



Implementation of Phone/Text Reminders to Enhance Glucometer Integration into Care



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Background

- According to the CDC, over 34 million Americans have diabetes.
- Risk of early death for adults with diabetes is 60% higher than for adults without diabetes.
- Keeping blood glucose under control can help prevent diabetes-related complications, such as retinopathy, nephropathy, and neuropathy.
- Glucose monitoring is key for the achievement of glycemic targets for many people with diabetes.

American Diabetes Association Recommendations

- Assess diabetes health care maintenance using reliable and relevant data metrics to improve processes of care and health outcomes (ADA Evidence Level B).
- ADA recommends self-monitoring of blood glucose be carried out 3 or more times daily for patients using insulin injections or pump therapy to help optimize glycemic control.

Importance of Glucometers

A blood glucose monitoring device, also known as a **glucometer**, is a quantitative test system for use at home or in health care settings to measure the amount of glucose in the blood. The glucometer measures glucose through a sample of blood, usually from the fingertip, that is then placed on a disposable strip and inserted into the device.

A Glucometer's Role in Clinic

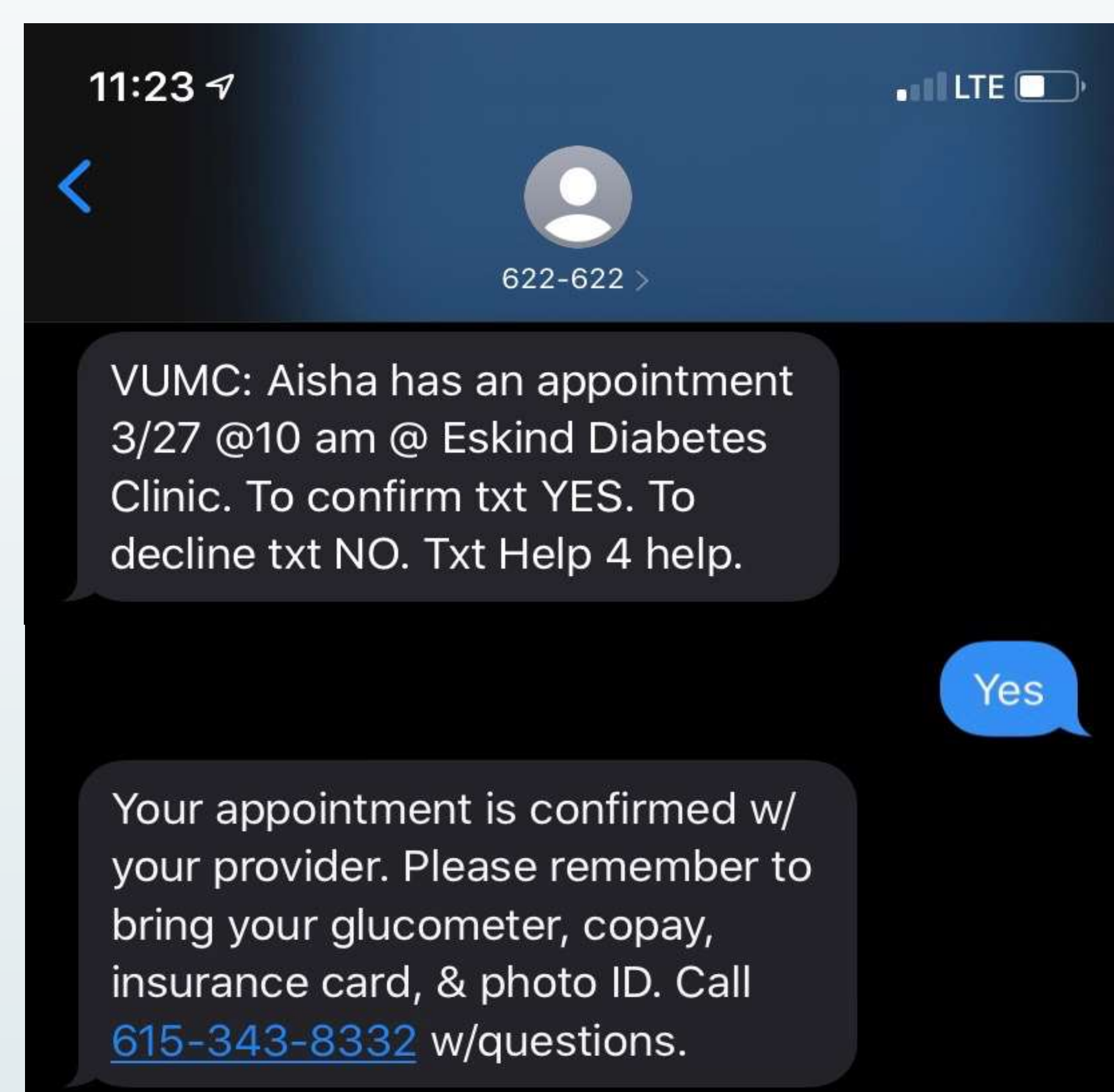
- Assists providers in helping the patient achieve better glycemic control.
- Provides insight about the body's response to the care plan.
- Allows providers to adjust the medication regimen appropriately.



Aim Statement

From November 2019 to March 2020, we hope to enhance glucometer integration into care. **We hope to increase the rate of patients bringing in glucometers to their appointment from ~50% to 75%** by implementing an automated text messaging and phone call reminder service.

Intervention



PHONE CALL SCRIPT:

"Hello, this is an appointment reminder from your healthcare provider. At any time during this message you may press one to confirm or three to cancel your appointment. This call is to remind you of your Appointment with your healthcare provider at Eskind Diabetes Clinic.

Please remember to bring your glucometer, all current prescriptions and dosages, including any vitamins or over-the-counter medications you are currently taking....."

Setting

- Eskind Diabetes Clinic at Vanderbilt University Medical Center diagnoses and treats adults with diabetes.
- Eskind holds the distinction of being one of the few diabetes centers in the United States accredited by the American Diabetes Association.
- Site Preceptor: Norma Edwards, FNP-C, RN
- Capstone Coach: Dr. Shannon Cole, DNP, FNP-BC

Measures

Did patient bring their glucometer?
Yes / No

Method of Contact

Text Message / Phone Call / Both Text and Phone Call

Conclusions and Future Work

Conclusions

- Enacting a text message or phone call prior to every clinic visit that specifically reminds the patient to bring their glucometer significantly increases the rate of compliance.

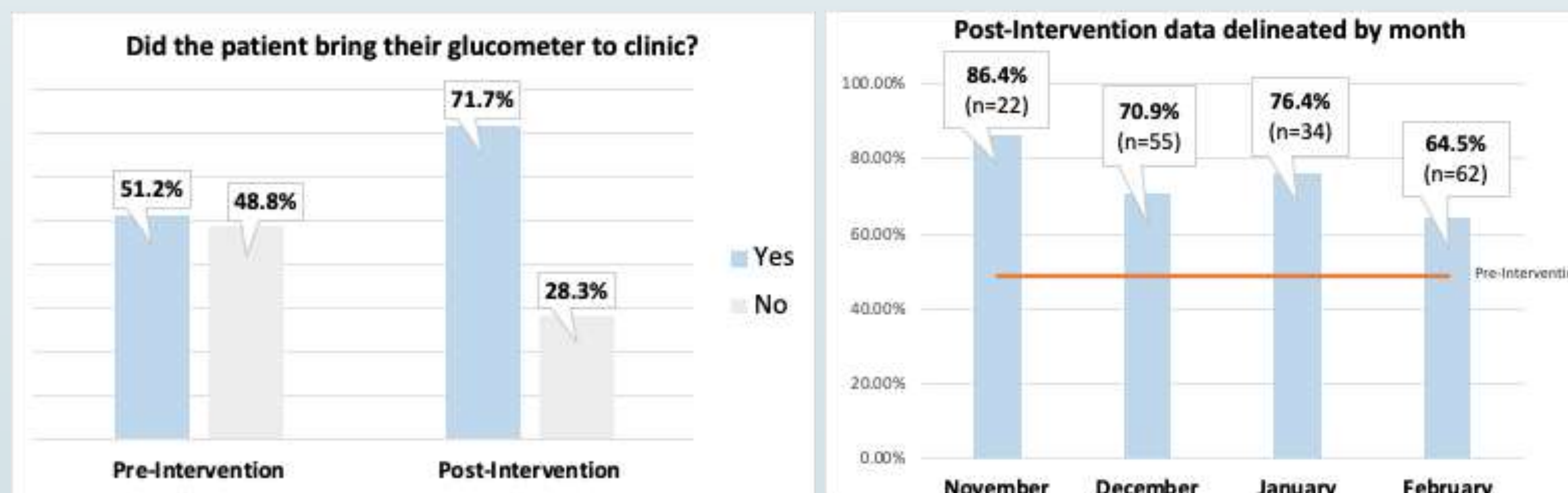
Future Work

- Extrapolate data to general clinic population to further assess efficacy of phone/text reminders
- Obtain Hgb A1c data from the population to determine if the range in those data correlate with an increased or decreased glycemic control for those patients who bring their glucometer to appointments
- Create a simple glucometer usage compliance measurement tool (survey or questionnaire) that will assist clinicians in tracking each patient's understanding of why and how to use a glucometer, as well as how often they use it.

Lessons Learned

- Appreciation of the usefulness of a glucometer in regards to managing diabetes
- How to utilize pre-existing technology to a clinician's benefit
- The Importance of using qualitative measures to influence clinical care outcomes

Results



Glucometer?	Method of Contact		
	Phone	Text	Both
Yes	43	50	31
No	20	14	15
Percentage	36.4%	37%	26.6%

Pre-Intervention:

51.2% of patients brought their glucometer to clinic (n=81)

Post Intervention:

Glucometer integration into care **increased to 71.7%** (n=173, p=0.0019)

- 76.2% (n=63) who received a phone call brought glucometer
- 63.5% (n=64) who received text brought it
- 69.6% (n=46) who received both brought it