

Assessment of HbA1C, Urine Microalbumin/Creatinine, and Lipids 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 **three** diabetes-related quality measures: **1) Hemoglobin A1C (HbA1C), 2) Urine Microalbumin/Creatinine ratio, and 3) Lipids** in a Community Free Health Clinic.

METHODS

- Retrospective chart review study:** The number of patients in the study was different for the **three quality measures** depending on the availability of **at least two data** (beginning and end of the study) to evaluate the performance of care in these measures. Data were 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 were as follows:**
 - HbA1C** - <9% (Ref.1),
 - Urine Microalbumin/Creatinine** <30 mg/G (Ref.2)
 - Lipids:** LDL <80 mg/dL, Total cholesterol <150 mg/dL, Triglyceride <150 mg/dL (Ref.2)

Number of patients (age range 34-77 years) for these 3 quality measures differed, based on the availability of the data.

- For **HbA1C** evaluation: **N = 90** patients with diabetes (38 hispanic, 14 latino, 9 mexican and 29 other), (55 females, mean age 54 years+/-STD 10)
- For **Urine Microalbumin/Creatinine** evaluation: **N = 39** patients with diabetes (19 hispanic, 4 latino, 2 mexican and 14 other), (21 females, mean age 55 years+/-STD 10.2)
- For **Lipids** evaluation: **N = 63** patients with diabetes (30 hispanic, 6 latino, 4 mexican and 23 other), (37 females, mean age 56.6 years+/-STD 9.7).

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 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: HbA1C (A1C) (Goal: < 9%) (N = 90)

A1C	Beginning of the study n = (%)	End of the study n = (%)*
< 9%	55 (61)	54 (60)
> 8.9%	35 (39)	36 (40)

*[Chi-square statistic did not exceed the critical value; so, P = Not significant]

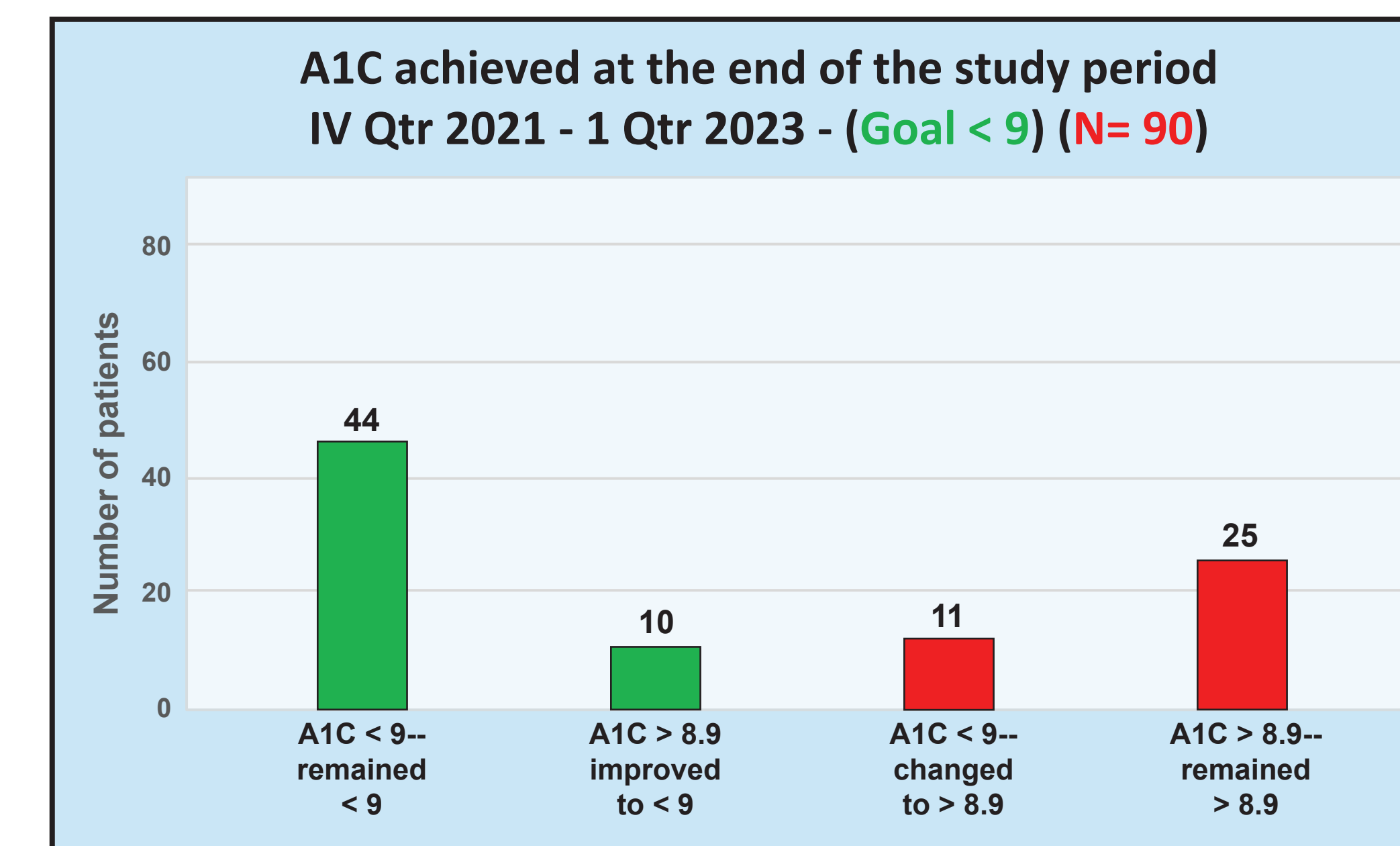
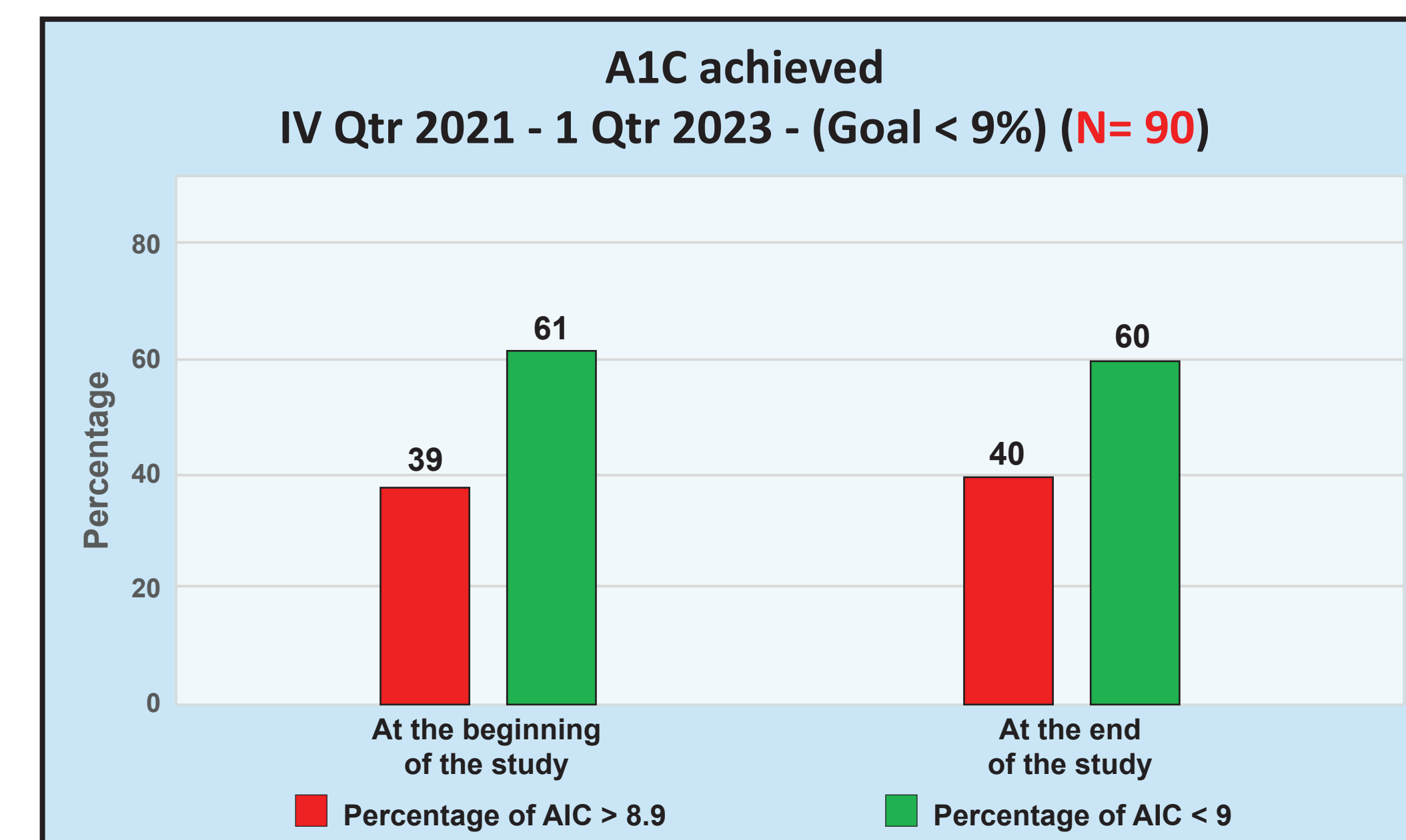
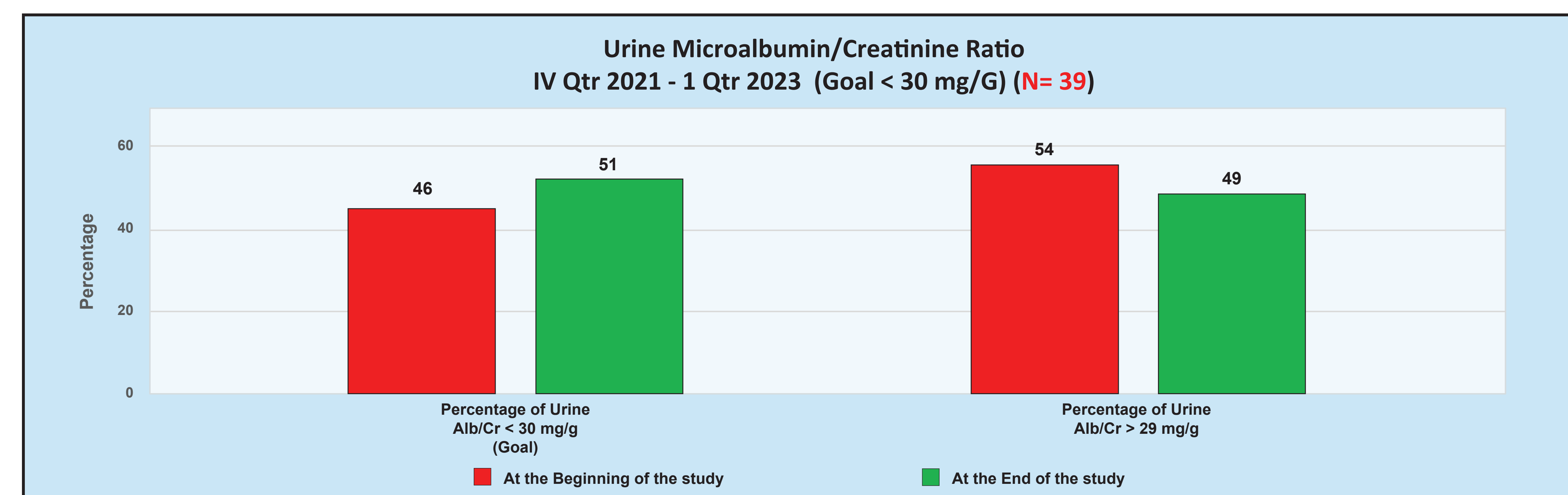


Table 2: Performance of Quality Measure 2: Urine Microalbumin/Creatinine (Alb/Cr) (Goal: < 30 mg/G) (N = 39)

Alb/Cr (mg/G)	Beginning of the study n = (%)	End of the study n = (%)*
< 30	18 (46)	20 (51)
> 29	21 (54)	19 (49)

*[Chi-square statistic did not exceed the critical value; so, P = Not significant]

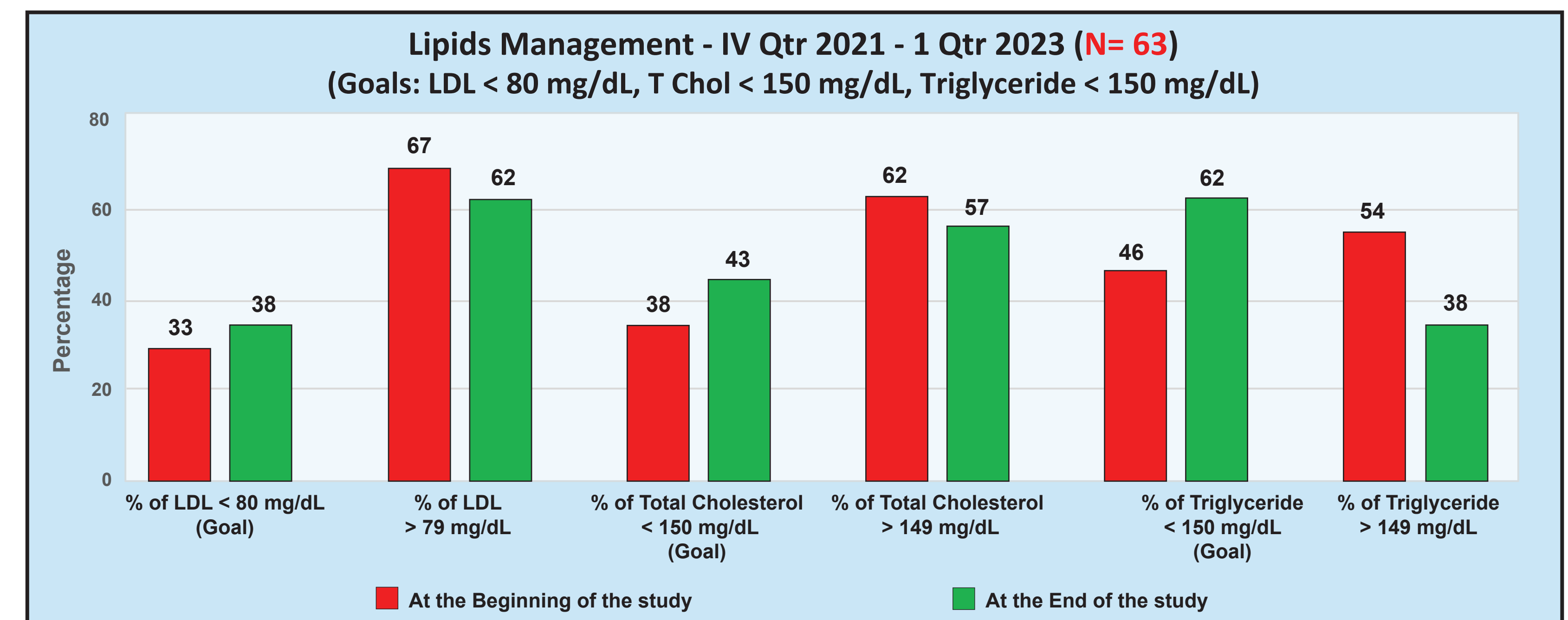


RESULTS

Table 3: Performance of Quality Measure 3: Lipids: LDL (Goal <80mg/dL), Total Cholesterol (Goal <150mg/dL), Triglyceride (Goal <150 mg/dL) (N = 63)

Lipid (mg/dL)	Beginning of the study n = (%)	End of the study n = (%)*
LDL (mg/dL)		
< 80	21 (33)	24 (38)
> 79	42 (67)	39 (62)
Total Cholesterol (mg/dL)		
< 150	24 (38)	27 (43)
> 149	39 (62)	36 (57)
Triglyceride (mg/dL)		
< 150	29 (46)	39 (62)
> 149	34 (54)	24 (38)

*[Chi-square statistic did not exceed the critical value; so, P = Not significant]



CONCLUSIONS

- Overall, management of HbA1C, Urine Microalbumin/Creatinine, and Lipids needed improvement.
- During this study period with Covid-19 pandemic, the number of patients seeking care for these performance measures and frequency of their visits to the clinic were low and that could have contributed to the performance measures not meeting the goals.
- The diabetes care and education providers in the Community Free Clinic of Concord plan to review the findings of this study and improve these quality measures in the near future.

REFERENCES

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

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