

**South East London Integrated Medicines Optimisation Committee
Formulary recommendation**

Reference	166
Intervention:	Carvedilol tablets for the treatment of portal hypertension in children and young people (Carvedilol is a vasodilatory non-selective beta-blocker)
Date of Decision	January 2026
Date of Issue:	February 2026
Recommendation:	Amber 2 – specialist initiation and prescribing for a minimum period of 1 month and until the patient is stable. GP may be requested to prescribe after this period. The use of carvedilol in this setting is restricted to King’s College Hospital NHS Foundation Trust, which provides specialist paediatric liver services in South East London.
Further Information:	<ul style="list-style-type: none"> • Carvedilol tablets are accepted for use in SEL for the primary or secondary prophylaxis of variceal bleeding in children and young people (CYP) with portal hypertension. • Treatment with carvedilol in this setting is accepted for use as a first line treatment option. The initiation of carvedilol in this setting is restricted to the specialist hepatology team. • Under Amber 2 arrangements, primary care clinicians will be requested to provide ongoing prescribing once treatment has been initiated and stabilised (minimum period of 1 month) in secondary care. All monitoring, dose adjustments, treatment changes, and clinical updates will continue to be managed and provided by the specialist hepatology team, who will communicate any required changes directly to the GP by email or clinical letter. • The duration of therapy is intended to be until the patient receives a liver transplant. Patients will remain under the care of the specialist hepatology team. • The use of carvedilol in this setting is off-label*. The off-label nature should be explained to the patient/carer and informed consent gained. • Monitoring requirements are as follows: <ul style="list-style-type: none"> Initiation of non-selective beta-blockers – to be carried out by specialist: <ul style="list-style-type: none"> ▪ First dose will be given in hospital, and patient will be monitored for 4 hours. ▪ Baseline 12-lead ECG, blood glucose, liver and renal function, urea and electrolyte levels. ▪ Baseline observations including heart rate, respiratory rate, blood pressure, oxygen and temperature. ▪ Following initial dose, blood pressure and heart rate checked every 30 minutes for at least 4 hours. Outpatient monitoring – to be arranged by specialist team and carried out as an outpatient appointment: <ul style="list-style-type: none"> ▪ 1 week after initiation – heart rate, respiratory rate, blood pressure, blood glucose, liver, renal function and electrolyte levels, and review of side effects. ▪ 4 weeks after any further dose increase – heart rate, respiratory rate, blood pressure, blood glucose and review of side effects. Liver and renal function should be rechecked 2 to 4 weeks after final dose increase by the specialist hepatology team At each clinical review – blood pressure, heart rate, respiratory rate <ul style="list-style-type: none"> ▪ Signs and symptoms and clinical suspicion of ascites and abdominal distention should be communicated to families and local team, if suspected, this should be reported via the specialist Liver CNS team. ▪ Follow up abdominal USS every 6 months (organised by specialist team). • The alternative beta-blocker treatment option included in the paediatric formulary in this setting is propranolol. The decision on the most appropriate treatment option will be made by the specialist hepatology team. • A patient information leaflet will be provided to parents/carers by the specialist

	<p>hepatology team to explain the treatment and how it should be administered.</p> <p>*Carvedilol is licensed for use in adults for the treatment of hypertension, long-term management of stable angina pectoris, as well as an adjunctive therapy for the treatment of symptomatic congestive heart failure to reduce morbidity and increase patient well-being.</p>
Shared Care/ Transfer of care required:	N/A
Cost Impact for agreed patient group	<ul style="list-style-type: none"> Based on data from 2023-2024, it is estimated that approximately 10 patients per annum in SEL may be eligible for treatment with carvedilol in this setting. Assuming all 10 patients are titrated up to the maximum dose of 12.5mg BD, the estimated cost impact for SEL is negligible.
Usage Monitoring & Impact Assessment	<p>Acute Trusts:</p> <ul style="list-style-type: none"> Monitor use and submit usage data and audit reports upon request to the Committee.
	<p>SEL Borough Medicines Teams:</p> <ul style="list-style-type: none"> Monitor ePACT2 data. Exception reports from GPs if inappropriate prescribing requests are made to primary care.
Evidence reviewed	<p>References (from evidence evaluation)</p> <ol style="list-style-type: none"> VCH clinical guidelines. NSBB for Portal Hypertension in children. June 2023 BNF for Children (BNFc) online monographs. Accessed May 2023 Summary of product characteristics. www.medicines.org.uk SEL Paediatric formulary monograph. www.clinibee.com Grammatikopoulos T et al. Portal hypertension and its management in children. Arch Dis Child 2018;103:186–191. Portal hypertension and its management in children (bmj.com) Samanta T et al. Effectiveness of beta blockers in primary prophylaxis of variceal bleeding in children with portal hypertension. Paediatric Gastroenterology. Jachs M. Carvedilol Achieves Higher Hemodynamic Response and Lower Rebleeding Rates Than Propranolol in Secondary Prophylaxis. Clinical Gastroenterology and Hepatology 2022. Carvedilol Achieves Higher Hemodynamic Response and Lower Rebleeding Rates Than Propranolol in Secondary Prophylaxis - Clinical Gastroenterology and Hepatology (cghjournal.org) Buck ML. Use of Carvedilol in children with cardiac failure. Pediatric Pharmacotherapy. 2005;1 Systematic review with meta-analysis: the haemodynamic effects of carvedilol compared with propranolol for portal hypertension in cirrhosis. E Sinagra 1, G Perricone, M D'Amico, F Tinè, G D'Amico Aliment Pharmacol Ther. 2014 Mar;39(6):557-68. doi: 10.1111/apt.12634.Epub 2014 Jan 26. Villanueva C, Albillos A, Genescà J, et al. Development of hyperdynamic circulation and response to β-blockers in compensated cirrhosis with portal hypertension. Hepatology. 2016;63:197-206. Safety and Efficacy of Carvedilol in Children with Portal Hypertension: A National Study from the 3 Quaternary UK Centres (King's College Hospital, London, Birmingham Women's and Children's NHS Foundation Trust, Birmingham, Leeds Teaching Hospitals NHS Trust, Leeds, UK) 2025 KCH Guideline – Non-Selective Beta-Blockers in Children with Portal Hypertension SEL adult Joint Medicines Formulary can be accessed here.

NOTES:

- SEL IMOC recommendations and minutes are available publicly via the [website](#).
- This SEL IMOC recommendation has been made on the cost effectiveness, patient outcome and safety data available at the time. The recommendation will be subject to review if new data becomes available, costs are higher than expected or new NICE guidelines or technology appraisals are issued.
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