

Assessment of Body Mass Index and Blood Pressure in Low-Income, Uninsured Patients with Diabetes in a Community Free Health Clinic

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INTRODUCTION

- This study was conducted in a stand-alone 501c3, non-profit free clinic providing medical care and laboratory services to low-income, uninsured patients with chronic health conditions including diabetes.
- A team of healthcare professionals including a nutrition therapist, volunteer pharmacy residents and pharmacist provides comprehensive medication therapy management and adherence and care for patients with a goal to keep the patients healthy and out of emergency room visits and hospitalization.
- The patient-centered service provided in this free clinic may be different during this study period (Covid-19 pandemic) from usual care in that the patient visits were not regular and they received care when they could visit the clinic.

OBJECTIVES

- To assess the effectiveness of the patient-centered team care on two diabetes-related quality measures: **1) Body Mass Index (BMI)**, and **2) Blood Pressure (BP)** in a Community Free Health Clinic.

METHODS

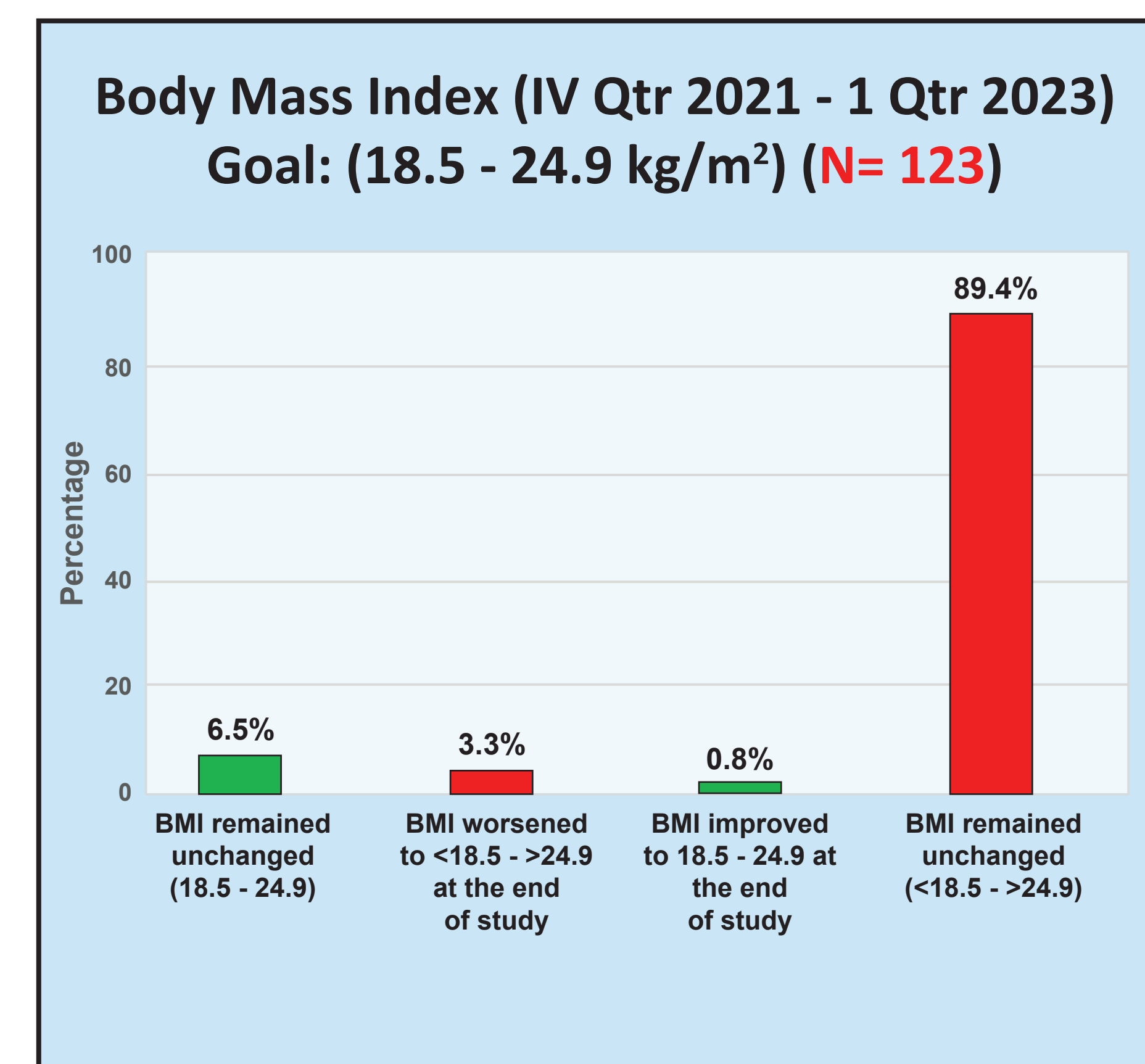
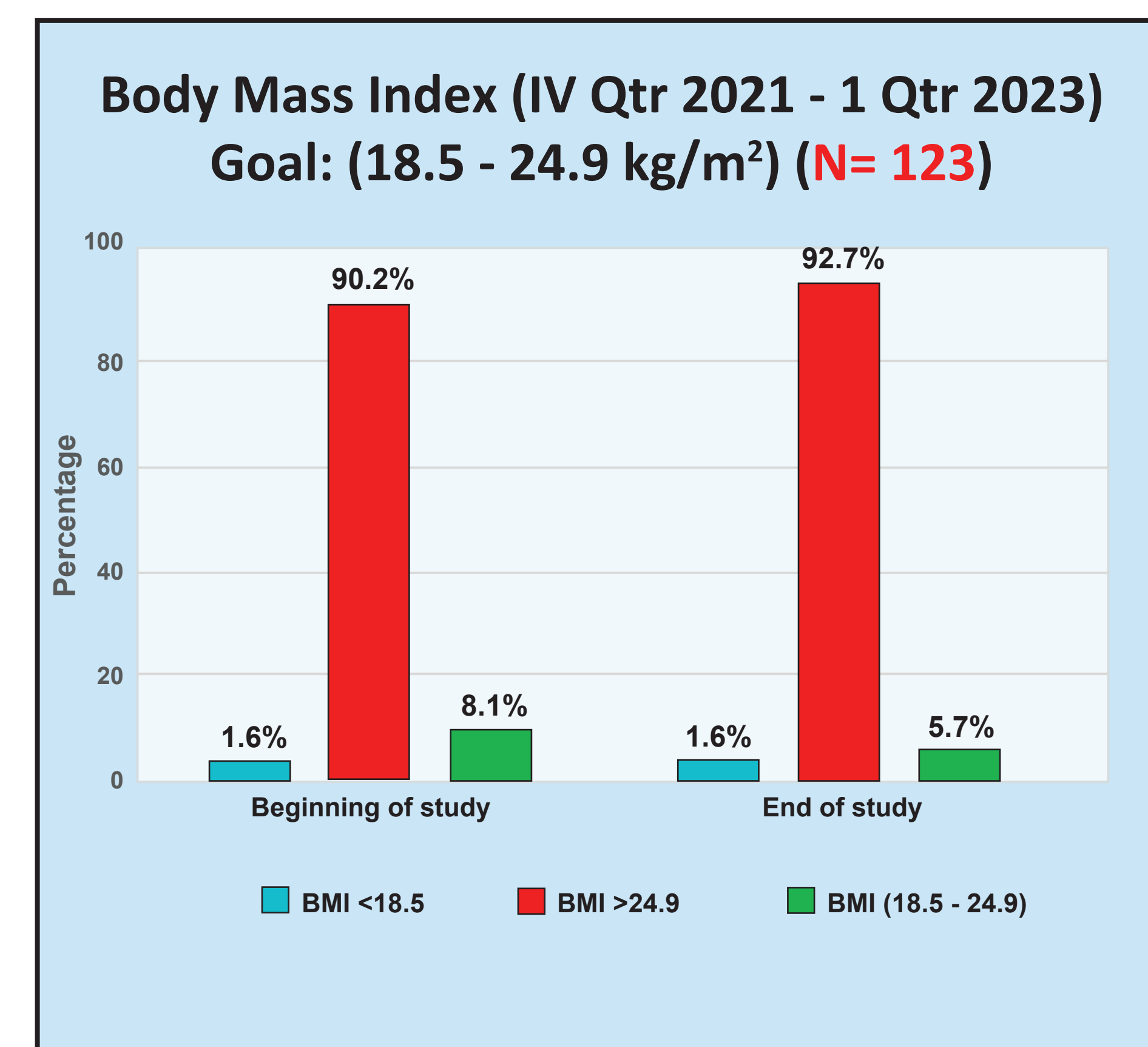
- Retrospective chart review study:** N = 123 patients with diabetes (50 Hispanic, 20 Mexican, 17 Latino, 36 other) (72 females, mean age 55 years-range: 34-77 years)-data collected using Athena Electronic Health Record.
- Study Period:** October-2021 (**Baseline**) → March 2023 -- the **earliest** to the **latest** data (**at least 2 data**) were used to compare the performance during this study period (**End of study**).
- Goals for the quality measures:** 1) BMI: 18.5 –24.9kg/m², 2) BP: <140/90 mmHg (Ref.1, 2).
- The interventions included:** Minimizing no-shows by phone calls, providing in-house medications from the pharmacy, encouraging life-style improvement, improving clinic-patient communications through text messaging when feasible, providing healthy food choices.
- Chi-square statistic was used with P <0.05 for significance to analyze the BMI and BP data.
- Microsoft Excel® was used to analyze descriptive statistics for percentages, mean, and standard deviation (STD).
- This study was exempt from Institutional Review Board Approval.

RESULTS

Table 1: Performance of Quality Measure 1: Body Mass Index (BMI) (Goal: 18.5 – 24.9 kg/m²) (N = 123)

BMI (kg/m ²)	Beginning of the study n = (%)	End of the study n = (%)*
< 18.5	2 (1.6)	2 (1.6)
18.5 - 24.9	10 (8.1)	7 (5.7)
> 24.9	111 (90.2)	114 (92.7)
Overall → (N = 123)	33.68 kg/m² Range: 17.1 - 66.7 (STD 8.2)	33.64 kg/m² Range: 17.7 - 68.7 (STD 8.2)*

*[Chi-square statistic, 0.569 did not exceed the critical value (3.841) - P = Not significant]



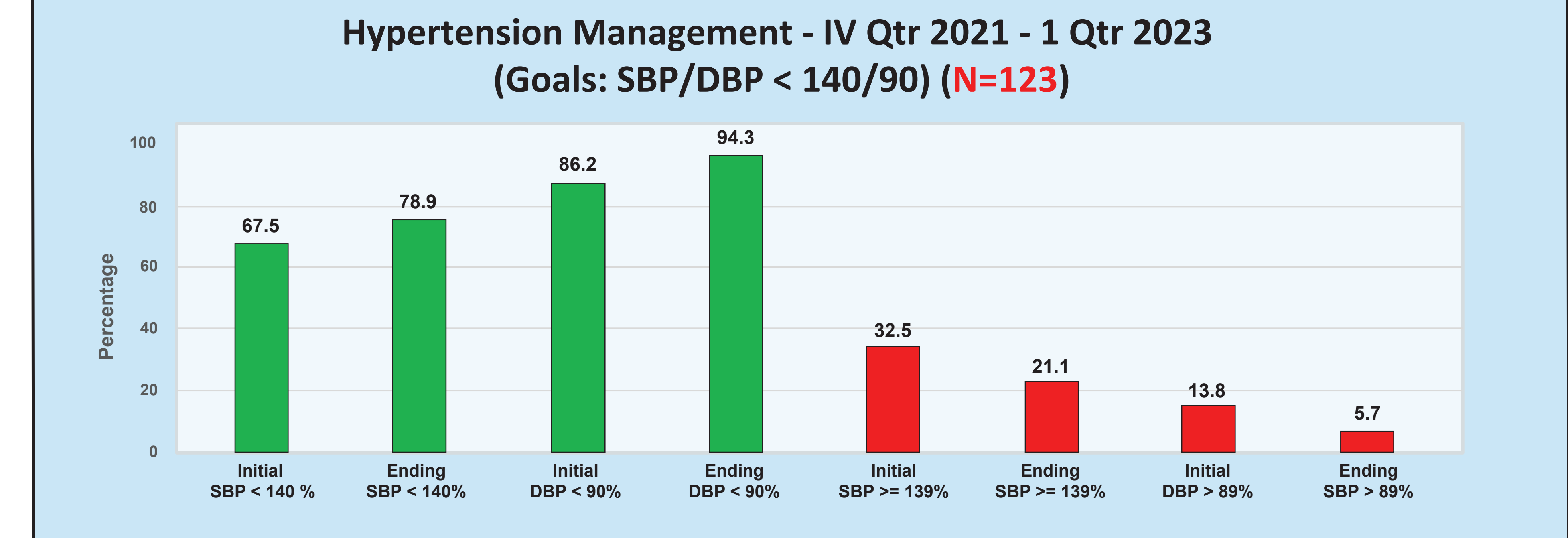
DISCLOSURE: "Authors of this presentation have nothing to disclose."

RESULTS

Table 2: Performance of Quality Measure 2: Blood Pressure (BP) (Goal: < 140/90 mm Hg) (N = 123)

[Systolic Blood Pressure (SBP) and Diastolic Blood Pressure (DBP) evaluated separately]

SBP 9 (mm Hg)	Beginning of the study n = (%)	End of the study n = (%)
< 140	83 (67.5)	97 (78.9)
> 139	40 (32.5)	26 (21.1)*
*(Chi-square statistic, 4.06 for df 1 and 0.05- exceeded the critical value 3.841 for probability level 0.05 SBP Improved P=Significant)		
DBP (mm Hg)		
< 90	106 (86.2)	116 (94.3)
> 89	17 (13.8)	7 (5.7)**
**(Chi-square statistic, 4.617 for df 1 and 0.05 exceeded the critical value 3.841 for probability level 0.05 -- P= Significant) DBP improved		



CONCLUSIONS

- Blood pressure** was very well managed by patient-centered care in this community free health clinic during this study (Covid-19 pandemic) period.
- However, **Body Mass Index (BMI)** needs improvement to manage diabetes-related complications. Nutritional, educational and other needed related community services may be helpful to improve BMI in these patients.

REFERENCES

- North Carolina Department of Health Medicaid/HEDIS Guidelines.
- Diabetes Care 2023; 46 (Suppl.) Standards of Care in Diabetes 2023-from American Diabetes Association