

GLP-1RA and SGLT2i Prescribing Patterns Among Primary Care Prescribers

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Background

- GLP-1 receptor agonists overcome the degradation that exogenous GLP-1 is subject to, resulting in decreased glucagon secretion, improved insulin sensitivity, decreased A1c, slowed gastric emptying and increased satiety^{1,2}
- Sodium-glucose cotransporter-2 (SGLT2) inhibitors are a class of drugs that lower blood glucose by blocking the SGLT2 cotransporters in the proximal tubules of the kidney, preventing renal tubular glucose reabsorption without stimulating the release of insulin^{1,2}
- Incorrect dose titration of GLP-1 receptor agonist and SGLT2 inhibitor agents can result in increased incidence of side effects, mostly gastrointestinal related, and can cause premature discontinuation of the medication²
- Concurrent use of GLP-1RA with dipeptidyl-peptidase-4 (DPP-4) inhibitors yields no additional clinical benefit and therefore is not recommended by the American Diabetes Association^{1,3}
- Discontinuation of DPP-4i is recommended to reduce pill burden and potential cost to the patient^{2,3}

Objective

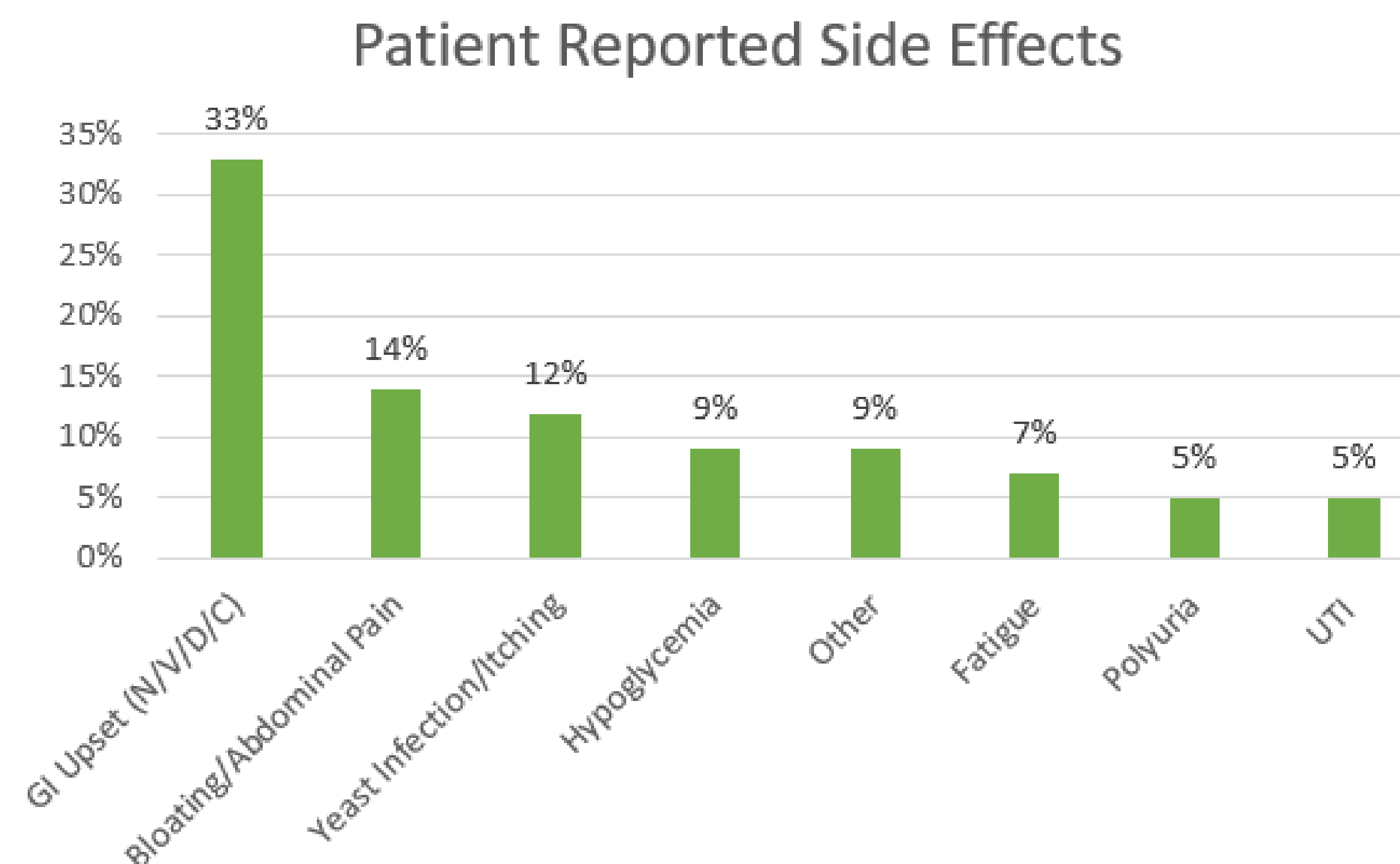
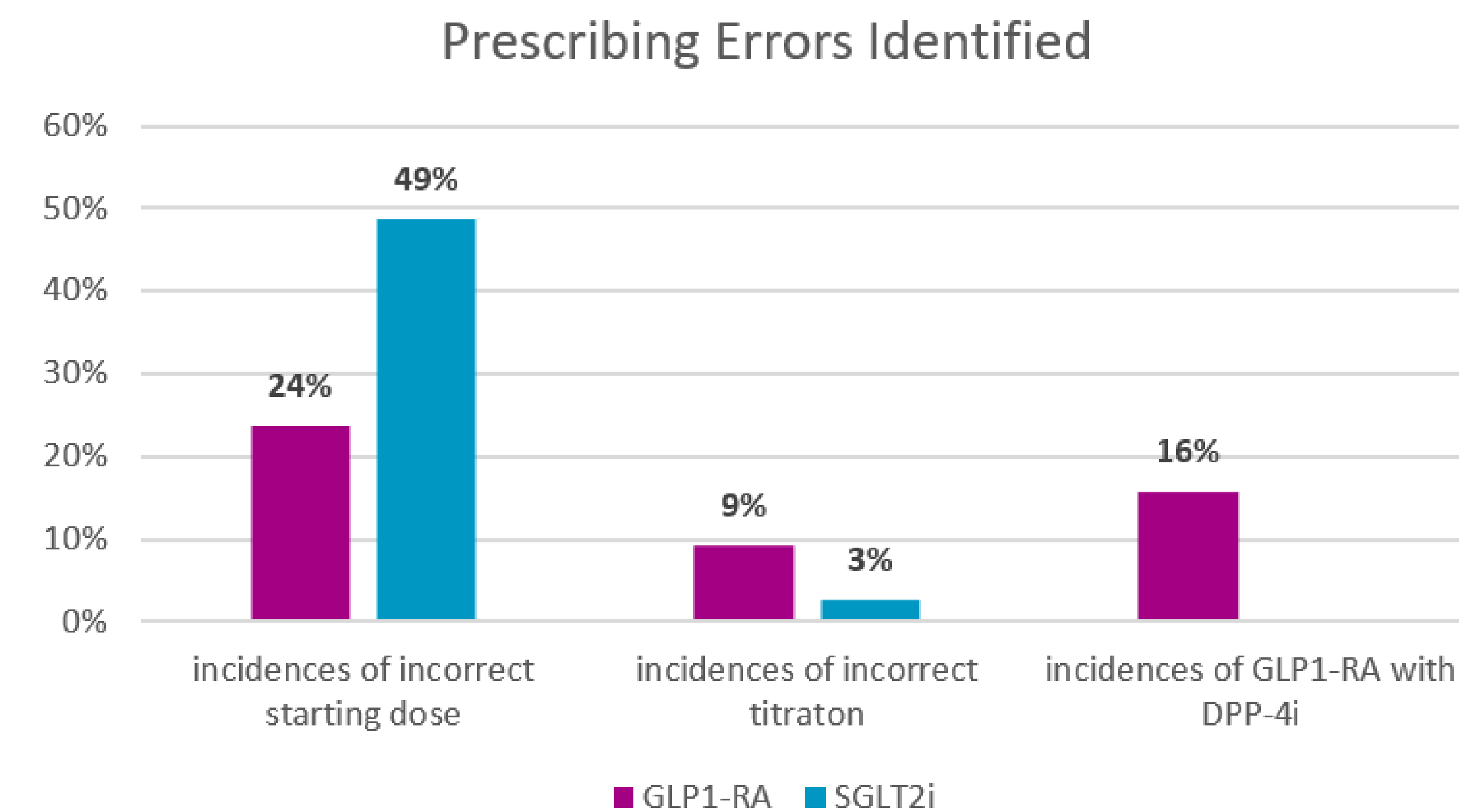
- The primary objective of this single-center, retrospective, observational study is to identify and categorize prescribing patterns for GLP-1RA and SGLT2i among primary care prescribers

Methods

- The number of incidences as well as patient outcomes were reported
- 285 patients were screened and 150 patients were deemed eligible based on the following criteria:
 - Hgb A1c >6.0%
 - Age >18 years old
 - Diagnosed with Type 2 diabetes
 - On GLP-1 receptor agonist and/or SGLT2 inhibitor
- Patients were excluded based on the following criteria:
 - Followed by endocrinology

Results

- In total, 69 out of 150 (46%) patients prescribed a GLP-1 RA or SGLT2i by a PCP had an error in either dosing, titration, duration or concurrent use of DPP4 with GLP-1
- Note some patients had more than one prescribing error
- Of the errors reported, 22 patients reported multiple significant side effects



Discussion

- The most frequent prescribing error was incorrect starting dose (73%) followed by concurrent use of GLP-1 receptor agonists with DPP-4 inhibitors (16%) and incorrect titration (12%)
- Of the errors reported, 22 patients (31%) reported multiple bothersome side effects
- The most common side effect was GI upset (33%) followed by bloating and abdominal pain (14%), yeast infections and itching (12%), hypoglycemia (9%), other (i.e. headache, psychiatric changes and unintended weight loss, vision changes) (9%), fatigue (7%), polyuria (5%) and UTI (5%)
- Of the 22 patients who reported multiple side effects, 11 (50%) discontinued the offending medication and experienced a subsequent increase in A1c and blood glucose levels

Conclusion

- The data confirms:
 - Many prescribers are unaware of correct starting doses and titration methods for GLP-1 and SGLT2 medications
 - Incorrect prescribing of medications can result in intolerable side effects for patients resulting in discontinuation
- There is an opportunity to provide prescriber education regarding the prescribing of these medications to reduce potential side effects
- Providing pharmacist intervention in the future may be helpful in reducing frequency of prescribing errors

References

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Disclosures

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:
 Jacqueline Callaghan: nothing to disclose Katarzyna Szablowski: nothing to disclose
 Monique Bennett-Bonn: nothing to disclose Brianne Nichols: nothing to disclose