Concurrent Session I: Together 2 Goal® Campaign

Population Health Lessons from AMGA Member Medical Groups and Integrated Delivery Networks: Improving Care Delivery for People with Type 2 Diabetes

March 19, 2019

AMGA™

Panelists

Jonathan P. Brady, Pharm.D.

Assistant Director, Ambulatory Clinical Pharmacy Programs
Enterprise Pharmacy
Geisinger Health
Scranton, PA

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Vice President, PMA Board of Directors
Chief Quality Officer
Premier Medical Associates
Monroeville, PA

John K. Cuddeback, M.D., Ph.D.

Chief Medical Informatics Officer
AMGA
Alexandria, VA

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Chief Medical Officer, **AMGA**
President, **AMGA Foundation**
Alexandria, VA

Agenda

- **Prediabetes** – Colangelo (15 minutes)
- **Screening for Diabetes** – Cuddeback (10 minutes)
- **CVD Risk in People with Type 2 Diabetes**
  - Brady (15 minutes)
  - Cuddeback (2 minutes)
- **Q&A** (15 minutes)

Prediabetes

Francis R. Colangelo, M.D., M.S.-HQS, FACP

Premier Medical Associates

- Formed 1993
- 100 Providers
- 24 Specialties
- Affiliation with Highmark Health since late 2011
- A member of the Allegheny Health Network

T2G: Launch Survey

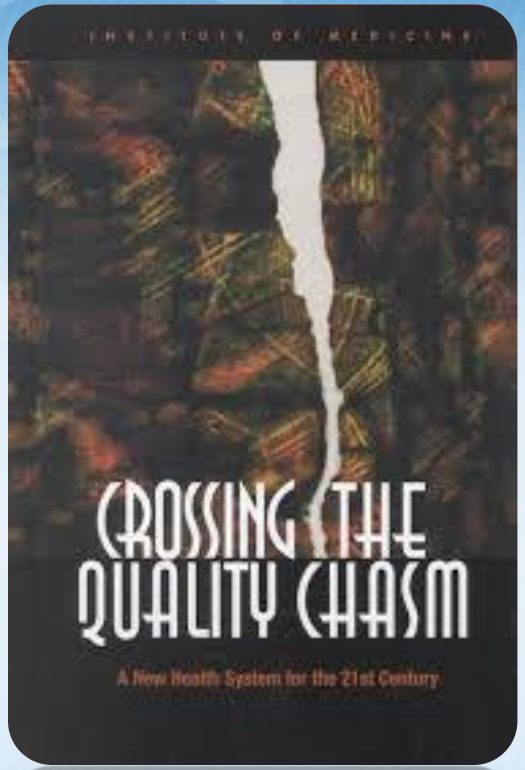
Which planks will you adopt?
Which will you not adopt?

31% said they *wouldn't* focus on screening.

They are already overwhelmed by
the number of patients with Type 2 Diabetes
...let alone Prediabetes!

What is Prediabetes?

- ✓ Fasting Glucose between 100–125
- ✓ 2hr Glucose on OGTT between 140–199
- ✓ HgbA1c between 5.7–6.4%



"It now takes an average of 17 years for new knowledge generated by randomized controlled trials to be incorporated into practice, and even then, application is highly uneven."

Committee on Quality Health Care in America, Institute of Medicine. 2001. Crossing the quality chasm: A new health system for the 21st century. Washington, DC: National Academy Press.

The New England
Journal of Medicine

VOLUME 346 FEBRUARY 7, 2002 NUMBER 6

REDUCTION IN THE INCIDENCE OF TYPE 2 DIABETES WITH LIFESTYLE INTERVENTION OR METFORMIN

DIABETES PREVENTION PROGRAM RESEARCH GROUP*

Intensive Lifestyle Intervention

- ✓ DPP Programs are Resource Intensive
  - 16 core sessions: one-to-one, in person
  - 2 monthly maintenance phone contacts
  - Exercise facilities at no cost

- ✓ For every 1kg of weight loss, diabetes incidence drops by 16 percent.

Metformin for Prediabetes

- ✓ 2008:

  "Metformin use was recommended for high risk individuals"

- ✓ 2019:

  "Metformin therapy for the prevention of type 2 diabetes should be considered in those with prediabetes, especially for those with BMI ≥ 35, those aged < 60 years, and women with prior gestational diabetes"

Standards of medical care in diabetes—2008. *Diabetes care*, *31*(Supplement 1), S12-S54.

Prevention or Delay of Type 2 Diabetes: Standards of Medical Care in Diabetes—2019. *Diabetes Care*, *42* (Supplement 1), S29–S33.

Metformin for Prediabetes

- ✓ NHANES 2005–2012

  < 1% use

- ✓ Commercially insured 2010–2012

  3.7% use

Moin, T., Li, J., Duru, O.K., Ettner, S., Turk, N., Keckhafer, A., ... & Mangione, C.M. 2015. Metformin prescription for insured
adults with prediabetes from 2010 to 2012: a retrospective cohort study. *Annals of internal medicine*, *162*(8), 542–548.

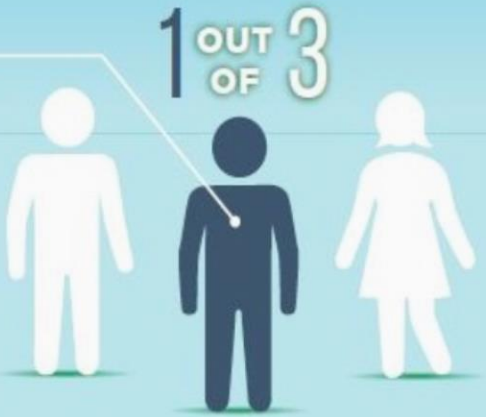
PREDIABETES

COULD IT BE YOU?

CDC
Centers for Disease Control and Prevention

84.1 MILLION

84.1 million American adults — more than 1 out of 3 — have prediabetes



9 OUT OF 10 people with prediabetes don't know they have it

BMJ 2015;350:h454 doi: 10.1136/bmj.h454 (Published 19 February 2015)

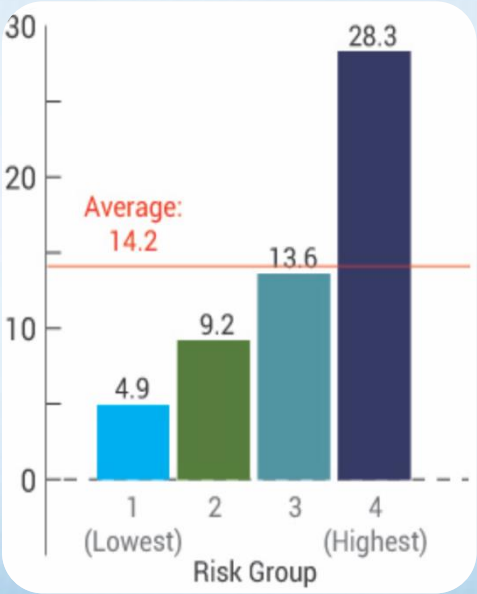
RESEARCH

Improving diabetes prevention with benefit based tailored treatment: risk based reanalysis of Diabetes Prevention Program

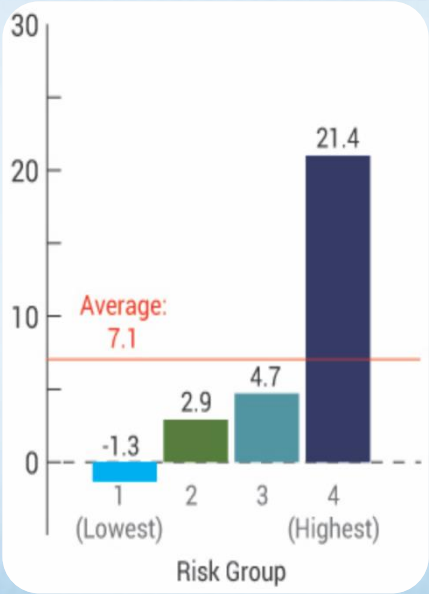
Jeremy B Sussman *research scientist*[1] *assistant professor*[2], David M Kent *professor of medicine and director*[3], Jason P Nelson *statistician*[3], Rodney A Hayward *professor of medicine*[1 2 4]

Heterogeneity of Treatment Effect: Diabetes Prevention Program Study

Intensive Lifestyle Intervention



Metformin



Value of a multivariable model

In the lowest-risk quartile, about 15% of patients have A1c ≥ 6.0

In the highest-risk quartile, more than 25% of patients have A1c < 6.0

http://www.pcori.org/research-in-action/moving-beyond-averages

Study Description

- ✓ 2 AMGA Member Groups
- ✓ Patient Stakeholders
- ✓ Patient and Provider Focus Groups
- ✓ Patient and Provider Surveys

Calculator Variables

Final Model	
Age	Fasting Glucose
Gender	Triglycerides
Race	BMI
Smoking Status	Systolic BP
Hypertension	HDL Cholesterol
HgbA1c	

Allscripts, Predm
01-Jan-1962 (56y) F

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PCP	Colangelo, Francis	FYI	FYI	Dash	Open
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Search/Filter

- ASCVD Risk
- Caloric Requirements
- CHA2DS2-VASc for Risk of Stroke
- Creatinine Clearance
- D.I.R.E Score
- Final Parental Height (FPH) Child Height Predictor
- FRAX WHO Fracture Risk
- HAS-BLED
- LACE Index Scoring Tool
- MCHAT-R
- PHQ-A (PHQ-9 for Adolescents)
- Tufts DPP Risk Estimator

Tufts DPP Risk Estimator v20180418

Sex: Female

Race: Black

Smoking Status: Former Smoker

Hypertension: True

Metric U.S.

Height: 64 in

Weight: 160 lb

BMI: 27.46 kg/m2

Systolic Blood Pressure: 138 mmHg

HDL Cholesterol: 38 mg/dL

Triglycerides: 180 mg/dL

A1C: 6.2 %

Fasting Blood Glucose: 118 mg/dL Drawn in same timeframe as fasting labs, so assumed to be a fasting blood glucose.

Calculate

Interpretation: High Risk Patient

Predicted Risk of Type 2 Diabetes at 3 Years	Treatment	Relative Risk Reduction (RRR)	Number Needed to Treat (NNT)
55.7 %	Usual Care	Reference	N/A
24.5 %	Metformin	56%	4
23.4 %	DPP Lifestyle	58%	4

Add to Chart

5/1/2019 – 1/31/2019

- ✓ 67.8% of PMA's 2,304 patients with Prediabetes had the Calculation Completed
- ✓ 55 were Low Risk (3.5%)
- ✓ 838 were Medium Risk (53.6%)
- ✓ 670 were High Risk (42.9%)

Of the 670 High Risk Patients…

- ✓ 11 were On Metformin before 5/1/18 (6.2%)
- ✓ 134 were Started on Metformin after 5/1/18 (18.8%)
- ✓ 0 were Referred to a DPP before 5/1/18 (0%)
- ✓ 297 were Referred to a DPP after 5/1/18 (44.3%)

Effects on Treatment Patterns

Risk Level	Action taken
High	64.7%
Medium	17.8%
Low	3.6%

During the Project

87 Patients were Identified as having Diabetes in a Timely Fashion

Utilization Savings

- ✓ Office of the Actuary estimates $2,650 in cost savings for Medicare beneficiaries over 15 months by offering a DPP
- ✓ Intermountain:
  - Avoiding or delaying progression to diabetes saves insurance arm $3,500 per patient per year

Population health management, *20*(5), 389-396.
https://www.ama-assn.org/delivering-care/diabetes/intermountains-prediabetes-effort-signs-10000-plus-patients

Contact

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Together2Goal®

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Improve care for 1 million people with Type 2 diabetes by 2021

Improvement – Year 2

763,000 patients, aged 18–79, with improved care

- 1/3 have new Dx
- 2/3 with net improvement in control on measures

319,000 additional patients with sustained bundle control

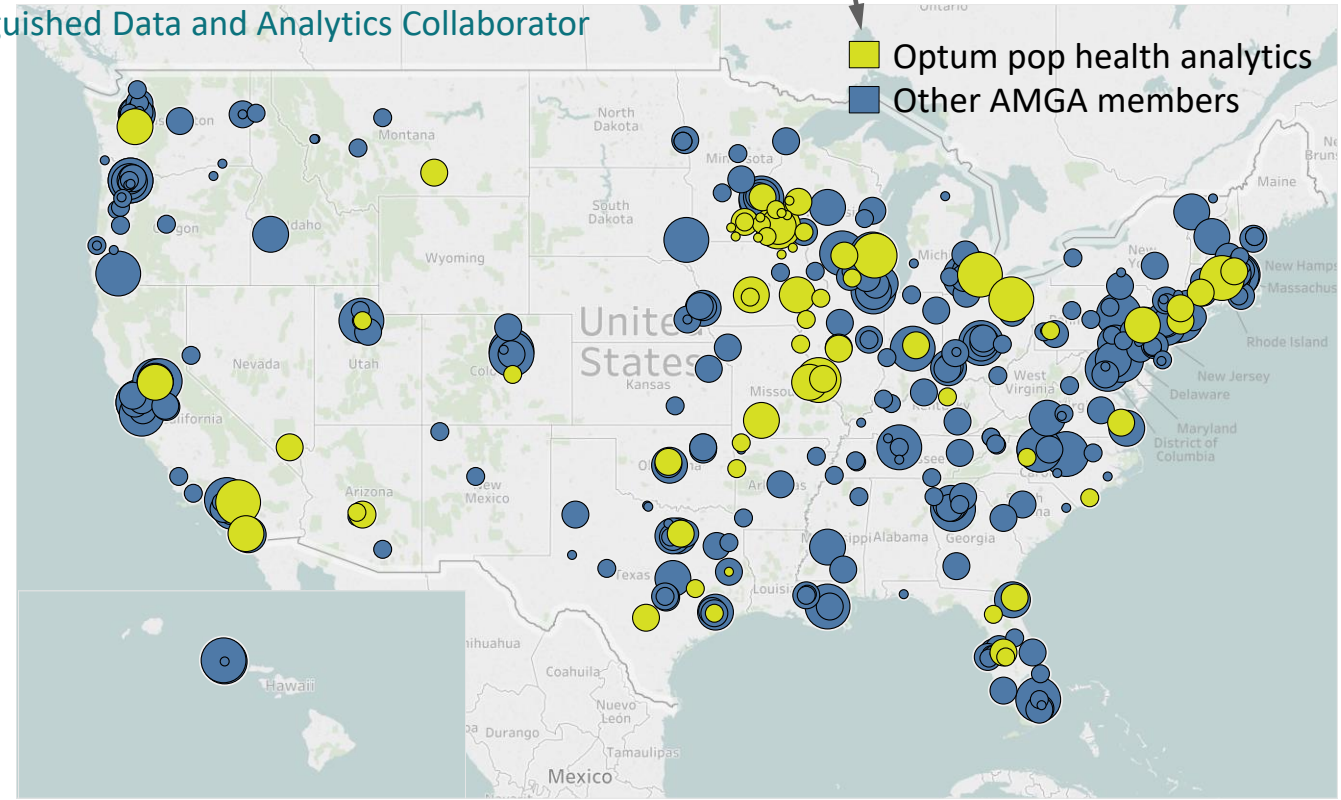
Baseline ended 2016 Q1
Year 2 ended 2019 Q1

OPTUM®

AMGA

AMGA's Distinguished Data and Analytics Collaborator

15% of AMGA members
25% of patients



GOAL: Improve care for 1 million people with type 2 diabetes

EMPOWER PATIENTS

- Build an Accountable Diabetes Team
- Integrate Emotional & Behavioral Support
- Refer to Diabetes Self-Management Education & Support Programs

IMPROVE CARE DELIVERY

- Conduct Practice-Based Screening
- Adopt Treatment Algorithm
- Measure HbA_{1C} Every 3-6 months
- Assess & Address Risk of Cardiovascular Disease
- Contact Patients Not at Goal & with Therapy Change within 30 Days

LEVERAGE INFORMATION TECHNOLOGY

- Use a Patient Registry
- Embed Point-of-Care Tools
- Publish Transparent Internal Reports

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Practice-Based Screening for Diabetes

1 out of 4

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Table 2.3—Criteria for testing for diabetes or prediabetes in asymptomatic adults

1. Testing should be considered in overweight or obese (BMI ≥25 kg/m^2 or ≥23 kg/m^2 in Asian Americans) adults who have one or more of the following risk factors:
   - First-degree relative with diabetes
   - High-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)
   - History of CVD
   - Hypertension (≥140/90 mmHg or on therapy for hypertension)
   - HDL cholesterol level <35 mg/dL (0.90 mmol/L) and/or a triglyceride level >250 mg/dL (2.82 mmol/L)
   - Women with polycystic ovary syndrome
   - Physical inactivity
   - Other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
2. Patients with prediabetes (A1C ≥5.7% [39 mmol/mol], IGT, or IFG) should be tested yearly.
3. Women who were diagnosed with GDM should have lifelong testing at least every 3 years.
4. For all other patients, testing should begin at age 45 years.
5. If results are normal, testing should be repeated at a minimum of 3-year intervals, with consideration of more frequent testing depending on initial results and risk status.

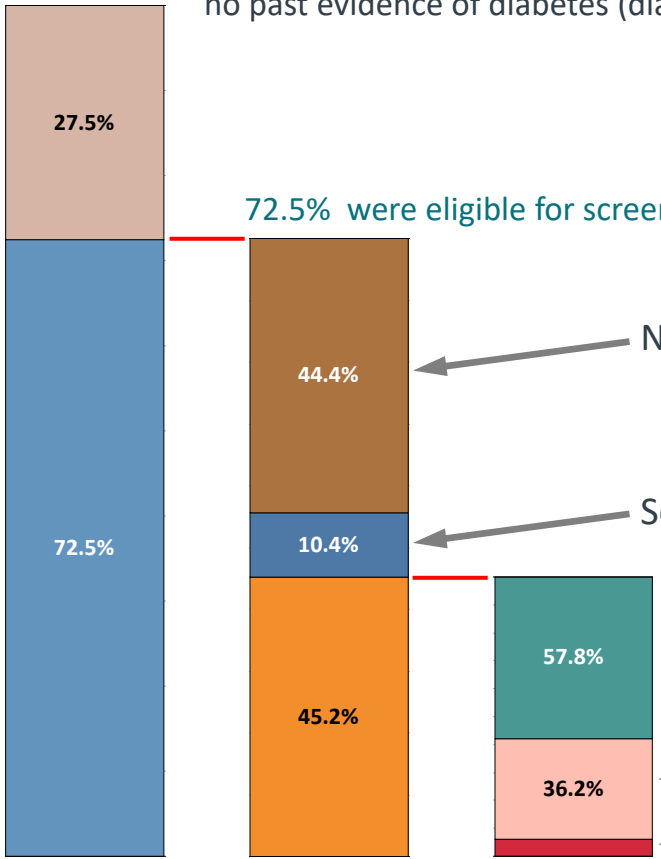
American Diabetes Association. *Standards of Medical Care in Diabetes—2019.*

5.1 million patients, 18–75, across 23 AMGA member organizations using Optum population health analytics

≥ 1 ambulatory visit with a PCP, endocrinologist, cardiologist, or nephrologist, July 2016 – June 2017, no past evidence of diabetes (diagnosis or medication), not pregnant within the past 2 years

Practice-based Screening Study

Together2Goal



72.5% were eligible for screening, by ADA criteria

Not screened: 1.7 million people

~ 600,000 people missed with prediabetes

~ 100,000 people missed with screening result in diabetes range

Screened in prior 2 years, no evidence of diabetes or prediabetes

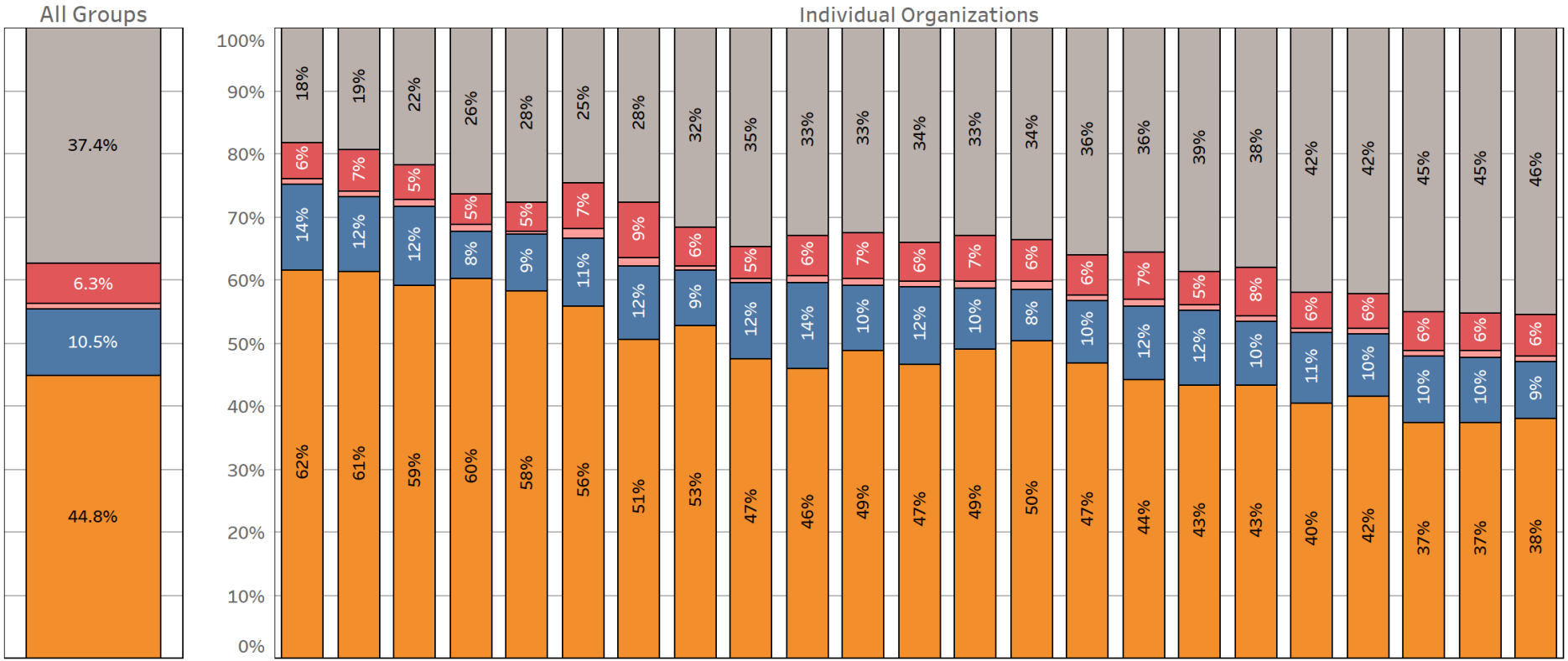
Screened during study year – no evidence of diabetes or prediabetes

Prediabetes – **615,000 people**

Screening result in diabetes range (6.0%) – **102,000 people**

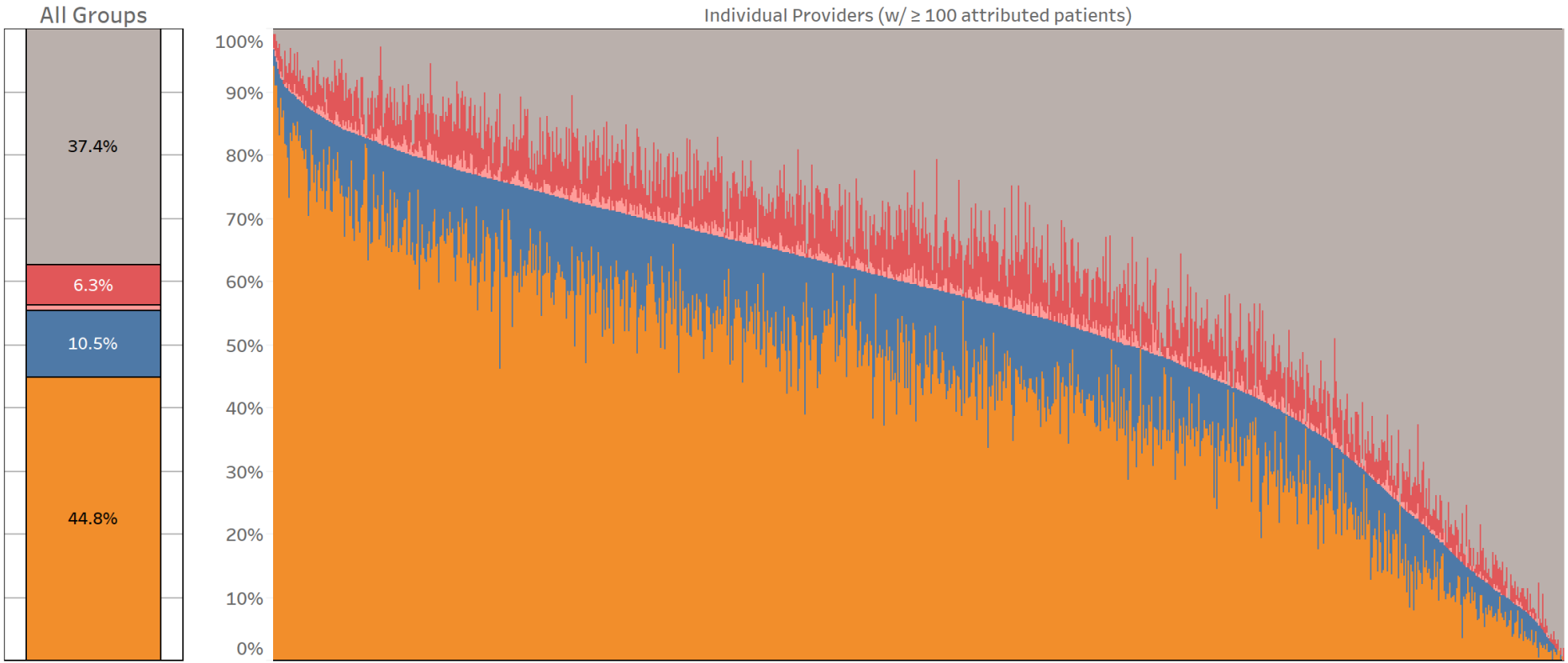
Who Was Screened?

- 3.8 million patients aged 18–75 w/ no evidence of prior DM or pregnancy, eligible for screening (ADA), across 23 A4i orgs.
- Overall, 44.8% of patients were screened in the past 12 months, and an additional 10.5% were screened in the prior 12–36 months with no result indicative of diabetes or prediabetes—these patients were properly screened according to ADA guidelines



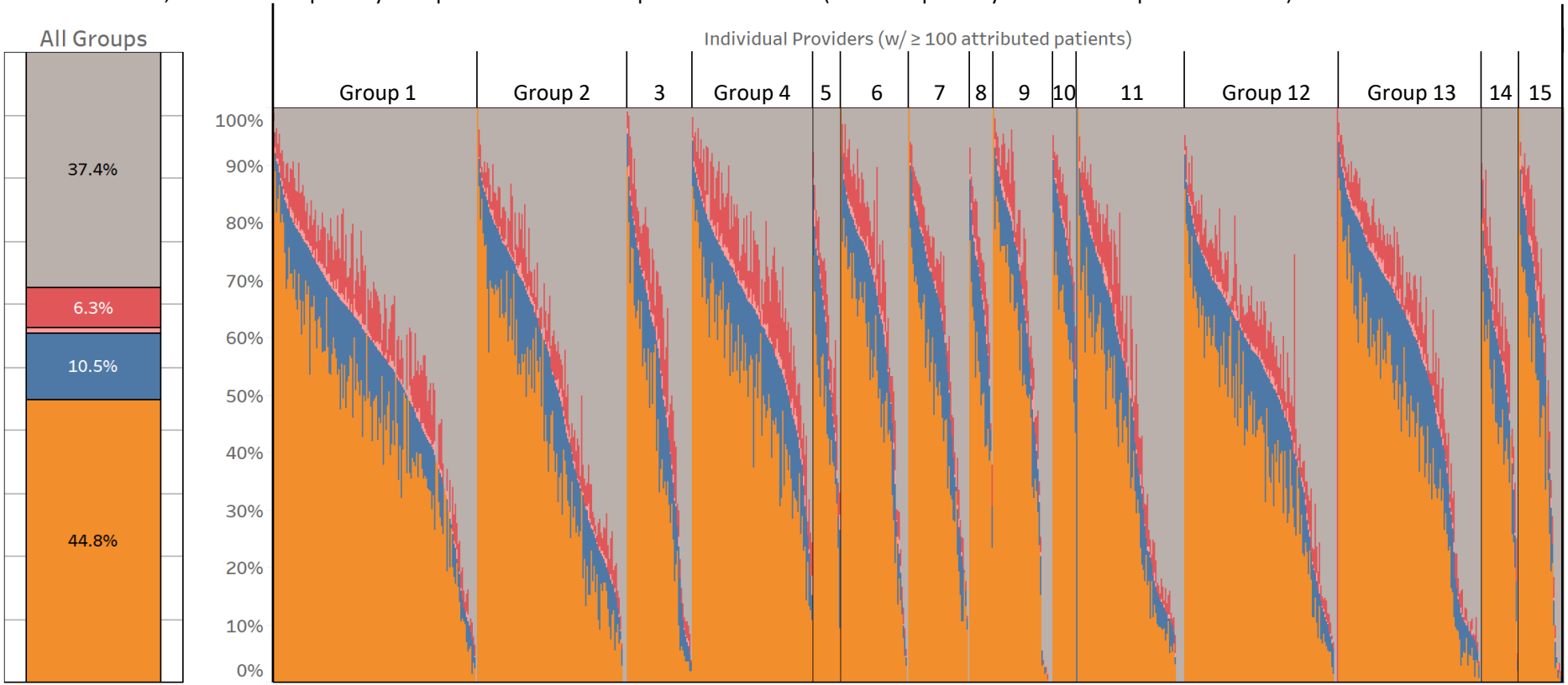
Screening Rates by Provider

- 3.8 million patients aged 18–75 w/ no evidence of prior diabetes or pregnancy, and eligible for screening (ADA), across 23 AMGA member organizations
- 8,830 individual primary care providers with ≥ 100 patients attributed (based on plurality of care in the past 24 months)

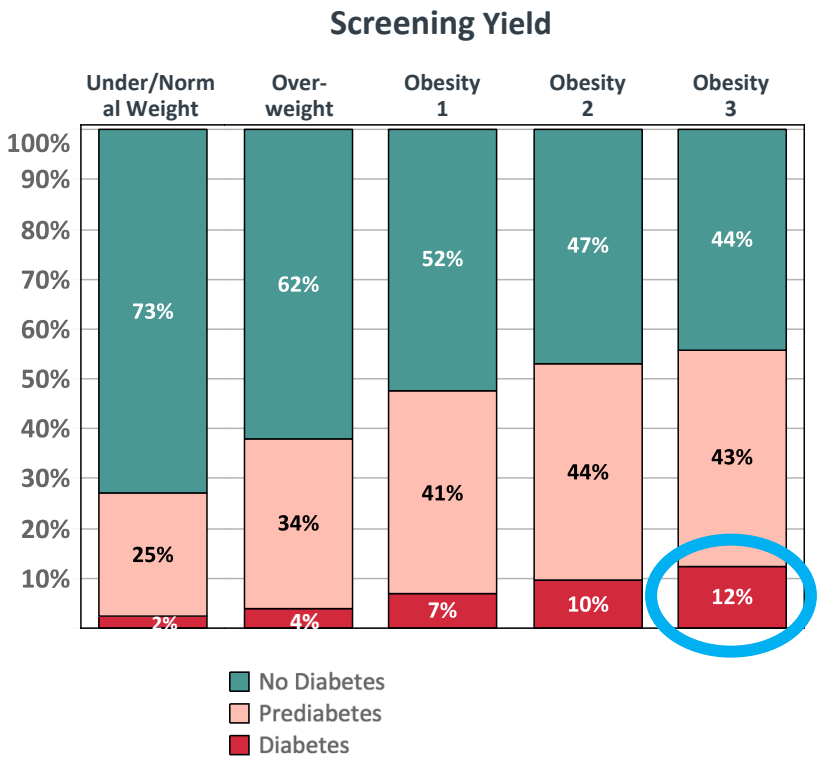


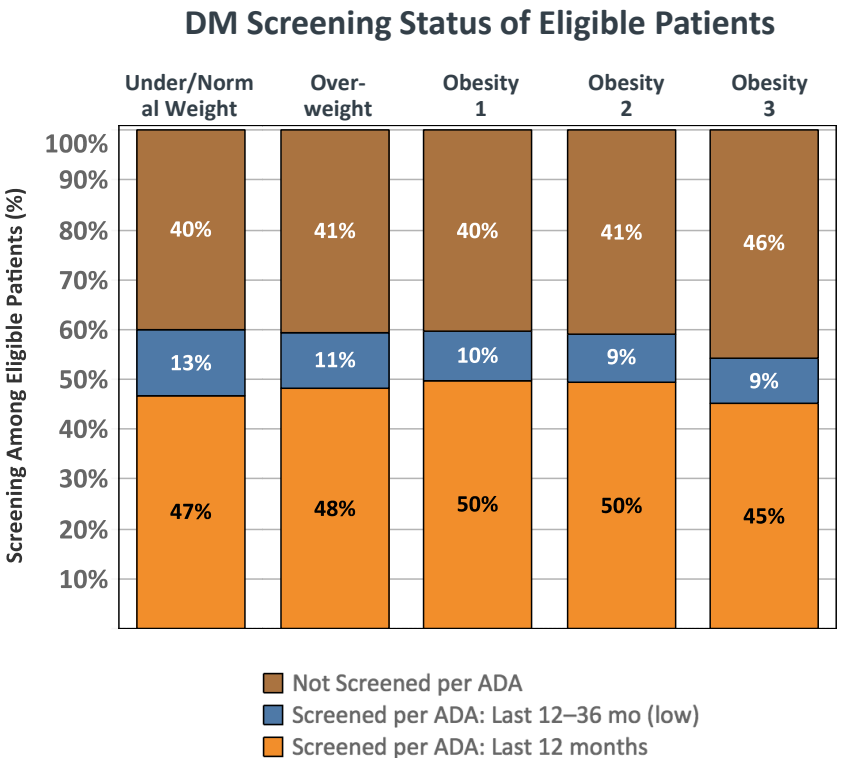
Rates by Provider within Organization

- 3.8 million patients aged 18–75 w/ no evidence of prior diabetes or pregnancy, and eligible for screening (ADA), across 15 AMGA member organizations
- About 5,000 individual primary care providers with ≥ 100 patients attributed (based on plurality of care in the past 24 months)



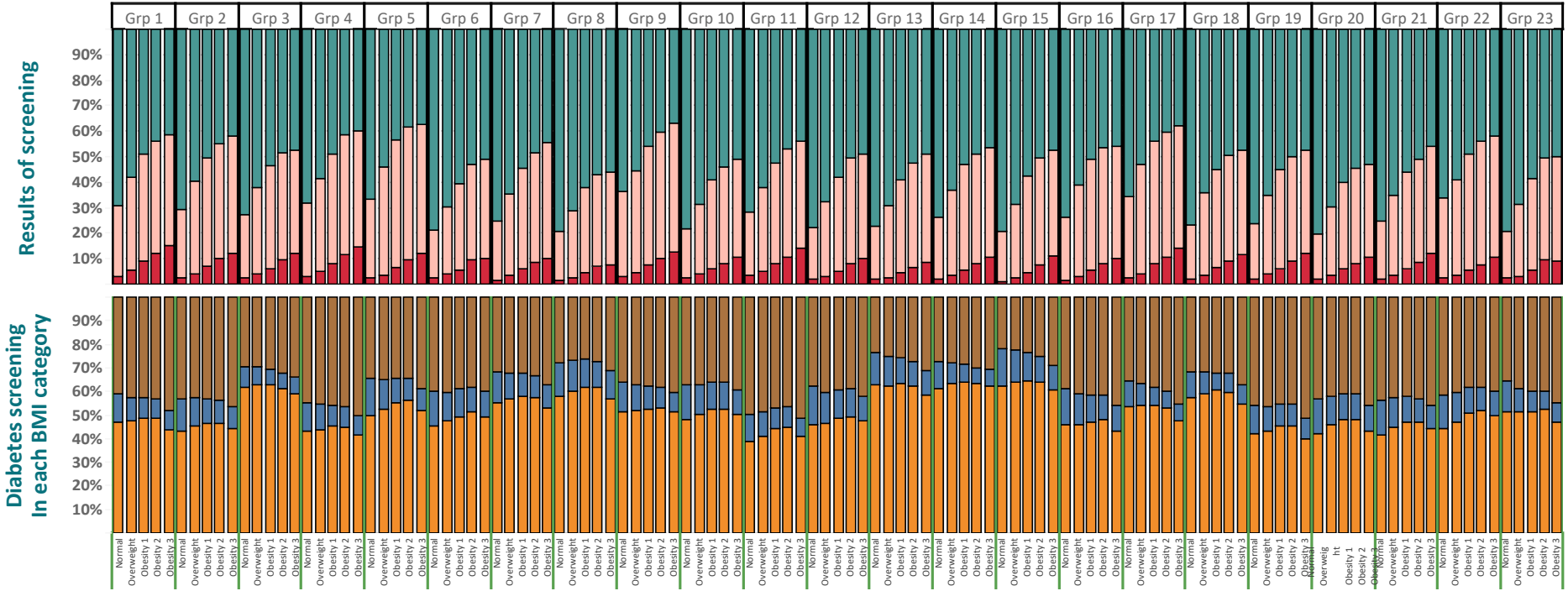
Screening by BMI Category



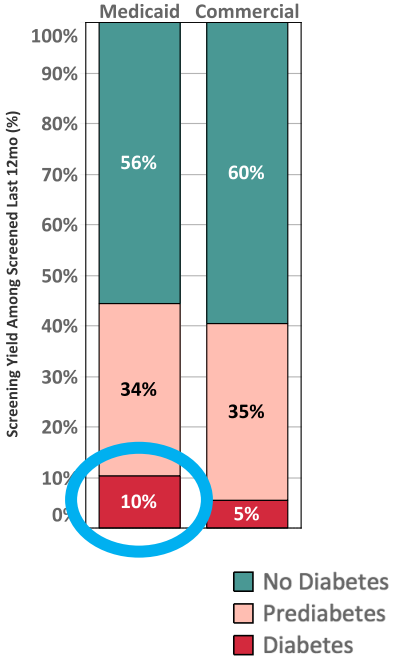


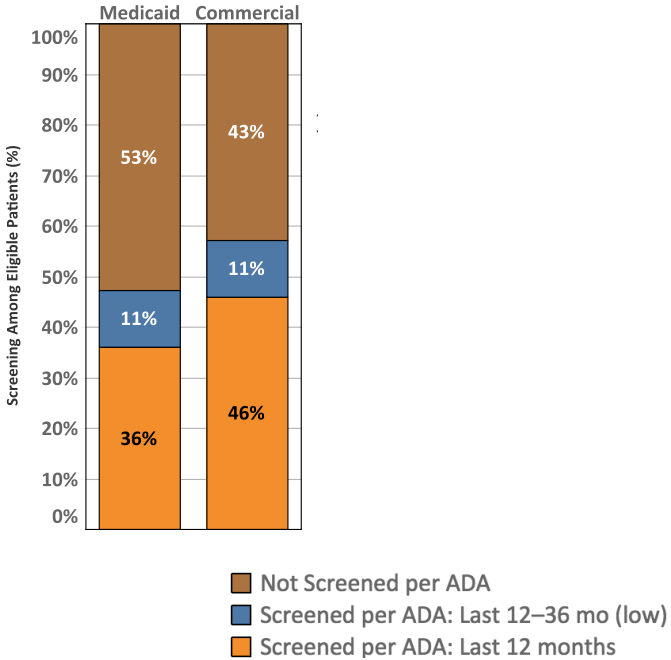
Screening Yield and Screening Rates by BMI Class, across Groups

- Within each group, the 5 bars represent weight classes: normal, overweight, obesity class 1, obesity class 2, obesity class 3
- Red indicates proportion of patients screened who are found to have diabetes, pink the proportion found to have pre-diabetes
- **No medical group is preferentially screening people with obesity classes 2 and 3, even though the yield—the proportion of patients screened who are found to have diabetes, the red bar segment in top graph—is 6 times greater for people with obesity class 3 than for those with normal weight**

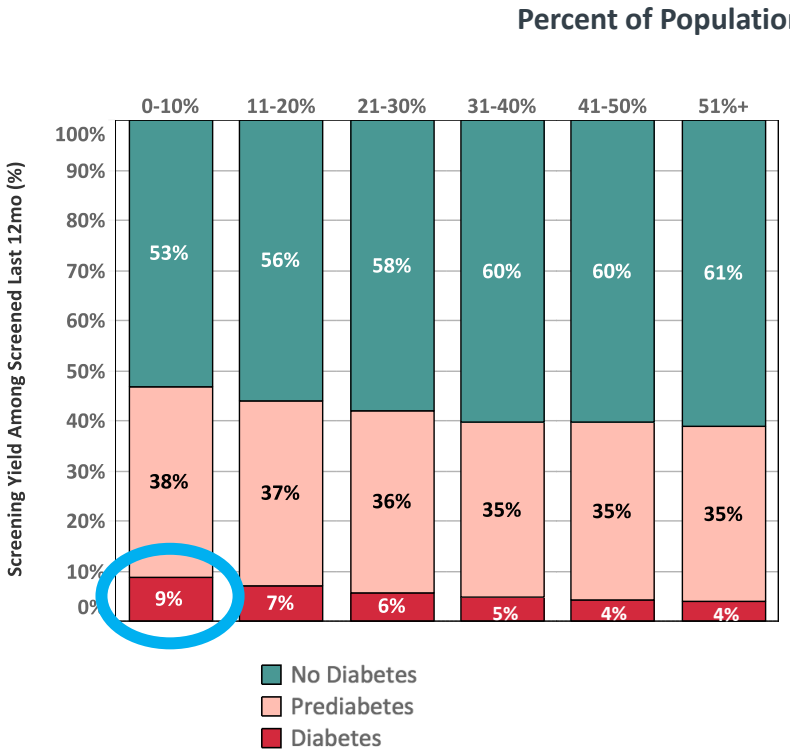


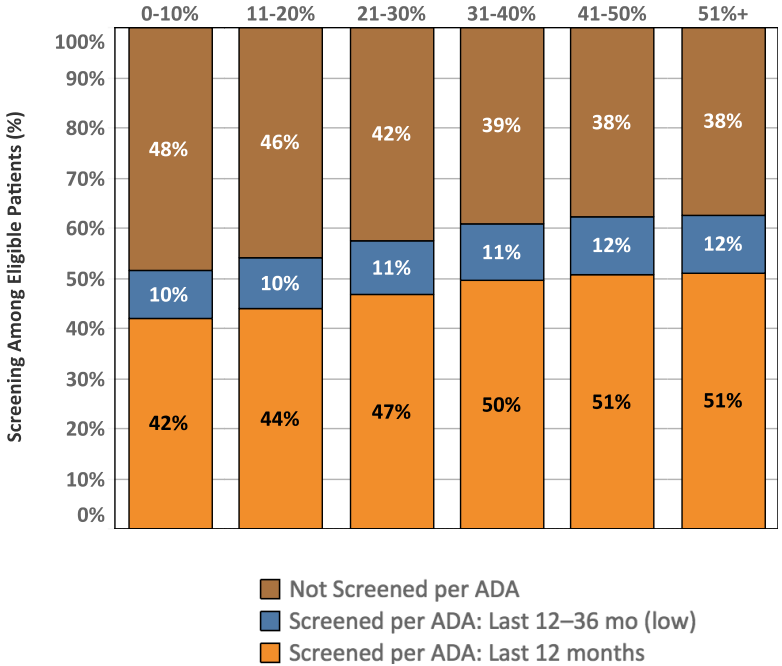
Screening by Insurance (SES)





Screening by Imputed Level of Education





Immediate Improvement

Preferential practice-based screening

- People with **obesity** (BMI ≥ 30)**: 3–6X yield** (vs. normal weight, BMI < 25)
- People with **Medicaid: 2X yield** (vs. commercial insurance)
- People from geographic areas with **low levels of education: 2X yield** (vs. areas with higher levels of education)

44% of people eligible for screening who aren't being screened

- Learn from high-performing care teams within your own organization

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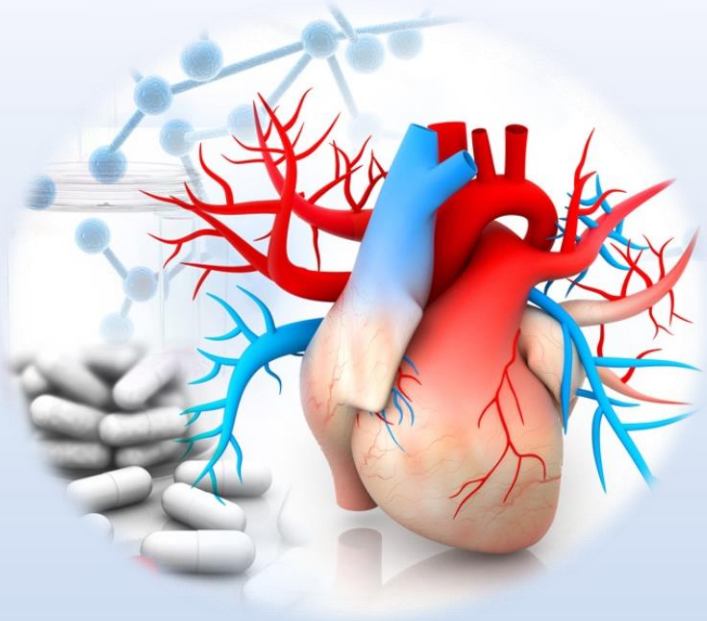
Caring

Geisinger

Diabetes Care Transformation

A Change of Heart



Jonathan Brady, PharmD
Assistant Director
Ambulatory Disease Management
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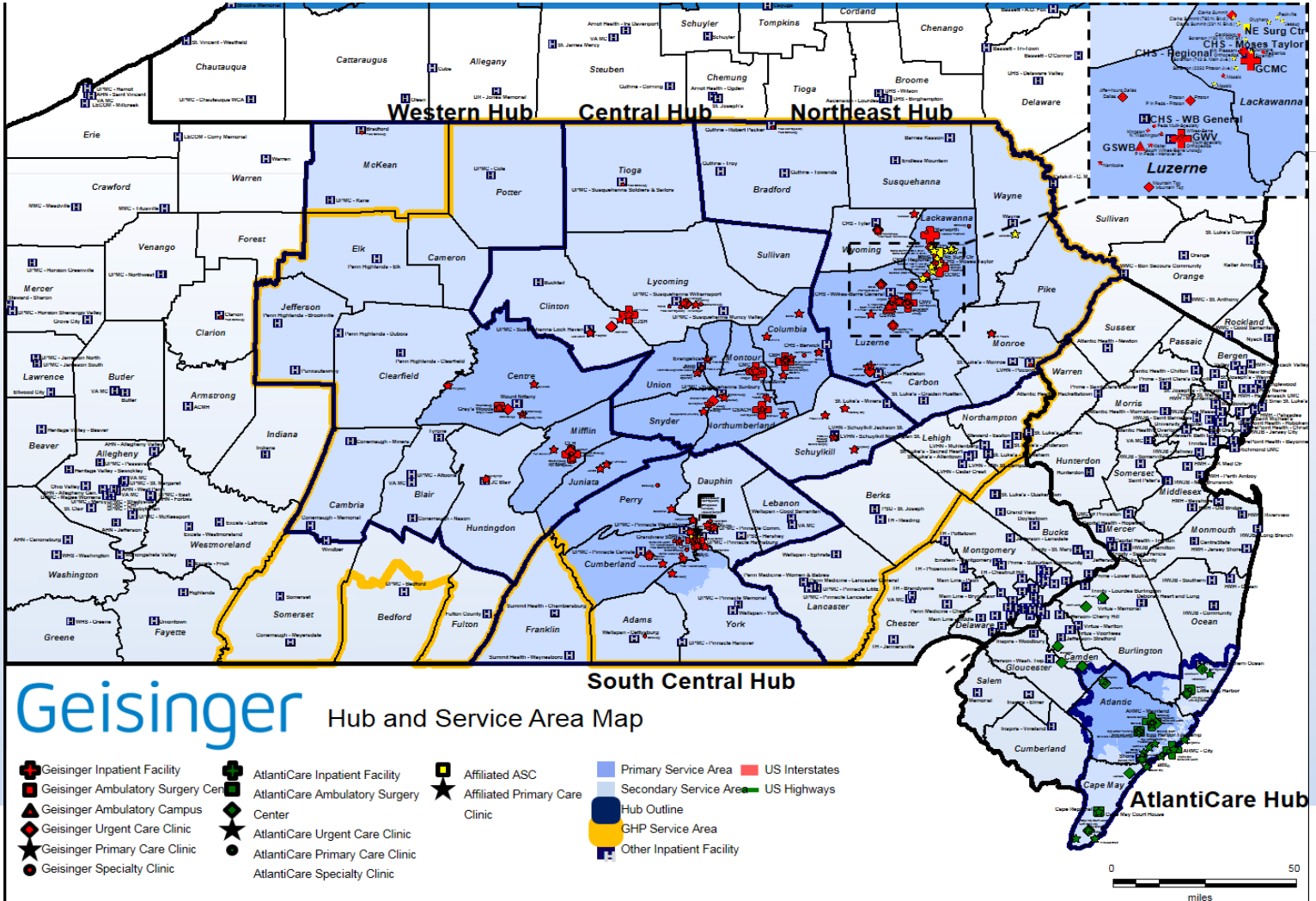
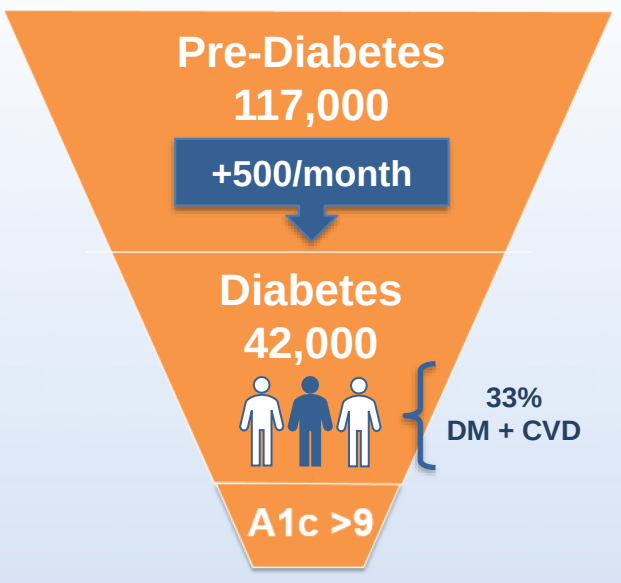

Western Hub
Central Hub
Northeast Hub
South Central Hub
AtlantiCare Hub
Geisinger
Hub and Service Area Map
Geisinger Inpatient Facility
Geisinger Ambulatory Surgery Cen
Geisinger Ambulatory Campus
Geisinger Urgent Care Clinic
Geisinger Primary Care Clinic
Geisinger Specialty Clinic
AtlantiCare Inpatient Facility
AtlantiCare Ambulatory Surgery Center
AtlantiCare Urgent Care Clinic
AtlantiCare Primary Care Clinic
AtlantiCare Specialty Clinic
Affiliated ASC
Affiliated Primary Care Clinic
Primary Service Area
Secondary Service Area
Hub Outline
GHP Service Area
Other Inpatient Facility
US Interstates
US Highways
0
50
miles
NE Surg Ctr
CHS - Moses Taylor
CHS - Regional
GCMC
Lackawanna
CHS - WB General
GWV
GSWB
Luzerne

Taking Diabetes to Heart

Geisinger System



Diabetes & CVD

Leading cause of morbidity & mortality among patients with DM

- 8.0x higher risk of MI
- 6.7x higher risk of CVA

2 of 3 patients will die of CV cause

Gregg EW, et al. *N Engl J Med* 2014; 370:1514-1523.

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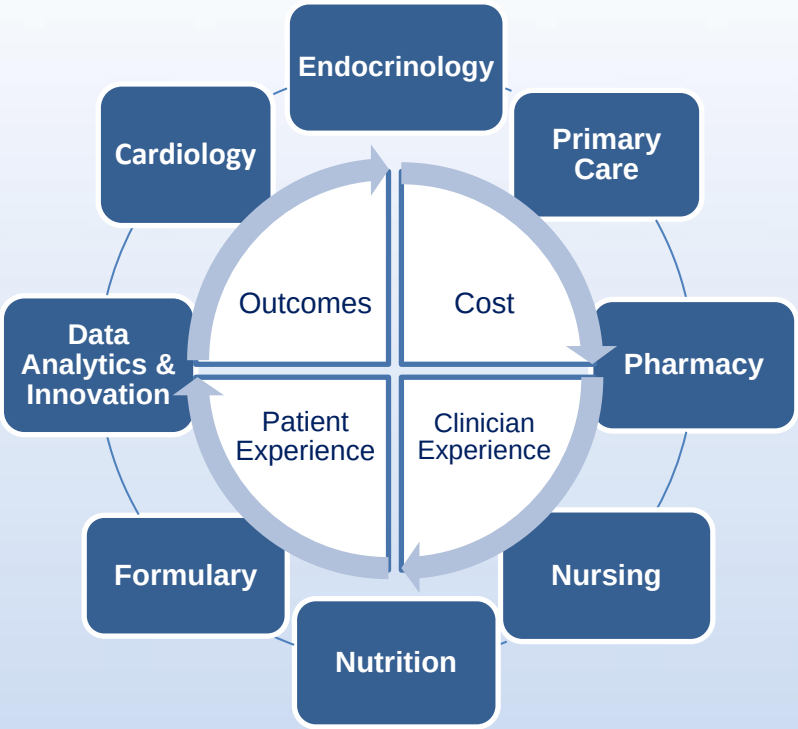
Aligning Stakeholders to Transform Care

Diabetes Care Transformation Committee (DCTC)

Agile framework,
Disease-specific stakeholders &
Common overall goal



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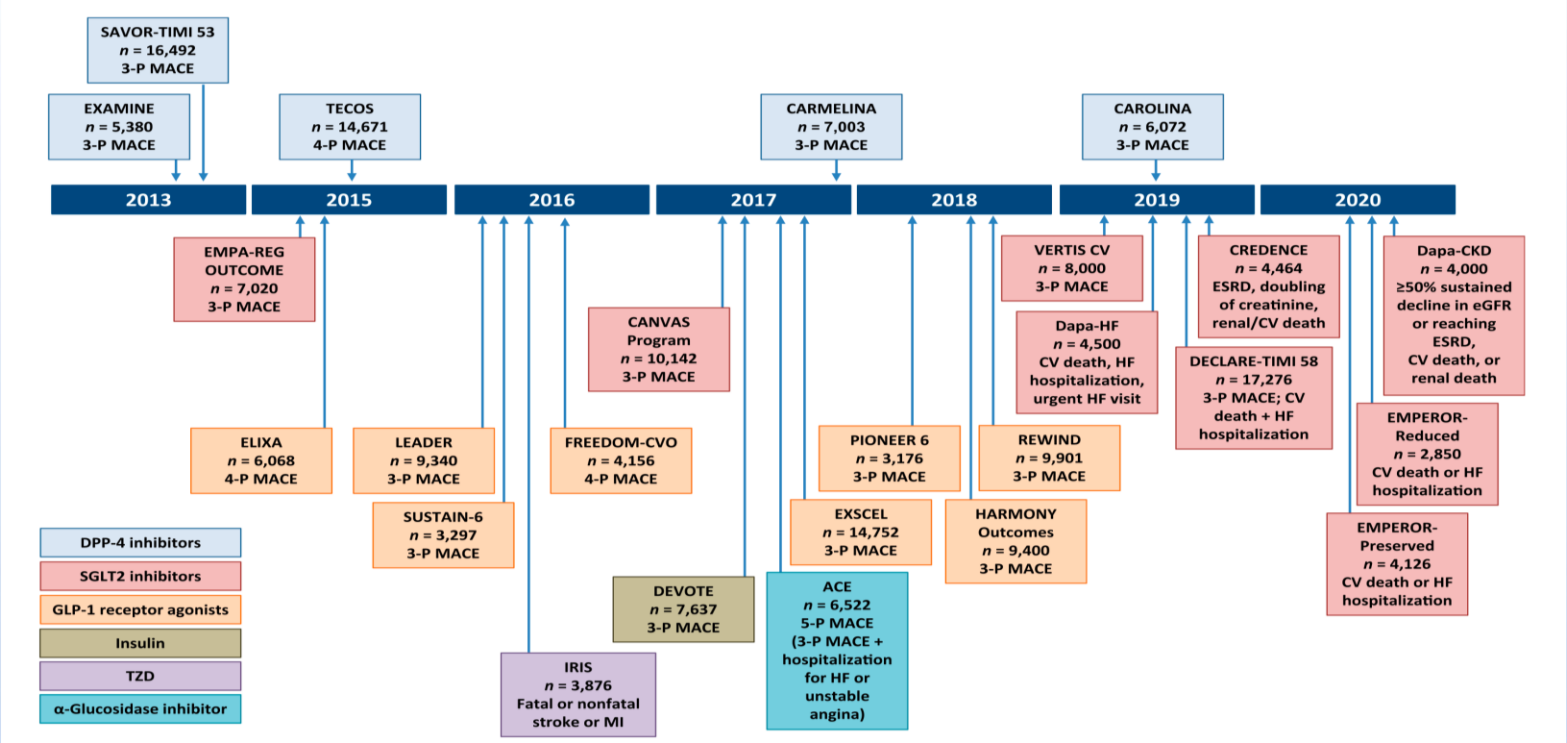
Diabetes CVOTs – The Beginning of a Paradigm Shift



Cefalu WT, et al. *Diabetes Care* 2018; 41(1): 14-31.

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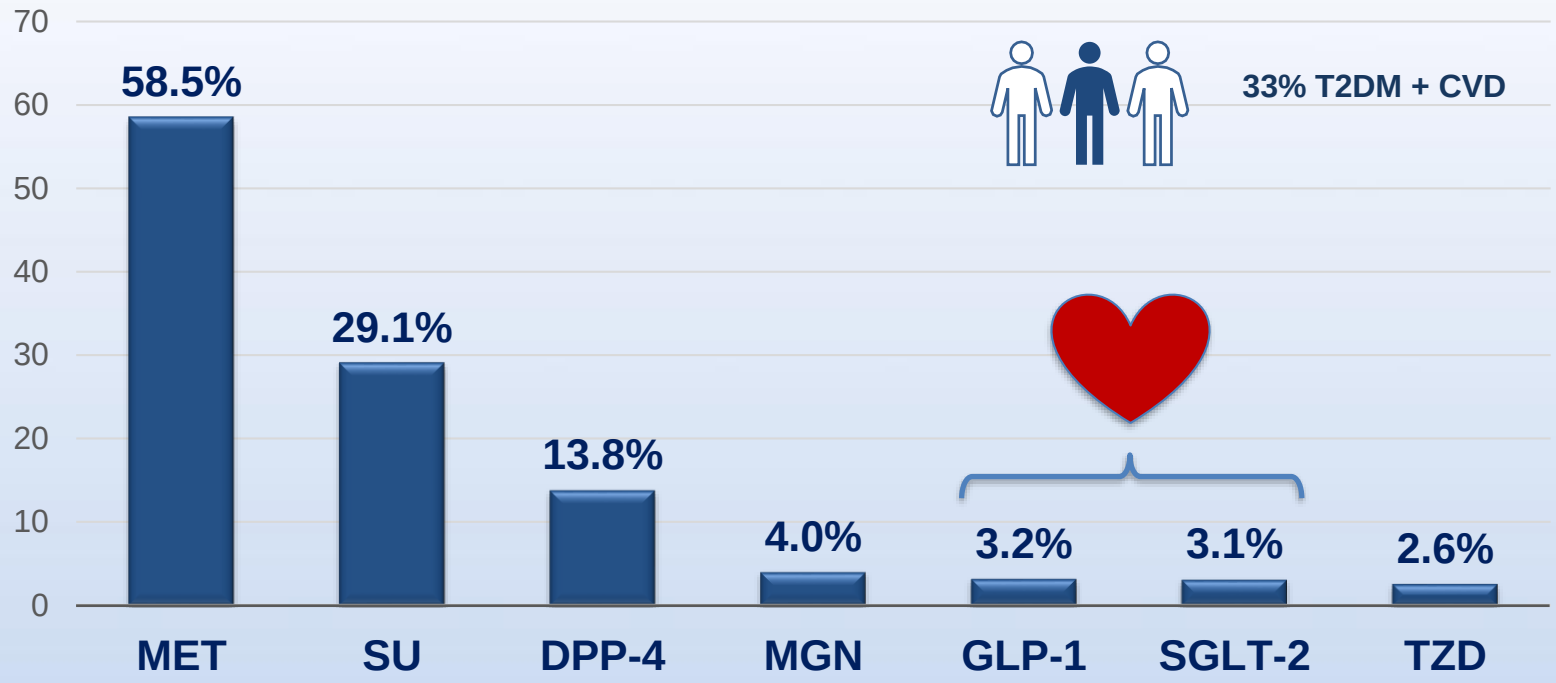
Evaluation of Baseline Prescribing



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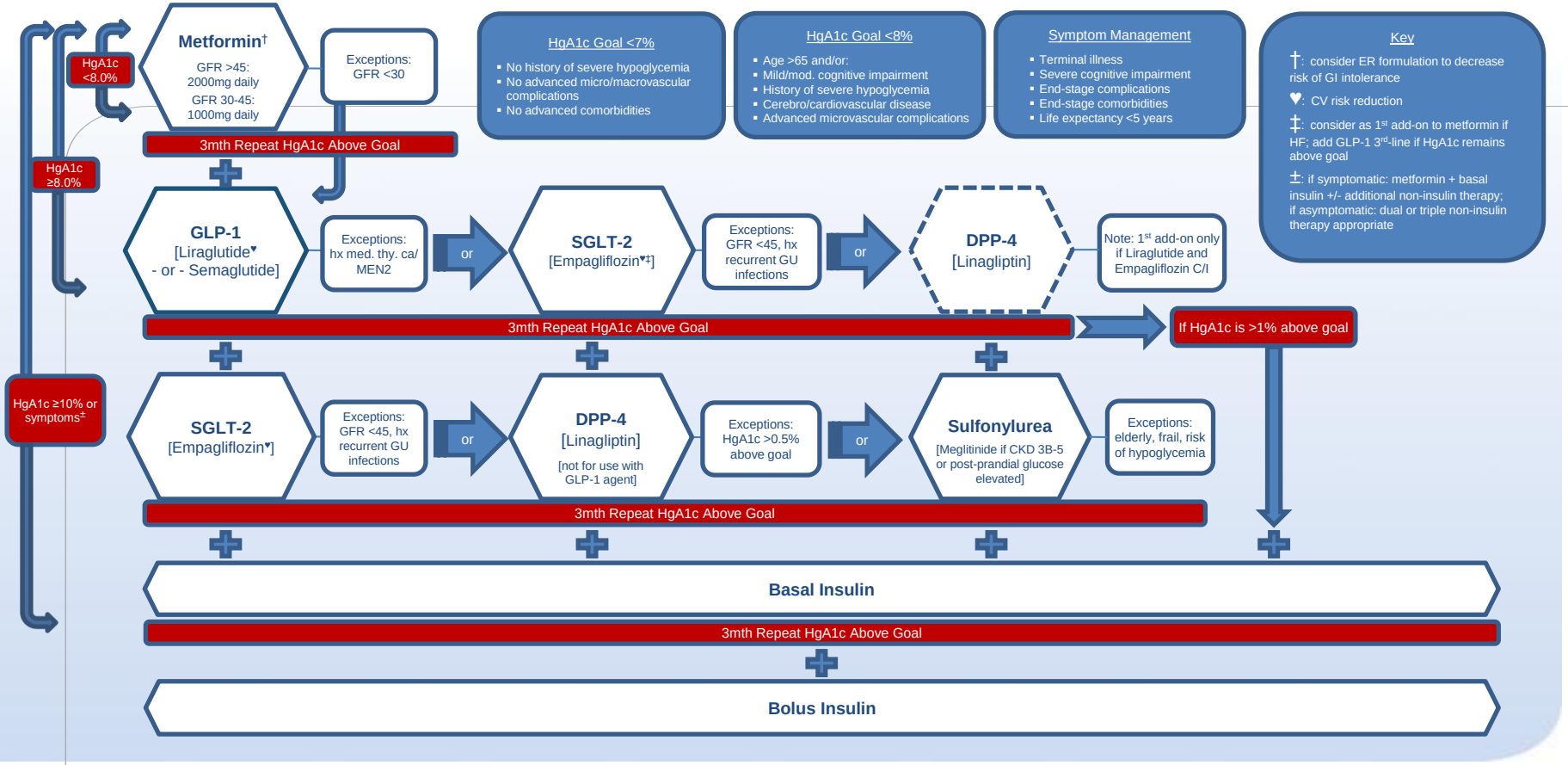

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Updated 2/2019

FIRST-LINE therapy is metformin and comprehensive lifestyle (including weight management and physical activity) if HbA_{1c} above target proceed as below

TO AVOID CLINICAL INERTIA REASSESS AND MODIFY TREATMENT REGULARLY (3-6 MONTHS)

ESTABLISHED ASCVD OR CKD

ASCVD PREDOMINATES

EITHER/OR

- GLP-1 RA with proven CVD benefit[1]
- SGLT2i with proven CVD benefit[1], if eGFR adequate[2]

If HbA_{1c} above target

If further intensification is required or patient is now unable to tolerate GLP-1 RA and/or SGLT2i, choose agents demonstrating CV safety:

- Consider adding the other class (GLP-1 RA or SGLT2i) with proven CVD benefit
- DPP-4i if not on GLP-1 RA
- Basal insulin[4]
- TZD[5]
- SU[6]

HF OR CKD PREDOMINATES

PREFERABLY

SGLT2i with evidence of reducing HF and/or CKD progression in CVOTs if eGFR adequate[3]

OR

If SGLT2i not tolerated or contraindicated or if eGFR less than adequate[2] add GLP-1 RA with proven CVD benefit[1]

If HbA_{1c} above target

- Avoid TZD in the setting of HF

Choose agents demonstrating CV safety:

- Consider adding the other class with proven CVD benefit[1]
- DPP-4i (not saxagliptin) in the setting of HF (if not on GLP-1 RA)
- Basal insulin[4]
- SU[6]

NO

WITHOUT ESTABLISHED ASCVD OR CKD

COMPELLING NEED TO MINIMIZE HYPOGLYCEMIA

DPP-4i	GLP-1 RA	SGLT2i[2]	TZD
If HbA_{1c} above target	If HbA_{1c} above target	If HbA_{1c} above target	If HbA_{1c} above target
SGLT2i[2] **OR** TZD	SGLT2i[2] **OR** TZD	GLP-1 RA **OR** DPP-4i **OR** TZD	SGLT2i[2] **OR** DPP-4i **OR** GLP-1 RA

If HbA_{1c} above target

Continue with addition of other agents as outlined above

If HbA_{1c} above target

Consider the addition of SU[6] **OR** basal insulin:

- Choose later generation SU with lower risk of hypoglycemia
- Consider basal insulin with lower risk of hypoglycemia[7]

COMPELLING NEED TO MINIMIZE WEIGHT GAIN OR PROMOTE WEIGHT LOSS

EITHER/OR

- GLP-1 RA with good efficacy for weight loss[8]
- SGLT2i[2]

If HbA_{1c} above target

- SGLT2i[2]
- GLP-1 RA with good efficacy for weight loss[8]

If HbA_{1c} above target

If triple therapy required or SGLT2i and/or GLP-1 RA not tolerated or contraindicated use regimen with lowest risk of weight gain

PREFERABLY

DPP-4i (if not on GLP-1 RA) based on weight neutrality

COST IS A MAJOR ISSUE[9-10]

SU[6]	TZD[10]
If HbA_{1c} above target	
TZD[10]	SU[6]

If HbA_{1c} above target

- **Insulin therapy** basal insulin with lowest acquisition cost

OR

- Consider DPP-4i **OR** SGLT2i with lowest acquisition cost[10]

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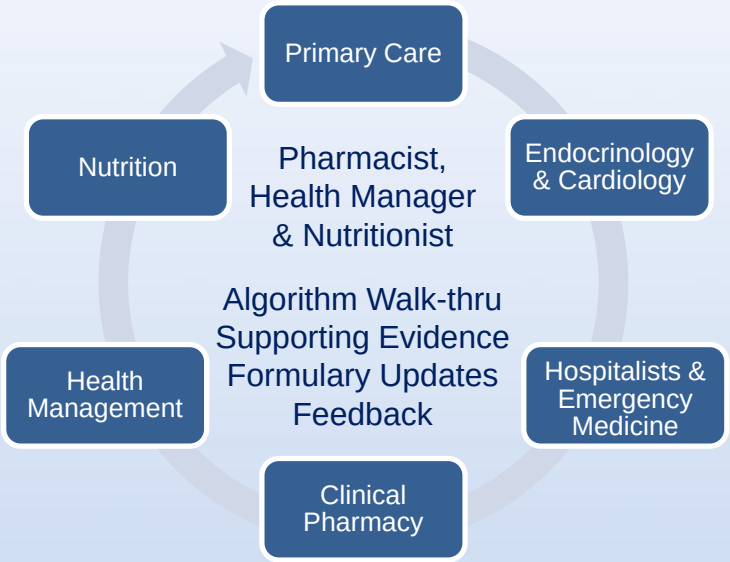
Implementing Our Medication Carepath

Initial Educational Campaign



Longitudinal Decision Support

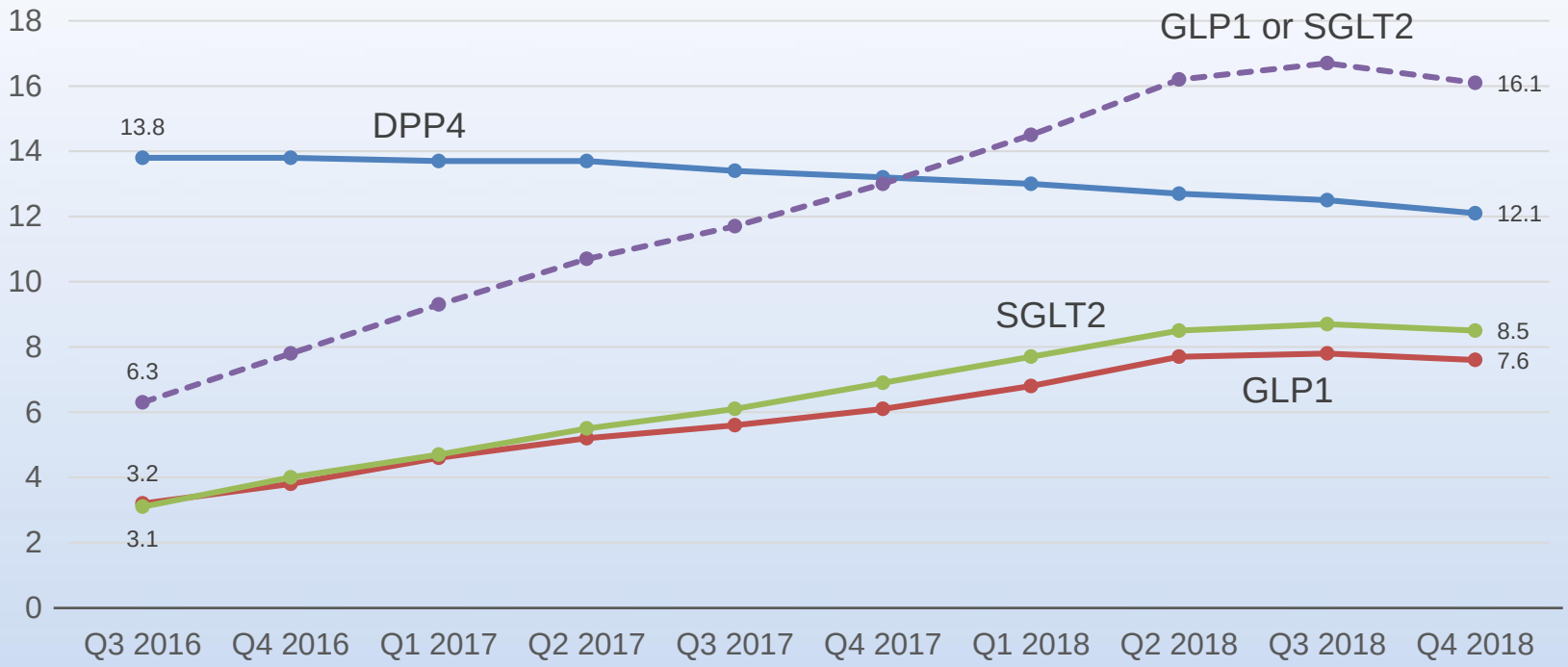
Electronic Health Record (EHR) Tools
- Embedded medication algorithm
- Corresponding order smart set

Virtual Grand Rounds
- Clinical trial & labeling updates
- Practical clinical tips & tricks

Ambulatory Sensitive Conditions Video
- Medication decision-making guidance
- Accessible to providers in EHR

Geisinger

Approaching Our Medication Tipping Point



Geisinger

Deploying Tactics to Combat Clinical Inertia

“Assessment”

A1c Overdue Letters


Geisinger

<Date>

<First & Last name>
<Address>
<City, State, Zip>

Dear <First name> <Last name>,

In review of your medical record, your Hemoglobin A1C (HgA1c) – or 3-month blood sugar average – is overdue and should be retested.

Poorly controlled diabetes can lead to health complications such as heart attack, stroke, kidney disease, and blindness – all of which can be prevented. Updating your HgA1c will help us determine if your diabetes is controlled so we can potentially make medication adjustments to protect you from health complications.

Please contact Laurie, our Health Coordinator, at 1-800-705-0764 option #9, to schedule an appointment for your labs at a date and time of your convenience.

Thank you for choosing Geisinger for your health care needs.

Sincerely,

<Primary Care Provider>

+

Point-of-care A1c

“Intensification”

A1c > 9 Letters


<Date>

<First & Last name>
<Address>
<City, State, Zip>

Dear <First name> <Last name>,

Partnering with your Geisinger health care team to manage your diabetes is an important step in preventing health complications such as heart attack, stroke, kidney disease, and blindness. In review of your medical record, your Hemoglobin A1C – or 3-month blood sugar average – is too high, which means your diabetes is currently not controlled.

While diet and exercise are important steps in managing diabetes, it can still be very difficult to control blood sugars without being on the right medications. Because of this, I am referring you to see a Clinical Pharmacist on my team to help adjust your medications and achieve better control of your diabetes.

Please contact Laurie, our Health Coordinator, at 1-800-705-0764 option #9, to schedule an appointment with the Clinical Pharmacist at a date and time of your convenience.

Thank you for choosing Geisinger for your health care needs.

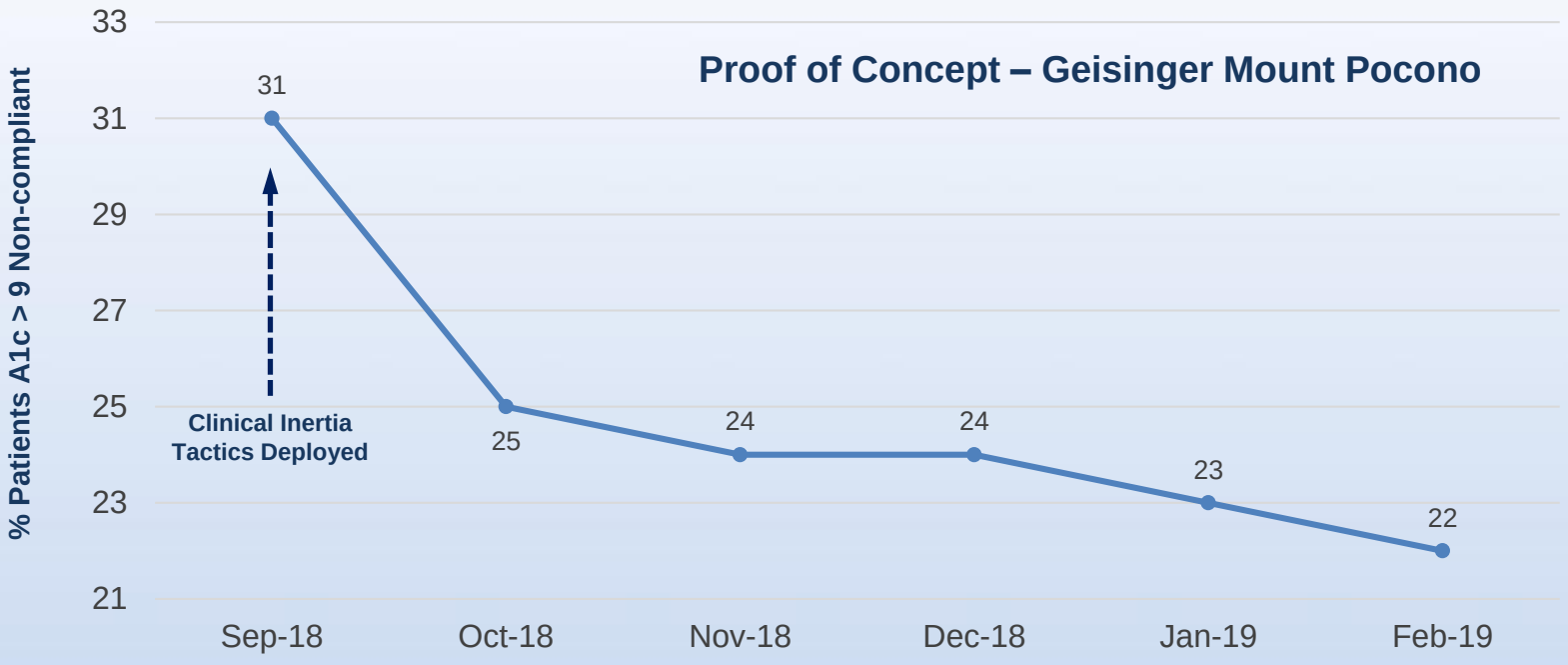
Sincerely,

<Primary Care Provider>

+

Amplified Diabetes Huddle

Impact of Tactics on Glycemic Control



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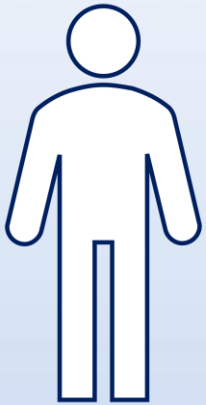
Fresh Food Farmacy™

The Problem

Determinants of Health[1]



- 10% Physical environment
- 20% Health care
- 30% Health behaviors
- 40% Socioeconomic

Food Insecurity & T2DM[2]

HgA1c 6.5–9.0%
1 in 5 are food insecure

HgA1c > 9%
1 in 4 are food insecure

The Solution

"Food as Medicine"

Eligibility

- T2DM
- 18+ years old
- HgA1c > 8%
- Food Insecure

Intervention

- 10 meals provided weekly
- Healthy meal planning support
- Group educational classes
- 360º team-based care

1. Institute for Clinical Systems Improvement. Going Beyond the Clinic Walls: Solving Complex Problems [White Paper]. October 2014.
2. Berkowitz SA, et al. *Diabetes Care*. 2013;36:3093-3099

Geisinger

Fresh Food Farmacy™

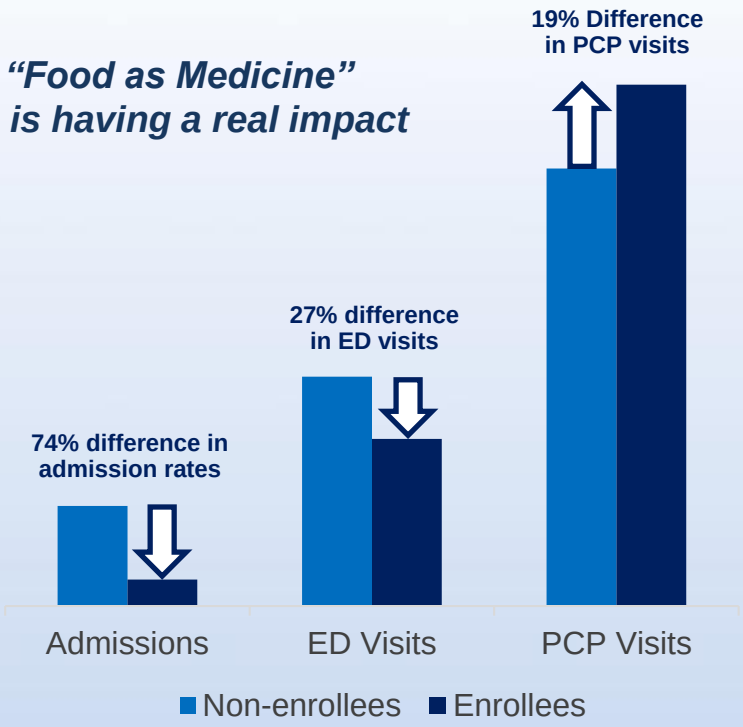
Fresh Food Farmacy™ Geisinger

July 2016
Pilot program initiated in Shamokin

March 2017
Full program expansion to serve 250+ patients & their families

September 2018
Additional locations opening in Scranton and Lewistown

"Food as Medicine" is having a real impact



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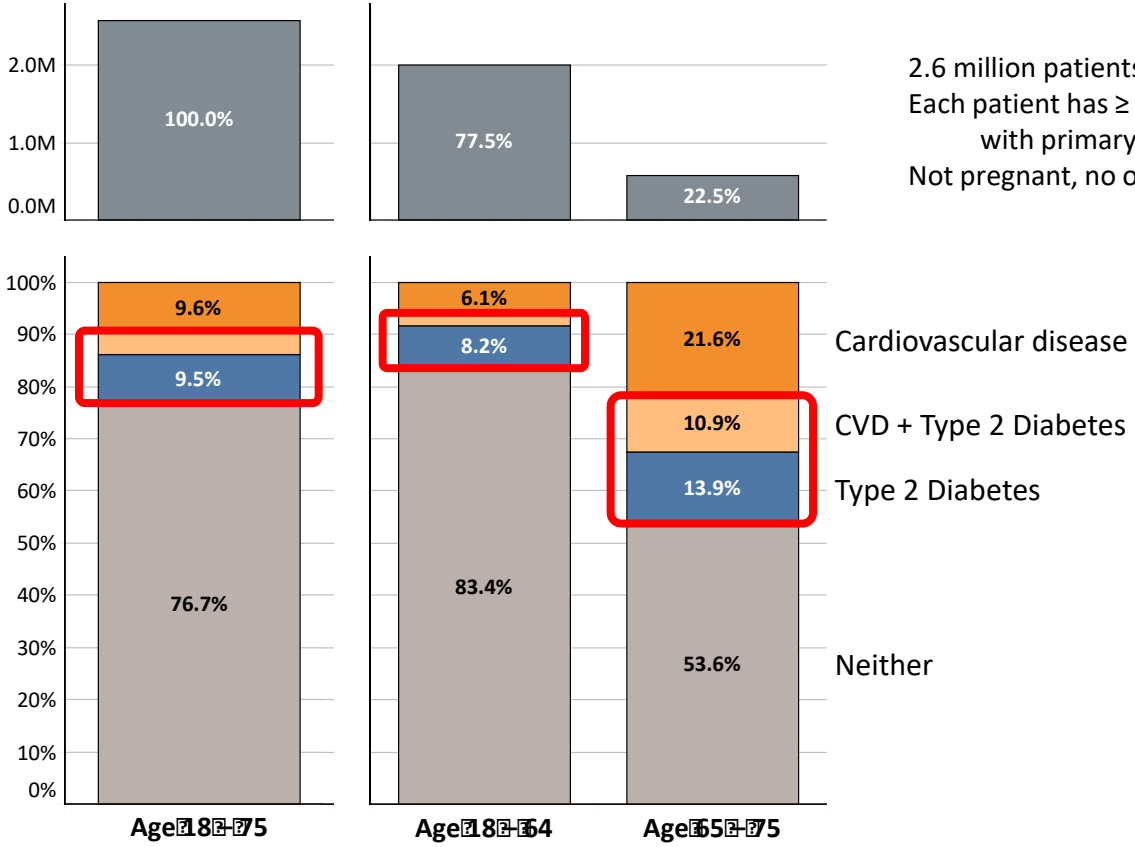
Caring

Geisinger

T2G Patients with Type 2 Diabetes and CVD, by Age

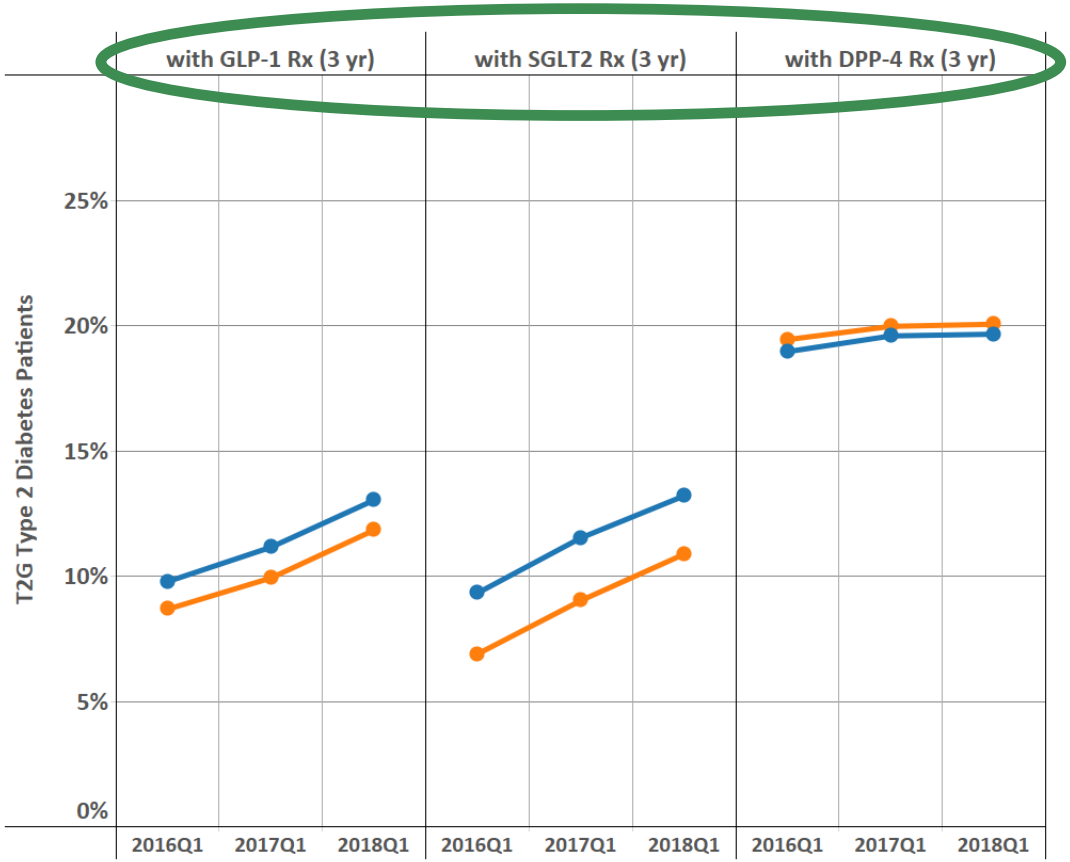


2.6 million patients, across 20 AMGA members participating in T2G
Each patient has ≥ 2 ambulatory E&M visits over the past 18 months with primary care, endocrinology, cardiology, or nephrology
Not pregnant, no other T2G exclusions

CVD for T2G – HEDIS Value Sets (diagnoses, events, or procedures):

- Ischemic vascular disease
- Myocardial infarction
- Coronary artery bypass graft
- Percutaneous coronary intervention
- Other revascularization procedure

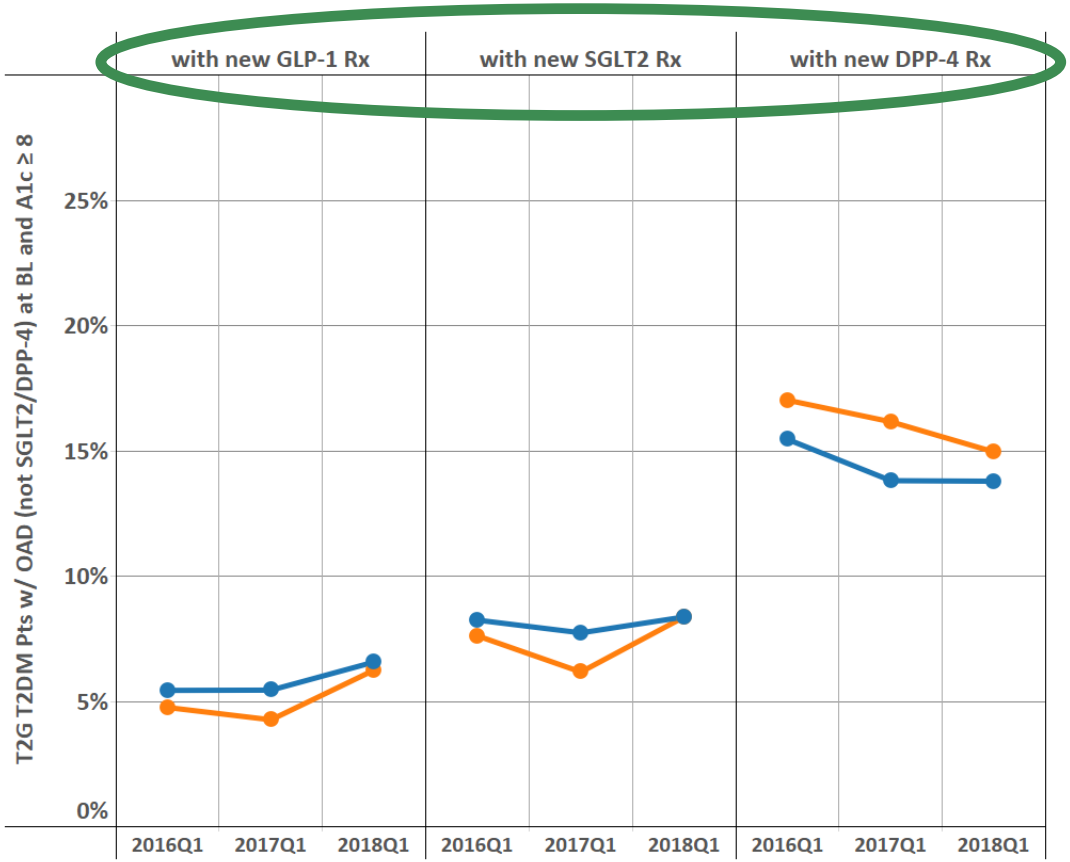
Proportion of patients with Rx for GLP-1 RA, SGLT2i, or DPP-4i in past 3 years of Together 2 Goal® campaign, by CVD status



- 310,000–350,000 patients with type 2 diabetes, aged 18–75, across 20 AMGA members using Optum population health analytics
- Prevalence of CVD among these patients, 29–31%

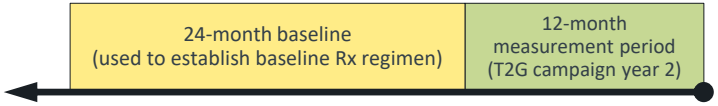
	2016Q1	2017Q1	2018Q1
No CVD	219,937	227,611	242,008
CVD	90,842	99,123	110,142

Proportion of patients with new Rx for GLP-1 RA, SGLT2i, or DPP-4i in Together 2 Goal® campaign year, by CVD status



Patients aged 18–75 on ≥ 1 oral DM medication at baseline (excluding SGLT2i and/or DPP-4i)

and A1c ≥ 8.0



End of Data
3/31/2018

	2016Q1	2017Q1	2018Q1
No CVD	15,741	15,879	16,408
CVD	3,967	4,094	4,378

Q & A

Agenda

- **Prediabetes** – Colangelo
- **Screening for Diabetes** – Cuddeback
- **CVD Risk in People with Type 2 Diabetes**
  - Brady
  - Cuddeback
- **Q&A**