Expansion of OPAT

The Belfast Experience

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“Traditional” OPAT model BHSCT

- Infectious Diseases run service
  - Complex infection skewed
- Referral to ID inpatient team- reviewed and clinical plan made
- Referral into CNIR team (Community Nurse Inreach- community funded team)
- Coordination of discharge via CNIR, pharmacy and district nursing
- End point- District nurse delivered IV antibiotics with CNIR link, pharmacy oversight and consultant owned – with fortnightly review clinics.

Traditional OPAT

Advantages

- Well governed pathway (very hands on approach)
- Clear communication lines
- Patient centric

Disadvantages

- Low throughput
- HCW “heavy”
- No low lying fruit
- Capacity

Need Breeds Innovation!

- How else can we deliver antibiotics?
  - 2019 OVIVA and POET -Stepwise change in infection specialties to move to Oral antibiotics earlier
  - Elastomerics (J Hale talk)
  - Self administration of antimicrobials
  - Hospital delivery without need for hospital stay- repurposing of units used for day case

COPAT/COAT BHSCT experience

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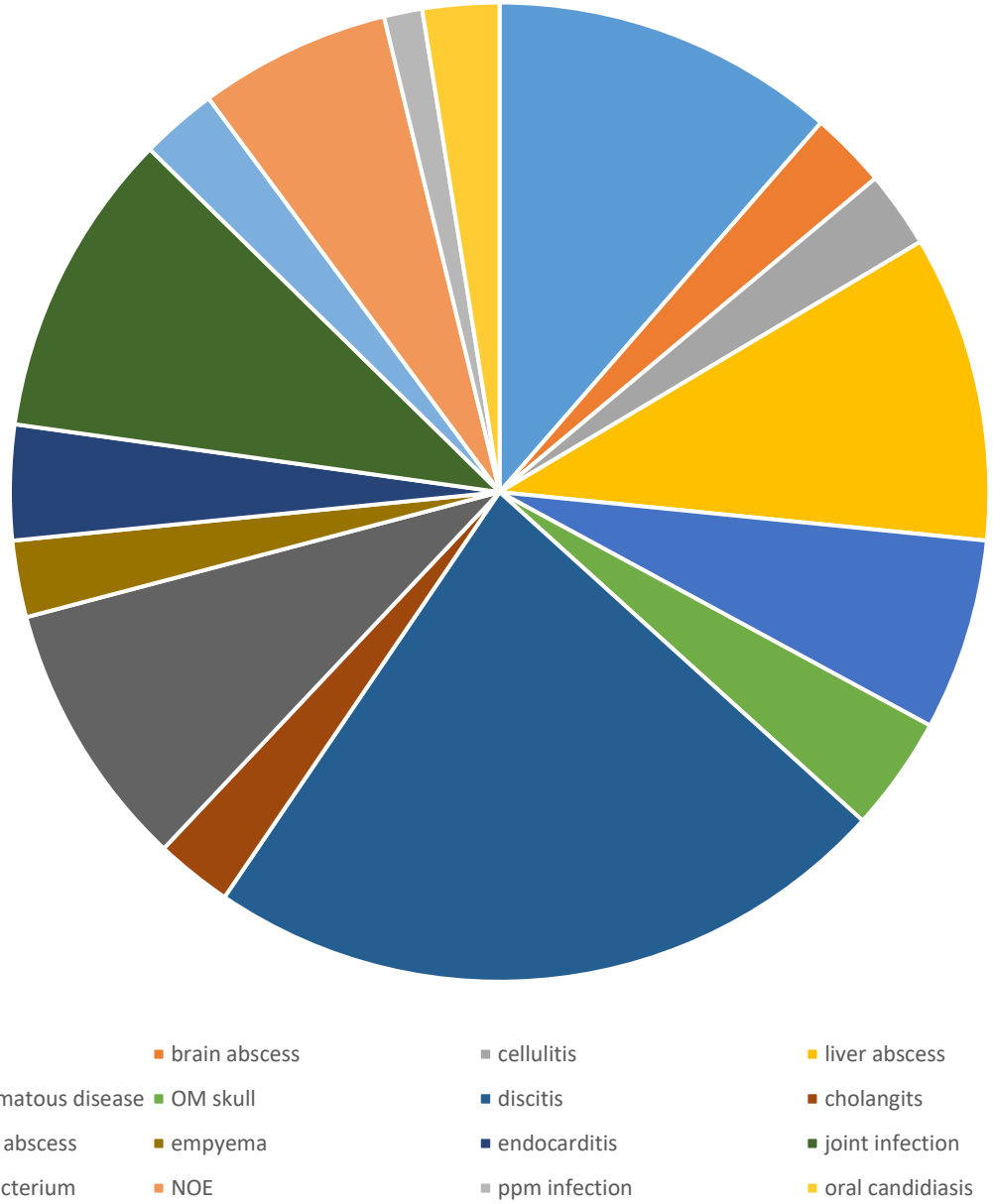
Pre 2019 post 2019 (OVIVA and POET)

- Prior to OVIVA- use of IV antibiotics for bone and joint infections reduced in duration- more and more patients moved to PO antibiotics earlier
- Did not result in reduced referrals to OPAT
- IV to oral switch – ID/ micro influenced (51%)
- 49% initiated BY ID/micro in response to referral
- Initially ? Need OPAT (COAT)support as before
- Policy update indicated antibiotics requiring COAT support
- Further update to indicate follow up as per complex infection rather than complex antibiotic

2022

- 80 patients
- Discitis; 23%
- PJI 11%
- Joint infection 10%
- Liver abscess 10%
- Intra-abdominal 10%



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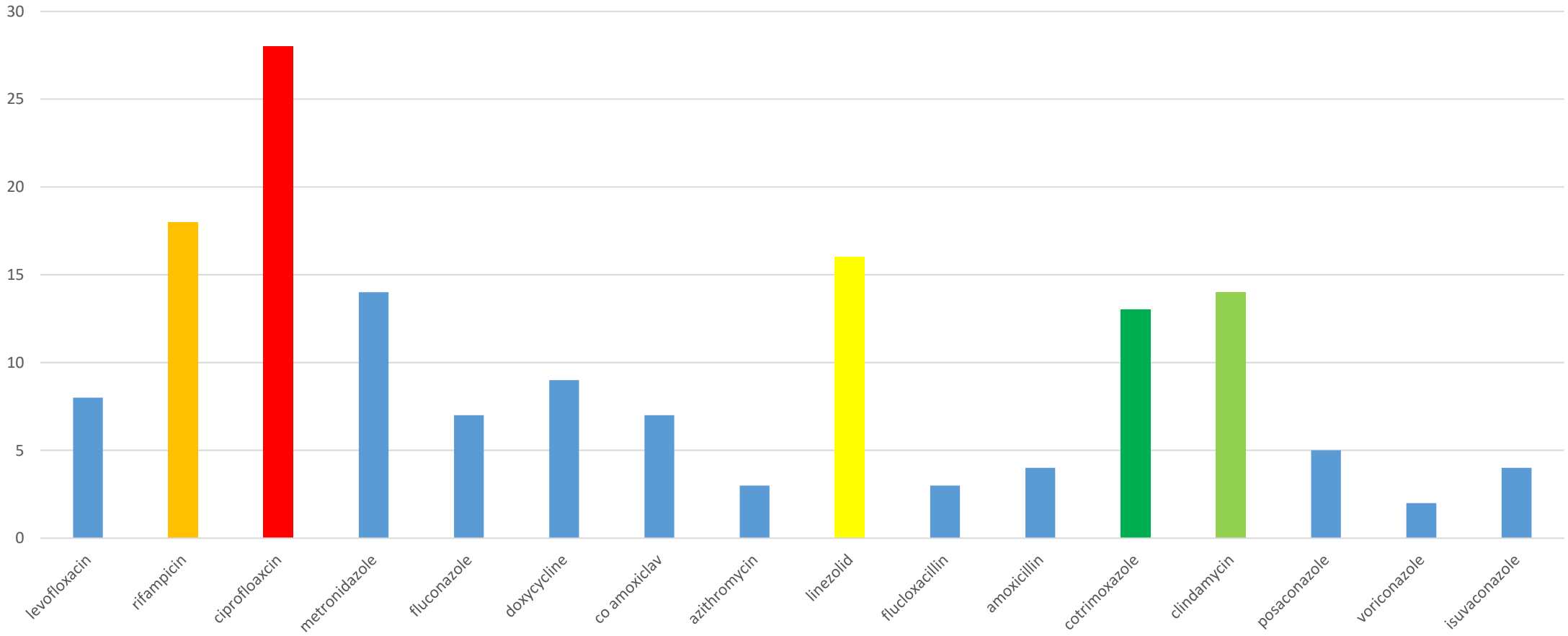
Antibiotic used in COAT delivery over 1 year (2022)



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Outcomes on COAT 2022

- 26% attained treatment aims without complication
- 5% readmission rate overall (reasons include eosinophilia, intolerance of antibiotics, pain management)
- 0% deaths on treatment
  - 4% on treatment for palliation
- Complications not requiring admission include
  - Intolerance of antibiotic choice (mostly GI)
  - Low platelets (predominance of Linezolid and Cotrim)
  - Change of antibiotic (reason not clearly listed)

Learning

- Better data!
- Confounded by referrals (i.e easier to discharge on PO without referral to OPAT so data skewed)
- Outcomes less well recorded
- Increase in oral antimicrobial prescribing has not reduced the overall input required by OPAT team
- Complex infection, as well as complex oral antibiotics

Self Administration of IV Antibiotics

S-OPAT

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BHSCT experience pre 2020

- Ad hoc
- Self chosen patients (patient!)
- Need for a clear policy and governance
- Authored by Paul Rafferty lead OPAT pharmacist BHSCT alongside Bronagh Smyth.
- Highlighted need for consistent and safe approach
- As well as competency assessment of patient or carer who would deliver IV antibiotic

S OPAT policy 2020

This document sets out the specific skills a patient must meet before they can be considered for self-administration.

Benefits of self-administration of a patient's IV medication:

1. Maintaining a patient's independence.
2. The patient does not have to wait for a nurse to arrive to administer their IV medication which allows them the freedom to organise their day accordingly. As part of their training, the OPAT team will advise patients about time spans permitted between doses to ensure their treatment is optimised.
3. Cost-savings for both the patient and the key stakeholders.
4. Patients save money on travel expenses and other expenses associated with a hospital stay and daily outpatient attendances.
5. The community nursing service will save the cost of and the time it takes to visit a patient at home releasing capacity into the service to take on more patients.
6. BHSCT saves on either the bed day if the patient had to remain in hospital for treatment or the cost of the patient being treated by the community nursing team

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Who should have S-OPAT?

Specific skills, inclusion and exclusion criteria

Embarking on the process of teaching self-administration is no guarantee that the patient/carer will eventually be judged competent to do so unsupervised. The teaching schedule will be set out and agreed at the outset.

A patient/carer may withdraw from the self-administration training process at any time or the S-OPAT nurse may terminate training if there is evidence of an inability of the patient/ carer to confidently manage IV administration without assistance. A discussion with the named consultant should take place regarding referral to CNIR and ID teams for district nursing placement or to be re-admitted to complete therapy.

- **5.7.1 Exclusion criteria**
- The following will exclude a patient from self-administering an IV antibiotic.
- Patient does not consent to self-administration or carer administration.
- Patient/carer unable to read or write.
- Patient/carer unable to speak English and does not have access to a suitable translation service (in the event of an emergency or an issue arises requiring the OPAT team to be contacted immediately).
- Patient is unable to attend the hospital for a review.
- Patient lives alone or has no support for first 72 hours of S-OPAT
- Patient/carer unable to comply with training.
- Previous (within 12 months) or current history of substance abuse (including alcohol).
- More than two intravenous medications required.

- Patient has no running water, working fridge or telephone at home.
- No suitable IV access device. (a peripheral venous cannula is not suitable for self-administration)
- Medically unfit or unstable from other co-morbidity point of view or treatment goal is not curative.
- Cerebral or CNS infections where cognitive decline can occur.
- Patient has reduced dexterity prohibiting their ability to manipulate the IV lines and attach the IV antimicrobial therapy.*
- Clinical frailty scale score greater than 4.**

- * Individual risk assessment may be undertaken to assess suitability for IV administration by a carer designated by the patient.
- ** Frailty score greater than 4 does not exclude patients but they must have a risk assessment for competency and may be appropriate to use service.

Assessing suitability

- The patient's competency can be assessed by a registered nurse confident and competent with their practice to carry out the task and able to effectively demonstrate to a patient or relative and have completed the following:
  - IV administration of medicine course (Band 5 or above).
  - Must have completed Central venous access device training at the CEC and have had supervised practice
  - PICC line management training
  - One shadowed teaching session as a minimum should be undertaken with the S-OPAT CNS or CNIR team to ensure consistency of patient training and methods of administration.

- Patients/carers are required to demonstrate competency in five specific skills
- 1. Hand hygiene, the principle of ANTT and infection control,
- 2. Drug reconstitution and administration
- 3. IV access management and maintenance
- 4. Safe storage of drugs and equipment
- 5. Disposal of sharps

Appendix 1

Patient suitability for Self-administration Assessment Form

Name	Date of birth	H&C number:

1	Is the patient or carer interested in being assessed for self-administration?	YES	NO
2	Can the patient/carer open the containers the medicines are supplied in?	YES	NO
3	Does the patient/carer understand:		
	(a) The medicines he/she will be taking or giving?	YES	NO
	(b) The dose and times of administration?	YES	NO
	(c) Any side effects, which might need to be reported to nursing staff?	YES	NO
4	Can the patient/carer identify and differentiate between the drugs,	YES	NO

Appendix 2

Agreement to undertake training in IV self/carer administration of antibiotic therapy by a patient/carer at Home

To be completed by: The patient or
The parent/guardian of a child under the age of 18 or
A patient representative

I confirm that I have read and understand the OPAT Patient Information sheet and the IV Self Administration guide. ☐

I understand that my agreement to self or carer administration of intravenous treatment is voluntary and I am free to choose an alternative method of delivery for my (dependents) antibiotic therapy at any time, without giving any reason, without my (dependents) medical care or legal rights being affected. ☐

I confirm that sufficient support / facilities are available at home to enable me to complete this treatment successfully (e.g. clean surface, appropriate storage, sink) ☐

I confirm that I have discussed the implications of self/carer administration with suitably qualified healthcare professional and that any questions have been answered to my satisfaction. ☐

I confirm that I have acquired through instruction and assessment the necessary skills, knowledge and understanding to administer IV therapy in my home. I understand the course of treatment and will comply with the training, assessment and administration. ☐

I confirm my understanding of the risk of serious adverse reactions and I agree to undertake the actions detailed in the written and verbal instructions provided in the event of any problems occurring, including anaphylaxis. ☐

I understand that my (dependents) treatment and condition will continue to be monitored once a week as an outpatient and I (my dependent) may be readmitted to hospital at any time to complete treatment. ☐

Name of patient		If the patient is unable to provide signed consent unaided they may appoint a representative	
Name of representative			
Signature of patient		Date	

Appendix 5

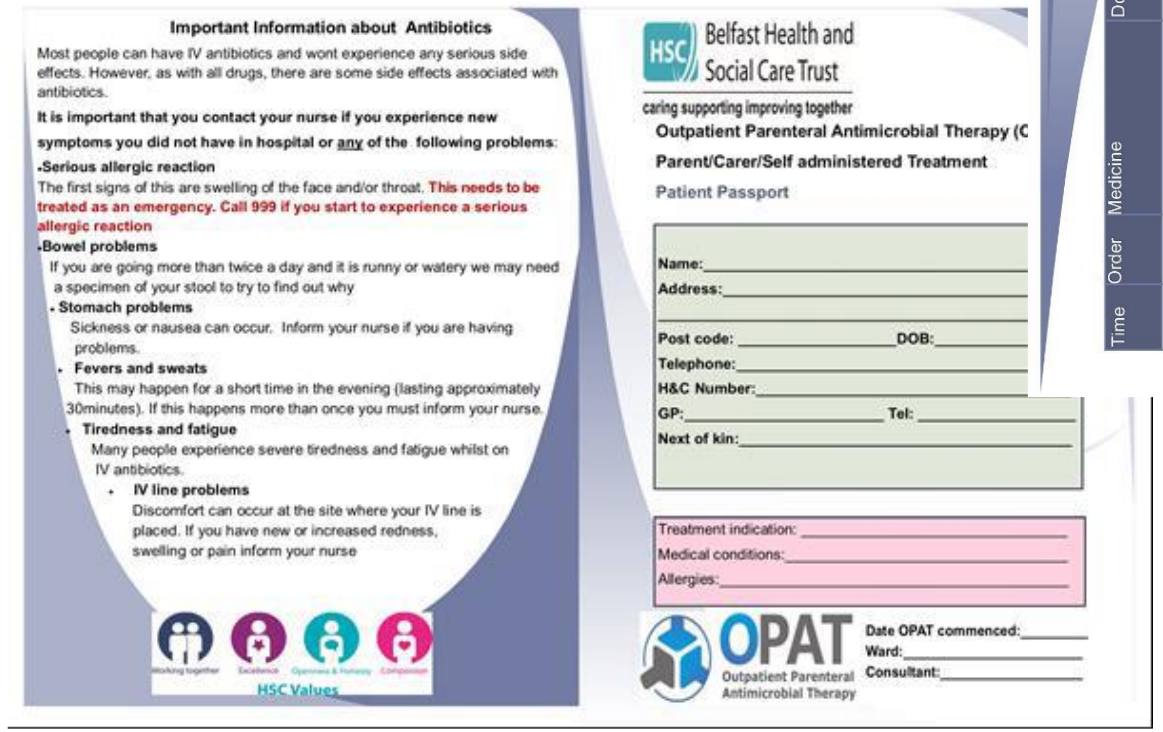
DAILY CHECKLIST

To be completed by patient/carer giving IV therapy. Mark relevant columns. If you encounter any problems, or are concerned, contact your nurse during working hours.

Name		Type & Site of Line Inserted	
H&C Number		Date of Insertion	
Date of Birth		Line Measurement On Insertion (if relevant)	

	Daily Assessment of the line access (contact your nurse if any new temperatures / pain /oozing)					Signature
Date / Time	Any high temperature or fevers in last 24 hours? Y/N	Dressing intact. Y/N	Any pain at entry site Y/N	Oozing or pus at entry site Y/N	Any swelling around or below the dressing, cool to touch? Y/N	

Patient passport



Important Information about Antibiotics

Most people can have IV antibiotics and wont experience any serious side effects. However, as with all drugs, there are some side effects associated with antibiotics.

It is important that you contact your nurse if you experience new symptoms you did not have in hospital or any of the following problems:

- **Serious allergic reaction**

The first signs of this are swelling of the face and/or throat. **This needs to be treated as an emergency. Call 999 if you start to experience a serious allergic reaction**

- **Bowel problems**

If you are going more than twice a day and it is runny or watery we may need a specimen of your stool to try to find out why

- **Stomach problems**

Sickness or nausea can occur. Inform your nurse if you are having problems.

- **Fevers and sweats**

This may happen for a short time in the evening (lasting approximately 30minutes). If this happens more than once you must inform your nurse.

- **Tiredness and fatigue**

Many people experience severe tiredness and fatigue whilst on IV antibiotics.

- **IV line problems**

Discomfort can occur at the site where your IV line is placed. If you have new or increased redness, swelling or pain inform your nurse

HSC Values

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caring supporting improving together

Outpatient Parenteral Antimicrobial Therapy (C

Parent/Carer/Self administered Treatment

Patient Passport

Name:_____

Address:_____

Post code: _____ **DOB:**_____

Telephone:_____

H&C Number:_____

GP:_____ **Tel:** _____

Next of kin:_____

Treatment indication: _____

Medical conditions:_____

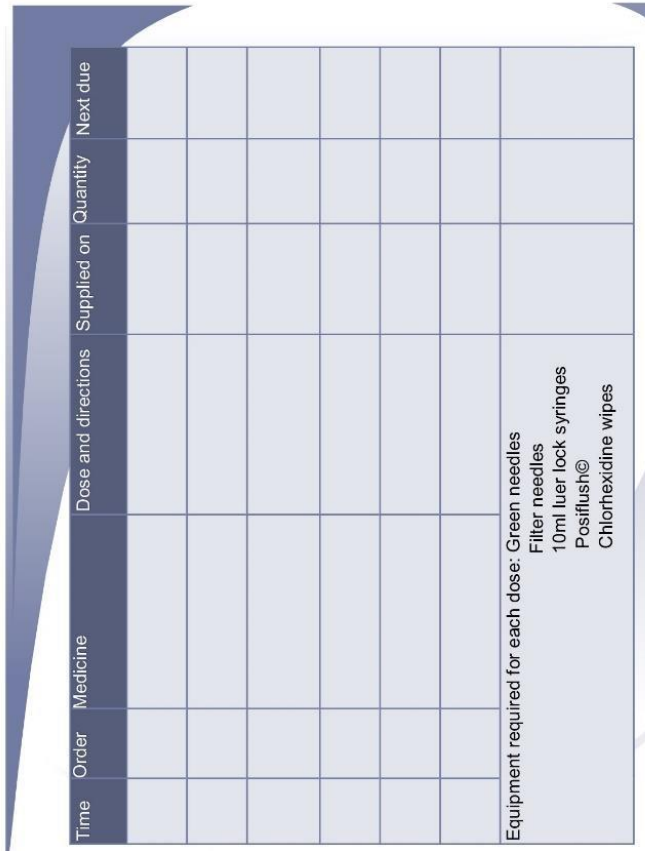
Allergies:_____

OPAT Outpatient Parenteral Antimicrobial Therapy

Date OPAT commenced:_____

Ward:_____

Consultant:_____



Time	Order	Medicine	Dose and directions	Supplied on	Quantity	Next due

Equipment required for each dose: Green needles
Filter needles
10ml luer lock syringes
Posiflush©
Chlorhexidine wipes

Keep this booklet with you throughout your treatment.

Show it to any other health professional looking after you

My Intravenous access Device

Line Type	
Date inserted	
Date to be removed	

My Appointments

Location	Date	Time	Service

My Team

	Name	Contact Details
Community nurse		
Hospital nurse		
medical / surgical team		
infectious diseases team		
OPAT pharmacist		

IN CASE OF EMERGENCY

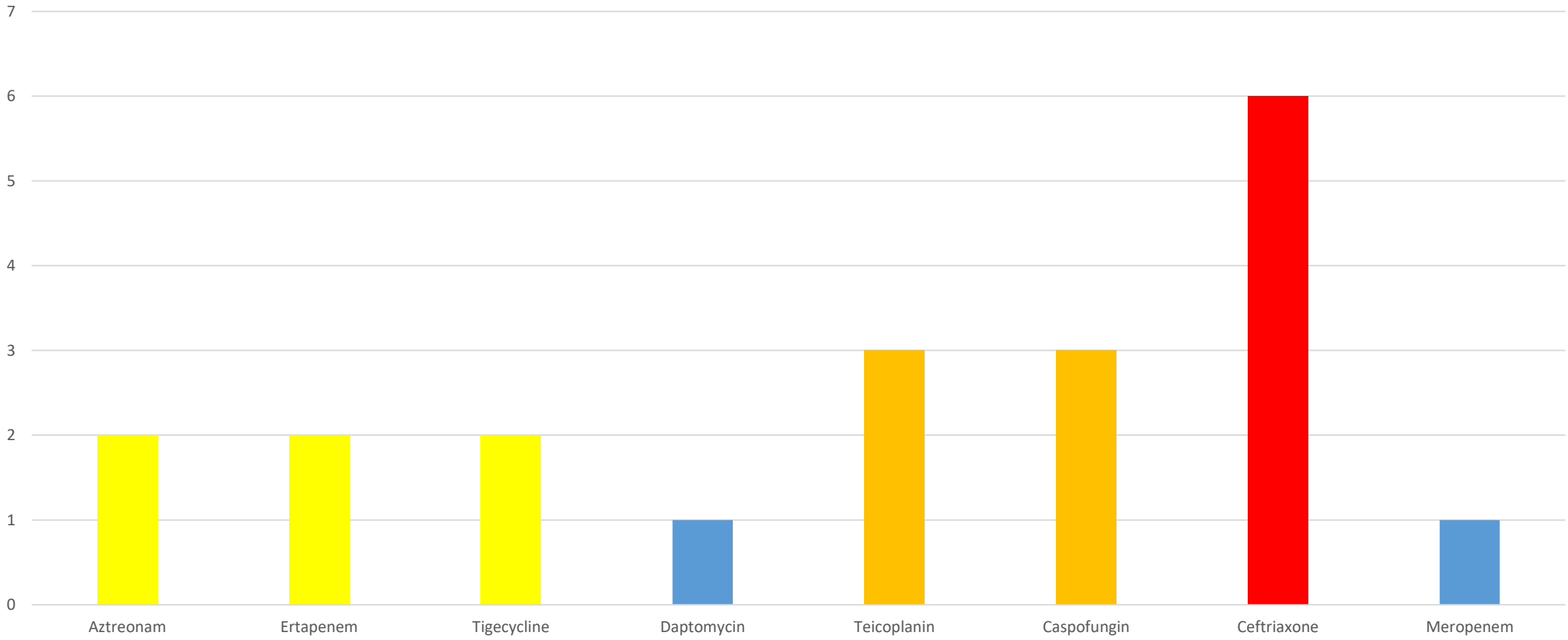
Contact the relevant member of your team if you have any problems with your treatment. After 9pm Mon-Sun contact GP out of hours service

If you need immediate medical attention phone 999

S-OPAT BHSCT experience

- 25 patients referred in 2022
- 22 deemed suitable by CNIR
- 19 self delivered treatment course
- Duration 2-8 weeks (most commonly 6 weeks)
- 88 weeks of antibiotic delivery self administered
- 3/19 carer delivered- remainder self delivered
- Predominant infection was discitis (42%)
- 10% intra-abdominal abscess
- 5% PJI
- Note candida mucositis – long standing patient

S-OPAT antibiotics used



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Outcomes

- 3 patients had complications
- 1 antibiotic allergy
- 1 x DVT
- 1x pain management / deranged LFTs
- Patient experience broadly positive (Leeanne Stewart)
- 100% patients had treatment aim achieved

COPAT Statistics

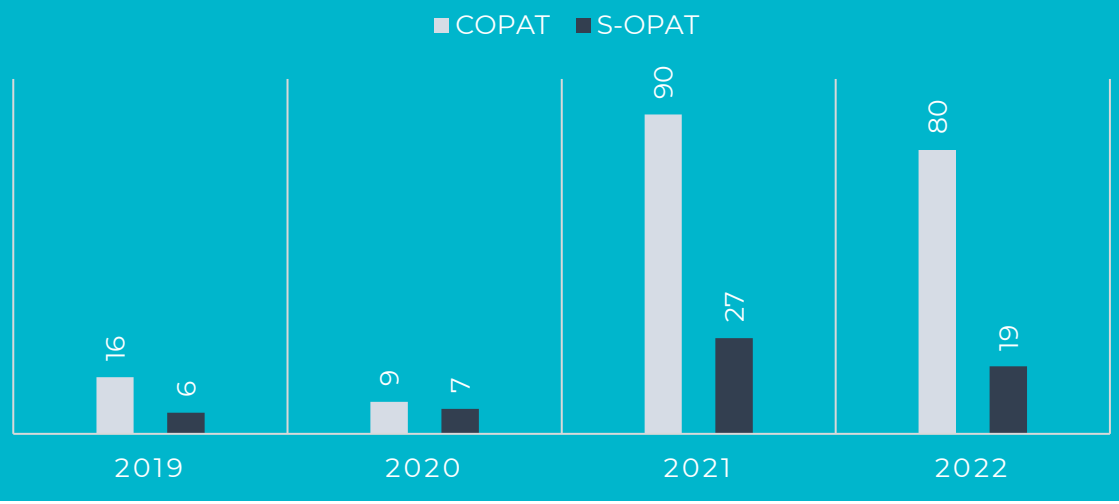
2019 - 2022

COPAT **9.2%**

Between 2019 and 2022 9.2% of all OPAT referrals where COPAT

S-OPAT **2.8%**

Between 2019 and 2022 2.8% of all OPAT referra
where S-OPAT



An Overall OPAT comparison between the year 2019 and 2022

2019		2022
2.3% were COPAT	**12.2%** Increase	14.5% were COPAT
0.9% were SOPAT	**2.6%** Increase	3.5% were SOPAT
96.8% were DN/PTU	**14.8%** decrease	82% were DN/PTU

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Day case administration

Programmed Treatment Unit

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RVH -Programmed Treatment Unit

- Day unit
- Staffed by PTU nurses
- Medical oversight provided by ID team and OOH acute medicine
- CNIR coordination
- Allows for patients who are within reasonable travel distance to attend daily
- Frees up DN capacity
- Allows patient to attend and then have remainder of day “free”
- Assessment area

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Expansion

- PTU
- Self admin
- Move to more PO antibiotics (reduced DN capacity but not overall OPAT)

- Recognised needs
  - Low hanging fruit- non complex infection, shorter durations

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Necessity is
the mother
of invention.
Plato