



Prematurity Across the Lifecourse: Consequences, Context, and Inequities

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Prematurity: a global public health challenge

13.4 million
preterm births
annually

4-16%
Global prevalence

Leading cause
Of deaths in
children <5 years

**Lifelong
consequences**
-Health,
development

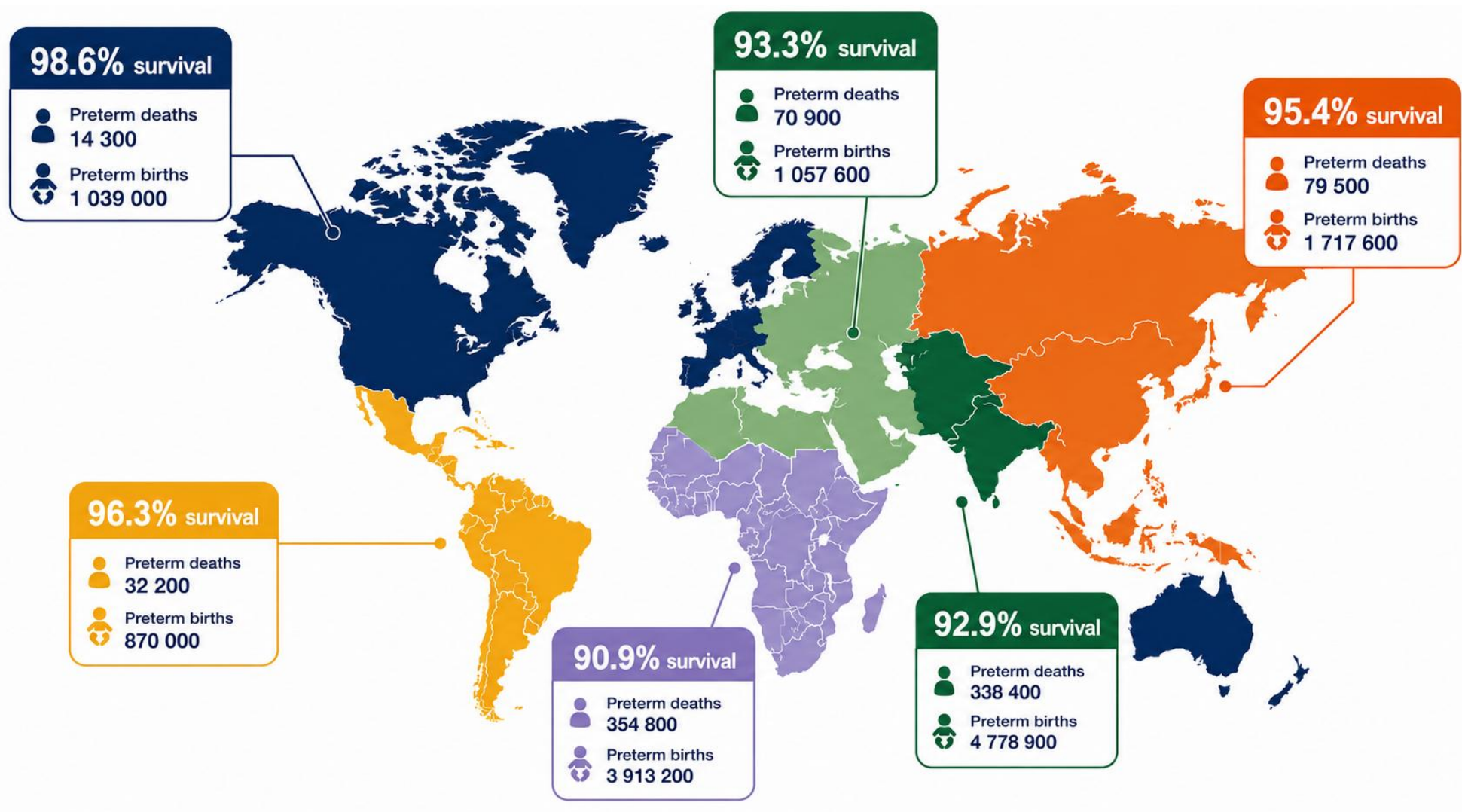
Global burden of prematurity

Global total 13.4 million preterm births



Together account for >60% of global preterm births

Where a baby is born matters

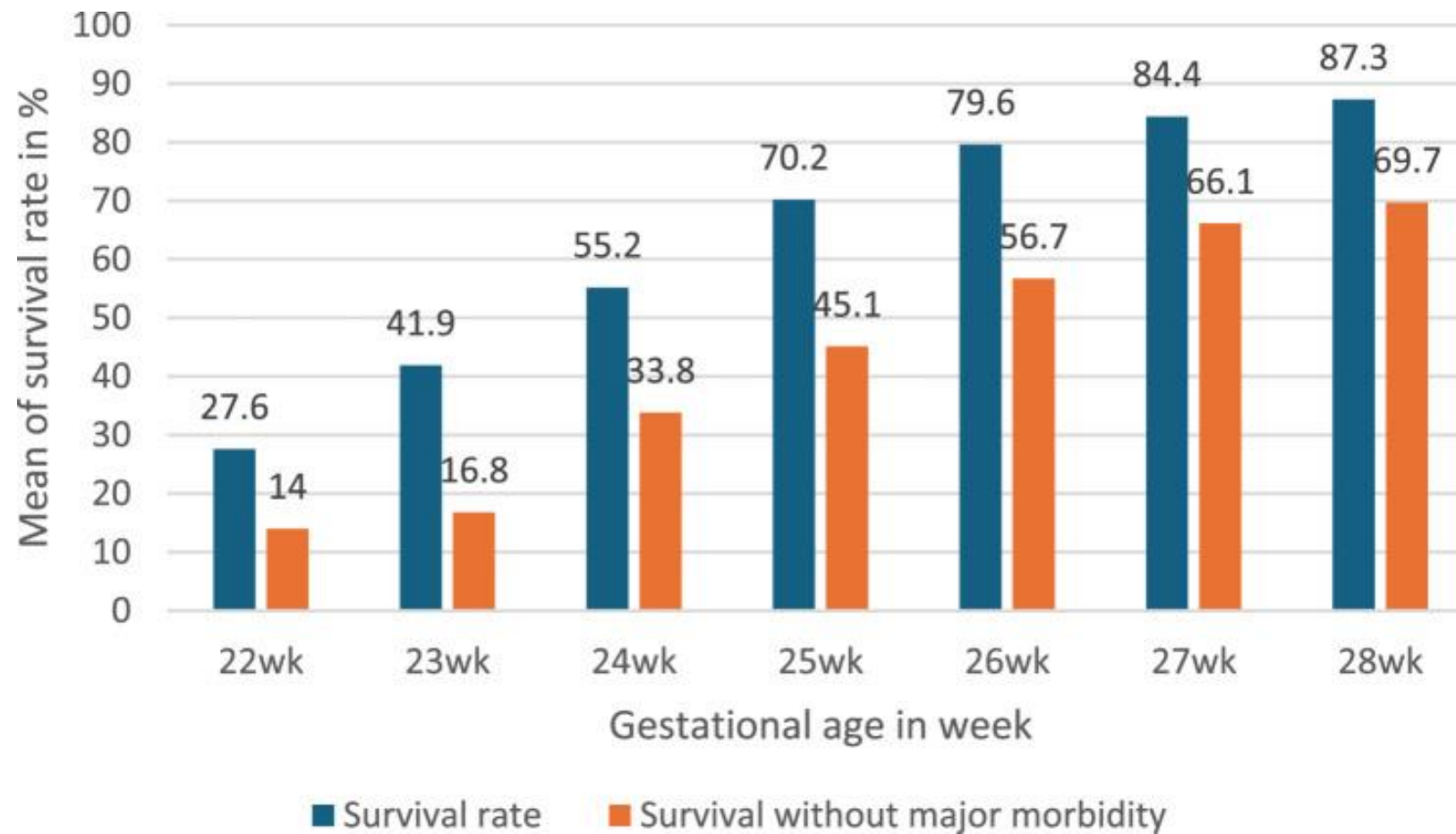


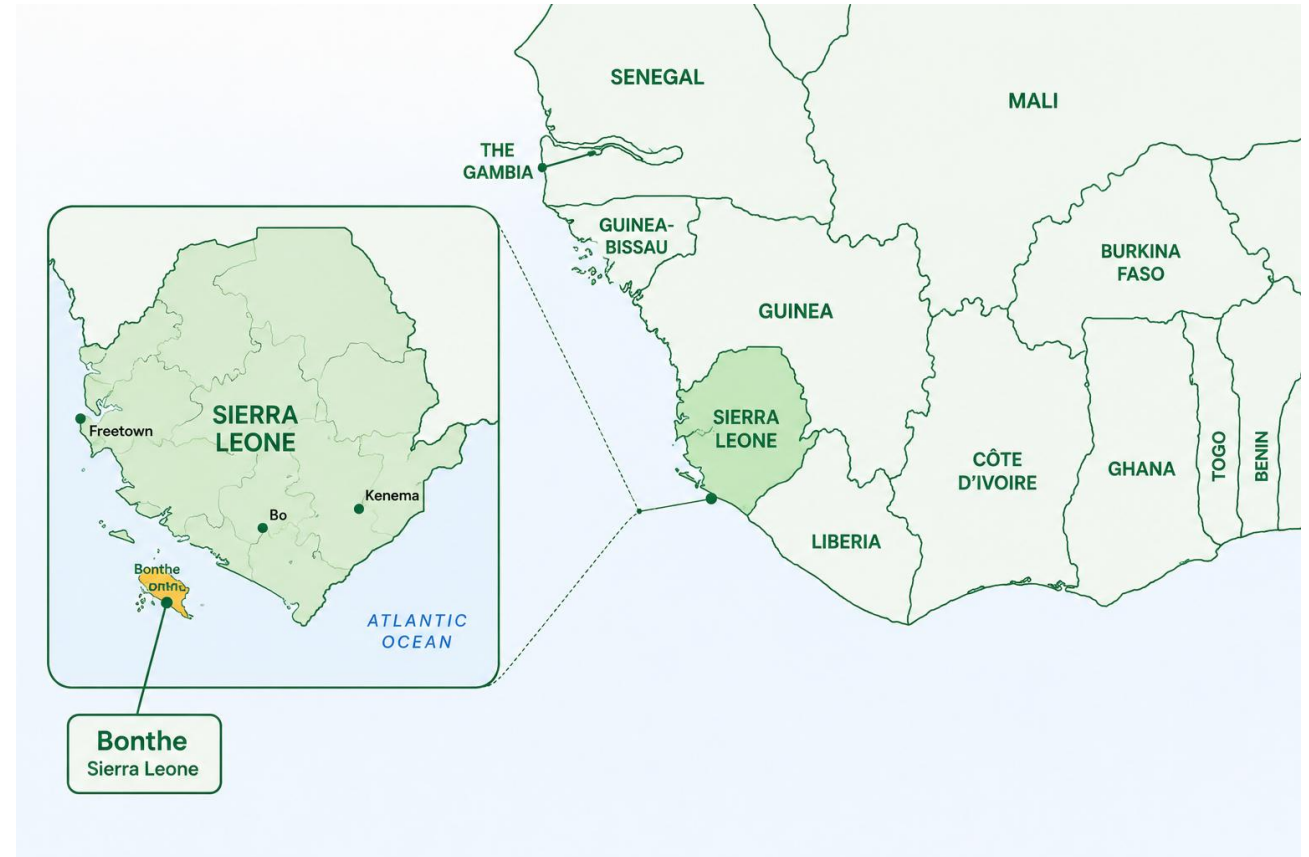
Where a baby is born matters

Location	Survival % (95%CI)	Studies number
High-income	69.3 (66.49, 72.17)	170
Upper-middle income	55.6 (48.58, 62.78)	27
Lower-middle income	33.91 (28.28, 29.54)	26
Low-income	32.24 (3.77, 60.71)	4



Gestational age matters





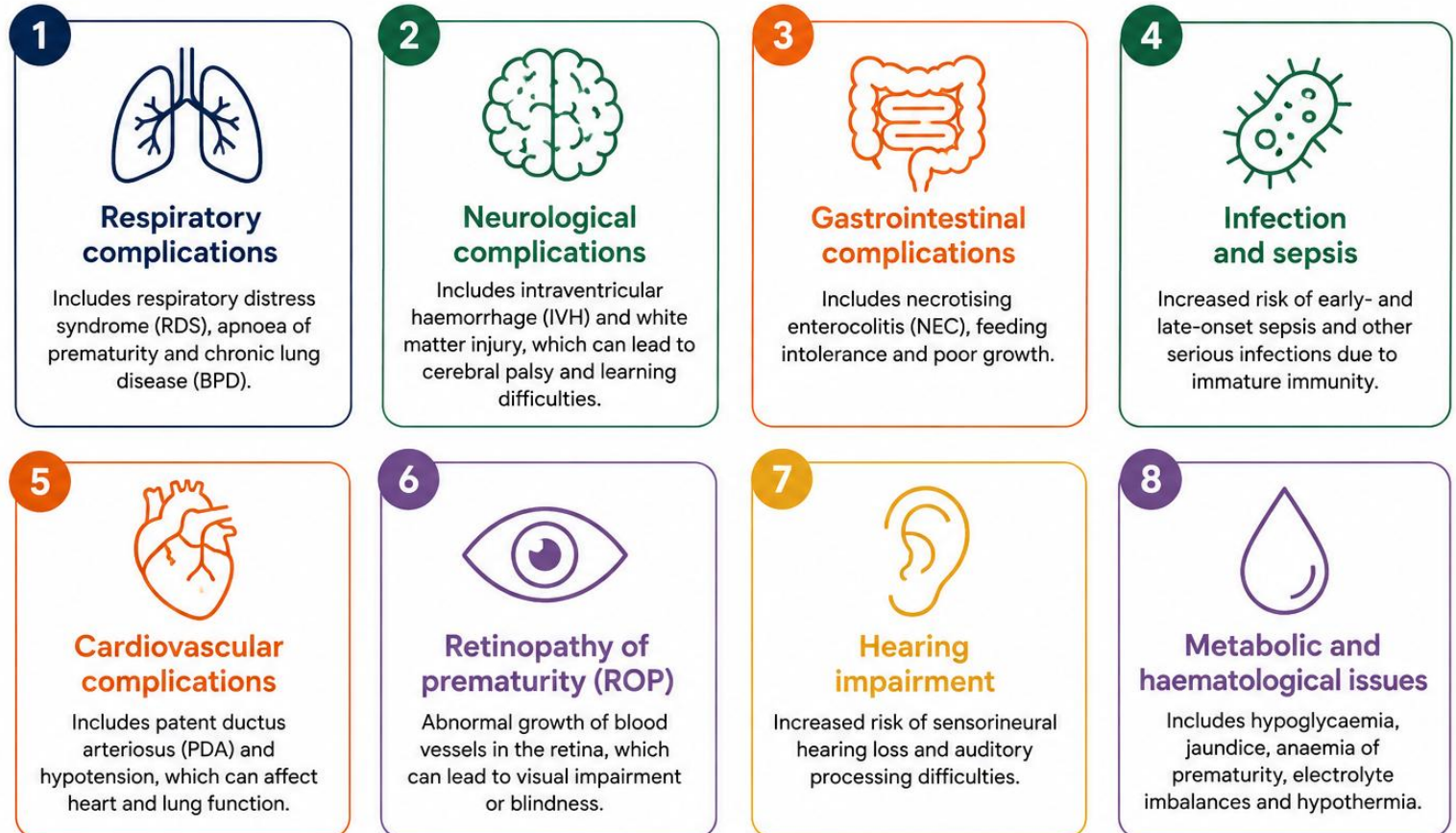
*Consent obtained for image

Neonatal consequences of prematurity

Key complications of prematurity

Premature birth can affect multiple organs and systems.
These complications are common and can have short- or long-term impacts.

Almost a million children (0.9 million) were estimated to have died due to direct complications of preterm birth in 2022.





Neurological development of moderately and late preterm children

Summary



Children born moderately or late preterm have higher risks of adverse neurodevelopmental outcomes than children born full term. These findings may help with better risk assessment, follow-up, and healthcare planning for the largest proportion of preterm children

Study design



Prospective cohort study

Data from [Swedish national registries](#)

Born at 32⁺⁰ to 41⁺⁶ weeks, from 1998 to 2012

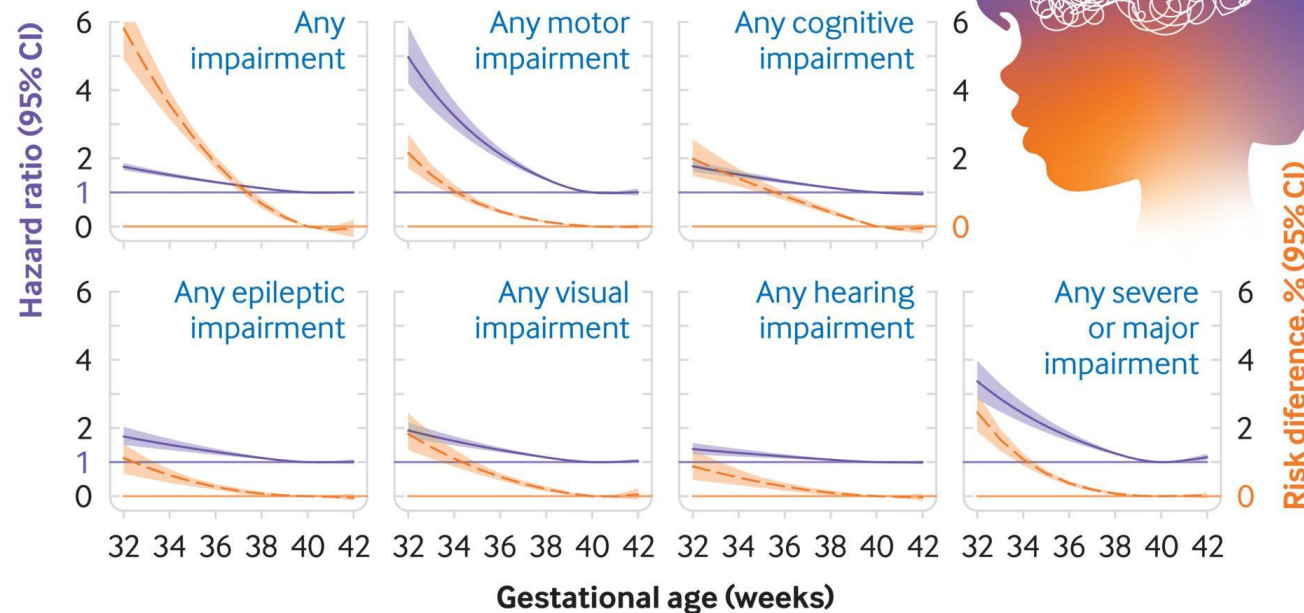
Population



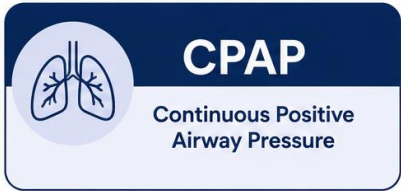
1 281 690 liveborn singleton children | Sex: 51% male
Median follow-up: 13.1 (IQR* 9.5-15.9) years
No congenital malformations

Outcomes

— Hazard ratio — Risk difference (%)



Interventions



Murless-Collins et al. Reproductive Health (2025) 22:114

Rhoda N et al. S Afr Med J. 2018;108:9

Tumukunde V et al. Lancet. 2024

Key messages

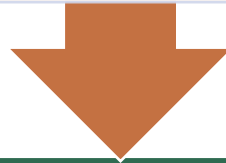
1. Prematurity is more than a neonatal outcome

Prematurity is a life-course exposure, with consequences extending from survival and neurodevelopment to education, employment and adult health.



2. Outcomes are shaped by context

The impact of prematurity depends not only on gestational age, but also on the social, economic and health-system environments into which a child is born.



3. Effective interventions exist

Interventions across the continuum of care—including antenatal care, infection prevention, neonatal care and Kangaroo Mother Care—can substantially improve outcomes.

Implications for maternal immunisation



The burden of prematurity are greatest where resources are most limited.

Maternal vaccines that prevent infection-associated prematurity could yield substantial benefits in high-burden settings.

Understanding these impacts requires better data from the settings where most preterm births occur.

Conversely, any vaccine-associated increase in prematurity could have disproportionate consequences in populations least equipped to mitigate its effects.

Thank you

