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RESEARCH NOTES

Development of a medication synchronization common language for community pharmacies

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ABSTRACT

Objectives: To develop a common language for the medication synchronization process in community pharmacies.

Methods: A systematic and iterative process was used to create and refine a common language for medication synchronization. First, a review of all available medication synchronization–related documents was completed. Second, a systematic scoping literature review was conducted to determine what core components of medication synchronization have been implemented by community pharmacies. Third, semistructured interviews were conducted with community pharmacists and key stakeholders to identify principles and successful practices. Findings from the document review, systematic scoping review, and semistructured interviews were integrated to develop a medication synchronization common language. Finally, researchers and key stakeholders refined the initial draft by means of a systematic process.

Results: This process generated a medication synchronization common language that includes common language for the philosophy and values of medication synchronization. This profile also includes descriptions of core components with activities to be conducted for each of the identified 5 core components. The 5 core components are: 1) identification and enrollment of patients; 2) completion of a medication review and patient assessment; 3) alignment of medication refills; 4) preparation for medication delivery; and 5) delivery of medication and other services.

Conclusion: The development of a common language for medication synchronization will allow for the promotion of consistency in implementation and operation of these programs across community pharmacies. Consistency in implementation will allow for better interpretation of patient outcomes such as adherence and other clinical measures.

Adherence to chronic medications achieves positive health outcomes only if patients adhere to their prescribed medication regimen.[1-3] Failure to adhere to prescribed medications can result in a huge public health burden and costs. Nonadherence to prescribed medications has been estimated to cost the United States health care system from $100 to $300 billion annually.[4,5] Many factors contribute to medication adherence, and it has recently been identified that the burden of visiting a pharmacy to fill and refill medications contributes to patients' nonadherence.[6] Many patients with chronic conditions manage multiple medications prescribed by numerous prescribers and may fill their prescriptions on numerous days during a month.[7-10] One study found that patients with cardiovascular disease visit the pharmacy an average of 20 times per year, and the top 10% visit the pharmacy more than 43 times to fill their prescriptions. This makes establishing a routine around filling medications challenging.[7]

In response to this challenge, many pharmacies have started to offer medication synchronization. One study estimated that 8% of all pharmacies in the United States offered medication synchronization in 2014. This number had doubled from 4% in 2013.[6] Medication synchronization simplifies the aforementioned refilling process by proactively assembling all of a patient's medications to be picked up on a single visit to the pharmacy.[11-13] Previous studies indicate that patients

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enrolled in medication synchronization have adherence rates 2 to 6 times higher than patients managing their refills on their own.[14-22] However the variation in medication synchronization programs makes it difficult to determine what aspects of the process lead to these adherence clinical outcomes.[14-22]

To provide the most effective synchronization program resulting in improved medication adherence and clinical outcomes, we must know what processes and core components lead to the improvement.[23,24] Although all programs align medication refills, some programs include additional services, such as comprehensive medication management, disease state management, point-of-care testing, delivery options, and vaccine recommendations.[6] In addition, pharmacies use medication synchronization programs offered by different vendors, pharmacy organizations, and pharmacy management systems with variations in core components and processes. Confounding matters further is a lack of medication synchronization literature focusing on the implementation and fidelity of the programs, with extant literature focusing on only a single program.[25] Thus, the overall best practice of medication synchronization in pharmacy-based clinical services has yet to be determined.[7]

A common definition of the process and core components of a medication synchronization program is lacking, without which any correlation between program features and improved adherence or clinical outcomes is difficult to identify.[23,24,26] One way to define medication synchronization is to develop a common language, which is a tool for operationalizing what is being implemented so that it is clear what community pharmacists will do as they carry out the intervention. The purpose of the present article is to describe how a common language document was developed. A systematic and iterative process adopted from implementation science was used to develop core components of medication synchronization. The common language includes: 1) philosophy and values of the intervention; 2) clear descriptions of the intervention's core components; 3) activities to be conducted during each core component; and 4) practical assessments of fidelity to the intervention.[24,26] A document addressing each of these criteria with regard to medication synchronization should provide an operational model for implementing the core components of a successful medication synchronization program.

In this study, we used a state-wide network of more than 250 community pharmacies. This network was developed by Community Care of North Carolina (CCNC). CCNC works with health care partners to provide cooperative coordinated care through a patient-centered medical home model to serve the needs of vulnerable populations in North Carolina. They have created a Community Pharmacy Enhanced Services Network which integrates longitudinal medication optimization services provided by community pharmacies with care management provided by CCNC's multidisciplinary care team. This model has now expanded to other states across the country.[27,28] Many of these pharmacies self-report as providing medication synchronization programs. However, little is known about which core components are being used and how pharmacies are implementing these programs. The development of a medication synchronization common language will allow for the promotion of consistency across community pharmacies to better capture clinical outcomes.

Objective

To develop a common language for the medication synchronization process in community pharmacies.

Methods

The common language methodology uses the experience of community pharmacists, technicians, and key stakeholders to ensure that information about best practices for medication synchronization are established for use. Implementation science researchers have developed a systematic and iterative process to create and refine a common language.[23-26,29] The researchers used this process, which follows 5 steps: 1) reviewing intervention-related documents; 2) scoping literature in a systematic process; 3) conducting semistructured interviews; 4) vetting and consensus of common language draft; and 5) testing usability. Each of these steps is outlined below. It is important to note that steps 1 through 3 can occur simultaneously. This study was approved by the University of North Carolina Institutional Review Board (IRB #17-1485).

Document review

Researchers conducted a review of publicly available medication synchronization–related documents. Materials were reviewed to gain a sense of context within which community pharmacies are expected to implement and carry out each medication synchronization program. This included documents such as handbooks, tools, and resources from pharmacy organizations (e.g., APhA and NCAP) and vendors (e.g., McKesson Health Mart). The documents were independently screened by 2 researchers (M.P. and C.R.) and were included if they directly addressed the operation of a medication synchronization program.

Systematic scoping review

The goal of the systematic scoping review was to identify and review published research that focused on implementation of medication synchronization in a community pharmacy. The review looked specifically at the question, “What core components have been implemented by community pharmacies as part of a medication synchronization program?” Published peer-reviewed literature was identified through conducting a search in Medline, Embase, and International Pharmaceutical Abstracts. Search terms included medication, prescription, or refill and synchronization or alignment or appointment-based model. Themes were identified and summarized to inform the common language development.[29,30]

Semistructured interviews

Researchers consulted with community pharmacists, technicians, and key stakeholders identified by CCNC to request additional insights on medication synchronization beyond published literature. Researchers developed a semistructured interview guide (Table 1) with the goal of identifying the principles and practices that guide successful work with medication synchronization. Qualitative data were