

Nebulised Tranexamic Acid for Haemoptysis Management



Areas where Protocol/Guideline applicable	SESLHD Inpatients
Authorised Prescribers:	For initiation on the advice of Respiratory, Emergency or Intensive Care Physicians
Indication for use	<p>Treatment of haemoptysis in adults as part of their haemoptysis management plan</p> <p>NB: <i>In the case of massive haemoptysis, nebulisation of tranexamic acid may provide temporary benefit but should not delay any definitive intervention. Please consult treating physician.</i></p> <p>This is an off-label but formulary listed indication.</p>
Clinical condition	Adult patients with active haemoptysis
Proposed Place in Therapy	First line therapy
Contra-indications	<ul style="list-style-type: none"> • Known hypersensitivity to tranexamic acid or any of its excipients • Active thromboembolic disease such as deep vein thrombosis (DVT), pulmonary embolism or cerebral thrombosis. • Active intravascular clotting. • Subarachnoid haemorrhage – may increase cerebral ischaemic complications.
Precautions	<ul style="list-style-type: none"> • Risk of eye irritation - Nebulise using mouthpiece nebuliser (e.g. Sidestream® or Pari®) preferably with filter system to reduce eye exposure. Dose is not to be withheld if a filter system is unavailable. • The Respiratory Clinical Nurse Consultant (CNC) could be contacted via switchboard for further details. • Risk of bronchospasm with first dose administration – close clinical supervision to be carried out to ensure tolerability. See First Dose Administration Protocol below. • Concomitant treatment with anticoagulants - seek guidance from treating specialist physician. • Patients with a history or risk of thrombosis.
Important Drug Interactions	<ul style="list-style-type: none"> • Do not dilute or mix with other nebulised medications.

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<p>Dosage</p>	<ul style="list-style-type: none"> The usual dose of tranexamic acid is 500mg (5 mL) NEBULISED three times daily until haemoptysis has stabilised or otherwise directed by the treating physician. If patient has known bronchospasm or forced expiratory volume in 1 second (FEV1) of less than 40% predicted, consider using reduced dose of 250 mg. <p>For management of bronchospasm during first dose administration protocol prescribe PRN either:</p> <ul style="list-style-type: none"> the patient’s usual bronchodilator OR salbutamol 2.5 mg to 5 mg nebulised OR salbutamol 100 microgram/puff via metered dose inhaler (MDI) 2 to 6 puffs via spacer <p>If patient is at high-risk of bronchospasm, consider prescribing STAT bronchodilator dose prior to first dose.</p>
<p>Duration of therapy</p>	<p>Until resolution of hemoptysis or otherwise advised by treating physician. Usual duration is up to 5 days.</p>
<p>Prescribing Instructions</p>	<p>Tranexamic acid for nebulisation should be prescribed on the eMR or eRIC. In the absence of eMM systems, the appropriate paper medication chart may be used.</p>
<p>First Dose Administration Protocol</p>	<ul style="list-style-type: none"> Close clinical supervision <ul style="list-style-type: none"> Before first dose perform clinical assessment for bronchospasm. Record baseline vital signs. Ensure continuous oxygen saturation (SpO2) monitoring during dosing. Administer nebulised tranexamic acid. If SpO2 drop below baseline, STOP nebulisation and review with treating physician before continuing and monitor vital signs (heart rate, SpO2 and BP if appropriate). <ul style="list-style-type: none"> Consider administering prescribed PRN bronchodilators if there is clinical concern of bronchospasm. Wait 15 minutes and review vitals sign. <ul style="list-style-type: none"> If no concerning desaturation of clinical signs of bronchospasm, document that patient tolerated first dose with no issues to allow continued therapy. If concerning change of clinical status and bronchospasm, document and discuss with prescribing specialist respiratory physician before further doses are given. Continue to monitor the presence of ongoing haemoptysis.

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<p>Administration Instructions</p>	<ul style="list-style-type: none"> • The appropriate volume should be drawn up from the ampoule and nebulised using mouthpiece nebuliser, preferably with filter system to reduce eye exposure (e.g. Sidestream® or Pari®). Do not withhold dosing if no filter set is available. • If using piped air or oxygen, run flow rate at 8 L/min OR turn on nebuliser compressor /pump and commence inhalation. • NB: Patients with hypercapnea (or at risk of developing hypercapnia) who require nebulised medications should use medical air (not oxygen) to drive the nebuliser. • If oxygen is being used to drive the nebuliser it should be ceased as soon as the nebulisation is finished. • Instruct patient to maintain a tight mouth seal around nebuliser mouthpiece (preferably with filter system to reduce eye exposure e.g. Pari®) and use slow tidal breathing with occasional deep breaths. Nebulisation time should be approximately 10 to 15 minutes. • Advise patient to gargle with water to rinse the mouth and throat after administration. • After use, nebuliser bowl should be dismantled and washed in hot water and detergent, then rinsed in hot water before leaving the nebuliser parts to air dry on clean dry paper towel until the next dose. <p>Nebulised tranexamic acid is compatible with non-invasive and mechanical ventilation circuits. Please refer to local protocols for specific nebulisation directions.</p> <p>Nebulised tranexamic acid is able to be used with jet nebulisers and vibrating mesh nebulisers. Not able to be nebulised through a high flow nasal cannula circuit due to increased risk of face and eye exposure.</p>
<p>Monitoring requirements Safety</p>	<ul style="list-style-type: none"> • Monitoring first dose administration – refer to First Dose Administration Protocol above. • During therapy, daily clinical review is required to assess volume and frequency of ongoing haemoptysis – in case of severe haemoptysis, refer to Respiratory Team for further investigation and treatment as necessary.
<p>Monitoring requirements Effectiveness</p>	<p>Primary: Reduction in haemoptysis volume and frequency.</p>
<p>Adverse effects</p>	<p>Bronchospasm (cough and wheeze) may occur in some patients. No systemic adverse effect reports for nebulised tranexamic acid were located in the literature.</p>
<p>Storage / Stability</p>	<p>Store below 25°C. Do not freeze. Protect from light. This product does not contain antimicrobial agents. It is for single use in one patient only. Any unused product should be discarded.</p>

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<p>Basis of Protocol/ Guideline:</p>	<ol style="list-style-type: none"> 1. St Vincent's Hospital Drug Guideline. Accessed January 2026 2. Western Sydney Local Health District Drug Protocol – Nebulised Tranexamic Acid for Management of Hemoptysis in Adults with Cystic Fibrosis – Westmead Hospital. Accessed June 2025. 3. Bharath Gopinath, Prakash Ranjan Mishra, et al. Nebulized vs IV Tranexamic Acid for Hemoptysis: A Pilot Randomized Controlled Trial, <i>Chest</i>, Volume 163, Issue 5, 2023, Pages 1176-1184, ISSN 0012-3692, https://doi.org/10.1016/j.chest.2022.11.021. 4. Wand O, Guber E, Guber A, Epstein Shochet G, Israeli-Shani L, Shitrit D. Inhaled Tranexamic Acid for Hemoptysis Treatment: A Randomized Controlled Trial. <i>Chest</i>. 2018 Dec;154(6):1379-1384. doi: 10.1016/j.chest.2018.09.026. Epub 2018 Oct 12. PMID: 30321510. 5. Bafiqih H, Chehab M, Almohaimeed S, et al. Pilot trial of a novel two-step therapy protocol using nebulized tranexamic acid and recombinant factor VIIa in children with intractable diffuse alveolar hemorrhage. <i>Ann Saudi Med</i> 2015;35(3):231-239. 6. Calvo GS, Granda-Orive ID, Padilla DL. Inhaled tranexamic acid as an alternative for haemoptysis treatment. <i>Chest</i> 2016;149(2):604. 7. Ye, M., Chen, M., Wang, C. <i>et al.</i> Nebulized Tranexamic Acid in the Management of Hemoptysis: An Integrative Review. <i>Lung</i> 203, 28 (2025).
<p>Groups consulted in development of this guideline</p>	<ul style="list-style-type: none"> • TSH Respiratory department • TSH, SGH Pharmacy department • SESLHD Medicine Stream

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