# **Bili**rubin assessment in **N**eonates of **E**very **S**kin **T**one


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# Why?...

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**NHS Race & Health Observatory report 2023 highlights:**

- Newborn investigations limited and not fit-for purpose in Black, Asian and ethnic minority babies.
- Concerns around detection of jaundice in different skin tones.
- Minimal preliminary studies – wide variation in results, inconclusive.
- Family experiences that “things were being missed”.

**National Neonatal Research database from 2012 – 2019 cited:**

- **50%** of babies with **kernicterus** were from **Black, South Asian and Other ethnic groups**, despite representing only **25%** of the population (Baskaran et al 2023)

**NICE Jaundice update 2023:**

- Recommendation: “Be aware that hyperbilirubinemia may be **harder to see visually in darker skin**”
- **Inconclusive evidence** on impact of skin tone on **diagnostic accuracy** of approaches to detect jaundice.
- **Limited evidence** suggesting a trend towards TCB overestimation of bilirubin in babies with darker skin.

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# What?...

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**Main questions:**

1. Is jaundice detected later in babies who have darker skin tone?

2. Do transcutaneous bilirubin measurements correlate well with serum bilirubin measurements in babies of all skin tones?

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# How?...

- Initial scoping survey to understand local variations in systems for detection of jaundice – **<u>Local leads, circulating today.</u>**
  - ❖ Collection of local jaundice / TCB guidelines included.
- PPI throughout planning period.
- Followed by multi-centre study collecting data on the first TCB / SBR measurement in babies of different skin tones.
  - ❖ Using validated neonatal skin tone tool (Maya-Enero et al 2020).

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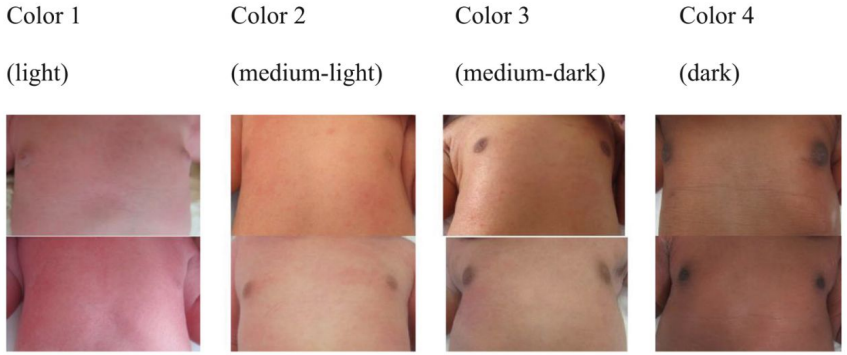


**Fig. 1** Neonatal skin color scale