Piloting a Diabetic Pharmacotherapy and Education Service in a Community Pharmacy

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Background

- Diabetes care cost the US economy $327 billion in 2017 (roughly $9,601/patient/year)
- Medication adherence and statin use in diabetics impact pharmacy performance metrics and DIR fees

Objective

- Primary: To analyze feasibility of a diabetic pharmacotherapy and education service in a community pharmacy
- Secondary: To measure impact on patient confidence in self-management activities

Methods

- Patient medications were compared with current ADA guidelines and analyzed for possible improvements
- Utilized Diabetes Self-Management Questionnaire (DSMQ) and Modified Drug Adherence Work-up (m-DRAW) scores to assess adherence and confidence in diabetes self management
- Cost of service was determined using average pharmacist wage ($50/hr) x time (min) spent on patients

Pharmacist-led Medication Review:

- Medication reconciliation performed with pharmacy data
- Patients were contacted via telephone or face-to-face to offer service and schedule appointment
- Medication reconciliation performed with patients
- Patients were provided a DSMQ survey

Appointment:

- m-Draw survey completed by patient to assess medication adherence
- Recommendations were discussed with patient and acceptance or rejections recorded
- Recommendations which required prescriber intervention were faxed to appropriate provider

Telephonic Follow-Up

- Patients were contacted 1-2 weeks later to discuss progress with recommendations
- DSMQ was repeated to assess change in diabetes self-management activities

- Setting: Midwest, employee owned, grocery store-based pharmacy
- Design: Prospective, single group intervention
- Time Frame: December 2019 to February 2020
- Inclusion Criteria: Patients included were Wellmark Value Based Pharmacy Program patients identified as having diabetes mellitus
- Exclusion Criteria: Non-English speaking, significant cognitive impairment, and institutionalized patients

Table 1: Study Population and Cost of Service

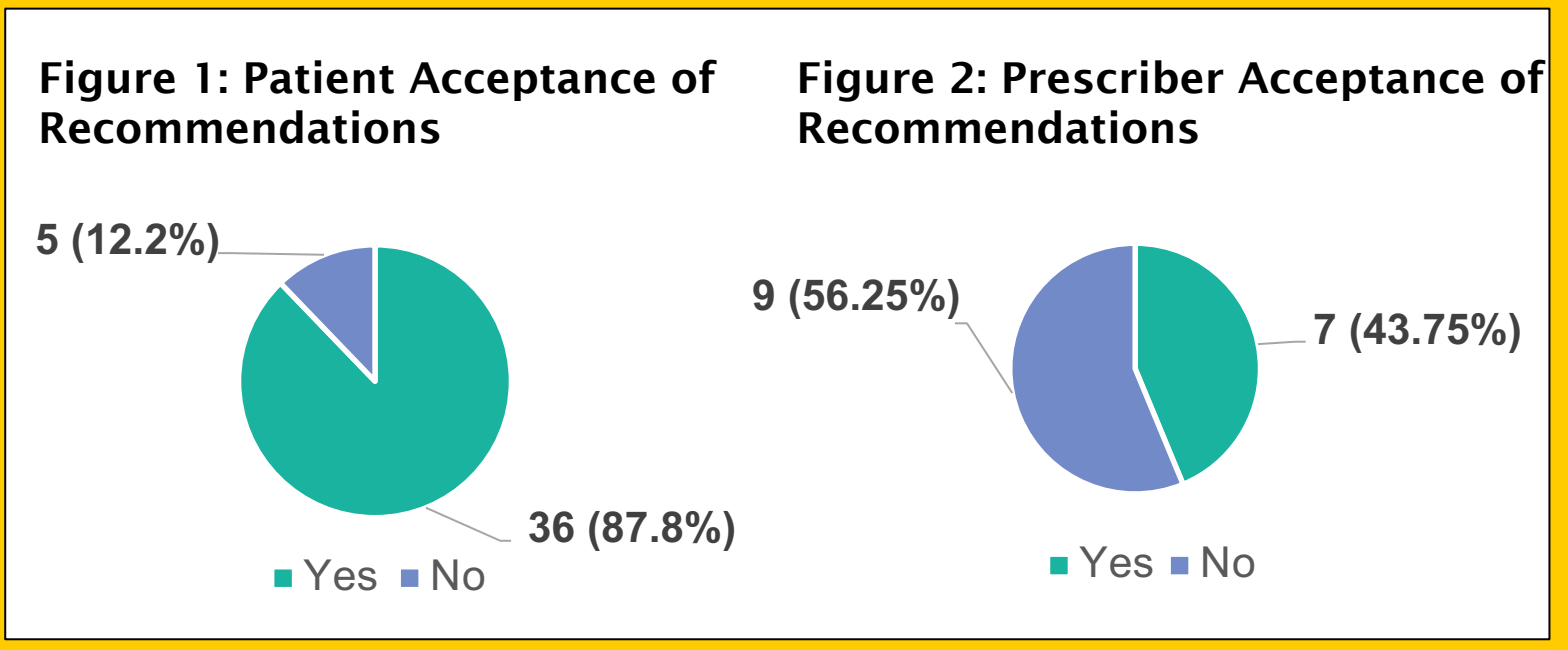| Eligible Patients (#)	53
Average Age (years)	54.1
Enrolled in Service (#)	12 (22.6%)
Completed Initial Appointment (#)	9 (17%)
Completed Follow-up (#)	6 (11.3%)
Average Recommendations per Patient (#)	4.7
Average m-DRAW score	16 / 48
Average Cost per Patient Offered Service ($)	$12.69
Average Cost Per Patient Completing Appointment ($)	$46.20

Table 2: DSMQ Confidence Scores for Enrollees

DSMQ Category	Pre-intervention (n=9)	Post-intervention (n=6)
Glucose Monitoring	7.63	7.57
Dietary Control	6.01	6.79
Physical Activity	8.01	7.47
Healthcare Utilization	9	8.57

Table 3: Time Required for Service

Enrollee Average (n=9)	Time (min)
Initial Work-up	26.33
Appointment	25.22
Follow-up	5.83
Total time	57.63

Table 4: Common Interventions

Intervention Type	# Interventions (% of total)
TDaP vaccination	6 (14.63%)
HepB vaccination	6 (14.63%)
Change dose Metformin	3 (7.31%)
Initiate Statin	3 (7.31%)
Discontinue PPI	3 (7.31%)

Figure 1: Patient Acceptance of Recommendations

5 (12.2%) No — 36 (87.8%) Yes

Figure 2: Prescriber Acceptance of Recommendations

9 (56.25%) No — 7 (43.75%) Yes

Discussion

- Average appointment time was 25.2 minutes and could be accommodated with scheduling. Follow-up appointment times would likely be shorter
- Patients were likely to accept/consider recommendations made during service. Informally, enrollees appreciated recommendations, individualized care, and follow-up
- Provider acceptance of recommendations scores was lower than patient acceptance (43.75%). This indicates we may need to communicate more directly with providers regarding this service in the future
- DSMQ scores had little change post-intervention. This could be due to fewer enrollees (n= 6) completing a post-intervention DSMQ. Time constrains of study may also have favored little change in result
- DSMQ survey measures are subjective and self-reported, making metrics less reliable than other objective adherence or disease state measures (PDC, A1C change over time, BG readings)
- Estimated reimbursement (presuming 50% revenue split CPA) for this study population would be $40.51 per patient based on CMS billing guidelines

Conclusions

- Time required for appointments with patients is comparable to other medication therapy management activities (eg. CMRs) performed by pharmacists currently
- Without a direct reimbursement model, this service may not be sustainable

References

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