

LITERATURE SURVEY
IBM-Project-18767-1659689727

TEAM ID: PNT2022TMID27535

PROJECT TITLE: Personal Assistance for senior citizens who are
Self - Reliant

TEAM MEMBERS:

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REVIEW-1:

Title of the Paper:

Older Patient and Caregiver Perspectives on Medication Value and Deprescribing: A Qualitative Study

Name of the Author:

Academic Editors: Aimee N. Pickering, Megan E. Hamm, Alicia Dawdani, Joseph T. Hanlon, Carolyn T. Thorpe, MPH, Walid F. Gellad, Thomas R. Radomski
Published on 17 February 2020

Problem Description:

Shared decision making is essential to deprescribing unnecessary or harmful medications in older adults, yet patients' and caregivers' perspectives on medication value and how this affects their willingness to discontinue a medication are poorly understood. We sought to identify the most significant factors that impact the perceived value of a medication from the perspective of patients and caregivers.

REVIEW-2:

Title of the Paper:

Elderly medication adherence monitoring with the Internet of Things

Name of the Author:

Xiaoping Toh, Hwee-Xian Tan, Huiguang Liang, Hwee-Pink Tan

Published on 14-18 March 2016 IEEE International Conference on Pervasive Computing and Communication Workshops

Problem Description:

With the growth in elderly population in Singapore, healthcare expenditure and prevalence of age-related illnesses are expected to increase. Non-adherence among the elderly is a common issue that leads to adverse health complications, particularly among those with chronic conditions. However, existing studies typically focus on identifying predictors of medication adherence, and provide neither user-friendly nor actionable solutions that can be easily adopted by the elderly. In this paper, we use the Internet of Things to monitor medication adherence and detect changes in medication consumption patterns among the elderly, thus enabling timely interventions by caregivers to take place. Sensor-enabled medication boxes are deployed in the residences of ten elderly participants for more than four months, since Jul 2015. Preliminary results indicate that our solution can effectively monitor medication intake patterns, and identify elderly who are non medication-adhering.

REVIEW-3:

Title of the Paper:

MedCue (A Medicine Reminder Android Application)

Name of the Author:

Vinay Kumar Kaim, Devendra Kumar Misra, Sarthak Sharma, Vishal Kumar

Published on 26-27 May 2022 2022 International Conference on Machine Learning, Big Data, Cloud and Parallel Computing

Problem Description:

This is an android based application which reminds the patients by ringing an alarm system and by giving notification so that there is no need to remember the entire medicine doses name and their timings throughout the month. The application is user friendly and has easy to understand functions. The user can also see the medicine history which is consumed by the patient in few steps. Many medicines related application have been developed but they have some minor problems related to their functionality. But we made an attempt to overcome these problems so it will be convenient to the users in medical adherence.

REVIEW-4:

Title of the Paper:

Medicine Box Reminder for Patients with Chronic Disease with IoT-Based Database Monitoring

Name of the Author:

Luh Kesuma Wardhani, Cinthya Bela Anggraini, Nenny Anggraini, Nashrul Hakiem, Imam Marzuki Shofi, Tabah Rosyadi

Published on 22-23 September 2021 International Conference on Cyber and IT Service Management

Problem Description:

Chronic illness is the highest cause of death in the world, to avoid increasing causes of death due to chronic diseases, it requires appropriate processes which require a long time of treatment and the drug becomes the most important component. Unfortunately, the level of adherence to taking medication in patients with chronic diseases is still low. According to the CDC (Centers for Disease Control and Prevention) carelessly taking medication can cause 30–50 percent of treatment failures and 125,000 deaths per year. Therefore in this study will create a medicine box reminder system for chronic disease patients with database monitoring based on IoT (Internet of Things) which can be monitored in real-time, this research stated reminder system using an android application that will be connected with medicine box reminder devices made using raspberry pi 3 model B, with speaker components and a PAM8403 amplifier. Based on the results of the study, it was found that the system that was made was tested with the user and produced a level of functionality of 100% and an average delay on the reminder system of 4,239 seconds for the reminder when going to take medication, and amounted to 7,298 seconds to inform that it had taken

the drug, and amounted to 97% for checking the accuracy of taking drugs with QR code.

References:

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