

# Coronavirus outcomes, predictions and infection: from mother to neonate


International Society for Ultrasound in Obstetrics and  
Gynaecology: Webinar 02-06-20

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**NDAU**

Neonatal Data Analysis Unit



# A summary of understanding to-date of COVID-19 impact on the newborn

- The risk of symptomatic and severe disease in the newborn appears low
- The risk of vertical, mother-infant and breastmilk transmission is unknown but appears low
- The risks to healthcare staff from aerosol generating procedures during neonatal care is unknown but appears low
- The impact of intrauterine and/or early postnatal infection on long-term outcomes is unknown
- Treatment when required, remains largely supportive
- Few randomised controlled trials involve neonates

World Health Organisation

[https://www.who.int/maternal\\_child\\_adolescent/links/covid-19-mncah-resources-care-for-young-children/en/](https://www.who.int/maternal_child_adolescent/links/covid-19-mncah-resources-care-for-young-children/en/)

British Association of Perinatal Medicine

<https://www.bapm.org/pages/182-perinatal-covid-19-resources>

Chinese Expert Consensus on Perinatal and Neonatal Management

<http://kjfy.meetingchina.org/m-site/news/show/cn/3431.html>

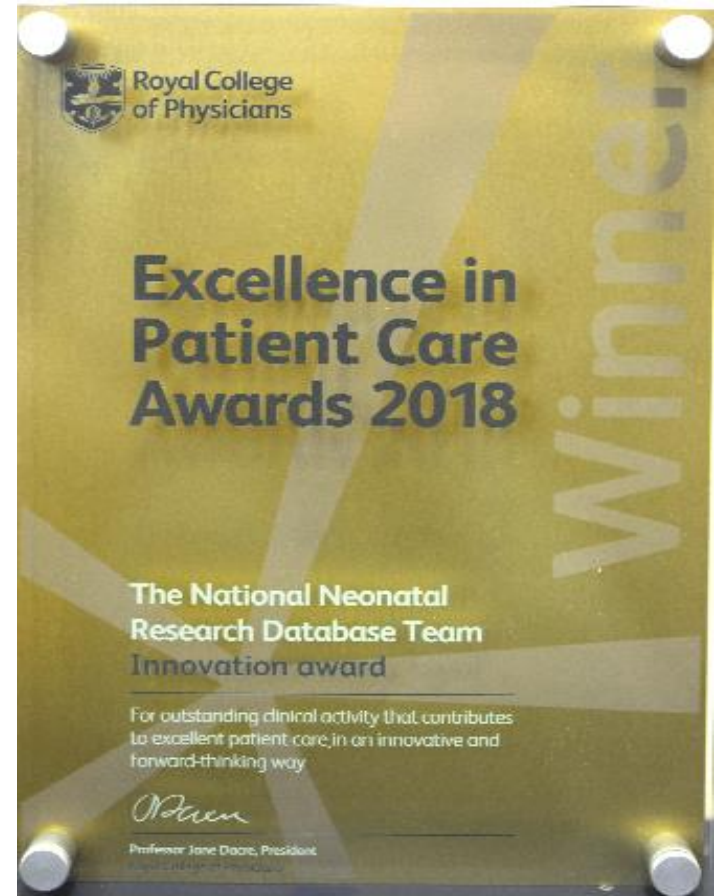
American Academy of Pediatrics

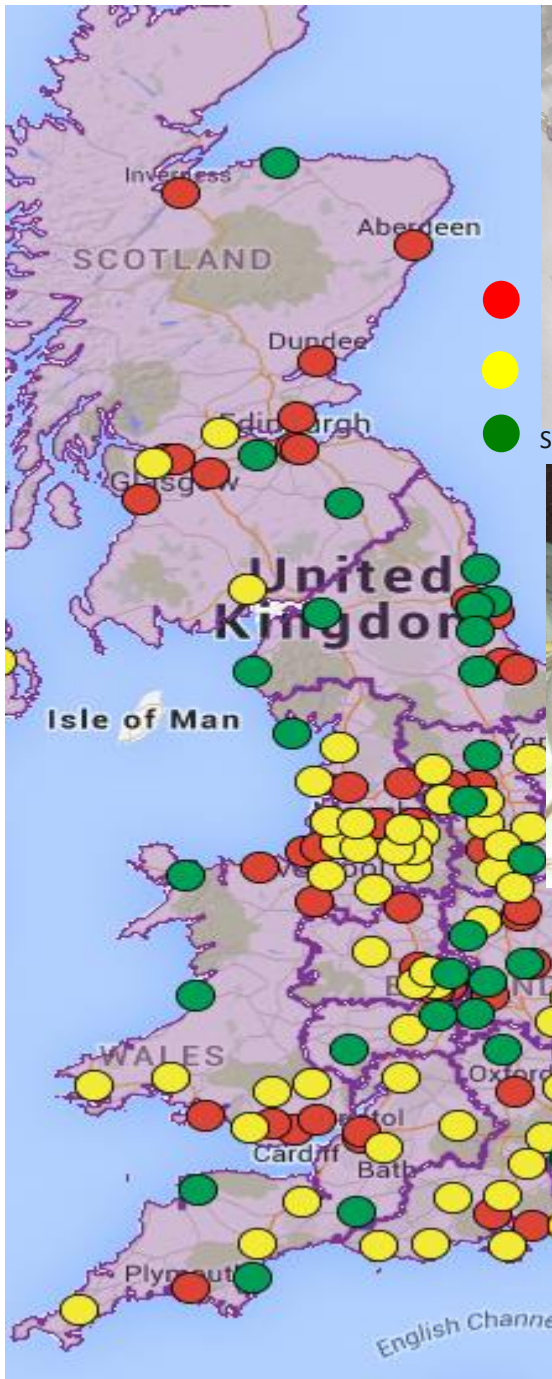
<https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/>

**The pandemic highlights the need for global infrastructure for rapid data acquisition and evidence-generation**

# Using “real-world” health data to improve newborn care: the UK National Neonatal Research Database

- Created from routine electronic patient records
- Used for multiple purposes including audit, evaluation, and research
- Recognises the principle that data should be recorded once, and well
- Data should be quality assured
- Parents, healthcare professionals and policy-makers should be involved in developing the wider secondary uses of healthcare data

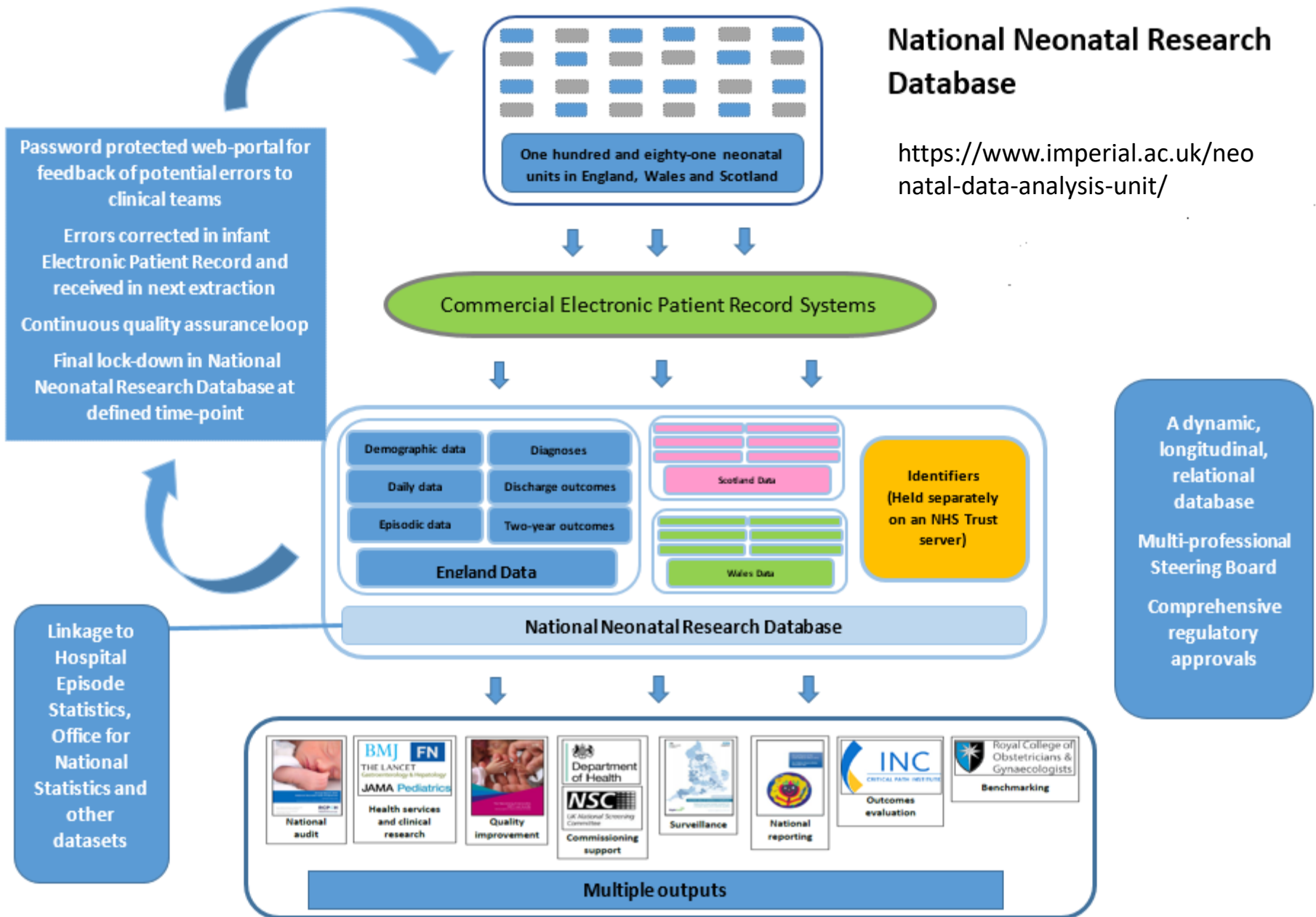






# National Neonatal Research Database

<https://www.imperial.ac.uk/neonatal-data-analysis-unit/>



# Data linkage to ascertain long term outcomes and obtain ancillary information



## National Neonatal Research Database

Primary and community care: General practice data  
Secondary health: Hospital Episode Statistics, laboratory, imaging, prescribing data

Disease registries

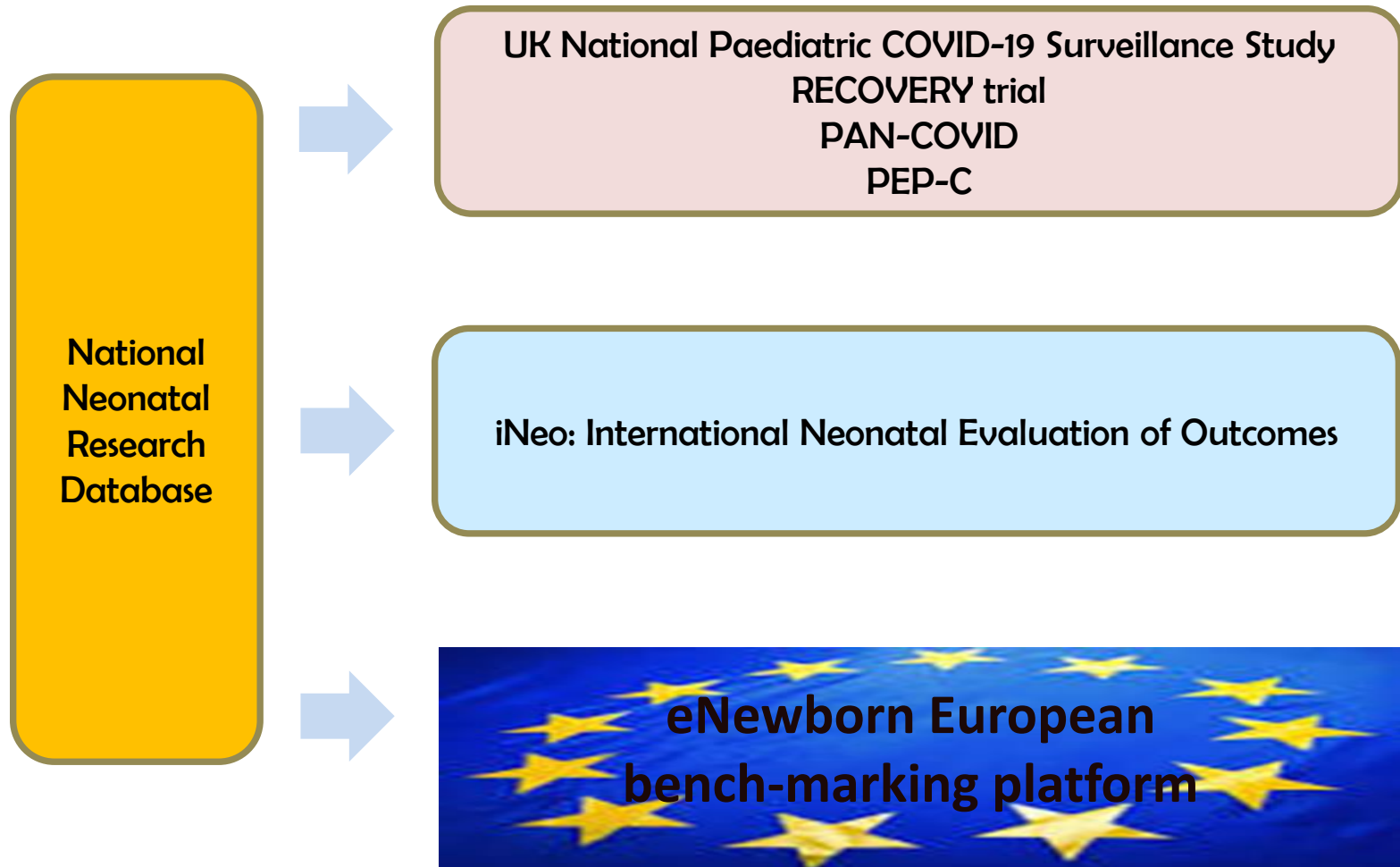
National Pupil Database (Education)

Social care

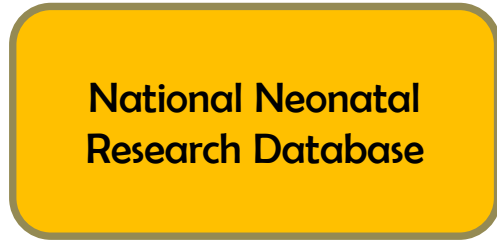
Biobanks and 'omic' data



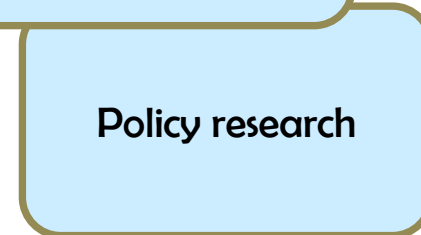
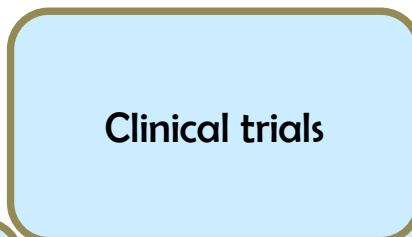
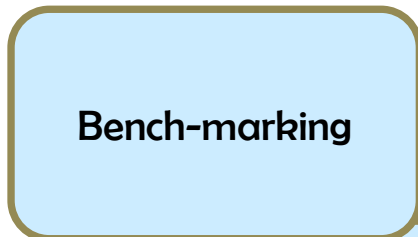
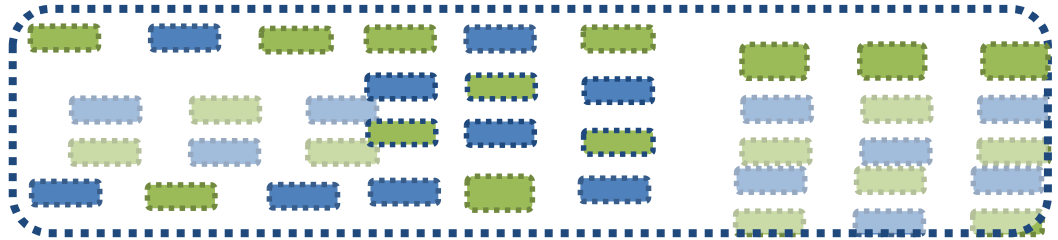
# Federated data for international collaboration



Neonatal units in the UK



Neonatal units internationally







**With thanks to the babies and their families, our collaborators and funders**