BJOG An International Journal of Obstetrics and Gynaecology

Royal College of Obstetricians & Gynaecologists

DOI.org/10.1111/1471-0528.18234

www.bjog.org

Abstracts

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Reduction of stillbirths with digital support for assessment of fetal growth velocity

Emily Butler, Hanna Ellson, Hannah Taylor, Jemma Mytton, Oliver Hugh, Jason Gardosi

Perinatal Institute, Birmingham, United Kingdom

Objective: The new electronic version of customised growth charts (GROW 2.0) includes auto-plotting, calculation of growth velocity, and prompts for clinical risk assessment and review. We wanted to assess the effect of implementation on stillbirth rates.

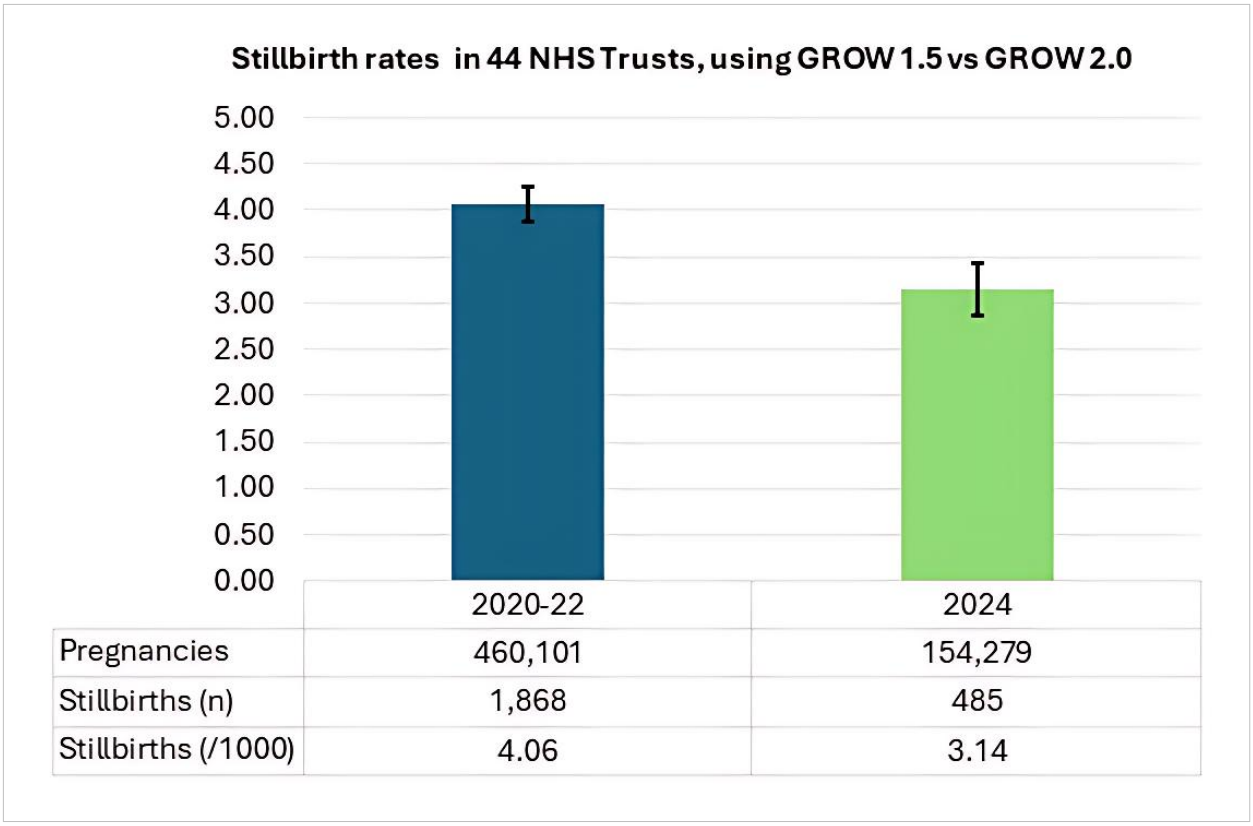
Method: We analysed 2024 data from the first 44 NHS Trusts that implemented GROW 2.0, compared with data from the same Trusts between 2020 and 2022, when GROW 1.5 with only printed charts was in use. Growth velocity based on serial ultrasound estimated fetal weight (EFW) had been assessed visually with GROW 1.5, while GROW 2.0 uses the Projected Optimal Weight Range1 standard, with prompts review if EFW is outside the normal range.

Results: There were 460,101 births with 1868 stillbirths (rate, per thousand: 4.06) during the 2020–2022 baseline period using GROW 1.5 charts, and 154,279 births including 485 stillbirths (rate 3.14) in 2024 following implementation of GROW 2.0, representing a 23% reduction (RR: 0.77, CI 0.70–0.86) (see Figure). GROW 2.0 identified 17.0% of pregnancies with slow growth, most of which (71%) were not SGA, were delivered about a week earlier, and had a stillbirth rate of 1.61 – half the rate in the overall GROW 2.0 cohort. The greatest effect was on stillbirth rates at term, which reduced from 1.86 to 1.04 (RR 0.56, CI 0.47–0.66).

Conclusion: Electronic growth chart functionality with auto-plotting, assessment of growth velocity and prompts for review support clinical awareness and decision making. Recognition of slow growth is an important contributing factor to stillbirth prevention.

Reference

1. Hugh O, Gardosi J. Fetal weight projection model to define growth velocity and validation against pregnancy outcome in a cohort of serially scanned pregnancies. *Ultrasound Obstet Gynaecol*. 2022;60(1):86–95. https://doi.org/10.1002/uog.24860



	2020-22	2024
Pregnancies	460,101	154,279
Stillbirths (n)	1,868	485
Stillbirths (/1000)	4.06	3.14

FIGURE 1