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Liothyronine injection for the management of hypothyroid conditions in adults

The High Cost Drugs Subgroup discussed the above at its meeting on 27th November 2019. The recommendation of this subgroup is as follows:

Recommendation	Liothyronine injection is approved for use as a treatment option in adults for myxoedema coma and for the short-term management of hypothyroid patients unable to take oral dosage forms (off-label use), on the advice of a consultant endocrinologist.
Background	<p>A formal commissioning policy is required because liothyronine injection was added to the PBR Tariff Excluded Drugs List as a CCG commissioned drug from the 1st April 2019.</p> <p>Liothyronine Sodium Injection is licensed for the treatment of myxoedema coma, usually in conjunction with other measures including the intravenous injection of a corticosteroid. It is more commonly used off-label for the short-term support of hypothyroid patients in the critical care setting who cannot take oral levothyroxine. For the treatment of less severe forms of myxoedema and for maintenance therapy, oral therapy should be used. Any prescribing of oral liothyronine should be in line with the GMMMG formulary.</p> <p>Liothyronine injection is categorised as RED drug on the GMMMG RAG list as suitable for prescribing in hospital only by or on the advice of an endocrinologist.</p> <p>Levothyroxine has very long half-life (~7 days) and omitting doses for 1-2 days is usually well tolerated meaning IV replacement is often not required if the patient is temporarily nil by mouth</p> <p>The NHS Blood and Transplant Service no longer recommend the use of liothyronine in donor optimisation protocols.</p>
Efficacy and Safety	<p>The overall safety and tolerability of liothyronine injection are well described.</p> <p>Liothyronine (L-triiodothyronine) is a naturally occurring thyroid hormone. Its biological action is qualitatively similar to that of thyroxine, but the effect is more rapid in onset (in a few hours) and the effect disappears within 24 to 48 hours after stopping treatment.</p>
Cost Effectiveness/ Affordability	<p>The NHS list price for 20 microgram powder for solution for injection vial, 5 = £1567.50</p> <p>5 to 20 micrograms is given by slow intravenous injection and repeated at intervals of 12 hours or less if required. The minimal interval between dosing is 4 hours. An</p>

	<p>initial dose of 50 micrograms intravenously is used by some physicians, followed by further intravenous injections of 25 micrograms every 8 hours until improvement occurs. The dosage may then be reduced to 25 micrograms intravenously twice daily.</p> <p>Commissioning Arrangements: liothyronine injection is a high cost PbR excluded drug and CCGs are the responsible commissioner for the treatment of adults. For paediatric patients NHSE is the responsible commissioner.</p> <p>Anticipated numbers of patients for the above conditions is in the region of 20 per year across Greater Manchester.</p> <p>An estimate of the cost impact is £175,560 per year across GM. This is based on a dose of 20mcg given every 6 hours for 7 days.</p>
Monitoring	<p>Monitoring of actual use against expected activity to provide assurance that any prescribing is in line with this policy will be made to commissioners on a 6 monthly basis.</p>
Patient perspective	<p>Routine commissioning for this indication will mean that patients can quickly access an accepted treatment without the need for an individual funding request to be processed.</p>