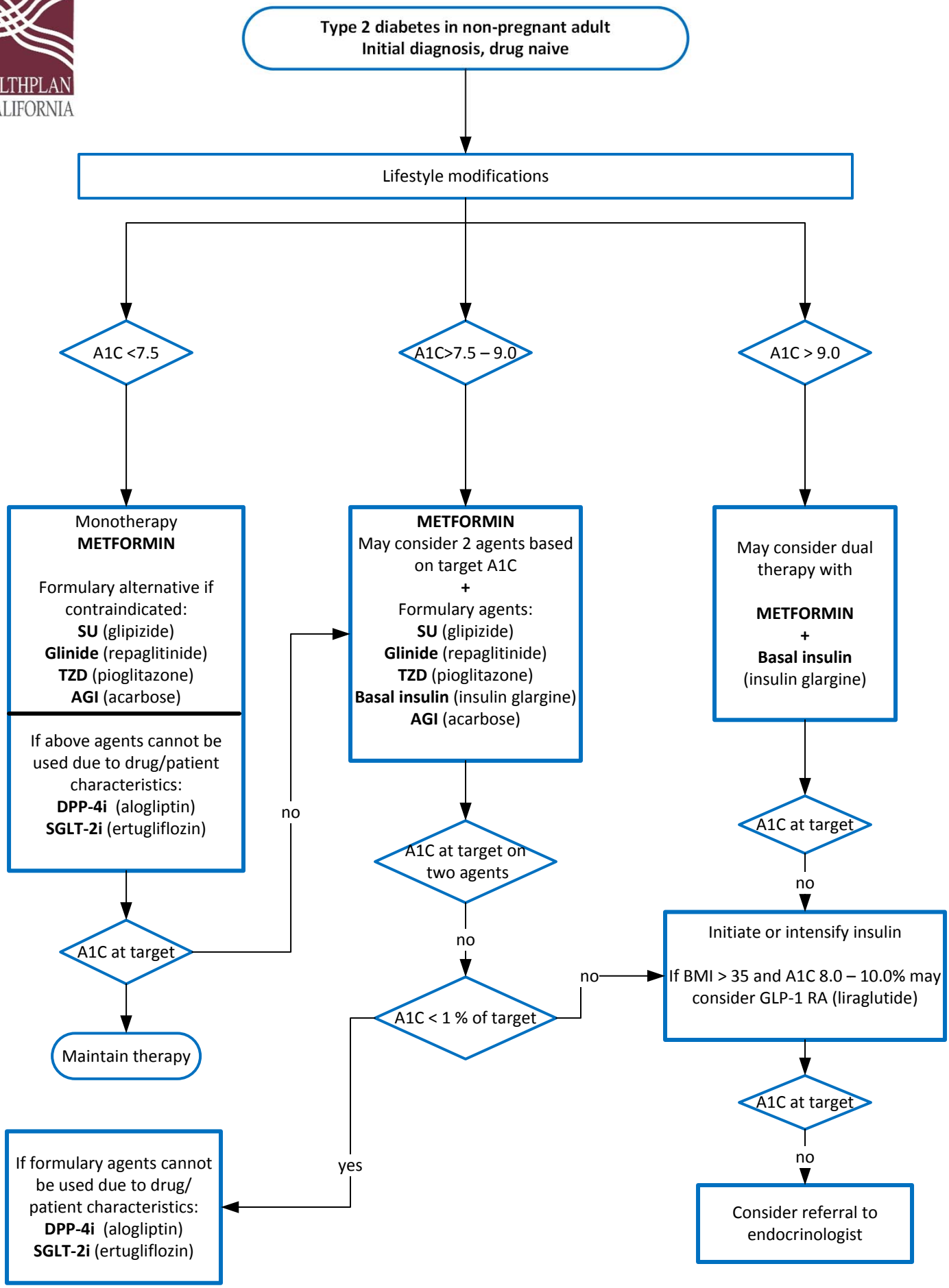
Type 2 diabetes in non-pregnant adult
Initial diagnosis, drug naive
Lifestyle modifications
A1C <7.5
A1C>7.5 – 9.0
A1C > 9.0
Monotherapy
METFORMIN
Formulary alternative if contraindicated:
SU (glipizide)
Glinide (repaglitinide)
TZD (pioglitazone)
AGI (acarbose)
If above agents cannot be used due to drug/patient characteristics:
DPP-4i (alogliptin)
SGLT-2i (ertugliflozin)
METFORMIN
May consider 2 agents based on target A1C
+
Formulary agents:
SU (glipizide)
Glinide (repaglitinide)
TZD (pioglitazone)
Basal insulin (insulin glargine)
AGI (acarbose)
May consider dual therapy with
METFORMIN
+
Basal insulin
(insulin glargine)
A1C at target
no
Maintain therapy
A1C at target on two agents
no
A1C < 1 % of target
yes
no
Initiate or intensify insulin
If BMI > 35 and A1C 8.0 – 10.0% may consider GLP-1 RA (liraglutide)
A1C at target
no
Consider referral to endocrinologist
If formulary agents cannot be used due to drug/ patient characteristics:
DPP-4i (alogliptin)
SGLT-2i (ertugliflozin)

DRUG CLASS	MEDICATION						
Sulfonylureas (SU)	Glipizide	Glimepiride	Glyburide				
Meglitinides (GLN)	Repaglinide	Nateglinide					
Thiazolidinediones (TZD)	Pioglitazone						
A-glucosidase Inhibitors (AGI)	Acarbose	Miglitol					
SGLT-2 Inhibitors (SGLT-2i) $$$$	Ertugliflozin *Formulary step*	Canagliflozin *NF*	Empagliflozin *NF*	Dapagliflozin *NF*			
DPP-4 Inhibitors (DPP-4i) $$$$	Alogliptin *Formulary step*	Sitagliptin *NF*	Linagliptin *NF*	Saxagliptin *NF*			
GLP-1 receptor agonists (GLP-1 RA) $$$$$$	Liraglutide *Formulary step*	Dulaglutide *NF*	Semaglutide *NF*	Exenatide ER *NF*	Exenatide *NF*	Lixisenatide *NF*	Albiglutide *NF*

* Relative cost: each $ = $100
* NF: *Non-formulary*

- Initiate metformin 500 mg ½ to 1 tablet once a day with meal and slowly titrate up q 5-7 days. If gastrointestinal side effects occur, consider ER formulation (500 mg and 750 mg on formulary).
- Alternatives to SU should be considered if BMI > 35 or eGFR < 30 ml/min.
- Can consider DPP-4i if expected change in A1C is <1% in order to reach patient specific target.
- Can consider GLP-1 RA after maximizing basal insulin, in member with BMI > 35, if A1C 8.0 – 10.0%. If A1C >10.0% consider intensifying insulin.
- Per AACE guidelines, patients taking 2 oral antihyperglycemic agents with an A1C >8.0% and/or long-standing diabetes are unlikely to reach their target A1C with a third oral antihyperglycemic agent. [2]
- Per AACE guidelines, prandial insulin should be consider when the total daily dose of basal insulin is greater than 0.5 U/kg. Beyond this dose of basal insulin, the risk of hypoglycemia increases without significant improvement in A1C. [2]
- Per ADA guidelines, SU, DPP-4i, and GLP-1 RA are typically stopped once more complex insulin regimens beyond basal insulin are used. [2]
- Per ADA guidelines, for patients with suboptimal blood glucose control, especially those requiring increasing insulin doses, adjunctive use of TZD (usually pioglitazone) or SGLT-2i may improve control and reduce the amount of insulin needed. [2]

References:

1. American Diabetes Association. Pharmacologic Approaches to Glycemic Treatment. Sec. 8. Standards of Medical Care in Diabetes-2017. *Diabetes Care* 2017;40(Suppl.1):S64-S74

2. Consensus Statement by the American Association of Clinical Endocrinologists and American College of Endocrinology on the Comprehensive Type 2 diabetes Management Algorithm-2018 Executive Summary. *Endocrine Practice* 2018;24 (1):91-120

3. Handelsman Y, Bloomgarden ZT, Grunberger G, et al. American Association of Clinical Endocrinologists and American College of Endocrinology 2015 Clinical Practice Guidelines for Developing a Diabetes Mellitus Comprehensive Care Plan. *Endocrine Practice* 2015;21Suppl 1:1-87