

QCAR_xE: Qatar-based cardiovascular risk assessment using the English/Arabic version of the EPI·RxISK™ mobile application

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ABSTRACT

Background: Cardiovascular disease (CVD) is the leading cause of death worldwide, accounting for almost one-third of the total global deaths. Early CVD risk assessment and management (RAM) has demonstrated to be effective in decreasing CVD-related burden. However, CVDRAM services face many challenges and barriers in the community. Mobile technology has been advocated to facilitate access to CVDRAM for both healthcare providers and patients to overcome these barriers. Nevertheless, there is limited availability and use of CVDRAM-related mobile technology in the Middle East region.

Objectives: To develop and implement an English and Arabic version of a mobile and a web application for CVDRAM in both, community pharmacies and selected primary care centres in Qatar.

Methodology: This study was conducted in two phases. In Phase 1, translation of the EPI·RxISK™ CV risk calculator (ERC) into the Arabic language was conducted based on guidelines developed by the International Society for Pharmacoeconomics and Outcomes Research. The English/Arabic version of the ERC was pilot tested by potential end users, consisting of a sample of community pharmacists (CRxs) and members of the public (MOP) accessing community pharmacy services. Semi-structured interviews were conducted based on the constructs of the Mobile Application Rating Scale (MARS) and data were analyzed using deductive content analysis. In Phase 2, a prospective observational study (QCAR_xE) is underway to explore the feasibility of using the ERC in patients accessing primary health care services for CVDRAM, including community pharmacies and primary health care centers (PHCC).

Results: In Phase 1, a total of 10 CRxs and 5 MOP were interviewed. The data derived from the interviews indicate that the ERC web and mobile application were overall, positively perceived as having quality engagement, functionality, aesthetics, information and subjective quality attributes. To date, a total of 36 patients have enrolled in the QCAR_xE study (20 from PHCC and 16 from community pharmacies). At their initial CVD risk assessment visit, the mean CVD risk score for these patients was 28.3%, and the most prevalent risk factor was obesity (mean BMI = 30.2 kg/m²).

Conclusion: The themes derived from the interviews indicate that the ERC was overall, positively perceived. Preliminary data derived from the QCAR_xE study indicated a significant proportion of patients accessing primary health care services are at high CVD risk. It is speculated that the use of the ERC will enable patients to become better aware of their CVD risk and improve access to risk factor interventions.