

CaDERAL Project 3: Details in South Africa

Mobile Phone text messages to support Hypertension treatment Adherence in adults attending HIV treatment centres in the Western Cape Province of South Africa: a pilot study (MOPHADHIV)

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Background

Cardiovascular diseases (CVD), to which hypertension is a major contributor, are emerging as threat to life expectancy and quality of life of people with HIV on antiretroviral therapy (ART). Therefore, strategies are needed to improve optimal management of CVD risk factors like hypertension in people with HIV, without compromising quality of the care.

Aim and objectives

The overall aim of this project is to test the effectiveness of sending short message service (SMS) texts in improving (1) health outcomes (primary outcome BP control with improved lipid profiles as a secondary outcome) and (2) supporting medication adherence in these patients.

Methods

The study is a blinded 12-month, individually randomized controlled two-arm trial. The study population include HIV+ patients on ART and on treatment for hypertension at ART clinics in the Cape Town metropolitan area (South Africa). The study power at 90% to detect a 5mmHg drop in systolic BP in the intervention as compared to the control arm. Allowing for 20% dropout, 650 participants are needed per study arm. Data collection include blood and urine pathology, anthropometry, office and 24-hour ambulatory BP, socio-demographic, and adherence and cost-related data. Data is collected with an electronic data management system (EDMS).

Three personalized SMS text-messages are sent per week to intervention participants. The messages are randomly selected by the EDMS from three different domains namely organization, habit, and motivation. During the 12 -month intervention only BP measurements will be collected from participants at routine clinic visits. In this way standard

PROJECT DETAILS

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Western Cape Dept of Health Approval Nr:	WC_01711_026

Trial Steering committee:

Professor Ayesha Motala ¹	Chair
Professor Andre Pascal Kengne ²	Principal Investigator
Professor Bob Mash ³	Independent member
Professor Ikechi Okpechi ⁴	Independent member
Professor Alta Schutte ⁵	Independent member
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operational health service conditions are adhered to and research contact with participants will be minimised.

Progress

Recruitment of participants and setting up of research sites have been severely delayed by the COVID-19 pandemic. The project is currently active in one research site and recruitment is progressing.

PhD Project Title: Health Related Quality of Life and economic evaluation of a text messaging-based intervention to support people living with HIV and Hypertension

PhD Fellow: Danleen J. Hongoro, University of Cape Town

Background and Purpose:

The MOBILE Phone text messages to support Hypertension treatment ADherence in adults attending HIV treatment centres in Cape Town (MOPHADHIV trial) is testing the effects of treatment support in the form of automated text-messaging on the uptake and adherence to medications, and outcomes of hypertension and HIV care in HIV-infected adult South Africans with hypertension. Our PhD study embedded in MOPHADHIV will examine the cost-effectiveness of introducing this intervention into an existing health service.

Methods

The study will identify and measure all costs related to the introduction of the SMS-based intervention, i.e. (1) what does it cost to provide care using SMS-text intervention) and (2) what is the cost and the economic burden to the patient to access and receive care. We will use a combination of the ingredients approach and step-down costing to estimate the cost and cost-effectiveness of the SMS-text messaging programme compared to current practice. A patient survey will also be used to collect data to be used to examine the cost and the economic burden to the people with HIV of accessing and receiving care for co-morbid hypertension. The burden to patients/participants will be measured in terms of out-of-pocket costs and the changes in quality of life because of the condition.

Progress to date

The PhD study has been registered at the University of Cape Town, and related protocol completed, pending external review. Data collection has commenced as part of the main trial.

Expected impact.

We will be able to map out whether their use has an impact on the patient's quality of life and the return on investment to the health system should the MHealth system manage to improve adherence and health outcomes in patients thereby reducing the cost of adverse events due to non-adherence and missed appointments.