

# Adherence to National Insulin Guidelines at Hinsdale Family Medicine Clinic

Samia Amjad MD, Anne Chen DO, Michael Quien MD

## Background and Hypothesis

Uncontrolled T2 diabetics often face long term serious complications of hyperglycemia including neuropathy, nephropathy and retinopathy (Lori Berard et al., 2018). Many patients with T2DM who would benefit from insulin therapy are reluctant to be started on insulin therapy. Physician knowledge and comfort with insulin management in the uncontrolled T2DM population is an important factor that can serve to help bridge gaps in patient care and positively influence long term preventive outcomes in T2DM patients.

We aim to understand and identify reasons for physician non-adherence in insulin initiation within our clinic's diabetic patient population for the purpose of identifying systemic gaps that can be improved upon for our diabetic patients.

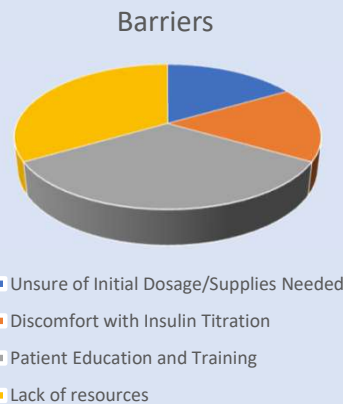
## Methods

This will be a survey study with the specific aim and goal of identifying provider knowledge gaps or provider hesitancy with initiating and managing insulin in a subset of T2DM clinic patients who meet insulin criteria but are not on insulin. Patient data and provider input will be obtained from the Hinsdale Family Medicine Clinic (HFMC) and residency. Identified knowledge gaps or discomfort with insulin initiation and management was addressed with conferences and providing educational resources. The goal is to identify provider gaps and to improve outcome measures in management for our clinic's subset of T2DM clinic patients who meet insulin criteria.

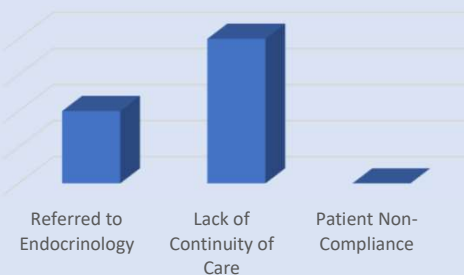
Of the 35 possible providers onsite between attending physicians and resident physicians, 7 provided surveyed responses for the study. There were 215 identified diabetic patients at HFMC, of which 83 met criteria for uncontrolled T2DM and guidelines for starting insulin (A1c>9).

## Results

Of the 7 surveyed responses available, 3/7 providers demonstrated strong understanding of national insulin guidelines and were noted to have managed more T2DM patients compared to the other 4/7, with more knowledgeable providers documenting management of at least 6 to 10 T2DM patients and often 16+ T2DM patients. The most common barriers identified included "difficulty with patient monitoring and education" (4/7) and "not having proper resources such as a diabetic educator" (4/7). Opportunities to manage T2DM patients who meet criteria was also surveyed with a majority of responses (4/7) citing "lack of continuity of care" as a barrier to closing provider knowledge gaps and hesitancy.  $\chi^2$  test analysis between number of patients managed and physician knowledge gap was 0.27.



## Lack of Opportunities in Managing Insulin due to:



## Conclusions

The study demonstrated that there are knowledge gaps in physician understanding of national insulin guidelines, with direct correlation between physician comfort and knowledge and the amount of uncontrolled T2DM actively managed in each physician's patient panel. Further identified barriers with provider/patient education, monitoring, lack of resource, and opportunity limitations with lack of continuity have been identified as areas of improvement to help improve physician knowledge and comfort. Our results were not statistically significant, likely due to small sample size. Educational resources and conference have incorporated in order to improve insulin management knowledge gaps and comfort with ultimate goals to improve long-term outcomes in our clinic's subset of uncontrolled T2DM patients.

## Reference

Balogh, E. G., Perez-Nieves, M., Cao, D., Hadjiyianni, I. I., Ashraf, N., Desai, U., Snoek, F. J., & Sturt, J. A. (2020). Key Strategies for Overcoming Psychological Insulin Resistance in Adults with Type 2 Diabetes: The UK Subgroup in the EMOTION Study. *Diabetes therapy: research, treatment and education of diabetes and related disorders*, 11(8), 1735–1744. <https://doi.org/10.1007/s13300-020-00856-4>

Berard, L., Antonishyn, N., Arcudi, K., Blunden, S., Cheng, A., Goldenberg, R., Harris, S., Jones, S., Mehan, U., Morrell, J., Roscoe, R., Siemens, R., Vallis, M., & Yale, J. F. (2018). *Insulin Matters: A Practical Approach to Basal Insulin Management in Type 2 Diabetes*. *Diabetes therapy: research, treatment and education of diabetes and related disorders*, 9(2), 501–519. <https://doi.org/10.1007/s13300-018-0375-7>

Delamater, A. M. (2006, April 1). Improving patient adherence. American Diabetes Association. Retrieved April 21, 2022, from <https://diabetesjournals.org/clinical/article/24/2/71/1610/Improving-Patient-Adherence>