NHS
Oxfordshire
Clinical Commissioning Group

Criteria for Switching Dipeptidylpeptidase-4 inhibitors (DPP4-inhibitors)

Alogliptin is priced 16-20% lower than existing DPP-4 inhibitors (sitagliptin, vildagliptin, saxagliptin and linagliptin). Savings are available by switching from existing DPP-4 inhibitors and combination products using strict criteria and follow up. This protocol for switching and reviewing patients below is based on PrescQIPP Bulletin 78 (Nov 2014).

In 2017 Oxfordshire CCG spent £1,040,267 on DPP4 inhibitors. Locally, alogliptin is the first choice DPP-4 inhibitor as it is the most cost effective option. Linagliptin should be used in patients with renal impairment. By complying with the formulary and reviewing patients for effectiveness, savings can be made in this area which can be used to benefit patient care elsewhere. See the Oxfordshire Formulary for more information: http://www.oxfordshireformulary.nhs.uk/.

Is a DPP4 inhibitor appropriate?

The NICE criteria for continued use of a DPP-4 inhibitor is a reduction in HbA1c of at least 0.5% at 6 months. Nb. if this was achieved on the original DPP4i you would not expect it to decrease again when switched to alogliptin, however the HbA1c level should be maintained.

If a patient does not meet the NICE criteria for continuation:

- Review the patient's concordance
- Consider stopping the DPP4 inhibitor and/or adding a different class of medication. See Blood Glucose Management Guidelines for information on other options
- If you are unsure on how to proceed, contact the diabetes specialist team on diabetesdialogue@nhs.net.

Criteria for switching a DPP4 inhibitor to alogliptin

1. Ensure that the DPP-4 inhibitor has reduced HbA1c by at least 5.5mmol/mol (0.5%) over 6 months. If criteria have been met consider a switch as below. If criteria have not been met, stop therapy and review. Consider other classes of glucose lowering therapy.
2. Exclude the following patients:
    - Patients prescribed a DPP-4 inhibitor as monotherapy.
    - Patients with severe hepatic impairment (Child Pugh score > 9).
    - Patients with congestive heart failure of New York Heart Association (NYHA) functional class III – IV.
3. If renal impairment (eGFR <60ml/min/1.73m^2), use linagliptin
4. Dual therapy

- Consider alogliptin an alternative to sitagliptin/vildagliptin/linagliptin/saxagliptin. Consider appropriate licensed combinations as per SPC for patient's current antidiabetic medication.
- When used in combination with a sulphonylurea or insulin there is an increased risk in hypoglycaemia. A lower dose of the sulphonylurea or insulin may be considered to reduce the risk of hypoglycaemia.

5. Triple therapy
    - Consider alogliptin an alternative to sitagliptin/vildagliptin/linagliptin/saxagliptin. Consider appropriate licensed combinations as per SPC for patient's current antidiabetic medication.
    - When used in combination with metformin and pioglitazone, advise the patient of the risk of hypoglycaemia and consider a lower dose of pioglitazone or metformin.
6. Alogliptin/metformin combination products
    - Although not specifically encouraged, combination metformin/alogliptin tablets may advantage some patients who would benefit from being prescribed fewer tablets. There is no additional cost for use of combination therapy.
    - When alogliptin 25mg daily is used in combination with metformin 2000mg, consider an alogliptin/metformin combination product if the dose is unlikely to change. When switching from separate tablets, calculate the new dose carefully as the combination product is taken twice daily. Avoid the combination product in patients with creatinine clearance <60ml/min or end stage renal disease requiring dialysis.
7. Ensure that patients who are switched to alogliptin are followed up to review glycaemic control and drug side effects. Ensure that self-monitoring of plasma glucose is available to those on insulin treatment/sulfonylureas and information is provided on hypoglycaemia. Assess changes in glucose control resulting from medications and lifestyle changes to ensure safety during activities, including driving. **Ensure that patients are followed up after 4 weeks to review any side effects and recheck HbA1c in 8-12 weeks.**

DPP4 Inhibitor Doses (consult product literature/BNF for further information)

Drug	Dose	Further notes
Alogliptin	25mg once daily	• Dose of concomitant sulfonylurea or insulin may need to be reduced. • If used in combination with metformin & pioglitazone, dose of either metformin or pioglitazone may need to be reduced. • In moderate renal impairment (CrCl 30 to 50 mL/min) the dose should be reduced to 12.5 mg once daily • In severe renal impairment (CrCl < 30 mL/min) or end-stage renal disease the dose should be reduced to 6.25 mg once daily.
Sitagliptin	100mg once daily	• Dose of concomitant sulfonylurea or insulin may need to be reduced. • In moderate renal impairment (GFR 30 to 45 mL/min) the dose should be reduced to 50 mg once daily. • In severe renal impairment (GFR 15 to 30 mL/min) or with end-stage renal disease (GFR < 15 mL/min) the dose should be reduced to 25 mg once daily.
Vildagliptin	50mg twice daily	• 50mg once daily when used with sulphonylurea. • Dose of concomitant sulfonylurea or insulin may need to be reduced • In moderate or severe renal impairment or end-stage renal disease, the dose should be reduced to 50 mg once daily
Linagliptin	5mg once daily	• Dose of concomitant sulfonylurea or insulin may need to be reduced
Saxagliptin	5mg once daily	• Dose of concomitant sulfonylurea or insulin may need to be reduced • In moderate renal impairment (GFR < 45 mL/min) and severe renal impairment the dose should be reduced to 2.5 mg once daily. It is not recommended in end-stage renal disease.

Community Pharmacy Service – New Medicines Service (NMS)

Patients switching to/starting on alogliptin are eligible for the NMS (the service is suitable for most patients starting medication for Type 2 Diabetes). The community pharmacist will provide an initial consultation, intervention and follow-up to ensure adherence and check for any issues (e.g. side effects). The patient can ask for this service when they get their prescription dispensed for the first time.