Title

NO LONGER THE INVISIBLE HOMEBOUND: IDENTIFYING CANDIDATES FOR HOME-BASED MEDICAL CARE IN BIG DATA

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conditions, functional impairment, frailty, and social stressors. Rendering the homebound visible to the health care system is critical to improving care delivery and health outcomes for this vulnerable population and population health efforts. Home-based primary care (HBPC) practices have developed effective approaches to address the clinical needs of this population. Appropriate metrics are lacking to measuring the quality of care delivered by HBPC to this frail population. This session will focus on 1) understanding the characteristics of the homebound population, and; 2) elucidating efforts to address gaps in quality measurement, including the development of quality measures, a national registry, and a learning collaborative for HBPC practices.

ALL IN IT TOGETHER: WHY DEVELOPMENT OF BETTER HEALTH CARE QUALITY MEASURES IS GOOD FOR CONSUMERS

L. Walker, *AARP Public Policy Institute, Washington, District of Columbia*

Health care in the United States is evolving. With this change, consumers and families are taking on greater responsibilities in managing their health care – sometimes voluntarily and sometimes involuntarily. For them to navigate effectively in this new environment they and their clinicians need information about the quality of care they receive, and that information has to be meaningful to their decision-making process. This is particularly so for people who are frail, functionally impaired, and have complex chronic conditions. The homebound are a subset of this group. Consumer and patient groups, including AARP, support the development of measures in critical gap areas, such as for patients who are homebound, who would benefit tremendously from the development of home-based quality of care measures. In addition to clinical measures, consumers would welcome development of measures in domains that capture patient and caregiver experience, care coordination, safety, and quality of life.

NO LONGER THE INVISIBLE HOMEBOUND: IDENTIFYING CANDIDATES FOR HOME-BASED MEDICAL CARE IN BIG DATA

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Homebound patients who could benefit from high-quality, cost-saving longitudinal home-based medical care cannot be identified easily by hospitals, health systems, or payers. Further, without a well-defined population denominator, assessments of care quality are inadequate. We addressed these gaps using the OptumLabs™ Data Warehouse, which includes more than 3 million commercial and Medicare 2014 enrollees age 65 and older. We identified two patient phenotypes who may benefit from home-based medical care: (1) patients with complex comorbid conditions already receiving home-based care (>2 in-home physician visits (N=30,251); and (2) patients receiving substantial acute care (>57% with >1 hospitalization, ER visit, or ambulance service) and low levels of ambulatory services (19.2% with <2 ambulatory visits/year); (N=171,894). This project revealed a high-need patient population for whom home-based care may be beneficial and established a method for using administrative data to identify patients who are either homebound or would benefit from coordinated home-based services.

SESSION 5020 (SYMPOSIUM)

BEYOND PERFORMANCE MEASURES: NOVEL INFORMATION FROM ACCELEROMETRY FOR FUNCTION

Chair: T. Harris, *NIA/Intramural Research Program, Bethesda, Maryland*

Functional status has long been recognized as critical to health and independence of older persons. Self-reported and performance measures, which are quick and easy to administer, allow assessment of function and are widely used in community population studies and clinical trials. However, these measurements are limited in that they are taken at one point in time in home, clinical and laboratory settings, and thus may not be representative of a person's usual function over time. Accelerometry is an emerging technology that has gained popularity in recent years, which allows for continuous and objective assessment of daily physical activity and function over an extended period of time in the free-living environment. Although these device present new opportunities to understand functional mobility, the benefits may be limited by associated costs, methodological, and data processing challenges. This begs the question: Are the data generated from accelerometry worth the effort? In this symposium, presenters will highlight novel information derived from the accelerometers and compare with routinely available self-report or performance measures. Accelerometer types, body placement locations, processing challenges, and costs will be addressed

ACTIGRAPHY FEATURES FOR PREDICTING MOBILITY DISABILITY IN OLDER ADULTS

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Actigraphy has attracted much attention for assessing and documenting physical activity in the past decade. However, there is a lack of understanding whether these data can help in detecting and/or predicting mobility function, or more specifically, mobility impairment and major mobility disability (MMD). Men (N=357) and women (N=778) aged 70–89 years wore a tri-axial accelerometer (Actigraph GT3X) on the right hip during free-living conditions for 8.4 ± 3.0 days and 67 features were extracted from the accelerometer data. Sensitivity and specificity of identifying slow walkers was approximately 70% and 80%, respectively. The top five features, which were related to movement pace and amount (activity counts and steps), length in activity engagement (bout length), accumulation patterns of activity, and movement variability significantly improved the prediction of MMD beyond that found with common covariates (age,