Shared Care Protocol

Shared Care Guideline for Promixin, 1 million International Units (IU) Powder for Nebuliser Solution (colistimethate sodium)	Reference Number
Author(s)/Originator(s): (please state author name and department) Nicola Jones, Specialist Cystic Fibrosis Pharmacist, Manchester Adults Cystic Fibrosis Centre, University Hospital South Manchester	**To be read in conjunction with the following documents:** Current Summary of Product characteristics (http://www.medicines.org.uk) BNF
Date approved by Commissioners: *dd/mm/yyyy*	**Review Date:** *dd/mm/yyyy*

Please complete all sections

1. Licensed Indications	Promixin is indicated for the treatment by nebulisation of colonisation and infections of the lung due to susceptible *Pseudomonas aeruginosa* in patients with cystic fibrosis.
2. Therapeutic use & background	Lung damage associated with persistent infection with *Pseudomonas aeruginosa* 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 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).	Promixin is contraindicated in patients with known hypersensitivity to colistimethate sodium or other polymyxins. Colistimethate sodium is known to reduce the amount of acetylcholine released from the pre-synaptic neuromuscular junction and therefore should not be used in patients with myasthenia gravis.
4. Prescribing in pregnancy and lactation	Safety in human pregnancy has not been established. Animal studies do not indicate a teratogenic potential. However there is evidence that colistimethate sodium crosses the placenta and consequently there is potential for foetal toxicity if administered during pregnancy. Promixin should only be given during pregnancy if the benefits outweigh any potential risk. Colistimethate sodium is excreted in breast milk; breast feeding is not recommended during therapy.

	This drug can be prescribed in the pregnant and breastfeeding patient. Under these circumstances prescribing should be the responsibility of the specialist CF team.		
5. Dosage regimen for continuing care	Route of administration	Nebulisaton	
	Preparations available - Powder for nebuliser solution.		
	Insert dose to be prescribed including units, frequency and duration of treatment. Please prescribe: 1-2 million IU two or three times daily The dosage is determined by the severity and type of infection. Dose and duration to be specified by the CF specialist team.		
	Is titration required	~~**Yes**~~	**No**
	n/a		
	Adjunctive treatment regime Patients should use a bronchodilator before each dose of Promixin. For patients taking multiple inhaled therapies, the recommended order of administration is as follows: 1. bronchodilator 2. mucolytics 3. and lastly, Promixin.		
	Conditions requiring dose reduction *Renal impairment* Colistimethate sodium is renally excreted and is nephrotoxic if high serum concentrations are achieved. Whilst this is unlikely during inhalation therapy, serum concentration estimations are recommended especially in patients with renal impairment. *Neurotoxicity* High serum concentrations of colistimethate sodium after intravenous or intramuscular administration may be associated with overdosage or failure to reduce the dosage in patients with renal impairment, and this may lead to neurotoxicity. Concomitant use with either non-depolarising muscle relaxants or antibiotics with similar neurotoxic effects can also lead to neurotoxicity. Dose reduction of colistimethate sodium may relieve symptoms.		

	Neurotoxic effects that have been reported include: vertigo, transient facial paraesthesia, slurred speech, vasomotor instability, visual disturbances, confusion, psychosis and apnoea. *Porphyria* Use with extreme caution in patients with porphyria.
	Usual response time Response will be assessed at the specialist centre at the patients' routine appointments
	Duration of treatment: ongoing until terminated by the specialist CF team
	Treatment to be terminated by the specialist CF team
	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.
6.Drug Interactions ***For a comprehensive list consult the BNF or Summary of Product Characteristics***	The following drugs must <u>not</u> be prescribed without consultation with the specialist: Due to the effects of colistimethate sodium on the release of acetylcholine, non-depolarising muscle relaxants should be used with extreme caution in patients receiving Promixin as their effects could be prolonged. Concomitant use of inhaled colistimethate sodium with other medications that are nephrotoxic or neurotoxic (e.g. cephalothin sodium, aminoglycosides, non-depolarising muscle relaxants) including those which are administered by the i.v. or i.m. routes should only be undertaken with the greatest caution.
	The following drugs may be prescribed with caution: See above.

7. Adverse drug reactions

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

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 System – symptom/sign	**Action to be taken** Include whether drug should be stopped prior to contacting secondary care specialist	**By whom**
Immune system disorders: Hypersensitivity reactions such as skin rash- Frequency: not known (cannot be estimated from the available data)	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

	Respiratory, thoracic and mediastinal disorders: Cough, chest tightness, bronchoconstriction or bronchospasm – Very common (≥1/10)	As above	GP or patient
	General disorders and administration site conditions: Sore throat and sore mouth- Frequency: not known (cannot be estimated from the available data)	As above	GP or patient
	The patient should be advised to report any of the following signs or symptoms to their GP without delay: Any of the above, contact specialist CF centre on 0161 291 2015 in hours or 0161 291 4732 out of hours or GP		
	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 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	Promixin should be stored at room temperature. Promixin may be reconstituted with Water for Injections (WFI) to produce a clear colourless to pale yellow hypotonic solution or a 50:50 mixture of WFI and 0.9% saline to produce a clear colourless to pale yellow isotonic solution. When reconstituted, Promixin may be used with any conventional nebuliser suitable for delivery of antibiotic solutions. Solutions should be used immediately after reconstitution. Any unused solution remaining in the nebuliser must be discarded following treatment. Conventional nebulisers operate on a continuous flow basis and it is likely that some nebulised drug will be released into the local environment. When used with a conventional nebuliser, Promixin should be administered in a well-ventilated room, particularly in hospitals where several patients may be using nebulisers at the same time. Tubing or filters may be used to prevent waste aerosol from entering the environment.
11. Secondary care contact information	**If stopping medication or needing advice please contact:**
	Prof AK Webb / Dr A Jones / Dr R Bright-Thomas / Dr A Brennan
	Contact number: *0161 291 2016*
	Hospital: *University Hospital South Manchester*
12. Criteria for shared care	Prescribing responsibility will only be transferred when ▪ 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**
	Tolerability to be assessed by specialist centre	***Clinical assessment***	***Clinicians at specialist centre***	***4 weeks after start of treatment and then at each clinic visit thereafter***
	Effectiveness to be assessed by specialist centre	***Clinical assessment***	***Clinicians at specialist centre***	***4 weeks after start of treatment and then at each clinic visit thereafter***
	Adherence to treatment	***Discussion with patient – and communication between specialist centre and GP***	***Clinicians at specialist centre and GP***	***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***
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 *[insert drug name]* for the treatment of *[insert indication]*

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]* *[insert dose].*

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: *[insert information]*

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

[insert Specialist name]

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 *[insert text here]*

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