

difficulty with understanding Medicare. The existing tools to support Medicare beneficiaries understand and navigate the program must evolve to meet the needs of those with hearing loss- a highly prevalent condition among Medicare beneficiaries.

SATISFACTION WITH HEALTH CARE BY DUAL SENSORY IMPAIRMENT STATUS

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Sensory impairment is a barrier to patient-provider communication and access to care, which may impact satisfaction with care. Satisfaction with the quality of care received in the past year was assessed in the 2017 Medicare Current Beneficiary Survey (weighted sample=53,905,182 Medicare beneficiaries). Self-reported sensory impairment was categorized as no sensory impairment, hearing impairment (HI)-only, vision impairment (VI)-only, and dual sensory impairment (DSI) – concurrent HI and VI. In a model adjusted for sociodemographic characteristics and health determinants, having DSI was associated with higher odds of dissatisfaction with the quality of care received (Odds Ratio [OR]=1.53, 95% Confidence Interval [CI]=1.14-2.06) relative to no sensory impairment; however, having HI-only or VI-only were not (OR=1.33, 95%CI=1.94-1.89, and OR=1.32, 95%CI=0.95-1.93, respectively). These findings have implications for healthcare providers as Medicare shifts to value-based reimbursement. Moreover, previous work that singularly focused on HI or VI alone may have failed to recognize the compounded effect of DSI.

ADDRESSING SENSORY IMPAIRMENT IN THE ICU: CRITICALLY IMPORTANT FOR IMPROVING OUTCOMES

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Millions of older adults are admitted to an intensive care unit (ICU) every year. Many of these patients have preexisting impairment in hearing or vision, but sensory impairment is rarely addressed in the ICU. This talk will present recent work evaluating the association of sensory impairment with functional outcomes among older ICU patients, and discuss barriers to and potential strategies for addressing sensory impairment in the ICU.

SESSION 7225 (SYMPOSIUM)

SMART WEARABLES IN THE LENS OF AGING: RESULTS FROM THE ROAMM STUDY

Chair: Mamoun Mardini

Co-Chair: Todd Manini

Discussant: Jennifer Schrack

Continuous, long-term monitoring with remote capabilities using wearable technology is ideal for capturing information about patient/participant symptoms synced to sensor-based information. The Real-time Online Assessment and Mobility Monitor (ROAMM) is a smartwatch

framework configured to collect data in free-living settings from both sensor-based (location and movement) and responses to symptom notifications through a visual display. The symposium presents the overall framework and preliminary findings from a demonstration study in older adults with knee osteoarthritis. Karnati will present the general framework of ROAMM explaining the data flow from the smartwatch to end users (clinicians and research). He will highlight components in the design that makes the framework unique and highly flexible to serve different studies with different research questions. Rouzard evaluated satisfaction, usability and compliance wearing a smartwatch and using the ROAMM app. Participants were compliant to ecological prompts about pain, fatigue and mood three times a day (82.5% compliance rate). Additionally, > 70% reported being satisfied with the function/usability and comfort with using ROAMM and wearing the smartwatch. Mardini examined the temporal relationship between ecological pain and derived life-space mobility features from Global Positioning System coordinates. Results suggested that higher level of knee pain in older adults was associated with lower life-space mobility. Manini examined physician perception towards an electronic health record (EHR) graphical interface of top ranked patient attributes of pain, falls, hydration and mobility patterns. Results indicated a relatively high level of usability of the EHR interface depicting smartwatch data.

A SMARTWATCH-BASED FRAMEWORK FOR REAL-TIME AND ONLINE ASSESSMENT AND MOBILITY MONITORING

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Pervasive computing is changing the monitoring landscape for patients to communicate their healthcare information in real-time to clinicians and researchers. We developed a framework based on a smartwatch application allowing researchers to execute a study that is customized to their needs. The application is configured to collect patient generated data in remote settings from both sensor-based (location and movement) and user-reported health factors through the visual display. For example, data are used to investigate concurrent symptoms and mobility patterns in free-living conditions. To support the collection and analysis of this data in a robust and scalable fashion, we have developed an event driven, serverless computing platform using Amazon cloud services. This system also allows multiple campaigns to run concurrently each under the auspices of a different researcher. The framework is ideal for harnessing and scaling the utilization of smart wearable devices in research and clinical settings.

PHYSICIAN SUITABILITY OF AN EHR INTERFACE FOR DEPICTING ECOLOGICAL SYMPTOMS DERIVED FROM A SMARTWATCH

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