**Publications reference number: B1308**

**Patient Group Direction (PGD) for the supply of ciprofloxacin 500mg tablets for post-exposure to plague**

## For the supply of ciprofloxacin 500mg tablets to adults and children aged 12 years and over exposed to a known or suspected deliberate release of plague (*Yersinia pestis*), by registered healthcare practitioners identified in [Section 3,](#section3) subject to any [limitations to authorisation](#limitations) detailed in [Section 2](#section2).

Reference: Ciprofloxacin 500mg tabs plague

Version number: 05.00

Valid from: 17 January 2022

Review date: 17 January 2024

Expiry date: 16 January 2025

**The UK Health Security Agency (UKHSA) has developed this PGD for local authorisation**

Those using this PGD must ensure it is organisationally authorised and signed in Section 2 by an appropriate authorising person, relating to the class of person by whom the product is to be supplied, in accordance with the Human Medicines Regulations 2012 (HMR2012)[[1]](#footnote-1). **The PGD is not legal or valid without signed authorisation in accordance with** [**HMR2012 Schedule 16 Part 2**](http://www.legislation.gov.uk/uksi/2012/1916/schedule/16/part/2/made)**.**

Authorising organisations must not alter, amend or add to the clinical content of this document (sections 4, 5 and 6); such action will invalidate the clinical sign-off with which it is provided.

As operation of this PGD is the responsibility of commissioners and service providers, the authorising organisation can decide which staff groups, in keeping with relevant legislation, can work to the PGD. Sections 2, 3 and 7 must be completed and amended within the designated editable fields provided.

The final authorised copy of this PGD should be kept by the authorising organisation completing Section 2 for 25 years after the PGD expires. Provider organisations adopting authorised versions of this PGD should also retain copies for 25 years after the PGD expires.

**Individual practitioners must be authorised by name, under the current version of this PGD before working according to it.**

Practitioners and organisations must check that they are using the current version of the PGD. Amendments may become necessary prior to the published expiry date. Current versions of UKHSA Chemical, Biological, Radiological and Nuclear (CBRN) PGDs for authorisation can be found from: <https://www.england.nhs.uk/ourwork/eprr/hm/>

Any queries regarding the content of this PGD should be addressed to: NSAC@phe.gov.uk

Enquiries relating to the availability of organisationally authorised PGDs and subsequent versions of this PGD should be directed to: insert local contact details

**Change history**

|  |  |  |
| --- | --- | --- |
| **Version number** | **Change details** | **Date** |
| PGD 2014/1 | Original template developed and ratified | 1 July 2014 |
| PGD 02.00 | 1. Put into the new PHE template format
2. For use in plague only, anthrax and tularemia put in separate PGDs
3. Clinical indications: “another biological agent” removed
4. Abbreviated lists of warnings and contra-indications included- these medicines must be offered in all cases where exposure to these biological agents may have occurred unless there are life-threatening contra-indications.
5. Interactions: advice simplified.
6. References updated.
 | 1 May 2016 |
| PGD 03.00 | 1. Cautions “or amoxicillin” removed
2. Identification & management of adverse reactions “or amoxicillin” removed
 | 4 November 2016 |
| PGD 04.00 | 1. Put into the new PHE template format
2. References updated
 | 7 December 2018 |
| PGD 05.00 | 1. Addition of ‘following deliberate release’ to page 1, clinical indication and criteria for inclusion for clarity
2. Removal of concurrent administration of aminophylline and theophylline from exclusion criteria
3. Cautions: amended wording for additional advice / actions to be taken; initiate supply for renal impairment to avoid delay; other medications added
4. Additional information under drug interactions section, adverse reactions and patient advice section

6. Minor rewording, layout and formatting changes for clarity and consistency with other UKHSA PGD templates | 17 January 2022 |

1. **PGD development**

This PGD has been developed by the following on behalf of the UKHSA:

|  |  |  |  |
| --- | --- | --- | --- |
| **Developed by:** | **Name** | **Signature** | **Date** |
| Pharmacist(Lead Author) | Jacqueline LambertyLead Pharmacist Medicines Governance, UKHSA |  | 17 January 2022 |
| Doctor | Nick GentConsultant in Health ProtectionEmergency Response Department, UKHSA |  | 17 January 2022 |
| Registered Nurse | Kelly StokerLead Immunisation Nurse Specialist, Immunisation and Vaccine Preventable Diseases Division, UKHSA |  | 17 January 2022 |

This PGD has been peer reviewed by the CBRN PGD Expert panel in accordance with the UKHSA PGD Policy. It has been agreed by the UKHSA Medicines Governance Group and ratified by the UKHSA Clinical Quality and Oversight Board.

**Expert panel**

|  |  |
| --- | --- |
| **Name** | **Post** |
| Ruth Milton (Chair) | Senior Medical Adviser, Consultant in Public Health Emergency Response Department, UKHSA |
| Nicholas Aigbogun | Consultant in Communicable Disease Control, Yorkshire and Humber Health Protection Team, UKHSA |
| Diane Ashiru-Oredope | Lead Pharmacist, HCAI, Fungal, AMR, AMU & Sepsis Division, UKHSA |
| Tim Brooks | Consultant Medical Microbiologist / Virologist, UKHSA |
| Rosie Furner | Community Services Pharmacist, East Sussex Healthcare NHS Trust |
| Jo Jenkins | Specialist Pharmacist (Patient Group Directions), Medicines Use and Safety Division, NHSEI |
| Michelle Jones | Principal Medicines Optimisation Pharmacist, NHS Bristol North Somerset and South Gloucestershire CCG |
| Craig Prentice | Advanced Paramedic Practitioner, Surrey and Sussex Healthcare NHS Trust |
| Rohini Manuel | Consultant Medical Microbiologist, UKHSA |

1. **Organisational authorisations**

The PGD is not legally valid until it has had the relevant organisational authorisation.

It is the responsibility of the organisation that has legal authority to authorise the PGD, to ensure all legal and governance requirements are met. The authorising body accepts governance responsibility for the appropriate use of the PGD.

Insert authorising body name authorises this PGD for use by the services or providers listed below:

|  |
| --- |
| Authorised for use by the following organisations and/or services |
|  |
| Limitations to authorisation |
| For instance any local limitations the authorising organisation feels they need to apply in-line with the way services are commissioned locally. This organisation does not authorise the use of this PGD by ….  |

|  |
| --- |
| Organisational approval (legal requirement) |
| Role | Name  | Sign | Date |
| Complete for instance .NHSEI Governance Lead, Medical Director |   |   |   |

|  |
| --- |
| Additional signatories according to locally agreed policy |
| Role | Name  | Sign | Date |
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Section 7 provides a practitioner authorisation sheet. Individual practitioners must be authorised by name to work to this PGD. Alternative practitioner authorisation sheets may be used where appropriate in accordance with local policy, but this should be an individual agreement, or a multiple practitioner authorisation sheet as included at the end of this PGD.

#### Characteristics of staff

|  |  |
| --- | --- |
| **Qualifications and professional registration**  | To be completed by the organisation authorising the PGD for instance registered professional with one of the following bodies:* nurses currently registered with the Nursing and Midwifery Council (NMC).
* pharmacists currently registered with the General Pharmaceutical Council (GPhC).
* Additional registered healthcare professionals to be added by organisation authorising the PGD

The practitioners above must also fulfil the [Additional requirements](#additional) detailed below. Check [Section 2 Limitations to authorisation](#limitations) to confirm whether all practitioners listed above have organisational authorisation to work under this PGD |
| **Additional requirements** | Additionally, practitioners:* must be authorised by name as an approved practitioner under the current terms of this PGD before working to it
* must have undertaken appropriate training for working under PGDs for supply/administration of medicines
* must have undertaken training appropriate to this PGD
* must be competent in the use of PGDs (see [NICE Competency framework](https://www.nice.org.uk/guidance/mpg2/resources) for health professionals using patient group directions)
* must be familiar with the product and alert to changes in the Summary of Product Characteristics (SPC)
* must be competent to assess the individual and discuss treatment options
* must have access to the PGD and associated online resources.
* should fulfil any additional requirements defined by local policy
* insert any additional requirements

**The individual practitioner must be authorised by name, under the current version of this PGD before working according** |
| **Continued training requirements** | * insert any continued training requirements
 |

1. **Clinical condition or situation to which this PGD applies**

|  |  |
| --- | --- |
| **Clinical condition or situation to which this PGD applies** | Chemoprophylaxis following a known or suspected deliberate release of plague (*Yersinia pestis*)**Notes:** ciprofloxacin is the antibiotic of first choice and no follow on course for plague is required |
| **Criteria for inclusion** | Adults and children aged 12 years and over following a known or suspected deliberate release of plague (*Yersinia pestis)*The benefits of using ciprofloxacin to prevent the onset of disease outweigh the potential risks of using this medicine in **growing adolescents, pregnant or breast-feeding individuals who** **should be given ciprofloxacin** in the situation criteria set out aboveIndividuals with the following conditions are included because the benefits of taking the medicine outweigh any risks, but provide the recommended advice given under [Cautions](#Cautions):1. History of tendon disorder related to quinolone use2. Conditions with risk factor for QT interval prolongation3. History of epilepsy4. Myasthenia gravis5. Vitamin K antagonist concomitant treatment (warfarin, phenindione and acenocoumarol)6. Renal impairment – CKD stages 1-57. Other medications |
| **Criteria for exclusion[[2]](#footnote-2)** | Individuals are excluded from this PGD if:1. They have a known history of severe allergic reaction to ciprofloxacin, other quinolones or to any of the listed excipients
2. They are aged under 12 years
3. They are taking tizanidine
 |
| **Ca****utions including any relevant action to be taken**Continued overleaf**Cautions including any relevant action to be taken**(continued) | Ciprofloxacin must be offered in all cases where a known or suspected deliberate release of plague may have occurred, unless there are life-threatening contra-indications not to do so.Supply to individuals with the conditions listed below, because the benefits of taking the medicine outweigh any risks, but provide affected individuals the recommended advice given below:History of tendon disorder related to quinolone use:*Advise to self-monitor for tendinitis. If tendinitis occurs, switch to doxycycline (see* [*Doxycycline*](https://www.england.nhs.uk/ourwork/eprr/hm/) *PGD) or, if contraindicated, refer to supervising doctor for consideration of amoxicillin or co-amoxiclav, as soon as reasonably possible.*Conditions with risk factor for QT interval prolongation:* acute myocardial infarction
* bradycardia
* congenital long QT syndrome
* heart failure with reduced left ventricular ejection
* history of symptomatic arrhythmias

*Warn to self-monitor for any exacerbation of symptoms. If there is an exacerbation of symptoms, switch to doxycycline (see* [*Doxycycline*](https://www.england.nhs.uk/ourwork/eprr/hm/) *PGD) or, if contraindicated, refer to supervising doctor for consideration of amoxicillin or co-amoxiclav immediately.** + - 1. History of epilepsy:

*Warn to self-monitor for any increase in frequency or severity of seizures. If an increase in frequency or severity of seizures occurs, switch to doxycycline (see* [*Doxycycline*](https://www.england.nhs.uk/ourwork/eprr/hm/) *PGD) or, if contraindicated, refer to supervising doctor for consideration of amoxicillin or co-amoxiclav, as soon as reasonably possible.** + - 1. Myasthenia gravis:

*Warn to self-monitor for any increase severity of disease. If an increase in severity of disease occurs, switch to* *doxycycline (see* [*Doxycycline*](https://www.england.nhs.uk/ourwork/eprr/hm/) *PGD) or, if contraindicated, refer to supervising doctor for consideration of amoxicillin or co-amoxiclav, as soon as reasonably possible.*1. Vitamin K antagonist concomitant treatment (warfarin, phenindione and acenocoumarol):

*Warn individual of increased risk of bleeding. Check INR and adjust dose of anticoagulant treatment weekly if necessary, as advised by an anticoagulant clinic or prescriber, during long term ciprofloxacin use.*6. Renal impairment:*Given the risk to benefit, initiate treatment at the doses specified under* [*Dose and frequency of administration*](#dose) *to all individuals with any severity of renal impairment, to avoid delay.*7. Other medications:*On the balance of risk to benefit, individuals taking medications which might interact with ciprofloxacin should normally receive chemoprophylaxis with ciprofloxacin if exposed to a biological agent. This includes methotrexate, theophylline, phenytoin, ciclosporin, clozapine and zolpidem. If a clinically significant interaction occurs or is reported, consider doxycycline (see* [*Doxycycline PGD*](https://www.england.nhs.uk/ourwork/eprr/hm/)*)* |
| **Action to be taken if the patient or carer declines prophylaxis** | Refer the individual to the supervising doctorAdvise the individual or their carer of the possible consequences of declining prophylaxis and of alternative optionsAdvise about the protective effects of the prophylaxis, risks of infection, and disease complicationsAdvise on the need for vigilance for symptoms of the potential disease, recognising symptoms and the need to seek urgent medical attention should symptoms occurDocument the advice given and the decision reached |
| **Action to be taken if the patient is excluded** | Explain why they have been excludedConsider doxycycline. If doxycycline is excluded, refer the individual to the supervising doctor for consideration of amoxicillin or co-amoxiclav, which will need to be supplied under Patient Specific Direction (PSD). |

 **5. Description of treatment**

|  |  |
| --- | --- |
| **Name, strength & formulation of drug** | Ciprofloxacin 500mg tablets |
| **Legal category** | Prescription Only Medicine (POM) |
| **Black triangle▼**  | No |
| **Off-label use** | Yes: Ciprofloxacin tablets are not licensed for use in plague. [UK national guidance](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712888/Chemical_biological_radiological_and_nuclear_incidents_clinical_management_and_health_protection.pdf) recommends its use.Where a product is recommended off-label consider, as part of the consent process, informing the individual/carer that the product is being offered in accordance with national guidance but that this is outside the product licence. |
| **Route / method of administration** | OralTo be swallowed whole with water, as this will help to prevent the formation of tiny crystals in the urine (crystalluria), and preferably on an empty stomach |
| **Dose and frequency of administration** | **Adults and children aged 12 years or over**:One tablet (500mg) to be taken twice a dayAdministration should begin as soon as possible after suspected or confirmed exposure. |
| **Duration of treatment** | 7 days |
| **Quantity to be supplied**  | 14 (fourteen) tablets **Instruct the individual to take one tablet twice daily for 7 days only (that is 14 tablets in total) and to take the remaining tablets to a community pharmacy for disposal.****Note:** No follow on course for plague is required.When supplying under a PGD, this must be a complete manufacturer’s original pack or over-labelled pre-packs. The individual’s name, the date and additional instructions must be written on the label at the time of supply. As split packs cannot be supplied, if an over-supply is required, individuals must be advised to take any remaining medicine to a community pharmacy for destruction. |
| **Storage** | Store in original container below 25 oC |
| **Disposal** | Any unused product or waste material should be disposed of in accordance with local arrangements. |
| **Drug interactions**Continued overleaf**Drug interactions**(continued) | Individuals taking tizanidine are excluded from this PGD.On the balance of risk to benefit, individuals taking other medications which might interact with ciprofloxacin should normally receive chemoprophylaxis with ciprofloxacin if exposed to a biological agent. This includes methotrexate, theophylline, phenytoin, ciclosporin, clozapine and zolpidem. If a clinically significant interaction occurs or is reported, consider doxycycline (see [Doxycycline PGD](https://www.england.nhs.uk/ourwork/eprr/hm/))See [Cautions](#Cautions) for advice for individuals taking vitamin K analogues.A detailed list of drug interactions is available in the [SPC](http://www.medicines.org.uk/emc/) |
| **Identification & management of adverse reactions** | Most commonly nausea and diarrhoea. Ciprofloxacin may affect reaction times; the ability to drive or to operate machinery may be impaired.Other side effects are classified as uncommon to very rare. If any side effects become serious, severe or prolonged, or if the individual notices any side effects not listed in the Patient Information leaflet, individuals should not stop antibiotic treatment, but should contact their GP or pharmacist.Tendon inflammation and rupture may occur with ciprofloxacin. Such reactions have been observed particularly in older individuals and those treated concurrently with corticosteroids. If there is pain or inflammation, **individuals should not stop antibiotic treatment**, but must see their GP at the earliest opportunity to change to doxycycline, amoxicillin or co-amoxiclav.A detailed list of adverse reactions is available in the [SPC](http://www.medicines.org.uk/emc/) |
| **Reporting procedure of adverse reactions** | All suspected adverse reactions in children and severe adverse reactions in adults should be reported using the [Yellow Card](http://yellowcard.mhra.gov.uk/) system or search for MHRA Yellow Card in the Google Play or Apple App Store. Any serious adverse reaction to the drug should be documented in the individual’s record. Alert the supervising doctor in the event of serious adverse reaction, document in the individual’s record and inform the individual’s GP. |
| **Written information to be given to patient or carer** | Supply the marketing authorisation holder's Patient Information Leaflet (PIL). The additional information leaflet covering the use of ciprofloxacin in response to known or expected exposure to a biological agent should also be provided. |
| **Patient advice/follow up treatment**Continued overleaf**Patient advice/follow up treatment**(continued) | Explain the treatment. Ensure the individual is aware of the need to maintain adequate fluid intake. Advise the individual or their carer to:* not take indigestion remedies or medicines containing calcium, magnesium, aluminium iron or zinc 1-2 hours before or 4 hours after taking the medicine
* not take with dairy products (for instance milk, yoghurt) or mineral-fortified fruit-juice (for instance calcium-fortified orange juice)
* swallow the medicine whole with water, as this will help to prevent the formation of tiny crystals in the urine (crystalluria), and preferably on an empty stomach
* not chew or crush the tablets
* space the doses evenly throughout the day
* keep taking the medicine until the course is finished, unless they are told to stop
* not give the tablets to anyone else
* return any unused tablets at the end of the course to a community pharmacy for destruction

Inform individual or their carer:* of possible side effects and their management

to read the PIL leaflet before taking the antibiotic and to seek medical advice if side effects, including painful or inflamed joints, or any other unexplained side effects on health are experienced* the medicine can make the skin more sensitive to direct sunlight. They should avoid exposure to excessive sunlight or use high SPF sunblock if prolonged exposure to the sun is unavoidable.

to only take the medicine for 7 days and to return the excess tablets to a community pharmacy for destruction.For individuals with conditions listed in the [Cautions](#Cautions) section, provide the additional recommended advice.  |
| **Records** | Record: * whether valid informed consent was given or a decision to supply was made in the individual’s best interests in accordance with the [Mental Capacity Act 2005](https://www.legislation.gov.uk/ukpga/2005/9/contents)
* name of individual, address, date of birth and GP with whom the individual is registered (or record where an individual is not registered with a GP)
* name of member of staff who supplied the product
* name and brand of product
* date of supply
* dose, form and route of administration of product
* quantity supplied
* batch number and expiry date
* advice given including advice given if excluded or declines treatment
* details of any adverse drug reactions and actions taken
* record supplied via PGD
* records should be signed and dated

All records should be clear, legible and contemporaneous.Contact details for the individual must be recorded. Local arrangements must ensure that contact is made between the designated centre and all individuals to discuss further supplies of ciprofloxacin or an alternative antibiotic, where appropriate.A computerised or manual record of all individuals receiving treatment under this PGD should also be kept for audit purposes in accordance with local policy.  |

#### Key references

|  |  |
| --- | --- |
| **Key references**  | * [Ciprofloxacin Summary of Product Characteristics](http://www.medicines.org.uk/emc/) accessed 1 December 2021
* [Chemical, biological, radiological and nuclear incidents: clinical management and health protection (2018)](https://www.gov.uk/government/publications/chemical-biological-radiological-and-nuclear-incidents-recognise-and-respond)
* [NICE Medicines Practice Guideline 2 (MPG2): Patient Group Directions](https://www.nice.org.uk/guidance/mpg2) updated 27 March 2017
* [NICE MPG2 Patient group directions: competency framework for health professionals using patient group directions](https://www.nice.org.uk/guidance/mpg2/resources) updated 27 March 2017
* [Health Technical Memorandum 07-01: Safe Management of Healthcare Waste.](https://www.england.nhs.uk/estates/health-technical-memoranda/) Department of Health 20 March 2013
 |

1. **Individual practitioner authorisation sheet**

By signing this PGD you are indicating you agree to the contents and you will work within it

PGDs do not remove inherent professional obligations or accountability

It is the responsibility of each professional to practice only within the bounds of their own competence

**Practitioner**

**I confirm I have read and understood the content of this PGD and I am willing and competent to work to it within my professional code of conduct**

Signed……………………………….………………………….…..Date……….….…………..............

Name (Print)…………….…………..………….………………………………………….…….............

Designation……………………………………………………………….…..………………................

**Authorising manager**

Manager to give authorisation on behalf of **insert name of organisation** for the named healthcare professional who has signed the PGD

Signed…………………………………….………………………. Date……………………..........

Name (Print)………………………..…………………………………….……………..………..........

Designation………………………………………………………………..…………….…….............

**Note to authorising manager**

By signing above, you are confirming you have assessed the staff member as competent to work under this PGD and they have the organisational approval to do so.

You must give this signed PGD to each authorised practitioner as it shows their authorisation to use the PGD

1. This includes any relevant amendments to legislation (such as [2013 No.235](http://www.legislation.gov.uk/uksi/2013/235/contents/made), [2015 No.178](http://www.legislation.gov.uk/nisr/2015/178/contents/made), [2015 No.323](http://www.legislation.gov.uk/uksi/2015/323/contents/made) and [2020 No.1125](https://www.legislation.gov.uk/uksi/2020/1125/contents/made) [↑](#footnote-ref-1)
2. Exclusion under this Patient Group Direction does not necessarily mean the antibiotic is contraindicated, but it would be outside its remit and another form of authorisation will be required [↑](#footnote-ref-2)