

## OUTPATIENT PARENTERAL ANTIMICROBIAL THERAPY (OPAT) POLICY

		POLICY	
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Review Date	August 2025		
Sponsor (Position)	Medicine Division Clinical Chair		
Author (Position & Name)	OPAT Sister – Kimberley Whysall (in collaboration with the OPAT Team, Task and Finish Group)		
Lead Division/Directorate	Medicine		
Lead Specialty/Service/Department	Medicine Division		
Position of Person able to provide Further Guidance/Information	OPAT Sister – Kimberley Whysall (in collaboration with the OPAT Team, Task and Finish Group)		

Associated Documents/ Information	Date Associated Documents/ Information was reviewed
<p>1. <b>OPAT Sticker.</b> (To identify potential patients for the service, the sticker will be added to the patient's medical notes for the attention of the medical team)</p>	6 <sup>th</sup> July 2022
<p>2. <b>ICE referral from the speciality consultant/team</b> (The referral is printed and filed in the patient's medical notes on discharge)</p>	6 <sup>th</sup> July 2022
<p>3. <b>OPAT Outpatient Parenteral Antibiotic Therapy Service Bundle.</b> (The bundle master copy will be held by and accessed through the OPAT service and filed in the patient's medical notes on discharge)</p>	6 <sup>th</sup> July 2022
<p>4. <b>OPAT Patient/carer Self-Administration Competency Document.</b> (Competency document master copy will be held by and accessed through the OPAT service. The competency document will be completed by the OPAT nurse with the patient/carer during self-administration training and held by the patient whilst on the OPAT pathway. Once the patient has been discharged from the OPAT service the competency document will be filed in the patient's medical notes)</p>	6 <sup>th</sup> July 2022
<p>5. <b>OPAT Self-Administration of Intravenous Antibiotics at home – A Step by Step Guide.</b> (Self-administration step by step guide master copy will be held by and accessed through the OPAT service. Patients/carers deemed competent in self-administration of IV antibiotics/medicines will be issued with the guide as part of the training/competency assessment process. The step-by-step guide will stay with the patient as a training/reference source whilst receiving treatment through the OPAT service and filed in the patients notes on discharge)</p>	6 <sup>th</sup> July 2022
<p>6. <b>OPAT Outpatient Parenteral Antibiotic Therapy Service Patient Passport.</b> (OPAT Passport master copy will be held by and accessed through the OPAT service. Patients will be issued with their passport once their treatment commences, and they will be advised to always keep the passport upon their person whilst receiving treatment through the OPAT service)</p>	6 <sup>th</sup> July 2022
<p>7. <b>Leaflet:</b> Information for Patients – Your intravenous line what you need to know. (Accessed via the Sherwood Forest Hospitals Patient information leaflet library) <a href="https://www.sfh-tr.nhs.uk/media/7068/pil202108-02-opativ-your-intravenous-line-what-you-need-to-know.pdf">https://www.sfh-tr.nhs.uk/media/7068/pil202108-02-opativ-your-intravenous-line-what-you-need-to-know.pdf</a></p>	6 <sup>th</sup> July 2022
<p>8. <b>Leaflet:</b> Information for patients – Receiving your intravenous antibiotics at home or in clinic. (Accessed via the Sherwood Forest Hospitals Patient information leaflet library) <a href="https://www.sfh-tr.nhs.uk/media/7069/pil202108-02-opathc-receiving-your-antibiotics-at-home-or-in-clinic.pdf">https://www.sfh-tr.nhs.uk/media/7069/pil202108-02-opathc-receiving-your-antibiotics-at-home-or-in-clinic.pdf</a></p>	6 <sup>th</sup> July 2022

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## 1.0 INTRODUCTION

This outpatient parenteral antibiotic therapy (OPAT) policy has been developed to outline the OPAT service for patients at King's Mill Hospital.

The OPAT service provides intravenous (IV) antibiotic/medicines to patients who require treatment for an extended period and are otherwise medically fit to continue treatment outside of an acute hospital setting.

The aim of the OPAT service is to provide safe patient focused care, promote early discharge from hospital and where possible admission avoidance.

The OPAT service will offer:

- Patient/Carer Self-Administration at Home.
- Clinic - Nurse Led Administration.
- Community (home) – Nurse Led Administration.

Once deemed medically fit by the referring clinician, the OPAT specialist nurses will review referred patients and liaise with the multi-disciplinary team (MDT) to ensure they are on the correct treatment and OPAT pathway. The OPAT service will ensure that patients are discharged in a timely manner once accepted onto the pathway and will have a clear focus towards ensuring safe and efficient care a positive patient experience.

The OPAT service currently accepts ICE referrals from (see table below) with the intention of ultimately extending to patients and specialities trust wide:

Speciality	Date Agreed at Governance
Medicine Divisional Clinical Governance	30/10/2019
Respiratory	22/11/2019
Endocrine and Diabetes	08/01/2020
Gastroenterology	19/02/2020
Cardiology	27/03/2020
HCOP	12/06/2020
Surgery	24/06/2020
Orthopaedic	07/07/2020
ENT	15/09/2020
Haematology	17/03/2022
Dermatology	15/03/2022

## 2.0 POLICY STATEMENT

The purpose of this policy is to define and standardise the approach taken by Sherwood Forest Hospitals NHS Foundation Trust, King's Mill Hospital for the implementation of outpatient parenteral antibiotic therapy within the specialities that have or are intending to sign up to the service.

This policy applies to all patients accessing the OPAT service as an evidenced based resource in order to standardise practice.

## 3.0 DEFINITIONS/ ABBREVIATIONS

<b>OPAT</b>	Outpatient Parenteral Antibiotic Therapy
<b>IV</b>	Intravenous
<b>BSAC</b>	British Society for Antimicrobial Chemotherapy
<b>MDT</b>	Multi-Disciplinary Team
<b>RCA</b>	Route Cause Analysis
<b>RAPA</b>	Recurrent Admission Patient Alert
<b>ICE</b>	Integrated Clinical Environment
<b>GP</b>	General Practitioner
<b>TTO's</b>	To Take Out
<b>NORS</b>	National Outcome Registry System
<b>ED</b>	Emergency Department
<b>ESR</b>	Electronic Staff Record (ESR)

## 4.0 ROLES AND RESPONSIBILITIES

### Divisional Nurses and Clinical Chairs

Divisional Nurses and Clinical Chairs are responsible for the content and implementation of this policy; ensuring that the necessary measures are in place to support the safe implementation in practice and monitoring of the use of the policy to ensure patient safety. Where practice has been deemed potentially unsafe; they are responsible for ensuring appropriate remedial action, measures are put into place to maintain patient safety.

### Matrons, Department Managers and Heads of Service

Matrons, Department Managers and Heads of Service are responsible for ensuring that all staff that are directly accountable to them are aware of this policy and adhere to the standards stated to ensure patient safety.

It is the manager's responsibility to investigate and rectify any discrepancies identified.

### Ward Sister/Charge Nurses/Departmental Leaders

Ward Sister/Charge Nurses/Departmental Leaders will act as excellent role models. They are responsible and accountable for the policy implementation in practice, and the monitoring of standards and best practice associated with it and ensuring patient safety.

### Infection Control Team

The Infection Control Team will act as the expert group; provide guidance and support on infection prevention and control issues relating to OPAT to promote safe, effective practice and patient care.

### Microbiologist

The Microbiologist will be responsible for:

- Ensuring the OPAT service meets national British Society for Antimicrobial Chemotherapy Standards (BSAC)
- Leading the weekly OPAT service MDT
- Agreeing that the hospital microbiologist can be contact for support and advice in/out of hours
- Liaising with the responsible consultants for patients on the OPAT service ensuring their treatment is being optimised.

### The referring physician/consultant:

The referring physician/consultant will be responsible for:

- Initiating OPAT referral on Integrated Clinical Environment (ICE)
- Ensuring the patient is reviewed, including blood results, prior to discharge
- Ensuring medication charts and TTOs are completed in a timely manner to support the discharge process
- The on-going care of the OPAT patient
- Reviewing patients weekly as a minimum, either face to face or remotely.
- The decision to start/continue/stop antibiotics and choice of antibiotic
- Liaising with the OPAT team weekly as a minimum.
- Communication with the patients GP

### OPAT Antimicrobial Pharmacist:

The OPAT Antimicrobial Pharmacist will be responsible for:

- Attending the weekly MDT
- OPAT Antimicrobial Pharmacist can be contacted for support and advice
- Liaising with the OPAT team and responsible consultants ensuring the patients treatment is being optimised in line with local, regional, national guidance.

### OPAT Service Lead and OPAT Lead Nurse:

The OPAT Service Lead and OPAT Lead Nurse will be responsible for:

- Patient Safety
- Staff Safety
- Staff training and education
- Personal professional training and education
- Coordinating the service/staff rota's (health roster)
- Developing the service, including written patient information

- Dealing with questions/troubleshooting
- Governance
- Setting up and running MDT
- Service risk management
- Incident reporting
- Audit data
- Complaint management
- Incident (DATIX) monitoring/Route Cause Analysis (RCA)

### OPAT Nurse:

The OPAT nurse will be responsible for:

- Patient Safety
- Personal Safety
- Professional training and education
- Teaching and supporting patients using the OPAT service
- Assessing patient's appropriateness for the OPAT service
- Assisting in the coordination of the OPAT service
- The administration of antibiotics
- On-going monitoring of patients who are receiving treatment through the OPAT service
- Line monitoring and dressing changes
- Equipment availability
- Monitoring stock levels and ordering stock as required
- Trouble shooting/on call cover
- Communication with the patients' General Practitioner (GP)

### OPAT Service Audit Assistant:

The OPAT Service Audit Assistant will be responsible for:

- Personal professional training and education
- Collection and recording data for the OPAT Databases
- Providing assistance to clinicians in the development and maintenance of national and local clinical audit activities related to OPAT services
- Providing administrative support to OPAT services, by the preparation of data reports
- Ensuring that data is collected accurately, supervising and advising nursing and medical staff in data collection.
- Checking and validating the quality of data collected
- Communication of highly sensitive accurate data both internally and externally to outside bodies
- Working closely with the National Audit Networks helping to implement audit system.

### Ward Staff:

The ward staff will be responsible for:

- Patient Safety
- Supporting and promoting the OPAT service
- Giving general advice to patients regarding their prescribed medications
- Checking drugs to be dispensed prior to discharge



- Ensuring a safe patient discharge onto the OPAT service with medication To Take Out (TTO's)
- Communication with the patients GP

### Ward Doctors:

Ward doctors will be responsible for:

- Patient Safety
- ICE referral to the OPAT service (if agreed at consultant level)
- Referral for or insertion of central venous line including base line bloods
- Reviewing the patient and blood results prior to discharge
- Completing medication charts and TTOs
- Liaising with the OPAT team
- Communication with the patients GP

### Patients/Carers:

Patients/carers will be responsible for:

- Attending the OPAT clinic on a weekly basis (as a minimum) if clinically indicated whilst accessing the OPAT service
- Taking care of their IV line as taught by the OPAT service
- Ensuring they do not allow the line to be accessed by anyone who is not trained to do so
- Ensuring that nothing is administered via the line other than what has been prescribed by the OPAT service
- Monitoring the line and dressing as taught by the OPAT service (to avoid the risk of infection)
- Escalating to the OPAT service in normal working hours if they have any concerns, feel unwell (relapse of symptoms) have any signs of infection (sepsis). Out of hours call 111 or attend the Emergency department (ED)
- Following guidance given by the OPAT service if experiencing a severe reaction (anaphylaxis) or feel they are severely unwell call 999 immediately.
- Understanding failure to comply with what has been taught for self-administration of IV antibiotics and the OPAT competency document may result in withdrawal from self-administration, transfer onto nurse administration within the community/clinic or readmission to hospital.

## **5.0 APPROVAL**

This policy (v2.0) has been produced under the direction of a Multi- Disciplinary Team working task group comprising of:

- Consultant Microbiologist
- Lead Respiratory Consultant
- Antimicrobial Pharmacist
- Infection Prevention and Control
- OPAT Lead Nurse

Consultation has been via the following forums:

- Respiratory Governance Meeting



- Infection Prevention and Control.
- Drugs & Therapeutics, Medicines Optimisation Committee
- Nursing, Midwifery and Allied Health Professional Board

The revised policy has been approved by the Medicine Division Clinical Governance Group.

## 6.0 MODEL OF DELIVERY (DOCUMENT REQUIREMENTS)

### Hours:

The service will run 07.00 – 22.00 hours, 7 days a week including bank/public holidays

### Lone Working Model (in line with SFHT lone worker policy):

All lone working members of staff have a responsibility to do all they can to ensure their own safety and that of their colleagues.

(This is in line with current health and safety legislation and the trust policies and guidance documents)

- The OPAT Nurse will receive training and guidance for lone working as part of their induction.
- Emergency contact information will be provided by all OPAT nurses and stored on Health Roster and ESR.
- The OPAT nurse is required to speak to the OPAT coordinator at the start of their shift (pre morning visits) midday (pre afternoon visits) and in the evening (once all visits are complete)
- If out on all day visits all OPAT staff will be asked to contact the OPAT coordinator to inform them of planned stops/starts (i.e.rest breaks, fuel stops)
- All OPAT staff on home visits will be encouraged to keep in contact with the co-ordinator and escalate any problems that they are experiencing, concerns and always to seek advice if in doubt
- The OPAT nurse will be allocated their visits each shift by the OPAT coordinator, and this will be recorded on the community patients white board to ensure the coordinator knows the location/whereabouts of the nurses based within the community at all times.
- It is the responsibility of the OPAT nurse providing home visits to inform the OPAT co-ordinator if there are any concerns or changes to the visits allocated to them to ensure location monitoring can continue
- The OPAT nurse providing home visits will be issued with an individual lone worker protection device (it is the individual's responsibility to ensure that their device is maintenance checked yearly through MEMD, fully charged and checked to be in good working order before every visit)
- The OPAT nurse is responsible for ensuring the lone worker device is correctly used before and after each visit (as per training provided)
- The OPAT nurse providing home visits will be issued with a mobile phone to use as required during home visits, (it is the individual's responsibility to ensure that their device is fully charged, checked and in good working order before every visit)
- If there are concerns or previous risks identified relating to a planned home visit joint working will be implemented (two OPAT nurses will be allocated to the home visit until treatment is complete)

- All OPAT nurses are required to sign up to easy expenses for fuel, mileage, insurance and car MOT monitoring and payments.
- All incidents relating to lone working and the OPAT service will be recorded, investigated and monitored via DATIX

### Environment:

- Patient's permanent/temporary place of residence
- Kingsmill, Newark, Mansfield community hospital – wards/clinics
- Sherwood Community Care Unit
- Medical Day Case Unit

### Identification of Patients:

- Speciality Clinics
- Speciality MDT meetings
- On Call consultant
- GP referral to speciality consultant
- OPAT floor walking/nerve centre
- ePMA IV antibiotic list
- RAPA

### Patient Criteria:

- Aged 18 years and above
- Clear and concisely documented diagnosis in the patient's medical notes
- The patient is medically fit for discharge at the clinician's discretion and clearly documented in the patient notes
- The patient is suitable for the OPAT service in the opinion of the consultant/ Registrar and clearly documented in the patient notes.
- The speciality consultant will remain responsible for the patients care whilst on the OPAT pathway
- The speciality consultant/registrar will liaise weekly as a minimum or more regularly as required with the OPAT team to discuss the patient's on-going care to enable treatments to be optimised and ensure patients remain safe
- The speciality consultant/registrar will review the patient weekly as a minimum, face to face or remotely whilst on the OPAT pathway  
The patient consents to the OPAT service or if the patient lacks capacity to consent to the OPAT service then a best interest decision will be made by the referring speciality team and OPAT team. Where possible the patient's family/carers will be involved in the decision-making process.
- The Patient is unable to be treated with oral antibiotics
- For self-administration of intravenous antibiotics, the patient or carer must have good vision, dexterity and be neurologically stable
- For self-administration of IV antibiotics the patient must have access to a working phone to access help via the OPAT service or emergency services
- The home environment must be suitable for:

- The OPAT team to have safe access and for the storage and administration of medicines
- Access to a phone for emergency situations
- The patient needs to consent to attending the hospital for routine/therapeutic bloods, clinical review with the consultant, line review and dressing change with the OPAT nurses at least once a week
- Transport must be available either self-funded, via the GP or via the trust with advanced notice
- The patient will require the most appropriate intravenous access dependent upon the prescribed treatment and duration – OPAT will advise and insert the required IV access
- Home visits/self-administration patients must be registered with a GP practice and reside within an area the OPAT service considers to be of an acceptable distance/travel time this will be assessed on an individual patient basis and depend upon service capacity at the time of referral.

#### Exclusion Criteria:

- Can be treated with oral antibiotics/alternative oral medications
- Does not meet all inclusion criteria
- Unclear diagnosis
- Medically unwell, not fit for discharge at the clinician's discretion and clearly documented in the patient notes
- Active intravenous drug user
- Is suitable for the OPAT service but the staffing capacity of the service has been reached

#### Line Access:

- The consultant / registrar referring to the OPAT service has the responsibility to consent the patient for line insertion
- The patient should have the most appropriate intravenous access dependent upon the prescribed treatment and duration – OPAT will advise and insert the required IV access
- Delays with line access should not delay a patient's discharge home – if clinically safe and appropriate for the patient an intravenous short-term cannula/midline can be inserted by the OPAT nurses whilst awaiting a longer-term line placement (This should be no longer than one week with strict VIP monitoring in place)
- Line maintenance monitoring plan should be initiated during periods of non-use with weekly discussion within the MDT
- All line concerns will be discussed with the consultant/registrar. The patient will be booked into clinic for a review by the OPAT team. If the line requires replacing this will be arranged by the OPAT service as an outpatient.
- Heparin flushing solution to be administered as clinically indicated or as per the Royal Marsden Manual of Clinical Nursing Procedure – trust specific custom content.

### Prescribing:

- Medicines requiring storage at room temperature should be kept out of reach of children, pets and should be kept in a dry environment
- Drugs, flushes, reconstitution, and infusion fluids will be prescribed by the referring speciality team on either an inpatient TTO or outpatient script (depending on the referral route)
- Drugs, flushes, reconstitution, and infusion fluids will also be prescribed by the referring speciality team on a trust drug chart (to allow record of administration)
- Nurse/clinic administration – drugs, flushes, reconstitution, and infusion fluids will be taken from OPAT stock.
- Self/carer administration – drugs, flushes, reconstitution and infusion fluids will be supplied by pharmacy/pharmacy stores
- Staff will be issued with an anaphylaxis kit/pen for community visits
- Patients with history of anaphylaxis or who reside within a remote location will be issued with an anaphylaxis pen (administration education will be provided by the OPAT service).
- OPAT Nurse's will be provided with appropriate equipment to carry and store drugs safely in and out of hospital setting
- All the necessary equipment required for intravenous administration will be provided to staff/patients
- All IV antibiotics/medicines will have a two-nurse check and record of completed checks before leaving the hospital site

### Antibiotic Choices:

Please see **OPAT Formulary**

<http://pharmacy.sfh-tr.nhs.uk/Microbiology/OPAT/OPAT%20Antimicrobial%20Formulary.pdf>

### Infection Control Requirements:

Each member of the OPAT team will be issued with the following:

- Alcohol hand rub
- Hand wipes
- Disposable wipes (for equipment)
- Dressing pack
- Gloves
- Aprons
- Shoe covers
- Eye shield
- Face Masks
- Transport container for clinical sharps waste bins
- Cold chain drug storage/transport box

Patients/carers will be issued with the required equipment as per their prescribed treatment regime.

### OPAT Referral Pathway:

- OPAT referral via ICE by the referring speciality consultant/registrar.
- 2 x printed copies of the ICE referral – 1 copy to be added to the patient's bundle and 1 copy for the OPAT service referral's file (for audit purposes).
- OPAT nurse review within 24 hours of receiving the fully completed ICE referral form.
- OPAT nurse review, OPAT bundle completed with the patient/carers
- OPAT nurse to assess most appropriate OPAT pathway to be followed:
  - Self-administration (patient/carer led)
  - Infusion Clinic (nurse delivered)
  - Patients Home/community (nurse delivered)
- Referring speciality team to complete the OPAT drug card and TTO for all medications to be administered via the OPAT service as per the trusts administration of medicines guidelines
- Arrange weekly patient follow up:
  - Consultant/registrar review
  - OPAT nurse review (bloods/dressing change/line review)
- Discharge patient with OPAT documentation, OPAT leaflets, OPAT Passport, out of hours/emergency contact information
- Send GP Letter informing of OPAT service pathway, estimated length of treatment and arranged follow up care
- If the patient has community support (care package/district nurse) inform care provider of the OPAT service pathway, estimated length of treatment, and arranged follow up care

### MDT:

Weekly MDT's will be attended by the consultant microbiologist, OPAT lead consultant, clinical antimicrobial pharmacist the OPAT lead nurse and/or OPAT coordinator

All patients on the OPAT service or with lines remaining in place will continue to be managed by the speciality consultant with support and advice from the consultant microbiologist, clinical antimicrobial pharmacist, OPAT lead nurse and the OPAT nursing team.

Responsible physician advice will be sought to establish antibiotic choice or a change in regime following a sputum sample result and/or blood results.

MDT communication will be documented on the OPAT MDT outcome sheet and emailed each week to the speciality consultant to review.

Upon discharge the outcome sheets and any correspondence from the speciality team will be printed and filed within the patient's medical notes.

The patients registered GP will receive an electronic letter from the OPAT service via dragon when, a patient is admitted and discharge from the OPAT service. Additional letter will be sent as required whilst the patient is receiving treatment to ensure the GP is updated of any changes in the patient's treatment/condition.

### Audit:

There will be an on-going audit/data collection process within the OPAT service which will be reviewed regularly by the OPAT team. The results from the audits will refine and influence the work undertaken within the OPAT service going forward ensuring patients care is optimized and that they received a positive experience.

Practices within the OPAT service may be reviewed following audit or DATIX reporting which has identified a risk with the existing procedure/processes.

### Monitoring of:

- Horizon OPAT audit database
- National Outcome Registry System (NORS)
- Number of OPAT referral
- Number of OPAT patients identified by the OPAT nurses
- Number of OPAT inclusions
- Number of OPAT exclusions and why
- Readmission rate – with root cause analysis
- Patient concerns/emergencies emergency department (ED) out of hours
- Patient satisfaction survey

### OPAT Pathway:

- Self-administration (patient/carer led)
- Infusion Clinic (nurse delivered)
- Patients Home/Community (nurse delivered)

### Antibiotic Prescribed:

- Length of treatment
- Treatment goal (cure/improvement/palliation)

### Line:

- Date line referral made
- Date line placed
- Type of line
- Any complications (occlusions/infections/accidental removal)

### Clostridium Difficile – CDIFF:

- What day
- Length of time
- Treatment/readmission
- Probable number of bed days saved

### Drug Reactions:

- Type of reaction
- What drug/dose
- Number of doses received prior to reaction
- Any previous history

## 7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

There will be an on-going audit/data collection process within the OPAT service which will be reviewed regularly by the OPAT team as a whole. The results from the audits will refine and influence the work undertaken within the OPAT service going forward ensuring patients care is optimised and that they received a positive experience.

Practices within the OPAT service may be reviewed following audit or Datix reporting which has identified a risk with the existing procedure.

Minimum Requirement to be Monitored  (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual  (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit  (HOW – will this element be monitored (method used))	Frequency of Monitoring  (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results  (WHERE – Which individual/committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Number of OPAT referrals.	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
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Number of OPAT exclusions and why	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
OPAT pathway: 1. Self-administration (patient/carer led) 2. Infusion Clinic (nurse delivered) 3. Patients Home/community (nurse delivered)	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
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Length of treatment.	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting

Minimum Requirement to be Monitored  (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual  (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit  (HOW – will this element be monitored (method used))	Frequency of Monitoring  (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results  (WHERE – Which individual/committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Treatment goal (cure/improvement/palliation)	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
Line: 1. Date line referral made. 2. Date line placed. 3. Type of line. 4. Any complications (infections / accidental removal)	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Datix Incident Reporting Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
Clostridium Difficile – CDIFF: 1. What day 2. Length of time 3. Treatment / readmission	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Infection control Datix Incident Reporting Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting

Minimum Requirement to be Monitored  (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual  (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit  (HOW – will this element be monitored (method used))	Frequency of Monitoring  (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results  (WHERE – Which individual/committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Probable number of bed days saved	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
Readmission rate – with root cause analysis.	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Datix Incident Reporting Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
Patient concerns / emergencies (A&E visits) out of hours	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Datix Incident Reporting Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting
Patient satisfaction survey	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Datix Incident Reporting Patient Experience Team	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting

<b>Minimum Requirement to be Monitored</b>  (WHAT – element of compliance or effectiveness within the document will be monitored)	<b>Responsible Individual</b>  (WHO – is going to monitor this element)	<b>Process for Monitoring e.g. Audit</b>  (HOW – will this element be monitored (method used))	<b>Frequency of Monitoring</b>  (WHEN – will this element be monitored (frequency/ how often))	<b>Responsible Individual or Committee/ Group for Review of Results</b>  (WHERE – Which individual/committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Drug reactions: 1. Type of reaction. 2. What drug/dose. 3. Number of doses received prior to reaction. 4. Any previous history.	OPAT Lead Nurse OPAT Specialist Nurse OPAT Nurse OPAT Audit Assistant	National OPAT Audit Database (Horizon) Audit Database/Spread sheet Datix Incident Reporting	Monthly	Results will be discussed in the: OPAT Weekly MDT OPAT team monthly meetings/updates Clinical Speciality Governance meeting

## 12.0 TRAINING AND IMPLEMENTATION

Staff will need to be trained and have knowledge of the following and assessed as competent:

- OPAT policy and SOP (Knowledge)
- (ANTT) policy (Knowledge)
- Aseptic Non-Touch Technique Training
- Medicines Policy (Knowledge)
- Registered Nurse Mandatory Training
- Accountability pack
- AIMS training course
- Venous Access training (venepuncture and cannulation)
- Central venous devices (CVAD) training
- IV administration training/calculations test
- Lone Worker personal safety alarm device training
- Conflict Resolution training
- Anaphylaxis management training

Patients/carers will need to be trained and have knowledge of the following and assessed as competent:

- Identifying drug reactions/anaphylaxis and what to do
- Preparation of the home environment for IV antibiotic administration
- Hand hygiene and infection control procedures
- Safe storage of medications/equipment
- Medicine reconstitution and administration
- IV device/site management and maintenance
- IV device/site checks Visual Infusion Phlebitis Score (VIPS)
- Safe disposal of sharps
- Knowledge and understanding of the OPAT trouble shooting guide

**(All of the above is taught and signed off once deemed competent by the OPAT service. The OPAT service patient/carer self-administration competency document will remain with the patient/carer as a reference guide/record whilst accessing the OPAT service and filed within the medical notes upon discharge from the OPAT service).**

## 9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at [Appendix 1](#)
- This document has been subject to an Environmental Impact Assessment, see completed form at [Appendix 2](#)

## 10.0 EVIDENCE BASE (Relevant Legislation/National Guidance) AND RELATED SFHFT DOCUMENTS

### Evidence Base:

- Please see **Appendix 4**

### Related SFHFT Documents:

- Respiratory Service Patient/Carer Administration of intravenous (IV) Antibiotic at Home Policy for the OPAT Service.
- Accountability Handover Policy for Registered Health Care Professionals
- Aseptic non touch technique policy (ANTT)
- Complaints, Concerns and Compliments Policy
- Consent to Examination, Treatment or Care Policy
- Clinical Audit Policy
- Clinical Records Keeping Standards Policy
- CVAD Policy – IV Medication and Fluid Therapy Administration through a Central Venous Access Device.
- Discharge Policy
- Duty of Candour Policy
- Escort and Transfer Policy
- Hand Hygiene Policy
- Health and Safety Policy
- Incident Reporting Policy
- Lone Working Policy
- Medicines management (pharmacy) related clinical documents.
- Medicines Policy.
- Medical Device Management Policy
- Personal and Protective equipment Policy
- Safeguarding Adults Policy
- Winter Capacity Plan

### Other related documents:

- Care Quality Commission Outcomes
- NHSLA Risk Management Standards for Acute Trusts

## 11.0 KEYWORDS:

- Standard operating procedure; SOP, service; referral pathway, risk, escalation

## 12.0 APPENDICES

Appendix 1	Equality Impact Assessment (EQIA)
Appendix 2	Environment Impact Assessment
Appendix 3	Process of Self-Administration Training
Appendix 4	Evidence Base (relevant legislation/national guidance) and Related SFHFT Documents
Appendix 5	OPAT/ Virtual Ward Lone Worker Activation Protocol

## APPENDIX 1 - EQUALITY IMPACT ASSESSMENT FORM (EQIA)

<b>Name of service/policy/procedure being reviewed:</b> <i>Introduction of the SFH OPAT Service and Policy</i>			
<b>New or existing service/policy/procedure:</b> <i>Existing</i>			
<b>Date of Assessment:</b> 6 <sup>th</sup> July 2022			
<b>For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)</b>			
<b>Protected Characteristic</b>	<b>a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?</b>	<b>b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?</b>	<b>c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality</b>
<b>The area of policy or its implementation being assessed:</b>			
<b>Race and Ethnicity</b>	No issues, needs or barriers.	N/A	No Barriers.
<b>Gender</b>	No issues, needs or barriers.	N/A	No Barriers.
<b>Age</b>	This is an adult only service/18 years and over.	None required the paediatric service is covered by the children's community team.	No Barriers.
<b>Religion</b>	No issues, needs or barriers every patient is assessed on an individual basis and all religions and beliefs are taken into consideration.	N/A	No Barriers.
<b>Disability</b>	No issues, needs or barriers the OPAT service could have a positive impact. Every patient's needs are assessed on an individual basis and all needs are taken into consideration.	There are three options on the OPAT service: Self/carer administration Nurse led clinic administration Nurse led community administration	No Barriers.
<b>Sexuality</b>	No issues, needs or barriers.	N/A	No Barriers.
<b>Pregnancy and Maternity</b>	No issues, needs or barriers. Every patient is assessed individually, and their treatment administered as clinically	N/A	No Barriers.



	required, as per the OPAT standard operational policy.		
<b>Gender Reassignment</b>	No issues, needs or barriers.	N/A	No Barriers.
<b>Marriage and Civil Partnership</b>	No issues, needs or barriers.	N/A	No Barrier.
<b>Socio-Economic Factors (i.e. living in a poorer neighbourhood/social deprivation)</b>	Travel distance is reviewed by the OPAT team on an individual patient basis and service capacity. If there are any risks/concerns relating to area or accommodation, then an alternative OPAT service will be offered to the patient.	If the travel distance is assessed as unsuitable at that time for the OPAT service, patients will be referred to their closest OPAT service and remain in hospital until that service has capacity to accept/or the patient has completed their required treatment whilst in hospital. There are three options on the OPAT service: Self/carer administration Nurse led clinic administration Nurse led community administration	No Barrier.

<b>What consultation with protected characteristic groups including patient groups have you carried out?</b> <ul style="list-style-type: none"> <li>MDT – Consultants /Specialist nurses/Matron/Business unit leads/CCG's</li> </ul>
<b>What data or information did you use in support of this EqIA?</b> <ul style="list-style-type: none"> <li>British Society for Antimicrobial Therapy (BSAC)</li> <li>OPAT Data Spread Sheet</li> </ul>
<b>As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?</b> <ul style="list-style-type: none"> <li>None</li> </ul>

**Level of impact**

From the information provided above and following EqIA guidance document ([click here](#)), please indicate the perceived level of impact:

**Low Level of Impact**

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

**Name of Responsible Person undertaking this assessment:** Kimberley Whysall

**Signature:**

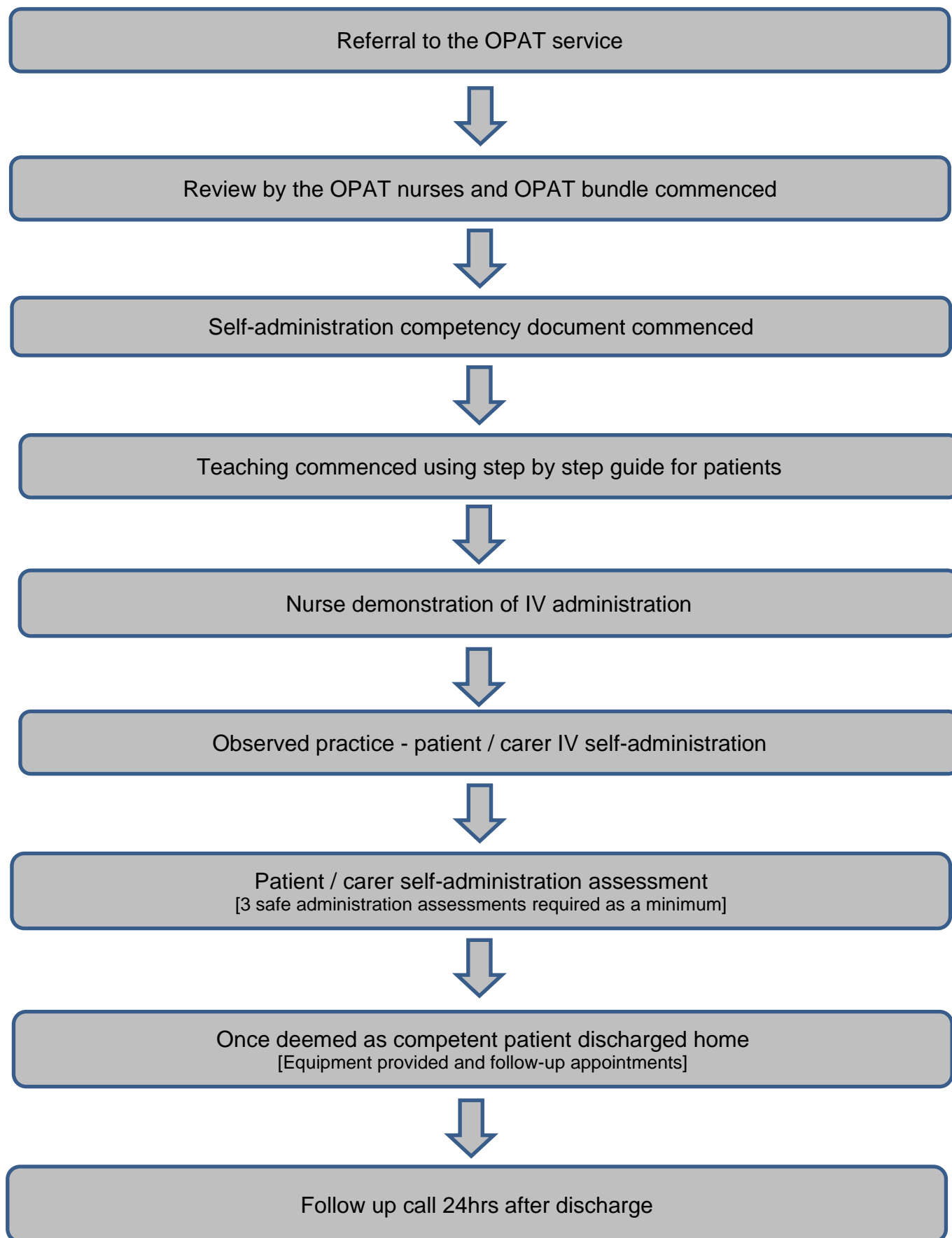
**Date:** 6<sup>th</sup> July 2022

## APPENDIX 2 – ENVIRONMENTAL IMPACT ASSESSMENT

The purpose of an environmental impact assessment is to identify the environmental impact, assess the significance of the consequences and, if required, reduce and mitigate the effect by either, a) amend the policy b) implement mitigating actions.

Area of impact	Environmental Risk/Impacts to consider	Yes/No	Action Taken (where necessary)
<b>Waste and materials</b>	<ul style="list-style-type: none"> <li>Is the policy encouraging using more materials/supplies?</li> <li>Is the policy likely to increase the waste produced?</li> <li>Does the policy fail to utilise opportunities for introduction/replacement of materials that can be recycled?</li> </ul>	NO	
<b>Soil/Land</b>	<ul style="list-style-type: none"> <li>Is the policy likely to promote the use of substances dangerous to the land if released? (e.g. lubricants, liquid chemicals)</li> <li>Does the policy fail to consider the need to provide adequate containment for these substances? (For example bunded containers, etc.)</li> </ul>	NO	
<b>Water</b>	<ul style="list-style-type: none"> <li>Is the policy likely to result in an increase of water usage? (estimate quantities)</li> <li>Is the policy likely to result in water being polluted? (e.g. dangerous chemicals being introduced in the water)</li> <li>Does the policy fail to include a mitigating procedure? (e.g. modify procedure to prevent water from being polluted; polluted water containment for adequate disposal)</li> </ul>	NO	
<b>Air</b>	<ul style="list-style-type: none"> <li>Is the policy likely to result in the introduction of procedures and equipment with resulting emissions to air? (For example use of a furnaces; combustion of fuels, emission or particles to the atmosphere, etc.)</li> <li>Does the policy fail to include a procedure to mitigate the effects?</li> <li>Does the policy fail to require compliance with the limits of emission imposed by the relevant regulations?</li> </ul>	NO	
<b>Energy</b>	<ul style="list-style-type: none"> <li>Does the policy result in an increase in energy consumption levels in the Trust? (estimate quantities)</li> </ul>	NO	
<b>Nuisances</b>	<ul style="list-style-type: none"> <li>Would the policy result in the creation of nuisances such as noise or odour (for staff, patients, visitors, neighbours and other relevant stakeholders)?</li> </ul>	NO	

### **APPENDIX 3 - PROCESS OF SELF -ADMINISTRATION TRAINING**



## **APPENDIX 4 - EVIDENCE BASE (RELEVANT LEGISLATION/ NATIONAL GUIDANCE)**

Atkinson, D. et al. (2015) **Providing an outpatient antimicrobial therapy service.** British Journal of Nursing, 24, pp. S28–S29. doi: 10.12968/bjon.2015.24.Sup19.S28.

Bedford, E. and Waterhouse, D. (2017) **Service development of a nurse-led community-based PICC insertion service.** British Journal of Nursing, 26(2), pp. S22–S27. doi: 10.12968/bjon.2017.26.2.S22.

Bellamy, Richard. (2018) **Outpatient parenteral antimicrobial therapy.** British Journal of Hospital Medicine. 79. 12-17. 10.12968/hmed.2018.79.1.12.

Berrevoets, M. A. H. et al. (2018) **Quality of outpatient parenteral antimicrobial therapy (OPAT) care from the patient's perspective: a qualitative study.** BMJ Open, 8(11), p. e024564. doi: 10.1136/bmjopen-2018-024564.

British Society for Antimicrobial Chemotherapy, (2022) Education. <https://bsac.org.uk/education/>

British Society for Antimicrobial Chemotherapy, (2022) e-OPAT. <https://e-opat.com>

Chapman, A. Seaton, A. Cooper, A et al (2012) **Good practice recommendations for outpatient parenteral antimicrobial therapy (OPAT) in adults in the UK: a consensus statement.** Journal of Antimicrobial Chemotherapy 67, pp. 1053–1062

Cole, E. (2019) **SUPPORTING PATIENTS - AND SAVING MILLIONS: A nurse-led initiative teaching patients to self-administer IV antibiotics has reduced costs and workload.** Nursing Standard, 34(7), pp. 42–44. doi: 10.7748/ns.34.7.42.s20.

Crick K et al (2016) **Reviewing a long-distance OPAT service model.** Nursing Times; 112: 35/36, 19-21.

Dimitrova M, Gilchrist M, Seaton RA  
**Outpatient parenteral antimicrobial therapy (OPAT) versus inpatient care in the UK: a health economic assessment for six key diagnoses**  
*BMJ Open* 2021;11:e049733. doi: 10.1136/bmjopen-2021-049733

Durojaiye, O. C., Cartwright, K. and Ntziora, F. (2019) **Outpatient parenteral antimicrobial therapy (OPAT) in the UK: a cross-sectional survey of acute hospital trusts and health boards.** Diagnostic Microbiology and Infectious Disease, 93(1), pp. 58–62. doi: 10.1016/j.diagmicrobio.2018.07.013.

Durojaiye, Oyewole & Gorrod, H. & Andrews, Dawn & Ntziora, Fotinie & Cartwright, Katharine. (2017). **Clinical efficacy, cost analysis and patient acceptability of outpatient parenteral antibiotic therapy (OPAT): A decade of Sheffield (UK) OPAT service.** International Journal of Antimicrobial Agents. 51. 10.1016/j.ijantimicag.2017.03.016.

Eaves, K., Thornton, J. and Chapman, A. L. (2014) **Patient retention of training in self-administration of intravenous antibiotic therapy in an outpatient parenteral antibiotic therapy service.** Journal of Clinical Nursing (John Wiley & Sons, Inc.), 23(9–10), pp. 1318–1322. doi: 10.1111/jocn.12376.

Falconer, S. (2019) **Tailoring services improves care -- and saves money.** Nursing Standard, 34(2), pp. 67–68. doi: 10.7748/ns.34.2.67.s20.

González Ramallo, V. J. et al. (2017) “*Usefulness of Hospital at Home in nosocomial infections: advantages and limitations*”, Revista Espanola De Quimioterapia: Publicacion Oficial De La Sociedad Espanola De Quimioterapia, 30 Suppl 1, pp. 61–65.

Hatcher, James & Costelloe, Ceire & Cele, Richard & Viljanen, Anu & Samarasinghe, Dunisha & Satta, Giovanni & Brannigan, Eimear & Barra, Eoghan & Sanderson, Frances & Gilchrist, Mark. (2019). **Factors associated with successful completion of outpatient parenteral antibiotic therapy (OPAT): A 10-year review from a large West London service.** International Journal of Antimicrobial Agents. 54. 10.1016/j.ijantimicag.2019.04.008.

Jacobs, D. M. et al. (2018) **Incidence and risk factors for healthcare utilisation among patients discharged on outpatient parenteral antimicrobial therapy.** Epidemiology and Infection, 146(6), pp. 782–787. doi: 10.1017/S0950268818000456.

Journal of Antimicrobial Chemotherapy (2012) **Good practice recommendations for outpatient parenteral antimicrobial therapy (OPAT) in adults in the UK: a consensus statement**

Keller, S. C. et al. (2018) **Rates of and Risk Factors for Adverse Drug Events in Outpatient Parenteral Antimicrobial Therapy** Clinical Infectious Diseases, 66(1), pp. 11–19. doi: 10.1093/cid/cix733.

Keller, S. C. et al. (2019) **Hazards from physical attributes of the home environment among patients on outpatient parenteral antimicrobial therap.** American Journal of Infection Control, 47(4), pp. 425–430. doi: 10.1016/j.ajic.2018.09.020.

Maréchal, M. L. et al. (2018) **Quality indicators assessing antibiotic use in the outpatient setting: a systematic review followed by an international multidisciplinary consensus procedure.** Journal of Antimicrobial Chemotherapy (JAC), 73, pp. vi40-vi49. doi: 10.1093/jac/dky117.

Mujal, A. et al. (2016) **Safety and effectiveness of outpatient parenteral antimicrobial therapy in older people.** Journal of Antimicrobial Chemotherapy (JAC), 71(5), p. 1402.

OPAT Training guidance for Antimicrobial delivery via a midline catheter and FOLFusor device V2. Issue date: January 2019, Owner: Clinical Educator Community Nursing.

Owen, K. (2016) **Setting up and running a community IV therapy clinic.** Journal of Community Nursing, 30(1), pp. 53–56.

Percival, K. M. (2017) **Antibiotic Classification and Indication Review for the Infusion Nurse.** Journal Of Infusion Nursing: The Official Publication Of The Infusion Nurses Society, 40(1), pp. 55–63. doi: 10.1097/NAN.0000000000000207.

Psaltikidis, E. M. et al. (2017) **Economic evaluation of outpatient parenteral antimicrobial therapy: a systematic review.** Expert Review of Pharmacoeconomics & Outcomes Research, 17(4), pp. 355–375. doi: 10.1080/14737167.2017.1360767.

Shrestha, N. K. et al. (2018) **Emergency department visits during outpatient parenteral antimicrobial therapy: a retrospective cohort study** Journal of Antimicrobial Chemotherapy (JAC), 73(7), pp. 1972–1977. doi: 10.1093/jac/dky133.

Sriskandarajah S , Hobbs J , Roughead E , et al . **Safety and effectiveness of ‘hospital in the home’ and ‘outpatient parenteral antimicrobial therapy’ in different age groups: a systematic review of observational studies.** Int J Clin Practice 2018;72:e13216.doi:10.1111/ijcp.13216

Tonna, Antonella & Anthony, Geraldine & Tonna, Ivan & Paudyal, Vibhu & Forbes-McKay, Katrina & Laing, Rob & Mackenzie, Alexander & Falconer, Sharon & McCartney, Gillian & Stewart, Derek. (2019). **Home self-administration of intravenous antibiotics as part of an outpatient parenteral antibiotic therapy service: A qualitative study of the perspectives of patients who do not self-administer.** BMJ Open. 9. bmjopen-2018. 10.1136/bmjopen-2018-027475.

Twiddy, M. et al. (2018) **A qualitative study of patients' feedback about Outpatient Parenteral Antimicrobial Therapy (OPAT) services in Northern England: implications for service improvement** BMJ Open, 8(1), p. e019099. doi: 10.1136/bmjopen-2017-019099.

Underwood, J. et al. (2019) **Intravenous catheter-related adverse events exceed drug-related adverse events in outpatient parenteral antimicrobial therapy** Journal of Antimicrobial Chemotherapy (JAC), 74(3), pp. 787–790. doi: 10.1093/jac/dky474.

Vargas-Palacios, A. et al. (2017) **Cost-effectiveness of outpatient parenteral antibiotic therapy: a simulation modelling approach** Journal of Antimicrobial

Williams, David & Baker, Cristina & Kind, Allan & Sannes, Mark. (2015).

**The history and evolution of outpatient parenteral antibiotic therapy (OPAT).** International journal of antimicrobial agents. Chemotherapy (JAC), 72(8), pp. 2392–2400. doi: 10.1093/jac/dkx123.

## **Examples from other Trusts**

Derby Teaching Hospitals NHS Foundation Trust (2017) **Trust policy for the continued administration of parenteral antibiotics which have been initiated at DHFT, to adult patients in the community.**

Mersey Care NHS Foundation Trust (2018) **Policy for the Management and Administration of Intravenous Antibiotics by staff working for Liverpool Community Health NHS Trust**

North Derbyshire OPAT Team (2017) **North Derbyshire OPAT (Outpatient Parenteral Antimicrobial Therapy) Pathway for Primary Care (Step-up Pathway/Admission Avoidance)**

Suffolk Community Healthcare/West Suffolk NHS Foundation Trust (2019) [Patient Self Administration of Intravenous \(IV\) Antibiotics at Home policy](#)

## **Acknowledgments**

### **Giving Your Own Intravenous Antibiotics at Home. Information for patients**

Acknowledgment: OPAT services, Infectious Diseases Department, Nottingham City Hospital Campus

### **Home Intravenous (IV) Therapy Self Administration Competency Document**

Acknowledgments: CF team at Wythenshaw Hospital 2013

### **Home intravenous medication**

Acknowledgments: Patient Experience Team (PET), Sherwood Forest Hospitals NHS Trust, King's Mill Hospital for supplying this document

### **Hospital at Home patient pathway**

Acknowledgments: Hospital at Home Team, Mid Essex Hospital Services NHS Trust 2012



### **OPAT Pathway. Version 1. York Teaching Hospital NHS Foundation Trust**

Acknowledgments: York Teaching Hospital NHS Foundation Trust, Antimicrobial Stewardship team January 2019

**Outpatient parenteral antibiotic therapy (OPAT) patient passport & treatment record (University of Leicester NHS Trust)** Acknowledgments: University Hospitals Leicester NHS Trust OPAT team

**Outpatient Parenteral Antimicrobial Therapy (OPAT): medical Consent & Competency** Acknowledgments: Department of Infectious Diseases 2016, Nottingham University Hospitals NHS Trust

### **Patient's Introduction to Outpatient Parenteral Antimicrobial Therapy (OPAT): Information for patients, relatives and carers**

Acknowledgments: York Teaching Hospital NHS Foundation Trust, Antimicrobial Stewardship team January 2019

### **PICC Care Guidelines 2013**

Acknowledgments: Nottingham University Hospital NHS Trust 2013

### **Other information**

Lancashire Teaching Hospitals NHS Foundation Trust (2017) **Developing a home OPAT service through cross organisational working** (Presentation) – P16.

Royal Wolverhampton NHS Trust (2017) **Application of the RCN standards for infusion therapy into OPAT service provision** (presentation)

RCN (2016) **Standards for Infusion Therapy (under revision 2019)**

### **Acknowledgments of pictures:**

Pixabay.com

Flickr

Wisconsin Department of Military Affairs

Clinical skills.net. 2017. Aseptic technique in the community.

Clinical skills.net. 2017. Care of a midline catheter.

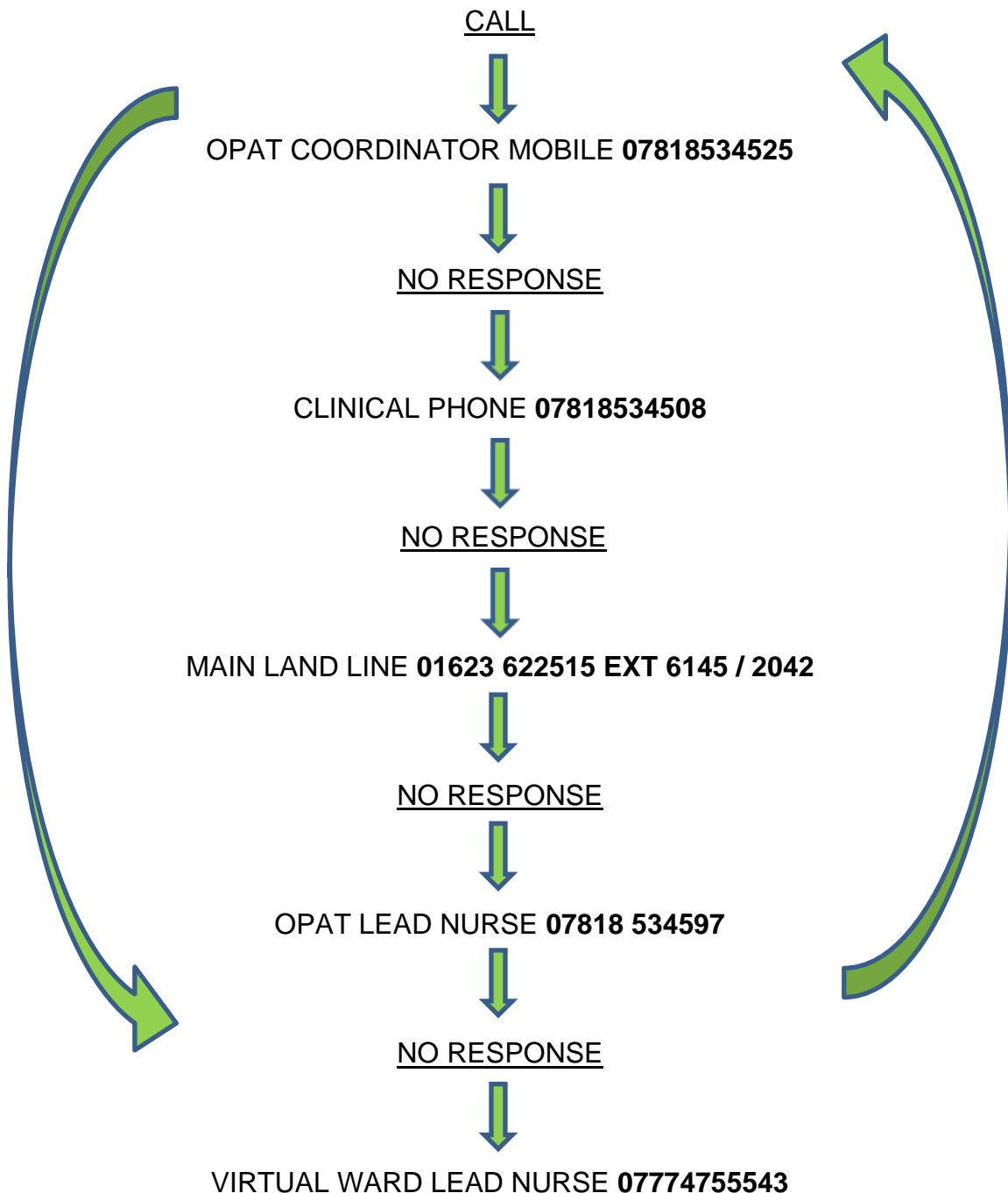
Clinical skills.net. 2017. Care of a PICC line catheter.

Clinical skills.net. 2017. Care of ANTT.

## Appendix 5 – OPAT/ Virtual Ward Lone Worker Activation Protocol

A Pack – TC0200003– Work Mobile 07818 534578  
B Pack - TC0-40005 - Work Mobile 07818534555  
C Pack – TC0700024 – Work Mobile – 07818 534600

If any of the above devices are activated and the Alarm Response Centre (ARC) are unable to contact the member of staff on the above mobile number/lone worker device, ARC please follow the process below:



**THE ALARM RESPONSE CENTRE (ARC) WILL REPEAT CALL CYCLE UNTIL A SENIOR MEMBER OF STAFF HAS BEEN INFORMED OF THE LONE WORKER ACTIVATION**  
**Personal contact details for staff and next of kin are accessible via Health Roster/ESR**

# **OPAT / VIRTUAL WARD Lone Worker Activation Guidance**

(All staff receive lone worker device face to face training as part of their induction.  
User guides are accessible in the department and stored on the OPAT universal drive)

## **Device Features -**

### **Yellow Alert**

The memo feature allows messages to be recorded onto a “Safe Hub”.  
These messages can be one minute in length and accessed by the Alarm Response Centre (ARC) when required.

Each lone worker is required to leave a message prior to entering the patient’s property such as:

- Lone Workers name
- Patients name and address
- Length of time the lone worker is expected to be at the location

Once the lone worker has finished at their location and feels safe another message is be recorded to advise the “Safe Hub” that:

- The visit is complete
- The address of their next location

### **Red Alert**

This provides rapid assistance when it is needed the most.

If a Red Alert is activated and the lone worker cannot be contacted the recent Yellow Alert recordings will be accessed by ARC, and the above pathway will be followed until contact is made with a senior member of staff.

Red Alerts can be activated by the SOS button and/or the ripcord function of the lanyard. If activated the ARC can actively listen into the lone worker device, if it is considered safe to talk the ARC will talk to the lone worker, if a threat is perceived they will continue to monitor discreetly and respond according to the situation.

### **Worker Down**

Uses built-in motion sensors to detect a fall or impact. If the device does not move for a period of time it will go into alert stage and provide an audible prompt. If the alert is not cancelled a Red Alert will be placed with the ARC.

### GPS Locate

Has the ability to pin-point the lone worker device/lone worker to within 3 meters.

Attempts to transmit GPS location will be made during Red Alert and Worker Down Activation.

**When managing a lone worker activation, the senior member of staff needs to gather information from the ARC and work with them to contact the lone worker who has activated their device:**

- Type of activation
- Last known location – GPS coordinates
- Last message recorded on the lone worker device (Stored on the Safe Hub)
- What can be heard in the background of the lone worker device at the time of activation and at present time
- Number of attempts made to contact the lone worker that has activated their lone worker device
- Contact number for ARC and activation reference number
- Using Nerve centre gain access to the lone worker's personal contact number and their next of kin.
- Using CareFlow gain access to the patient's contact information on the lone worker's visiting schedule.

Call the lone worker on their **PERSONAL MOBILE** if no answer - leave a message and a contact number

Call the lone worker on the **WORK MOBILE** linked to the lone worker device if no answer – leave a message and a contact number

Does the **GPS COORDINATES** help place the lone worker near a planned patient visit? If yes can contact be made with the patient and/or their relatives to gather further information of the lone worker's last known movements.

**If it has not been possible to make contact with the lone worker using all of the information gathered call 999 and ask for police assistance.**

**In hours** – inform the lead nurses if they are not already aware and the duty nurse manager.

**Out of hours** - inform the duty nurse manager.

**Complete a DATIX once the escalation has been resolved.**

Community workers are supported by a senior OPAT/VW coordinator who will have access to the community visiting schedules, Nerve Centre, CareFlow, Dragon, Healthroster.