

Nursing Home Calls: What to do When the Sugars Are Too High or Too Low?

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Introduction

- Diabetes has a high prevalence in long-term care facilities but also carries significant disease burden and comes with high costs.
- Many older adults with diabetes cared for in nursing homes (NH) are treated with sliding scale insulin (SSI) and oral hypoglycemic medications.
- Many nursing home residents (not just long term care) prefer comfort based care and the goals are to avoid hypoglycemia, but some NH residents prefer life prolonging care, despite risks.
- A main goal for diabetes treatment for patients in long term care is early recognition and treatment of hypoglycemia and hyperglycemia, as prevention of hypoglycemic episodes and severe hyperglycemia can best improve the patient's quality of life.
- No standardized approach for covering providers to deliver diabetic care congruent with patient preferences (or optimal care).

Aim/Goal

- We describe the frequency of telephone calls to covering providers for hyperglycemic and hypoglycemic episodes at two large academic NHs (Hebrew SeniorLife and New Bridge on the Charles); the types of interventions implemented, and the proportion of residents with hypoglycemia on SSI.
- We identify some areas where one can intervene to improve glycemic management

The Team

- Erika Leung, MD, MSc; Sandra Shi, MD; Soumya Chandrasekaran, MD- Geriatric Medicine Fellows
- Sarah Berry, MD- Geriatrician/Attending at Hebrew SeniorLife and BIDMC Geriatrics
- For the next steps in this project, we plan on involving nursing, pharmacy and various other disciplines to aid with implementation

The Interventions

- Preliminary data has been analyzed and we have identified areas where interventions are possible in order to improve management for nursing home phone calls regarding hyperglycemia and hypoglycemia
- Will make a list with the above graph and streamline management for hyperglycemic and hypoglycemic calls from the nursing home for improved outcomes
- We plan to compare outcomes by looking at outcomes during a 3 month period post-intervention

Results/Progress to Date

Table 1: Number of Calls During August-October 2017 Regarding Blood Sugars

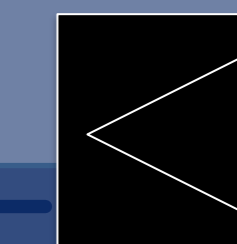
	Hypoglycemia	Hyperglycemia	Total
Number of Calls	37	14	51
	Post Acute Care	Long Term Care	Total
Location of Calls	26	25	51

Table 2: Number of Calls for Hypoglycemia and the Interventions Made

Calls for Hypoglycemia (n=12)	
Symptomatic	6/12
Sliding Scale Insulin Scheduled at Mealtime	8/12
Intervention	
Orange juice/glucagon/D5 drip	6/12
Skipping next insulin dose	6/12
Insulin Reduction	4/12

For more information, contact:

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More Results/Progress to Date

Figure 1: Identified Areas Where We Can Intervene and Make Improvements

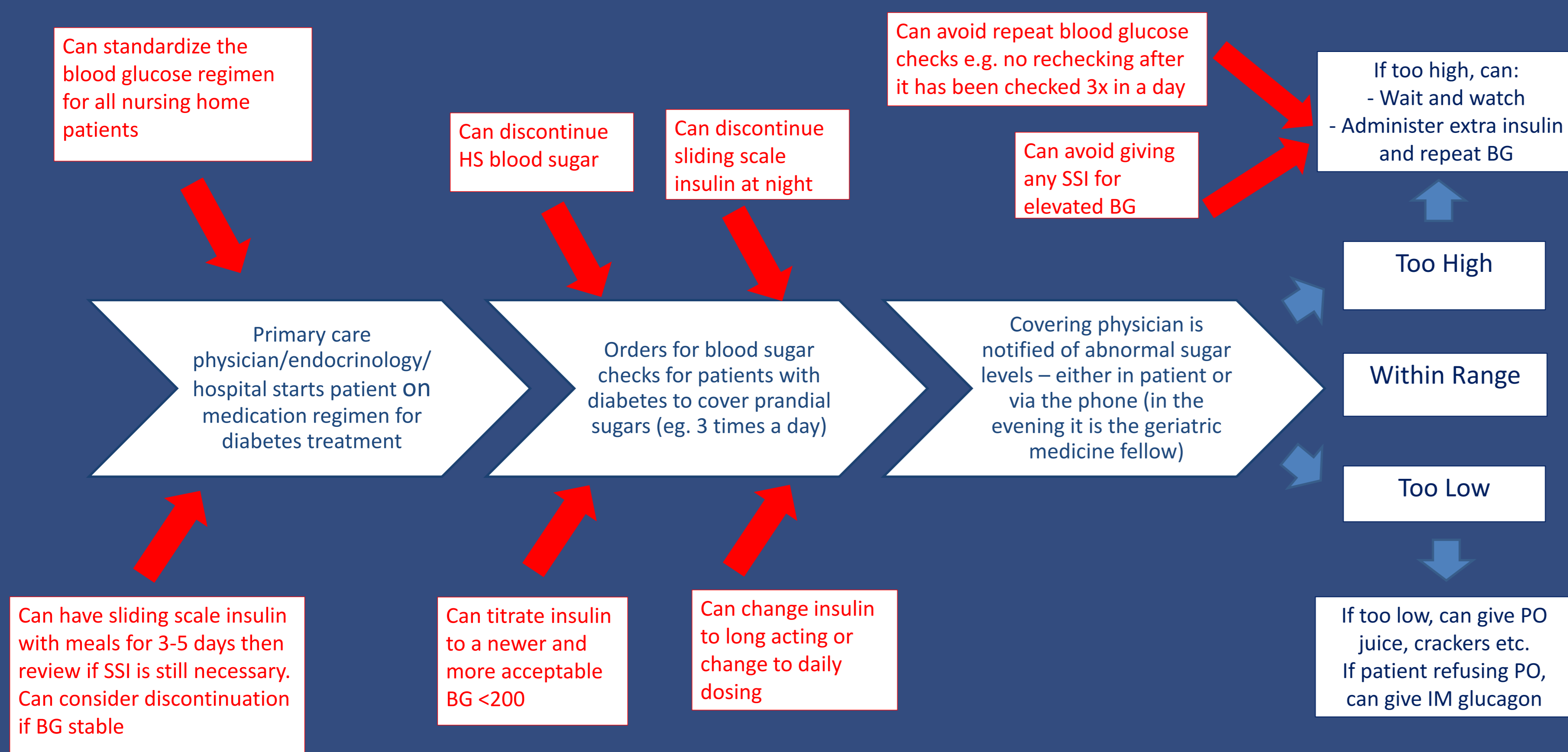


Table 3: Number of Calls for Hyperglycemia and the Interventions That Were Made

Management for Hyperglycemia (n=37)	
No change in management	30/37
Sliding scale insulin was added or increased	5/37
Timing of insulin administration changed	1/37
Patient declined sliding scale insulin	1/37
Timing of repeat finger stick was changed	2/37
Repeat calls for hyperglycemia within 24 hours during fellow's call coverage	3/37 (4 calls)

Two patients did not have sliding scale insulin, one patient had sliding scale insulin.

Two patients were given their long acting insulin doses early

Lessons Learned

- Given the extreme variability regarding management of abnormal blood glucose levels in both post-acute and long term care settings, it is important to standardize the approach to managing hyperglycemic and hypoglycemic events in the nursing home setting.
- Our findings of frequent calls for hyperglycemia will inform an evidence based, standardized approach to managing abnormal blood sugars in this setting.

Next Steps

- We will disseminate information regarding intervention and areas of improvement to this year's and next year's geriatric medicine fellows.
- We will make a list to help streamline management for hyperglycemic and hypoglycemic calls from the nursing home for improved outcomes We plan to compare outcomes by looking at outcomes during a 3 month period post-intervention including episodes of hyperglycemia and hypoglycemia, symptomatic events, number of calls and reason for calls and number of times SSI is used.

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