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Conference Abstract

Development of a Multi Matrix Multi Partner Telehealth Model in pregnancy care in South of Tyne and Wear, UK

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Abstract

Introduction: Health Services recognise that Telehealth can play a role in the clinician's ability to support patients remotely and promote self-care. This paper describes the progress of an innovative project developing a Multi Matrix Telehealth Model in pregnancy care in North-East England, partnering Local Authorities, Primary and Secondary Care.

Background: Since September 2011, 23 pathways have been developed including COPD in Foundation Trusts, Deprivation Medicine in Primary Care and Smoking Cessation in Public Health. A multi-matrix model of Telecare services operates across South of Tyne and Wear with deployment of 1st Generation Home Based Telehealth within Community Nursing Services. Recent evaluation has indicated 21% reduction in A&E attendance and 14% reduction in hospital admission.

Objective: To develop a new Telehealth Model providing cost effective Telehealth technology to pathways in pregnancy.

Methods: The project used Quality Management Tools developed in industry to define and develop Telehealth applications to support clinicians managing mild hypertension and diabetes in pregnancy. Primarily Quality Function Deployment (QFD) was adapted and used by the project team to identify the best equipment for application to each pathway. Project Officers met clinicians and developed appropriate "Ranked Order of Priorities" (ROP) which were matched to "How to deliver" within the QFD tool. This provided the Telehealth Application Pathway Design. The methodology used, systematically involved clinicians in total development of the solution (ROP). Once priorities were ranked, the 'How to Deliver' function of the tool was deployed, translated into a proposal, approved by the lead clinician and built/procured by the Project Team.

Results to date: 3rd Generation Telehealth systems have been widely deployed with the 'Florence SMS System' proving one of the most adaptable. This provided the basis for the two International Congress on Telehealth and Telecare 2013, London, July 01-03, 2013.

pregnancy pathways in Sunderland Royal Hospital. Diabetes Treatment Satisfaction Questionnaire (DTSQ) show

high levels of patient satisfaction and confirm positive perceived benefits in terms of convenience, control, flexibility with treatment and enhanced understanding. No adverse outcomes have been reported during the pilot. In gestational diabetes, significant cost savings were attained with total cost of 'Simple Telehealth' estimated at £80/patient/yr. Average reduction in number of hospital visits per patient was 3.2 during a single pregnancy. Assuming a single visit cost of £80, this equates to a total saving of £1,024/pt/yr. Evaluation of home monitoring of mild pregnancy hypertension is ongoing. Women measure blood pressure and test for urinary proteinuria at home, texting results back to the hospital obstetric department via the Florence system. Specific alerts direct patients to continue home monitoring or to refer themselves to hospital for further assessment, dependent on levels of hypertension and/or proteinuria. Community midwifery visits and repeated day assessments in hospital are reduced. Patient acceptability is being assessed.

Conclusions: Early results from this innovative project assessing the role of Telehealth in pregnancy suggest that when methodically applied, cost savings can be achieved with increased patient satisfaction and reduced intensive health service interactions. Outcome measures in terms of patient safety will be evaluated. The project confirms how management tools from industry can add to service design.

Keywords:

telecare personal neighbourhood network services

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Presentation available at: <http://www.kingsfund.org.uk/events/third-annual-international-congress-telehealth-and-telecare>