

# Using the Type 2 Diabetes Glycemic Treatment Algorithm

## Purpose

- Assist provider decision-making for the treatment of hyperglycemia in patients with type 2 diabetes.
- Serves as a recommended pathway for treating hyperglycemia.
- Encourages rapidly adding additional therapy if the patient does not achieve A1C goal.

## Creation

- Created by a collaborative group of physicians, pharmacists, and diabetes educators working to improve care in members with diabetes.
- Based on recommendations from the American Diabetes Association and the American Association of Clinical Endocrinologists.
- Approved by the Priority Health Pharmacy and Therapeutics (P&T) Committee.
- Updated in January 2009 to reflect recent recommendations published by the American Diabetes Association.

## What Changed with the Algorithm in 2009?

- The algorithm now classifies recommendations as “Well validated” and “Less well validated”.
- It includes recommendations on when to use GLP-1 (e.g. Byetta) therapy.
- And it addresses recent safety concerns with TZDs, by not recommending Avandia be used. Actos is still included as a “less well validated” option.

## How to use this tool

- The algorithm is a five step approach to managing hyperglycemia.
- Treatment decisions should be made based on A1C in addition to patient self-monitored blood glucose results.
- Assure that the dosages of medications are maximized in each step prior to advancing to the next step.
- Steps of therapy are additive, as the medications in the algorithm have synergistic effects when used together. Do not discontinue previous steps of therapy when advancing through the algorithm unless otherwise noted.
- Refer to “Insulin Initiation Guidelines for Type 2 Diabetes Mellitus” for guidance on dosing insulin.

*Note: All of the medications in the algorithm are available on the Priority Health formulary. With the exception of Byetta, no drugs in this algorithm require prior authorization or have step therapy requirements. Click on the “approved drug list” for details on what is required for Byetta.*

## Steps of therapy

### After diagnosis is made, start with Step 1 recommendations:

- Lifestyle modifications
- Referral to diabetes self-management training
- Metformin (if A1C < 10%) or insulin (if A1C ≥ 10%)
- Titrate medication dose
- Recheck A1C after three months

### Add Step 2 therapy if A1C is ≥ 7.0% (continue Step 1 therapy):

- Well Validated Core Therapies
  - Insulin is the most effective option
  - Sulfonylurea is the least expensive option
- Less Well-Validated Therapies
  - Actos has a low risk for hypoglycemia
  - Byetta has a low risk for hypoglycemia and may be an appropriate option for patients with an A1C of less than 8.0%.
- Titrate medication dose
- Recheck A1C after three months

**Continue adding therapy as outlined in steps 3-5 if the patient does not achieve an A1C.**

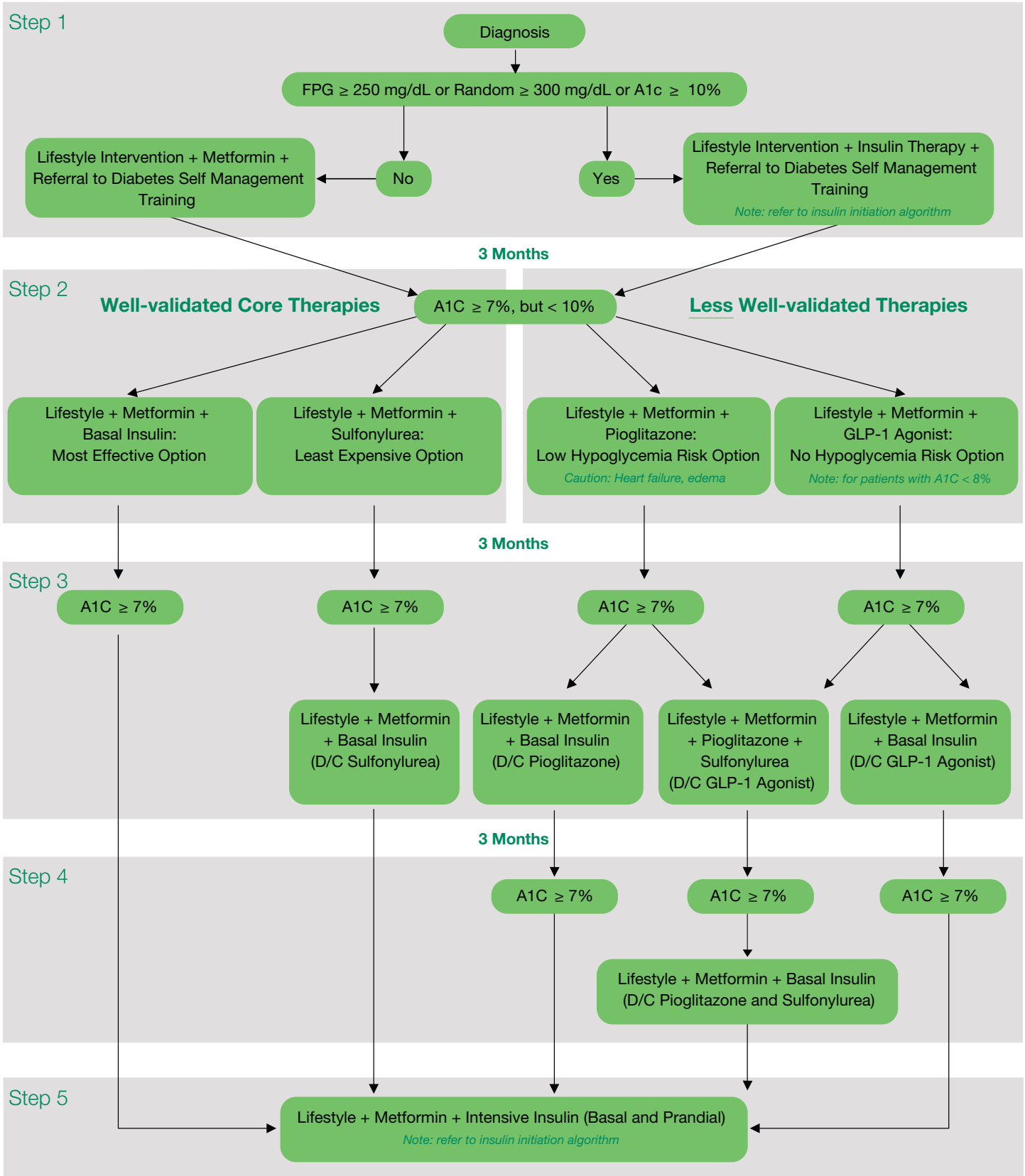
## Limitations of the Algorithm:

- This algorithm recommends addition of therapy based on an A1C goal of less than 7%.
- While this recommendation is appropriate for the majority of patients, Priority Health recognizes it may not apply to all patients.
- Recent evidence suggests a goal A1C of less than 8% may be appropriate for certain patients, including those with the following conditions: history of CABG or PTCA; diagnosis of IVD, heart failure, MI, and ESRD.
- Additionally, According to the American Diabetes Association, DPP-4 inhibitors, pramlintide, alpha-glucosidase inhibitors, and the glinides are not included in this algorithm, owing to their generally lower overall glucose-lowering effectiveness, limited clinical data, and/or relative expense.
- However, these therapies be appropriate choices in select patients.
- There is insufficient clinical use to be confident regarding the safety of GLP-1 agonists.

*If you have questions, contact:*

*Erica Clark, Pharm.D., Sr. Clinical Pharmacy Manager  
616 464-8690 [erica.clark@priorityhealth.com](mailto:erica.clark@priorityhealth.com)*

# Type 2 Diabetes Glycemic Treatment Algorithm



- Note:**
1. Treatment decisions should be made based on A1C in addition to patient self-monitored blood glucose results. Adapted from Diabetes Care 2008;31:1-11
  2. Assume that dosages of medications are maximized in each step prior to advancing to the next step.
  3. Refer to "Insulin Initiation Guidelines for Type 2 Diabetes Mellitus" for guidance on dosing insulin.
  4. Sulfonylureas other than glyburide and chlorpropamide should be used.
  5. According to the American Diabetes Association, DPP-4 inhibitors, pramlintide, alpha-glucosidase inhibitors, and the glinides are not included in this algorithm, owing to their generally lower overall glucose-lowering effectiveness, limited clinical data, and/or relative expense. However, they may be appropriate choices in select patients. There is insufficient clinical use to be confident regarding the safety of GLP-1 agonists.