

A Deprescribing Initiative to Reduce Risk of Hypoglycemia in Long-term Care Residents

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Introduction and Objectives

- Polypharmacy affects many older adults in Long Term Care (LTC) and can lead to adverse drug events like hypoglycemia.
- The American Diabetes Association (ADA) recommends higher hemoglobin A1c targets for older adults with multiple comorbidities and poor functional status.
- The Drive to Deprescribe initiative targets reduction of antihyperglycemic agents to improve quality of life and reduce risk of hypoglycemia for LTC residents.
- Our primary objective was to safely change, reduce, or stop one or more antihyperglycemic medications in at least 25% of at-risk patients. The secondary objective was to reduce unnecessary blood glucose checks and insulin administrations.

Methods

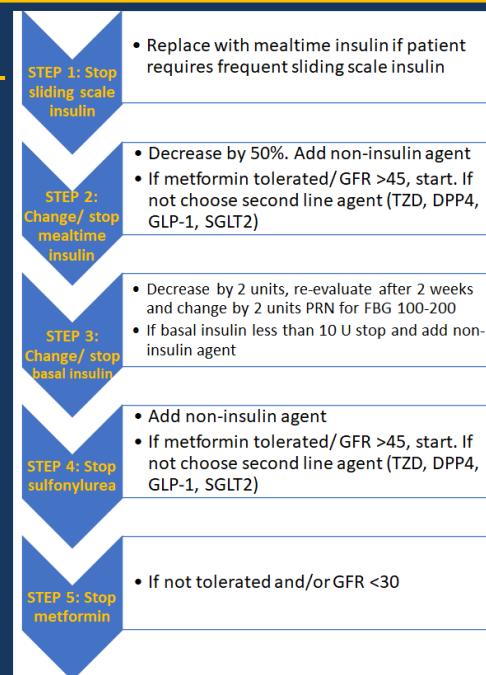
- 215-bed nursing home in Southeast Michigan
- 21 LTC residents on antihyperglycemic agents
- PDSA (Plan, Do, Study, Act) model used

Data for 30 days pre-/post-intervention:

- Hypoglycemic events (<70 mg/dL)
- Pre-hypoglycemic events (70-100 mg/dL)
- Hyperglycemic events (>250 mg/dL)
- Recent hemoglobin A1C
- Average number blood glucose checks/day
- Average number insulin administrations/day

Deprescribing plan implemented (see right)

- Monitoring for hypo-/hyperglycemic events
- HbA1C 90 days post intervention



Results

Figure 1. Number of antihyperglycemic agents before and after deprescribing intervention

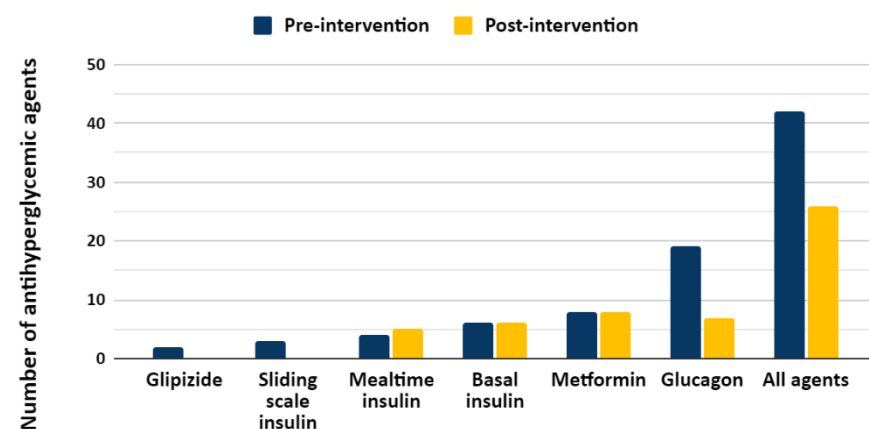
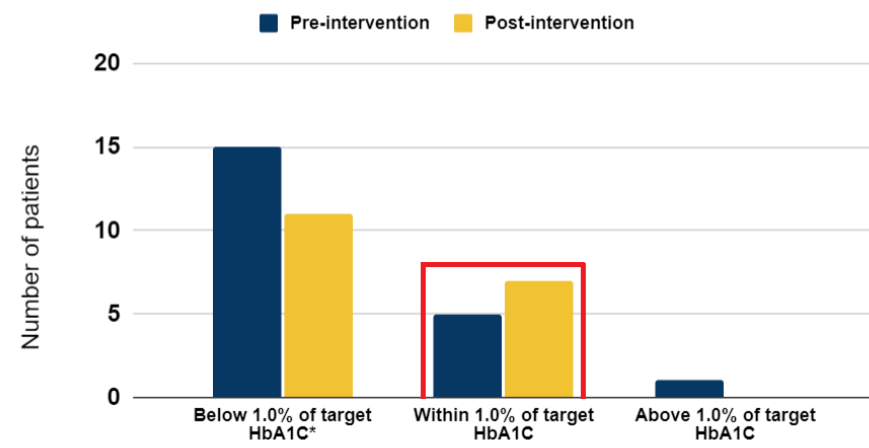


Figure 2. Number of patients below, at or above target hemoglobin A1C before and after intervention



*Target HbA1C is based on ADA standards of medical care for diabetes in older adults.

Discussion

- Implementation of individualized deprescribing plans led to stopping one or more unnecessary antihyperglycemic agents in 81% (17/21) of patients, decreased frequency of BG checks in 57% (12/21) and discontinuation of sliding scale insulin by 100% (3/3).
- Three participants were not included in the post-intervention results as two passed away and one declined to participate.
- After discontinuing unnecessary BG checks, the average number of BG checks per day over 30 days decreased from 0.85 to 0.46.
- More patients were at their target HbA1C after compared to before the intervention [39% (7/18) vs 24% (5/21)]. Following the intervention, most patients remained below target HbA1C [61% (11/18)].
- Study limitations included: Difficulty obtaining accurate records of BG checks due to multiple recording sites. Limited time and resources made it challenging to obtain buy-in from patients and providers.

Conclusions

- Individualized deprescribing plans led to reduction of antihyperglycemic agents, decrease in unnecessary BG checks, and improvement in achieving target HbA1C.
- Benefits of this intervention likely include improved quality of life for patients, a decrease in nursing duties, and cost reduction.
- Future studies should focus on standardizing documentation of BG, hypoglycemia protocols, and continued education and efforts towards deprescribing in LTC settings.

We acknowledge the efforts of front-line healthcare workers in LTC. The authors have no financial interests that relate to the research presented in this poster. For questions, contact Vanessa Ogundipe, MD vogundip@med.umich.edu