Are mobile applications useful in the control of diabetes? A systematic review

Alirio Bastidas, Daniel Martín Arsanios, Gina Montaño, Aldair Chaar, Natalia Becerra and Daniel Vesga

Sabana University, Colombia

Background: During the last decade, diabetes mellitus has become a prevalent disease as well as an important cause of mortality, morbidity which has increased costs in healthcare systems worldwide. Telemedicine has merged as an alternative to lower these costs and favor healthcare. When available, this tool may reduce barriers such as long distance to health institutions, disease monitoring and follow up, facilitating patient self-report through mobile applications on variables such as glycaemia, lipid panel or blood pressure in a way that is easy and adaptable to the patient's life.

Objective: The aim of the study was to evaluate the yield of mobile applications in the metabolic control on patients with diabetes mellitus, analyzing HbA1C levels, fasting and postprandial blood glucose, as well as patient's perspective of the impact on quality of life and attractive features of the application.

Methods: This systematic review includes randomized clinical trials, cohort, cross-sectional and case-control studies; research strategy included use of MESH terms, throughout ten years from January of 2007 to January of 2017 and the use of Medline, Embase, Cochrane, Ovid and Lilacs databases.

Results & Conclusion: After completing research, 312 articles were found as potentially eligible, 15 of which were selected after triangulation. Once the reading was completed, each article was characterized by type of study and main approached topic, to extract the most relevant data responding to the objective previously proposed. Mobile applications aiming metabolic control of diabetic patients showed a positive impact on the monitoring of the disease and a wide utility perception on its users. However, limitations such as pharmacoeconomic barriers and insufficient bibliography supporting the topic make difficult the enforcement of foreign studies in our country. For this reason, it is necessary to develop new studies considering demographic characteristics and local resources available, to objectively approach the applied technologic efficiency.

Biography

Alirio Bastidas is a Doctor at Sabana University in Colombia.

bashiru.koroma@yahoo.com