System for Reducing Adverse Health Events in Assisted Living Facilities

Adverse events in geriatric residents are a major concern for long term care and assisted living facilities. Each year about 8 million adverse events are reported by nursing homes in the US alone. According to a report from the Office of Inspector General in the US Department of Health and Human Services some type of adverse health event is experienced by 22 percent of Medicare beneficiaries residing in nursing homes and among these events about 60 percent were deemed preventable. Currently, selection of an assisted living facility is almost entirely based on the preferences of the future resident and their family members. This important decision is not based on clinical information and specific requirements of each resident which results in dissatisfaction and increased likelihood of adverse health events. Currently, most assisted living facilities and long-term care centers are not well equipped with systems for continuously monitoring the health and safety of the residents leading to delay in detection or prevention of adverse health events. Considering this unmet need researchers at NSU designed a system capable of monitoring, communication, data analysis and risk assessment that when implemented can reduce the occurrence of adverse health events in assisted living facilities.

Technology

This invention by researchers at NSU offers a mechanism of preventing adverse health events and optimizing selection of appropriate type of residence for residents of assisted living. It utilizes a system of sensors and monitoring devices to minimize the frequency of adverse events and improve response times if they occur. This interconnected system of wearables, built-in sensors and monitoring devices will act as a closed loop system capable of constantly monitoring the residents. These features will allow the system to predict possible adverse health events and use the communication component to alert healthcare professionals in a timely fashion. It will also serve as the ideal platform for continuously collecting and electronically storing relevant clinical information about the residents that can be employed as actionable data when required. With the application of appropriate AI algorithms this actionable clinical information can further serve as the building block for developing a predictive health model that can be implemented in long-term care facilities.

Application

- This innovation can be implemented for improved selection of assisted living facility using clinical metrics.
- This system incorporates monitoring and communicating components to connect senior living locations with healthcare facilities both remotely and locally.
- The combination of sensors, monitoring technologies and customized collection of health data, and framework of data analysis will allow development of a safer environment with built-in system capable of adverse health event prevention.

Advantages/Benefits

- The implementation of sensors and monitoring device will enable care givers to detect and prevent medical issues earlier.
- Communication and connectivity offered by this novel system will enable quicker and easier access to medical assistance in case of emergency
- Implementation of this technology will allow continuous tracking of location of residents through Bluetooth. This feature will be beneficial in taking care of individuals suffering from some form of dementia.

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Information on Inventors

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