

High SGA rates by uncustomised fetal weight standards in South Asian pregnancies at term do not represent increased stillbirth risk



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Objective

Babies of South Asian mothers have an increased risk of being stillborn.

Their intrauterine weight is also more likely to be small-for-gestational-age (SGA) according to universal fetal growth standards not adjusted for ethnicity.

Therefore it is often assumed that the increased risk of stillbirth in South Asian pregnancies is associated with fetal growth restriction.

We examined whether the two observations are related in term pregnancies, where designation of SGA is most consequential for management.

Results

- 7,584 fetuses (11.6%) were SGA at delivery (GROW) and included 24 stillbirths (RR: 4.9; CI 3.0-8.3).
- The SGA rates were higher according to each standard: Hadlock: 24.5%, WHO: 31.1%, Intergrowth: 16.1%, but not higher with GROW as ethnicity was adjusted for.
- The additional pregnancies designated SGA according to each of these standards were not associated with increased stillbirth risk:
 - Hadlock +8584 (RR 1.8, CI: 0.9-3.9)
 - WHO +12,760 (RR 1.9, CI: 0.97-3.8)
 - Intergrowth +3628 (RR 1.8, CI: 0.6-5.1).

Conclusions

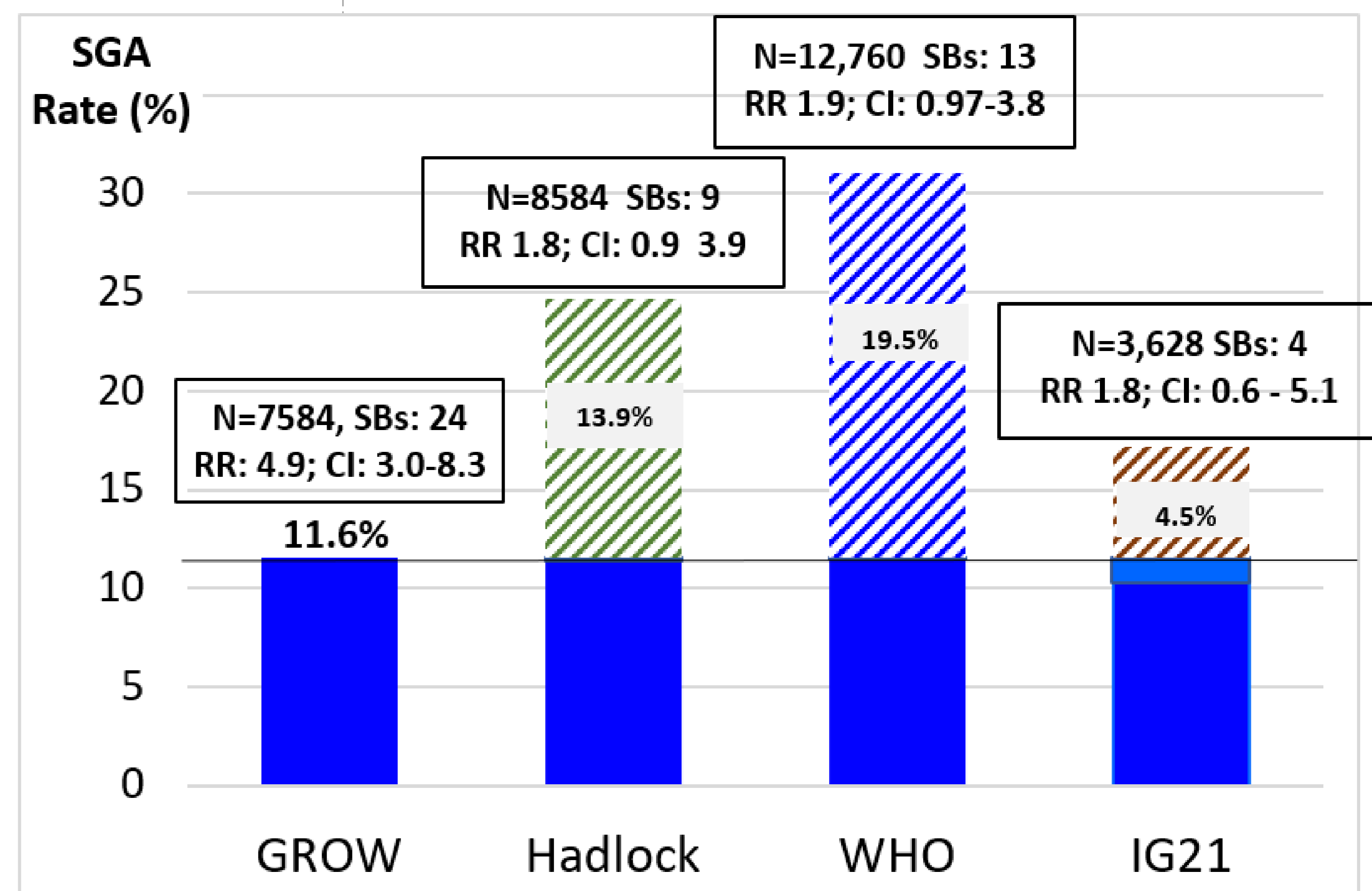
- Higher SGA rates in South Asian pregnancies according to unadjusted, one-size-fits-all fetal weight standards are not associated with increased stillbirth risk and indicate that the wrong standard is being used.
- Such inflated SGA rates may lead to unnecessary investigations and interventions and parental anxiety.
- They also may divert attention from more likely causes of increased stillbirth risk in ethnic minority groups such as social deprivation or inequalities in service provision.

Methods

- We studied a routinely recorded database of South Asian singleton term pregnancies from
 - 83 NHS trusts/health boards in 2023-25, with
 - 65,340 term deliveries including 61 stillbirths.
- SGA (<10th centile) at delivery was assessed using fetal weight standards by:
 - Hadlock¹, Intergrowth², WHO³ (universal), and GROW⁴ - customised for ethnicity, parity and maternal height and weight
- Stillbirth risk was calculated for groups designated as SGA by each standard.

Results

FIGURE: GROW SGA rate (11.6%) and additional SGA rates and stillbirths according to Hadlock, WHO and Intergrowth (IG21) charts



References

- Hadlock FP et al 1991
<https://doi.org/10.1148/radiology.181.1.1887021>
- Stirnemann J et al 2020 (Intergrowth)
<https://doi.org/10.1002/uog.22000>
- Kiserud T et al 2017 (WHO)
<https://doi.org/10.1371/journal.pmed.1002220>
- Perinatal Institute 2023-25 (GROW)
<https://www.perinatal.org.uk/FetalGrowth/Tools>