

# HbA1c Screening and Control in Patients with Diabetes Mellitus in an Ambulatory Resident Clinic

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## BACKGROUND

- Hemoglobin A1C is the primary clinical tool used to assess glycemic control, and, according to the ADA, should be routinely performed in diabetic patients. Recommendations include biannual testing of Hb-A1C for patients with stable glycemic control who are meeting treatment goals, and at least every 3 months for patients who are not, or who have recently had changes in treatment plans. Monitoring Hb-A1C in diabetic patients within this timeline ensures that providers can effectively tailor treatment plans according to reliable metrics.
- There are numerous sequelae of uncontrolled Diabetes Mellitus including but not limited to cardiovascular disease, peripheral nerve disease, nephropathy, retinopathy, skin conditions, and many others which ultimately lead to multiple comorbidities and a decreased quality of life.

## METHODS

- IRB approval was obtained from the institution to perform a retrospective chart review of HbA1c lab-work in diabetic patients in the University Hospital Ambulatory Care Center.
- We performed a retrospective chart review of 99 patients randomly selected from a pool of 1600 patients with Diabetes Mellitus as defined by HbA1C above 6.5 with appointments from January 1<sup>st</sup> 2021 to June 30<sup>th</sup> 2021.
- We collected data on whether this sample patient population's diabetes mellitus was controlled (A1C≤9) or uncontrolled (A1C>9).
- Furthermore, data was collected whether repeat Hb-A1C were ordered by physicians as per guidelines for those with uncontrolled A1Cs
- From the patients who were prescribed blood work of Hb-A1c checks from their physicians, data was collected to study adherence to blood work completion.

## RESULTS

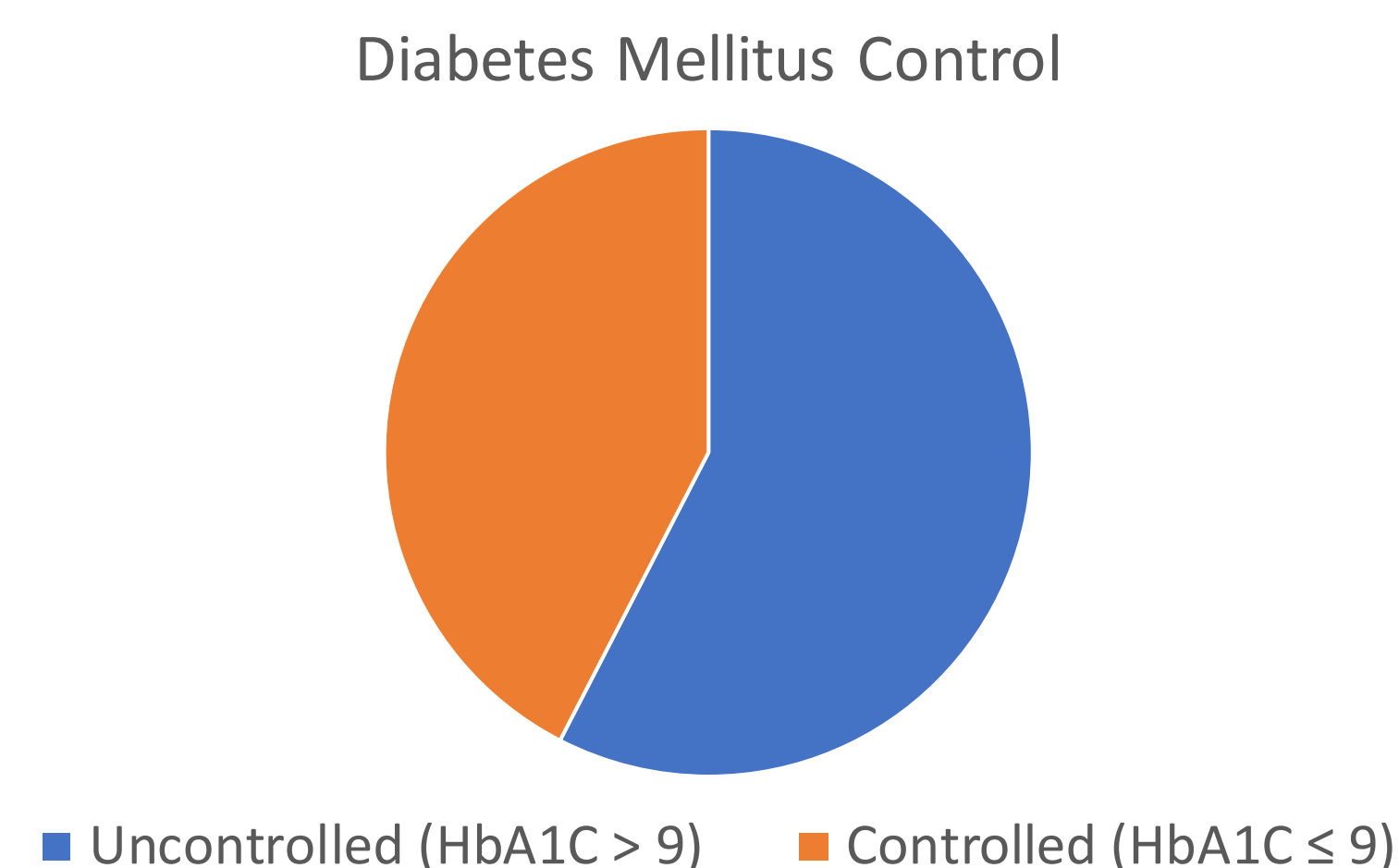


Figure 1.

This chart demonstrates 57.6% of the patients had at least 1 reading of an uncontrolled HbA1C reading of 9 or higher.

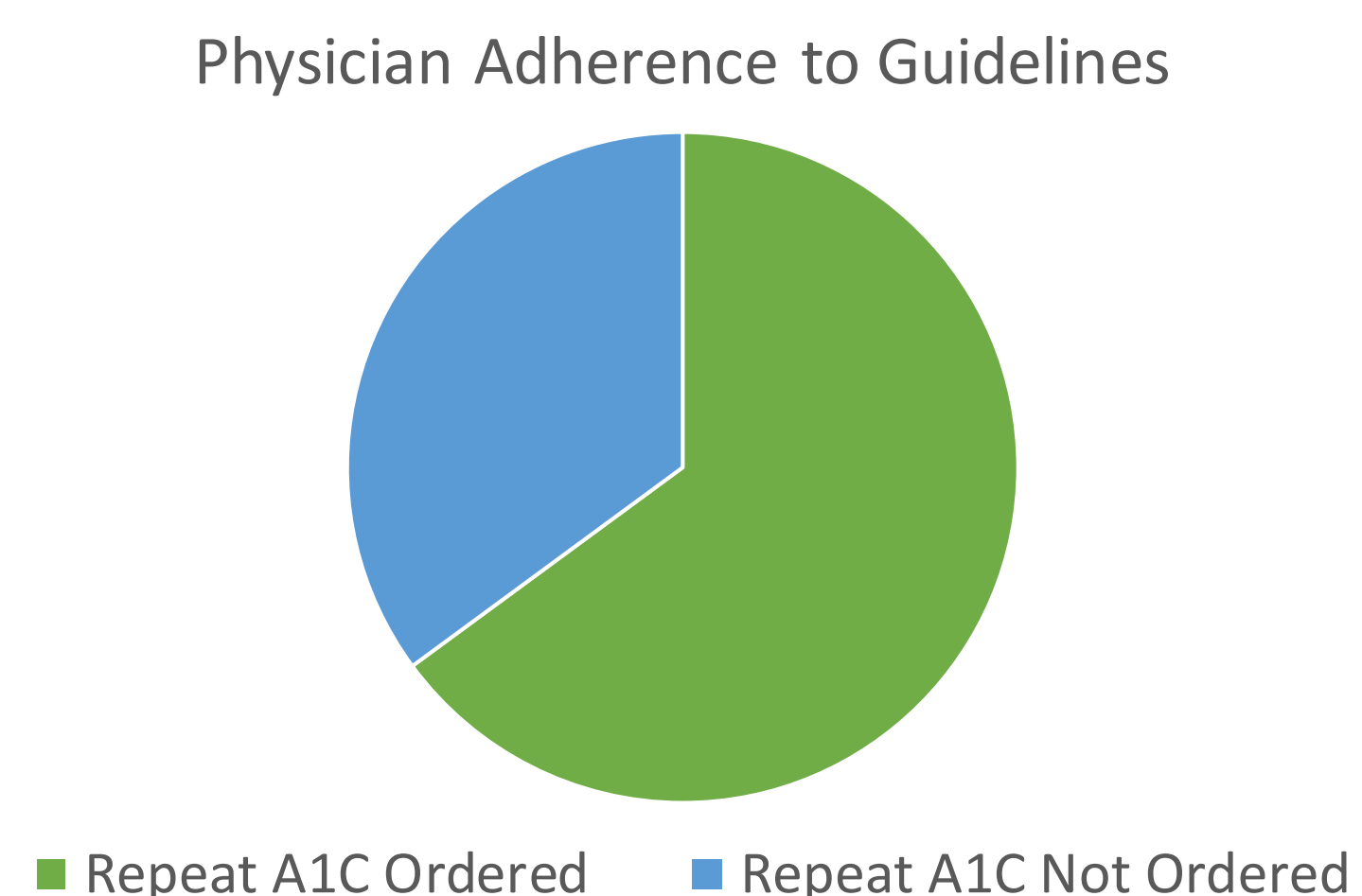


Figure 2.

This chart demonstrates that only 64.9% of the times physicians ordered a repeat HbA1C labs on a patient with an uncontrolled HbA1C reading as indicated by ADA guidelines.

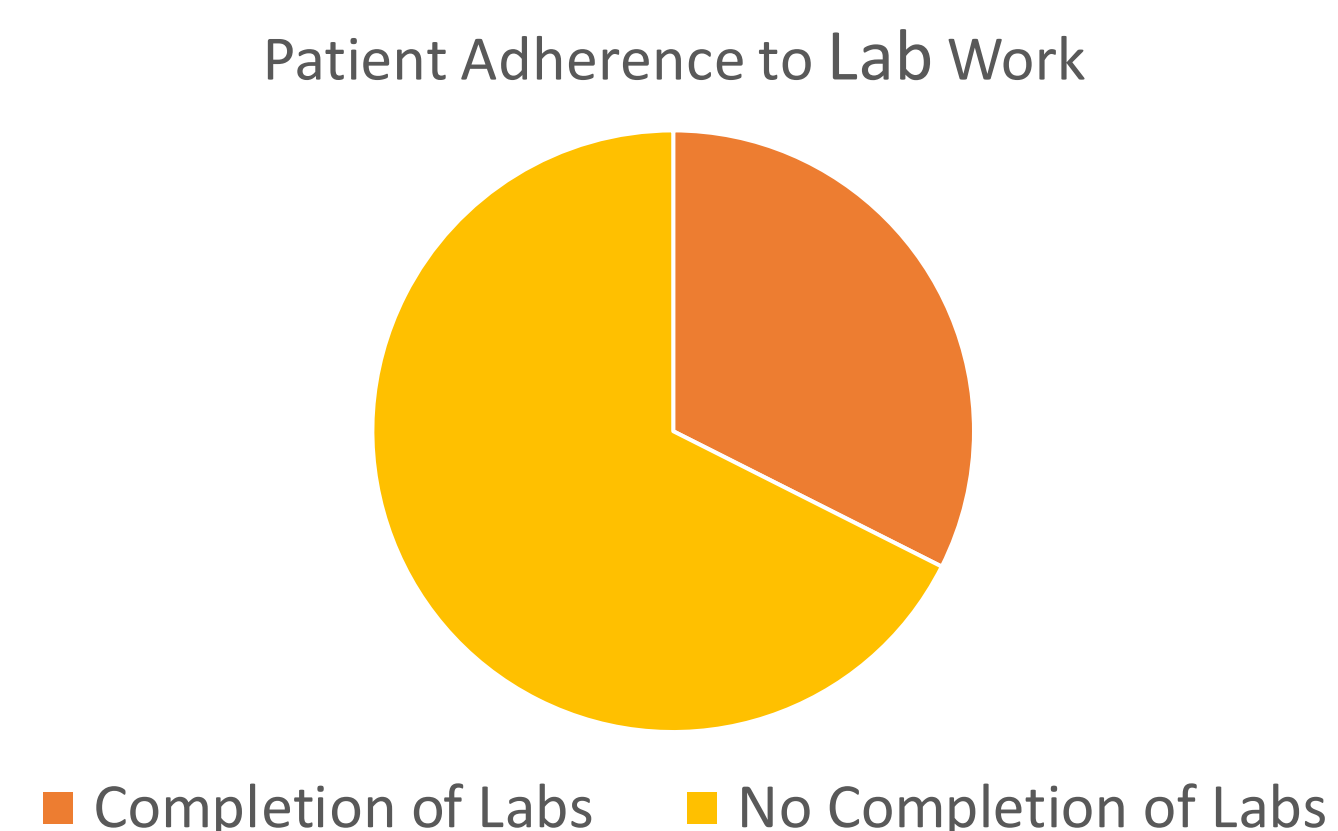


Figure 3.

This chart illustrates patient adherence to prescription lab work of repeat HbA1C when ordered by their physician was only 32.4%.

- Of the 99 patients, 57 (~57.6%) patients were found to have had at least one documented uncontrolled A1c value of 9 or higher.
- Only 37 out of 57 uncontrolled diabetic (64.9%) patients had a 3-6 month repeat Hb-A1c ordered by the physician.
- Additionally, out of the 37 patients who did have a repeat Hb-A1c ordered for 3-6 months, 12 patients (32.4%) completed their bloodwork whereas 25 patients (67.6%) did not.

## CONCLUSIONS

- The study showed that the majority of the diabetic patients (57.6%) had a Hb-A1c of 9 or higher at one point in their care. In 35.1% of these instances, physicians did not order repeat bloodwork as per diabetes management guidelines. Patient compliance to the lab work ordered by their physician was only 32.4%. Future research should focus on studying contributing factors leading to physicians not ordering repeat testing, as well as patient non-adherence in completing their prescribed bloodwork.
- Study limitations include a sample size of 1600 patients with a total of 99 randomized charts that were reviewed. Increasing the power of this study would entail analyzing a larger patient population.

### References

American Diabetes Association; 6. Glycemic Targets: *Standards of Medical Care in Diabetes—2021. Diabetes Care* 1 January 2021; 44 (Supplement\_1): S73–S84. <https://doi.org/10.2337/dc21-S006>