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Excess small-for-gestational-age rate according to the UK-WHO birthweight standard in South Asian pregnancies does not represent increased stillbirth risk

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Objectives: South Asian babies have an increased risk of stillbirth, which has been associated with a high rate of smallness-for-gestational-age (SGA) according to the UK-WHO birthweight standard. We wanted to examine whether the two observations are related.

Methods: We studied a database of 2,991,568 singleton births routinely recorded between 2016 and 2023 in the UK GAP programme,¹ which included 286,793 (9.6%) South Asian babies. SGA (<10th centile) was defined according to (i) the UK-WHO standard adjusted for sex² and (ii) the GROW birthweight standard,³ customised for ethnic origin, as well as maternal height, weight, parity, and sex. The South Asian birth cohort included 1,571 stillbirths (rate 5.5/1000). Stillbirth risk was calculated for subgroups designated as SGA by each standard.

Results: A total of 39,984 (13.4%) of South Asian babies was SGA using the customised GROW standard, while 52,468 (17.5%) were SGA according to UK-WHO. Babies SGA by both standards had a relative stillbirth risk (RR) of 3.8 (CI: 3.4–4.2). There were an additional 4,404 cases designated SGA by GROW and not by UK-WHO, which were also at increased stillbirth risk (RR: 2.6; CI 1.9–3.4), while an additional 16,888 (47%), designated SGA by UK-WHO and not by GROW, did not have an increased risk (RR: 0.9; CI 0.8–1.2). See Figure 1.

Conclusions: The high SGA rate in South Asian babies according to UK-WHO centiles is not associated with higher stillbirth risk, and suggests that this standard fails to represent the birthweight distribution of this ethnic group.

References:

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2. Cole TJ, Williams AF, Wright CM. Revised birth centiles for weight, length and head circumference in the UK-WHO growth charts. *Annals of Human Biology*. 2011;38(1):7–11. DOI: [10.3109/03014460.2011.544139](https://doi.org/10.3109/03014460.2011.544139)
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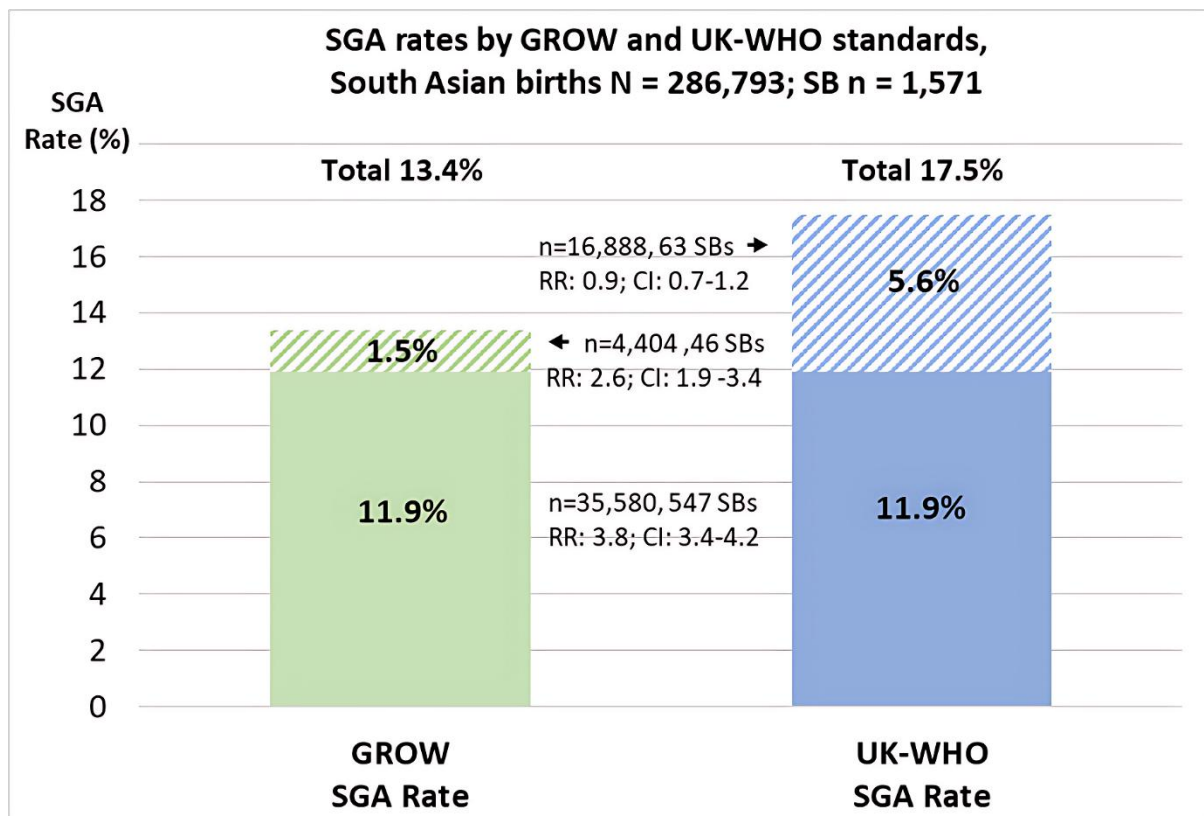


FIGURE 1