



COMMUNITY PHARMACY FOUNDATION
COMPLETED GRANT SYNOPSIS

FINANCIAL ANALYSIS OF MTM SERVICES IMPLEMENTED IN A NON-MTM PARTICIPATING PHARMACY

Anthony Pudlo, PharmD, MBA; Marlena Abernethy, PharmD, MBA, Jeremy “JJ” Peek, PharmD
Kerr Health, Asheville, NC; Burke Pharmacy, Morganton, NC; Metcalf Pharmacy, Brevard, NC

Objectives	
1) To integrate Medication Therapy Management (MTM) into North Carolina pharmacies that do not currently offer MTM services, in an effort to analyze the primary financial endpoints of added value and revenue to the pharmacy <ul style="list-style-type: none"> a. Secondary objective: To measure and compare medication adherence rates prior to and after initial intervention 	
2) To assess the knowledge gained by pharmacy personnel regarding implementation of MTM services	
Methods	
Design	<ul style="list-style-type: none"> • Inclusion/exclusion criteria <ul style="list-style-type: none"> ○ Inclusion criteria: Age ≥ 65 years, participation in Medicare Part D Plan, North Carolina resident ○ Exclusion criteria: Resident of nursing home, comprehensive medication review (CMR) within last year • Implementation of MTM-services <ul style="list-style-type: none"> ○ Pharmacy technician or administrative assistant at site scheduled 30-minute sessions (12-14 per day) for 2 days per month for 3 months total. Clinical pharmacists traveled to pharmacy sites on these days. ○ MTM sessions consisted of the following targeted interventions that were billable through ChecKmeds NC utilizing the Outcomes Pharmaceutical Health care® online platform: <ul style="list-style-type: none"> ▪ CMR (\$50) ▪ Cost efficacy management (\$20) ▪ Drug therapy problem (\$20) ▪ Administration/technique (\$20) ▪ New/changed prescription and over-the-counter (OTC) therapy (\$10) ○ Physicians were contacted when necessary and follow-up sessions via telephone were made to patients in which therapy changes were initiated. ○ Pharmacy technician or administrative assistant at site billed for services once completed. • Revenue Analysis <ul style="list-style-type: none"> ○ Costs were calculated using hourly wages for clinical pharmacist (\$55/hr) and technician/administrative assistant (\$12/hr). Travel costs were estimated at \$25/hour. Costs were estimated using NACDP digest and/or Kerr Health standard consultant rates. ○ Direct revenue was calculated using compensation fees billed through ChecKmeds NC program, as outlined above.

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	<ul style="list-style-type: none"> • Medication adherence <ul style="list-style-type: none"> ○ Refill history data was collected for the three months prior to the initial MTM session and compared to the three months following the session. A gap in therapy of ≥ 7 days of the expected refill date was considered to be the benchmark for non-adherence. ○ Statistical analysis was performed through contracted statistician services • Knowledge assessment <ul style="list-style-type: none"> ○ A ten question survey was given to pharmacy personnel prior to implementation of services, after implementation, and after the three month project period.
Study endpoints	<ul style="list-style-type: none"> • Net profit generated by the pharmacy from MTM services • Patient adherence rates 3 months prior to intervention compared to rates for 3 months after intervention • Analysis of 10-question knowledge assessment survey performed pre-in-service, post-in-service, and post-project

Results

<ul style="list-style-type: none"> • Revenue Generation <ul style="list-style-type: none"> ○ Direct expenses <ul style="list-style-type: none"> ▪ Clinical pharmacist wages (\$55/hr x 105 hr) = \$5,775 ▪ Pharmacy technician/administrative assistant wages (\$12/hr x 62 hr) = \$744 ▪ Travel costs (\$25/hr x 16 hr) = \$400 ▪ Total = \$6,919 ○ Direct revenue <ul style="list-style-type: none"> ▪ A total of 285 claims were submitted through the Outcomes platform. The break-down of services is as follows: <ul style="list-style-type: none"> • 128 CMRs = \$6,400 • 12 Cost efficacy = \$240 • 20 Drug therapy problem = \$400 • 84 Administration/technique = \$1,680 • 41 New/changed prescription and over-the-counter (OTC) therapy = \$410 ▪ Total = \$9,130 ○ Total net profit = \$2,211 <ul style="list-style-type: none"> ▪ Burke Pharmacy (Morganton,NC) = \$1,378 ▪ Metcalf Pharmacy (Brevard,NC) = \$833 • Medication Adherence <ul style="list-style-type: none"> ○ Analysis of the adherence rates for the two pharmacy sites had shown a small decrease in adherence after the initiation of MTM services. Statistical analysis using a paired t-test was performed on the data from each pharmacy site individually, as statistical analysis showed significant variances between the two datasets. <ul style="list-style-type: none"> ▪ Burke Pharmacy - 7% decrease in adherence rates, significant (p = 0.0014) ▪ Metcalf Pharmacy - 1% decrease in adherence rates, non-significant (p = 0.37) • Knowledge Assessment <ul style="list-style-type: none"> ○ Knowledge assessment surveys were completed pre-in-service, post-in-service, and post-project by 6 subjects at Metcalf pharmacy. Statistical analysis using a Signed Rank Test shows that knowledge about MTM services significantly improved from pre-in-service to post-project. <ul style="list-style-type: none"> ▪ Post-in-service vs. pre-in-service (p = 0.03) ▪ Post-project vs. pre-in-service (p = 0.03) ▪ Post-project vs. post-in-service (p = 0.06) ○ Knowledge assessment surveys for Burke pharmacy were not analyzed, as the surveys were not completed as the study design dictated.

Conclusion

Implementation of MTM services as outlined above can be a profitable endeavor for a community pharmacy. In this case, two days per month were reserved for patient appointments conducted by a clinical pharmacist. Pharmacy technician or administrative assistants scheduled an average of 12 appointments on each of those days. Using hourly wages of these staff personnel and accounting for travel time/costs of the clinical pharmacist, this service was considered profitable when MTM services were billed as outlined above (Total net profit = \$2,211). This type of service could be more profitable if clinical pharmacists were in-house and had no need to travel. Also, the use of student pharmacists for some services could increase overall revenue, as their wages would be much less than a practicing clinical pharmacist.

Medication adherence rates after initial interventions were found to decrease unexpectedly. At one of the pharmacy sites, a 7% decrease in adherence rate was seen that was considered statistically significant. The researchers were unable to identify the reasoning behind these results other than potential confounding variables such as the state of the economy and/or the use of mail-order pharmacies.

As expected, the implementation of these services improved the knowledge base of the personnel at one of the community pharmacy sites. Increasing knowledge for the staff can help to improve the service over time and increase revenue, as personnel realize the importance and potential of MTM services.