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PREFACE

# Mobile health

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Healthcare delivery is a pervasive global challenge with huge ramifications for costs and human well-being. No nation is ready (or able) to deal with the multitude of confronting issues. Emerging population dynamics including longer life expectancy and lower birthrates are challenging traditional approaches. Mobile technology can play an important role in providing an additional degree of freedom. Mobile devices (e.g., mobile phones, smartphones, tablets, wireless laptops) and wireless technologies (e.g., Bluetooth, RFID, NFC) are now commonplace and support a rapidly growing set of applications.

The topic of Mobile Health (mHealth) seeks to capture the dynamics of using mobile devices for various aspects of healthcare delivery. This includes access to government resources as well as social networking. Interactions within as well as between organizations, institutions, individuals, and interested parties are all relevant. Societal as well as personal impacts are in force and paramount to wide-ranging appeal. We have collected five papers that are eclectic in focus yet pervasive in terms of addressing relevant topics.

Balasundaram and Saravanan (Integrated Location Aware Medical Care Services) focus on a system called LAMECS (Location Aware MEdical Care Services) which provides timely facilities to people in the mobile-based networked environment, specifically reducing the time taken to inform service providers about the situation. LAMECS uses GPS technology to provide location-based services, which helps patients obtain treatment from mobile doctors. The request received from a location (in the form of mobile data to the LAMECS) enables the system to identify the available mobile doctor to be assigned to the affected person.

Cocosila (Role of User a Priori Attitude in the Acceptance of Mobile Health: An Empirical Investigation) investigates the role of user attitude toward the activity supported by a mobile health application in the overall technology acceptance equation. He focuses on a perceived risk-motivation theoretical model integrating user attitudes that was developed and tested empirically with 170 participants from the UK, using mobile phones to support smoking cessation interventions. Results show an attitude favorable to quitting smoking has a negative effect on the perceived risk, no significant effect on the motivation, and a small positive influence on the behavioral intention associated with accepting the mobile health service.

Akter, Ray and D'Ambra (Continuance of mHealth Services at the Bottom of the Pyramid: The Roles of Service Quality and Trust) develop an mHealth continuance model for the bottom of the economic pyramid (BOP), exploring the impact of two post- adoption expectation beliefs (i.e., perceived service quality and perceived trust). Their study extends the ECM (expectation confirmation model) perspective synthesizing the extant literature on continued IS usage, service quality and consumer trust. The proposed model is empirically tested within the context of mobile health services at the BOP, applying PLS (partial least squares) under a cross-sectional study. Their findings confirm that both perceived service quality and perceived trust have good explanatory power under an integrated ECM, providing a better prediction of continuance intentions.

Guo, Sun, Wang, Peng and Yan (The Dark Side of Elderly Acceptance of Preventive Mobile Health Services in China) provide an understanding of elderly acceptance of mobile health services seen from the dark side (i.e., technology anxiety and dispositional resistance to change) that

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can influence adoption factors (e.g., perceived ease of use, perceived usefulness) and resistance to change, which, in turn, influence intention to adopt mobile health services. The hypothesized model is empirically tested using data collected from a field survey of 204 customers of a large elderly service providing company. The key findings include: (1) resistance to change influences perceived usefulness, but does not influence perceived ease of use and adoption intention; (2) technology anxiety is negatively associated with perceived ease of use, but positively associated with resistance to change; (3) dispositional resistance to change is negatively associated with perceived ease of use, but positively associated with resistance to change.

Sultan and Mohan (Transforming Usage Data into a Sustainable Mobile Health Solution) explain how usage logs in a mobile health system can be analyzed to understand how different patients use the system over a period of time. It defines a system usage model built on key interaction events which are captured and then analyzed to obtain patterns of patient behavior. Based on the patterns of usage obtained from a real mobile health system over a period of 2 months, the paper shows how the usage model can be used by the mobile health system to drive day-to-day interactions with the patient. This adaptation can significantly influence the sustainability and diffusion of the mobile health system into the target patient market.

The five contributions in this section bring to the fore examples of the rich domain of Mobile Health which we expect to receive continued attention. Towards that end, we encourage researchers and practitioners alike to practice engaged scholarship in addressing this extremely relevant societal topic.