A MEDICATION APP FOR OLDER PEOPLE ATTENDING A HF CLINIC

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INTRODUCTION

The population aged 65+ years is increasing and by 2026, a quarter of Ireland's population will be aged ≥85 years (Houses of the Oireachtas 2017). While increased longevity is a very welcome development, it presents with the challenge of an increase demand for care. Cardiovascular disease is a leading cause of death worldwide and heart failure (HF) rates are on the increase in Europe.

HF treatment is complex and polypharmacy is a common challenge associated to self-management. Evidence suggests that the use of apps is on the increase and can enhance patient-provider collaboration (Santo et al. 2019). In the current context of the COVID-19 pandemic, when social distancing measures are ongoing, Mobile Health has never been so important for treatment. The need for new models of care in this changed environment to support older adults at home is especially timely.

MATERIALS AND METHODS

In phase one, semi structured interviews were conducted with HF clinic staff followed by 2 questionnaires. Observations were conducted in the clinic over 5 days to identify day-to-day challenges for healthcare professionals (HCP) delivering care. Semi structured interviews were analysed using thematic analysis (Braun & Clarke 2006).

In phase two, a review of the Google Play and iTunes App Stores was conducted to identify commercially available apps with a medication list functionality. The apps included in this review will be subject to further analysis using a validated tool. The Mobile Application Rating Scale (MARS) will identify the app with the highest quality to test in phase three of this study. A second review in the peer-reviewed literature was conducted to identify apps with a medication functionality used in different settings.

RESULTS

Phase one: four themes emerged from the data (see table 1). The main finding from the observations was around medication review. Patients were not attending the clinic appointments with their medication list as requested by HCP. This delayed appointments considerably and disrupted the clinic efficiency.

Phase two: Google play and iOS app stores searches identified 483 potential apps (292 Android stores and 191 Apple stores). Following application of the exclusion criteria, nine apps were included in the review.

19 academic articles were included in the peer-reviewed literature aimed to identify studies where medication apps were used in practice and with what outcomes.

Table 1:   Themes that emerged from the data

Theme 1	Staff attitudes towards older patients' use of technology
Theme 2	Factors affecting patient technology uptake
Theme 3	Technology potential to enhance practice and patient care
Theme 4	Challenges experienced by staff

DISCUSSION

Healthcare professionals are concerned about the ability of older patients to use and comply with technology. Challenges to the uptake of technology were voiced by staff. Healthcare staff agreed that an app to support patients to keep an up to date list of medication is an opportunity for a new model of care

The majority of app interventions included in the peer reviewed literature indicated that medication apps were widely accepted among older people and most were advantageous for medication adherence and management (Santo et al. 2019; Morrisey et al. 2018; Buning et al. 2016; Johnston et al. 2016; Mertens et al. 2016, Mira et al 2014). However only one study (Buning et al. 2016) was concerned with the efficacy and usability of an app to allow patients to maintain an accurate list of medication. Therefore, there is a need for further studies investigating the efficacy of an app with a medication list functionality supporting older people, specifically with HF, attending an outpatient clinic.

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