



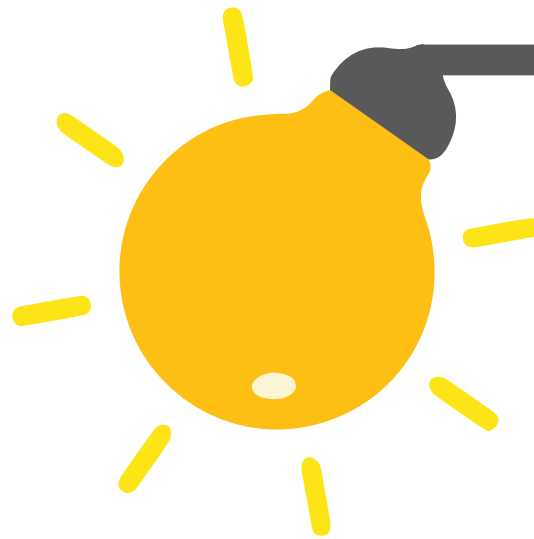
Are we ready for IVTO switch?

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Scenario

A term neonate presented with tachypnoea. He was screened for infection and started on intravenous Benzyl penicillin and Gentamicin. Initial C-reactive protein (CRP) was 28 mg/L. **At 36 hours of age;** he appeared well, blood culture was negative, and CRP went down to 19 mg/L.



Switch from intravenous-to-oral antibiotic therapy in clinically stable term-born neonates with probable EOI is **safe** and enables earlier discharge to home.



Design

- Quantitative retrospective case review project
- Data sources: Neonatal handover sheets, Welsh Clinical Portal, CITO



Aims

01

Evaluate **current** local practice for management of babies with probable early onset infection (EOI).



02

Evaluate **potential** impact of a change in practice by introducing switch at 48 hours from intravenous to oral antibiotic in selected group of neonates.



Inclusion Criteria

All babies born at PCH >34+6 weeks GA from 01/01/2024 – 31/07/2024, who have received intravenous antibiotics in the first 72 hours after birth, with a negative blood culture, maximum CRP value < 50mg/L, and decision to continue antibiotics beyond 36 hours from start of antibiotics.



Results

20 babies

GA range **36-41**, Median **38** weeks

Birth weight range **2296 – 4155**gms, Average **3325**gms

Mode of delivery **70%** LSCS

35% PROM

80% Symptomatic (**88%** respiratory)

80% Admitted to neonatal unit

Highest CRP range **13-48**mg/L; Median **24**, Average **28**

Total Days of IV antibiotics **90** days



Potential impact of change of practice of introducing a switch at 48 hours from IV to Oral over a 7 month period:

(calculations based on baby receives 3 doses of IV Benzylpenicillin & 2 doses of IV Gentamicin)

20 babies

39 doses of IV Gentamicin instead of **58** (19 doses saved = **33%** reduction)

60 doses of IV Benzyl penicillin instead of **172** (112 doses saved = **65%** reduction)

40 days of IV antibiotics instead of **90** days (50 days saved = **56%** reduction)



PCH Model

1.46% of babies receive IV antibiotics > 36 hours for probable early onset infection (fulfil criteria for IVTO switch)

36 babies every year

Reduction of IV Gentamicin from **104** to **70** doses (**34** doses saved)

Reduction of IV Benzyl penicillin from **310** to **202** doses (**108** doses saved)

Reduction of IV antibiotic days from **162** to **72** days (**90** days saved)



CTM Model

1.46% of babies receive IV antibiotics > 36 hours for probable early onset infection (fulfil criteria for IVTO switch)

68 babies every year

Reduction of IV Gentamicin from **197** to **133** doses (**64** doses saved)

Reduction of IV Benzyl penicillin from **585** to **204** doses (**381** doses saved)

Reduction of IV antibiotic days from **306** to **136** days (**170** days saved)



Wales Model

1.46% of babies receive IV antibiotics > 36 hours for probable early onset infection (fulfil criteria for IVTO switch)

413 babies every year

Reduction of IV Gentamicin from **1198** to **805** doses (**393** doses saved)

Reduction of IV Benzyl penicillin from **3552** to **1239** doses (**2313** doses saved)

Reduction of IV antibiotic days from **1859** to **826** days (**1033** days saved)



SWOSH

SWOSH PROJECT Switching to oral Antibiotics and Sending Home



A Project by
Neonatal Sepsis Interest Group Wales

Background

- Early onset infection is one of the most common causes of hospitalisation for term neonates.
- One principle of Antibiotic Stewardship states appropriate and timely de-escalation of antibiotic use from parenteral to oral therapy, which is widely practiced in older children.
- A recent European Randomised controlled trial and a cohort study suggested this practice could be undertaken safely in well babies from 35 weeks gestation with negative blood culture .

Aim

- To undertake a desktop study to determine the potential impact of switching to oral antibiotics to complete a prescribed antibiotic course in well babies with culture negative probable sepsis on healthcare resources in Wales.

Inclusion Criteria

- Neonates born \geq 35weeks gestation, Birth weight \geq 2kg
- On antibiotics beyond 36-48 hours of age
- Blood Culture Negative
- Inflammatory markers regressing
- Clinically Well
- Tolerating oral feeds
- Discharged from NICU within 24 hours of admission.

Exclusion Criteria

- Babies with culture positive sepsis
- Babies who have been clinically unwell requiring significant cardiorespiratory support on NICU (Ventilated or inotropic support)

Potential Benefits

- Reduction in duration of hospitalisation
- Reduction in cost of care
- Improvement in patient flow
- Reduction in complications associated with insertion and maintenance of peripheral cannulae
- Improvement in breastfeeding
- Reduced maternal-infant separation/parental anxiety/pain/interventions

We need your help?

Kindly fill SWOSH proforma on all the babies fulfilling inclusion criteria and leave in the designated area assigned by your QIP team.

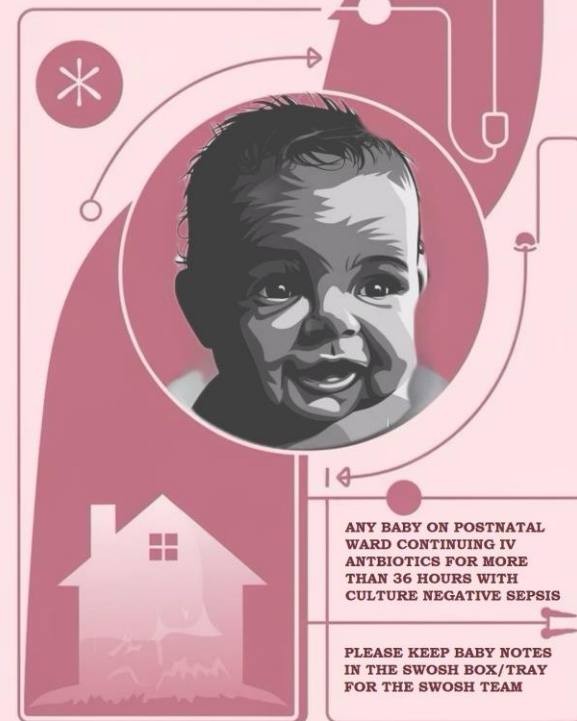
Questions? Get in touch

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UHW- Dr Nitin Goel
GUH- Dr Murali Sridhar Natti



NEONATAL STUDY
SWITCHING TO ORAL
ANTIBIOTICS AND
SENDING HOME

SWOSH



ANY BABY ON POSTNATAL
WARD CONTINUING IV
ANTIBIOTICS FOR MORE
THAN 36 HOURS WITH
CULTURE NEGATIVE SEPSIS

PLEASE KEEP BABY NOTES
IN THE SWOSH BOX/TRAY
FOR THE SWOSH TEAM



References

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