

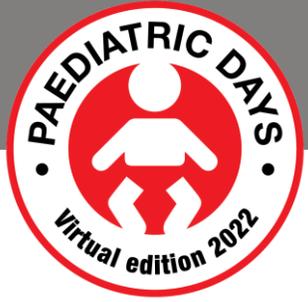


Early skin-to-skin contact and neurodevelopmental outcomes at 5^{1/2} years in very preterm infants: The EPIPAGE-2 cohort study

Ayoub Mitha, Laëtitia Marchand, Jean-Christophe Rozé, Pierre Kuhn, Isabelle Leray, Monique Kaminski, Véronique Pierrat and Neurodevelopmental care group

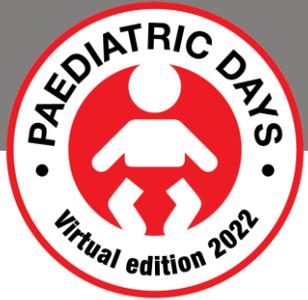
Obstetrical, Perinatal and Pediatric Epidemiology Research Team INSERM U1153, Paris, France





Objective

To evaluate the impact of early Skin-to-Skin Contact (SSC) on neurodevelopmental outcomes at 5^{1/2} years among very preterm infants



EPIPAGE-2 cohort

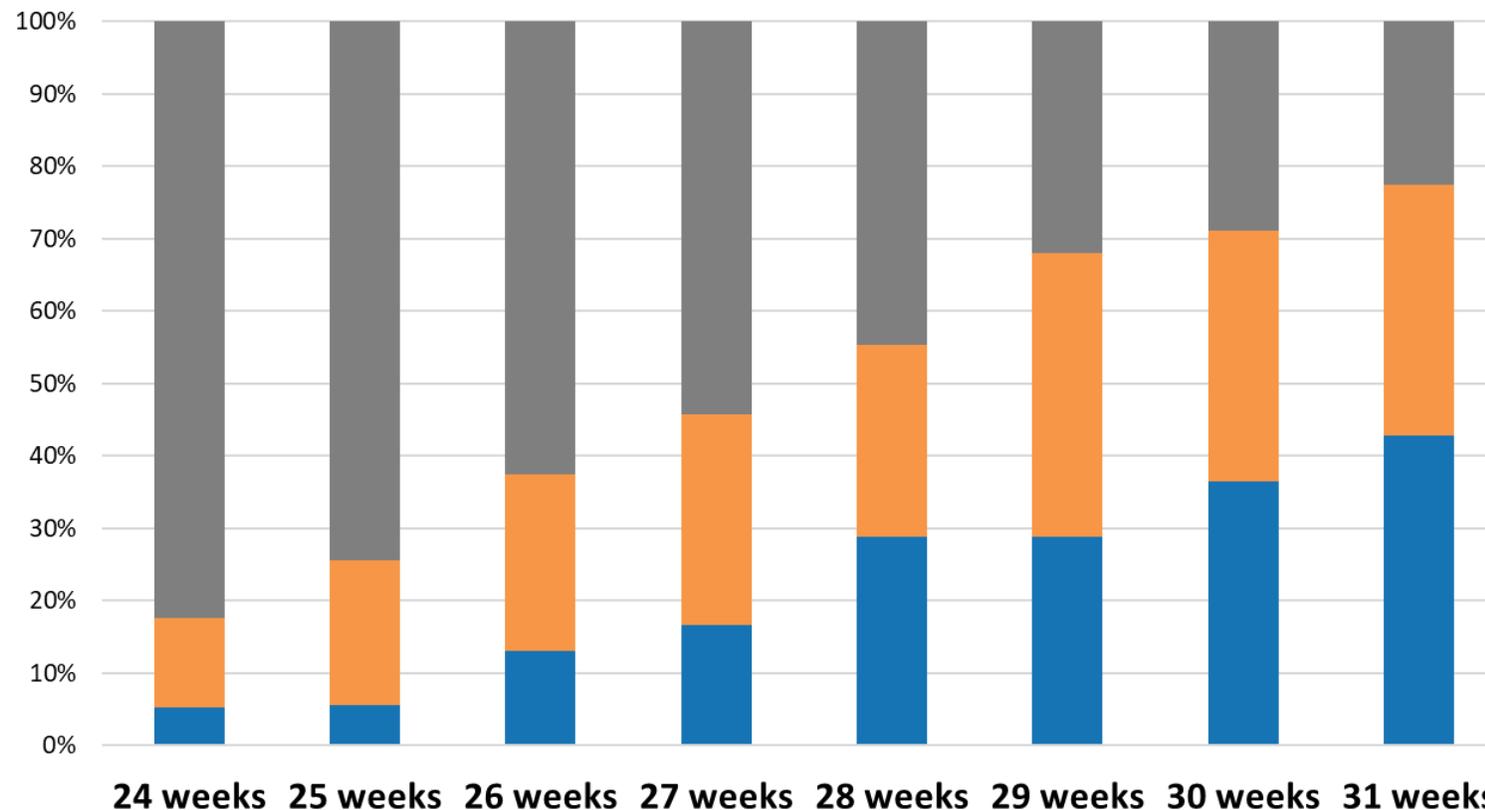


- Population-based prospective study of preterm infants
- In all maternity units in 25 French regions in 2011
- **2666 survivors at day 8 with gestational age between 24 and 31 weeks**
 - Propensity score analysis with Inverse Probability of Treatment Weighting (IPWT) approach
- **2561 survivors at 5^{1/2} years**
 - Cognition (WPPSI-IV)
 - Behaviour difficulties (Strengths and Difficulties Questionnaire)



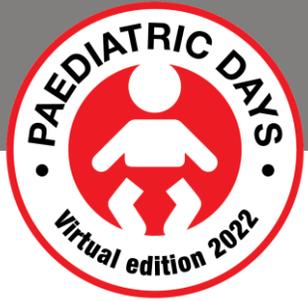
Results (1): Practice of skin-to-skin contact

1607 infants exposed to SSC
1059 infants non exposed



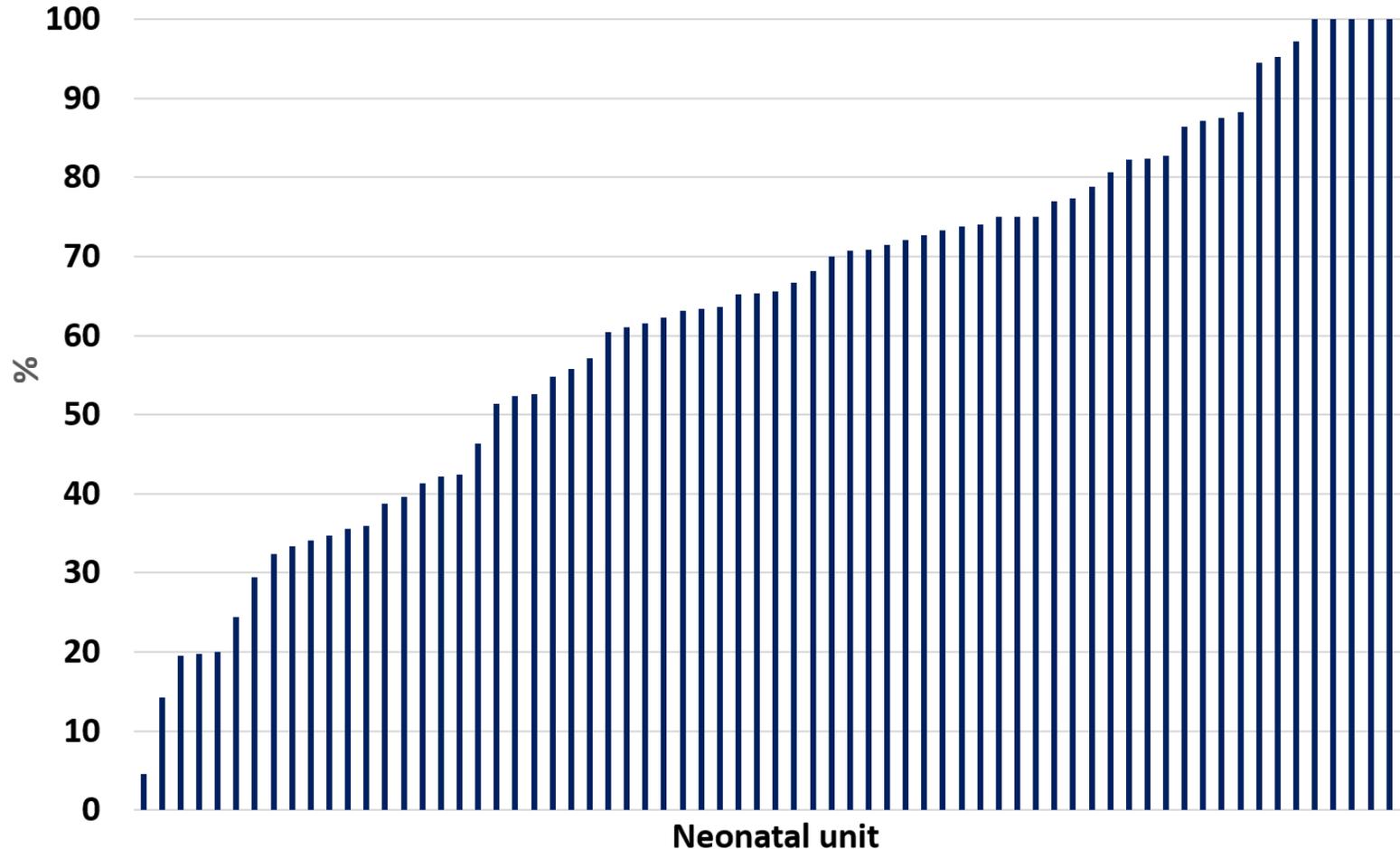
- No skin-to-skin between D0 and D7
- Skin-to-skin started between D4 and D7
- Skin-to-skin started between D0 and D3

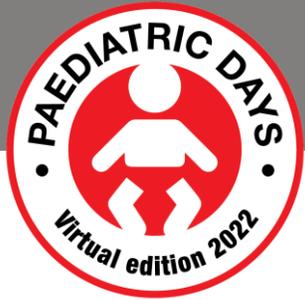




Results (2): Practice of skin-to-skin contact

■ % of preterm infants with skin to skin D0-D7



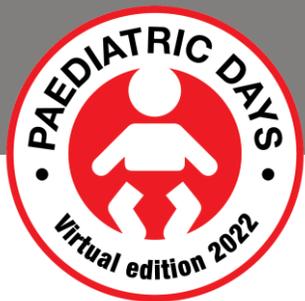


Balance between exposed and non-exposed groups

After IPWT, all standardized difference between baseline characteristics is $< 10\%$

The weighting (IPTW) create a pseudo population with perfect covariable balance





Results at 5^{1/2} years

OR or Mean Difference (95%CI)^a

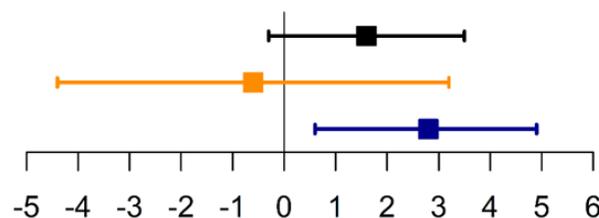
Pvalue

Full scale intelligence quotient (FSIQ)

mean(sd)

24-27 weeks

28-31 weeks



0.092

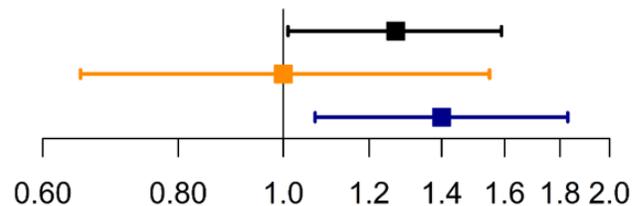
0.75

0.011

>=93 (>=-1sd)

24-27 weeks

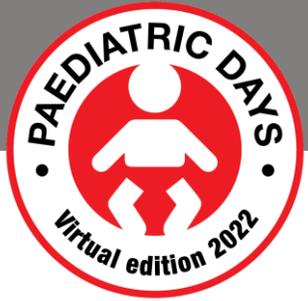
28-31 weeks



0.042

0.99

0.014



Results at 5^{1/2} years

OR or Mean Difference (95%CI)^a

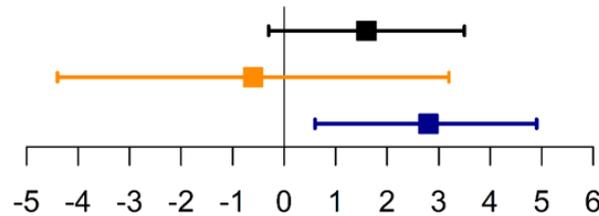
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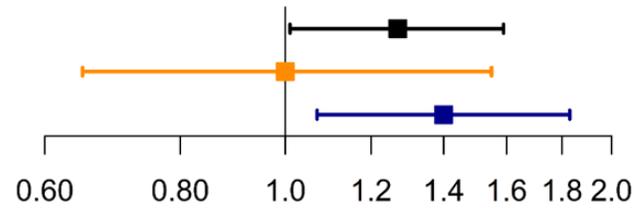
0.75

0.011

>=93 (>=-1sd)

24-27 weeks

28-31 weeks



0.042

0.99

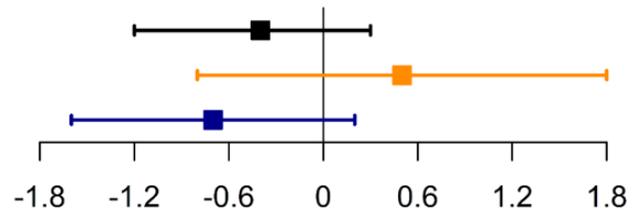
0.014

Behavioural difficulties, SDQ score

mean(sd)

24-27 weeks

28-31 weeks



0.28

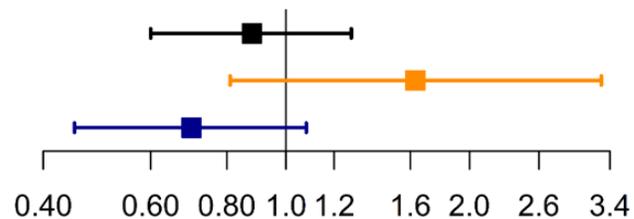
0.43

0.11

>90th percentile

24-27 weeks

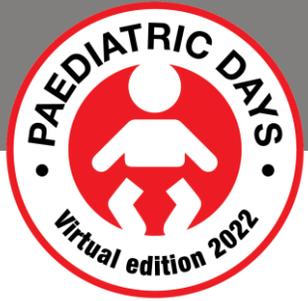
28-31 weeks



0.50

0.17

0.11



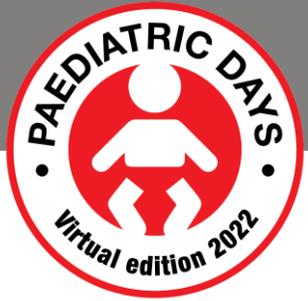
Discussion

Strengths

- Evaluation of the impact of SSC on long term neurodevelopmental outcomes
- Population-based
- Extremely and very preterm birth
- Standardised developmental assessments

Limitations

- No information about duration of SSC
- No information on SSC after the 1st week
- Despite a good balance between exposed and non exposed groups, **residual indication biases, unmeasured confounders** due to individual and unit characteristics
- Intermediate factors



Conclusion

- **Trend towards an association of skin-to-skin the first week of life with cognitive outcome at 5^{1/2} years among very preterm infants**
- **Variability of practices among units deserves attention.**
- **Further evaluation of the dose-effect is needed.**

