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ADVANCES IN PHARMACY PRACTICE

A technology-supported collaboration between a health plan and a community pharmacy to improve blood pressure control

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ABSTRACT

Objectives: To assess the impact of a health plan and community pharmacy partnership to improve blood pressure control.
Setting: A midwestern health plan and a regional community pharmacy chain.
Practice innovation: Health plan members with a hypertension diagnosis and attributed to the pharmacy chain based on prescription claims were invited to participate. Interested patients enrolled in the program at their pharmacies and were assigned a "smart card" for use with a blood pressure kiosk in the pharmacy. When the card was used at the kiosk, individual patient readings were linked directly to their electronic pharmacy record and an online patient portal. Pharmacists intervened with patients and prescribers as necessary to address adherence issues and adjust therapy as needed.
Evaluation: Before and after blood pressure readings were assessed to determine the impact of patient self-monitoring and pharmacist intervention for patients with 1) uncontrolled blood pressure at first reading and 2) multiple readings throughout the pilot period.
Results: Fifty-six of 276 eligible patients (20%) were enrolled in the program. Fourteen patients qualified for before and after assessments, having uncontrolled blood pressure on initial reading and multiple readings throughout the pilot. These patients demonstrated a mean reduction in systolic blood pressure of 12 mm Hg and diastolic blood pressure of 8 mm Hg. Nine of 16 eligible pharmacy locations enrolled patients at their sites. Challenges faced in the initiative included gaining adequate pharmacist and patient engagement.
Conclusion: The pilot demonstrated promising early results in a model that has potential to improve blood pressure monitoring and management in a community pharmacy setting.

Hypertension has been recognized as a critical public health concern; approximately 30% of the population has been diagnosed with hypertension and only one-half of those patients have met clinical goals.[1] Community pharmacists, because of their clinical expertise and accessibility, have been recommended as one resource to address this concern.[2] Recent meta-analyses have demonstrated success in pharmacists affecting blood pressure control,[3] particularly community pharmacists.[4] The evidence is so significant that there has been a call to shift our focus and resources from research to implementation.[2]

Despite positive results in controlled research studies, community pharmacists do not typically have access to key data required to effectively and efficiently identify and intervene with patients not achieving their clinical goals. Asking individuals to self-report clinical data, or requesting readings from health systems or prescriber offices is cumbersome and impractical for most community pharmacists working in high-volume settings. Access to clinical data has been cited as a means to improve clinical decision making in community

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Key Points

Background:

- Community pharmacists have demonstrated positive impact on hypertension management in previous studies and demonstration projects.
- Less is known about real world implementation strategies, such as partnerships with health plans and use of technology for data sharing.

Findings:

- This pilot suggests that there is potential to achieve blood pressure reductions through coordinated efforts of health plans and community pharmacists.
- Innovative self-monitoring technology and data integration can help to streamline and scale patient care processes.
- Experiences from this pilot can guide future partnerships between health plans and community pharmacy organizations aiming to achieve common goals in population health management.

pharmacy, and insufficient access is a perceived limitation of implementing services in community pharmacy practice.[5]

Use of blood pressure monitoring kiosks is common in community pharmacies in North America and is one way to collect clinical data in the community pharmacy setting. These devices have also been suggested as a means to expand awareness, screening, and monitoring related to blood pressure. There has been controversy about the validity of these devices,[6] but selected devices have demonstrated strong clinical validity.[7,8] Furthermore, some validated kiosk devices are supported by interoperable technology that can share patient-specific data in an online network that is accessible both to the patient (through an online portal) and to the pharmacist (through their pharmacy management system). This allows the pharmacy management system to flag patients for the pharmacist during prescription processing, alerting them in real time to the patient's level of control and of the need for additional review. Use of this device has been explored as an opportunity to expand medication therapy management (MTM) services for patients with hypertension.[9]

As roles for community pharmacists have expanded, there has been a recent call to action for increased partnership between the community pharmacy and managed care sectors.[10] This is driven by the increased focus on quality in health care and by the important role that pharmacists can play in improving Medicare Star Ratings. Furthermore, it is notable that the most commonly used community pharmacy–based quality measure is currently medication adherence. Although adherence is important, there is interest in moving beyond adherence to patient outcomes. In light of these trends and opportunities, a partnership was formed between a health plan, a regional community pharmacy chain, and a health care technology company to support mutual goals in improving population health through community pharmacy engagement.

Objective

The goal of this pilot was to assess the impact of a health plan and community pharmacy partnership to improve blood pressure control in a community pharmacy setting.

Setting

This pilot was conducted from March to September 2015 at 16 locations affiliated with a regional community pharmacy chain and in partnership with a midwestern health plan.

Practice description and innovation

Two hundred seventy-six members of the health plan were identified by the health plan's medical informatics team as attributed to the community pharmacy partner (defined as filling the majority of their total medication days supply at the pharmacy) from December 2013 to November 2014, receiving medication therapy for hypertension, and with a medical claim for hypertension.

Eligible patients received a letter of invitation to participate in the program cobranded with the health plan and pharmacy logos and information. The letter informed them that they could speak with their pharmacists about enrolling. Because of low early enrollment, the list of eligible patients was shared with pharmacists so that patients could be flagged and personally invited to enroll. Interested patients were provided a free “smart card” to track their blood pressure readings and were encouraged to check their blood pressure frequently at the pharmacy location by means of the kiosks that use the smart cards. The smart card has microchip technology that tracks the patient's blood pressure readings. Because this was pursued for care improvement and not research purposes, consent was not required.

The blood pressure kiosks used in this pilot have been validated through a series of clinical studies.[7,8] The kiosks are connected through secure technology to the pharmacy management system, and the pharmacist can view the patients' most recent blood pressure readings on their screen during prescription processing. An indicator on the computer screen displays “stoplight” blood pressure levels represented by green, yellow, red, and flashing red. Pharmacist action is prompted when the average of up to the last 10 blood pressure readings is high or very high. Stoplights are based on Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 7 (JNC7)[11] guideline definitions:

- Green: normal; systolic blood pressure (SBP) 50-119 mm Hg *and* diastolic blood pressure (DBP) 30-79 mm Hg.
- Yellow: pre-hypertension; SBP 120-139 mm Hg or DBP 80-89 mm Hg.
- Red (high): stage 1 hypertension; SBP 140-159 mm Hg or DBP 90-99 mm Hg.
- Flashing red (very high)—stage 2 hypertension; SBP $\geq$160 mm Hg or DBP $\geq$100 mm Hg.