



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

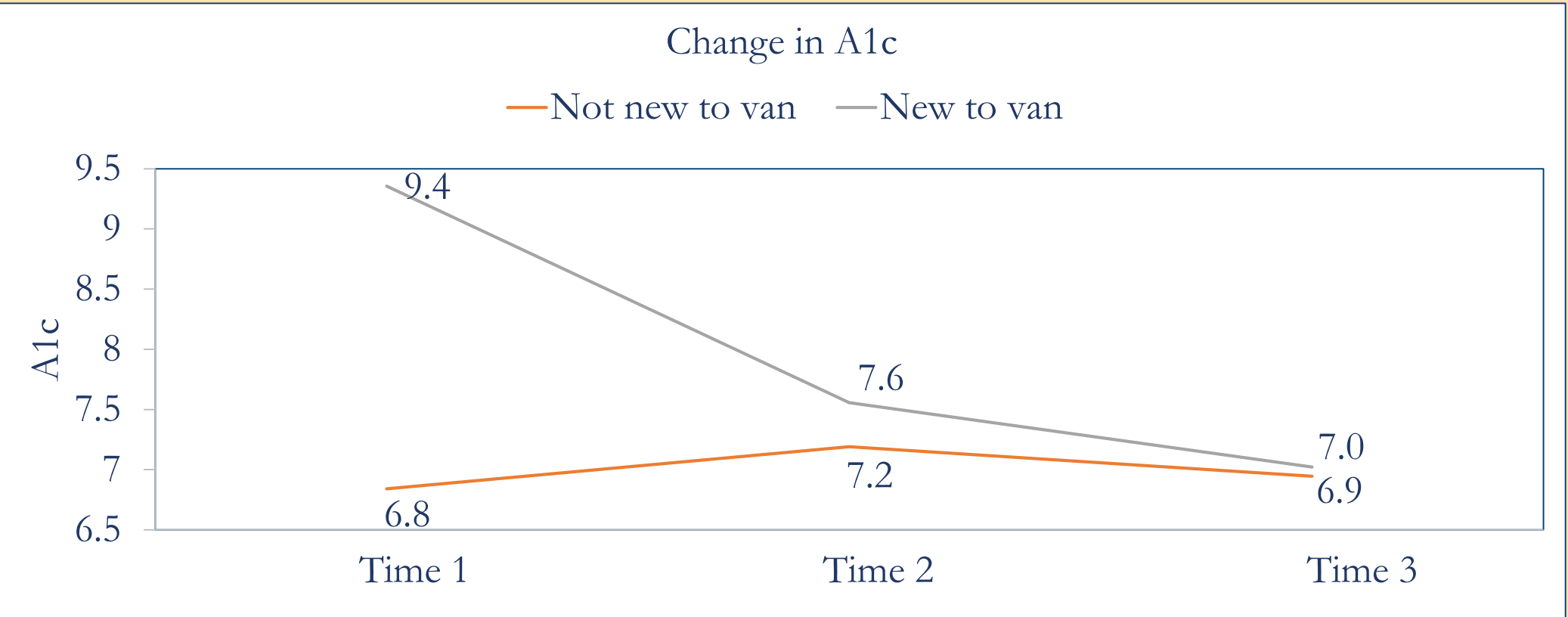


Figure 1. Change in A1C level post Index visit

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) |

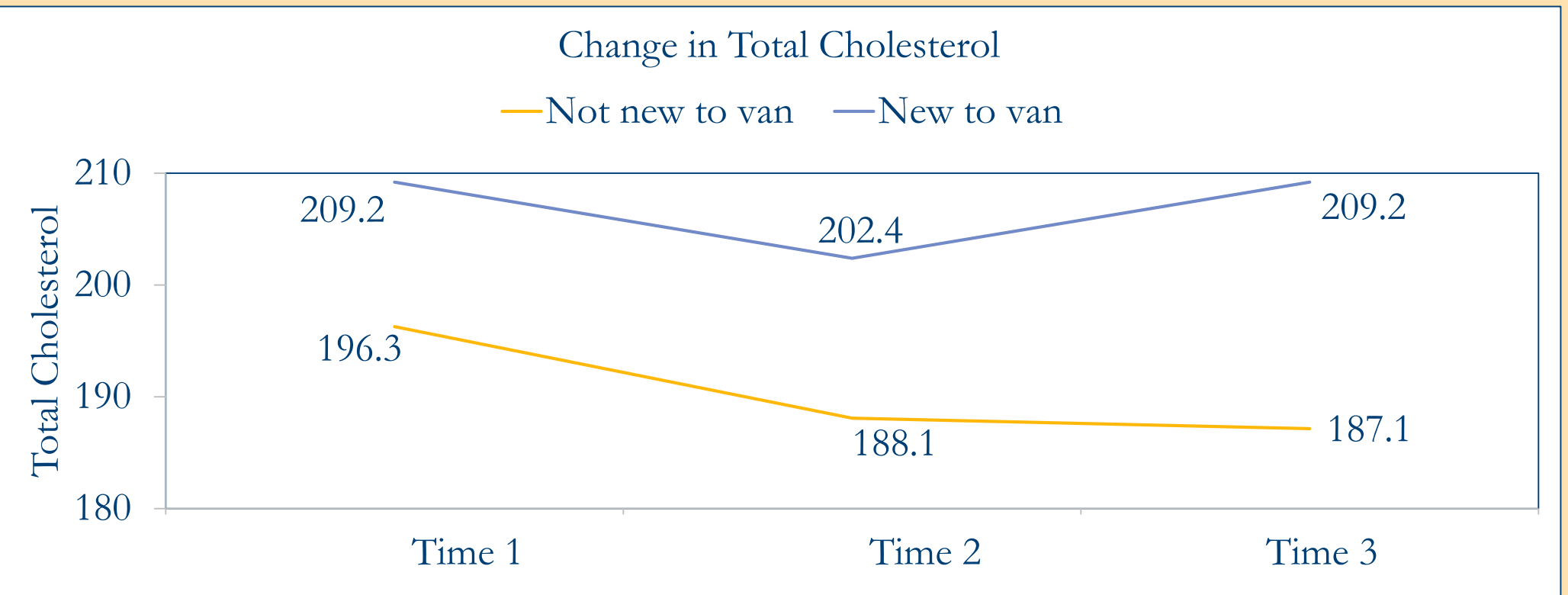


Figure 2. Change in total cholesterol level post Index visit

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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