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## Study Objective

The objective of this study was to evaluate the impact of ambulatory care pharmacists' interventions on A1C changes in uncontrolled type 2 diabetes mellitus (T2DM) patients during a two-year period at a diabetes education center.

**Primary Outcome:** Changes in A1C from baseline to 1-3 or 4-6 months.

**Secondary Outcomes:** Changes in systolic and diastolic blood pressures and weight.

## Methods

A single center, retrospective chart review evaluated A1C changes from baseline to 1-3 to 4-6 months in T2DM patients referred to the diabetes education center to be managed by ambulatory care pharmacists. This study was IRB approved.

▪ Inclusion / Exclusion Criteria:

- Non-pregnant adults ≥18 years
- A1C ≥ 9%
- Seen between Jan 1, 2017 and Dec 31, 2018
- Had baseline and 1-3 or 4-6 month follow up A1C.

## Results Enrollment

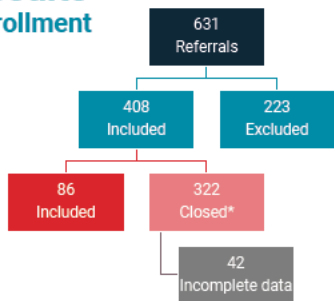
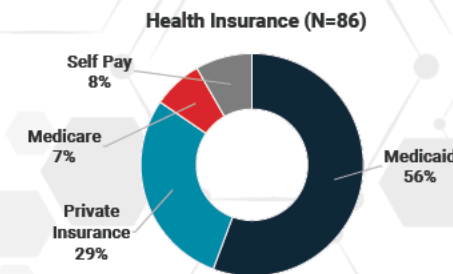
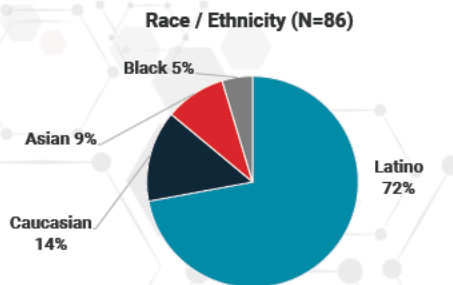
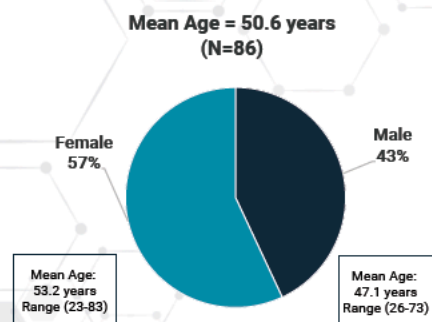


Figure 1. Flow diagram of participants in the study.  
\*Closed: Patients who were not reachable after three attempts were closed.

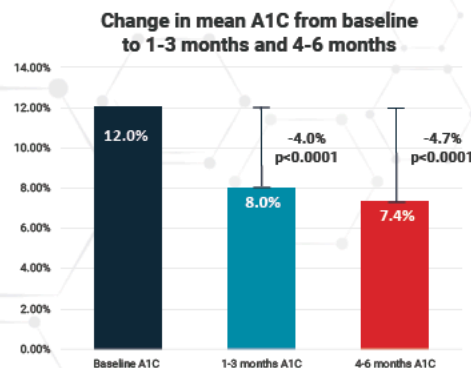
## Results Demographics



## Results Medications

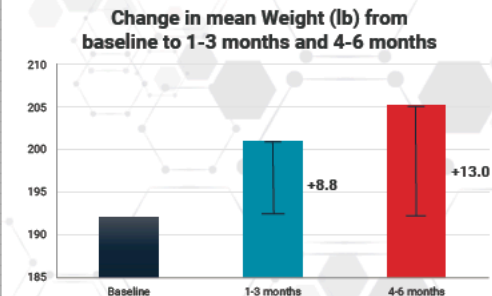
	N=86	Baseline N	Baseline %
Metformin	39	39	45.3
Insulin (Basal/Bolus)	34	34	39.5
Sulfonylureas	21	21	24.4
Insulin (Basal)	19	19	22.1
DPP-4 Inhibitors	9	9	10.5
SGLT-2 Inhibitors	3	3	3.5
Thiazolidinediones	1	1	1.2
GLP-1 receptor agonists	0	0	0.0

## A1C Change



- No severe hypoglycemic episodes were documented.
- There were no significant changes in blood pressure.
- There was a mean increase in weight at 1-3 months and 4-6 months.

## Results Weight Change



Mean Weight Changes			
Avg Weight	Kilograms	Pounds	Changes
Baseline	87.4	192.2	-
1-3 months	91.3	201.0	+8.8
4-6 months	93.3	205.2	+13.0

## Time Spent

Each patient spent an average of 43.2 minutes for each face-to-face encounter with the ambulatory care pharmacist and had an average of 5.9 encounters.

## Conclusion

Intensive diabetes management by ambulatory care pharmacists was associated with improved A1C outcomes that were achieved within 3- to 6-months. Additional studies in return on investment for improving glycemic control by pharmacists in diabetes education clinics may help to justify continuation of services in this setting.

## Acknowledgements

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