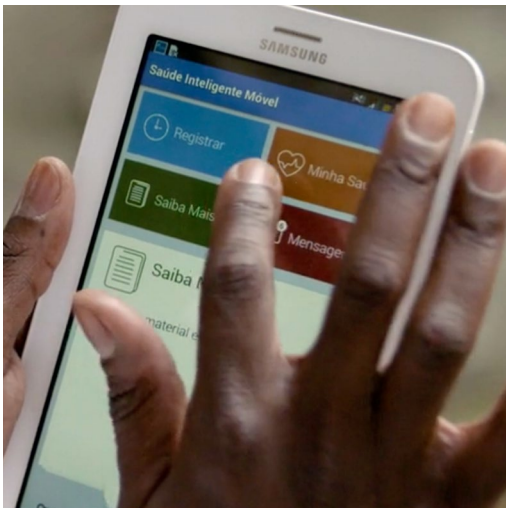

Project SIM: Smart Mobile Health

Improving Outcomes for Patients with Diabetes through the Use of 3G and 4G Technologies

Project SIM: Smart Mobile Health is a twelve-month clinical study in Rio de Janeiro, Brazil, that aims to demonstrate how an innovative mobile health platform can be an effective approach to improving outcomes for patients with type 2 diabetes. The specialized platform supports patient adherence and engagement in treatment through remote monitoring and better access to educational resources. The clinical study protocol was approved by the Rio de Janeiro State University and the City of Rio de Janeiro's Health Secretariat.

BRAZIL

2017 Statistics*

Population (est.)	207.3 million
Life Expectancy	73.8 years
GDP Per Capita (2016 est.)	US$15,200
Mobile Penetration	109%

Challenge

- The existing public health care infrastructure in Brazil was primarily created to deal with acute diseases. Today, a different health care system is needed to cope with the lengthy duration and demand of chronic diseases.
- Over the last 30 years, life expectancy in Brazil has increased by up to 12.4 years, resulting in a larger elderly population requiring treatment for chronic diseases, and therefore increasing the demand for public health care services.[2]
- Despite significant efforts from the City of Rio de Janeiro's Health Secretariat to deal with chronic diseases, the number of patients continues to increase. There is a strong need for tools that enable the existing health care workers to reach more patients faster and more efficiently.

Solution

- A platform developed by MTM Tecnologia includes a website and mobile app that provides a constant connection between the health care workers and the patient.
- Four hundred patients with type 2 diabetes from an underserved clinic are participating in the clinical study, half of whom are in a control group. The other half are in the technology intervention group and receive a 3G- or 4G-enabled smartphone or tablet pre-loaded with a specialized mobile app; a scale to measure body weight; a pedometer to measure physical activity; a heart rate monitor to measure blood pressure; and a data plan provided by TIM.
- The technology intervention group uses the mobile app on their device to submit their health information to their health care providers, track their progress and access educational material.
- Providers and clinical researchers log in to the mobile health platform via clinic computers to access patient information, monitor and track patients' progress, send reminders, and push educational material to them.

*Sources: CIA World Factbook (https://www.cia.gov/library/publications/the-world-factbook); Mobile penetration data provided by Ovum World Cellular Information Service and based on market intelligence.

Projected Impact

Reduce Costs

The study aims to demonstrate that remote monitoring with mobile health solutions will cut costs, increase capacity and improve patient outcomes.

Improve Health Decision-Making

The use of 3G and 4G mobile technologies to support patient treatment, adherence and self-monitoring is expected to increase the quality, accuracy, speed and availability of data for health decision-making primarily by health care providers.

Increase Capacity of Patients

It is expected that patients will increase their capacity to self-treat and manage their chronic diseases and conditions as a result of the education, prevention and behavior management strategies acquired via the platform.

Improve Quality of Life

Project SIM: Smart Mobile Health aims to demonstrate how remote monitoring with mobile technology can increase the overall quality of life for patients with chronic diseases.

Technology

- 3G- and 4G-enabled Samsung Tab 3 tablets
- Motorola “Moto G” Android 4.4 smartphones powered by Qualcomm® Snapdragon™ 400 platform with a 1.2 GHz quad-core CPU
- 3G and 4G network connectivity and data plans provided by TIM

Program Stakeholders

RIO PREFEITURA SAÚDE

SUS

MTM Tecnologia Software Solutions

Instituto TIM

QUALCOMM Wireless Reach™

[1] World Health Organization. World Health Organization – Chronic diseases and health promotion in Brazil http://www.who.int/nmh/countries/bra_en.pdf

[2] http://www.ibge.gov.br/english/estatistica/populacao/tabuadevida/2014/default.shtm

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