m-Health for Early Detection of Oral Cancer in Low- and Middle-Income Countries

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Abstract

Background: Up to 86% of oral cancer (OC) patients present at the late stage where survival is dismal. Limited access to specialist diagnosis is a significant factor for late presentation. The increasing use of smartphones presents an opportunity to use digital technology to facilitate early detection of OC.

Aim: To evaluate the feasibility of using Mobile Mouth Screening Anywhere (MeMoSA®) to facilitate early detection of OC.

Methods: A mobile phone app named MeMoSA was developed and the feasibility of integrating this for documentation of oral lesions, and communication between dentists and specialists for management decisions were evaluated. The experience of dentists and specialists in using MeMoSA was determined using qualitative questionnaires.

Results: Communication between specialist and dentists using MeMoSA stratified cases and streamlined referral of patients. Twelve of 48 patients were found to have oral lesions or signs suspicious of cancer and 3 required referrals. The patient’s compliance for referral was tracked with MeMoSA. All dentists agreed that MeMoSA could facilitate early detection of OC and believed that MeMoSA could assist in the identification of oral mucosal lesions through direct communication with specialists and continuous learning in the recognition of high-risk lesions.