

Design and Interest in Virtual Diabetic Education from Patients and Providers

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Background

- American Diabetes Association (ADA) recommends providing diabetic patients with self-management education
- Less than half of diabetic patients receive formal self-management education
- Barriers include
 - Clinicians infrequently refer patients
 - Inadequate numbers of certified diabetic educators
 - Time intensive
 - Transportation barriers
 - Prohibitive copayments or a not covered benefit

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For Patients: Diabetes class and program registration

How to register for diabetes education

The following forms and information are required for all programs except the Pre-diabetes Program. If you have questions, contact the Inova Diabetes Center location where you will be receiving services.

Steps to register for classes

Cómo registrarse para el programa de educación en diabetes

1. Ask your physician to complete an order form.

Print a [physician order form](#)  for diabetes education to take to your doctor. Inova Diabetes Center requires an order form from your doctor to provide services.

2. Choose a location.

Find the location for the class or program that interests you and call to reserve a spot.

3. Check with your insurance company about coverage.

Some insurance companies also require pre-authorization to cover our services.

What can I do?

 [Call 1-877-511-4625](#)

 [Download patient forms](#)

 [Try our free diabetes risk assessment](#)

Coverage May Not Be Known Until After the Fact...

Insurance Coverage for Diabetes Education

Fees for Inova Diabetes Center programs are set individually. Many insurance plans cover diabetes education, but it is important you confirm coverage in advance with your insurance company. Call your plan's customer service number and ask if diabetes self-management training is covered.

For most group classes or individual consultations, we bill your insurance company directly. Co-payments, if applicable, are due at the time of your visit. The Preventing Diabetes Program is a self-pay program you pay for at the time of registration.

[Download an order form for diabetes education](#)  to take to your physician.

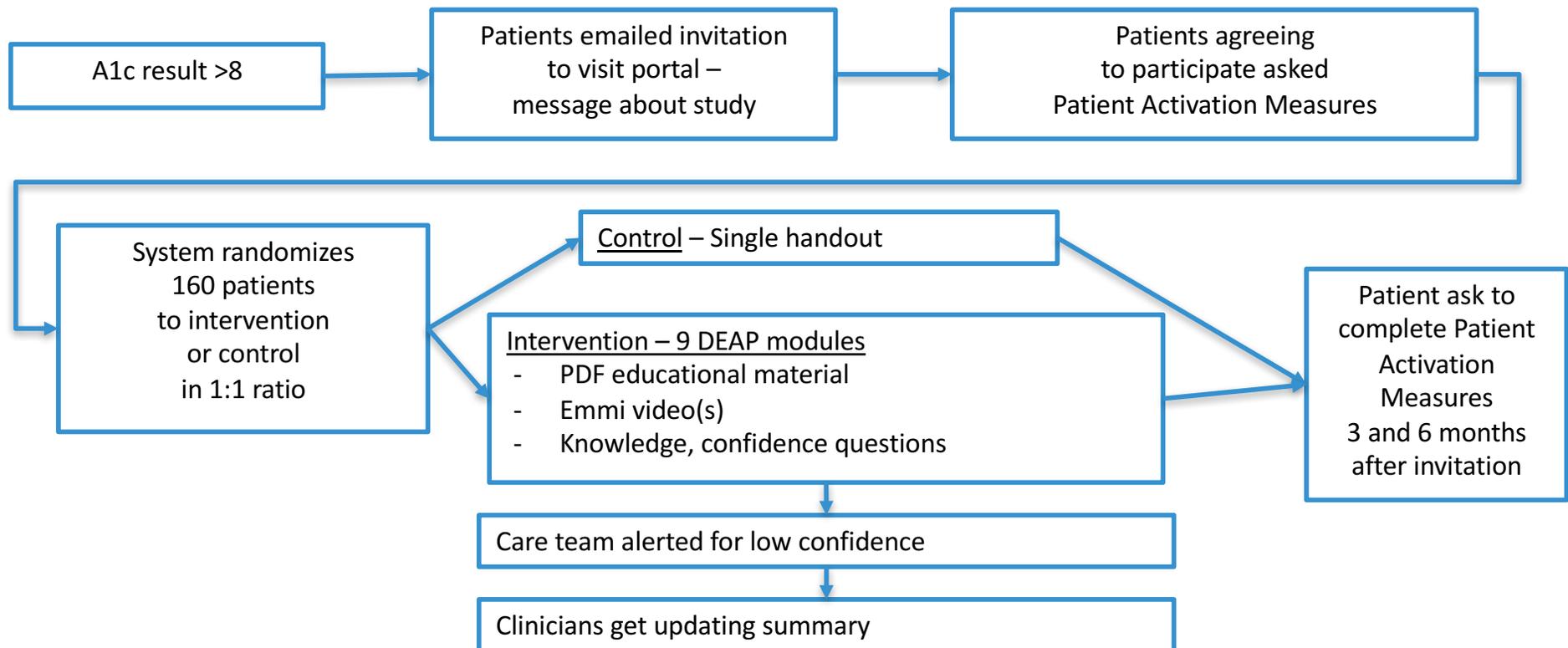
Objective

- To better help patients with uncontrolled diabetes, we sought to test the use and impact of a novel patient educational tool integrated into primary care workflow called the Diabetes Engagement and Activation Platform (DEAP)
- Key innovations include:
 - Utilizes existing infrastructure – portals and care teams
 - Proactive and automated
 - More accessible
 - Patients identify and direct needs

Overall Study Design

- Patient-level randomized controlled trial
- All patients with HgbA1 > 8.0 (goal 160 patients)
- Initially include 9 primary care offices (183 clinicians) in Virginia from Privia Medical Group
 - After go live added 13 primary care and 2 endocrinology offices (additional 111 clinicians), in VA, GA, MD
- Outcomes include use of DEAP, knowledge, confidence, patient activation*, and disease control (A1c, blood pressure, lipid values, number of medications) – 3 and 6 months after randomization

General DEAP Workflow / Intervention



9 Modules Based on ADA Curriculum

1. Describing diabetes
2. Nutritional management
3. Physical activity
4. Medications
5. Monitoring blood sugars
6. Acute diabetic complications
7. Chronic diabetic complications
8. Psychosocial stresses
9. Strategies to promote healthy behaviors

Patients receive one module at a time, and progress through modules by:

- Completing all actions within a module
- “Skipping” a module
- Not completing a module in 7 days

Module 1 “Describing Diabetes”

< Messages Flag Print

 **Understanding Diabetes**
From Alexander Krist, MD on 1:07pm

Must Read Action Required

Hi Sam Jones,

This is the first of nine modules to help you better manage your diabetes. This module explains what diabetes is and general things you can do to manage it better.

To learn the basics about diabetes, this module has three sections:

Read – Basic Diabetes Information

Watch the video – Diabetes Type 2

Test your knowledge – take the assessment on the basics of Diabetes

Please complete each section to move on to the next module. I will be keeping track of your progress, and my team is available to answer questions.

Best of health,
Dr. Alexander Krist

Click [here](#) to skip this course and immediately begin "Module 2, Managing Your Diet"

Actions your care team needs you to take:

Action #1: Read 'Basic Diabetes Information' Due 2017-10-10 ^

Basic Diabetes Information

Click below to read Basic Diabetes Information. It will help you to better understand what diabetes is, how it relates to heart disease, and beginning information on how to manage diabetes with lifestyle and medicine.

[CLICK HERE FOR BASIC DIABETES INFORMATION](#)

 Created by:
Alexander Krist, MD

Action #2: Watch 'Diabetes Type 2' Due 2017-10-10 v

Action #3: Let us know how you are doing Due 2017-10-10 v

Example of Educational Material

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SELF MANAGEMENT TOPIC 1

What is Diabetes and What Can I Do to Manage It?

The most important thing you can do to stay healthy is to control your "ABCs."

A

A1C

A1C is a blood test that shows what your average blood sugar level has been during the last few months

B

Blood Pressure

If you have diabetes, controlling your blood pressure is just as important as controlling your blood sugar. High blood pressure puts you at risk for heart attack, stroke, and kidney disease.

C

Cholesterol

Cholesterol is a waxy substance found in the blood. High cholesterol is another factor that increases your risk of heart attacks, strokes, and other serious problems.

Basic Information

Type 2 diabetes is a disorder that disrupts the way your body uses sugar. All the cells in your body need sugar to work normally. Sugar gets into the cells with the help of a hormone called insulin.



Type 2 Diabetes: The Problem

- The body's cells do not respond to insulin
- The body does not make enough insulin
- Or both
- Sugar then builds up in the blood

Successful self-management of diabetes requires a lifelong management plan, and persons with diabetes have a central role in this plan.

Why are my ABCs so important?

Compared with people who do not have diabetes, people who have diabetes are 2 to 3 times more likely to have a heart attack or a stroke. By keeping your ABCs under control, you can lower your risk of these problems by a lot. Also, staying as healthy as possible may help with energy level, mood and sexual function.

What should my ABC levels be?

The levels you should aim for will depend on how severe your diabetes is, how old you are, and what other health problems you have. Ask your doctor or nurse what your target levels should be.

Target for many people with diabetes

- **A1C** levels below 7 percent
- **Blood pressure** below 140/90 or lower in some cases
- **LDL cholesterol** (sometimes called "bad cholesterol" level below 100

Privia Medical Group May 4, 2017

Managing your Diabetes

How can I control my ABCs?

You and your healthcare team will work together to create a plan to keep your ABCs under control.

Routine medical care is important to preventing, detecting, and slowing the progression of complications.

Your healthcare team can recommend a management plan that is periodically reevaluated to detect health problems

Medicines

Most people with diabetes take medicine every day to control their blood sugar. They might also need check their blood sugar level every day. Plus many people with diabetes need medicines every day to treat high blood pressure or high cholesterol. If you have any problems with your medicines, or you cannot afford them, talk to your doctor or nurse about these issues.



Lifestyle modifications are an opportunity for diabetics to take charge of their health.

Lifestyle Modifications

Lifestyle modifications can be very effective in keeping diabetes in control. Improved blood sugar control can slow the progression of long-term complications. It is important to learn as much as possible about diabetes and take an active role in making decisions about healthcare and treatment.

Understand how to balance food intake, physical activity, and medication.

-  Make Healthy Food Choices
-  Be Active
-  Stop Smoking
-  Lose and Maintain a Healthy Weight
-  Limit Alcohol

Improve your ABCs	Helps with A1C	Helps with blood pressure	Helps with cholesterol
TAKE YOUR DAILY MEDICATIONS	✓	✓	✓
MAKE HEALTHY FOOD CHOICES: Eat a diet low in saturated fat but rich in vegetables, fruit, low-fat dairy products and whole grains	✓	✓	✓
BE ACTIVE: Walk, garden, bike, dance or do something active for 30 minutes most days of the week.	✓	✓	✓
MANAGE YOUR WEIGHT: Being overweight increases the risk of many health problems.	✓	✓	✓
LIMIT ALCOHOL: Alcohol can increase blood sugar and blood pressure.	✓	✓	

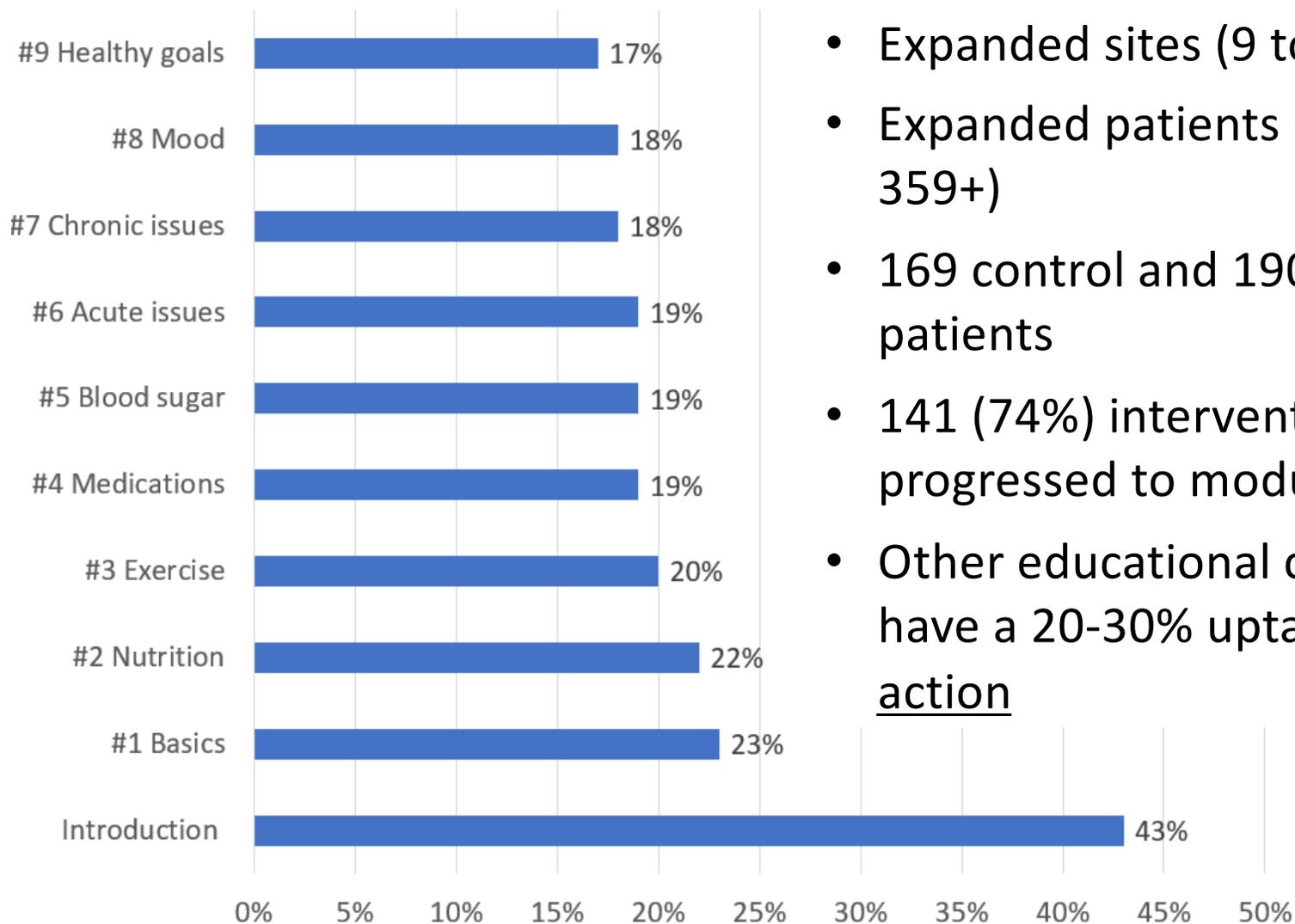
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Clinician Alerts

- As patients complete module, summary sent to PCP or to designated DEAP coordinator
- Summary includes patient's answers, confidence, and desire for help

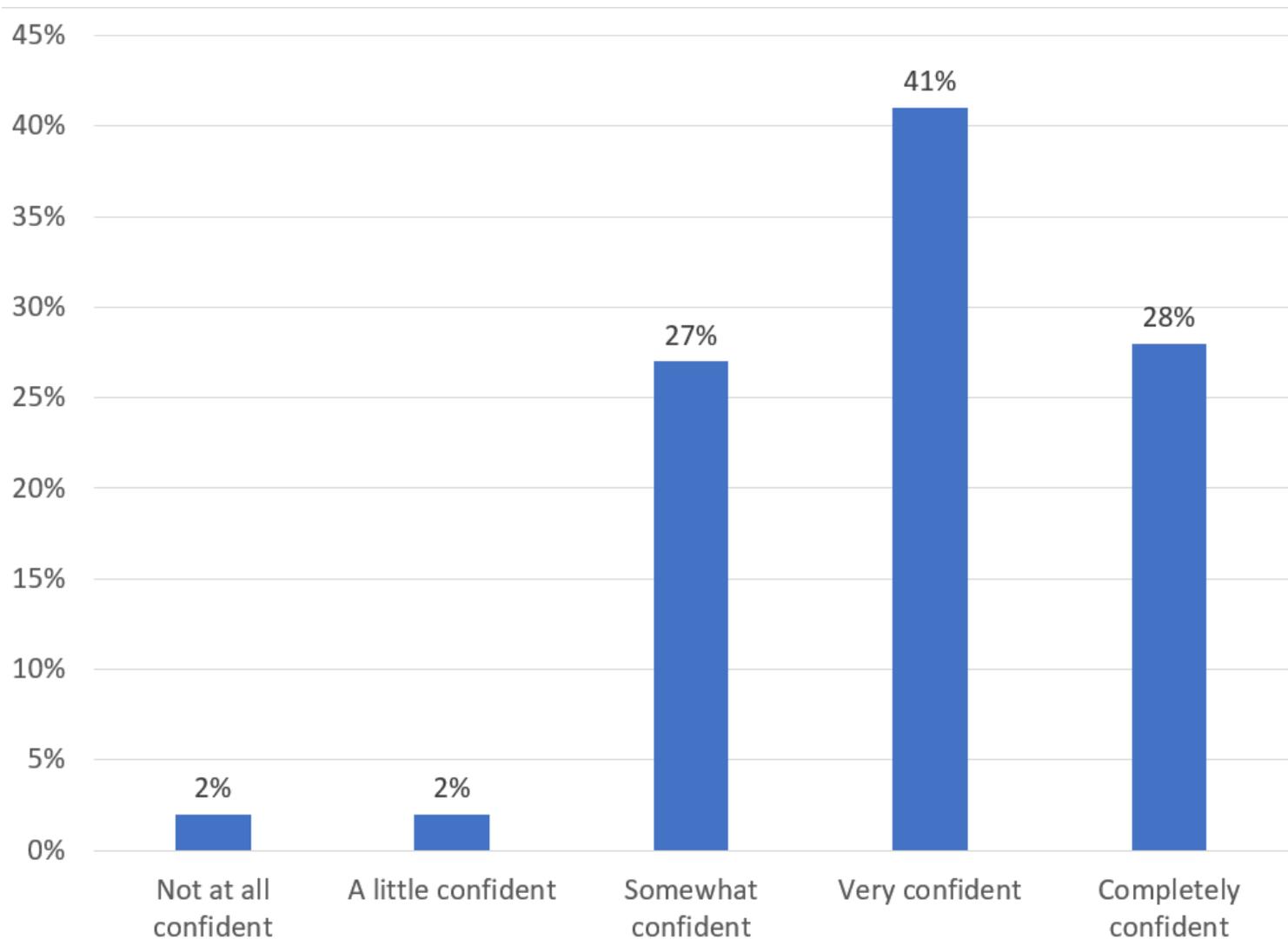
The screenshot displays a clinical information system interface. On the left, a sidebar menu includes categories like Allergies, Problems, Meds, Vaccines, Vitals, Results, Visits, History, Quality, and Apps. A search bar is visible, and a dropdown menu shows search results for 'Patient diary (32)'. One result, 'medical record document - patient diary' dated 11-08-2017, is highlighted with a red box. The main content area shows a task alert for 'medical record document - patient diary in REVIEW to ftaweel (created 11-06-2017 12:11 PM by API-75) #100533842'. The alert includes a 'Priority' field, a 'This task is urgent' checkbox, and a 'VIEW ACTIONS' section with 'Save' and 'Cancel' buttons. The task content area displays 'Module 4 - Module 4 title.' and 'Module completed: 10/29/2017'. A status bar at the bottom indicates 'dmills24 recently edited this chart at 01:46 PM. Refresh to view the most current information. REFRESH CHART'.

Actions Taken for Each DEAP Module

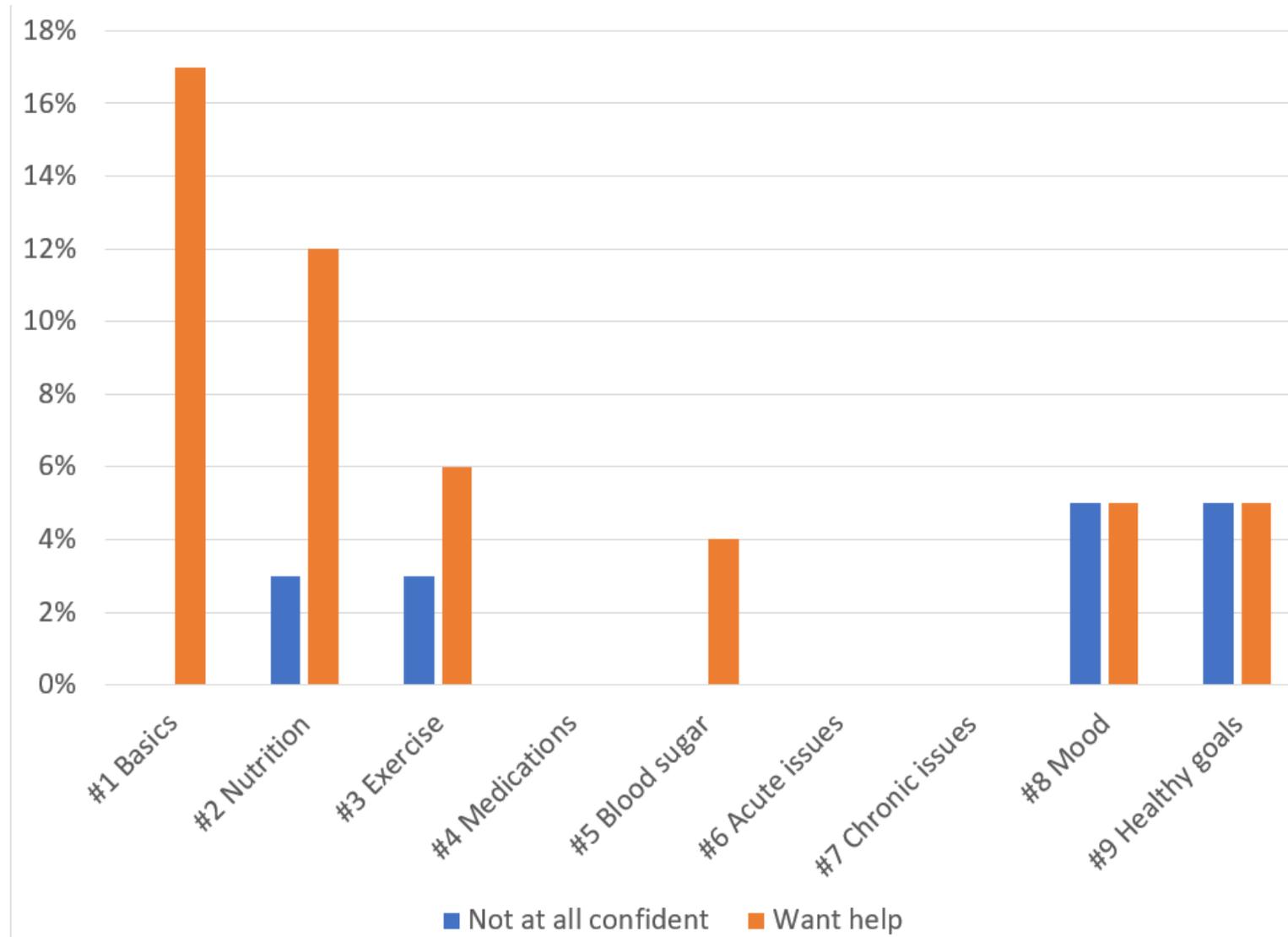


- Expanded sites (9 to 24)
- Expanded patients (from 160 to 359+)
- 169 control and 190 intervention patients
- 141 (74%) intervention patients progressed to module 9
- Other educational campaigns have a 20-30% uptake for 1 action

Average Patient Confidence for Modules



Care Team Alerted: “Not at all confident” or “Want help”



Patient Knowledge

Module	Number correct answers (max 4)
#1 Basics	3.6
#2 Nutrition	2.9
#3 Exercise	3.7
#4 Medications	3.7
#5 Blood sugar	3.7
#6 Acute issues	3.3
#7 Chronic issues	3.0
#8 Mood	3.7
#9 Healthy goals	3.9

Four most commonly missed questions

- (91%) Potentially taking aspirin, controlling blood pressure, and potentially taking a cholesterol medicine may be more important than controlling your blood sugar. (**true**, false)
- (65%) How many servings of vegetables and fruits should you have in a day? (1, 2, 3, 4, **5**)
- (38%) Low blood sugar can be caused by: (**heavy exercise**, not insulin, infection, overeating)
- (32%) Hemoglobin A1c is a measure of your average blood sugar level for the past (day, week, **6-12 weeks**, 6 months)

Limitations

- Selection bias from respondents
- No comparison of knowledge and confidence for control group
- Not effective for patients without a portal account

Next Steps

- Assessing impact on diabetes outcomes
 - A1c, lipids, blood pressure, statin/aspirin use, office visits
 - Patient activation
- Future study to build and test role for the multi-disciplinary care team

Key Conclusions

- Much greater patient, clinician, and practice uptake than other similar initiatives
- High risk of non-response, if don't mandate responses to knowledge, confidence, and desire for help (57-83% non-response rate)
- Patient knowledge and interest in help was surprisingly low for a cohort of patients with uncontrolled diabetes



Questions?

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