

Shared Care Protocol

Shared Care Guideline for TOBI [®] 300 mg/5 mL Nebuliser Solution	Reference Number
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Date approved by Commissioners: dd/mm/yyyy	Review Date: dd/mm/yyyy

Please complete all sections

1. Licensed Indications	Long-term management of chronic pulmonary infection due to <i>Pseudomonas aeruginosa</i> in cystic fibrosis (CF) patients aged 6 years and older.
2. Therapeutic use & background	Lung damage associated with persistent infection by <i>Pseudomonas aeruginosa</i> is the major cause of morbidity and mortality in people with cystic fibrosis (CF). Nebulised anti-pseudomonal antibiotic treatment controls the burden of infection and has been shown to improve lung function, slow the rate of respiratory decline and reduce the frequency of exacerbations of infection in CF. This reduces the need for intravenous antibiotic treatment and hospitalisation. Nebulised antibiotics reduce the risk of developing antibiotic-related toxicity compared to intravenous antibiotics as they achieve high local concentrations with low systemic absorption and toxicity.
3. Contraindications (please note this does not replace the SPC or BNF and should be read in conjunction with it).	Administration of TOBI is contraindicated in any patient with known hypersensitivity to any aminoglycoside or any of the excipients: Sodium chloride Water for injections Sulphuric acid and sodium hydroxide for pH adjustment
4. Prescribing in pregnancy and lactation	TOBI should not be used during pregnancy or lactation unless the benefits to the mother outweigh the risks to the foetus or baby. Pregnancy

	<p>There are no adequate data from the use of tobramycin administered by inhalation in pregnant women. Animal studies do not indicate a teratogenic effect of tobramycin (see section 5.3 Preclinical data). However, aminoglycosides can cause foetal harm (e.g., congenital deafness) when high systemic concentrations are achieved in a pregnant woman. If TOBI is used during pregnancy, or if the patient becomes pregnant while taking TOBI, she should be informed of the potential hazard to the foetus.</p> <p>Lactation</p> <p>Systemic tobramycin is excreted in breast milk. It is not known if administration of TOBI will result in serum concentrations high enough for tobramycin to be detected in breast milk. Because of the potential for ototoxicity and nephrotoxicity with tobramycin in infants, a decision should be made whether to terminate nursing or discontinue TOBI therapy.</p> <p>This drug can be prescribed in the pregnant and breastfeeding patient. Under these circumstances prescribing should be the responsibility of the specialist CF team.</p>		
<p>5. Dosage regimen for continuing care</p>	Route of administration	Nebulisation	
	Preparations available – nebuliser solution only		
	<p>Insert dose to be prescribed including units, frequency and duration of treatment.</p> <p>Please prescribe: TOBI® 300 mg BD, followed by 28 days off TOBI®.</p> <p>The dose does not require adjustment for age or weight.</p> <p>The dose interval should be as close as possible to 12 hours and not less than 6 hours</p> <p>A cycle of 28 days on followed by 28 days off treatment should be maintained for as long as clinical benefit is seen.</p>		
	Is titration required	Yes	No
	N/A		
	<p>Adjunctive treatment regime</p> <p>The patient should continue their standard regimen of chest physiotherapy. The use of appropriate bronchodilators should continue as deemed clinically appropriate. 3</p> <p>If patients are receiving several different respiratory therapies it is recommended that they take them in the following order:</p> <ol style="list-style-type: none"> 1) bronchodilator 2) chest physiotherapy, 3) other inhaled medicinal products, 4) and lastly, TOBI® 		

	<p>Conditions requiring dose reduction</p> <p><i>Elderly patients (≥ 65 years)/ Patients with renal impairment</i></p> <p>There are insufficient data in this population to support a recommendation for or against dose adjustment.</p> <p><i>Patients with hepatic impairment</i></p> <p>No studies have been performed on patients with hepatic impairment. As tobramycin is not metabolized, an effect of hepatic impairment on the exposure to tobramycin is not expected.</p> <p><i>Patients after organ transplantation</i></p> <p>Adequate data do not exist for the use of TOBI in patients after organ transplantation.</p> <p>Usual response time Response will be assessed at the specialist centre at the patients' routine appointments</p> <p>Duration of treatment: ongoing until terminated by the specialist CF team</p> <p>Treatment to be terminated by the specialist CF team</p> <p>NB. All dose adjustments will be the responsibility of the initiating specialist care unless directions have been specified in the medical letter to the GP.</p>
<p>6. Drug Interactions</p> <p><i>For a comprehensive list consult the BNF or Summary of Product Characteristics</i></p>	<p>The following drugs must <u>not</u> be prescribed without consultation with the specialist:</p> <p>Concurrent and/or sequential use of TOBI with other medicinal products with nephrotoxic or ototoxic potential should be avoided. This is more of a concern with intravenous use of tobramycin as systemic absorption from nebulised therapy is low. Some diuretics can enhance aminoglycoside toxicity by altering antibiotic concentrations in serum and tissue. TOBI should not be administered concomitantly with furosemide or mannitol.</p> <p>Other medicinal products that have been reported to increase the potential toxicity of parenterally administered aminoglycosides include:</p> <p>Amphotericin B, cefalotin, ciclosporin, tacrolimus, polymyxins (risk of increased nephrotoxicity);</p> <p>Platinum compounds (risk of increased nephrotoxicity and ototoxicity);</p> <p>Anticholinesterases, botulinum toxin (neuromuscular effects).</p> <p>The following drugs may be prescribed with caution:</p>

	See above		
7. Adverse drug reactions <i>For a comprehensive list (including rare and very rare adverse effects), or if significance of possible adverse event uncertain, consult Summary of Product Characteristics or BNF</i>	Specialist to detail below the action to be taken upon occurrence of a particular adverse event as appropriate. Most serious toxicity is seen with long-term use and may therefore present first to GPs.		
	Adverse event <small>System – symptom/sign</small>	Action to be taken <small>Include whether drug should be stopped prior to contacting secondary care specialist</small>	By whom
	Infections and infestations: Laryngitis rare (< 1/1000) Oral candidiasis, fungal infection rare (< 1/1000)	Patient to be advised to contact specialist CF centre on 0161 291 2015 in hours or 0161 291 4732 out of hours or GP to stop therapy and contact the specialist centre	GP or patient
	Lymphadenopathy, Hypersensitivity Very rare (< 1/10,000).	As above	GP or patient
	Anorexia rare (< 1/1000)	As above	GP or patient
	Nervous system disorders: Headache, dizziness, aphonia rare (< 1/1000) Somnolence Very rare (< 1/10,000)	As above	GP or patient
	Ear and labyrinth disorders: Tinnitus, hearing loss rare (< 1/1000) Ear disorder, ear pain Very rare (< 1/10,000)	As above	GP or patient

<p>Respiratory, thoracic and mediastinal disorders:</p> <p>Dysphonia, dyspnoea, cough, pharyngitis uncommon ($\geq 1/1,000$ to $< 1/100$);</p> <p>Bronchospasm, chest discomfort, lung disorder, productive cough, haemoptysis, epistaxis, rhinitis, asthma rare ($< 1/1000$)</p> <p>Hyperventilation, hypoxia, sinusitis Very rare ($< 1/10,000$)</p>	As above	GP or patient
<p>Gastrointestinal disorders:</p> <p>Dyspepsia, nausea, mouth ulceration, vomiting rare ($< 1/1000$)</p> <p>Diarrhoea, abdominal pain Very rare ($< 1/10,000$)</p>	As above	GP or patient
<p>Skin and subcutaneous tissue disorders:</p> <p>Rash rare ($< 1/1000$)</p> <p>Urticaria, pruritus Very rare ($< 1/10,000$).</p>	As above	GP or patient
<p>Back pain Very rare ($< 1/10,000$).</p>	As above	GP or patient
<p>Asthenia, pyrexia, chest pain, pain rare ($< 1/1000$)h</p> <p>Malaise Very rare ($< 1/10,000$).</p>	As above	GP or patient
<p>Pulmonary function test decreased rare ($< 1/1000$)</p>	As above	GP or patient
<p>The patient should be advised to report any of the following signs or symptoms to their GP without delay:</p> <p>Any of the above, contact specialist CF centre on 0161 291 2015 in hours or 0161 291 4732 out of hours or GP</p>		

	Other important co morbidities (e.g. Chickenpox exposure). Include advice on management and prevention and who will be responsible for this in each case: N/A				
	Any adverse reaction to a black triangle drug or serious reaction to an established drug should be reported to the MHRA via the "Yellow Card" scheme. Yes				
8. Baseline investigations	Baseline pulmonary function tests, audiology and renal tests will be performed by the specialist centre.				
9. Ongoing monitoring requirements to be undertaken by GP	Is monitoring required?		Yes or No (if yes complete following section) None by GP		
	Monitoring	Frequency	Results	Action	By whom
	N/A	N/A	N/A	N/A	N/A
10. Pharmaceutical aspects	<p>Store at 2-8°C. Store in the original package in order to protect from light.</p> <p>After removal from the refrigerator, or if refrigeration is unavailable, TOBI pouches (intact or opened) may be stored at up to 25°C for up to 28 days.</p> <p>TOBI solution is normally slightly yellow, but some variability in colour may be observed, which does not indicate loss of activity if the product has been stored as recommended.</p> <p>TOBI is a sterile, non-pyrogenic, aqueous preparation for single use only. As it is preservative-free, the contents of the whole ampoule should be used immediately after opening and any unused solution discarded. Opened ampoules should never be stored for re-use.</p>				
11. Secondary care contact information	<p>If stopping medication or needing advice please contact:</p> <p>Prof AK Webb / Dr A Jones / Dr R Bright-Thomas / Dr A Brennan</p> <p>Contact number: 0161 291 2016</p> <p>Hospital: University Hospital South Manchester</p>				
12. Criteria for shared care	<p>Prescribing responsibility will only be transferred when</p> <ul style="list-style-type: none"> ▪ Treatment is for a specified indication and duration. ▪ Treatment has been initiated and established by the secondary care specialist. ▪ The patient's initial reaction to and progress on the drug is satisfactory. ▪ The GP has agreed in writing in each individual case that shared care is appropriate. ▪ The patient's general physical, mental and social circumstances are such that he/she would benefit from shared care arrangements 				

13. Responsibilities of initiating specialist

Continue treatment and prescribe until dose is stable

Undertake baseline monitoring.

Dose adjustments.

Monitor patient's initial reaction to and progress on the drug.

Ensure that the patient has an adequate supply of medication until GP supply can be arranged.

Continue to monitor and supervise the patient according to this protocol, while the patient remains on this drug, and agree to review the patient promptly if contacted by the GP

Provide GP with diagnosis, relevant clinical information and baseline results, treatment to date and treatment plan, duration of treatment before consultant review.

Provide GP with details of outpatient consultations within 14 days of seeing the patient or inform GP if the patient does not attend appointment

Provide GP with advice on when to stop this drug.

Provide patient with relevant drug information to enable Informed consent to therapy

Provide patient with relevant drug information to enable understanding of potential side effects and appropriate action

Provide patient with relevant drug information to enable understanding of the role of monitoring.

Provide patient with monitoring booklet where appropriate.

14. Responsibilities of the GP

Continue treatment as directed by the specialist

Ensure no drug interactions with concomitant medicines

To monitor and prescribe in collaboration with the specialist according to this protocol

To ensure that the monitoring and dosage record is kept up to date

To undertake influenza vaccine annually and ensure pneumococcal vaccine administered once since birth as directed by the initiating consultant, the BNF or Green Book

Symptoms or results are appropriately actioned, recorded and communicated to secondary care when necessary.

15. Responsibilities of the patient

To take medication as directed by the prescriber, or to contact the GP if not taking medication

To attend hospital and GP clinic appointments, bring monitoring booklet (if issued)

Failure to attend will result in medication being stopped (on specialist advice).

To report adverse effects to their Specialist or GP.

16. Additional Responsibilities	List any special considerations	Action required	By whom	Date
	<i>Tolerability to be assessed by specialist centre</i>	<i>Clinical assessment</i>	<i>Clinicians at specialist centre</i>	<i>4 weeks after start of treatment and then at each clinic visit thereafter</i>
	<i>Effectiveness to be assessed by specialist centre</i>	<i>Clinical assessment</i>	<i>Clinicians at specialist centre</i>	<i>4 weeks after start of treatment and then at each clinic visit thereafter</i>
	<i>Adherence to treatment</i>	<i>Discussion with patient – and communication between specialist centre and GP</i>	<i>Clinicians at specialist centre and GP</i>	<i>4 weeks after start of treatment and then at each clinic visit thereafter by specialist centre or following a routine appointment or review by GP</i>
17. Supporting documentation	The SCG must be accompanied by a patient information leaflet.			
18. Patient monitoring booklet	The patient must receive a monitoring booklet from the specialist upon initiation of treatment. The patient must bring this booklet to all specialist and GP appointments where it will be updated by the health professional conducting the appointment. The patient must also produce the booklet to any health professional involved in other aspects of their care e.g. pharmacists and dentists.			
19. Shared care agreement form	Attached below			

Shared Care Agreement Form

Specialist request

***IMPORTANT: ACTION NEEDED**

Dear Dr *[insert Doctors name here]*

Patient name: *[insert Patients name here]*

Date of birth: *[insert date of birth]*

Diagnosis: *[insert diagnosis here]*

This patient is suitable for treatment with TOBI[®] 300 mg/5 mL Nebuliser Solution for the treatment of Long-term management of chronic pulmonary infection due to *Pseudomonas aeruginosa* in cystic fibrosis (CF) patients aged 6 years and older.

This drug has been accepted for Shared Care according to the enclosed protocol (as agreed by Trust / LHB / AWMSG). I am therefore requesting your agreement to share the care of this patient.

Treatment was started on *[insert date started]* TOBI[®] 300 mg/5 mL BD.

If you are in agreement, please undertake monitoring and treatment from *[insert date]*

NB: date must be at least 1 month from initiation of treatment.

Baseline tests: *See information above in SCP above.*

Next review with this department: *[insert date]*

You will be sent a written summary within 14 days. The medical staff of the department are available at all times to give you advice. The patient will not be discharged from out-patient follow-up while taking *[insert text here]*.

Please use the reply slip overleaf and return it as soon as possible.

Thank you.

Yours

Shared Care Agreement Form

GP Response

Dear Dr *[insert Doctors name]*

Patient *[insert Patients name]*

Identifier *[insert patient date of birth/address]*

I have received your request for shared care of this patient who has been advised to start TOBI[®] 300 mg/5 mL Nebuliser Solution

- A I am willing to undertake shared care for this patient as set out in the protocol
- B I wish to discuss this request with you
- C I am unable to undertake shared care of this patient.

GP signature

Date

GP address/practice stamp