

THE ERA OF TAILORED MHEALTH

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Journal MTM 5:1:1–2, 2016

doi:10.7309/jmtm.5.1.1

Dear Readers,

It is with great pleasure that we introduce the first issue of the fifth volume of the *Journal* with a diverse range of papers that illustrate the broad engagement of mobile health technologies to target the spectrum of socioeconomic groups in society. Currently the mHealth developers stand at the precipice of the greatest rate in growth of mHealth related apps. Results published in the mhealth App Developer Economics Survey in 2015 showed that the number of mHealth apps has now exceeded 165,000.¹ However, with only 5 per cent of apps being developed from Africa and South America combined (compared to 72% from Europe and North America) there clearly remains a challenge in developing and implementing apps for low-resource settings.

Increasing the impact of telemedicine and mHealth interventions requires appraisal of structural and economic components of health care service delivery. Using the concept of teleophthalmology in a large provincial service model of eye care in Western Australia, Razavi et al conducted a descriptive survey of current capacity of mHealth across the state. The authors demonstrated that 15% of urgent patient transfers and 24% outreach consultations were potentially suitable for telehealth. The authors equated this to a potential saving of AUD\$1.1 million per year in their health care setting. The study identified that key strategies to maximize the utility of mHealth included advocacy for funding, and engaging dialogue between tertiary, provincial and district level health care facilities in order to identify capacity and needs. This would then contribute to regulatory, training and infrastructure recommendations.²

Similarly, there is an imperative upon mHealth technology developers to engage with target audiences in low-resource settings. In the current issue,

Blackman et al use the example of app development to promote physical activity amongst youth from low socioeconomic status to highlight a framework for a user-centric approach. The authors used qualitative methods to analyse results from focus groups involving adults and adolescents. The results showed that opportunities to interact in a social network platform and establishing a sense of competition were critically important in engaging youth in low socioeconomic resources to participate in physical activity related apps. Whilst it seems intuitive and sensible that any health intervention must consider the needs and capacity for key stakeholders to access, afford and use the technology, these may be overlooked when the majority of app developers are based in higher socioeconomic settings.

As with any health intervention, the economic evidence for mHealth interventions must be closely examined. A recent systematic review of the health economics of telemedicine and mobile health systems reflected the inherent challenges confronted by policy makers and governments alike when weighing up the evidence. The authors identified the main limitations of economic evaluations of mHealth interventions were heterogeneity between study designs, lack of randomized control trials, and poor study design including small sample sizes, failing to include indirect costs, and the absence of data quality control. The review concluded that there is a definite paucity in cost-utility studies which measure the functional benefit to the user/patient. Additionally, at best cost-effectiveness studies show that mHealth and telemedicine interventions can reduce costs but not all. Whilst the review showed obvious deficiencies in the current economic evidence, it also highlighted the importance for mHealth app developers and policy makers to incorporate consumers and health practitioners to identify their needs, and capacity to implement such technologies.

Consideration of these local and region specific determinants of mHealth care will ultimately lead to efficiency and greater utility for patient care.

References

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