# Re-assessing 'at risk' cutoffs for birth weight

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A research article published in *PLOS Medicine* contributes to the evidence base regarding the use of population charts for detection of fetal growth disorders and how best to determine risk of complications.

In the article, Stamatina Iliodromiti from the University of Glasgow, UK, and colleagues found birth weight ?25th or ?85th centile to be associated with greater risk of adverse outcomes compared with birth weight within these cutoffs, suggesting an expansion of the definition of 'fetus at risk' beyond the ?10th or ?90th centile range that is commonly used to trigger surveillance of fetal well-being and/or delivery. In this study, the researchers used routinely collected data from 979,912 term singleton pregnancies over a 19-year period in Scotland and externally validated the findings in an independent UK cohort including 10,515 pregnancies. They further estimated that by offering delivery to women outside of the 25th to 85th centile (rather than the traditionally used 10th and 90th centiles), an additional 1143 deliveries would be required to prevent one fatal event (422 additional deliveries at or below 25th centile; and 721 additional deliveries at or above the 85th centile).

In a linked Guest Editorial, Sarah Stock from the University of Edinburgh and Jenny Myers from the University of Manchester, UK acknowledge that these two research articles "support the concept that robustly developed population growth standards are appropriate for the diagnosis of fetal growth disorders, but that thresholds of risk that are relevant to local populations should be considered." They continue: "Whatever method is used, the benefits of detecting fetal growth disorders can only be realized if we can effectively reduce risk of

complications."

**More information:** Iliodromiti S, Mackay DF, Smith GCS, Pell JP, Sattar N, Lawlor DA, et al. (2017) Customised and Noncustomised Birth Weight Centiles and Prediction of Stillbirth and Infant Mortality and Morbidity: A Cohort Study of 979,912 Term Singleton Pregnancies in Scotland. *PLoS Med* 14(1): e1002228. DOI: 10.1371/journal.pmed.1002228