Together 2 Goal®

AMGA Foundation
National Diabetes Campaign

Monthly Campaign Webinar

August 15, 2019

Today's Webinar

- Together 2 Goal® Updates
  - Webinar Reminders
  - 2019 AMGA IQL
  - AMGA Acclaim Award
  - T2G Plank Mentors
- Embedded Pharmacists in Primary Care
  - James Kalus, Pharm.D. of Henry Ford Medical Group
- Q&A
  - Use Q&A or chat feature

Webinar Reminders

- Webinar will be recorded today and available the week of August 19th
  - www.Together2Goal.org
- Participants are encouraged to ask questions using the “Chat” and “Q&A” functions on the right side of your screen

2019 AMGA Institute for Quality Leadership

Embracing Disruption
Delano Las Vegas
Las Vegas, NV

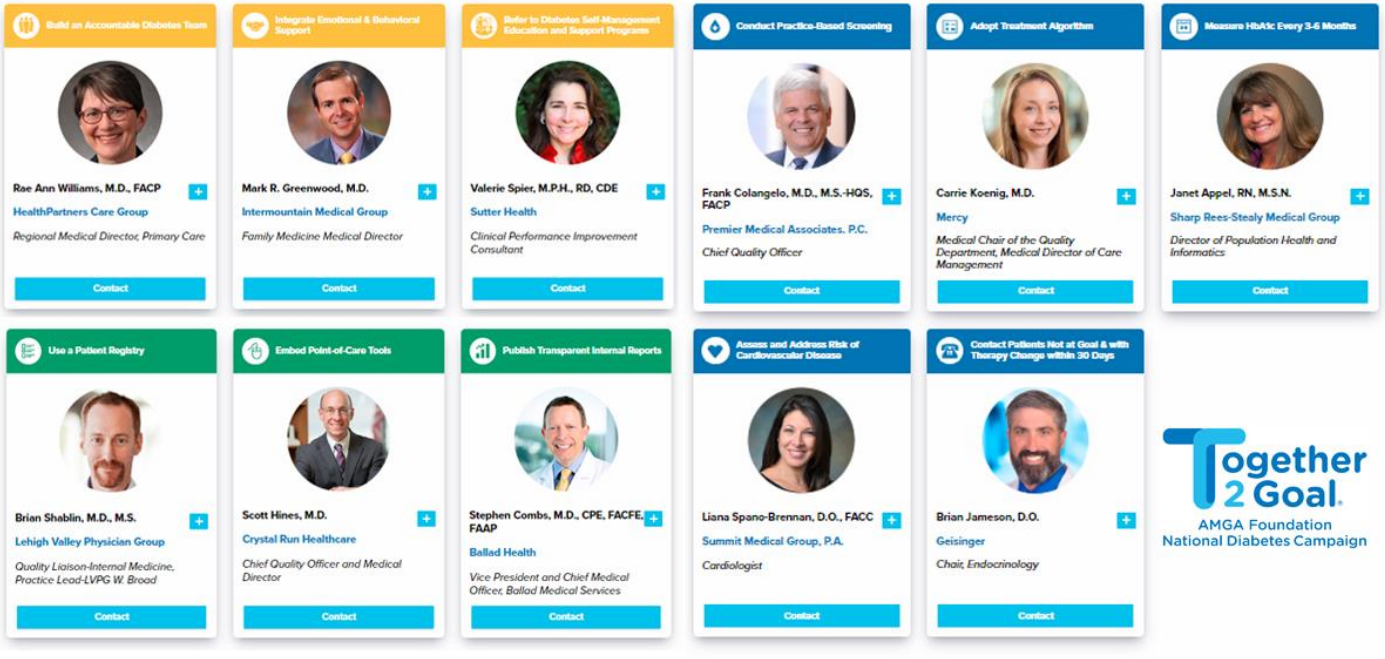
September 25 – 28th

AMGA Acclaim Award

- Applications due: Friday, October 18th
- Webinar on Wed., August 7th at 3:00 P.M. (ET) for more information

Acclaim Award

T2G Plank Mentors



Today's Featured Presenter

James Kalus, Pharm.D.
Henry Ford Medical Group

Embedded Pharmacists in Primary Care

James Kalus, PharmD
Director of Pharmacy, Henry Ford Health System
jkalus1@hfhs.org

Objectives

1. Compare and contrast the skills and knowledge of the pharmacist, relative to other traditional members of the primary care team
2. Describe the role of the pharmacist embedded in a primary care clinic
3. List the patient care benefits of deploying embedded clinical pharmacists in primary care clinics
4. Develop a plan for efficient and cost effective deployment of pharmacist within an organization

Why Pharmacists in Primary Care?

Success in specialty areas: Oncology

Implementation of oral chemotherapy management program in a large integrated health care system and its impact on patient safety

Abstract # 279

Jessica J. Yoo, PharmD; Salin Nhean, PharmD; Prabha Dhanaphal Vogel, PharmD; Igor I. Rybkin, MD, PhD; Diana Kostoff, PharmD
Henry Ford Cancer Institute, Henry Ford Health System, Detroit, MI

15% reduction in ANY oral chemo adverse effects and 70 – 85% reduction in severe oral chemo adverse events

BACKGROUND

- …IP) was … to provide a … f patients
- …s of Oral …y Regimens …responsibility …e complex dosing …other treatment …gist supervision …intervention leading …outcomes
- Similar programs have been implemented across the n…on, but there is limited evidence on the impact of these programs o… reduction of chemotherapy-induced toxicities and prevention of eme… department (ED) visits and/or hospitalizations.

METHODS

- Study objectives
  - **Primary**: To compare the incidence of all-grade and grade 3/4 toxicities that are commonly associated with capecitabine before and after OCMP initiation
  - **Secondary**: To compare the incidence of ED visits and/or hospitalizations due to toxicities, treatment outcome and adherence rates
- Eligibility
  - Inclusion criteria: ≥18 years old, ≥1 dose of capecitabine between January 2012 – September 2016
  - Exclusion criteria: Enrolled in clinical trial or pregnancy
- Retrospective chart review

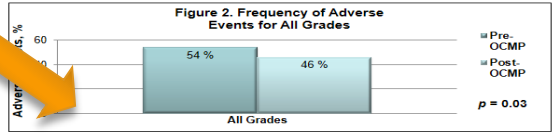
Figure 1. Quasi-experimental study design

RESULTS

Characteristics	Pre-OCMP (N = 175)	Post-OCMP (N = 175)	P
Mean age, years (SD)	64 (14)	64 (13)	0.59
Sex, n (%)			
Male	73 (41.7)	75 (42.9)	0.83
Female	102 (58.3)	100 (57.1)	
ECOG PS, n (%)			
0	66 (38.6)	66 (39.1)	0.93
1	73 (42.7)	79 (46.7)	0.45
2	23 (13.4)	19 (11.2)	0.54
3	7 (4.1)	4 (2.4)	0.37
4	2 (1.2)	1 (0.6)	0.57
Stage, n (%)			
0	0 (0)	1 (0.6)	1.00
I	10 (6.2)	4 (2.3)	0.08
II	25 (15.5)	47 (27.3)	0.01
III	44 (27.3)	56 (32.6)	0.32
IV	82 (50.9)	64 (37.2)	0.01

Abbreviations: ECOG PS, Eastern Cooperative Oncology Group Performance Status; OCMP, oral chemotherapy management program; SD, standard deviation

- OCMP decreased the frequency and severity of chemotherapy-induced toxicity



All-Grade Toxicity	Pre-OCMP (%)	Post-OCMP (%)	p-value
Nausea	45 %	30 %	0.003
Vomiting	20 %	11 %	0.03
Diarrhea	41 %	29 %	0.018
Hand-Foot Syndrome	37 %	29 %	0.11
Stomatitis	12 %	8 %	0.21

Grade 3/4 Toxicity	Pre-OCMP (%)	Post-OCMP (%)	p-value
Nausea	21 %	3 %	<0.001
Vomiting	10 %	3 %	0.008
Diarrhea	14 %	5 %	0.002
Hand-Foot Syndrome	11 %	3 %	0.003
Stomatitis	5 %	2 %	0.13

RESULTS (cont.)

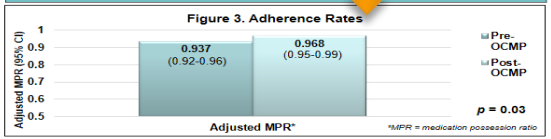
- OCMP improved clinical outcomes by reducing ED visits and hospitalizations due to chemotherapy-induced toxicities

	Pre-OCMP (N = 175)	Post-OCMP (N = 175)	p-value
Total number of ED visits	108	86	0.23
ED visits due to drug-related toxicity	52	32	0.07
Total number of hospitalizations	79	59	0.18
Hospitalizations due to drug-related toxicity	36	15	**0.004**

All-Grade Toxicity	Toxicities Present in ED Visits			Toxicities Present in Hospitalizations		
	Pre-OCMP	Post-OCMP		Pre-OCMP	Post-OCMP	
Nausea (%)	30 (17…					
Vomiting (%)	18 (10…					
Diarrhea (%)	22 (13…					
Hand-Foot Syndrome (%)	2 (1)					
Stomatitis (%)	1 (1)	1 (1)	NS	1 (1)	1 (1)	NS
Other (%)	4 (2)	8 (5)	NS	…)	4 (2)	NS

Abbreviations: ED, emergency department; NS, not significant; OCMP, …hemotherapy management program

Significantly improved medication adherence



CONCLUSIONS

- OCMP implementation improved safety of capecitabine and reduced ED visits and hospitalizations due to drug-related adverse effects of capecitabine
- Adherence rate to prescribed oral chemotherapy was significantly higher in OCMP patients

Poster prepared for 2018 ASCO Quality Care Symposium, Phoenix, AZ
Please address all correspondence concerning this poster to Diana Kostoff, PharmD, BCPS, BCOP at dkostof1@hfhs.org

***Journal of Clinical Oncology* 36, no. 30_suppl (October 20 2018) 279-279.**

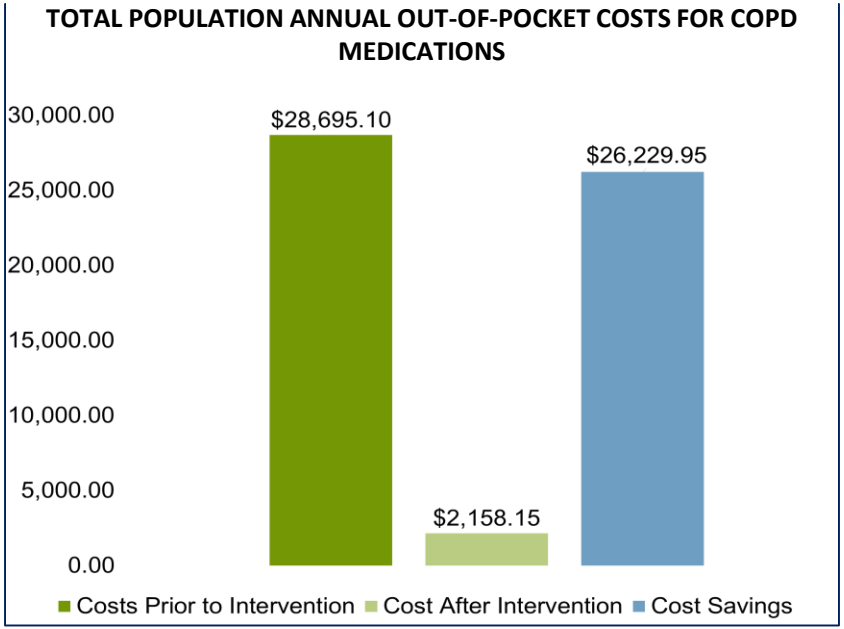
Why Pharmacists in Primary Care?

Success in specialty areas: Pulmonary

Improved outcomes in COPD

- 61% of patient inhaler devices switched based on pharmacist objective assessment
- Rescue inhaler use decreased from 22 times per week to 10 times per week ($p < 0.01$)
- Patient assessment scores significantly improved in 4 weeks
- Statistically significant improvements in medication adherence
- Decrease in ED visits/hospitalizations over 12 weeks

Reduced out-of-pocket costs for patients



Pilot study of 44 patients with COPD who had clinic visits with a pharmacist

Why Pharmacists in Primary Care?

- Proven success in specialty clinics within HFHS
- Growing chronic disease burden in primary care
- Medication-sensitive metrics important in primary care
  - HgbA1c control, Blood pressure control, statin use
- Emergency department utilization and hospitalization due to sub-optimal chronic disease control
- Advanced data analytic capabilities
  - Proactive instead of reactive

Why Pharmacists in Primary Care?

The pharmacists' skillset is complementary to the clinic team

- Identify medication non-adherence
- Resolve barriers to medication adherence
- Design and redesign medication regimens customized to patient characteristics and needs
- Medication focused patient education
- Assist with the resolution of medication access issues

DATA TO DEFINE THE PROBLEM

Background

- Multiple interventions have been put in place to impact A1c control over many years.
- Henry Ford Medical Group overall improved.
- Interventions were very impactful at some sites.
- Several sites did not improve significantly
  - Control rates stayed low and flat.
- Needed to find a more targeted approach for these sites.

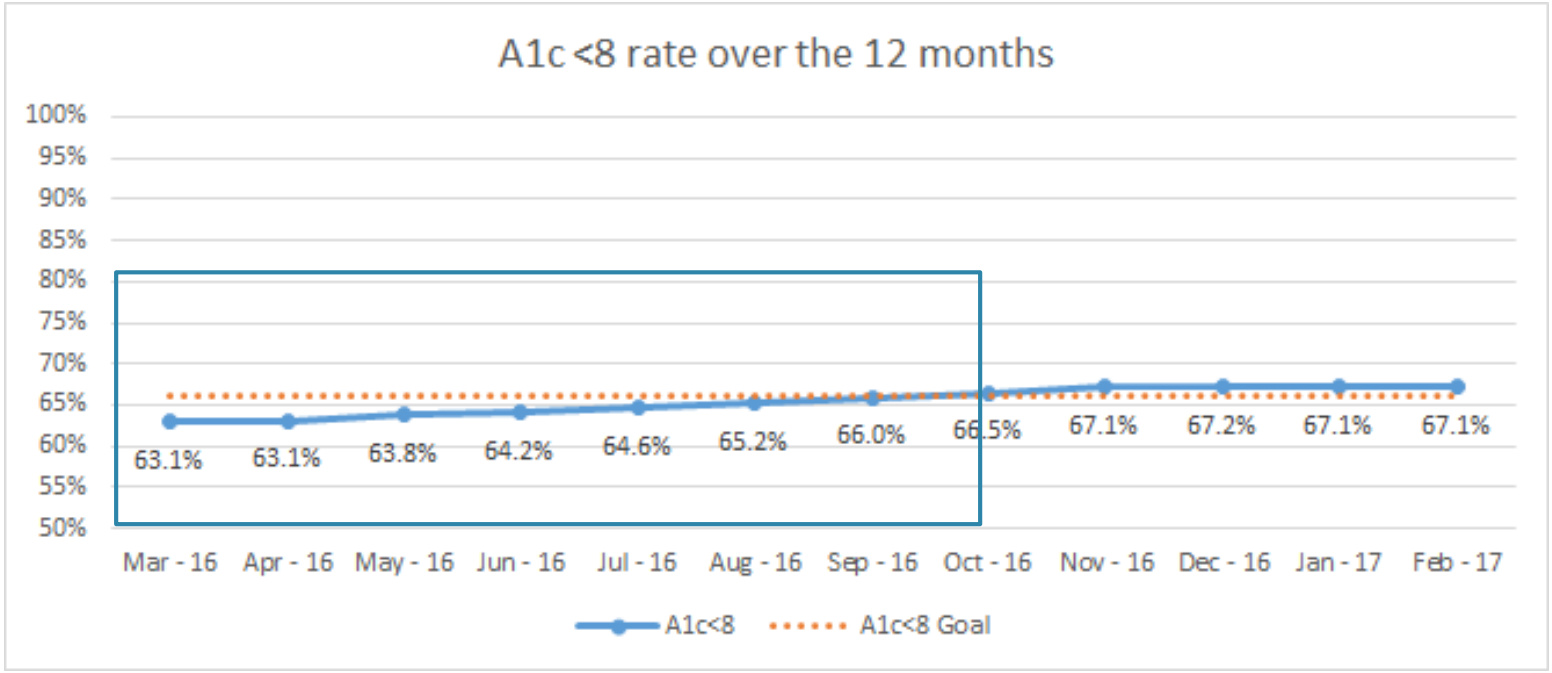
Interventions in Place

- Robust Diabetes Care Center Services
- Diabetes in Active Control with automatic referral for patients with A1c>9
- Standing orders for “no missed opportunities”
- Standard Diabetes Treatment Algorithm
- POC testing in some clinics (targeted)
- Dashboard with un-blinded results
- Quality incentive

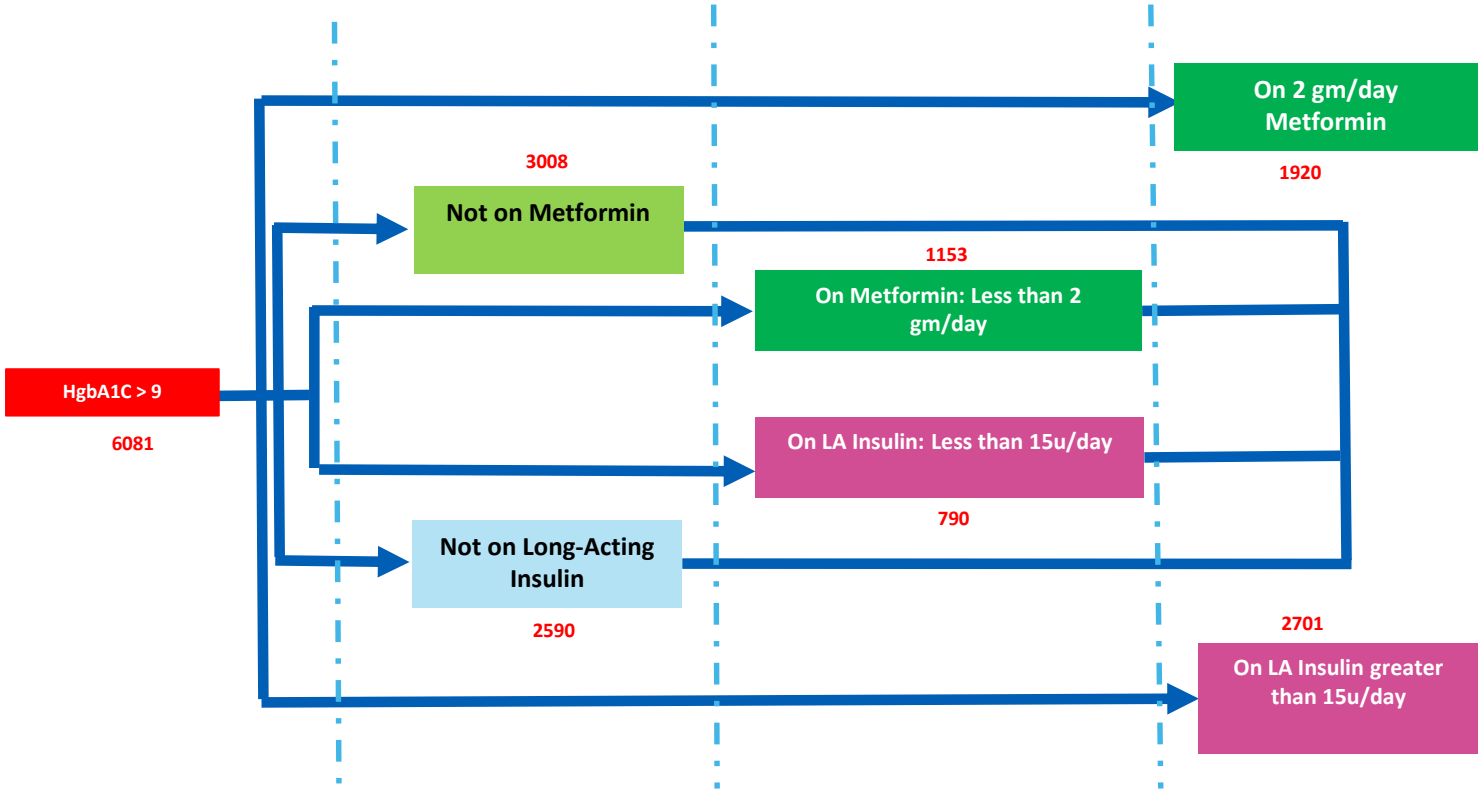
Diabetes Control Improvement:

Not Good Enough!

All HFMG Primary Care Clinics



Data Analytics: Medication Opportunities



Primary Care – Pharmacy Collaboration Pilot

November 2016 – August 2017

- Pharmacist embedded in two primary care clinics
- Clinic selection based on:
  - 2016 improvement data (flat and low performance)
  - Medication optimization opportunity data
  - Clinic leadership
- Pharmacist-patient encounters were tracked
- Overall clinic diabetes control was used to assess impact

Initial Pilot Data:
Patients “Touched” by the Pharmacist

10.2 ± 2.0 mg/dL → 8.4± 1.7 mg/dL
Average A1C **pre/post** pharmacist involvement

↓ 1.25 ± 1.99 mg/dL
Average A1C reduction **3 mos** post pharmacist involvement

39.11%
Patients w/ A1C <8.0 mg/dL at **3 mos** post pharmacist involvement

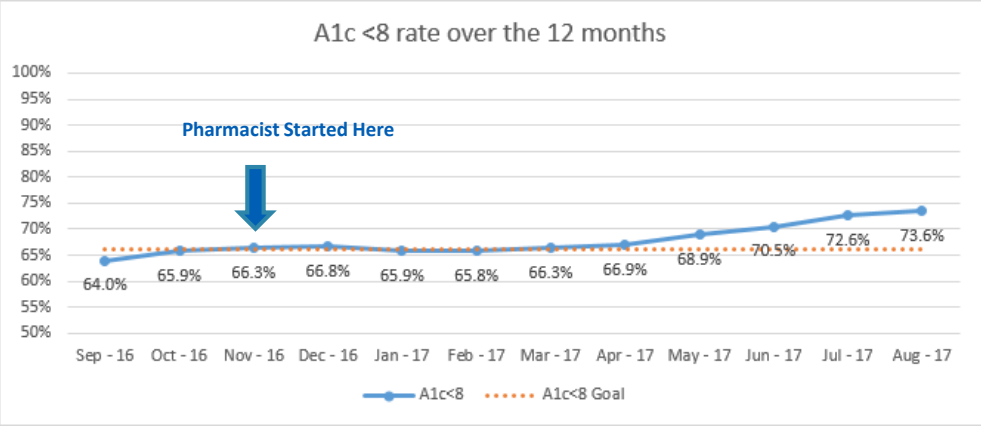
Patient-level A1C Improvement Analysis (n = 320 patients evaluated, 307 patients with A1C > 8.0 mg/dL)

November 2016 – August 2017

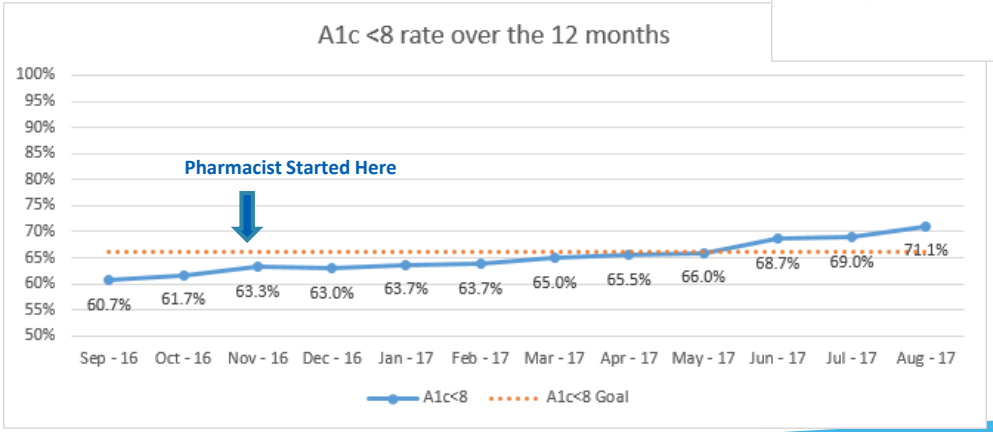
OUTCOMES OF INITIATIVE

Clinic-level Data

HARBORTOWN



EAST JEFFERSON



OUTCOMES OF INITIATIVE

December 2015 DM/HTN Metrics Rankings			August 2017 DM/HTN Metrics Rankings By Site		
DM A1c < 8 Ranking			DM A1c < 8 Ranking		
1	Novi	76	1	Novi	80↑
2	Farm	71	2	Hamtramck	77↑
3	LKS	71↓	3	Farmington	76↓
4	Colum. C	69	4	Lakeside	76↑
5	SH	69↓	5	Harbortown	74↑
6	Hamtr	68↑	6	Sterling Hts	73
7	Troy	68↑	7	Commerce	73
8	Sfield	67	8	Taylor	72↑
9	Taylor	67	9	Southfield	72↑
10	Whaven	67↓	10	Columbus	72
11	Comm	66↓	11	E. Jefferson	71↑
12	Plymouth	66↑	12	Troy	70
13	Warren	65↓	13	K-15	69↑
14	FRL	64	14	Fairlane	68↑
15	Pierson	64	15	Royal Oak	68↑
16	Livonia	63↓	16	Plymouth	68
17	Canton	61	17	Pierson	68
18	RO	61	18	Warren	68↓
19	EJ	61↓	19	Woodhaven	67
20	K15	60↓	20	Livonia	65
21	Harbort	59↓	21	Canton	65
22	DNW	59↓	22	DNW	65
			23	Milford	50↑

90th percentile HEDIS	75th percentile HEDIS	50th percentile HEDIS	25th percentile HEDIS	<25th percentile HEDIS

Primary Care – Pharmacy Collaboration Pilot

November 2016 – August 2017

- Success of pilot → expansion
  - 2 additional pharmacists deployed
  - Clinics with a pharmacist increased from 2 – 6
    - 1 pharmacist ~ 400 uncontrolled patients with diabetes
      - Usually 2 clinics per pharmacist unless clinic is large

Additional Clinics Added

December 2015 D			August 2017 DM/		
DM A1c < 8 Ranking			DM A1c < 8 Ranking		Ranking
1	Novi	76	1	Novi	80↑
2	Farm	71	2	Hamtramck	77↑
3	LKS	71↓	3	Farmington	76↓
4	Colum. C	69	4	Lakeside	76↑
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7	Troy	68↑	7	Commerce	73
8	Sfield	67	8	Taylor	72↑
9	Taylor	67	9	Southfield	72↑
10	Whaven	67↓	10	Columbus	72
11	Comm	66↓	11	E. Jefferson	71↑
12	Plymouth	66↑	12	Troy	70
13	Warren	65↓	13	K-15	69↑
14	FRL	64	14	Fairlane	68↑
15	Pierson	64	15	Royal Oak	68↑
16	Livonia	63↓	16	Plymouth	68
17	Canton	61	17	Pierson	68
18	RO	61	18	Warren	68↓
19	EJ	61↓	19	Woodhaven	67
20	K15	60↓	20	Livonia	65
21	Harbort	59↓	21	Canton	65
22	DNW	59↓	22	DNW	65
			23	Milford	50↑

90th percentile HEDIS	75th percentile HEDIS	50th percentile HEDIS	25th percentile HEDIS	<25th percentile HEDIS

EMBEDDED PHARMACISTS

What is an Embedded Pharmacist?

- Pharmacist physically located in clinic 2 – 5 days per week
  - Pharmacist develops a relationship with providers in clinic
  - Pharmacist collaborates with providers and other health care professionals frequently
- Pharmacist conducts face-to-face, virtual and telephone encounters
  - Pharmacist develops a relationship with patients

Greater Efficiency Through Analytics

Traditional Approach

- Wait for referrals from provider
  - **Challenge:** Slow to start
- Review all/many patients coming into clinic
  - **Challenge:** Many patient charts must be reviewed to find the patient that needs the pharmacist
  - **Challenge:** Difficult to establish relationship with the patient. Try to catch patient before or after provider or see patient with provider.

Greater Efficiency Through Analytics

Our Approach

- Analytics tool
  - Patients with uncontrolled chronic disease identified
- Pharmacist fills schedule with appointments by engaging patients identified in tool
- Advantages:
  - Fill pharmacist schedule more quickly
  - More patient encounters = improved quality metrics

How Does the Pharmacist Establish a Relationship with Patients?

Analytic Tool

- Identification of patients with HgbA1C >8 mg/dL
  - Sort by: Clinic, Provider, A1C level
- Real time linkage with scheduled appointments

Goal: > 10 patient encounters per day

Pulls the patient in

Pharmacist works through the list of patients with HgbA1C > 8 mg/dL.

Engages the patient and schedules appointments with patients

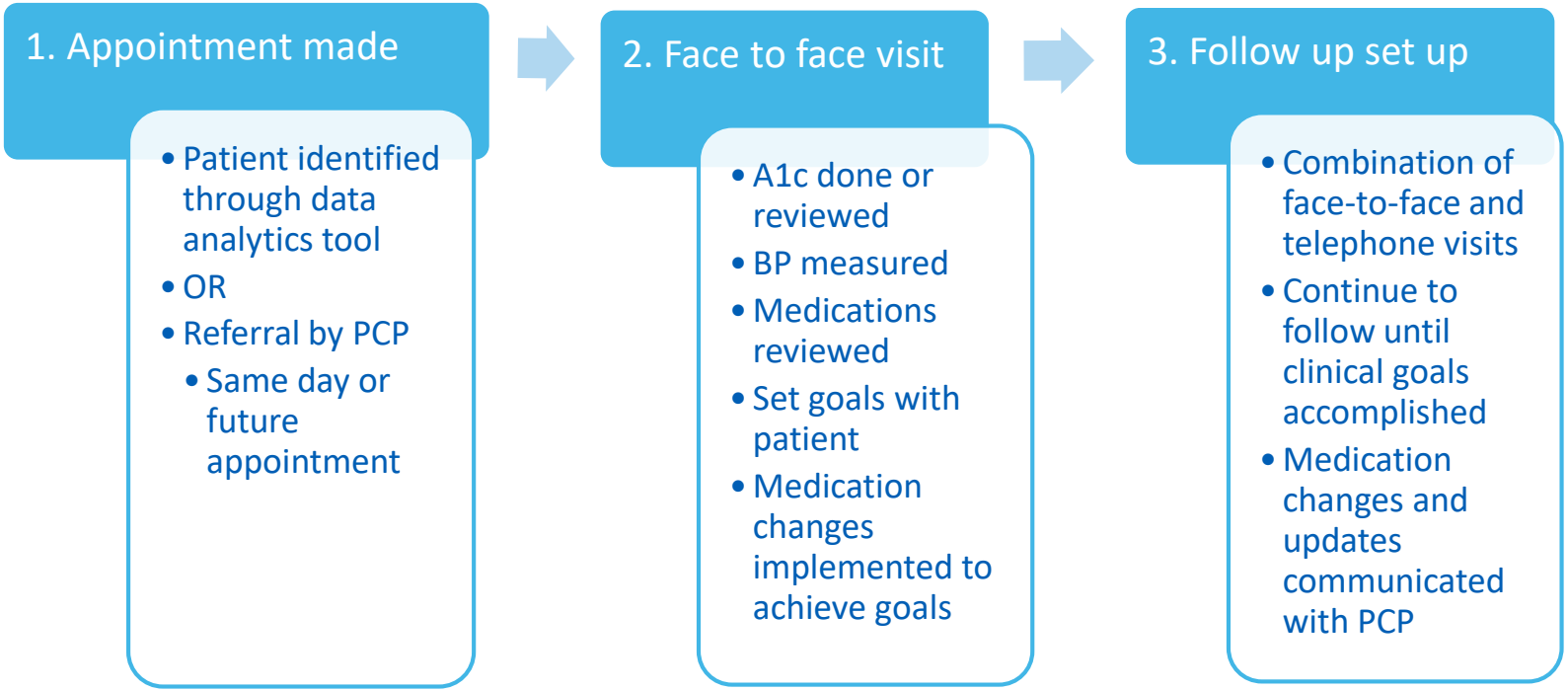
~80%

Pharmacist reviews “real time” appointment list to identify patients coming in to see provider

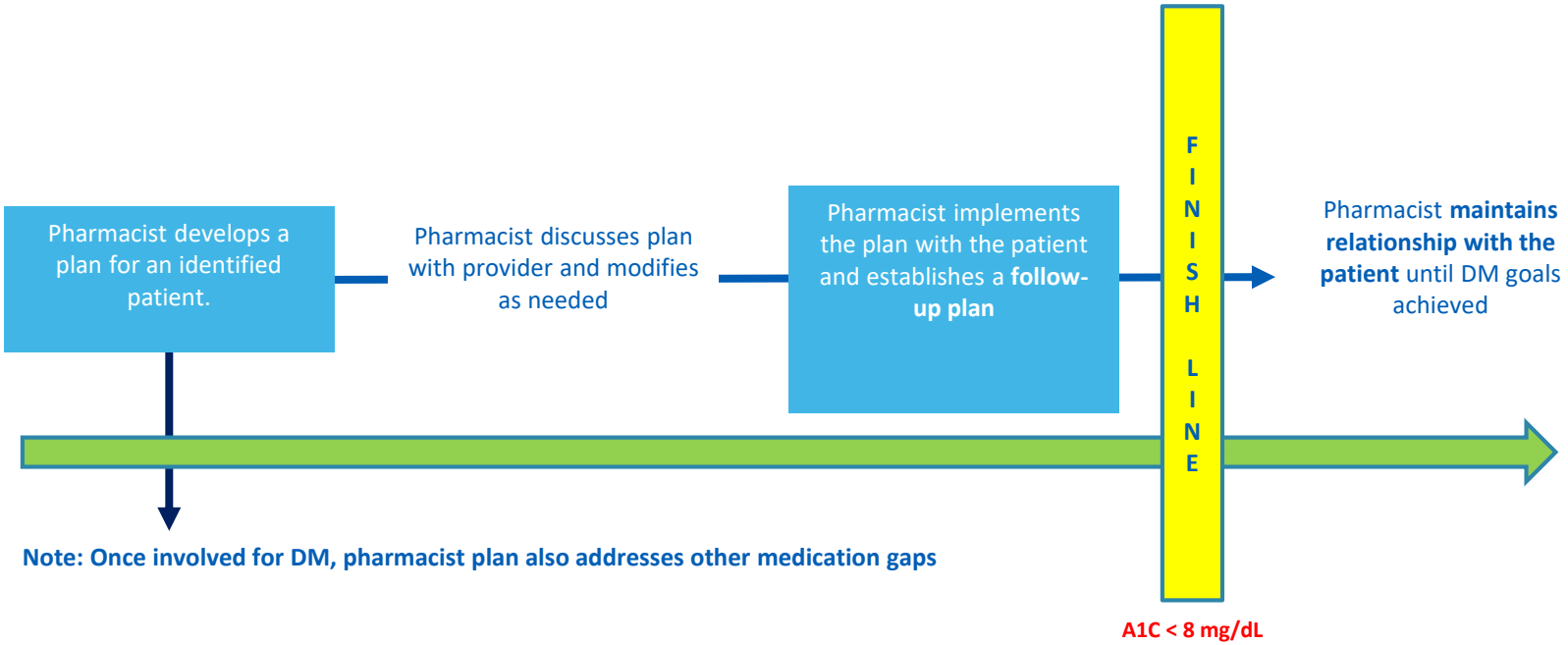
Providers refer patients to pharmacist

~20%

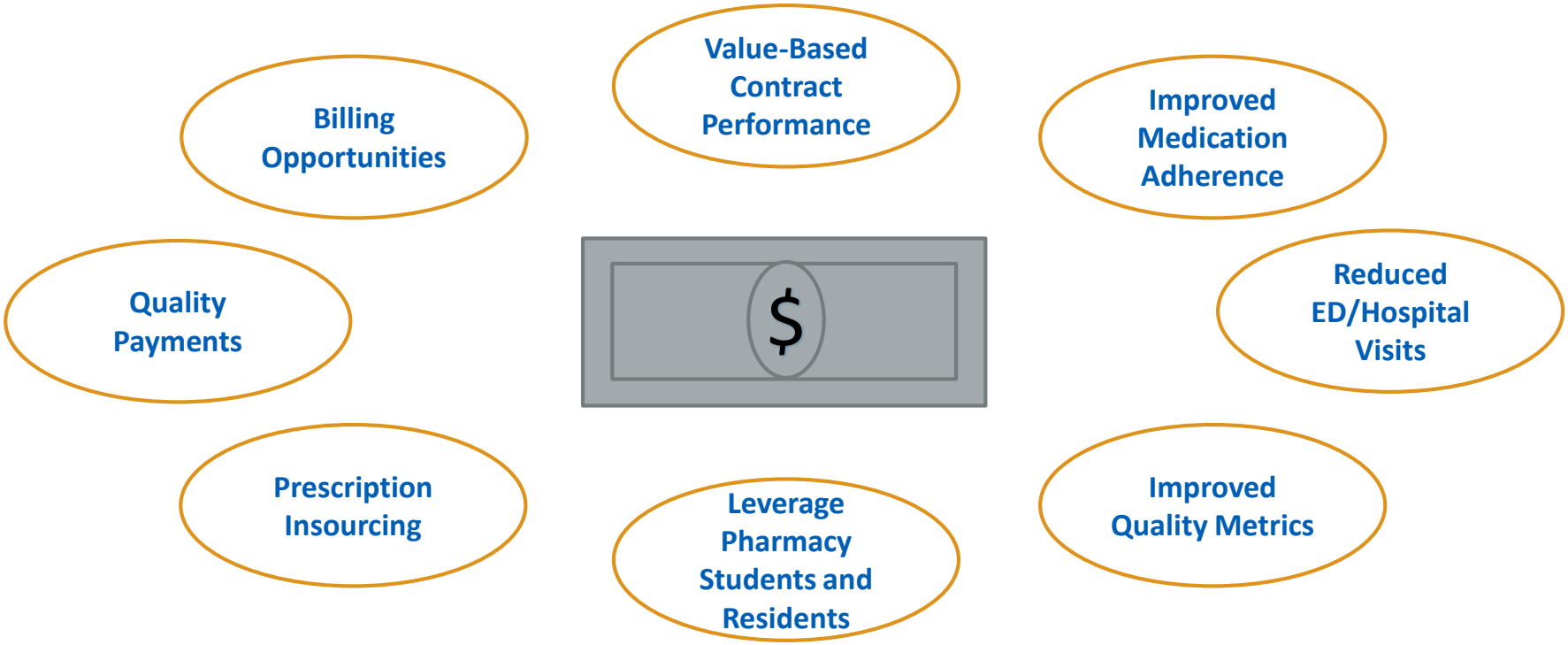
Pharmacist Workflow



How Does the Pharmacist Maintain a Relationship with Providers and Patients?



Funding a pharmacist



IMPACT OF EXPANSION

Clinical Improvements

Aug 2017-Feb 2018 238 patients evaluated		
Average A1c **pre/post** pharmacist involvement: **10.3% → 8.4%**	Average A1c reduction 4 months post pharmacist involvement: **↓ 1.96 +/- 0.17%**	Patients with A1c <8.0% at 4 months post pharmacist involvement: **52.1%**

CONFIRMS PILOT DATA!

Clinic – Level Data

August 2017 HFMG DM Metrics Rankings By Site

DM A1c < 8 Ranking		
1	Novi	80↑
2	Hamtramck	77↑
3	Farmington	76↓
4	Lakeside	76↑
5	Harbortown	74↑
6	Sterling Hts	73
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8	Taylor	72↑
9	Southfield	72↑
10	Columbus	72
11	E. Jefferson	71↑
12	Troy	70
13	K-15	69↑
14	Fairlane	68↑
15	Royal Oak	68↑
16	Plymouth	68
17	Pierson	68
18	Warren	68↓
19	Woodhaven	67
20	Livonia	65
21	Canton	65
22	DNW	65
23	Milford	50↑

April 2019 HFMG DM Metrics Rankings By Site

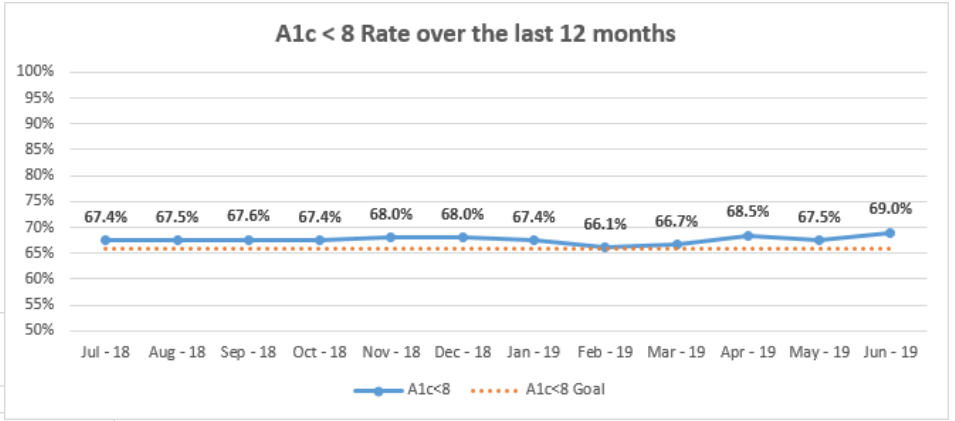
DM A1c < 8 Ranking		
1	Farmington	78↓
2	Hamtramck	77
3	Novi	75↑
4	Commerce	75↑
5	Sterling Hts	73↑
6	Lakeside	72
7	Warren	71↑
8	Woodhaven	71
9	Harbortown	71
10	E. Jefferson	70
11	Livonia	70
12	Plymouth	70
13	Taylor	70
14	Troy	69↓
15	Columbus	69↑
16	DNW	69↑
17	Southfield	68↑
18	AIM (K15)	68↑
19	Canton	66
20	Royal Oak	66
21	Pierson	65↑
22	Milford	65
23	Ford Road	65
24	Waterford	63↑

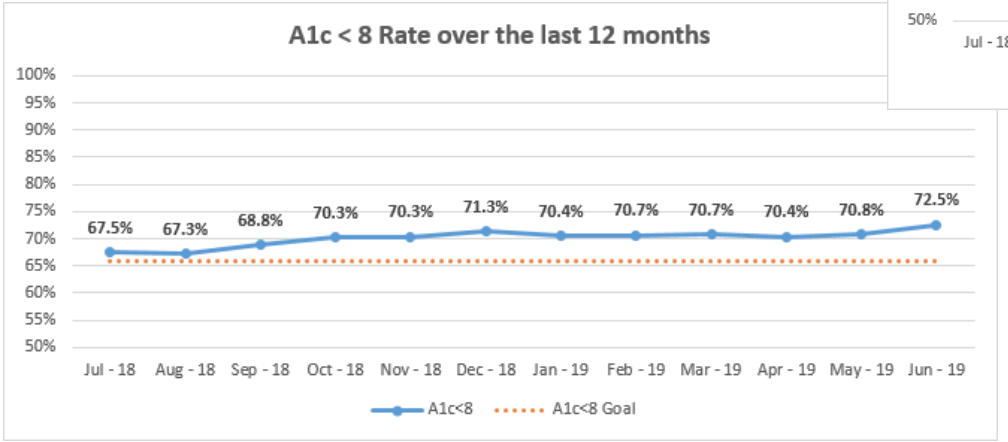
90th percentile HEDIS	75th percentile HEDIS	50th percentile HEDIS	25th percentile HEDIS	<25th percentile HEDIS

OUTCOMES OF INITIATIVE

Clinic-level Data

DETROIT NORTHWEST





LIVONIA

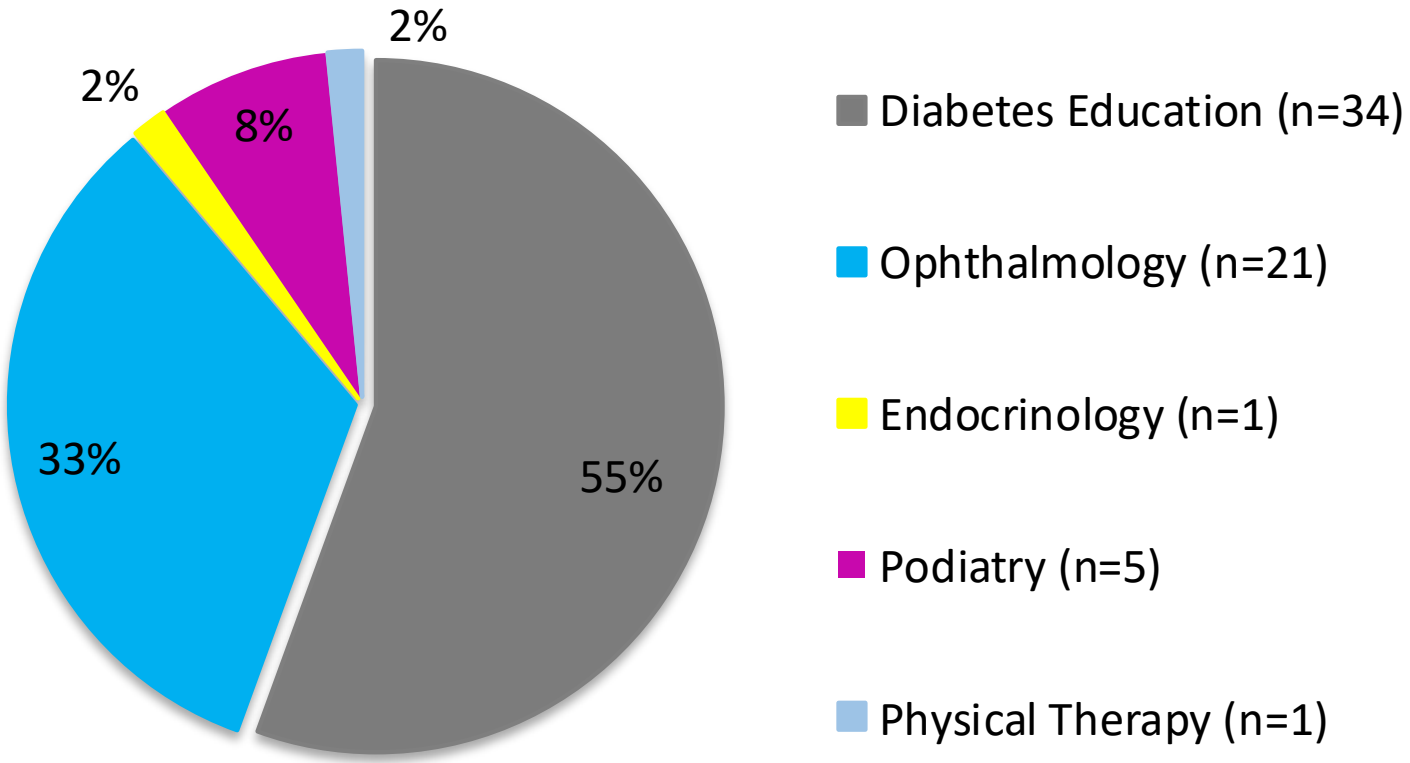
Diabetes control maintained or continues to improve in these clinics!

Therapy Changes

	New	Modified	Discontinued
Aspirin	18	1	0
Statin	29	1	7
ACEI/ARB	6	3	1
Insulin	81	442	23
Non-insulin injectable	42	25	4
Oral anti-diabetic	80	92	60
Total	256	564	95

August 2017 – February 2018; n = 238 patients

Increased DM Related Referrals

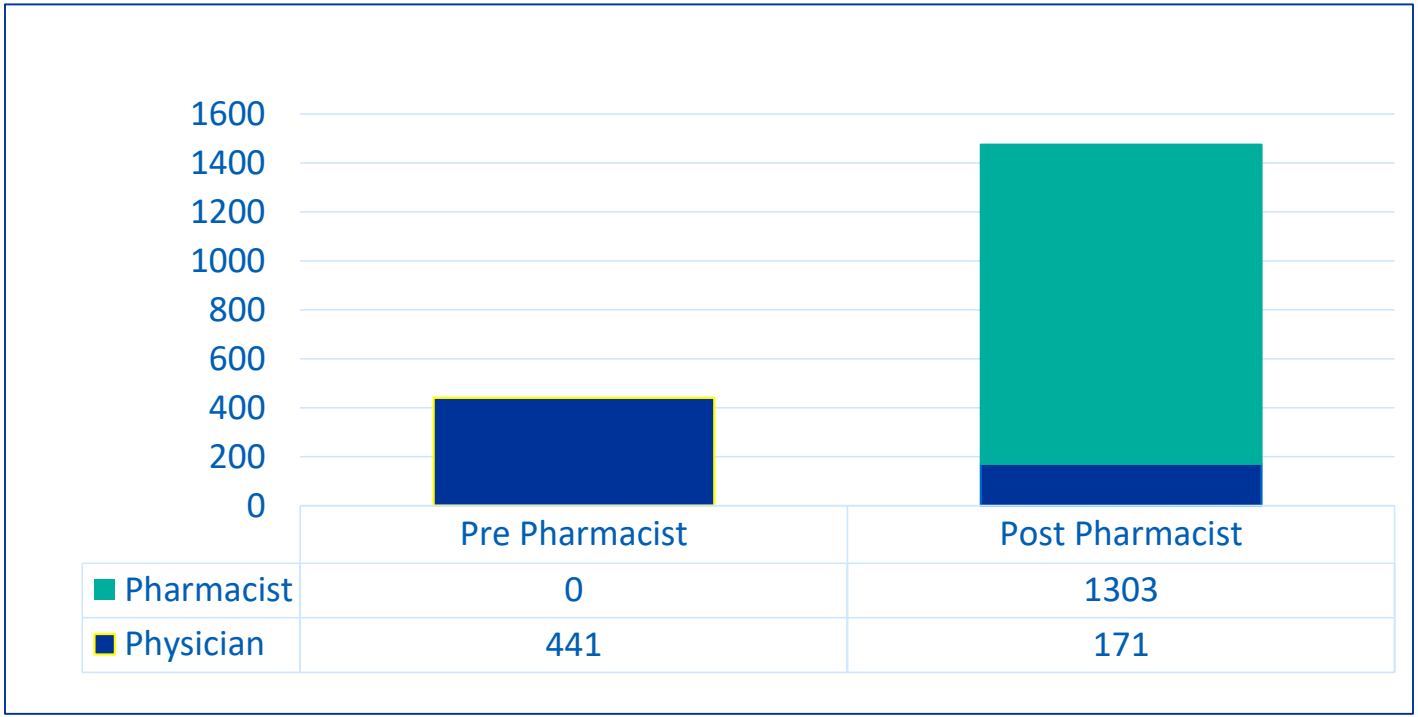


August 2017 – February 2018; n = 238 patients

Increased Patient Encounters

- Reviewed patient office visits 6 months prior to pharmacist visit vs 90 days after
- Before Pharmacist: 1.9 encounters per patient (all physician)
- After Pharmacist: 6.2 encounters per patient
  - 0.7 encounters per patient (physician)
  - 5.5 encounters per patient (pharmacist)
- Overall, physician productivity did not decline during this time

Increased Patient Encounters



August 2017 – February 2018; n = 238 patients

NOTE: Physician productivity did not decline over this time period

Diabetes-related Hospital/ED Visits

Compared 90 days pre vs 90 days post first encounter with pharmacist

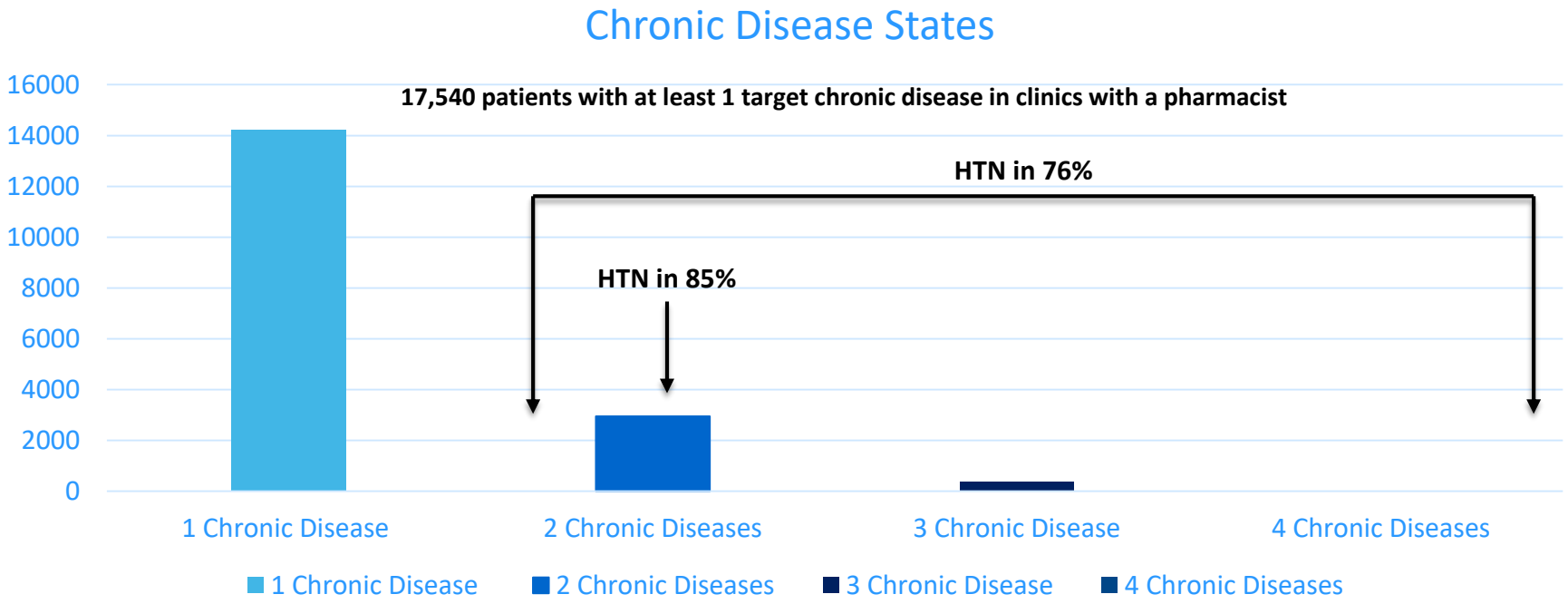
	Pre-Pharmacist	Post-Pharmacist	P-value
ED Visits	14	3	0.016
Hospitalizations	16	0	0.001
Total Days of Hospitalization	39	0	0.0001

August 2017 – February 2018; n = 238 patients

Next Steps for HFMG

- Expand to 4 target chronic disease states
  - Diabetes (HgbA1C > 8)
  - Hypertension (BP > 140/90)
  - COPD (any)
  - Heart failure (any)
- Use analytic tool to increase complexity of patients
  - More than 1 chronic disease in the same patient

Analytic Approach to Expansion

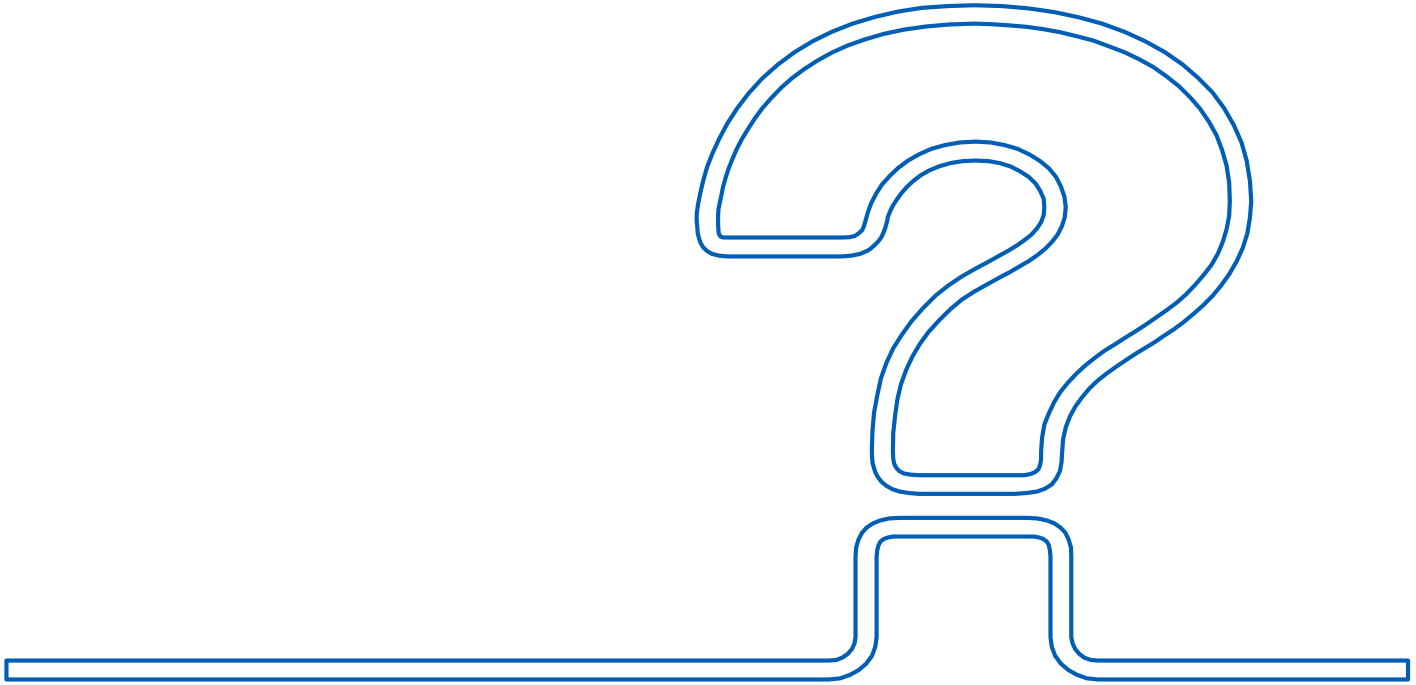


Target 600 – 800 uncontrolled patients/pharmacist

Conclusion

- Embedded pharmacists equipped with analytic tools utilizing a proactive approach
  - Improve chronic disease surrogate measures and outcomes
  - Provide physicians with a highly skilled partner in care
  - Lead to better results with lower physician work burden

Questions



September Webinar

- **Date/Time**: September 19, 2019 from 2-3pm Eastern
- **Topic**: Innovator Track Eye Care Cohort Results
- **Presenters**: AMGA

Questions