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QCARxE: Qatar-Based Cardiovascular Risk Assessment Using the English/Arabic Version of the EPI-RxISK™ Mobile Application

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Background: Cardiovascular disease (CVD) is the leading cause of death worldwide. Early CVD risk assessment and management (RAM) has been effective in decreasing CVD, but it faces many challenges. Mobile technology helped overcome these barriers. Nevertheless, there is limited use of CVDRAM-related mobile technology in the Middle East

Objectives: To develop and implement an English/Arabic version of a mobile and a web application for CVDRAM in community pharmacies and primary health care centers (PHCCs) in Qatar.

Methods: This study has two phases. In Phase 1, translation of the EPI-RxISK™ CV risk calculator (ERC) into Arabic was conducted. The English/Arabic version of the ERC was pilot tested by potential end users; community pharmacists (CRxs) and members of the public (MOP) accessing community pharmacy. Semi-structured interviews were conducted, and data were analyzed using deductive content analysis. In Phase 2, a prospective observational study (QCARxE) is underway to explore the feasibility of using ERC in patients accessing primary health care services for CVDRAM.

Results: In Phase 1, 10 CRxs and 5 MOP were interviewed. The data indicate that the ERC web and mobile application were positively perceived as having quality engagement, functionality, aesthetics, information and subjective quality attributes. In phase 2, to date, 46 patients have



enrolled from both PHCCs and community pharmacies, 30 patients completed the follow up visit, and 25 completed the satisfaction survey. At the initial visit, the mean CVD risk score was 28.3%, and the most prevalent risk factor was obesity (mean BMI = 30.2 kg/m²).

Conclusion: Themes derived from the interviews indicate that the ERC was positively perceived. Preliminary data indicated most patients accessing PHCC 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 their risk factor interventions.

Keywords: Cardiovascular risk, mobile technology, patient education, community pharmacists, pilot testing.