

Well@Birth- Can a mobile health (mHealth) intervention, with no internet connection, support multi-disciplinary healthcare teams at remote locations in a developed country?

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Abstract

Statement of the Problem: Access to up to date educational materials is viewed as being critical in both recruiting and retaining healthcare staff in remote areas. This proposal draws on investigations (White, 2018; White et al, 2019). These explored whether mHealth tools could support the management of women with pre-eclampsia in rural and remote settings in Highland Scotland.

Methodology & Theoretical Orientation: A prototype toolkit was piloted as part of making it Work a European project about recruitment and retention of Healthcare Practitioners in remote and rural areas. Members of multidisciplinary healthcare teams, at remote locations in Highland Scotland were recruited as participants in the study. They were asked to consider the quality of the content and the usefulness of the toolkit. The study also explored whether such a toolkit might offer any advantage and/or improvement over areas of current practice other than maternal health.

Qualitative methods were used and focus groups [n=18] and several 1:1 interviews [n=9] were conducted with multidisciplinary team members. A thematic analysis was used to identify themes from the transcribed data.

Findings: 5 themes were identified:

- Using the toolkit
- Offering support to those working at remote locations
- Assisting in decision making
- Learning on the move
- Using the toolkit to explain conditions to patients

The participants in the study agreed that a mHealth toolkit could be of value to both midwives and less specialised healthcare practitioners. These include GPs, Practice Nurses, Mental Health Practitioners, GP Practice Receptionists, NHS 24, Healthcare Support Workers, Paramedics, Police Officers and carers who encounter people with health, and social care challenges at remote locations. The ability to use the toolkit to work on Continuous Professional Development (CPD) whilst on the move was particularly welcomed. The potential to incorporate predictive analytics was also thought to be valuable and worth further exploration.



Fig1. Example of a page from Well@Birth on an iPhone



Biography:

Alan White is a founder director of Interactive Health Ltd (IHL). He has led mHealth/mLearning projects in Scotland and sub-Saharan Africa. These have been aligned to capacity building and continuous professional development. In 2016 Alan was awarded a Scottish Digital Health and Care Institute (DHI) scholarship to study for a MRes in Digital Health at the Robert Gordon University (RGU) in Aberdeen, Scotland. This was aligned to the development of a pilot version of Well@Birth with NHS Highland Research, Development and Innovation. In May 2019, IHL was awarded funding by the Scottish Government to develop the incorporation of Artificial Intelligence and Machine Learning into its programmes. This new and innovative “Well@” platform aims to catalyse transformal behavioural change in an person centred approach to person centred preventative healthcare. The platform is currently being applied to projects in Public Health, Occupational Health, Maternal Health and Mental Health.

Speaker Publications:

1. White A (2018), MRes Thesis, Exploration of how a mobile health (mHealth) intervention may support midwives in the management and referral of women with pre-eclampsia in rural and remote areas of Highland Scotland The Robert Gordon University, Openair
2. White A and Mason A (2018), “When Lightning Strikes”, Oral and Poster at NHS Highland Research Development and Innovation Conference
3. White A and Mason A (2018), Making it Work (Report to Scottish Government and EU Interreg), “Supporting rural and remote practice within multidisciplinary health teams in Highland Scotland using a prototype mobile health (mHealth) intervention: A qualitative descriptive study.” Alan Hamilton White, MRes, Director, Interactive Health Ltd.; Anne Mason M.Ed; RMN, Research Nurse, NHS Highland, Research Development and Innovation.
4. White A et al (2019), Journal of Remote and Rural Health, Supporting rural midwifery practice using a mobile health (mHealth) intervention: a qualitative descriptive study “Alan Hamilton White, MRes; Professor Susan Crowther PhD, MSc, BSc (Hons.), RM, Professor of Midwifery; Siew Hwa Lee PhD, MPHE, BSc (Hons), FHEA, RN, Lecturer in Adult Nursing
5. White A et al (2019), Africa Health Agenda International Conference - March 2019, “1 Step 4 Life”, Alan White MRes, Interactive Health Ltd (SME), Scotland; Dr. Mari Lahti PhD, Turku University of Applied Science; Jay Evans MSc Lecturer, Global eHealth Academy, University of Edinburgh; Department of Global Health, University of Copenhagen

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