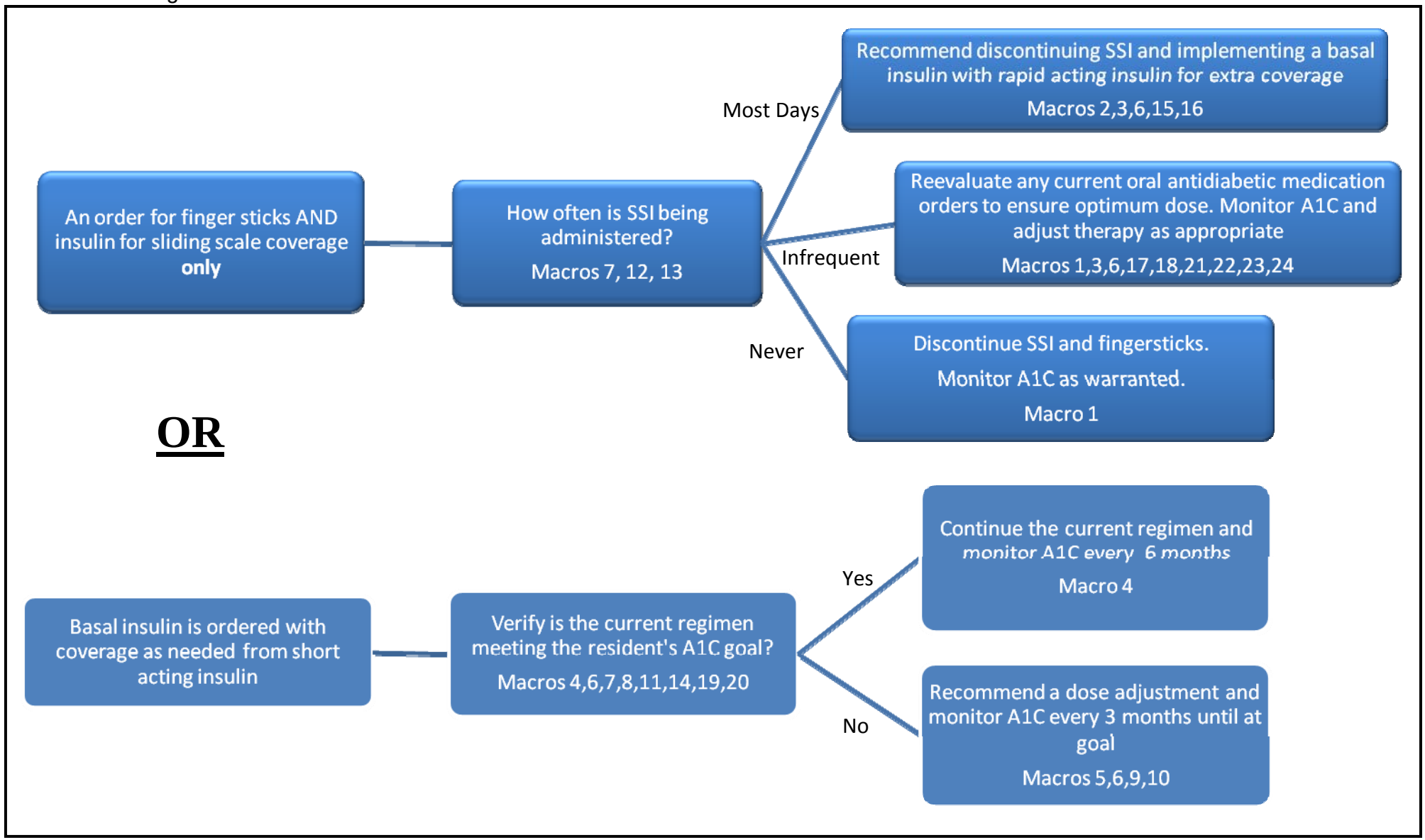
Algorithm to Reduce Use of Sliding Scale Insulin (SSI)

*Macros used to address diabetes have been referenced in the algorithm

HbA1c Goals:

- Residents who are functional, cognitively intact, and have significant life expectancy should follow the ADA's A1C goal of <7%
- Residents with a history of severe hypoglycemia, limited life expectancy (<5 years), or extensive co-morbid conditions should have an A1C goal of <8%



MACROS TO ADDRESS DIABETES

1. CATEGORY: Clinical Monitoring
   SUBCATEGORY: Diabetes
   TITLE: Discontinue BS checks and SS order
   Key / Description: Sliding scale

   This resident has an order for sliding scale insulin and blood glucose checks «» times daily. Review of recently documented results indicates blood sugar is within normal limits and no insulin has been needed within the past «» days. Please consider discontinuing the sliding scale insulin order and blood glucose checks «» times daily. Nursing will monitor for signs and symptoms of hyper- and hypoglycemia.

2. CATEGORY: Clinical Monitoring
   SUBCATEGORY: Diabetes
   Title: Diabetes Assessment
   Key / Description: Sliding scale

   A diabetic assessment was completed during the medication regimen review. Please consider the following recommendations to help this resident reach target goals.
   Resident's last HgbA1C done «» was «». Target is <7.0.
   BP average is «».
   Lipid profile done «» is not within target range <100.
   This resident is not receiving aspirin for CVD prophylaxis.
   Current hyperglycemic treatment orders include: «»
   Sliding Scale insulin order should be converted to a fixed daily insulin dose to minimize the need for correction dosing and reduce the risk of hypoglycemia.

   Please consider «»

3. CATEGORY: Therapeutic Interchange
   SUBCATEGORY: Lantus or Diabetes
   TITLE: Sliding scale to basal
   Key / Description: Sliding scale

   This resident's insulin orders include «» for sliding scale coverage. CMS guidelines state that continued or long-term need for sliding scale insulin for non-emergency coverage may indicate inadequate blood sugar control. Recent glucose readings for the past «» days reflect «» with coverage «».

   Please consider replacing the sliding scale regimen with «» to control blood glucose levels appropriately.

4. CATEGORY: Clinical Monitoring
   SUBCATEGORY: Diabetes
   TITLE: Reduce frequency of BS Checks
   Key / Description: Glucose

   This resident is receiving «» with an order to test blood glucose «» times daily. Results indicate resident is at goal and stable at this time. Please consider reducing the blood glucose checks to once daily prior to breakfast.

5. CATEGORY: Clinical Monitoring
   SUBCATEGORY: Diabetes
   TITLE: Post Prandial BS Checks
   Key / Description: Glucose

   This resident is receiving «» with an order to test fasting blood glucose «» times daily. A1c results indicate resident is not at goal at this time. Please consider reducing the blood glucose checks to twice daily before a meal and once daily two hours after the largest meal of the day to monitor post prandial blood glucose levels.

6. CATEGORY: Lab Monitoring **NEW**
   SUBCATEGORY: Diabetes
   TITLE: HgbA1c
   Key / Description: Glucose

   Please consider quarterly HemoglobinA1c to monitor this resident's progress reaching blood glucose target goal.

7. CATEGORY: Documentation /Charting
   SUBCATEGORY: Blood Glucose Monitoring
   TITLE: Blood glucose checks
   Key / Description: Glucose

   This resident has an order to monitor blood glucose «». Results were not charted on «». Please follow up.

8. CATEGORY: Clinical Monitoring
   SUBCATEGORY: Endocrine and metabolic
   TITLE: Endocrine and metabolic
   Key / Description: Glucose

   This resident is currently being treated with «», an atypical antipsychotic, and may be experiencing adverse metabolic or endocrine effects. For this class of drugs, the published literature supports increased awareness and monitoring for adverse events including vital signs, BMI, FBS/diabetes, waist circumference; blood pressure; mental status, extrapyramidal symptoms (EPS) such as an abnormal involuntary movement scale (AIMS) . Weight should be assessed prior to treatment, at 4 weeks, 8 weeks, 12 weeks, and then at quarterly intervals. Consider titrating to a different antipsychotic agent for a weight gain =5% of the initial weight.

9. CATEGORY: Dose Clarification
   SUBCATEGORY: Lantus
   TITLE: Adjust basal Lantus dose
   Key / Description: Glucose

   This resident is currently receiving Lantus «». Recent fasting blood sugars have ranged at «» and last A1c was «» on «». Please consider increasing the Lantus dose by 2 units to a total dose of «» units SQ daily (at HS). This dose may further be increased by 2 units every 3 days until at or near goal of 90-130 mg/dL. If an alternate or less aggressive goal is more appropriate for this resident please provide the blood glucose range for goal in the reply below.

10. CATEGORY: Dose Clarification
    SUBCATEGORY: Levemir
    TITLE: Adjust Basal Levemir
    Key / Description: Glucose

    This resident is currently receiving Levemir «». Recent fasting blood sugars have ranged at «» and last A1c was «» on «». Please consider increasing the Levemir dose by 3 units to a total dose of «» units SQ daily (at HS). This dose may further be increased by 3 units every 3 days until at or near goal of 90-130 mg/dL. If an alternate or less aggressive goal is more appropriate for this resident please provide the blood glucose range for goal in the reply below.

11. CATEGORY: Order Clarification
    SUBCATEGORY: Blood sugar parameters
    TITLE: BS Parameters
    Key / Description: Glucose

    Please clarify the finger stick order to include blood sugar parameters in which to notify the physician

12. CATEGORY: Order Clarification
    SUBCATEGORY: Glucagon parameters
    TITLE: Glucagon parameters
    Key / Description: Glucose

    This resident has an order for Glucagon, however the parameters for use need to be specified. Suggest clarifying the order to Glucagon 1mg SQ/IM PRN blood glucose/finger stick level <50.

13. CATEGORY: Evaluate for continued need
    SUBCATEGORY: Glucagon
    TITLE: Glucagon usage
    Key / Description: glucagon or glucose

    This diabetic resident has experienced a frequent number of hypoglycemic episodes in the past «» days requiring «» number of glucagon injections or glucose gel dosing to help the resident's glucose level return to normal range. Please evaluate current diabetes therapies and blood glucose monitoring orders and consider «».

14. CATEGORY: Untreated Conditions
SUBCATEGORY: Diabetes
TITLE: Diabetes Lipids Targets
Key / Description: Diabetes

This resident is «» YO with Type «» diabetes. A lipid panel has not been done «» (has been done) and the resident is not «» (is) on the statin «». The primary goal of the 2006 ADA guidelines in adults is to lower LDL-C levels to < 100 mg/dL. Please consider adding a fibrate or increase statin dose. «»

15. CATEGORY: Untreated Conditions
SUBCATEGORY: Diabetes
TITLE: Add basal
Key / Description: Insulin

This «» YO resident with Type 2 diabetes is currently receiving «». Glucose control goals are not being met, as reflected by A1c of «» on «» (goal <7%), and recent fasting blood sugars ranging «» (goal 90-130mg/dL).
Please consider:
a. Initiating basal insulin therapy such as Lantus (insulin glargine) 10 units SQ at bedtime (or 0.2 units/kg body weight if less than 50kg/110 lbs).
b. Sulfonylureas or other secretagogues should be tapered, since beta-cell activity declines over time.
c. Titrate Lantus according to response, adding or subtracting 2 units every 3 days until FBS at goal of 90-130mg/dL.

16. CATEGORY: Untreated Conditions **NEW**
SUBCATEGORY: Diabetes
TITLE: Add basal insulin
Key / Description: Insulin

This resident has orders for: «»
Recent fasting blood sugars range from «» to «». Most recent HgbA1c, per lab report dated «» was «».
Please consider:
( ) Initiating basal insulin therapy such as Lantus or Levemir 10 units SQ at bedtime (or 0.2 units/kg body weight if less than 50kg/110 lbs).
( ) Titrate «» according to response, until FBS at goal of 90-130mg/dL.
( ) Sulfonylureas or other secretagogues should be tapered, since beta-cell activity declines over time.

17. CATEGORY: Therapeutic Interchange
SUBCATEGORY: Lantus
TITLE: Lantus for TZD
Key / Description: Glucose or insulin

This resident is currently receiving Avandia (rosiglitazone) «». Manufacturer warning information emphasizes that rosiglitazone may cause or exacerbate congestive heart failure in some patients. Avandia is not recommended in patients with symptomatic heart failure. Initiation of Avandia in patients with established NYHS Class III or IV heart failure is contraindicated.

Please evaluate and document below benefit of continuing Avandia therapy with specific monitoring guidelines for nursing staff, e.g., blood pressure, weight changes, edema, and shortness of breath.

You may consider initiating basal insulin therapy. Basal insulin therapy, such as Lantus (insulin glargine) is initiated at 10 units SQ at bedtime (or 0.2 units/kg body weight if less than 50kg/110 lbs). Titrate Lantus according to fasting blood glucose response, adding or subtracting 2 units every 3 days until FBS at goal of 90-130mg/dL. Glucose from meal intake should be covered with rapid acting insulin.

18. CATEGORY: Therapeutic Interchange
SUBCATEGORY: Januvia
TITLE: Januvia for TZD
Key / Description: Glucose or TZD

This resident is currently receiving a thiazolidinedione(TZD) class of medication, «», for glucose control. TZDs are not recommended in patients with symptomatic heart failure, cardiovascular risk factors or those with frequent falls and/or fracture risks. TZDs have been shown to increase the risk for bone fractures by 1.5 to 2.5 fold in both men and women.
Januvia® (sitagliptin), classified as a DPP–IV inhibitor, should be considered as an alternative due to the lack of cardiovascular adverse event risk and minimal incidence of hypoglycemia and is supported by the AACE/ACE treatment algorithm for glycemic control.

Please consider discontinuing «» and beginning Januvia 100 mg orally once daily. Dosing adjustment is needed with renal impairment. For patients with CrCl 30-50 mL/min start Januvia 50mg orally once daily. CrCl < 30 mL/min should start at Januvia 25mg orally once daily. Use with insulin and/or sulfonylureas may require dosage reductions of those medications.

After initiation of Januvia, patients should be observed carefully for signs and symptoms of pancreatitis.

19. CATEGORY: Untreated Conditions
SUBCATEGORY: Diabetes
TITLE: Diabetic nephropathy
Key / Description: ACEI

Current ADA practice guidelines include the addition of an ACE Inhibitor to slow progression of diabetic nephropathy. Since this resident is diabetic, please consider «»

20. CATEGORY: Therapeutic Interchange
SUBCATEGORY: Ramipril
TITLE: ACEI to rampiril
Key / Description: ACEI

This resident currently receives the ACE inhibitor «» once daily. The preferred ACEI is Ramipril. Based on the results of the HOPE trial, Ramipril demonstrated a decrease in all cause mortality in patients 55 years or older at high risk for developing a major cardiovascular event because of a history of coronary artery disease , stroke, peripheral vascular disease, or diabetes accompanied by at least one other cardiovascular risk factor.

Please consider discontinuing «» when current supplies are depleted and begin Ramipril «» once daily.

21. CATEGORY: Inappropriate therapy
SUBCATEGORY: Diabinese
Title: Diabinese
Key / Description: diabetes

This resident is receiving Diabinese (chlorpropramide) «» for diabetes mellitus. This medication is no longer recommended in the elderly due to prolonged duration of action of active metabolites and an increased chance of hypoglycemia, as well as the risk of SIADH. Please consider a change to a shorter acting agents such as glipizide.

22. CATEGORY Inappropriate therapy **Updated**
SUBCATEGORY: Glucophage
Title: Glucophage
Key / Description: diabetes

This resident is receiving Glucophage «» for diabetes mellitus. Metformin is substantially eliminated by the kidney and the risk of lactic acidosis increases with the degree of intrinsic renal disease or impairment. Metformin is contraindicated in residents with renal impairment defined as serum creatinine greater than 1.5mg/dL in males or greater than 1.4mg/dL in females, or a creatinine clearance less than 60ml/min. This resident's current CrCL is «» mL/min. Please evaluate continued use of metformin due to renal impairment in this resident and consider a different oral agent or insulin.

23. CATEGORY: Inappropriate therapy **NEW**
SUBCATEGORY: Glyburide
TITLE: Glyburide
Key / Description: Glyburide

This resident receives glyburide «». Glyburide has a greater risk of severe prolonged hypoglycemia in older adults. Please consider a discontinuing glyburide and begin a shorter acting agent such as glipizide.

24. CATEGORY: Dose Clarification **NEW**
SUBCATEGORY: Renal Impairment
TITLE: Januvia
Key / Description: Januvia

This resident is currently receiving Januvia «». According to lab results dated «», CrCl/SrCR is ««mL/min. Please consider a dose adjustment to Januvia «» mg daily.
For patients with CrCl 30-50 mL/min start Januvia 50mg orally once daily. CrCl < 30 mL/min should start at Januvia 25mg orally once daily.