

# Evelina London Children's Hospital (ELCH)

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## **Paediatric OPAT CNS**

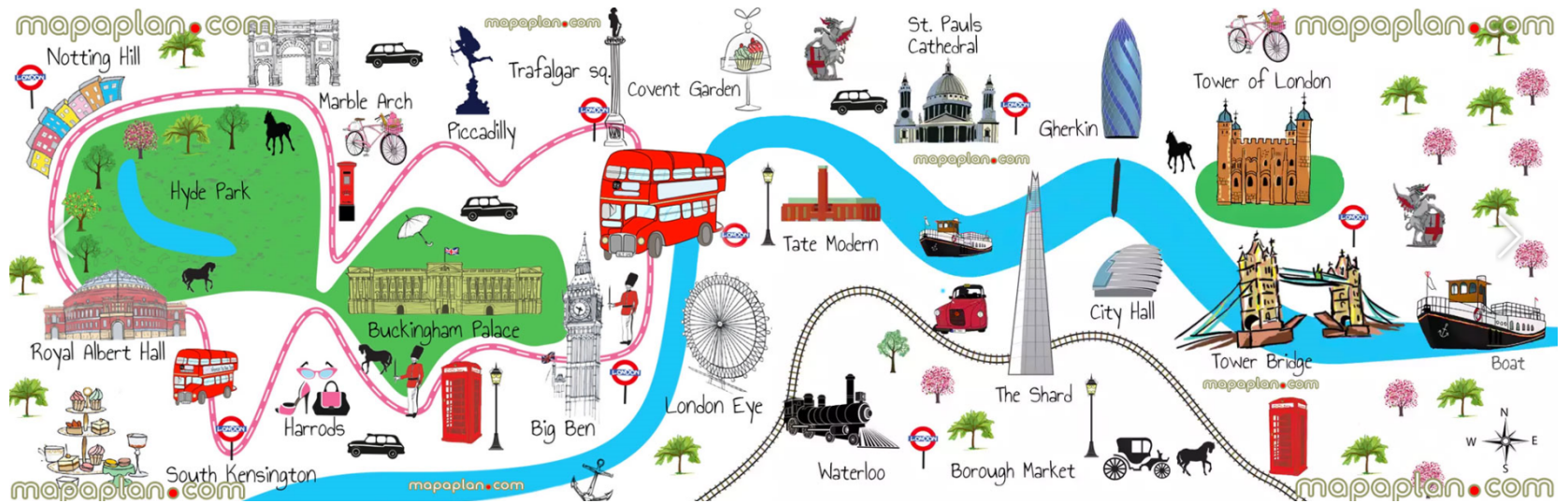
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# Overview

- Paediatric OPAT in London
- Paediatric OPAT ELCH
- Children's Hospital @home vs OPAT
- Key considerations for paediatrics
- Initial challenges
- Ongoing challenges

# Paediatric OPAT in London



# Paediatric OPAT in London

- Standalone – Great Ormond Street Hospital
- Numerous other providers of paediatric care
- Most hospitals send children home on IV antibiotics (have been doing so for years)
- Minimal number of official OPAT services – ELCH, St George's
- Ward attenders
- Specialised services such as Oncology / CF

# ELCH

- Part of Guy's & St Thomas' NHS Foundation Trust
- 167 inpatient beds, including 20 intensive care beds and 52 cot neonatal unit
- Paediatric ED / Specialist Tertiary Services
- Children's Hospital @home Team (Lambeth & Southwark)
- Tertiary / Ambulatory care models

# Service Model @ELCH

Paediatric OPAT	Children's Hospital @home
Referral Monday – Friday 9am-5pm	Referral Monday – Sunday 8am-10pm
Patients from any area	Local patients (Lambeth & Southwark)
No maximum duration	Maximum duration 72 hours
IV access – ideally PICC	IV access – peripheral cannula
Administration – CCN team, CH@h, parent/carer	Administration – CH@h
Joint care PID/referring speciality	Referring speciality responsible for care
Weekly review	Daily review (nursing)

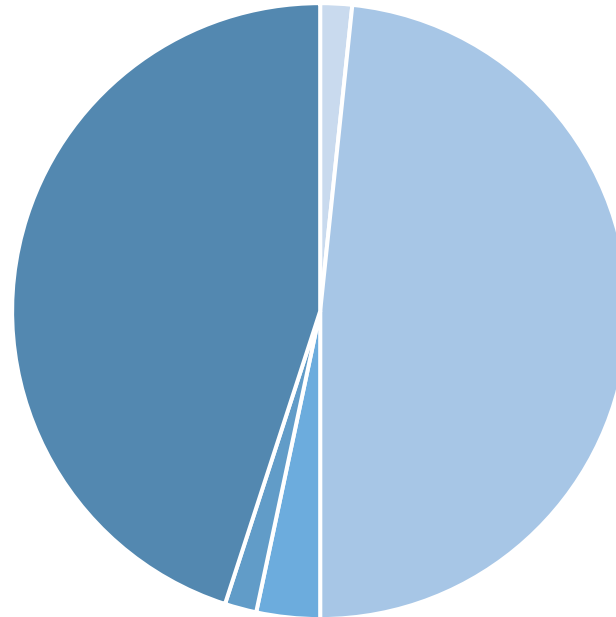
# Paediatric OPAT @ELCH

**1st April 2017 – 31<sup>st</sup> March 2018**

- 744 bed days saved (Paediatric OPAT service only)
- 57 patients (58 patient episodes)
- 98% cure rate
- Majority of administration by CCN team / CH@h team
- Ceftriaxone most commonly prescribed antimicrobial
- No vascular access acquired infections

# Method of Delivery

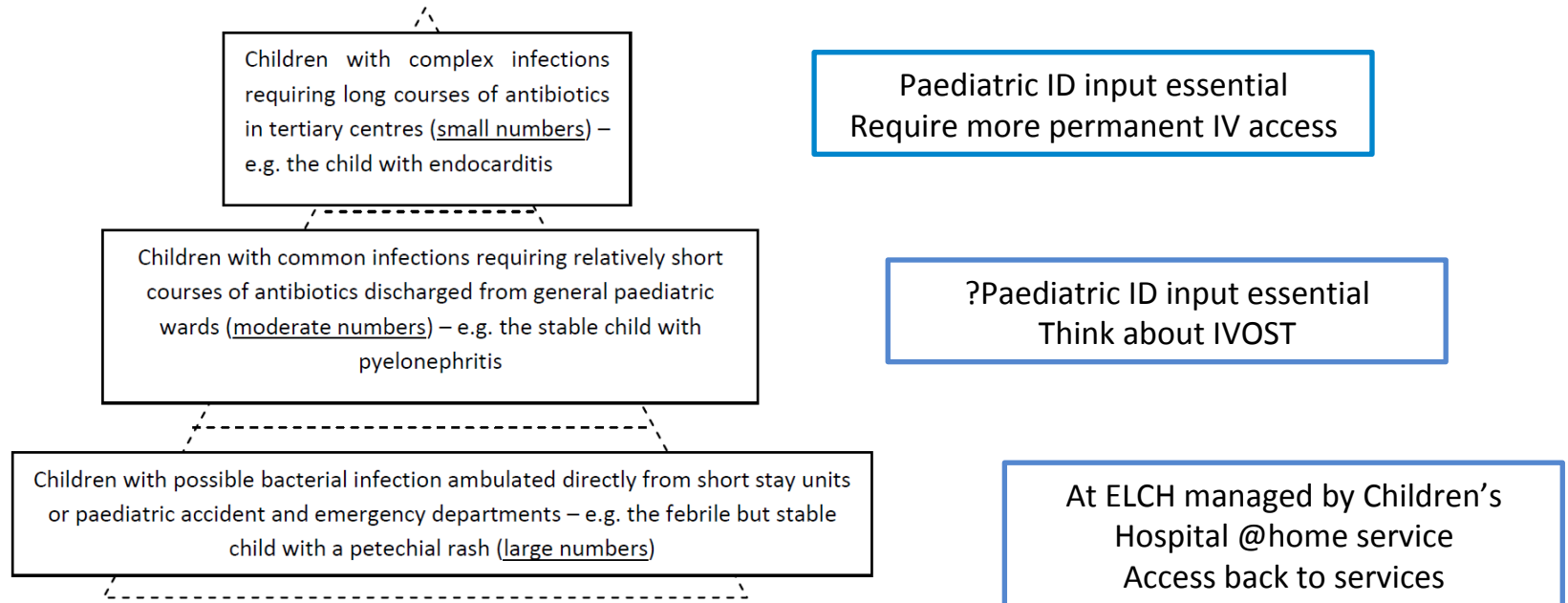
- Parent/Carer
- Children's Community Nursing Team
- Local Hospital
- OPAT Clinic



# Antimicrobials

- Ceftriaxone most frequently used
- Once daily preferable – CCN team capacity
- Minimal side profile (neutropenia), low cost, stability profile
- Licensing changes
- Dosing in paediatrics mg/kg – often use doses of 4g/day
- Administration – infusion vs bolus
- Antimicrobial stewardship? low rates of C.Diff, use of continuous infusors devices

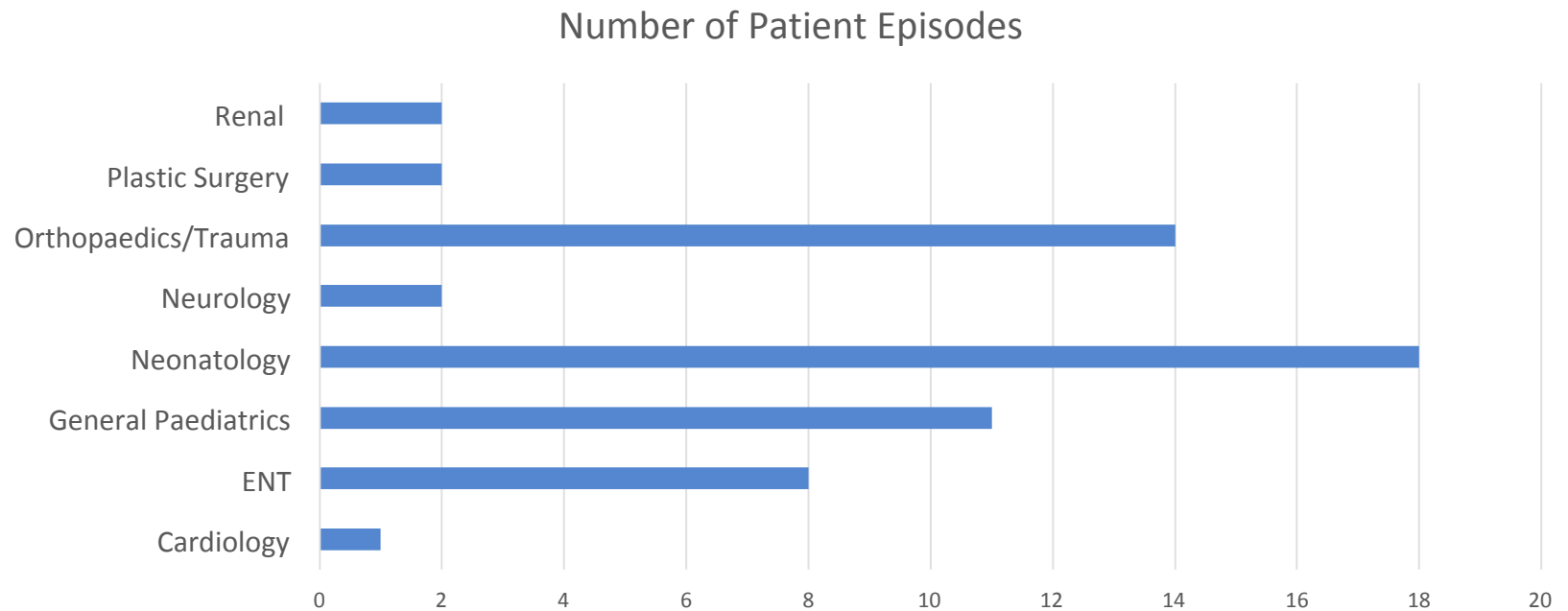
# Which Children?



# Children's Hospital @home

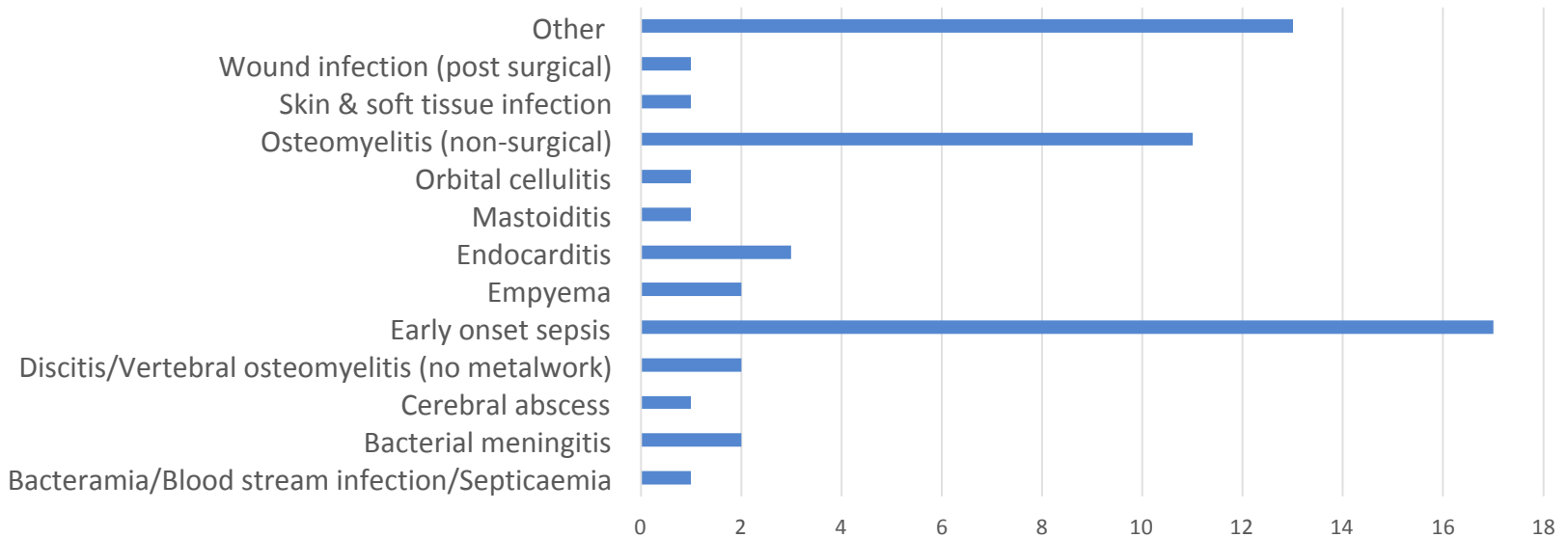
- Febrile infants 1-3 months – post conjugate vaccine era, the rate of serious bacterial infection in developed countries < 3%
- Well child with petechial rash
- Periorbital cellulitis
- Urinary tract infection

# Specialities



# Primary Infective Diagnoses

Number of Patient Episodes



# What About Neonates?

Neonatal infection (early onset):  
antibiotics for prevention and treatment

Clinical guideline

Published: 22 August 2012

[nice.org.uk/guidance/cg149](http://nice.org.uk/guidance/cg149)

# What About Neonates?

- Inpatient therapy with cefotaxime – BD administration
- Return for re-cannulation (47%)
- Ceftriaxone – contraindicated in neonates
- Ceftriaxone 60 minute infusion in neonates – reduce risk of hyperbilirubinemia

# What About Neonates?

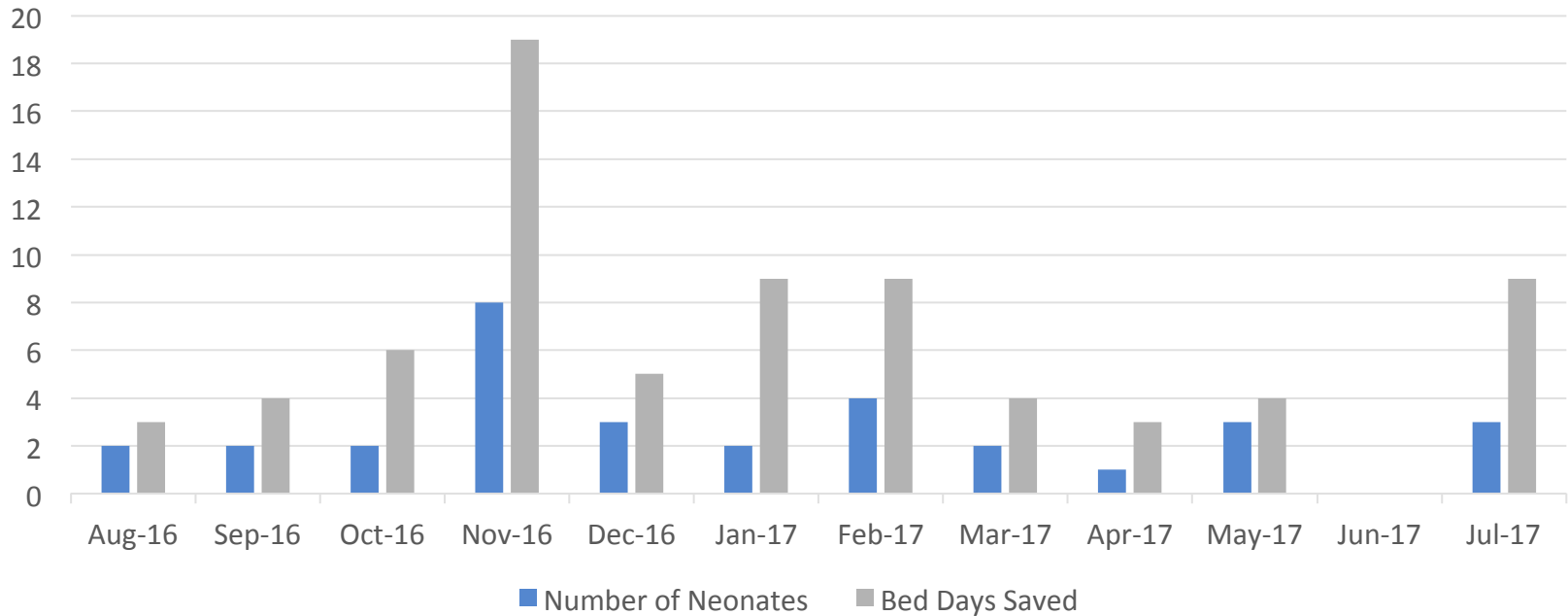
## **Inclusion Criteria:**

- $\geq 37$  weeks gestation at birth
- Transcutaneous bilirubinometer reading  $< 250\mu\text{mol/L}$
- Baby and mother are eligible for discharge
- Parents agree to Neonatal p-OPAT and to return for cannula replacement if fails

## **Exclusion Criteria:**

- Medical and safeguarding concerns not addressed and precluding discharge

# What About Neonates?



# Key Considerations for Paediatrics

- Registered GP or referral to CCN team
- Medically stable – no medical condition that may need immediate medical attention or monitoring
- The need for IV antimicrobial therapy is the only barrier to discharge
- Family agree to bring child to attend follow up clinics
- No safeguarding issues
- Fast turnover – children bounce back quicker than adults
- Risk adverse behaviours in paediatrics

# Duration of Therapy?

- Lack of evidence base
- Organism not always known
- Need for repeat imaging
- Benchmarking other paediatric OPAT centres
- Does literature support oral switch

# To Oral Switch or Not?



# To Oral Switch or Not?

**Usual considerations:** allergies, organism susceptible, good oral bioavailability, penetration at infection site, drug interactions

## **PLUS:**

- Is the patient a neonate – variable PO absorption
- Can the patient tolerate PO medications / enteral feeding tubes / functional GI tract
- Is the chosen antimicrobial available as a suitable formulation / is it palatable
- Is the patient of school age – BD or TDS regimens preferred

# Initial Challenges

- Ensuring delivery of same quality of care at home
- Negotiating with commissioners – Cost saving vs Bed Days Saved
- Robust Clinical Governance
- Communication
- Antimicrobial Stewardship
- Timely vascular access
- Limited aseptic pharmacy input

# Ongoing Challenges

- Most commonly prescribed antimicrobial – ceftriaxone cephalosporins ‘Watch’ antimicrobials for the upcoming CQUIN
- On-going issues with funding arrangements for infusor devices – CQUIN target could potentially help with this as allows use of narrow spectrum agents
- Children’s Hospital @home team cross cover with different hospitals – difference in antimicrobial practices
- Hard to reach areas such as Haemodialysis / Respiratory
- Timely IV access
- CCN capacity

# CQUIN

## Adapted WHO EML AWaRe List for England



Access	Watch	Reserve
Amoxicillin / ampicillin	Amikacin, tobramycin, etc	Aztreonam
Penicillin – all forms	Macrolides	Ceftobiprole,
Co-trimoxazole	Most cephalosporins	Ceftaroline
Doxycycline	Chloramphenicol	Ceftazidime-avibactam
Flucloxacillin	Fluoroquinolones	Ceftolozane-tazobactam
Fosfomycin oral	Clindamycin	Colistin
Fusidate	Co-amoxiclav	Daptomycin
Gentamicin	Other tetracyclines	Carbapenems
Metronidazole	Fidaxomicin	Fosfomycin IV
Nitrofurantoin	Piperacillin-tazobactam, etc	Linezolid / tedizolid
Pivmecillinam	Temocillin	Televancin
Tetracycline	Vancomycin, teicoplanin	Tigecycline
Trimethoprim		

# Patient Experience

## Rewina's at home for her antibiotics

 Tweet

 Like 0

Posted on Wednesday 18th November 2015



Rewina Tsegai with specialist pOPAT nurse Joanna Newton and her mum Yordanos.

**A budding X Factor star has become the first Evelina London patient to use a new device that allows her to have antibiotic treatment at home rather than in hospital.**

Rewina, who wants to be an X Factor judge when she grows up and can't wait to see the X Factor live show at Wembley Arena in December, says: "I like Evelina London but it's so much better being at home with my One Direction posters. I really miss my older sister when I'm in hospital so it's nice to be at home where she can look after me with my parents."

Rewina's mum, Yordanos, was given two days of training by our Paediatric Outpatient Parenteral Antibiotic Therapy (pOPAT) team to learn how to use the device.

She says: "I feel really proud to be able to give Rewina her medicine. I feel confident and supported to do it at home after the training which the Evelina London nurses gave me."

# Questions?

Faye Chappell

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