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

• 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.

Discussion

• Polypharmacy affects many older adults in LTC and can lead to adverse drug events like hypoglycemia.
• The 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.

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.

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