

Comparing patients seen by the Wheaton IM pharmacist to patients seen at a similar but entirely separate practice with no pharmacist (Control group-figure 1). With a pharmacist on their care team, more patients had a decrease in A1c of ≥ 0.5 and less patients had an increase in A1c of ≥ 0.5 .



Impact of an Embedded Pharmacist on Diabetes Control in a Primary Care Practice

Executive Sponsor
Jim Giblin, M.D.

Clinical Sponsor
Douglas Ambler, M.D.

Sponsor
Pat McGuire

Process Owner
Mark Greg, Pharm.D.

Improvement Leader
Imran Khan, Pharm.D.



Team Members: Therese Castrogiovanni, Pharm.D.; Jasmina Kadric, RN; Julie McGuire, RN; Samantha Schoenfelder, RN

80.5% of patients with diabetes at the Wheaton IM practice decreased their HbA1c by $\geq 0.5\%$ after a clinical pharmacist was added to the patient care team. Additionally, a reduction preventable diabetes-related ED visits and hospitalizations resulted in \$85,965 in cost avoidance to NM.

BACKGROUND

Problem Statement:

- In June 2019, 42% of patients with diabetes in RMG Wheaton IM practice had a baseline glycated hemoglobin (HbA1c) of $>7\%$.
- Diabetes is the 7th leading cause of death in the United States and uncontrolled diabetes can lead to major health complications.
- The American Diabetes Association (ADA) goal for most adults with diabetes is a HbA1c of $<7\%$.
- Management of diabetes in primary care is complex and requires a multidisciplinary care team approach.

Goal:

- 30% of patients with diabetes with HbA1c $>7\%$ in Wheaton IM practice will reduce HbA1c values by at least 0.5% by end of FY20.

Scope:

- Patients with diabetes with HbA1c $>7\%$ at Wheaton IM (7 Blanchard Circle).

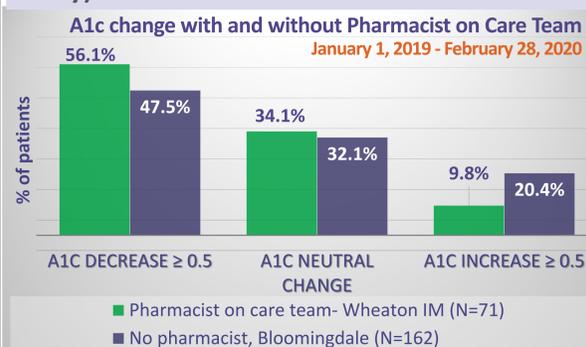
Outcome Metrics:

- HbA1c reduction by 0.5% in patients with diabetes with HbA1c $>7\%$ followed by the pharmacist.
- Improvement in provider burnout, patient satisfaction.

Process Metric:

- Establish referral criteria for patients with diabetes to see the pharmacist.

Figure #1: Baseline A1c Data Comparing Wheaton IM vs. Bloomingdale IM (Control Study)*



*Comparing patients seen by the Wheaton IM pharmacist to patients seen at a similar but entirely separate practice with no pharmacist (Control group-figure 1). With a pharmacist on their care team, more patients had a decrease in A1c of ≥ 0.5 and less patients had an increase in A1c of ≥ 0.5 .

METHODS

Improvement Interventions:

- Intervention 1:** Introduced a full-time embedded pharmacist in RMG Wheaton IM practice to provide services via a signed collaborative practice agreement between provider and pharmacist, to all patients with diabetes with HbA1c $>7\%$ (Figure 2).

Figure 2: Services Provided by the Clinical Pharmacist

New Diabetes Diagnosis <ul style="list-style-type: none"> Basic survival skills: blood sugar monitoring, hypoglycemia symptoms and treatment, basic diet/exercise counseling 	Elevated A1c/Glucose <ul style="list-style-type: none"> New medication (education and dose titration) Lifestyle education on how to decrease blood sugars Importance of PCP follow-ups 	Diabetes Education <ul style="list-style-type: none"> Basic lifestyle, diet, exercise, and medication education Provide education about CDE program and how to connect with the program
Continuous Glucose Monitor Initiation <ul style="list-style-type: none"> Discuss need for glucose monitoring with PCP Evaluate insurance coverage Initiate order and education based on coverage 	Continuous Glucose Monitor Management <ul style="list-style-type: none"> Glucose reading interpretation Medication dose adjustment recommendations based on glucose readings 	Polypharmacy Concerns <ul style="list-style-type: none"> Medication reconciliation Education about timing and administration of medications Assessment of medications based on prescribing cascade
Medication Adherence/ Affordability Issues <ul style="list-style-type: none"> Assessing medication adherence via medication reconciliation and checking MPR Based on patient expression of affordability issues, make recommendations regarding clinically equivalent covered alternative medications or patient access options 	Drug Information Questions <ul style="list-style-type: none"> Provider driven questions, typically responding to drug interactions, allergies to medications, pre/post op medication discontinuation, and renal/hepatic dosing 	

- Intervention 2:** The clinical pharmacist recorded all medication interventions per patient (Figure 3). Ensuring the patient was on the appropriate drug therapy, being able to obtain their medications, and receiving the proper disease state education were the keys to success.

Figure 3: Pharmacist Interventions (July 2019 – Feb 2020)

	Elevated HbA1c/Glucose - Drug/Dose Adjustment	Medication Adherence/ Affordability Issues	New Diabetes Diagnosis/ Education/CGM	Polypharmacy Concerns	Drug Information Questions
Interventions	440	233	151	31	29
884 Total Interventions (2.6 interventions/patient)					

- Established pharmacist follow up criteria, identifying frequency of follow up for medication titration and various education needs (Figure 4).

Figure 4: Established Pharmacist Follow Up Criteria

- 1 week (phone or MyChart):** new insulin/GLP-1 agonist start, significant medication titration required based on blood sugars (multiple lows, post-prandial highs, bedtime/AM blood sugars significantly different). Pharmacist documents in telephone call or MyChart encounter.
- 2 week (phone or MyChart):** significant diet or exercise goals, new medication that does not require close dose titration, blood sugars fairly stable but still require adjustment to reach goal range. Pharmacist documents in telephone call or MyChart encounter.
- 1 month (in person; phone ok if transportation/schedule is a barrier):** medication changes that are unlikely to cause side effects, small diet/exercise plan changes. Pharmacist documents in office visit on pharmacist schedule.

RESULTS

Figure 5: Project Achievements:

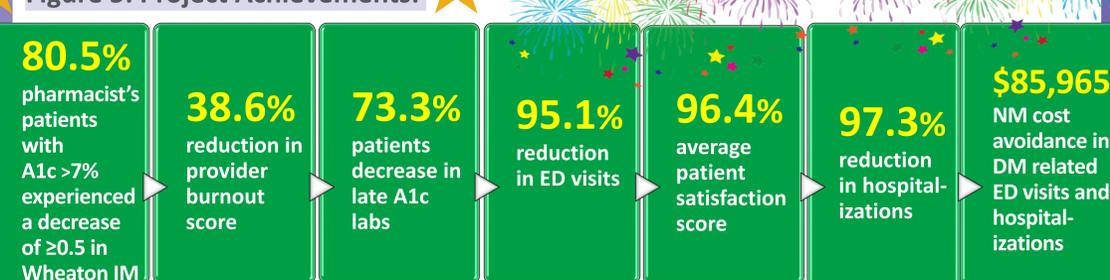
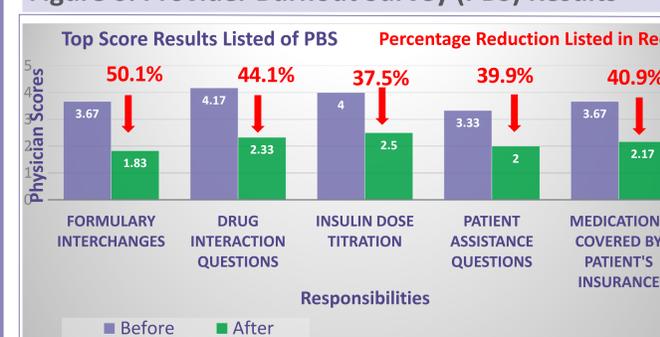


Figure 6: Provider Burnout Survey (PBS) Results



★ Reduction in all 10 surveyed tasks. Some as high as 50%! ★

"This is the **MOST** significant improvement in practice in the 15 years I have worked at CDH/NM"



Control

Table 1: Sustainment Plan

Metric Measured:	% of patients with an A1c decrease of $\geq 0.5\%$
Goal:	70% of patients will reduce A1c values by 0.5%
Review Process:	Project manager to pull and review EDW summary report monthly Present data to clinical pharmacist and pharmacy director quarterly Share data with NM Primary Care Pharmacist Collaborative annually
Threshold for Action:	2 consecutive months below the control limit (Control limit defined as 60%)
Recommended Action Step:	Pharmacy workgroup to identify barriers/opportunities

CONCLUSIONS

- Adding a clinical pharmacist to the patient care team improved clinical outcomes, reduced health care spending, increased patient access to care, and reduced provider burnout.
- The keys to success were clearly defined pharmacist services, management of patient drug therapy, essential disease state education, establishment of patient follow-up criteria, and reduced demands on physician time.
- Next steps include implementing billing for pharmacist services and growing the program to include pharmacist presence in additional IM practices.