Beth Israel Lahey Health
Performance Network

Practical Prescribing Pearls

Top-ten take-home points for the treatment of type 2 diabetes

1. **All patients diagnosed with diabetes should be counseled to make lifestyle changes, including diet changes and increased exercise, to prevent or delay disease progression**. Suggest making incremental changes in daily lifestyle as these changes can be overwhelming for many patients.

2. **Metformin remains the first-line medication option for patients with type 2 diabetes.** In patients who have been unable to tolerate metformin in the past, consider re-challenging by starting low and titrating slowly as tolerated. Metformin extended-release is better tolerated than immediate-release and should be considered the preferred formulation (generic Glucophage XR® is preferred due to lower cost).

3. **The second drug added to a patient's regimen will depend on the presence of risk factors for, or established, ASCVD, CKD, or HF.** The indication which is most pressing guides selection of the second agent added to metformin. If none of these indications pose a significant risk and patient is not at their goal A1c, consider medication selection based on patient-specific needs like reducing the risk of hypoglycemia, need for weight loss, and cost barriers.

4. **SGLT-2 inhibitors have demonstrated benefits in regard to a decreased risk of CVD and hospitalizations from heart failure while also slowing the progression of CKD**. They have also demonstrated modest reductions in weight and A1c (0.7-1.0%). These medications are also expensive as there are no generic alternatives. Each agent has a different profile in terms of which disease states they have demonstrated benefits in.

5. **GLP-1 receptor agonists have demonstrated significant reduction in the risk of CVD.** They have also demonstrated significant weight loss and an expected A1c reduction of 1.0-1.5%. This class of medication is expensive, as there are no generic alternatives. Only certain GLP-1 receptor agonists have currently demonstrated benefits regarding CV risk reduction.

6. **DPP-4 inhibitors may demonstrate modest A1c-lowering benefits (0.5-1.0%), however they have not demonstrated benefits in terms of CV risk reduction.** These agents are popular because of their tolerability and once-daily dosing. However, they are expensive agents which do not add significant clinical benefit outside of their glucose-lowering effects. They should not be used alongside GLP-1 agonists due to overlapping mechanisms of action involving incretin pathways.

7. **The best time to start the insulin conversation with patients is around the time of diagnosis to reduce fears and stigma.** Many patients with type 2 diabetes progress to the point where insulin therapy is necessary to reach their goals. Patients may feel they have "failed" treatment if they need insulin therapy, or may have underlying concerns regarding frequent fingersticks, injections, and hypoglycemia.

8. **New longer-acting basal insulins are available.** They are available as higher concentrations to reduce large volume injections for patients on high doses. They also allow for dose timing flexibility as they can last longer than 24 hours. Studies have shown lower risk of hypoglycemia compared to shorter-acting basal insulins.

9. **Continuous glucose monitors (CGM) are available for patients on multiple daily insulin doses who need multiple daily fingersticks.** See charts at this link for more information regarding insurance coverage of glucometers and CGMs.

10. **Consider collaborating with experts in different aspects of diabetes treatment for the most comprehensive approach to treatment.** Treatment of diabetes involves a whole health care team including doctors, nurses, pharmacists, and dieticians.