



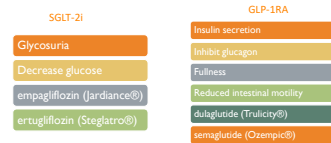
Management of Uncontrolled T2DM with Combination Therapy with Metformin and/or GLP-1RA/SGLT-2i

COHORT X

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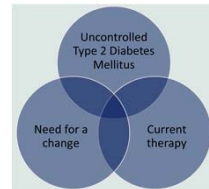
Background/Significance

- Diabetes is a chronic metabolic disease associated with high rates of morbidity and premature mortality
- T2DM is a global healthcare priority
- Projected to increase from 360 million individuals in 2011 to 552 million by 2030
- Uncontrolled T2DM leads to cardio-renal diseases, retinopathy, and neuropathy
- Treatment has evolved, new drugs are available to improve glycemic control and reduce incidence and progression of complications
- GLP1-RA and SGLT-2i in combination with metformin are now considered first-line treatment for uncontrolled T2DM
- The mechanism of action complements each other in glycemic control and preventing microvascular complications
- The purpose of this QI Project is to introduce combination therapy with metformin and GLP-1RAs or SGLT-2is



10-Day Reflective Practice

- My review of the 10-day reflective practice log highlighted the variety of chronic medical conditions experienced by the patients in my primary care practice in rural New Mexico
- Patient data was recorded and organized by the nursing process including assessment, diagnosis, treatment/intervention, and follow-up
- My findings revealed that current therapeutic strategies used to manage T2DM were not fully effective and might benefit from a change in practice
- My patients deserve to have access to optimal therapy that will prevent or reverse the complications associated with T2DM.



Project Structure

QI Proposal and Work Letter

IRB at UTEP/Letter

Work Setting and Resources

PICOT Question

The PICOT question guiding the QI Project was as follows:

- P:** Patients 18–80 years of age who have been diagnosed with uncontrolled T2DM and managed with metformin
- I:** Addition of a GLP-1RA and/or an SGLT-2i to metformin (i. e., combination therapy)
- C:** Monitor blood glucose via HbA1c levels
- O:** Reduction in HbA1c levels
- T:** Four weeks



Literature Review



- A Cochrane database search provided me with evidence-based literature to support the proposed QI Project.
- A primary search resulted in nine articles that supported my selected intervention.
- The secondary selection was somewhat more difficult due to the comparatively large amount of evidence-based material available.
- Several systematic reviews and meta-analyses of RCTs consider the efficacy, safety, and tolerability of GLP-1RA and SGLT-2is.
- The overall conclusion is that use of these drugs in combination with metformin has been proven to be effective.
- The results of the RCTs reviewed in these studies are reliable and provide high efficacy and internal validity.
- The studies and meta-analyses focused on GLP-1RAs and SGLT-2is verify that these RCTs were the results of well-conducted trials with rigorous methodology in controlled clinical settings.
- The guidelines consider all data from the published RCTs and provide results that can be used by medical providers as part of a highly structured approach for clinical practice.

QI Project Implementation

- 56 m, GLP1-RA+SGLT-2i, S/E
- 61 f, GLP1-RA
- 55 f, GLP-1RA+SGLT-2i
- 57 m, SGLT-2i
- 49 f, SGLT-2i
- 53 m, GLP1-RA
- 57 m, GLP-1RA, S/E
- 50 f, GLP-1RA, S/E
- 77 m, GLP-1RA
- 46 F, GLP-1RA

Theoretical Framework/QI Model



Outcomes and Evaluation

