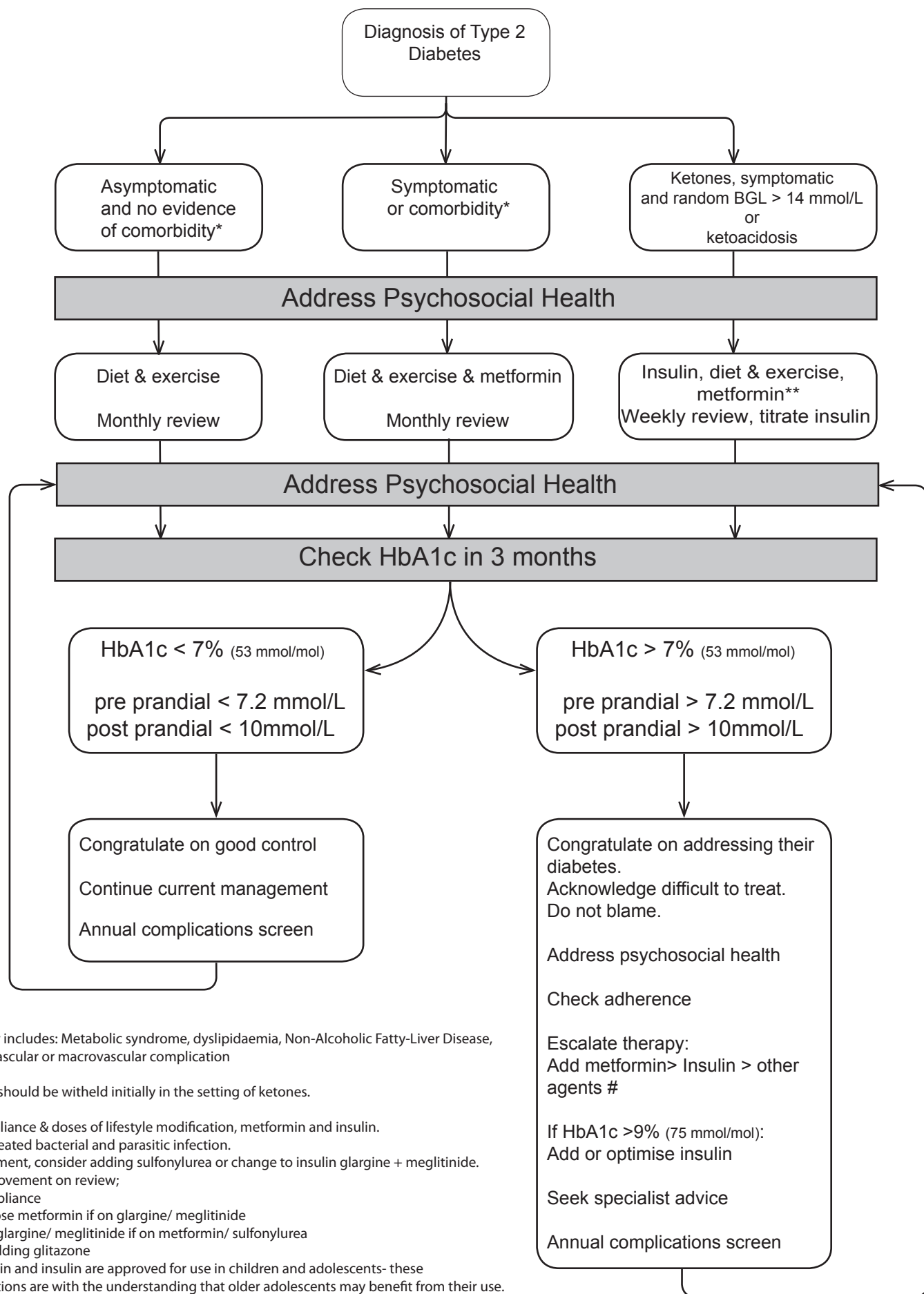


Figure 2: Treatment algorithm for T2DM in Indigenous children and adolescents. Adapted from IDF/ISPAD guideline 2011.



* Comorbidity includes: Metabolic syndrome, dyslipidaemia, Non-Alcoholic Fatty-Liver Disease, PCOS, microvascular or macrovascular complication

** Metformin should be withheld initially in the setting of ketones.

Check compliance & doses of lifestyle modification, metformin and insulin.
Consider untreated bacterial and parasitic infection.
If no improvement, consider adding sulfonylurea or change to insulin glargine + meglitinide.
If still no improvement on review;

- check compliance
- add low-dose metformin if on glargine/ meglitinide
- change to glargine/ meglitinide if on metformin/ sulfonylurea
- consider adding glitazone

Only metformin and insulin are approved for use in children and adolescents- these recommendations are with the understanding that older adolescents may benefit from their use.

Metformin dosing and use of long acting preparations should follow local protocols, with the treatment of children < 14 years in consultation with a paediatrician. An approach includes commencing 250mg daily for 3-4 days, increasing to 250mg twice daily if tolerated, then titrating over 3-4 weeks to a maximum of 1000mg twice daily. It takes 4 - 6 weeks for metformin to reach its full effect. Side effects include transient abdominal pain, nausea and diarrhoea, all improved by slow titration of the dose or use of long release formulation. Metformin should not be used in renal impairment, hepatic disease, cardiac or respiratory insufficiency, alcohol abuse, or those receiving radiographic contrast. Metformin should be discontinued in gastrointestinal illness.

Insulin therapy should follow local guidelines, and requires comprehensive education about: Normal BGL range, recording BGLs in a diary, Insulin injection technique and rotation of sites, signs and symptoms of hypoglycaemia and how to treat, storage of insulin, effect of alcohol and other drugs and how to be safe if using them.