

Presentation 1

Effects of smartphone-based chatbot intervention to increase influenza and COVID-19 vaccine uptake among South Asians: a wait-list randomized controlled trial

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Summary:

Vaccination is a crucial means to curb the spread of vaccine-preventable diseases and strengthen herd immunity. However, South Asian ethnic minorities in Hong Kong, specifically residents with Pakistani, Indian, and Nepalese backgrounds, exhibit low rates of influenza and COVID-19 vaccination due to linguistic, cultural, and informational barriers. Addressing these health disparities requires tailored, accessible interventions to overcome these hurdles and reduce vaccine hesitancy. This talk will present empirical findings from a wait-list randomized controlled trial evaluating a novel smartphone-based chatbot intervention.

The talk will first outline the intervention's design, which combined a simple rule-based chatbot that delivered targeted educational content and twice-weekly structured vaccination reminders with an on-demand feature that connected participants directly to trained research assistants for personalized support. Next, the talk will present key trial outcomes, showing that the intervention significantly increased influenza vaccination uptake compared to wait-list controls. This effect was sustained both immediately post-intervention and at the 3-month follow-up. Furthermore, the intervention enhanced vaccination intentions for both influenza and COVID-19 while reducing vaccine hesitancy, particularly regarding confidence and calculation.

Translating these findings into practice, the talk will share how smartphone-based chatbot interventions address the unique barriers facing underserved populations. It will then explore the key factors that bridge the gap between vaccine intention and actual uptake. Ultimately, the talk will highlight the potential impact of these outcomes, offering scalable strategies to strengthen protection against vaccine-preventable diseases in vulnerable communities.