



# Efficacy of Co-Located Pharm D on Diabetic Outcomes in an Urban Family Medicine Clinic



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## BACKGROUND

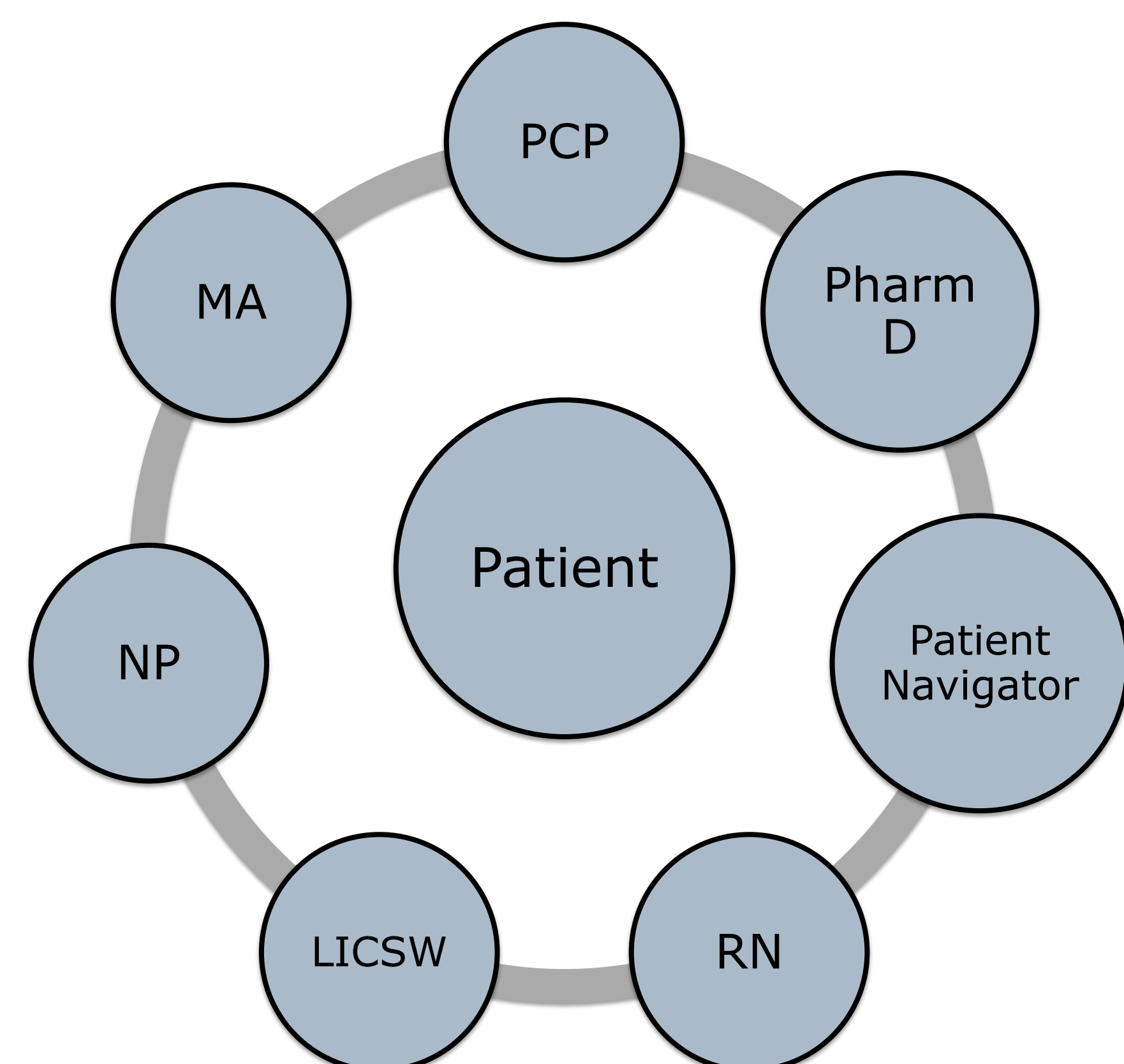
- Improving outcomes for Type 2 Diabetic patients is challenging for primary care providers.
- Reimbursement is increasingly tied to quality outcomes for diabetic patients.
- Developing care teams as part of a Patient Centered Medical Home aid in obtaining quality outcomes for these patients.
- Pharm D's trained as certified diabetic care manager can be a vital part of the PCMH care team.

## AIM

To determine whether a co-located Pharm D improves a1c levels, ldl and/or blood pressure outcomes for type 2 diabetic patients (ICD-9 codes 250.00/250.02)

## METHODS

Patient Centered Medical Home Team

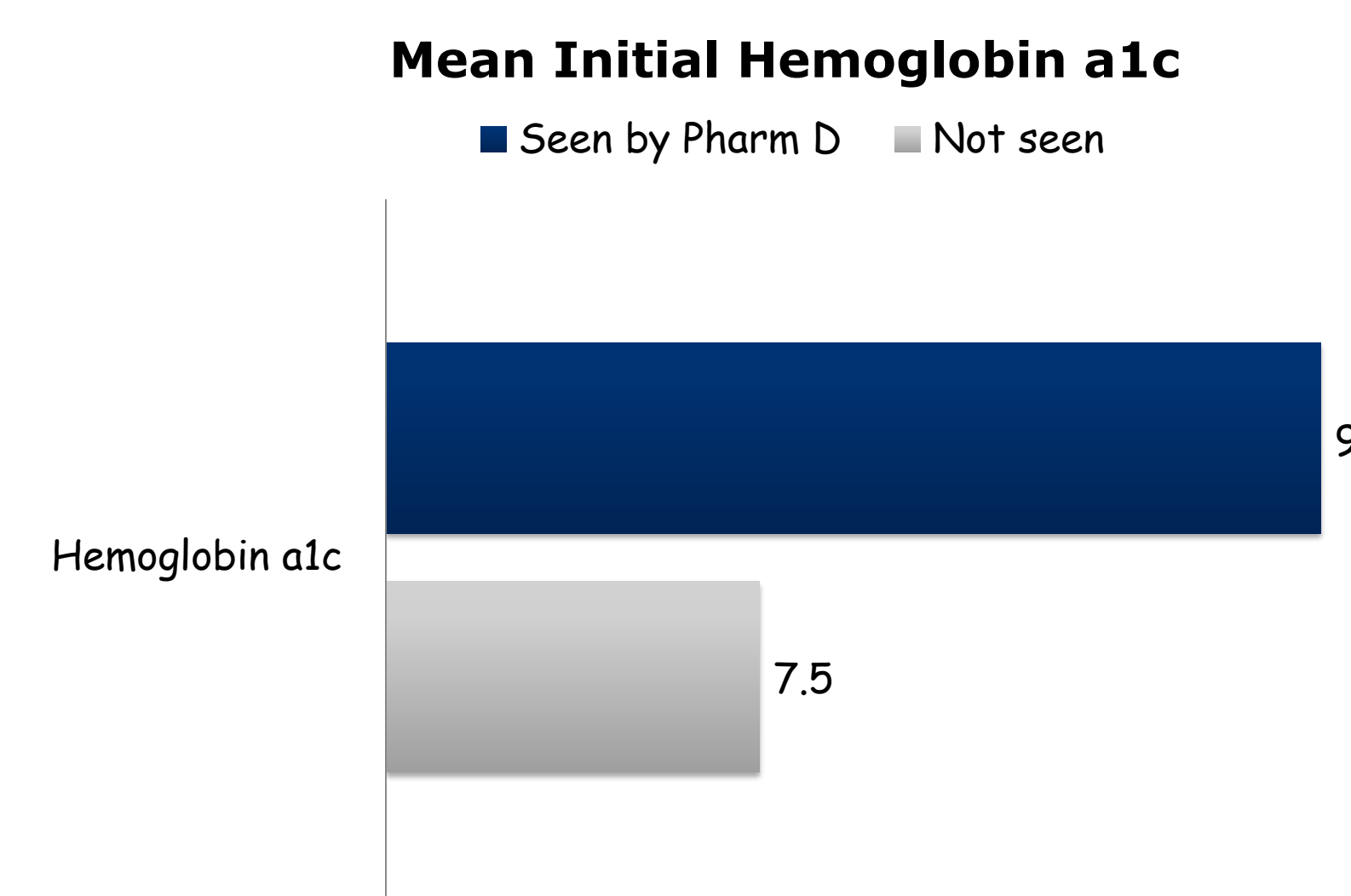


## METHODS

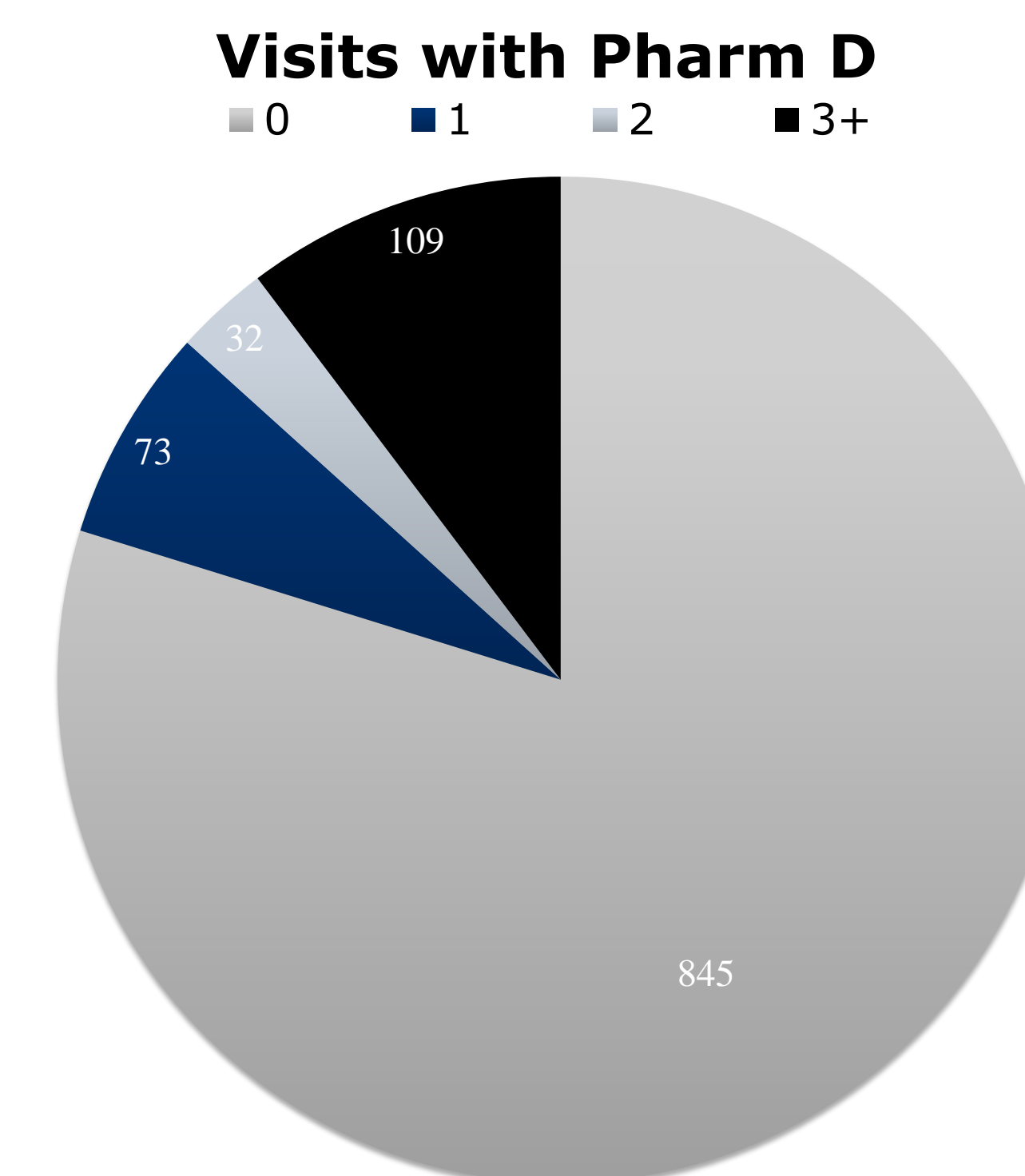
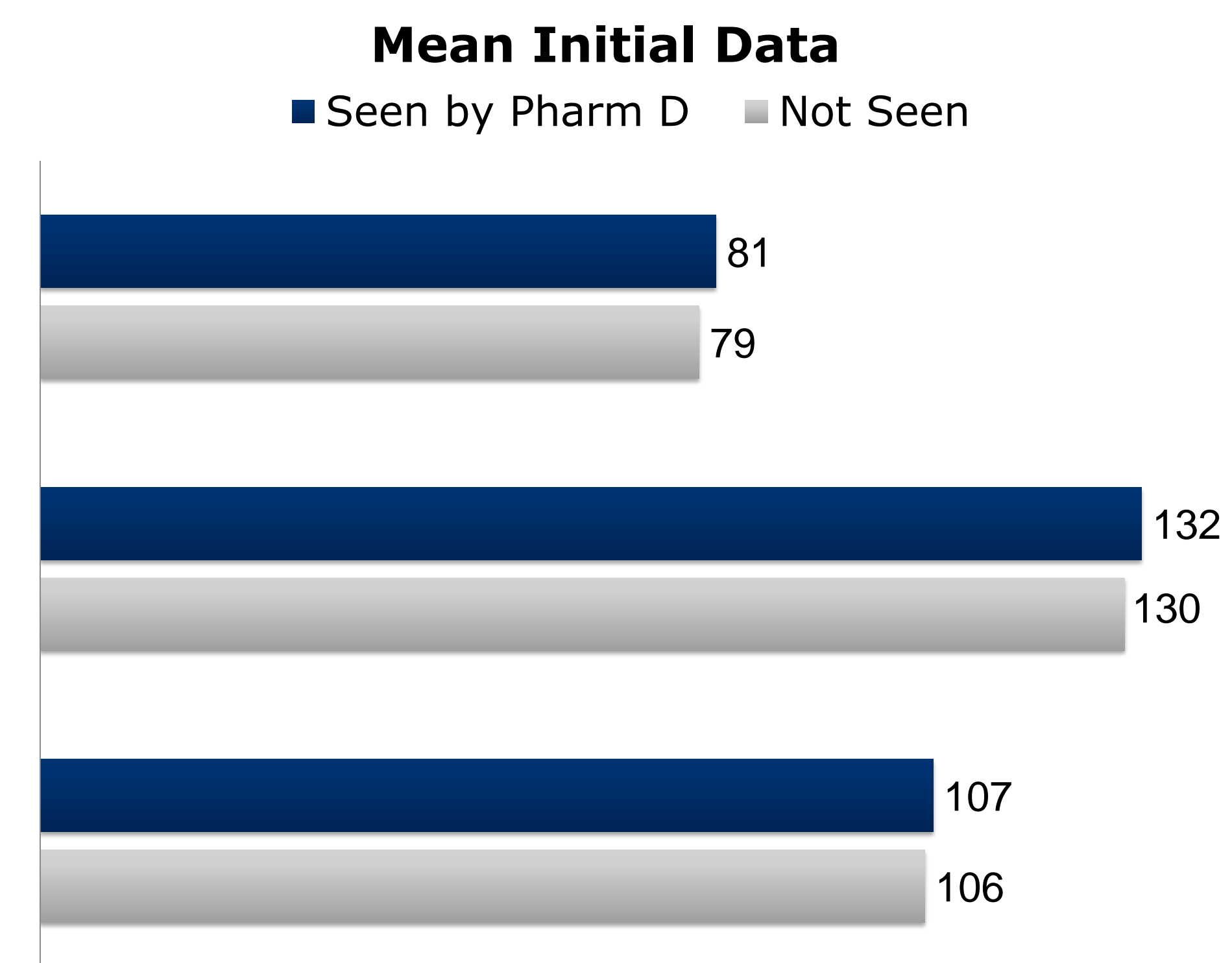
- A cohort of patients with Type 2 Diabetes (ICD 250.00/250.02) seen by the Pharm D within 12 months in our Family Medicine clinic were studied.
- Analysis inclusion criteria included if the patient was seen by Pharm D  $\geq 1$  visit and an uncontrolled outcome measure.
- Uncontrolled outcome measures included:
  - Hemoglobin a1c  $\geq 9$
  - LDL  $>100$
  - Systolic blood pressure  $>140$
  - Diastolic blood pressure  $>90$
- Patients with missing outcome measure data were excluded from the analysis.
- Outcomes at the beginning and end of the study period were analyzed using student t-test.
- Statistical significance was set at  $\leq 0.05$

## RESULTS

Baseline Data	September 2013
Diabetic Patients (ICD-9 250.00/250.02)	1028
Controlled a1c (a1c<9)	79.7%
Controlled LDL (LDL $\leq$ 100)	59.9%
Controlled blood pressure ( $\leq$ 140/90)	82.4%



## RESULTS



## RESULTS

Measure	N	Mean	95% CI	P
A1c	99	-0.88	-0.34- -1.2	<0.001
LDL	88	-24.4	-14.8- -15.4	<0.001
SBP	54	-15.5	-9.0 - -22.0	<0.001
DBP	31	-9.9	-4.5 - -15.4	<0.001

## CONCLUSIONS

- 10.5% of diabetic patients were seen by the Pharm D from Sept 2013-Sept 2014.
- Patients referred to the Pharm D had a higher mean hemoglobin a1c than those not referred.
- Baseline mean LDL, systolic and diastolic blood pressure were similar between those referred to the Pharm D and those not.
- There was a significant improvement in ALL measures for those patients who were seen by the Pharm D.

## LIMITATIONS

- A comparison group not seen by the Pharm D was not analyzed.
- Patients with missing data were not included in the analysis.
- The data were not controlled for confounders including those patients co-managed with endocrinology or severity of disease.
- Enrollment with the Pharm D was by provider referral, so there is possible referral bias.

## NEXT STEPS

- Compare outcomes to control group not seen by Pharm D.
- Evaluate hospitalization, emergency room visits, patient and provider satisfaction.
- Cost analysis to evaluate ROI.