Oxford Academic Health Science Network

CASE STUDY 1

Clinical Innovation Adoption

IMPROVED MANAGEMENT OF DIABETES DURING PREGNANCY

Reduced risks for mother and baby

Up to 18 in every 100 pregnant women develop diabetes. Untreated, this can lead to complications for mother and baby before and after birth.

Careful monitoring of the mother's blood sugar levels is vital for successful management. Standard practice is for the woman to record her blood glucose levels up to six times a day with fortnightly check-ups in hospital.

Up to 6,000 pregnant women across our region could benefit from improved blood glucose control and fewer hospital visits each year.

REMOTE MONITORING

Professor Lionel Tarassenko and his team at the University of Oxford's Institute of Biomedical Engineering have developed a Bluetooth-enabled blood glucose meter and smartphone app (GDm-health) enabling patients to pass on readings in real time via a secure internet link. Data are reviewed by diabetes specialists who can swiftly contact the patient if treatment is needed. The result is better management and fewer tiring, time-consuming and expensive hospital appointments.

INCREASED SPECIALIST CLINICAL CAPACITY

GDm-health was used in an initial trial with 52 pregnancies led by Dr Lucy Mackillop, Consultant Obstetric Physician at Oxford University Hospitals (OUH). Participants rated the technology as 'reliable', 'convenient' and suited to their lifestyles.

App usage increased efficiency, freeing up 25% more specialist clinical capacity.

Oxford AHSN helped the award-winning project – a collaboration between OUH and the University of Oxford – extend to hospitals in Reading and Milton Keynes. Others are following suit. A randomized, controlled pilot trial involving around 200 patients is ongoing. Funding is from the National Institute for Health Research Oxford Biomedical Research Centre.

"…it was handy to know that I was in constant touch with somebody and that I would get a message if there was something to worry about. Without the kit I wouldn't have known my results and what my diet was doing to my levels. I would have had to follow a more rigid diet. We live about an hour away so having fewer appointments as a result of using this kit helped a lot."

Vanessa Galli-Wara, *patient*

Rolled out nationally, app use could generate cost savings of up to £14m each year.