottles ($P = 0.021$). There was a positive correlation between profit and number of prescriptions filled per 12 months ($r = 0.56$; $P < 0.001$), number of medication classes ($r = 0.27$; $P < 0.001$), and higher-risk indicator scores ($r = 0.21$; $P < 0.001$). **Conclusion:** Enrolling complex patients in a medication adherence program can benefit community pharmacies, particularly CPESN pharmacies, through chronic medication fills and yearly profit. Greater profit is generated when prescriptions are dispensed in strip packaging instead of bottles.

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Disclosure: Macary Marciniak declares that her spouse is an employee of the American Pharmacists Association. Cody Clifton, Ashley Branham, and Joseph Moose are employed by CPESN USA.

Funding: This work was supported by a \$1000 grant from the American Pharmacists Association (APhA) Foundation. The sponsor had no role in study design; in the collection, analysis, and interpretation of data; in the writing of the report; or in the decision to submit the article for publication. The project described was supported by grant number 1C1CMS331338 from the Centers for Medicare and Medicaid Services, Department of Health and Human Services. The contents of this presentation are solely the responsibility of the author and do not necessarily represent the official views of the U.S. Department of Health

and Human Services or any of its agencies. The research presented here was conducted by the awardee. Findings might or might not be consistent with or confirmed by the findings of the independent evaluation contractor.

Previous presentations: American Pharmacists Association (APhA) Annual Meeting & Exposition, March 23–27, 2017, San Francisco, CA; Research in Education and Practice Symposium, May 22–23, 2017, Chapel Hill, NC.

* **Correspondence:** Macary Weck Marciniak, PharmD, BCACP, BCPS, FAPhA, Division of Practice Advancement and Clinical Education, UNC Eshelman School of Pharmacy, University of North Carolina, 115G Beard Hall, Campus Box 7574, Chapel Hill, NC 27599-7574.

E-mail address: macary_marciniak@unc.edu (M.W. Marciniak).

Key Points

Background:

- Medication nonadherence is the United States' number one avoidable health care cost, at an estimated \$105 billion annually.
- Medication adherence programs can help pharmacies to combat low medication adherence, particularly in high-risk populations with multiple chronic medications or conditions, as well as providing an additional revenue stream.

Findings:

- Community-based pharmacies that offer enhanced pharmacy services, such as medication adherence programs, may increase the number of chronic medication fills and profit by managing complex patients with the use of strip packaging compared with bottles.
- Patients enrolled in medication adherence programs who have a higher number of prescriptions and higher patient risk scores should be prioritized to significantly improve health outcomes and increase profit.

The most significant cause of the increasing health care expenditure in the United States is the rising prevalence of chronic disease. An estimated \$1.7 trillion annually, or more than 75 cents of each health care dollar spent, is used to treat chronic disease.¹ In 2015, \$310 billion was spent in the United States on medications.² Medication nonadherence is the United States' number 1 avoidable health care cost, at an estimated \$105 billion annually.³ Medication adherence rates for many chronic conditions often range from 40% to 70%, which is well below the preferred 80% threshold preferred by many health plans, adding to health care expenditure.^{4,5} Studies provide examples of improved health outcomes and a reduction in health care costs for patients with high adherence to chronic medications.^{6,7} Medication optimization through improved adherence could save \$290 billion.²

Medication adherence programs are one mechanism that pharmacies can implement to combat low medication adherence, particularly in high-risk populations with multiple chronic medications or conditions. Pharmacists are well positioned to facilitate this role because patients are estimated to visit their pharmacy several more times per year compared with visiting their medical doctor.^{2,4} Although some literature supports the claim that automatic prescription refill programs may be beneficial, medication adherence programs may assist in further improving adherence because they provide the patient longitudinal touch points with a pharmacist. Medication adherence programs traditionally include monthly medication reviews, medication synchronization, and packaging. Doucette et al. concluded that some enhanced pharmacy services, including adherence programs and influenza and herpes zoster immunization services, showed a net financial gain.⁸ In a systematic review by Nguyen et al., appointment-based model

synchronization improved medication adherence and had a positive financial return on investment for patients taking chronic medications.⁹ As an added benefit, medication optimization through adherence improves health outcomes and decreases overall health care costs.¹⁰

A typical independent pharmacy generates more than 90% of its revenue from prescriptions.¹¹ The National Community Pharmacists Association Digest reported that profit per prescription in 2015 remained stable at \$11.99. However, over the past 2 years, gross margins for prescription medications have declined.¹¹ For this reason, community-based pharmacies should consider implementing sustainable revenue streams by complementing drug dispensing with enhanced pharmacy services. Limited studies are available that discuss the financial impact of enhanced pharmacy services, such as immunizations. The financial impact of attributed patients to Community Pharmacy Enhanced Services Network (CPESN®) pharmacies enrolled in a medication adherence program is unknown.

Objective

The primary objective of this study was to determine the financial impact of attributed patients enrolled in a medication adherence program at CPESN® pharmacies.

Setting

Community Pharmacy Enhanced Services Network Pharmacies

CPESN was an open network of more than 270 high-performing pharmacies in North Carolina that are dedicated to providing comprehensive community pharmacy care management and reducing total cost of care.^{2,12,13} CPESN was established by Community Care of North Carolina (CCNC) in September 2014, following receipt of a Centers for Medicare and Medicaid Innovation grant.¹⁴ Through the grant, more than 270 North Carolina high-performing pharmacies were dedicated to providing comprehensive community pharmacy care management and reducing total costs of care. Participating CCNC CPESN pharmacies were referred attributed patients, which are defined as “complex patients who are Medicare or Medicaid beneficiaries in the state of North Carolina.”^{2,12,13} Furthermore, attributed patients were eligible for enhanced services, such as medication adherence programs and immunizations, if they had at least 1 chronic medical condition and filled at least 80% of their chronic medications at a CPESN pharmacy.¹⁴ Each attributed patient had a risk score, presented as a value ranging from 1 to 100 (where higher numbers indicate higher risk). Developed with the use of pharmacy fill data, the risk score was used by CPESN pharmacies to triage the provision of enhanced pharmacy services to those most at risk for hospitalization or medication-related problems.¹⁵ Early findings indicate that CPESN pharmacies contribute to improved medication optimization because of increased touch points with patients.¹²

Moose Pharmacy

Established in 1882, Moose Pharmacy consists of 5 locations in rural North Carolina, and the company has a

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