of Long-Term Care Providers conducted by the National Center for Health Statistics. In 2016, about 81% of RCCs had at least one resident visiting the ED in the past 90 days and around 19% of RCCs had no residents with ED visits in the past 90 days. Bivariate analyses indicated that ED visits varied by chain affiliation, ownership status, electronic health records use, and Medicaid participation. Logistic regression modeling to examine factors associated with whether or not RCCs had any residents with ED visits in the past 90 days will also be presented. Results may benefit efforts focused on implementing practices to reduce ED visits in RCCs.

IMPROVING SLEEP USING MENTORED BEHAVIORAL AND ENVIRONMENTAL RESTRUCTURING (SLUMBER)

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Sleep disturbances are common in skilled nursing facilities (SNF) affecting up to 70% of residents. Poor sleep is linked to depressed mood, cognitive impairment, increased pain, and functional disability. SNF residents depend on staff for basic day-to-day needs making it essential that staff be empowered in sleep improvement efforts. In SLUMBER, we are using a multisite stepped-wedge design to implement a program for SNF staff to improve common sleep-disruptive factors. This three-month program includes four in-person staff meetings and three didactic webinars covering three content areas: 1) improving the nighttime sleep environment, 2) increasing daytime activities, light exposure, reducing daytime sleeping, and 3) helping individual residents having difficulty with sleep. In addition to mentoring staff on sleep improvement strategies, technology provides feedback on noise levels from decibel meters throughout the unit and weekly "sleep pearls" text messages sent to staff to reinforce teachings. We measured noise readings (in decibels) in one second increments. For sleeping hours, 10pm to 6am, we calculated the percentage of observations exceeding 60 decibels. Post intervention in the first of six study units, 78% of noise readings exceeded 60db during sleeping hours compared to three months later where 50.3% of noise readings exceeded 60db, suggesting benefits of noise-reduction efforts. SNF staff reported several instances of improving sleep among chronically poor sleepers and an improved work environment. This mentoring program can achieve important environmental improvements with perceived benefit to residents and staff. Whether this leads to objective symptom and physiological improvements awaits conclusion of this four-year trial.

AN IOT TROLLEY FOR LONG-TERM CARE FACILITIES TO PROVIDE EFFICIENCY AND REDUCE RISKS

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One of challenges facing the long-term care facilities in Taiwan is the burden of the paperwork affecting nurses, which limits their time to look after the residents. Nurses usually estimate spending one quarter of their shifts with paperwork. The aim of this study is to develop a mobile care information system - Jubo IoT Trolley: a trolley with IoT vital-sign devices collecting and delivering timely care information to care professionals. Based on user-centered design (i.e., discover-define-develop-delivery), we conducted stakeholder interviews and rapid prototypes to zero in on the communication problem, and designed the IoT Trolley to support nurses in their daily workflow, facilitate vital-sign measurements at the bedsides, and collect the measured values to the cloud database automatically. Through design iterations, we have validated usability of the system in multiple care facilities. The result shows, with the IoT Trolley, the nurses can receive the senior's critical vital status from the caregivers more promptly, provide instructions remotely and therefore, reduce potential care risks. Furthermore, the cloud analyzes the collected residents' health data, the vital sign alerts can be sent to the nursing directors, so they can coordinate and intervene instantly. At last, this work demonstrates that through the technology, care qualities are improved, and care professionals can spend more valuable time with residents in the long-term care facilities.

ADVANCED ILLNESS AMONG ELDERLY NURSING HOME RESIDENTS WITH ALZHEIMER'S DISEASE AND RELATED DEMENTIA

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Alzheimer's disease and related dementia (AD/ADRD) are leading causes of mortality in the United States. Identifying advanced illness (AI) in NH residents is key for developing therapeutic and palliative care plans for end of life. We refined and extended existing measures of AI in NH residents with AD/ADRD and described patterns of survival for each measure. Using the Minimum Data Set (MDS; 2011 to 2013) linked to vital status (through 2016), we defined categories of AD/ADRD residents at AI onset: (1) those with ADRD, (2) and those with both, AD and ADRD. We estimated survival functions and multivariable duration models to describe patterns of survival from AI onset until death, stratified by AD/ADRD classifications, sex and functional status at AI onset, conditional on socio-demographics and co-morbidities. We limited our sample to adults ages >64 for whom we observed the incident AI assessment in the MDS. Median survival was 229 days for all classifications of AI, but higher for those with only ADRD (300 days). Survival declined substantially for residents with eating difficulties; to 122 days for residents with AD and ADRD. A stark survival decline (40 days) occurred among residents with shortness of breath. Across all AI classifications, survival was negatively associated with male sex, age, diabetes, substantial weight-loss and events such as heart failure. Depression, hypertension, and UTI were associated with small or insignificant increases in mortality risk. AI can be defined using MDS data, allowing for examination of policies designed to improve end of life care.