DERBYSHIRE JOINT AREA PRESCRIBING COMMITTEE
SHARED CARE AGREEMENT
AZITHROMYCIN FOR USE IN ADULT RESPIRATORY INFECTIONS

1. REFERRAL CRITERIA

- Shared Care is only appropriate if it provides the optimum solution for the patient.
- Prescribing responsibility will only be transferred when it is agreed by the consultant and the patient's GP that the patient's condition is stable or predictable.
- When transferred, the patient will be given a supply of azithromycin sufficient for 4 weeks maintenance therapy.

2. AREAS OF RESPONSIBILITY

GP responsibilities	Consultant responsibilities
1. Prescribe azithromycin at the dose determined by the secondary care specialist and clearly document indication/anticipated duration in the patients notes. **2.** Refer to secondary care if the patient's condition deteriorates. **3.** Perform monitoring tests as outlined in section vii. **4.** Continue to perform six monthly LFTs. **5.** Check for drugs not recommended or should be avoided with azithromycin; or where concomitant use with azithromycin are cautioned. **6.** Stop treatment on the advice of the specialist or immediately if any urgent need to stop treatment arises. **7.** Report any adverse effects to the referring specialist and the MHRA yellow card scheme.	**1.** To confirm the patient has no contra-indications to treatment and consider the relevance of any cautions. **2.** To discuss the benefits and possible side-effects of treatment with patient. Counsel patient to report side effects from azithromycin treatment. **3.** Perform monitoring tests as outlined in section vii. **4.** To discuss the possibility of sharing prescribing and monitoring of azithromycin for their consideration and not to transfer prescribing until the GP has formally agreed to shared care in this way. **5.** Clearly communicate to GP the indication, dose and anticipated treatment duration. **6.** To advise on the clinical relevance of concomitant medication after initiation of azithromycin, as well as potential drug interactions. **7.** Respiratory specialist will assess response after therapy initiation and make recommendation to continue the drug, after a period of 6 – 12 months. **8.** Annual reviews are unnecessary; however, consultants are asked to provide advice remotely when needed and review patients in cases of difficulty. **9.** To ensure that arrangements are in place for GPs to obtain advice and support where needed. **10.** To communicate promptly with the GP the results of any monitoring undertaken in secondary care and any changes to treatment made by the specialist. **11.** Recognising antimicrobial stewardship is important and patients should be counselled about potential adverse effects before starting therapy, including gastrointestinal upset, hearing and balance disturbance, cardiac effects and microbiological resistance.

Patient responsibilities

1. Report to the specialist or GP if he/she does not have a clear understanding of the treatment.
2. Share any concerns in relation to treatment with azithromycin.
3. Seek urgent medical attention should their condition significantly worsen.
4. The patient must notify the GP or secondary care specialist if they develop any of the following:
- chest pains or a faster or irregular heartbeat
- yellow skin or the whites of eyes turn yellow, or pale stools with dark urine
- tinnitus, temporary hearing loss, vertigo
- severe pain in the stomach or back (pancreatitis)
- diarrhoea that contains blood or mucus severe diarrhea without blood or mucus for more than 4 days should also reported to a doctor

5. Report any other adverse effects to the specialist or GP whilst taking azithromycin.

3. COMMUNICATION AND SUPPORT

i. Hospital contact: **University Hospitals of Derby & Burton** Respiratory consultant/nurse via switchboard:01332 340131 Specialist nurses: Asthma Team: 01332 787221 Uhdb.adultasthmateam@nhs.net IMPACT Team (COPD): 01332 788225 Dhft.impact-plus@nhs.net Bronchiectasis/ Respiratory Infection Team: 01332787159 Dhft.derbyrespiratoryinfectionsteam@nhs.net **Chesterfield Royal Hospital Foundation Trust** Respiratory consultant via switchboard: 01246 277271	**ii. Out of hours contact and procedures:** Pharmacy, UHDB, ask for on-call pharmacist via switchboard: 01332 340131 Respiratory, UHDB, ask for on-call Respiratory Consultant via switchboard: 01332 340131 Contact the CRH on-call Medic for the relevant specialty via switchboard: 01246 277271
iii. Define the referral procedure from hospital to primary care prescriber & route of return should the patient's condition change As outlined in consultant responsibility.	
Patient information **https://patient.info/medicine/azithromycin-for-infection-zithromax**	

4. CLINICAL INFORMATION

i. Prescribed indications	**Off Label Use**
	
	Chronic Obstructive Pulmonary Disorder (COPD) – patients with COPD, in line with NICE NG115, i.e., if they:
	• do not smoke **and**
	• have optimised non-pharmacological management and inhaled therapies, relevant vaccinations and (if appropriate) have been referred for pulmonary rehabilitation **and**
	• continue to have 1 or more of the following, particularly if they have significant daily sputum production:
	  ○ frequent (typically 4 or more per year) exacerbations with sputum production
	  ○ prolonged exacerbations with sputum production
	  ○ exacerbations resulting in hospitalisation
	
	Bronchiectasis – For adults who have high exacerbation rates (3 or more per year) (BTS) (CKS)
	
	Asthma – For adults (>18yrs) who have ongoing symptoms despite use of high-dose inhaled steroids and at least one exacerbation requiring oral corticosteroids in the past year (BTS) (CKS)

ii. Therapeutic summary	Azithromycin is a macrolide-type antibiotic that can be applied for the treatment of infections, when caused by microorganisms sensitive to azithromycin.
iii. Dose & Route of administration	**COPD** Usually, 250mg three times weekly (NICE NG115). BTS recommends 250mg - 500mg three times a week **Bronchiectasis** A starting dose of azithromycin 250 mg three times a week. Titrate up to 500mg three times a week according to clinical response. (BTS)

	Asthma A starting dose of azithromycin 250 mg three times a week. Titrate up to 500mg three times a week according to clinical response. (BTS)
iv. Pregnancy, paternal exposure and breastfeeding	**Pregnancy:** The safety of azithromycin has not been confirmed with regard to the use of the active substance during pregnancy. Therefore, azithromycin should only be used during pregnancy if the benefit outweighs the risk. **Breastfeeding:** Azithromycin is excreted in breast milk. Because of the long half-life, accumulation in the milk is possible. Information available from published literature indicates that, in short-term use, this does not lead to clinically relevant quantities in the milk. No serious side effects have been observed by azithromycin in breast-fed children. A decision should be taken whether breastfeeding is discontinued or that treatment with azithromycin is discontinued/initiated or not, considering the benefit of breastfeeding for the child and the benefit of treatment for the woman.
v. Duration of treatment	A specialist will assess its effectiveness over 6 – 12 months, and if it reduces the exacerbation frequency, azithromycin will be recommended to continue by the GP until specialists instruct to stop. Total duration of treatment will vary, but if beneficial, it may be recommended life-long. **COPD** Subsequent follow-up at 6 and 12 months should determine whether benefit is being derived from therapy using objective measures, such as the exacerbation rate, CAT score or quality of life as measured by a validated assessment tool, such as SGRQ. If there is no benefit, treatment should be stopped. **Bronchiectasis** Subsequent follow-up at 6 and 12 months should determine whether benefit is being derived from therapy using objective measures, such as the exacerbation rate, quality of life as measured by a validated assessment tool, such as SGRQ. Even if benefit is seen, consideration should be given to stopping treatment for a period each year, for example over the summer. Such a drug holiday may help with reducing the development of resistance whilst maintaining efficacy. **Asthma** If macrolide therapy is considered for symptom reduction, this should be for a defined period (6–12months) and stopped if no symptomatic improvement is seen.
vi. Adverse effects Refer to the SPC for a full list of adverse effects & further information http://www.medicines.org.uk	Very Common • Nausea • Diarrhea • Abdominal pain • Flatulence Common • Anorexia • Headaches • Dizziness • Paraesthesia • Fatigue • Dysgeusia • Visual impairment • Deafness • Vomiting • Dyspepsia • Rash/pruritis • Arthralgia

<table>
<tr><td></td><td>Serious side effects
Chest pain or palpitations
Hepatitis,
Hepatic function abnormal,
Jaundice cholestatic
Tinnitus, temporary hearing loss, vertigo
Pancreatitis
Diarrhea that contains blood or mucus, severe diarrhea without blood or mucus for more than 4 days</td></tr>
<tr><td>vii. Monitoring Requirements</td><td><u>Consultant responsibility</u>
Baseline tests:
sputum culture and sensitivity (including tuberculosis culture), to identify other potential causes of persistent or recurrent infection that may need specific treatment (for example, antibiotic-resistant organisms, atypical mycobacteria or Pseudomonas aeruginosa)
training in airway clearance techniques to optimise sputum clearance
a CT scan of the thorax to rule out bronchiectasis and other lung pathologies
an ECG to rule out prolonged QT interval
Liver function test / Renal function test
LFT/ECG at 1 month (including interpreting ECG)
Advise patients there is a small risk of hearing loss and tinnitus and to contact a healthcare professional if this occurs
Respiratory specialist will review prophylactic azithromycin after the first 3 months, and subsequently assess response and make recommendation to continue the drug, after a period of 6 – 12 months. (NICE)
<u>GP responsibility</u>
For patients where the drug is continued after 1 month:
Perform six monthly LFTs
Medication reviews for potential drug interactions/QTc prolongation
ECG yearly if on another QTc prolonging drug.
Perform an ECG if new drugs that could prolong QTc are prescribed
<u>Actions to be taken</u>
<table><tr><th>Parameter</th><th>Action</th></tr><tr><td>ECG</td><td>Stop azithromycin if QTc >450msec (men) or QTc>470msec (women)

GPs can also contact cardiologist for advice on interpretation of ECG, and/or respiratory physician for recommendation of action (e.g. via advice and guidance or directly to responsible physician) if ECG changes are considered attributable to azithromycin or there is is uncertainty.</td></tr></table></td></tr>
<tr><td>viii. Clinically relevant drug interactions

Refer to the SPC for more detailed information on drug interactions http://www.medicines.org.uk.</td><td><table><tr><td>Antacids</td><td>Peak serum concentrations are reduced. Recommend 2 hours between dose and taking antacids.</td></tr><tr><td>Atorvastatin</td><td>Post-marketing cases of rhabdomyolysis in patients receiving azithromycin with statins have been reported. Report unexplained muscle ache.</td></tr><tr><td>Digoxin</td><td>Concomitant administration with digoxin, has been reported to result in increased serum levels of digoxin. Monitor digoxin levels, if showing signs of toxicity.</td></tr><tr><td>Dabigatran</td><td>Azithromycin is predicted to increase the exposure to dabigatran.</td></tr><tr><td>Edoxaban</td><td>Azithromycin is predicted to increase the exposure to edoxaban.</td></tr></table></td></tr>
</table>

	Ticagrelor	Azithromycin is predicted to increase the exposure to ticagrelor. Manufacturer advises use with caution or avoid.
	Colchicine	Azithromycin is predicted to increase the exposure to colchicine. Manufacturer advises avoid P-glycoprotein inhibitors or adjust colchicine dose.
	Medicinal products known to prolong the QT interval	Azithromycin should be used with caution if co-administered with other medicinal products known to prolong the QT interval
ix. Contra-indications Refer to the SPC for more detailed information	Hypersensitivity to the active substance, erythromycin, any macrolide or ketolide antibiotic, soya lecithin or to any of the excipients Hepatotoxicity – the liver is the principal route of elimination for azithromycin, the use of azithromycin should be undertaken with caution in patients with significant hepatic disease.	
x. Additional information	Where patient care is transferred from one specialist service or GP practice to another, a new shared care agreement must be completed. It is not necessary to stop prophylactic azithromycin during an acute exacerbation of COPD unless another antibiotic with potential to affect the QT interval has also been prescribed	
xi. Supply of ancillary equipment	N/A	
xii. Supply, storage, and reconstitution instructions	N/A	
xiii. To be read in conjunction with the following documents	• NHSE policy- Responsibility for prescribing between Primary & Secondary/Tertiary Care	
xiv. Prepared by	Derbyshire shared care and guideline group In consultation with: Dr Sally Davies – Chesterfield Royal Hospital, Consultant, Respiratory & General Medicine Dr Priya Daniel – University Hospitals of Derby & Burton, Respiratory Consultant	

This does not replace the SPC, which should be read in conjunction with it.
Date Prepared: August 2022 **Review Date**: July 2025

References:
British Thoracic Society guideline for the use of long-term macrolides in adults with respiratory disease
AZITHROMYCIN | Drug | BNF content published by NICE Accessed online 05/05/22
Azithromycin 500mg Tablets (SPC) Accessed online 05/05/22
NICE ESUOM38: Non-cystic fibrosis bronchiectasis: long-term azithromycin (November 2014)
NICE NG115: Chronic obstructive pulmonary disease in over 16s: diagnosis and management (December 2018)
Azithromycin | Prescribing information | Asthma | CKS | NICE Access online 05/05/22
Dorset Medicines Advisory Group - Azithromycin Shared Care Agreement, Nov 2019. Accessed online 05/05/22

{Insert Hospital Logo here}

Sample transfer letter

Hospital No: «HOSPITAL_NUMBER»
NHS No: «NHS_NUMBER»

{Insert date}

PRIVATE & CONFIDENTIAL
«GP_TITLE» «GP_INITIALS» «GP_SURNAME»
«GP_ADDRESS_1»
«GP_ADDRESS_2»
«GP_ADDRESS_3»
«GP_ADDRESS_4»
«GP_POSTCODE»

DERBYSHIRE JAPC SHARED CARE AGREEMENT LETTER

Dear «GP_TITLE» «GP_SURNAME»

«FORENAME_1» «SURNAME» «DATE_OF_BIRTH»
«CURRENT_ADDRESS_1» «CURRENT_ADDRESS_2» «CURRENT_ADDRESS_3»
«CURRENT_ADDRESS_4» «CURRENT_POSTCODE»

Your patient was seen on ***{Insert date}*** with a diagnosis of ***{Insert diagnosis}***. I have initiated the following medication ***{Insert drug name}*** and am writing to ask you to participate in the shared care for this patient.

This medication has been accepted as suitable for shared care by the Derbyshire Joint Area Prescribing Committee (JAPC). I agree to the secondary care responsibilities set out in the shared care agreement for this medication (available from www.derbyshiremedicinesmanagement.nhs.uk/clinical_guidelines/shared_care_guidelines). I am therefore requesting your agreement to share the care of this patient. Where preliminary tests are set out in the agreement, I have carried these out and results are below.

Dose Regimen	Date ***{Insert medicine name}*** started	Date for GP to start prescribing ***{Insert medicine name}*** from
The baseline test results are (if applicable):		

I can confirm that the following has happened with regard to this treatment:

	Specialist to complete
The patient has been initiated on this therapy and has been on an optimised dose for the following period of time:	
Baseline investigation and monitoring as set out in the shared care documents have been completed and were satisfactory	*Yes / No*
The condition being treated has a predictable course of progression and the patient can be suitably maintained by primary care	*Yes / No*
The risks and benefits of treatment have been explained to the patient	*Yes / No*
The roles of the specialist/specialist team/ Primary Care Prescriber / Patient and pharmacist have	*Yes / No*

been explained and agreed	
The patient has agreed to this shared care arrangement, understands the need for ongoing monitoring, and has agreed to attend all necessary appointments	*Yes / No*
I have enclosed a copy of the shared care protocol which covers this treatment/the SCP can be found here (insert electronic/ web link)	*Yes / No*
I have included with the letter copies of the information the patient has received	*Yes / No*
I have provided the patient with sufficient medication to last until	
I have arranged a follow up with this patient in the following timescale	

If you do **NOT** wish to participate in shared care for this patient, usually under clinical grounds, please complete the attached form.

Yours sincerely

{Consultant name}

GP RESPONSE TO SHARED CARE (only complete & send if **NOT** participating in shared care)

Shared care is produced by GPs and specialists knowledgeable in the field of that drug usage. The shared care has been approved by the JAPC. This allows a more convenient service to the patient and cost-effective use of NHS resources.

Patient:	NHS No:
Consultant:	Medicine requested for shared care:

I will **NOT** be undertaking the GP responsibilities as described in the agreed shared care guideline. My clinical reasons for declining shared care for this patient are listed in the box below:

		Tick which applies
1.	**The prescriber does not feel clinically confident in managing this individual patient's condition, and there is a sound clinical basis for refusing to accept shared care** As the patient's primary care prescriber, I do not feel clinically confident to manage this patient's condition because *[insert reason]*. I have consulted with other primary care prescribers in my practice who support my decision. This is not an issue which would be resolved through adequate and appropriate training of prescribers within my practice. **I have discussed my decision with the patient and request that prescribing for this individual remain with you as the specialist, due to the sound clinical basis given above.**	
2.	**The medicine or condition does not fall within the criteria defining suitability for inclusion in a shared care arrangement** As the medicine requested to be prescribed is not included on the national list of shared care drugs as identified by RMOC or is not a locally agreed shared care medicine I am unable to accept clinical responsibility for prescribing this medication at this time. **Until this medicine is identified either nationally or locally as requiring shared care the responsibility for providing this patient with their medication remains with you**	
3.	**A minimum duration of supply by the initiating clinician** As the patient has not had the minimum supply of medication to be provided by the initiating specialist, I am unable to take clinical responsibility for prescribing this medication at this time. Therefore, can you please contact the patient as soon as possible in order to provide them with the medication that you have recommended. ***Until the patient has had the appropriate length of supply the responsibility for providing the patient with their medication remains with you.***	
4.	**Initiation and optimisation by the initiating specialist** As the patient has not been optimised on this medication, I am unable to take clinical responsibility for prescribing this medication at this time. Therefore, can you please contact the patient as soon as possible in order to provide them with the medication that you have recommended. ***Until the patient is optimised on this medication the responsibility for providing the patient with their medication remains with you.***	
5.	**Shared Care Protocol not received** As legal responsibility for clinical care lies with the clinician who signs the prescription, I need to ensure that I am in possession of sufficient clinical information for me to be confident to prescribe this treatment for my patient and it is clear where each of our responsibilities lie to ensure the patient is	

	safely managed*.* For this reason, I am unable to take clinical responsibility for prescribing this medication at this time, therefore would you please contact the patient as soon as possible in order to provide them with the medication that you have recommended. ***Until I receive the appropriate SCP, responsibility for providing the patient with their medication remains with you.***	
6.	**Other (Primary Care Prescriber to complete if there are other reasons why shared care cannot be accepted)**	

Please do not hesitate to contact me if you wish to discuss any aspect of my letter in more detail and I hope to receive more information regarding this shared care agreement as soon as possible

Yours sincerely

{GP name}
{Surgery}

Please send a copy of this response to:

1. The specialist/consultant requesting shared care
2. **AN ANONYMISED COPY OF THIS FORM ONLY** to the Medicines Management and Clinical Policies and Decisions Team, 1st Floor East Point, Cardinal Square, 10 Nottingham Road, Derby, DE1 3QT or E-MAIL: ddccg.medicinesmanagement@nhs.net

(Sending a copy of this form to the Medicines Management and Clinical Policies and Decisions Team will help to identify any inappropriate requests for shared care e.g., indication not covered, hospital monitoring requirements not fulfilled. It will also help to inform the CCG prescribing group of the reasons shared care is not being undertaken allowing for changes to be made in future updates to improve patient care).