

Updated guidance for prescribing of sodium glucose transport inhibitors in Cornwall following licence extension to include non-diabetic patients with heart failure.

Addendum to previous advice.

Background

Sodium glucose transport inhibitors (SGLT2i) have been used in the treatment of type 2 diabetes for several years. Several trials have demonstrated convincing benefits in secondary prevention of cardiac complications in patients with established cardiovascular disease.

Recent trials have demonstrated the benefit of SGLT2i in the treatment of heart failure in patients with and without diabetes. Furthermore, studies have explored the impact of SGLT2i on potential role in delaying progression of renal disease in diabetic and non-diabetic populations and this may lead to further licence changes.

The licence (and National Institute for Health and Care Excellence (NICE) guidance for dapagliflozin and empagliflozin) for the use of SGLT2i in non-diabetic heart failure (with reduced ejection fraction) patients requires an amendment of Cornwall prescribing guidance.

Guidance for initiating sodium glucose transport inhibitors

As per local and national guidelines, SGLT2i can be initiated in primary care (by medical and non-medical prescribers) after recommendation by secondary care specialists as described below.

Cohort	Initiation advice
Initiation in patients with diabetes but without heart failure	New advice. To be commenced by secondary care diabetes team recommendation or where primary care feel confident and competent to initiate.
Initiation in patients without diabetes but with heart failure	New advice. To be commenced on recommendation by heart failure specialist team – face-to-face, virtual or MDT.
Initiation in patients with diabetes and heart failure	New advice. To be commenced on recommendation by secondary care diabetes and heart failure specialist teams – face-to-face, virtual or when Consultant visits surgery.

SGLT2i are only effective in lowering glucose with an eGFR above 45 yet continue to have benefits on heart failure and chronic kidney disease with an eGFR as low as

20. Therefore SGLT2i can be initiated and continued with an eGFR between 20 and 45 where the indication is heart failure or CKD but is unlikely to be of benefit in lowering glucose at these eGFR levels. Caution should be used in frail and elderly patients who are more at risk of volume depletion.

Some patients with both diabetes and heart failure require input from both specialist heart failure and diabetes teams to ensure safety and that the best pharmacological agents for an individual patient are selected.

The following cohorts of patients require referral from cardiac (heart failure services) to diabetes secondary care service (via maxims outpatient referral - clinic letter can be pasted) as these patients may not be suitable for SGLT2i and alternative therapies may be more appropriate, or adjustments may be required to existing medications to prevent severe hypoglycaemia.

Patients with diabetes and heart failure requiring secondary care diabetes review prior to initiation of sodium glucose transport inhibitors

- BMI less than 25 or greater than 40 (slim or losing weight) may indicate impaired beta cell function and patient may require insulin whilst in those with a BMI greater than 40 a GLP analogue may be preferential to an SGLT2i or both agents may be required.
- Reduced renal function - If eGFR persistently below 45ml/min, Secondary care review will consider if adjustment of other therapies for glycaemic control may be required or alternative agents viewed as more appropriate.
- Those patients on multiple dose insulin (more than 1 injection a day) as significant rationalisation of insulin may be required.
- Those with an HbA1c above 75mmol/mol as may be decompensating and require insulin and initiation with SGLT2i may cause ketoacidosis and biochemical evaluation of B-cell reserve may be indicated.

Patients with diabetes and heart failure who do not require diabetes specialist involvement prior to recommendation of sodium glucose transport inhibitors by specialist heart failure team

Patients not in above groups who take metformin, pioglitazone (contraindicated in heart failure), GLP analogue or DPP4 inhibitor. The HbA1c should be checked in primary care 3 months after initiation of an SGLT2i and if below 58mmol/l the DPP4 inhibitor should be stopped.

Patients who are on sulphonylureas (gliclazide, glimepiride etc) or once daily insulin and have an HbA1c below 75mmol/mol. If an SGLT2i is recommended by the heart failure specialist team, it is also recommended that the dose of sulphonylurea should be straight away reduced by 25% to 50% and dose of insulin straight away reduced

by 20% and the patient is advised to test their blood glucose regularly over the first 2 weeks to detect hypoglycaemia.

This risk should be documented, and the patient asked to contact primary care for consideration for onward referral to the diabetes team or their diabetes community specialist nurse (if on insulin) if hypoglycaemia occurs so further medication adjustments can be advised. These patients (on insulin and sulphonylurea) should be referred to their practice to review glucose control two to three weeks after initiation of SGLT2i.

[NICE guidance: Dapagliflozin for treating chronic heart failure with reduced ejection fraction](#)

[NICE guidance: Empagliflozin for treating chronic heart failure with reduced ejection fraction](#)

[Type 2 diabetes in adults: management](#)

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