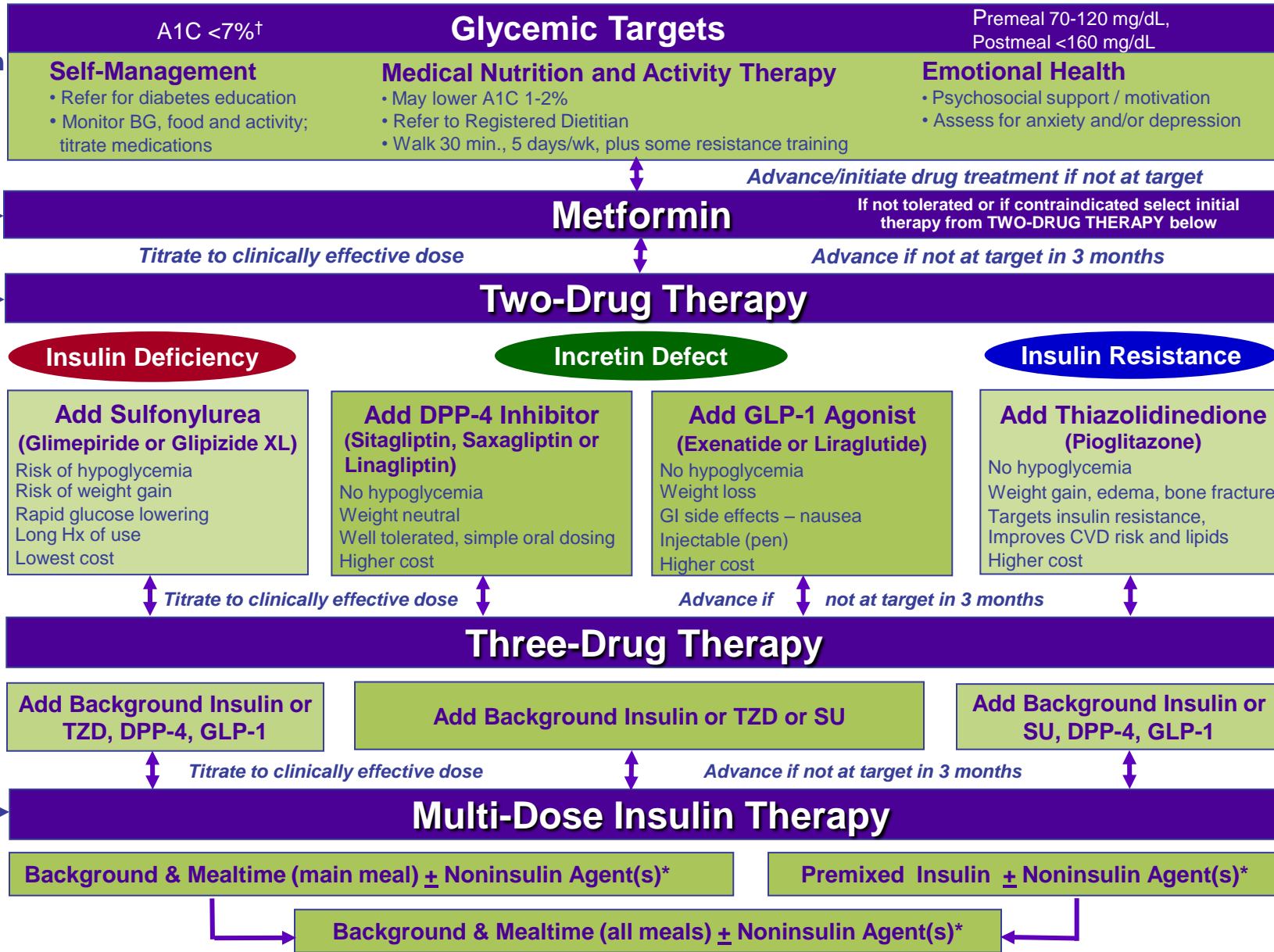


IDC Type 2 Diabetes Glycemic Control Algorithm



A1C 7-8.9%
 FPG 150-200 mg/dL
 RPG 200-300 mg/dL
 (Strongly consider metformin if A1C ≥6.5%)

A1C 9-11%
 FPG 201-300 mg/dL
 RPG 301-350 mg/dL

A1C >11%
 FPG >300 mg/dL
 RPG >350 mg/dL
 Start Insulin (Multi-Dose Insulin Therapy preferred)

† **Individualize A1C target:** consider A1C <8% for those with major medical comorbidities, hypoglycemia unawareness, frail elderly, or those whose therapy has been significantly intensified without seeing an improvement in A1C; consider lower A1C (closer to 6%) for recently diagnosed patients. * Discontinue sulfonylureas; recommend adding or maintaining metformin; consider maintaining DPP-4 inhibitor or GLP-1 agonist if positive response to drug; discontinue thiazolidinedione in most cases.

IDC Type 2 Diabetes Glycemic Control Algorithm

Abbreviations and Clinical Considerations

Abbreviations

A1C, Glycosylated hemoglobin A_{1c}; **CV**, Cardiovascular; **DPP-4**, Dipeptidyl peptidase-4 inhibitor (sitagliptin, saxagliptin and linagliptin); **FPG**, Fasting plasma glucose; **GI**, Gastrointestinal; **GLP-1**, Glucagon-like peptide-1 receptor agonist (exenatide and liraglutide); **RPG**, Random plasma glucose; **SMBG**, Self-monitored blood glucose; **SU**, Sulfonylurea; **TZD**, Thiazolidinedione

Clinical Considerations:

1. Check kidney and liver function prior to initiation of noninsulin therapies.
2. Pioglitazone recommended over rosiglitazone due to concerns of increased CV risk with rosiglitazone.
3. Long-acting background (basal) insulins detemir and glargine reduce risk of nocturnal hypoglycemia compared to intermediate-acting NPH; some patients may benefit from BID dosing of long-acting insulin.
4. If a clinically stable patient with A1C >11% and consuming excessive sweetened beverages, consider starting noninsulin agents and re-evaluate need for insulin in 1-2 weeks.
5. Pramlintide may be added to mealtime insulin.
6. Background and mealtime insulin regimen is the most physiological and flexible regimen.
7. Focus on modest weight loss of 5-7% total body weight for patients with BMI over 26 kg/m².
8. General nutrition recommendations include elimination of sweetened beverages, eat minimum 3 meals/day, each containing approximately 3 carbohydrate choices (45 g/meal).
9. Recommend 150 minutes/week of physical activity, for example, 30 minutes five days a week.
10. Consider referral to psychologist or social worker if persistently elevated A1C to address non-medical barriers to glycemic control.
11. If patient treated with metformin and FPG significantly elevated, consider adding background insulin.
12. Other noninsulin therapies to consider:
 - a) Alpha-glucosidase inhibitor if A1C close to target and postmeal glucose elevated due to excessive carbohydrate intake.
 - b) Nateglinide or repaglinide for postmeal hyperglycemia and there is a need for a flexible mealtime dosing schedule.
 - c) Colesevelam if A1C close to target and LDL levels remain above target with current statin therapy.
 - d) Bromocriptine QR if A1C is close to target; works through CNS-mediated improvement in insulin sensitivity.
13. Self-management education includes understanding disease state, glucose monitoring, injection technique and how to respond to daily glucose excursions.

Reference:

Simonson G, Cuddihy, R, Reader D, Bergenstal R. Diabetes Management 2011;1:175-189.