NeoIPC
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Mortality and infection-related outcomes in low birth weight infants receiving Kangaroo Care: a systematic review and meta-analysis

Minotti C1, Jost K1, Aghlmandi S1, Schlaeppi C1, Sieswerda E2, van Werkhoven CH2, Schulzke SM1, Bielicki JA1,3

1 University Children's Hospital Base and University of Basel, CH
2 University Medical Centre Utrecht, NL
3 City St. George's University of London, UK

chiara.minotti@ukbb.ch

1. Background & Aims

Kangaroo Care (KC) in preterm and LBW infants reduces mortality.
Aim: to evaluate the effects of KC on mortality, sepsis and invasive infection in LBW infants.

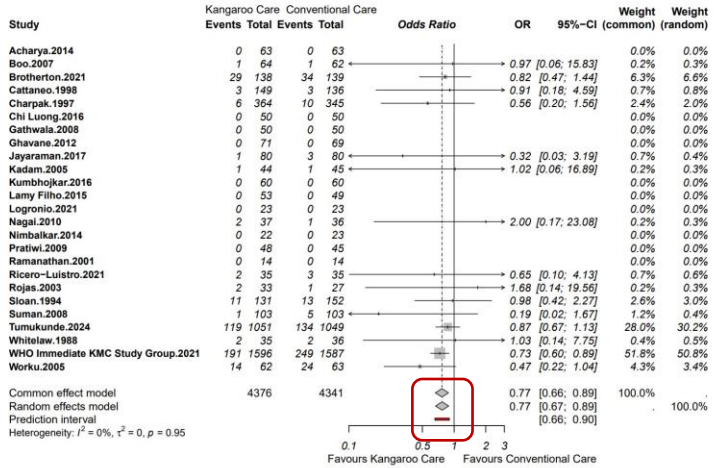
KC: early, continuous, and prolonged skin-to-skin contact between infants, even if not yet medically stable, and the mother, father or any caregiver, with support for exclusive breastfeeding or breastmilk feeding and early discharge

2. Methods

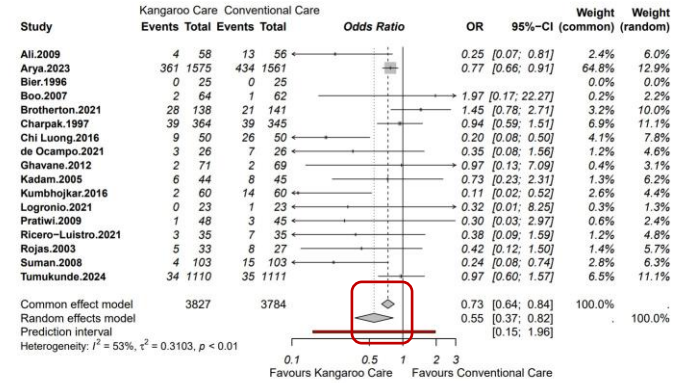
Embase, **MEDLINE**, **Cochrane Library** and **Web of Science** databases were systematically searched (January 2013 to **February 2025**), updating a 2016 Cochrane review, according to PRISMA guidelines (PROSPERO: CRD42024501546). Inclusion of randomized controlled trials (**RCTs**) on **KC versus conventional care in LBW infants**.

Primary Outcomes (OR, 95% CI): **i) all-cause mortality; ii) sepsis; iii) invasive infection** (composite of necrotizing enterocolitis, pneumonia, meningitis and other severe infections) at 28 days or by discharge. Secondary outcomes: sepsis/invasive infection-related mortality and bacterial colonisation; adverse events assessment: hypothermia and apnoea.

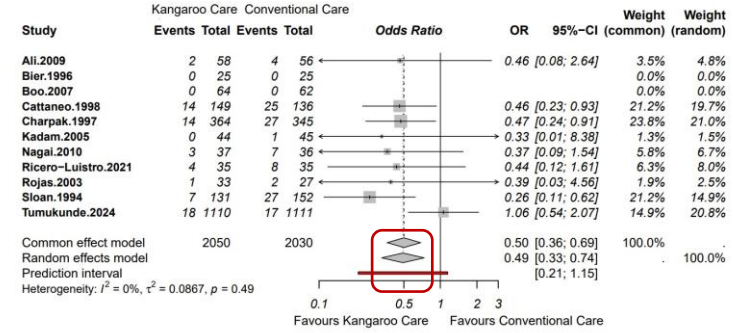
a) All-cause mortality



b) Sepsis



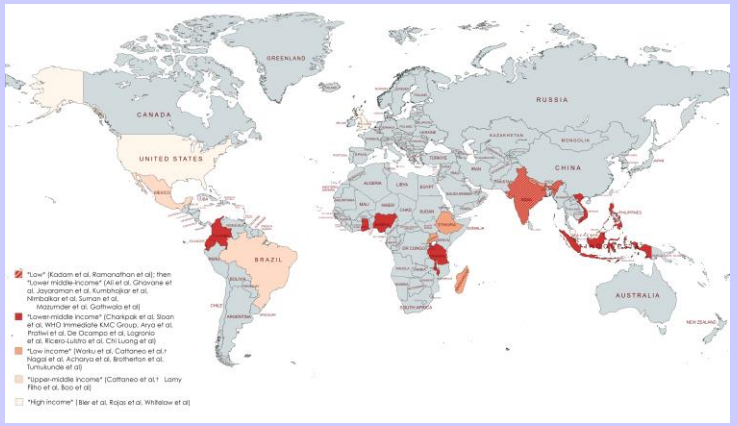
c) Invasive infection



3. Results

2298 screened records

Included: **30 records** (1.5%, **29 trials**), mainly from lower-middle income countries, with data on 17,513 LBW infants.



Quality of evidence: **moderate-to-high** (RoB2 tool, GRADE)

- Random effect meta-analysis, primary outcomes
- KC also reduced the odds of sepsis/invasive infection-related mortality, hypothermia and apnoea.
- Limited data on bacterial colonisation (one trial, protective effect).

Limitations: heterogeneity was explored for sepsis, hypothermia and apnoea, and was due to the variation in KC offered in the control groups.

4. **Conclusions:** The **joint protective effect of KC on mortality and infections** reinforces its critical importance in routine neonatal care across different settings aligning with WHO recommendations.

Since some protective effects are likely mediated through averted infections, KC integration into standard IPC measures should be considered for care of LBW infants globally.

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