Presentation Abstract Submission

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Research Title	The role of Maternal Glycaemic Control During Pregnancy and Socioeconomic Factors on Use of Dental Services by Offspring: Results from Northern Ireland

Abstract:

Background Caries is the most common disease of childhood and in the UK exhibits a sharp socio-economic gradient. A small literature exists examining the relationship between maternal glycaemic control during pregnancy and ontogenesis in the offspring of the pregnancy that may have a bearing on childhood risk of caries. However, existing studies suffer from sample sizes and provide conflicting evidence. In this study, we examine the relationship between maternal glycaemic status and utilization of dental services over time by offspring controlling for a range of covariates among a population of care users. Methods Anonymised data on mothers and children for a cohort of mothers who carried a child to term in Northern Ireland from 2012 to 2017 were linked. Data from the Northern Ireland Maternity System provided maternal health and birth outcome data, medicines prescribed to the mother during pregnancy from the Enhanced Prescribing database and data on offspring use of dental services from the Dental Payment System. All data were specific to the individual and included use of specific services. Descriptive statistics, difference in means, Generalised Linear Regression Models, Zero-Inflated Poisson regression models and cox-proportional hazard models were used to relate maternal diabetic status to child service use. The impact of prevention prior to the COVID pandemic on use of dental services after the pandemic adjusting for maternal diabetes was also examined. Results Statistically significant relationships were found between specific measures of maternal diabetes status and the offspring's use of specific treatment services, in the time to first use of treatment for specific teeth and in overall use of services, controlling for a range of covariates. The results provide a prima facie case for further investigation of the role of maternal glycaemic control on offspring oral health. In addition, a significant relationship was found between use of preventive care prior to the pandemic and use of treatment services after a pandemic-related lockdown which generally underscores the importance of prevention in oral health care. Conclusion The analyses demonstrate the value of routinely collected administrative data to examine relationships, including those of maternal health and use of dental services by children.