



Taking a Systematic Approach to Supporting Behavior Change in Diabetic Patients

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DISCLAIMER

- This webinar is sponsored by, and on behalf of Abbott.
- The information presented is based on the speaker's own clinical experience.

UNCONTROLLED DIABETES IS WIDESPREAD

In the US, the diabetes epidemic has reached new heights:

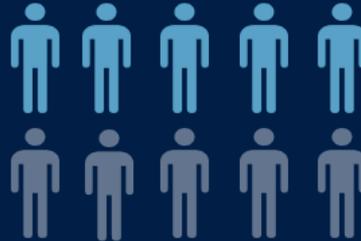
~50%

Of Type 2 patients have poor glycemic control (A1C>8)¹



~30%

Patients with Type 2 diabetes experience hypoglycemia²



Costs related to severe hypoglycemia

\$17,540

per inpatient stay for patients with Type 2 diabetes⁴



Single emergency service²

\$1,387

A1C & Costs

Patients with **lower A1C** have **lower diabetes-related inpatient costs**.³

Diabetes-related inpatient stays (\$)



¹ Harris ML, Eastman RC, Cowie CC, Flegal KM, Eberhardt MS. Racial and ethnic differences in glycemic control of adults with type 2 diabetes. *Diabetes Care*. 1999;22(3):493-8.

² Williams SA, et al. *J Diabetes Complications*. 2012;26(5):399-406.

³ Menzies J, et al. *J Manag Care Pharm*. 2010;16(4):284-295.

⁴ Quilliam BJ, et al. *Am J Manag Care*. 2011;17(10):673-80.

⁵ Chung J, et al. *Diabetes Technol Ther*. 2013;17(Suppl 1):Poster A196.

DIABETES MANAGEMENT IS COMPLEX & LARGELY RELIANT ON SELF-MOTIVATION

Self Management

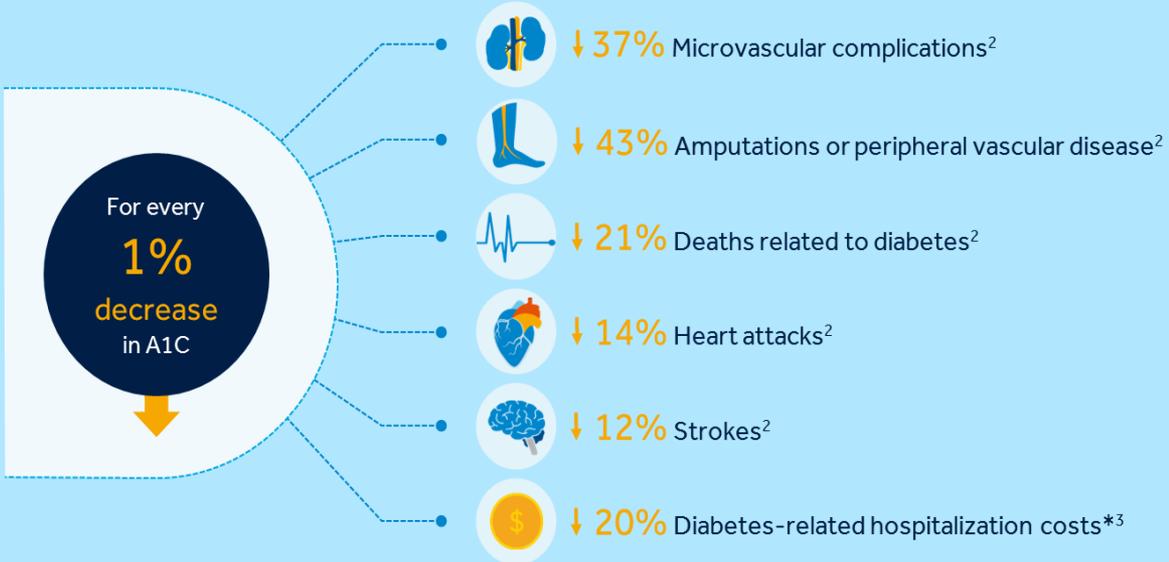
>95 % of diabetes care comes from patients themselves⁴



- HEALTHY EATING
- BE ACTIVE
- MONITOR
- TAKE MEDICATION
- PROBLEM SOLVE
- REDUCE RISK
- COPE WELL
- OUT OF POCKET

A1C Target

is recognized by the ADA as a primary goal for diabetes management¹



*Data are from a separate study³ in which the impact of glycemic control on healthcare costs was investigated in a retrospective study of 9,887 patients with diabetes in the U.S. A1C = glycosylated hemoglobin; ADA = American Diabetes Association.
¹ADA, Diabetes Care, 2016;39(Suppl 1):S89-S16.
²Stratton IM, et al. BMJ, 2000;321(7253):405-12.

EXPANDING THE MEANING OF HEALTH AND HEALTHCARE



TREATING DIABETES CALLS FOR A HOLISTIC PROGRAM EXTENDING BEYOND INSTITUTIONAL WALLS



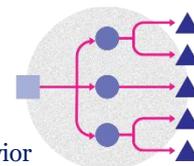
Clinical Workflow Integration

- Scale Existing Care Teams
- Reduction of Workflow Steps
- Reduce EMR Clicks

Improve Outcomes

Clinical Decision Support

- Gap in Care Exposure, Closure
- Tie Priorities to Clinical Workflows
- Guideline Based Treatment Plans
- Deeper Understanding of Clinical Behavior



Improve Physician Satisfaction

Lower Costs



Risk Stratification Analytics

- Focus on Highest Risk Patients
- Measure Quality Improvements
- Prepare for Value Based Care
- Identify HCC Opportunities

Better Patient Experience

Remote Patient Monitoring

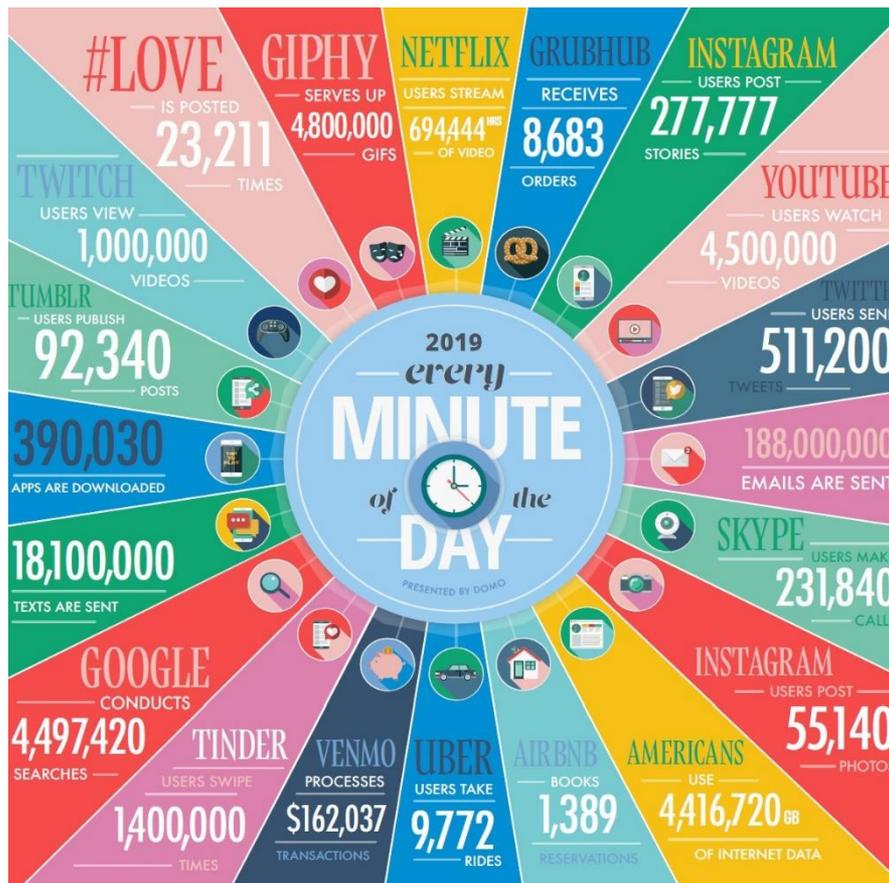
- Virtualize Clinical Experience
- Drive Improved Adherence
- Enable RPM Reimbursements



THE DATA PROBLEM



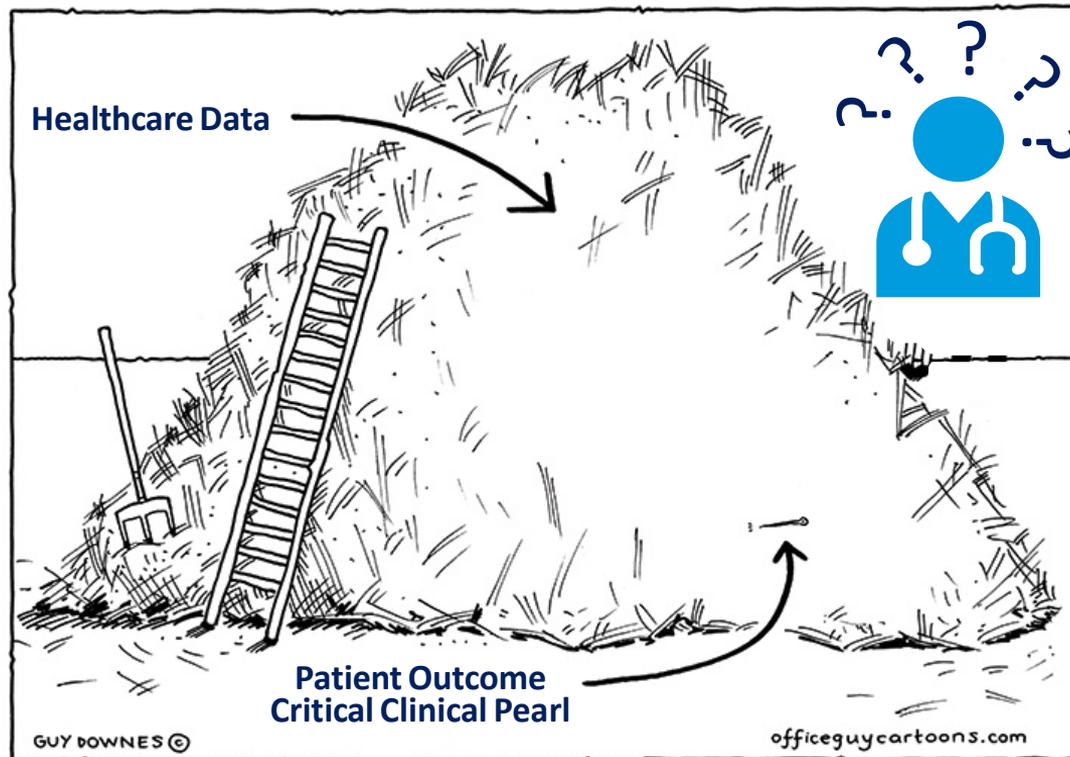
Clinical Workflow
Integration



THE RIGHT INFORMATION AT THE RIGHT TIME



Clinical Workflow
Integration



MEETING THE CLINICIAN AT THE POINT OF CARE IS VITAL



Clinical Workflow
Integration

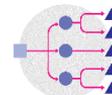
Mr. Jake Boxer
Edit Patient Info Edit Health Data Diabetes View

Patient Information	Patient Status	Screenings	Medications	ASCVD Score
Full Name Mr. Jake Boxer	Diagnoses Hypertension Diabetes, Type 2 Hyperlipidemia Hypertriglyceridemia	Creatinine 1.0 mg/dL 06/12/19	Anti-Diabetics INVOKANA (Oral Pill) 100 mg	9.7%
Date of Birth 01/01/1964 (55y)	Smoking Status Former smoker	Foot Exam Normal 06/12/19	Statin Atorvastatin (Oral Pill) 40 mg	BP: 140/90 08/12/19
Gender Male	Allergies Acetaminophen, Aspirin	Urine Microalbumin Microalbuminuria 06/12/19	ACE-I/ARB None	Total Chol: 240 mg/dL 06/20/19
Ethnicity White		Flu Vaccine Completed 12/17/18	Aspirin None	HDL: 83 mg/dL 06/20/19
Patient ID MRN1288		Eye Exam Normal 06/12/19		LDL: 125 mg/dL 06/12/19
				A1C: 9.8% 06/12/19
				BMI: 29.0 07/29/19

Logbook TABLE GRAPH CGM

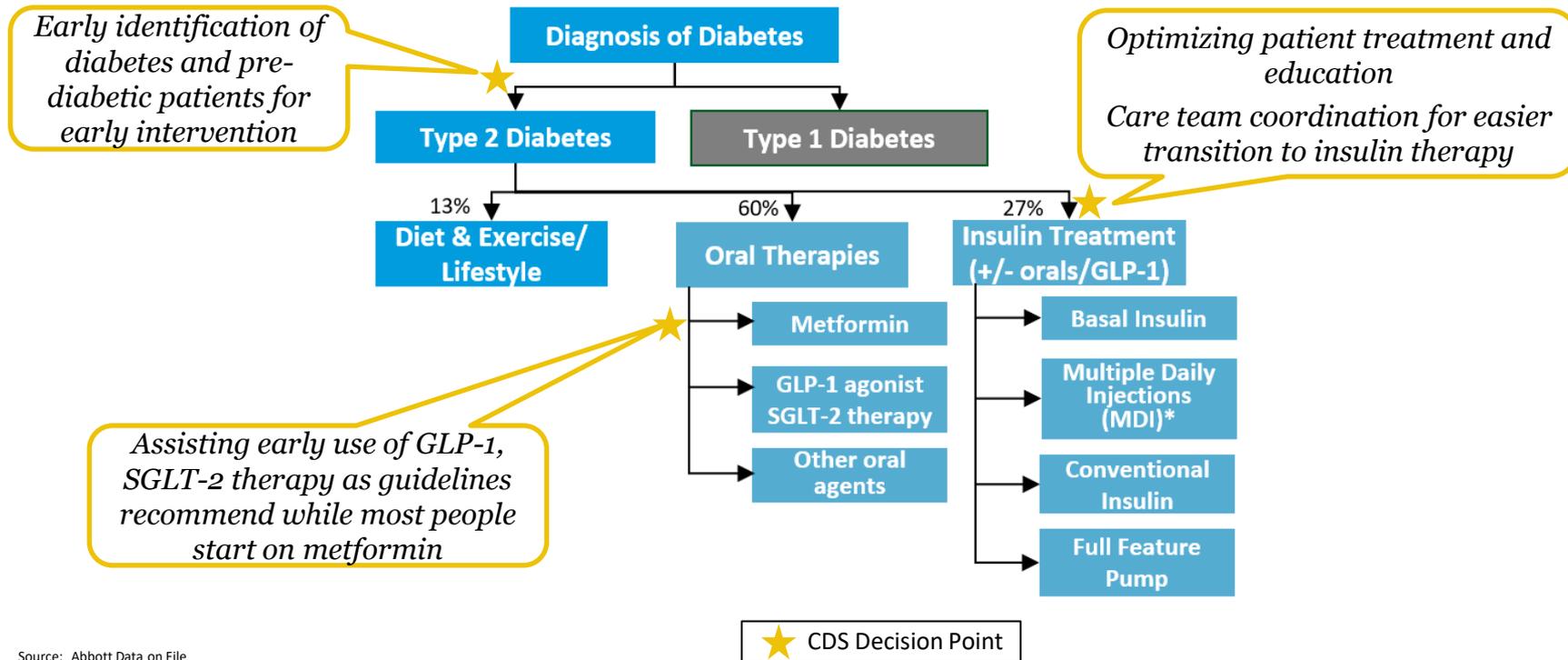
ADD ENTRY MESSAGE PATIENT

IMPACTFUL YET SIMPLE CLINICAL DECISION SUPPORT INTERVENTIONS



Clinical Decision Support

Current Treatment Paradigm



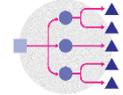
Source: Abbott Data on File

Proprietary and confidential — do not distribute

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SMALL CDS RULE, SIGNIFICANT IMPACT – 500 BED HOSPITAL



Clinical Decision Support

Assumptions	Values	Comments
Number of Type 2 Diabetes Patients X	21,000,000	• Total US prevalence of Type 2 diabetes ~ 21MM
% of Patients Treated with Insulin ~	27%	• Patients treated with insulin ~5.7MM
T2D Insulin Patients at 500-bed hospital X	3100	• Total US beds ~930,000 • 500-bed hospital approximately handles ~3100 type II diabetes patients on insulin therapies
% Reduction in Progression (Due to CDS) X	5%	• The number of patients treated with insulin who could have stayed on pharmacological management with a CDS support
Cost Differential between Pharmacological vs Insulin Management =	\$9,000	• Average annual cost of management ~\$17,000 (insulin-dependent) and ~\$8,000 (pre-insulin) • Quality of life improved and risk of co-morbidities lowered for pharmacological treatment
Total Annual Savings	\$1,400,000	• Estimated Annual Cost Savings

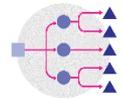
Source: Abbott Data on File

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DECISION SUPPORT CARDS CONFIGURED TO CLINICAL NEEDS



Clinical Decision Support

Mr. Jake Boxer
 Edit Patient Info Edit Health Data Diabetes View

Patient Information	Patient Status	Screenings
Full Name Mr. Jake Boxer	Diagnoses Hypertriglyceridemia Hyperlipidemia Diabetes, Type 2 Hypertension	Foot Exam Normal 06/12/19
Date of Birth 01/01/1964 (55y)	Smoking Status Former smoker	Creatinine 1.0 mg/dL 06/12/19
Gender Male	Allergies Acetaminophen, Aspirin	Eye Exam Normal 06/12/19
Ethnicity White		Flu Vaccine Completed 12/17/18
Patient ID MRN1288		Urine Microalbumin Microalbuminuria 06/12/19

LOGBOOK HOME BP MEDICATIONS MODELING LABS & VITALS TA

Logbook TABLE GRAPH CGM

Date	Breakfast			Lunch	
	Early 3am	before	after	before	after

Cards



Optimizing CV Outcomes in Adult Patients with Type 2 Diabetes

Both the [American College of Cardiology Expert Consensus Decision Pathway](#) and the [American Diabetes Association Standards of Care](#) are now recommending that comprehensive CV care in adults with established CV disease and Type 2 Diabetes should include treatment that has been proven to reduce the risk of fatal CV events.

This patient meets the following criteria:

1. Type 2 Diabetes
2. Atherosclerotic Cardiovascular Disease (ASCVD)
3. Adult

Please indicate your next step for this patient:

Prescribe: Will prescribe according to guideline recommendation

Later: Will review later

No Action: No Action required

PRESCRIBE

LATER

NO ACTION

AUTOMATED, CONFIGURABLE RISK STRATIFICATION COHORTS AT-A-GLANCE



My Patients

HIGH RISK 15
MEDIUM RISK 13
LOW RISK 0
ALL 28

All Patients

Patient Name ^	Patient ID	Date of Birth (Age)	Wellbeing Score	A1c	Alerts	My Patients
Abernathy, Aaron	MRN1031	1963-01-01 (56y)	65	7.8	1	★
Boucher, Eliseo	MRN1166 <small>(iGlucose #5079081) (Bodytrace Scale #864507033671347)</small>	1946-01-01 (73y)	60	8.0		★
Boxer, Jake	MRN1288 <small>(Bodytrace Scale #864507037519419)</small>	1964-01-01 (55y)	50	9.8	●	★
Bryan, Tony	MRN1067	1939-01-01 (80y)	52	7.9	●	★
Burgos, Pasquale	MRN1284 <small>(Bodytrace Scale #864507037600029)</small>	1943-01-01 (76y)	51	7		★
Casillas, Joan	MRN1286 <small>(Bodytrace Scale #864507037556742)</small>	1953-01-01 (66y)	64	7		★

Guide
HIDE

1. Click on the patient's name or photo to view their details.
2. Patient Alerts
 - **Hypoglycemic Alert:** indicates number of hypoglycemic measures within last 7 days. Threshold for alert is set by HCP on patient's Target screen.
 - **Hyperglycemic Alert:** indicates number of blood glucose measures above 250 mg/dL within last 7 days.
 - **Heart Failure:** indicates weight gain of 2 or more pounds in 1 day OR 3 or more pounds in one week.
3. You can add or remove any patient to your list by finding them in All Patients. Click the ★ to add or remove the patient from your My Patients list.
4. You can add any patient to your list by finding them in All Patients.

IMPROVE THE OVERALL HEALTH OF THE POPULATION, BUT TREAT THE INDIVIDUAL



Targets

Glucose Targets (mg/dL)

Pre-meal Glucose

Low 80

High 130

Post-meal Glucose

Low 80

High 180

Hypoglycemic

50

A1C

7.0

Weight Targets

BMI 24.9

Weight (lb) 170

Nutrition & Exercise Targets

Exercise (min/wk)

150

Sodium Allowance (mg)

2300

Blood Pressure Targets

Systolic

140

Diastolic

90

Cholesterol Targets

LDL

100

HDL

50

Triglycerides

150

UPDATE TARGETS

Quick Fill

Guideline Goals

- ADA
- AACE
- ACOG

AGS Goals [What's this?](#)

- Healthy
- Complex
- Very Complex

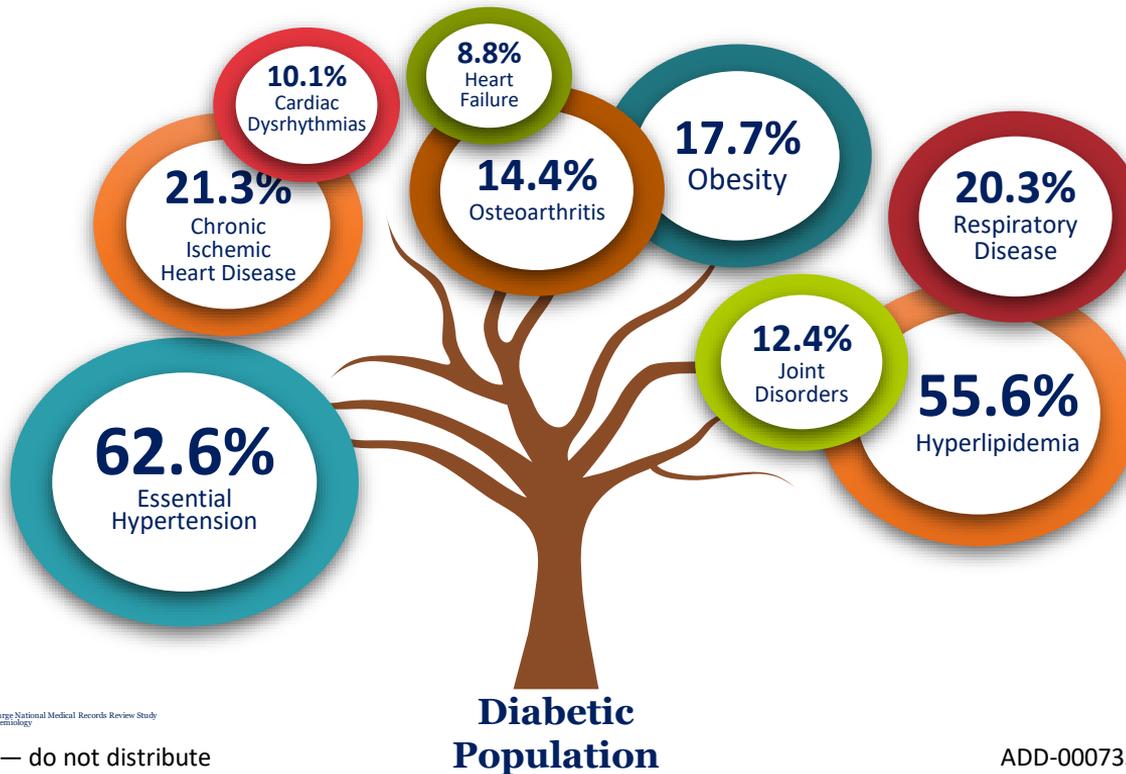
Use one of these options to pre-fill values according to your chosen guidelines.

REMOTE PATIENT MONITORING (RPM) IN THE TIME OF COVID REQUIREMENTS



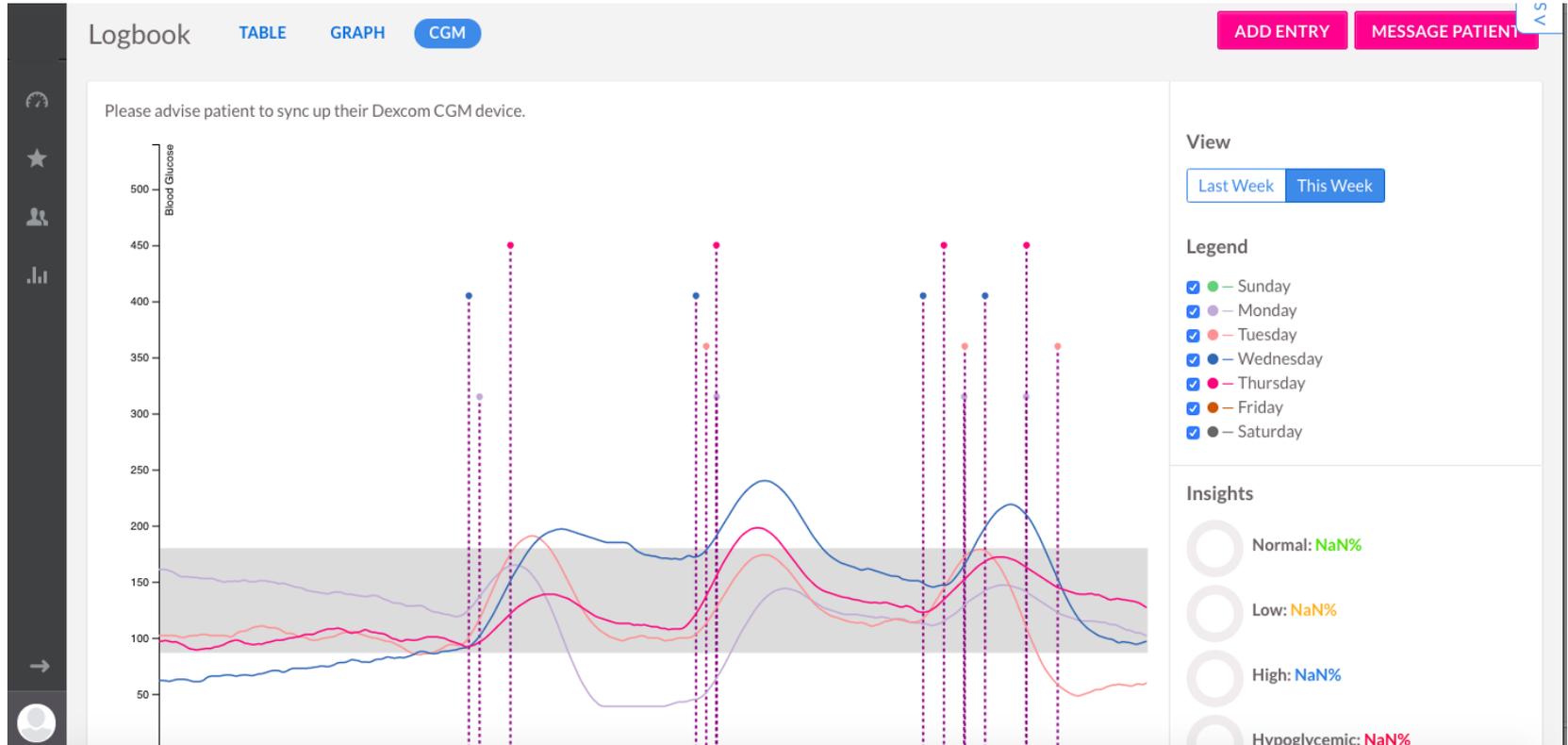
- **Supports Multiple Disease States and Use-Cases**
- **Integrates Data from EMR and Variety of Connected Devices**
- **EMR Embeds Clinical Decision Support**
- **Synchronous and Asynchronous Population Communication**
- **Provide Self Management Education to Deliver Best Practices to Patients**

THE HYDRA OF CHRONIC DISEASE – THE NEED FOR A COMPREHENSIVE SOLUTION



Recent Top 14 Comorbid Conditions among Patients with Type 2 Diabetes Mellitus (a Large National Medical Records Review Study)
PETER SHIN, SUJING WANG, SCOTT J. MCGOVERN, 979-P Indianapolis, IN, Austin, TX, Epidemiology
66th Scientific Sessions (2006), Epidemiology

BRIDGING THE LAST DATA MILE



FAST, MEANINGFUL AND SECURE DIRECT PATIENT INTERACTION EMR INTEGRATED



1708-01-01 (307)

Patient ID
MRN1031

Gender
Male

Ethnicity
White

Last Creatinine
Nov 21, 2018 1.4

Last Eye
Nov 16, 2018 Normal

Last Urine
Nov 21, 2018 Micro
=====

Allergies
None

Statin
Pravastatin
(Oral Pill)

ACE-I/ARB
Hydrochloro
(Oral Pill)

Aspirin
BAYER
ASPIRIN (Or
Pill)

LOGBOOK MEDICATIONS MODELING LABS & VITALS TARGETS CARE

Logbook **TABLE** GRAPH CGM

Date	Early	Breakfast			Lunch	
	3am	before	after	between	before	after
2019-02-06	●	●	●	●	●	●
2019-02-05	●	●	●	●	●	●

Message Patient

Improve patient outcomes by regularly encouraging progress.

Select one or more messages to send.

★ Logbook

Your logbook is looking great. Keep it up.

💧 Glucose

Please log your glucose data.

🚴 Exercise

Great job exercising this week!

📏 Weight Control

Your weight is improving. Well done.

⚡ Stress

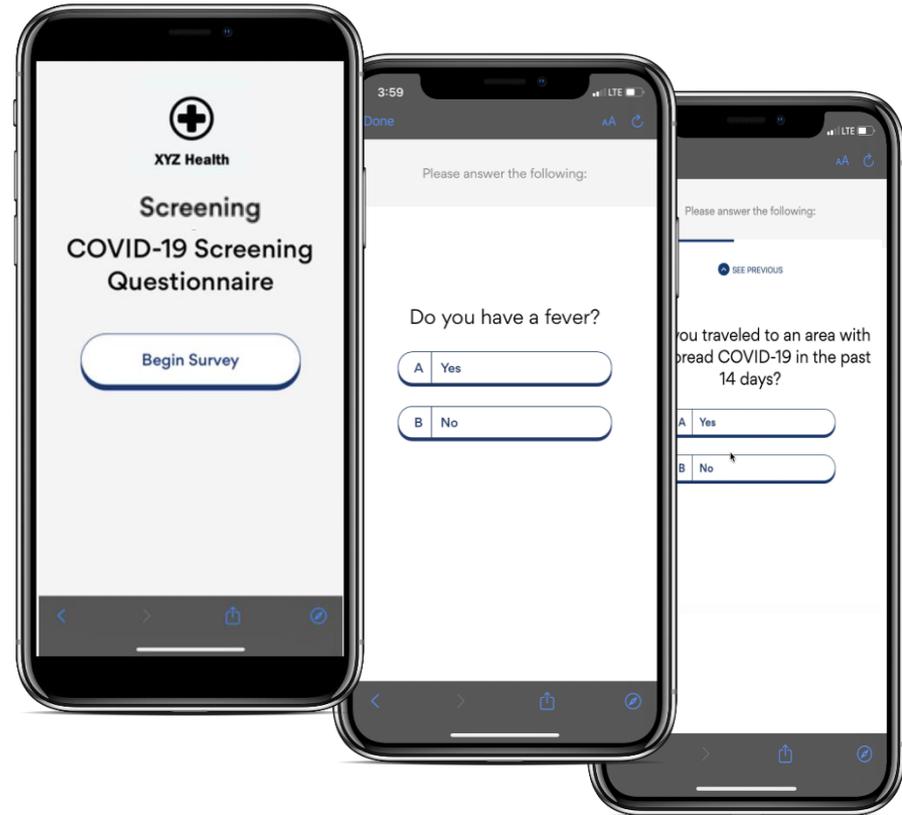
Sorry you're stressed. Let me know if I can help.

💬 Custom Message

SEND MESSAGE

POPULATION COMMUNICATION AND SURVEILLANCE

Direct communication is key to engagement in a population health strategy



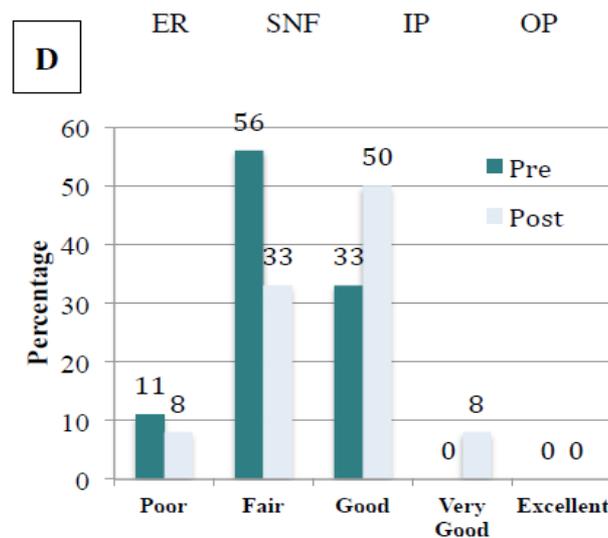
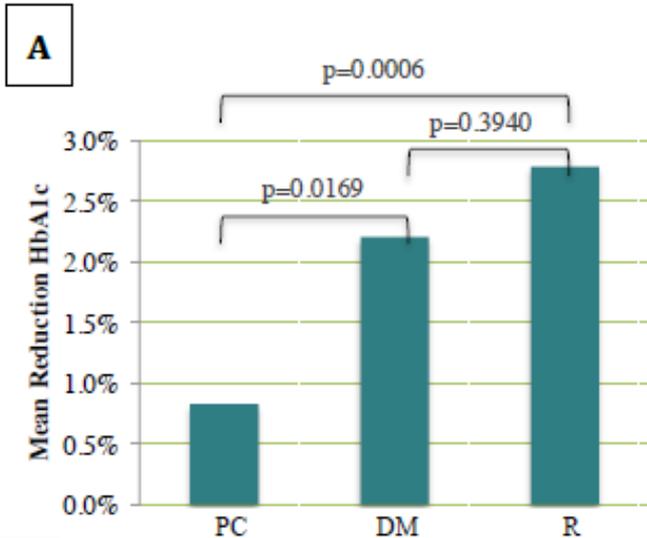
PUSH SELF MANAGEMENT EDUCATION



DIABETIC AND COVID REAL WORLD IMPACT

Diabetic Interventions

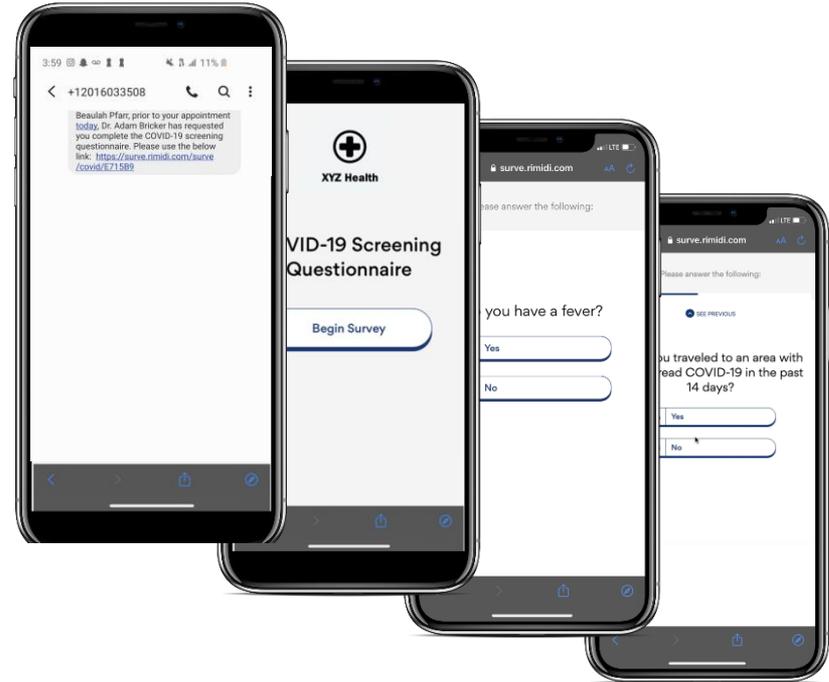
- **18,000+ Patients** successfully monitored by 250 physicians
- Implementation of the program achieved **significant reduction (2.8%) in HbA1c** in a short (12-week) period of time and lower total medical utilization.
- **Cost savings of \$12,700** were realized in the Program group compared to DM, representing fewer emergency room visits and skilled nursing facility stays.



REMOTE PATIENT MONITORING IN A COVID WORLD

COVID Pandemic Surveillance

- Results of Initial Survey
 - >10,000 responses in first days of implementation
 - 17% people with respiratory symptoms and symptomatic
 - 1 with known exposure
 - 54% with chronic conditions (DM, CVD, pulmonary dz)
 - 13% immunocompromised
 - 50% over 65 years old
 - 13% identified as candidates for testing and contacted
- Follow Up Survey Example
 - New or worsening symptoms: 8.8%
 - Difficulty accessing food: 7.5%
 - Suffering Anxiety, depression or loneliness: 22.6%
 - Desire a phone call: 18.5%





Abbott