



# Mobile Applications: Methods for Increasing Delivery and Adherence to Methadone Maintenance Treatment in Rural and Remote Communities

Saeid Komasi<sup>1</sup>, Mozhgan Saeidi<sup>2</sup>, Behzad Heydarpour<sup>2</sup> and Ali Soroush<sup>3,\*</sup>

<sup>1</sup>Clinical Research Development Center, Imam Reza Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

<sup>2</sup>Cardiac Rehabilitation Center, Imam Ali Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

<sup>3</sup>Lifestyle Modification Research Center, Imam Reza Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

\*Corresponding author: Lifestyle Modification Research Center, Imam Reza Hospital, Kermanshah University of Medical Sciences, Zakarya Razi Blvd., Kermanshah, Iran. Tel: +98-8334276299, Fax: +98-8334276299, Email: alisoroush.kums@yahoo.com

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## Dear Editor,

In the recent years, methadone/buprenorphine maintenance treatment (MMT/BMT) centers have been able to be effective in controlling drug abuse and related high-risk behaviors in Iran (1). The treatment protocol of these centers is multi-component. In addition to drug therapies, this protocol includes psychotherapy and social work services (2, 3). According to the protocol defined by the Iran Health Ministry for MMT/BMT centers, each patient during the first six months of the treatment is obliged to refer to the center every day (3). This instruction is actually facing serious challenges, as recent studies indicate the highest rate of dropout occurs in the first six months of treatment (3, 4). Although this challenge is due to a number of factors, insufficient motivation, the cost of medication and services, and difficulty of access to the treatment center are the major causes (5). Specifically, the mentioned obstacles threaten the success of treatment for those patients, who live far away from the center of providing service. Obviously, a significant proportion of drug addicts live in rural and remote areas. These people usually have to travel a long distance to obtain medicine and clinical services (6). Meanwhile, the cost of transport and risks related to traffic accidents should be considered. In Iran, recently, some organizations, such as the Social Welfare and Universities of Medical Sciences have been able to reduce a portion of the financial burden of patients by offering medical subsidies (3). It has been able to partially increase adherence to treatment. However, the challenges of distance and accessibility to services in remote areas still remains.

Extensive strategies can be provided to facilitate ac-

cess to services. One of these strategies is the use of mobile applications, such as Telegram, Mobogram, Viber and Whatsapp messenger, WeChat, and Line messenger (7). Although patients in remote areas do not have access to their own treatment clinic, in most villages, there is the possibility of internet communication. Based on the format of services delivery, medication for at least a period of time (e.g. one week) can be provided to the patient after stabilizing drug dose (e.g. two first weeks). Thus, the physician can follow-up and monitor the health and the dose via internet and mobile applications on a daily basis. If necessary, the physician can ask the person to refer to the clinic physically. In addition to the weekly counseling, the center psychologist can send appropriate audio and video clips through these applications. Meanwhile, social workers can provide necessary support and supervision for each patient using this delivery format.

Given that it is not solely focused on receiving center-based services (7), this new technology-tailored strategy can facilitate access. This delivery strategy is likely to increase the participation and adherence to MMT/BMT among drug addicts living in rural and remote areas. Since during the recent years mobile interventions and relevant applications are strongly recommended and expanded (7, 8), the current authors recommend that MMT/BMT should be integrated with comprehensive support and health services (8) consisting of web-based and mobile intervention (7). There are major challenges for deploying clinical mobile applications, including financial, hardware, connectivity to existing clinical information systems, security, and user interfaces. However, the ease of developing and ex-

panding mobile apps should not lead to neglecting real challenges of clinical applications. Otherwise, patient and health system safety is potentially threatened (9).

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