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TOOLS FOR ADVANCING PHARMACY PRACTICE

Developing a dashboard for benchmarking the productivity of a medication therapy management program

Audrey Umbreit*, Emily Holm, Kelsey Gander, Kelsie Davis, Kristina Dittrich, Vanda Jandl, Laura Odell, Perry Sweeten

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ABSTRACT

Objectives: To describe a method for internal benchmarking of medication therapy management (MTM) pharmacist activities.
Setting: Multisite MTM pharmacist practices within an integrated health care system.
Practice description: MTM pharmacists are located within primary care clinics and provide medication management through collaborative practice. MTM pharmacist activity is grouped into 3 categories: direct patient care, nonvisit patient care, and professional activities.
Practice innovation: MTM pharmacist activities were tracked with the use of the computer-based application Pharmacist Ambulatory Resource Management System (PhARMS) over a 12-month period to measure growth during a time of expansion.
Results: A total of 81% of MTM pharmacist time was recorded. A total of 1655.1 hours (41%) was nonvisit patient care, 1185.2 hours (29%) was direct patient care, and 1190.4 hours (30%) was professional activities. The number of patient visits per month increased during the study period. There were 1496 direct patient care encounters documented. Of those, 1051 (70.2%) were face-to-face visits, 257 (17.2%) were by telephone, and 188 (12.6%) were chart reviews. Nonvisit patient care and professional activities also increased during the period.
Impact: PhARMS reported MTM pharmacist activities and captured nonvisit patient care work not tracked elsewhere. Internal benchmarking data proved to be useful for justifying increases in MTM pharmacist personnel resources. Reviewing data helped to identify best practices from high-performing sites. Limitations include potential for self-reporting bias and lack of patient outcomes data.
Conclusion: Implementing PhARMS facilitated internal benchmarking of patient care and nonpatient care activities in a regional MTM program.

Objective and setting

The objective of this work was to describe a method for internal benchmarking of medication therapy management (MTM) pharmacist activities. The work was carried out in the southwest Minnesota (SWMN) region of the Mayo Clinic Health System, which encompasses a wide geographic area of the state and includes rural and urban areas. The largest city in this region has a population of more than 40,000 and serves as the "hub" site for all regional pharmacist services.[1] The hub city is also the location of the region's largest hospital, a 166-bed level 3 trauma center. There are an additional 3 critical access hospitals and 2 smaller hospitals within the region, for a total of 144 additional hospital beds.[2] There are a total of 22 primary care clinics in the region with 203 physicians and 131 nonphysician providers who provide care to a total of 83,626 paneled patients.[3] Paneled patients represent the total number of patients under the care of a Mayo Clinic primary care provider. The region also includes 3 dialysis units, which accommodate a total of 120 patients per week. There are no Mayo Clinic outpatient pharmacies in the region.

MTM pharmacists are either colocated with other primary care providers or have a hybrid hospital-ambulatory practice at the critical access sites, and they conduct patient visits within the clinic. MTM pharmacists in the Mayo Clinic Health System operate under a broad collaborative practice agreement, which allows for pharmacists to initiate, modify, and discontinue

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* **Correspondence:** Audrey Umbreit, PharmD, BCACP, 101 Martin Luther King Jr. Drive, Mankato, MN 56001.
E-mail address: umbreit.audrey@mayo.edu (A. Umbreit).

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Key Points

Background:

- PhARMS is an effective tool to track pharmacist work in 3 categories: direct patient care, nonvisit patient care, and professional activities.

Findings:

- PhARMS data described the growth of a regional MTM practice through internal benchmarking
- Application of PhARMS data was useful in justifying the need for expanding MTM services and resources to upper level management.

most chronic disease medications, as well as to order appropriate laboratory tests for chronic disease or medication monitoring. All MTM pharmacists are credentialed providers in the Mayo Clinic Health System and have completed training through the American Pharmacists Association's "Delivering MTM in the Community" certificate program.

During the time period of the present study, from January 2015 to December 2015, MTM services expanded in the region to include a total of 3 full-time MTM pharmacists based in 1 of 3 hub clinics, each with dialysis and outreach responsibilities to a regional clinic site. Three lead pharmacists at the critical access hospitals expanded their role to provide MTM services at their affiliated clinics on a part-time basis. As the practice expanded, we sought to pilot a productivity monitoring tool that would allow us to assess and report on the growth of the MTM service in the region.

Practice description

MTM pharmacist activity at Mayo Clinic Health System can be grouped into 3 main categories: direct patient care, nonvisit patient care, and nonpatient care professional activities.

Direct patient care activities include:

- Face-to-face patient visits
- Telephone visits
- Chart review consultations

Nonvisit patient care activities include:

- Answering patient or provider drug information questions
- Assisting with prior-authorization requests
- Pre-visit review of medical chart
- Post-visit care coordination work (documentation, communication with providers or pharmacy)

Nonpatient care professional activities include:

- Attending department and committee meetings
- Providing education to health care providers and medical staff
- Conducting research or quality assurance projects
- Precepting students or residents

For the purpose of this study, it is important to note that direct patient care time included only the time spent directly with the patient or, in the case of a chart review, the total time spent completing documentation of the chart review. Pre-visit work of reviewing the patient's chart as well as post-visit work of documenting face-to-face and telephone encounters were considered to be nonvisit patient care activities.

Although several tools have been designed to track patient encounters and clinical outcomes, such tools have often lacked the ability to track nonvisit patient care or nonpatient care activities.[4]

Practice innovation

The use of dashboards and metrics to measure productivity is expanding in health care management.[5] Internal benchmarking is advantageous for the management of a clinical pharmacist program because it allows for self-comparison over time, directly measures changes in practice and workload, and provides a foundation for determining resource distribution.[6] Although several methods have been piloted in retail, academic, and inpatient settings, there is no widely accepted productivity tool to track the wide array of patient care activities and productivity of MTM pharmacists in an ambulatory clinic setting.[6-8] Some of the suggested productivity measures could apply to the ambulatory care clinic setting, including: clinical interventions per pharmacist shift worked, clinical documentation rate, and work-hour documentation rate.[6] However, these measures alone do not capture the entirety of ambulatory care pharmacist work, demonstrating the need for a dashboard specific to ambulatory care.

Workload Management and Reporting Systems (WMRS) is a validated computer-based application to track productivity and time management for ambulatory care nurses.[9] The Mayo Clinic pharmacy informatics team modified WMRS to meet the needs of the ambulatory care pharmacists and named it the Pharmacist Ambulatory Resource Management System (PhARMS). Both WMRS and PhARMS are unique systems developed by the Mayo Clinic and are not currently available to the public.

PhARMS is a separate system from the electronic health record. It runs simultaneously with the electronic health record on the desktop of the pharmacist's workstation. The amount of time spent entering information into PhARMS is minimal, approximately 10 to 15 minutes per day. The pharmacist enters 3 pieces of information for each entry: patient identifier (if applicable), type of activity, and amount of time in minutes spent on the activity. The patient identifier and time spent fields are free-text entries. The type of activity is chosen from a menu of categories. The complete list of these activities is presented in Supplemental Table 1. A screen shot of the PhARMS tool shown in Supplemental Figure 1.

PhARMS has been used by Mayo Clinic MTM pharmacists in Rochester to measure MTM pharmacist activity. But it had not been studied in the wider Mayo Clinic Health System, nor had it been applied to set goals for a regional MTM program before the present project. We chose to pilot the use of PhARMS in the SWMN region.