

Improving Diabetes Outcomes in the Minority Community with Telehealth



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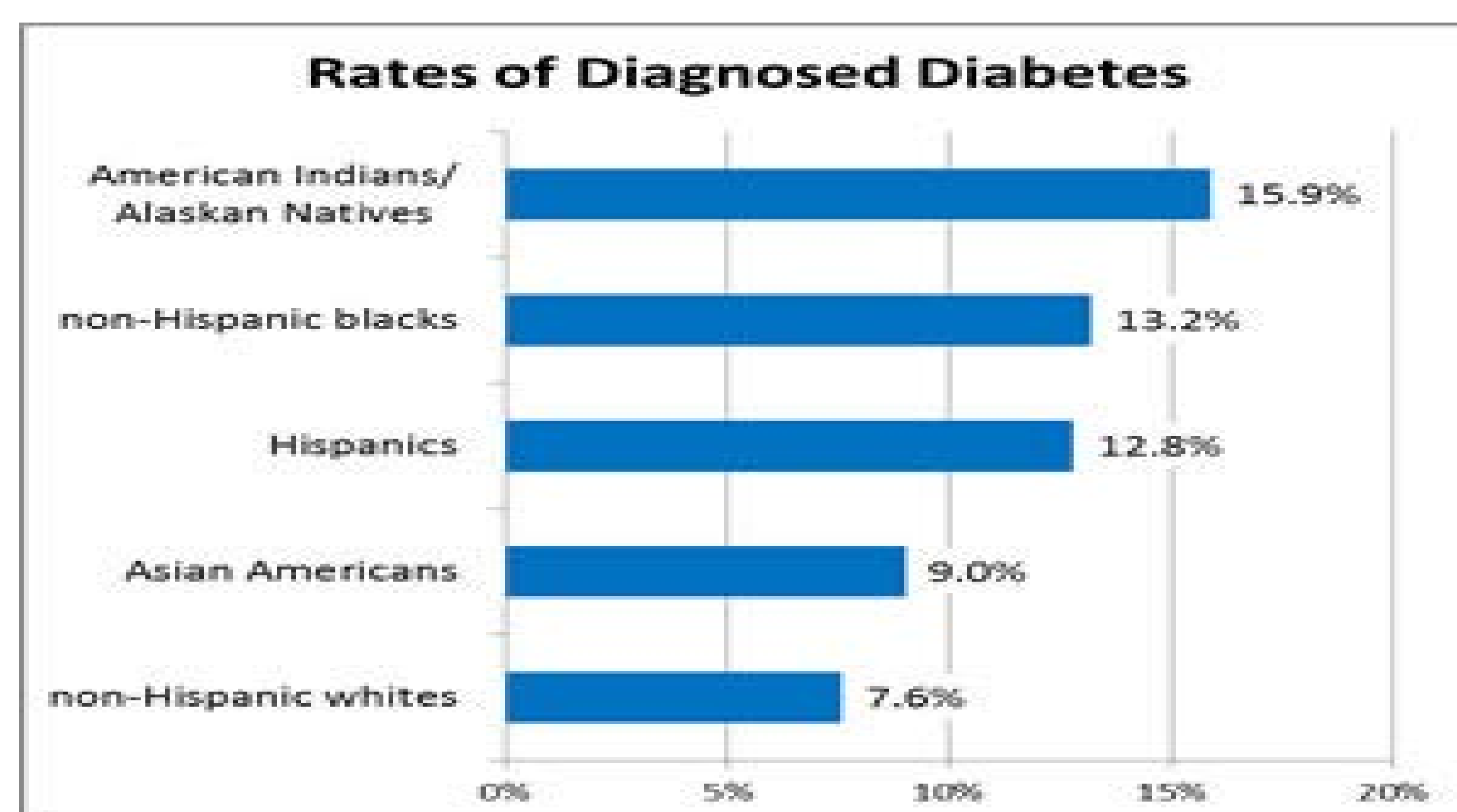
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Problem/Call for Project



disproportionately affects minorities d/t SDOH

- About 40% of patients in current practice have uncontrolled DM
- Leading cause of blindness and amputation
- Increases risk of CVD and renal failure- Seventh leading cause of death
- \$327 billion in healthcare cost



Aims/Objectives

- This quality improvement project was to assess if augmenting routine provider care with biweekly telehealth teaching to bridge space between visit will result in increased DM self management for members of the minority community
- Aim 1: improve DM knowledge using a validated pre and post assessment tool Diabetes knowledge Test (DKT2)
- Aim 2: improved perceived QOL using a validated pre and post assessment tool Dawns Impact of Diabetes Profile (DIDP)
- Aim 3: improved health indicators measuring BMI, BP, LDL, Fasting blood glucose, Waist Circ

Methods

Design: Pretest-posttest, independent group

Setting: small primary care clinic in Greenbelt MD

Sample: N=8 Minority patients between ages 18-73(62% female, 28% male)

Intervention: 30minutes personalized biweekly virtual teaching sessions plus routine care

Data collection: Diabetes Knowledge scores, QOL scores, measurement of biologic markers at the start and project completion

Project duration: 12 weeks

Analysis: Mann Whitney U for Aims 1&2, Wilcoxon Signed Rank Test for aims

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Result

Aim 1: Intervention did not significantly change diabetes knowledge

Aim 2: Intervention did not change perceived impact of DM on QOL
However, the direction of means is promising, if maintained with a larger group could reach statistical significance

Aim 3: Statistically significant improvement in FBG. See table 1 for result of each aims

Table 1: Result

Aims	Pre-intervention		Post Intervention		P-Value
	Median	IQR	Median	IQR	
Aim 1 : Diabetes Knowledge	10	2	12	3	.438
Aim 2: Impact of DM on QoL	19	11	28	6.5	.149
Aims 3:					
BMI	33.950	8.3	33.350	9.7	.600
SBP	132	19	141	35	.326
DBP	82.50	7	83.5	13	.733
Fasting Blood Glucose	121.50	111	90	50	.017
Lipids	78.50	53	98.50	79	.090
Waist Circ	46	2.8	45.5	6.5	.173

Limitations/Implication for practice

- Small sample size, No randomization
- Response bias, Time Constraints
- Not representative of the Hispanic population

Implication for practice

Given the high health care cost of diabetes and its associated mortality, adding a biweekly virtual coaching sessions to manage space between visits aligns with IHI objectives

The Triple Aim: Improving Healthcare Outcomes

Everyone in healthcare is probably familiar with the Institute for Healthcare Improvement's Triple Aim:



Triple Aim

- Improving the individual experience of care
- Improving the health of populations
- Reducing the per capita cost of care for populations

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Conclusion

Findings demonstrated how a biweekly telehealth coaching combined with routine quarterly provider visits could:

- Decreased fasting blood glucose
- improve access and diabetes outcomes

Though not measured there was a significant improvement in participants attitudes and confidence in self care

References

American Diabetic association (2018) CDC National Diabetes Statistics Report, 2020.

<https://www.cdc.gov/diabetes/data/statistics-report/index.htm>

DC National Diabetes Statistics Report, (2020). Economic Costs of Diabetes in the U.S. in 2017.