Social Media as a Tool for Medication Adherence and Personal Health Management

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Abstract: Medication adherence is crucial for treatment success. Adherence problem is common in patients with polypharmacy, especially in the geriatric population who are vulnerable to multiple chronic conditions but averagely less knowledgeable about diseases and medications. In order to help patients take medications appropriately and enhance the understanding of diseases or medications, a Line official account named e-Pharmacist was designed. The line is a popular freeware app with the highest penetration rate (95.7%) in Taiwan. The interface of e-Pharmacist is user-friendly for easy-toread and convenient operating. Differ from other medication adherence apps, users just added e-Pharmacist as a LINE friend without installing any more apps and the drug lists were automatically downloaded from the personal electronic medical records with security permission. Over and above medication reminder, several additional capabilities were set up and engaged in the platform of e-Pharmacist including prescription refill reservation, laboratory examination consultation, medical appointment registration, and "Daily Health Log" where patients can record and track data of blood pressure/blood sugar and daily meals for self-health management as well as can share the important information to clinical professionals when seeking medical help. Additionally, a Line chatbot was utilized to provide tailored medicine information for the individual user. From July 2020 to March 2022, around 3000 patients added e-pharmacist as Line friends. Every day more than 1500 patients receive messages from e-pharmacist to notify them to take medicine. Thanks to the e-pharmacist alert system and Chatbot, the lowcompliance patients (defined by Program on Adherence to Medication, PAM) significantly dropped from 36% to 6%, whereas the high-compliance patients dramatically increased from 13% to 77%. The user satisfaction is 98%. In brief, an e-pharmacist is not only a medication reminder but also a tailored personal assistant with value-added service for health management.

Keywords: e-pharmacist, self-health management, medication reminder, value-added service

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