

For NHS Digital's Maternity Services Monthly Statistics see <https://digital.nhs.uk/data-and-information/publications/statistical/maternity-services-monthly-statistics>



See Correspondence page e363

See Online for appendix

For GROW see <https://www.perinatal.org.uk/GROW2.0>

For the patient safety alert see <https://www.rcog.org.uk/guidance/browse-all-guidance/patient-safety-alerts/intergrowth-estimated-fetal-growth-charts/>

adjust their own local thresholds for action away from the 3rd and 10th centiles based on local data has not succeeded. Trusts do not report doing this before adopting IG21 charts, even when they are aware they will under-detect SGA cases. They also do not see enough pregnancies to detect potential consequences of such changes on uncommon adverse outcomes such as stillbirths.

For many years, UK maternity care has focused on placing SGA and FGR fetuses on appropriate pathways for additional monitoring and carefully timed delivery, considering the full clinical picture. The current use of IG21 charts in England runs contrary to this established practice, undermines the foundations of RCOG, the UK National Institute for Health and Care Excellence, and NHS England's Saving Babies' Lives guidance, and hampers efforts to prevent perinatal deaths. Widespread adoption of IG21 charts should be analysed by a national body and appropriate action taken to prevent poor outcomes for babies.

As a result of concerns and evidence provided to NHS England and the RCOG, a patient safety alert on IG21 charts has been issued, phasing out their use in the NHS in England.

We declare no competing interests. After the conception and initiation of the freedom of information exercise presented in this Correspondence, we contacted the Perinatal Institute, a not-for-profit social enterprise, which developed the GROW customised growth charts. We have discussed the content of this Correspondence with this organisation.

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- 1 Liauw J, Mayer C, Albert A, et al. Which chart and which cut-point: deciding on the INTERGROWTH, World Health Organization, or Hadlock fetal growth chart. *BMC Pregnancy Childbirth* 2022; **22**: 25.
- 2 Hugh O, Butler E, Ellson H, et al. Small-for-gestational age according to INTERGROWTH-21st fetal weight standard misses most pregnancies at risk of stillbirth identified by GROW. *Ultrasound Obstet Gynecol* 2025; **65**: 798–804.
- 3 Stirnemann J, Villar J, Salomon LJ, et al. International estimated fetal weight standards of the INTERGROWTH-21st project. *Ultrasound Obstet Gynecol* 2017; **49**: 478–86.

- 4 Stirnemann J, Salomon LJ, Papageorgiou AT. INTERGROWTH-21st standards for Hadlock's estimation of fetal weight. *Ultrasound Obstet Gynecol* 2020; **56**: 946–48.
- 5 Morris RK, Johnstone E, Lees C, Morton V, Smith G, The Royal College of Obstetricians and Gynaecologists. Investigation and care of a small-for-gestational-age fetus and a growth restricted fetus (green-top guideline no. 31). *BJOG* 2024; **131**: e31–80.

Fetal growth restriction (FGR) is a strong risk for an adverse pregnancy outcome, and small fetuses are at increased risk of FGR. Contrary to previous versions, the authors of the latest (2024) green-top guideline for fetal growth by the Royal College of Obstetricians & Gynaecologists (RCOG)<sup>1</sup> decided not to specify which fetal growth charts should be used. Gestation Related Optimal Weight (GROW) is the most commonly used chart for fetal weight in the UK National Health Service (NHS) and has been the recommended standard in RCOG guidelines since 2003. It is based on large NHS datasets and adjusts or customises fetal and neonatal weight limits for maternal height, early pregnancy weight, parity, and ethnic origin to represent the heterogeneous UK population. INTERGROWTH-21st (IG21)<sup>2</sup> fetal weight charts are based on an international dataset of eight low-income, middle-income, and high-income countries and have been proposed as a global one-size-fits-all solution, which does not require additional software for customisation to individual pregnancy characteristics. An estimated 18 NHS hospitals switched to IG21 charts since drafts of the new RCOG guideline<sup>1</sup> began circulating in mid-2023.

In light of an apparent increase since 2024 of avoidable stillbirths in case reports of pregnancies managed with IG21 charts, we wanted to assess their screen-positive rate, defined as the antenatal identification of small-for-gestational age (SGA) as a proportion of all singleton births. This rate is a key marker in NHS England's Saving Babies' Lives Care Bundle for fetal growth.<sup>3</sup> Maternity units are required to report these rates, which are then

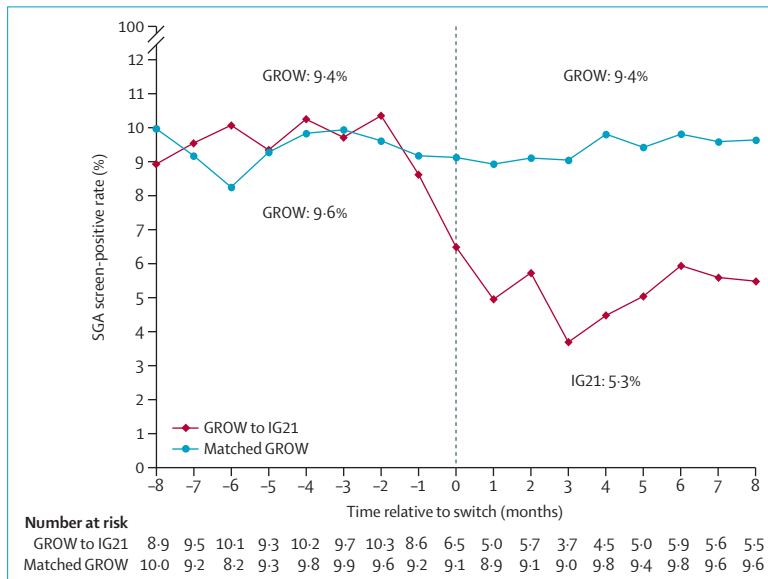
published monthly by NHS Digital as the Maternity Services Monthly Statistics. We analysed the effect that switching charts from GROW to IG21 had on SGA screen-positive rates, based on dates when the switches occurred, obtained from a national survey of freedom of information requests.<sup>4</sup> 12 of the 18 units switched from using GROW charts to IG21 and had switch dates confirmed via the freedom of information requests. Four of the 12 units had to be excluded as their reports had zero returns (appendix p 1). For the remaining eight units, useable data from the Maternity Services Monthly Statistics reports were available for 8 months before and after the switch date. For controls, each switching unit was matched with two units of similar size (according to 2024 birthrates) that had continued with GROW (appendix p 2).

We used an interrupted time-series logistic regression model with unit-level random intercept before and after the change date, adjusting for the time before and after the switch. All analyses were carried out using R version 4.4.1.

The figure shows the GROW and IG21 screen-positive rates and monthly averages over 8 months of available data from before and after the switch period. The rate stayed constant at an average of 9.4% in the matched GROW-continuing units, but reduced rapidly by 45% with IG21, from 9.6% before the switch to 5.3% after the switch (intention-to-treat OR 0.51 [95% CI 0.46–0.57]).

This analysis shows firstly that the data reported on NHS Digital's monthly statistics is of varying and often poor quality. Many units reported incomplete data, which could be a result of data entry not being monitored and just published as submitted, without checks on quality and ascertainment.

The pattern with SGA screen-positive rates that emerges is that it decreased by nearly a half as soon as



**Figure:** SGA screen-positive rates relative to the time of switch

Screen-positive SGA rates for NHS units for 8 months with averages before and after their respective switch dates from GROW to IG21 fetal weight charts (n=8; appendix p 1), and for matched units that continued with GROW fetal weight charts (n=16; appendix p 2). GROW=Gestation Related Optimal Weight. SGA=small-for-gestational age. IG21=INTERGROWTH-21st.

the IG21 fetal weight standard was implemented, whereas the matched control group showed no change over the same time period. Such a large reduction in antenatal identification of SGA fetuses might lead to many missed diagnoses of babies at risk of FGR and stillbirth.

Extrapolated to the 26 NHS Trusts using IG21 charts in the freedom of information survey, which had a total of 120 555 births in 2024, this would translate to a halving of antenatal identification of pregnancies at SGA-related risk in about 10 000 pregnancies per month. The negative effect on NHS England's efforts on recognising risk and preventing stillbirth is likely to be substantial. Recent analysis of a large NHS database with pregnancy outcomes showed that use of IG21 charts would not identify 68% of babies at risk of stillbirth.<sup>5</sup> Urgent work is needed at regional and national levels to assess the actual effect that IG21 charts might be having on pregnancy outcomes.

NHS England have since issued a patient safety alert because of the low screen-positive SGA rate

and advised all hospitals to stop using IG21 fetal weight charts by March 31, 2026.

AM, OH, and JG are employees of the Perinatal Institute, a not-for-profit social enterprise that has developed and licenses the GROW fetal growth chart referred to in this Correspondence.

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## Authors' reply

Losing a baby is a tragedy and we strongly support critical appraisal of antenatal screening programmes. However, the Correspondence by Sherena Corfield and Jack A Devlin, and by Amanda Merricks and colleagues, risks further entrenching three basic misconceptions: (1) treating uncontrolled associations as proof of causation—association is not causation; (2) confusing centile thresholds with the proportion of a population affected; and (3) suggesting that estimated fetal weight (EFW) alone is a useful risk predictor.

INTERGROWTH-21st (IG21) provides international prescriptive standards for fetal growth, newborn size, and preterm postnatal growth aligned across the life-course (womb to classroom).<sup>1</sup> The standards were derived prospectively using standardised protocols in optimally healthy populations. This approach is conceptually different from a local reference. Standards define expected physiological growth, allow valid comparisons across geographical settings, and provide continuity between antenatal assessment, neonatal care, and later child follow-up. Across diverse, non-isolated populations, between-site variability in fetal growth is much smaller than within-population variability (as is the case with genetic variants),<sup>2</sup> supporting a single standard when health and nutrition needs are met. They also avoid the temptation to embed social constructs, such as ethnicity, into the definition of normal.

A centile is a position on a distribution, not a prevalence. Defining small-for-gestational age (SGA) as less than the 10th centile does not imply that exactly 10% of any given population will be SGA when assessed against a prescriptive standard. In England, applying the IG21 newborn standard to 508 230 livebirths (34–42 weeks' gestation) identified 7.6% that were less than the 10th centile and 15.9% that were more than the 90th centile, with a clear deprivation



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