



# OPTI-PREM

Place of care for preterm babies born at 27 - 31 weeks



*National Institute for  
Health Research*

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Original article



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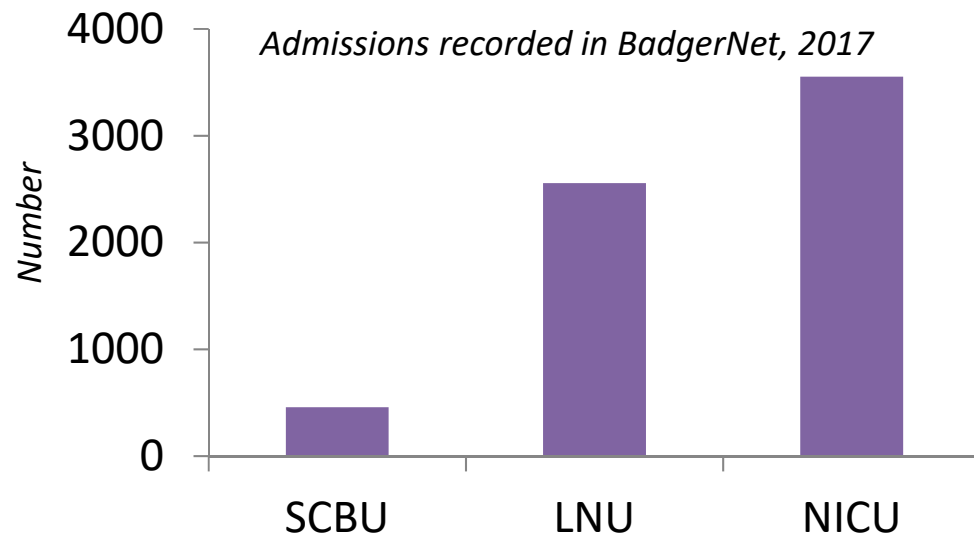
## Perinatal outcomes for extremely preterm babies in relation to place of birth in England: the EPICure 2 study

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26 weeks gestation

## What about the next most vulnerable group of preterm babies born at 27-31 weeks gestation?

- 341281 bed days per year vs 157 232 for those born at 23-26 weeks in 2017
- ~12% of all Preterm births
- No defined guidelines



*With permission*



Optimising neonatal service provision  
for preterm babies born between 27-31 weeks of gestation  
using national data, qualitative research  
and economic analysis

The Royal Wolverhampton   
NHS Trust

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**NDAU**  
Neonatal Data Analysis Unit

**Bliss**  
for babies born  
premature or sick

  
**National Institute for  
Health Research**

## PRIMARY QUESTION

For preterm babies born at 27-31 weeks of gestation and admitted into a neonatal unit for care:

- does care in a NICU, when compared to care in a LNU result in improved gestation-specific survival and reduced major morbidity up to 1 year of age?



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## SECONDARY QUESTIONS

- are there differences in care provided, **independent** of unit designation, that are associated with different outcomes
- where is it most **cost-effective** to care for these babies
- what are **parents' and clinical team perspectives** regarding place of care, and how can these **guide decision** making on place of care?

### Workstream 1: The 'Clinical Outcomes Study'

Data from NNRD for 01/01/2014-31/12/2018, with detailed statistical analysis

Define and compare key morbidities and mortality at each gestational age in weeks, in babies managed in NICU vs LNU, and those transferred after birth between the two types of unit.

#### Workstream 2

##### Clinical Care Study

Compare care between neonatal units with similar types of care, at each gestational age. These will be fed into the statistical analysis.

#### Workstream 3

##### Health Economic Study

A cost-effectiveness analysis using modelling based on individual patient-level data)

#### Workstream 4

##### Social Study

Observations and interviews with parents and clinicians in LNU and NICU settings in two ODNs

Results and findings

Establish BAPM working Group

Stakeholder engagement

Develop Recommendations

Promote Implementation

Workstream 5

### BLISS Parent Advisory Panel Input throughout

1. Protocol Design, Concept and Application
2. Design of leaflets and information for neonatal units
3. Study Guardians: Progress Review
4. Design of Social ethnographic studies – which are the most appropriate questions to ask parents and clinicians
5. Review of Results of Analysis with the team and assess validity of interpretations from parent perspective
6. Participate in Working Group BAPM and with stakeholders
7. Promote dissemination through Parent Groups
8. Facilitate implementation through contribution to engagement with Health Service providers



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## DATASET

- NNRD/NDAU
- NHS DIGITAL : link to  
Hospital Episode Statistics  
Office for National Statistics – Mortality

~ 30 000 births

RWT Data monitoring  
R&D team support

Parent Panel (10)

**Study Collaborators (9)**

- Clinical Researchers x 3
- Statisticians x 2
- Health economist
- Social scientist
- Perinatal Epidemiologist
- Parent

**Post Doctoral/Scientists/PhD student (5)**

- Statistician
- Social scientist
- Health economist
- Clinical Out of Programme PhD student
- Data analyst

Study Steering Group (7)

BAPM LNU  
Collaborative



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## The SSC

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**NHS**  
The Royal Wolverhampton  
NHS Trust

This unit is participating in

**OPTI-PREM**  
Place of care for preterm babies born at 27 - 31 weeks

A national study aimed at improving neonatal service delivery for babies born between 27 and 31 weeks of gestation in England.

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<http://www.royalwolverhampton.nhs.uk/research-and-development/opti-prem-improving-neonatal-service-delivery/>