MEDICAL PILL BOX REMAINDER FOR ALZHEIMER PATIENTS

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Abstract— A complicated daily routine of drugs is necessary for many people who have physical limitations and memory/cognitive problems. This research seeks to make it easier for elderly or disabled individuals to take their medications effectively and on time. Additionally, this device will monitor the patient's bodily movement and health data. The smart pillbox that this research suggests has a consumption and remind feature. This is used to remind the user to take medication at a specific time, and the medication the user needs to take at that time is sent to them so there is no confusion about which medications they should be taking at what time. The burden of ensuring that elderly family members take their medications correctly and on time can be reduced by using a smart pill box. The primary goal is to monitor the patient, transfer information to the cloud automatically, and send out a message informing of any abnormal conditions. to automate a prescribed medication box to their specified time

Keywords—smart pill box, cloud, monitoring device…

I. INTRODUCTION

Research published an increasing body of anecdotal evidence from Adult Social Care teams in the region suggested that complex medication regimes with multiple dosages throughout the day posed particular challenges for older people with memory loss or cognitive impairment and people with mental health problems and learning difficulties. The statistics provide a picture of the extent of the medication market:

• 927 million prescription items dispensed per annum.
• English average 17.8 prescription items per head of population.
• Older people receive an average in excess of 42.4 items
• Net ingredient cost of £8,834 million.The use of prescribed medication is, however, extremely variable − there have been several studies of people's behavior and how closely they adhere to prescribed medication regimes:
• Some studies reported different ranges of adherence for adult patients (40–60%) and children (25–75%)
• Only 50% of people take their medicines adequately.
• About 42 million patients on prescription medications. 1 in 6 "fully" adhere, o 1 in 3 adhere "satisfactorily," o 1 in 6 adhere "poorly." The cost to the government in untaken medicines has been estimated at around £100 million per year, although this is regarded as a conservative estimate.

II. LITERATURESURVEY

MEDICAL REMAINDER AND HEALTHCARE WITH ANDRIOD

This is an Android-based application in which an automa

It focuses on doctor and patient interaction. Patients need not remember their medicine dosage timings as they can set an alarm on their dosage timings. The alarm can be set for multiple medicines and timings including date, time and medicine description. A notification will be sent to them through email or message inside the system preferably chosen by the patients. They can search doctor disease wise. The patients will get the contact details of doctors as per their availability. Also the users can see different articles related to medical fields and health care tips. The system focuses on easy navigation and good user interface. Drawback Android and iPhone and for a lite version on iPhone, is less rated by the users because of the problem about the flaws in the reminder system and a service that backs up user data.

AN IOT BASED INTELLIGENT MEDICINE BOX:

A modern health care and in addition to this intelligenthome monitoring, controlling embedded system capable of taking care of the patients from all aspects, covering personalized medication, vital signs monitoring. The project gives an experimental idea of patient's health condition and monitor environmental conditions and controlling. The platform involves an open-platform-based intelligent medicine box with enhanced connectivity and interchange ability for the integration of devices and services, Intelligent pharmaceutical packing with communication capability enabled by Zigbee and actuation capability enabled by functional materials and, flexible and wearable bio-medical sensor device enabled. The proposed platform devices with in-home healthcare services for

improved user experience and service efficiency. The feasibility of the implemented Health platform has been proven in field trials and if any vital signs recognized then gives alert to predefine care takers through SMS alert and monitor the conditions continuously with an IP address of WIFI.

III. EXISTINGSYSTEM

We found several different pillbox products available in the market. The cheapest one was the traditional pillbox, which contained seven boxes for seven different days of a week. However, user had to load the pills to the boxes every week. Mixing different pills in the same box would increase the risk of mistakes. Then in patient monitoring condition an external person or any relation must be in the patients room for continuous monitoring, if it fails a severe damage will occur in patients health.

IV.PROPOSED SYSTEM:

In order to reduce the responsibility of family members of dividing the medications in the pill box, we assume that the medicine the patients need to take at particular times has been packed into the pill box. In this system we have to set the pill time for required medicine by using input system. We can set the different time for different pills. If the more than one pill is required at a time, give the box nos. to the system to get required pills. We also set the no.of pills we are inserting in the system. The real-time clock gives continuous time as an output. Monitor the time continuously using a Real-time clock to identify the pill time. If the system time matches with pill time, the system shows that that it is time to take a pill.

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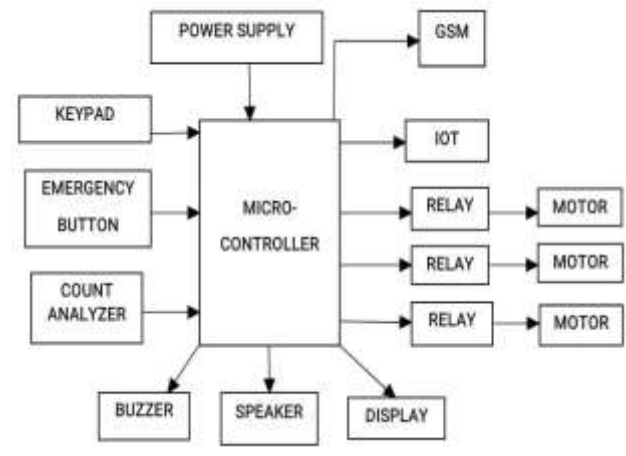
V. CONCLUSION:

The intelligent medicine box and health monitoring and management system can effectively solve the error or negligence in the field of medications. The report presented an interactive embedded measurement of daily activities through usage of sensor data. Predicting the behavior of an elderly person was based on past sensor activity durations. Combination of sensing system with time series data processing and enabled us to measure how well an elderly person is able to perform their daily activities in real-time. So far, the forecasting process was able to rightly measure the wellness indices related to use. Hence, some of the basic elderly daily activities such as sleeping, toileting, dining and relaxing are rightly assessed care takers and hospitals by the wellness measurement system. A single system can be useful for more than one patient. Multiple users can access the system by using their own card. For that the medicine box need to contain more number of sections and each section is utilized by particular user.

VI. REFERENCES:

[1] Jakkula V.R, Cook D, Jain G, "Prediction models for a smart home based

health care system", Proceedings of the 21st International Conference on
Advanced Information Networking and Applications, pp.761-765,2007 .

[2] Jae H.S, Boreom L, Kwang S.P, "Detection of Abnormal Living Patterns for Elderly Living Alone Using Support Vector Data Description", IEEE Transactions
on Information Technology in Biomedicine, Vol. 15, No. 3, Page(s):438-448, May
2011.

[3] Arcelus A, Veledar I, Goubran R, Knoefel F, Sveistrup H and Bilodeau M,
"Measurements of Sit-to-Stand Timing and Symmetry from Bed Pressure
Sensors," IEEE Transactions on Instrumentation and Measurement, vol. 60, no. 5,
pp. 1732-1740.

[4] Tibor B, Mark H, Michel C.A.K, Jan T, "An Ambient Agent Model for
Monitoring and Analyzing Dynamics of Complex Human Behavior", Journal of
Ambient Intelligence and Smart Environments, Vol 3, No. 4, Page(s): 283-303,
2011.

[5] Gaddam A, Mukhopadhyay S.C, Gupta G.S, "Elder Care Based on Cognitive
Sensor Network", IEEE Sensors Journal, Vol. 11, No. 3, Page(s): 574 – 581, 2011.

[6] Suryadevara N.K, Mukhopadhyay S.C, "Wireless Sensor Network based Home
Monitoring System for Wellness Determination of Elderly", IEEE Sensors Journal,
Vol: 12, No:6, pp.1965 – 1972, 2012.2010.

[7] Brockwell P.J and Davis R.A, "Introduction to Time Series and

Forecasting", Springer, 2nd edition, pp.326-330,

2001.

[8]. Smarr C.A, Fausset C. B and Rogers W. A, "Understanding the potential for robot assistance for older adults in the home environment", Technical Report-HFATR-1102, School of Psychology, Human Factors and Aging Laboratory-Georgia Tech-Atlanta, http://hdl.handle.net/1853/39670 , 2011.

[9] Geng Yang, Li Xie, MattiMntysalo, Xiaolin Zhou,Zhibo Pang, Li Da Xu, Sharon Kao-Walter, Qiang Chen, LirongZheng, "A Health-IoT Platform Based on

the Integration of Intelligent Packaging, Unobtrusive Bio-Sensor and Intelligent

Medicine Box", IEEE Transactions on Industrial Informatics, 2013.

[10] J.A.Cramer, A.Roy, A.Burrell, C.J.Fairchild, M.J.Fuldeore, D.A.Ollendorf, et

al.,"Medication compliance and persistence: terminology and definitions", Value

Health: J IntSocPharmacoeconom Outcomes Res, 11 (1), pp. 4447, 2008.

[11] Frost & Sullivan, "European Remote Patient Monitoring Market", Report

B519-56, June 2005.

[12] Huai-Kuei Wu, Chi-Ming Wong,et.al.,"A Smart Pill Box with Remind and

Consumption Confirmation Functions",IEEE 4th Global Conference on Consumer

Electronics (GCCE), 2015.

[13] B.Abbey, A.Alipour, C.Camp, C.Hofer, "The Smart Pill Box", in proceedings

of the Rehabilitation Engineering and Assistive Technology Society of North America,2012.

[14] Shih-Chang Huang, Hong-Yi Chang, Yu-Chen Jhu, Guan-You Chen, "The Intelligent Pill Box - Design and Implementation",ICCE-Taiwan2014.

[15] Xiankleber C. Benjamim, Rafael B. Gomes, Aquiles F. Burlamaqui, Luiz MarcosG, "Visual Identication of Medicine Boxes Using Features Matching",

IEEE, 2012.