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of community pharmacy.*



## COMMUNITY PHARMACY FOUNDATION COMPLETED GRANT SYNOPSIS

Implementation of a community pharmacy comprehensive medication review program in the workplace setting

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### Objectives

- 1) Demonstrate the impact of a community pharmacist-run comprehensive medication review program in the workplace setting
- 2) Identify the type of interventions commonly made in a medication review program in the workplace setting

### Methods

Design	<p>The CMR program utilized the framework for community pharmacy-based MTM services developed by the American Pharmacists Association and the National Association of Chain Drug Stores Foundation. Patients (employees, spouses, and dependants) aged 18 years and older, taking at least one or more prescription and/or nonprescription medications, were eligible for a comprehensive medication review. The KH office manager administrative assistant scheduled all patients interested in the MTM service with a pharmacist and/or community pharmacy resident. A majority of the sessions were completed by the pharmacy residents. Each patient session was scheduled for 60-minute appointments to allow adequate time for the pharmacist to provide patient care and documentation. The patients was seen either in a private area at their workplace or at a local Kerr Health clinic. At the initial MTM session, a follow-up visit interval was determined. Each patient was eligible for one follow-up session.</p> <p>Each patient was required to complete an IRB-approved informed consent form and HIPAA form. During the initial MTM session, the pharmacist gathered and reconciled all medication information from both the medical record and patient interview. The pharmacist then reviewed/evaluated the medications the patient was taking to identify and address drug therapy problems, including underutilization, overutilization, adverse drug reactions, drug-drug or drug-disease interactions, inappropriate therapy, duplicate therapy, insufficient dose or duration, excessive dose or duration, and cost-saving opportunities. Additionally, the pharmacist observed and corrected medication administration problems including: appropriate inhaler technique, insulin administration, and timing of medications with food and other medications.</p> <p>Findings, including the medication list, were documented in the online MirixaEdge program. The patient was provided a Personal Medication Record (PMR) including patient's drug allergies, medical conditions, and medications and Medication Action Plan (MAP) that included recommendations made by the pharmacist during the MTM session. These recommendations included measures to improve adherence, compliance, or efficacy, or to decrease adverse drug events or cost. If immediate issues presented, the pharmacist contacted the patient's primary healthcare provider. However, a majority of recommendations were routed through the patient. Each patient was responsible for following up with their primary healthcare provider to discuss recommendations or changes. Pharmacists followed up with a majority of patients in 4-8 weeks to assess their understanding of previous recommendations and answer any additional questions related to the MTM session.</p>
Study endpoints	<ul style="list-style-type: none"><li>• Type of pharmacist made interventions during a comprehensive medication review</li></ul>

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## Results

A number of employers in the greater Charleston area were contacted regarding their participation in the MTM program. However, only three employers signed on to participate in the program. Each employer enrolled has an established wellness program with a primary contact. Thirty seven (37) patients enrolled and participated in the initial MTM session. The study population was representative of the general population employed by these employers. Seventy three percent (73%) of participants were male. Sixty five percent (65%) of participants were African American, 27% were Causasian and 2% were Asian. The average age of participants was 52 years (Age Range: 30-64 years). The participants had an average of 3 disease states (Range: 1-10 disease states). The participants took an average of 7 medications (Range: 1-17 medications); including an average of 5 prescription medications and 2 over-the-counter or herbal products. The pharmacists recorded 169 interventions, which averaged to 4.5 per participant. Table 1 summarizes the interventions made.

## Conclusion

### Limitations

While the pharmacist team was able to make interventions, additional data was not collected. Health-related cost information from employers would be helpful to further identify how interventions and therefore the MTM program could impact their financials. Additionally, the limited number of participants makes data analysis difficult.

### Conclusions

The pharmacist team was able to make many recommendations to enhance the participant's drug therapy. Of note, 21% of the interventions were related to cost savings, which would indicate that the cost savings related to medications may decrease. However, it was also noted that the pharmacists identified forty interventions where additional or new therapy was needed. Therefore, the outcome cannot easily be predicted related to the effect of the MTM service on overall medication costs. The investigators identified the need to accurately educate employers, employees and other potential "customers" on the benefits of medication therapy management programs. It was noted that the employers were unsure how the MTM service would benefit their employees and fit into their established wellness initiatives.

Type of Intervention	Number of Interventions Made
Adherence	3
Administration Timing (Statins, Omeprazole)	7
Administration Technique	2
Identification of Adverse Drug Reaction	3
Cost Savings Opportunity (Brand Generic Switches)	36
Excessive Dose of Medication	7
Excessive Duration (Plavix > 12 months)	2
Generalized Counseling	9
Inappropriate Medication	9
Needs Therapy <ul style="list-style-type: none"><li>• Statins</li><li>• Fish oil</li><li>• Metformin</li><li>• Anti-hypertensives</li><li>• Calcium/Vitamin D</li><li>• Other</li></ul>	40 5 8 6 8 5 8

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Overuse of Medication	1
Referral	26
• Primary Care Provider	4
• Laboratory	4
• Immunizations	18
Suboptimal Dose	19
• Metformin	8
• Fish Oil	4
• Other	7
Unnecessary Medication	5
Total Interventions	169

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