



Benefits of a Mobile Health Clinic on Health Outcomes in an Underserved Community: A Program Evaluation

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BACKGROUND



- ❖ 1996 – 1st Van deployed (Emphasis on reaching uninsured children)
 - Over-utilization of ED Services
 - Provide a medical home
 - Vaccinations to enter school
- ❖ 1999 – 2nd Van deployed to expand to the adult population
 - More children were enrolled in Medicaid or FAMIS
 - Shifted focus to uninsured adults
 - Provide a medical home
 - Acute and chronic care
- ❖ Each van staffed with a nurse practitioner and medical assistant
- ❖ Weekly schedule to include homeless shelters, churches, grocery stores
- ❖ Services provided: primary care, acute and chronic illnesses, preventative health screenings, medication access, and specialty care coordination
- ❖ Few longitudinal evaluations of Mobile Health Clinics (MHCs) (Hill et al., 2014)
- ❖ Program evaluation research is needed to:
 - ❖ Estimate unmet needs
 - ❖ Increase program visibility
 - ❖ Provide empirical evidence
 - ❖ Identify unexpected negative outcomes
 - ❖ Impact future funding (i.e. sustainability) for MHCs (Posavac, 2015)

PROJECT AIMS

- ❖ Aim 1: Explore the effect of MHC program on clinical and utilization outcomes
- ❖ Aim 2: Examine the effect of MHC program on fatalism and machismo

METHODS

- ❖ Prospective, longitudinal study using a convenience sample of patients receiving primary care services through the MHC
- ❖ Informed consent for patients (English & Spanish) explicit that declining participation doesn't preclude them from van services

MEASURES

- ❖ Health Behaviors Clinical Questionnaire
 - ❖ Range 1-5 with higher score equal more positive behaviors
 - ❖ Cronbach's Alpha (N=135) of .85
- ❖ Fatalism Questionnaire Powe, B. (1994)
 - ❖ Range 0-15 with higher score equal higher rate of fatalistic beliefs
 - ❖ Cronbach's Alpha (N=369) of .84
- ❖ Negative Machismo Scale Neff, J. A. (2001).
 - ❖ Range 1-5 with higher score equal stronger endorsement of negative machismo beliefs
 - ❖ Cronbach's Alpha (N=72) of .57

RESULTS

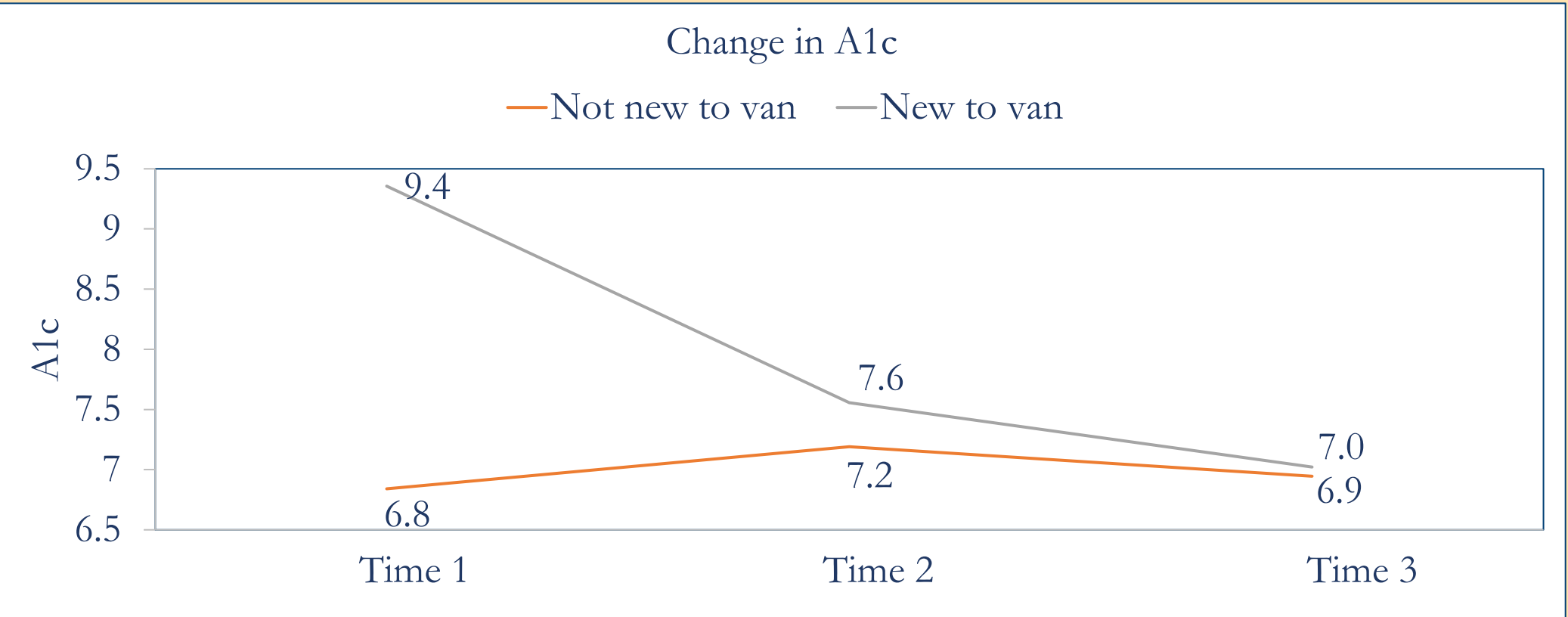


Figure 1. Change in A1C level post Index visit

RESULTS CONTINUED

Table 1. Outcomes for patients that were or were not new to the mobile van.

	Not New to Van	New to Van	
Outcomes	Mean (SD)	Mean (SD)	t (p)
Exercise 3 times weekly	3.89 (1.21)	3.63 (1.26)	1.90 (.058)
Pay attention to carbohydrates	4.06 (1.03)	3.54 (1.24)	3.48 (.001)
Check blood sugar	3.96 (1.24)	3.53 (1.34)	3.23 (.027)
Check blood pressure	4.04 (1.19)	3.53 (1.23)	2.94 (.004)
Check feet	4.28 (1.02)	3.73 (1.23)	3.51 (.001)
Total Healthy Behaviors	3.96 (1.02)	3.62 (1.09)	2.94 (.004)
Weight	177.09 (42.75)	173.39 (37.73)	0.63 (.527)
BMI	32.03 (7.66)	28.91 (5.19)	3.19 (.002)
	Mean (SE)	Mean (SE)	F(p)
A1C (Baseline adjusted)	6.57 (0.90)	5.87 (.16)	15.34 (<.001)
Cholesterol (Baseline adjusted)	186.63 (2.68)	191.49 (4.50)	0.86 (.36)
	N (%)	N (%)	χ ² (p)
High Blood Pressure (Yes/No)	47 (24.4%)	30 (22.9%)	0.09 (.763)

Note. Bold represents statistically significant differences. R-squared ranged from 0.01 to 0.06.

Table 2. Fatalism and Machismo Levels for patients that were or were not new to the mobile van.

	Not New to Van	New to Van	
Outcomes	Mean (SD)	Mean (SD)	t (p)
Fatalism (range 0-15)	5.32 (3.80) (N=223)	5.37 (3.64) (N=162)	-0.14 (.89)
Negative Machismo (range 1-5)	2.05 (0.48) (N=36)	2.12 (.61) (N=38)	-0.52 (.60)

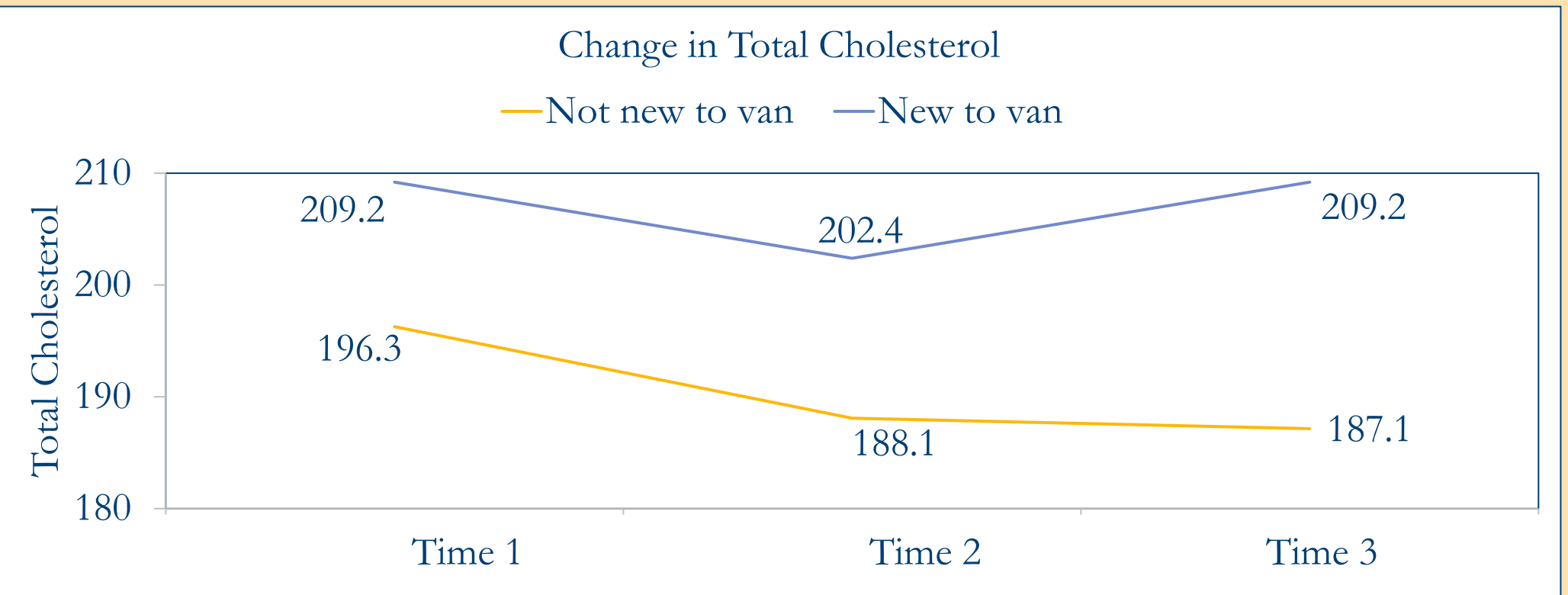


Figure 2. Change in total cholesterol level post Index visit

RESULTS CONTINUED

- ❖ Descriptive Summary
 - ❖ N = 385 (Missingness varies); New to the van: 162 (42.1%); Female: 293 (76.1%); Hispanic: 313 (81.3%); Age: M = 44.6 years (SD = 13.5); BMI: M = 30.82 (SD = 6.9)
- ❖ MHC standard program targets:
 - ❖ 65% of patients in the sample will have HbA1c < 8.0%
 - ❖ Currently: 91.4% (310 out of 339)
 - ❖ 40% of patients in the sample will have HbA1c < 7.0%
 - ❖ Currently: 86.1% (292 out of 324)
 - ❖ ≤ 35% of patients in the sample will have blood pressure of ≥ 140/90 mmHg
 - ❖ Currently: 23.8% (77 out of 324)
 - ❖ If criteria is revised to the 2018 recommendations of ≥ 120/80 mmHg: 28.3% (109 out of 324)

CONCLUSIONS

- ❖ Participation on the van helps patients engage in healthy behaviors more frequently
- ❖ For patients who were new to the van there was a significant drop in A1c from their first visit to the next two visits, providing evidence for the efficacy of the program.
- ❖ Continued evaluation is needed to show improvement in longer term outcomes such as total cholesterol for patients who were new to the van

REFERENCES

- ❖ References available upon request

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