

Objective

The new version of customised charts (GROW 2.0) features:

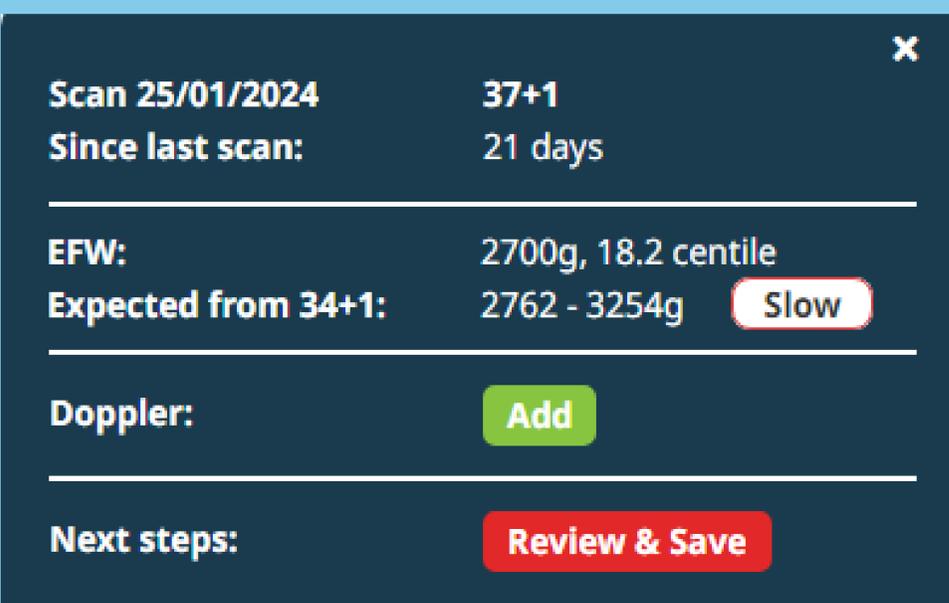
- auto-plotting of fundal height and fetal weight
- growth trajectory and identification of slow growth
- prompts for clinical risk assessment and review.

We undertook a longitudinal study to assess the effect of implementation of the new charts on stillbirth rates.

Methods

- We analysed anonymised data from the first 8 hospitals with a full year's (2023) information on GROW 2.0 use.
- We compared this with the same hospitals' GROW1.5 data from the preceding 3 year period (2020-2022)
- We analysed rates of stillbirth and compared them using a proportions Z test.

Fig 1. GROW 2.0 tooltip: monitoring size and velocity



Growth velocity is calculated and flagged up as abnormal even if the EFW is not SGA but below the expected fetal weight gain, thereby identifying additional at-risk cases.

Fig 2. GROW 2.0 chart

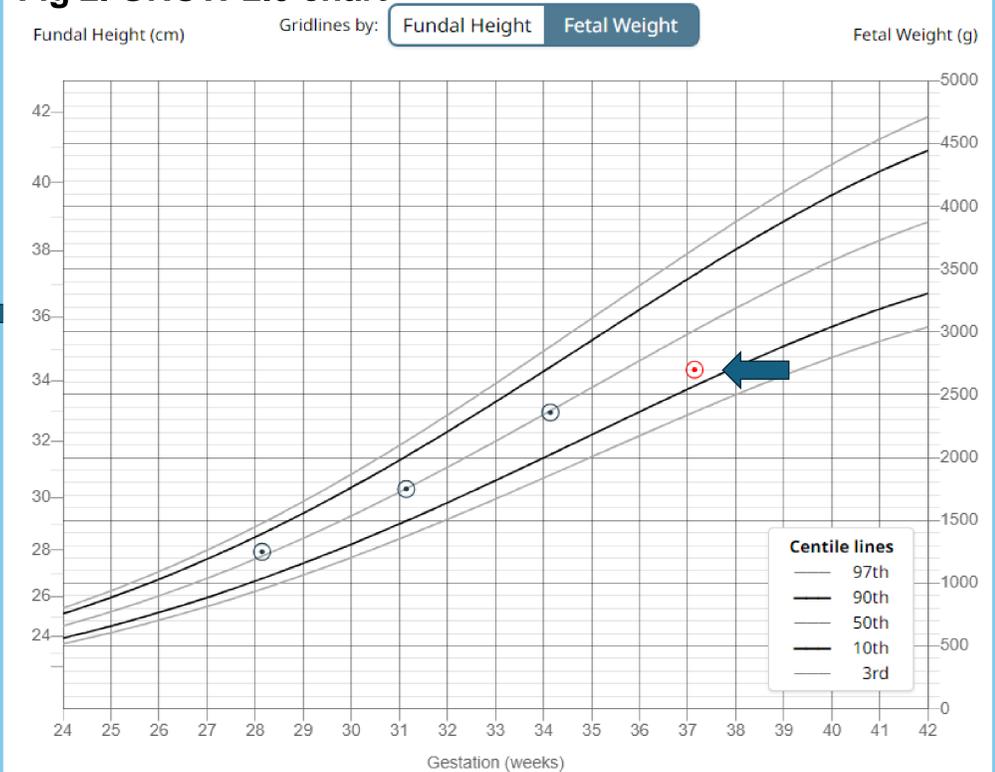
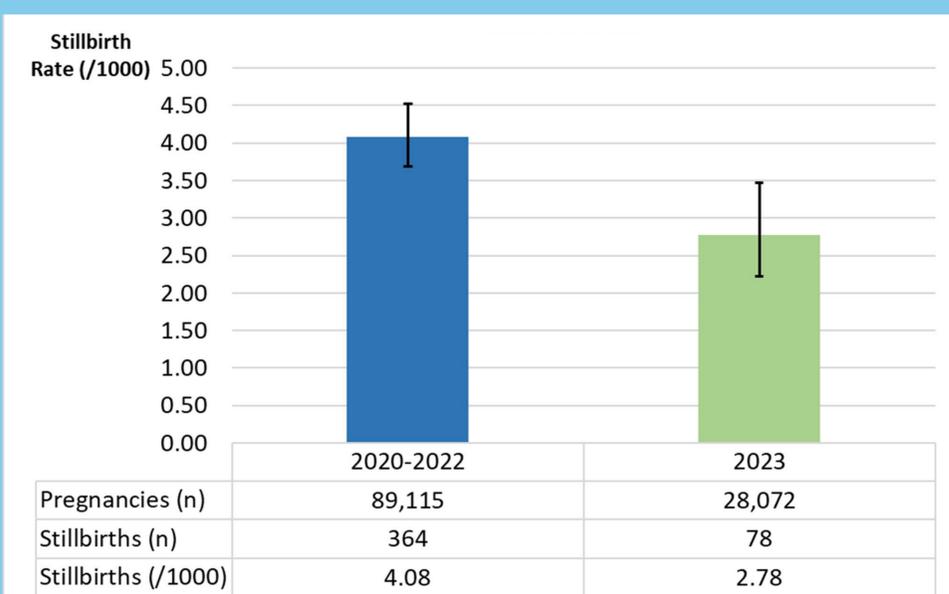


Fig 3. GROW 1.5 vs GROW 2.0 stillbirth rates



Results

- There were 89,115 births in GROW 1.5 (2020-22), incl. 364 stillbirths (rate /1000: **4.08**, CI 3.69 - 4.53)
- 2023 cohort with GROW 2.0 included 28,072 births, with 78 stillbirths (rate / 1000: **2.78**, CI 2.23 - 3.47) ($p < 0.001$).
- This reduction was mostly because of fewer stillbirths at term (25.6% vs 49.5%, $p < 0.01$).
- This reduction was associated with increased detection of SGA (45 vs 40%) with lower false +ve rate (5.5 vs 5.9%), added detection of slow growth in 10.6% of cases, and a higher rate of preterm (<37wks) deliveries (7.1 vs 6.3%).

Conclusion

Early results show that functionalities within GROW 2.0 such as auto plotting of measurements, alerts for slow growth and prompts for clinical review appear to assist decision making and prevention of stillbirths at term.

Further information:

GROW 2.0: <https://www.perinatal.org.uk/GROW2.0/>

GAP programme: <https://www.perinatal.org.uk/GAP/>

Velocity: doi.org/10.1002/uog.24860; doi.org/10.1002/uog.26248

Growth rate calculator: <https://www.perinatal.org.uk/growthrate>