

Gestational Diabetes: Findings from analyses of over 25 years of prospectively collected data.

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Background:

Prospective data collection and storage in a customised database have been integral parts of day-to-day patient management in our gestational diabetes (GDM) and diabetes in pregnancy service since its inception in 1992. With standardised diagnostic criteria, treatment targets, clinical management protocols, a minimum dataset including demographic and clinical variables and stable clinic supervision until a change in GDM diagnostic criteria in early 2016, we have accumulated a large amount of clinical data on the management and outcomes of women seen in this service. Review of these data has been undertaken to address several quality audit and research questions, resulting in a significant number of conference abstract presentations and publications in the peer-reviewed literature. This paper reports on aspects of successful data collection and some of the major publication findings.

Aims:

To assess drivers of successful data collection and review the findings of data assessments from over 25 years of tracking gestational diabetes, analysed to address specific audit and research questions.

Methods:

Deidentified data extracts from our patient database have been analysed using SPSS Software. Specific inclusion and exclusion criteria determine the individual number of eligible patients' data suitable for analysis in each extract, usually restricted to those with complete data available. Ethics approval has been obtained from the SWSLHD Research and Ethics Committee.

Results:

Development of a data collection 'culture' as part of daily work practice is considered the major driver of success. There are over 4000 GDM pregnancy records available for analysis. We have presented over 45 oral and poster presentations at national and international conferences and have recently published 7 papers in high-impact journals. Topics covered include: 'The Clinical Significance of Overt Diabetes in Pregnancy', 'Predictors of large and small for gestational age [(LGA) and (SGA)] babies', 'Assessment of clinical criteria to detect GCK-MODY in GDM', 'Development and Validation of a Predictor Model of insulin use in GDM' (published Nov 2016; 505 downloads), and the 'Appropriateness of the Institute of Medicine Weight Gain recommendations in GDM' (published Mar 2017; 262 downloads). Findings from these analyses have informed service development.

Conclusions:

With an appropriate data collection and audit culture, clinical data can be reliably collected. Audit and analysis of these data have resulted in service provision changes and contributions to the literature.

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