Novel Way to Deliver Care to Women with GDM through the Use of Cloud Technology

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Introduction: The prevalence of Gestational diabetes (GDM) is rising and has consequences for maternal and neonatal mortality and morbidity putting more pressures on diabetic antenatal services. In April 2019 we started using the cloud-based Sensyne GDm-Health application allowing the diabetes team to view each patient's blood glucose remotely.

Aim: Our aim was to reduce time to intervention and the frequency of hospital appointments.

Methods: Women with GDM who were diagnosed after April 2019 were given an AgaMatrix glucose meter and were advised to upload their glucose readings to the Sensyne GDm-Health application. The healthcare professionals responsible for their diabetic care were advised to review these reading s during the week and arrange relevant intervention.

We collated the time to intervention, amount of interactions (appointments, emails and telephone conversations) and hospital appointments for these patients. women with GDM who were diagnosed and delivered between April to September 2018 and during the same period in 2019 at Royal Surrey County Hospital, UK.

Results: In 2018, 51 women were diagnosed with GDM and delivered between April 2018 and September 2018. During the similar period in 2019, 73 women were diagnosed and delivered.

Mean time to intervention prior to the introduction of the GDM app was 7.94 ± 6.09 days and+ after the introduction of the technology, it was 6.27 ± 4.19 days (p=0.073). Overall, both patient groups had the same mean number of interactions (face to face, emails, on the application, telephone consultations) with diabetes specialist healthcare professionals (nurses/midwives, doctors) 6.62 ± 2.60 vs 6.05 ± 3.42 (p=0.351). The mean number of face-to-face appointments with the specialist midwives/diabetes specialist nurses was 1.72 ± 0.80 in 2018 and 1.41 ± 0.81 in 2019 (p=0.033). The mean number of appointments to see diabetes specialist doctors reduced from 2.43 ± 1.13 to 1.29 ± 1.24 (p<0.001).
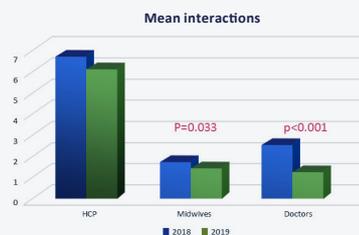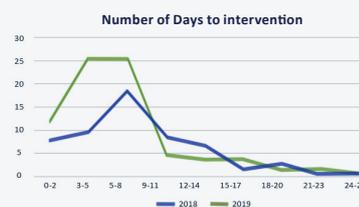
Conclusions: through the use of cloud technology, the number of face-to-face appointments with the diabetes specialists was significantly reduced. Live glucose readings gave healthcare professionals ongoing insight into glycaemic control and improved communication made. Patients felt more supported and that it gave them greater flexibility.

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