

account alterations of vigilance and behavior (hypoactive, hyperactive, mixed), and confirmed by clinical judgment.

Starting from 539 consecutively admitted patients, 424 were enrolled. Of them, 156 (36.8%) developed delirium. The prevalence of motor subtypes was 6.8% for hypoactive, 17.0% for hyperactive, and 13.2% for mixed subtype. One-year mortality was 15.5% in patients who did not experience delirium, and 41.4%, 20.3%, and 38.2% in the hypoactive, hyperactive, and mixed delirium subgroups, respectively. After adjusting for potential confounders in a Cox regression analysis, mortality was significantly higher among subjects experiencing the hypoactive subtype (Hazard Ratio 2.78, 95% Confidence Interval: 1.15–6.71).

In-hospital hypoactive delirium is significantly associated with higher one-year mortality in patients undergoing hip fracture surgery.

#### FRAILTY ASSESSMENT TO HELP PREDICT PATIENTS AT RISK OF ED-INDUCED DELIRIUM

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**Introduction:** Delirium is a frequent complication among seniors in the emergency department (ED). This condition is often underdiagnosed by ED professionals even though it is associated with functional & cognitive decline, longer hospital length of stay, institutionalization and death. Frailty is increasingly recognized as an independent predictor of adverse events in seniors and screening for frailty in EDs is now recommended. The aim of this study was to assess if screening seniors for frailty in EDs could help identify those at risk of ED-induced delirium.

**Method:** This study is part of the ongoing multicenter prospective cohort *MIDI-INDEED* study. Patients were recruited after 8 hours in the ED exposure & followed up to 24h after ward admission. Frailty was assessed at ED admission using the Canadian Study of Health and Aging-Clinical Frailty Scale (CSHA-CFS) which classified seniors from robust (1/7) to severely frail (7/7). Seniors with CSHA-CFS  $\geq 5/7$  were considered frail. Delirium was assessed using the CAM.

**Results:** 370 patients were recruited. Preliminary data show an incidence of ED-induced delirium of 10.0%. Average frailty score at baseline was 3.5. 72 patients were considered frail, while 289 were considered robust. Among the frail seniors, there were 48.4% (30–66) patients with ED-induced delirium vs 17.9% (13.7–22.0) in the non-frail ones ( $p < 0.0001$ ).

**Conclusion:** Increased frailty appears to be associated with increased ED-induced delirium. Screening for frailty at emergency triage could help ED professionals identify seniors at higher risk of ED-induced delirium.

#### DISRUPTIONS, DISCONTINUITIES, AND DISPERSIONS: AN ETHNOGRAPHY OF DISJUNCTURES IN ORTHOPAEDIC WARDS

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Enhanced Recovery Pathways (ERPs) have become viewed as evidence-based medicine being brought to bear. Events are sequential, aiming to maximise throughput, productivity and quality. It is notable that usual care is full of multiple types of disjunctures (disruptions, discontinuities and dispersions) for patients, carers as well as health and social care professionals. Patients featuring on the cognitive impairment continuum (living with dementia and/or delirium) can present particular disruptions to usual practice. As part of the Peri-operative Enhanced Recovery hip FacturE Care of paTiEnts with Dementia (PERFECTED) research programme, focused ethnographic observations were conducted to unpick the everyday lived experiences of how patients experiencing delirium and/or dementia impact on ERP orientated practices on Orthopaedic Trauma wards.

Observations of routine “public” care places and activities were conducted across the 24 hour cycle, over 4 weeks in 3 secondary care settings across the United Kingdom. The spaces were selected due to the presence of care delivery processes aiming to provide ‘enhanced recovery’ to PERFECTED’s target population. Consisting of 144 hours of fieldnotes, data identifies multiple types of disruptions and discontinuities for patients and staff, with patients living with dementia posing particular and specific disruptions to usual practice, conditioning and staff responses. We will discuss how such practice dilemmas are well-known but not well-captured in this setting in relation to their specific impact on clinical care. The paper will conclude by demonstrating the value of ethnographic observations in health science research and how ERP procedures can be situated in usual care practices.

#### SESSION 4935 (SYMPOSIUM)

##### AN INTERNATIONAL PERSPECTIVE ON IMPLEMENTING FRAILTY INTO CLINICAL PRACTICE

Chair: M. McAdams De Marco, *Johns Hopkins University School of Public Health, Baltimore, Maryland*  
Discussant: J.E. Morley, *Saint Louis University, St. Louis, Missouri*

Frailty is a clinical state of increased vulnerability characterized by high risk of adverse healthcare outcomes when exposed to a stressor that is frequently observed in older adults. Although frailty is commonly recognized by clinicians across a range of diseases and medical conditions, it is most commonly utilized in clinical and biologic research rather than in routine clinical care. The slow progress in the implementation of frailty into clinical practice may in part stem from the lack of consensus around the definition of frailty and because of a proliferation of frailty screening tools. However, amongst clinicians, there is compelling need to identify and more appropriately treat frail and vulnerable older adults. This symposium will feature a group of international experts

who have helped to develop and propagate some of the major tools used in frailty research, including the frailty phenotype, the frailty index, and the Gerontopole frailty tool. These investigators will discuss attempts to date to integrate distinct tools into clinical practice for screening purposes, for risk assessment and for the prevention of adverse outcomes. They will also outline future plans for further implementation of these tools into primary care, hospital, and subspecialty practices with the goal of improving outcomes and quality of life for the most vulnerable subset of older adults.

#### THE USE OF PHYSICAL FRAILTY MEASUREMENT IN GENERAL AND SUBSPECIALTY CLINICAL PRACTICE

J.D. Walston, *Johns Hopkins School of Medicine, Baltimore, Maryland*

Physical frailty measurement, also known as the frailty phenotype or Fried Frailty assessment, uses an aggregate of measures of grip strength, walking speed, weight loss, fatigue and physical activity to determine frailty status. Frailty status has then been utilized in population studies in order to determine future risk of disability, falls, hospitalization, and mortality. In addition, it has been extensively utilized to identify chronic inflammation and altered stress response systems as probably biological basis of frailty. Results of these epidemiological studies have encouraged the increasing integration of physical frailty measurement into a wide variety of general and subspecialty clinical practices. These include 1) cardiovascular, oncological, and thyroid surgery, 2) anesthesia and pre-operative assessment, and 3) into general Geriatric practice. The speaker will provide a brief overview of the physical frailty assessment and provide examples of how it is presently being integrated into decision making processes in each of these specialties.

#### CLINICAL USE OF THE PHYSICAL FRAILTY PHENOTYPE IN OLDER TRANSPLANT RECIPIENTS

M. McAdams De Marco, *Johns Hopkins University School of Public Health, Baltimore, Maryland*

In the US, frailty prevalence is high in older end stage renal disease (ESRD) patients being evaluated for kidney transplantation (KT); among patients aged 65–74, 27.1% are frail and among patients aged  $\geq 75$ , 23.7% are frail. Older KT recipients are more than twice as likely to be frail, which increases their risk of longer length of stay, delayed graft function, early hospital readmission and post-KT mortality. At JHU and other US transplant centers, frailty is used as a valid and reliable ‘foot of the bed test’ and is included in the evaluation process to improve older KT candidate selection. These transplant centers can accept a marginal older candidate who are robust or in contrast, decide against transplanting a frail older candidates. Importantly, frailty mitigates the reliance on chronologic age for risk prediction in older adults and helps identify who would do well with KT despite their age.

#### USING A FRAILTY INDEX BASED ON DEFICIT ACCUMULATION

K. Rockwood, *Dalhousie University, Halifax, Nova Scotia, Canada*

Frailty as a state of increased risk can be operationalized by a frailty index. It is the proportion of age-related health

deficits present in an individual to the deficits counted. As it does not require special instrumentation, existing/routinely collected data can quantify frailty across clinical and population settings. Several electronic frailty indices have been devised, allowing risk to be graded on millions of people. The mean frailty index score varies by regional and national economic indicators, so it is also being used as a population health metric. Despite varying versions, the frailty index characteristically increases by ~4% annually across the adult lifespan, to a maximum value of 0.7. It is used in research to estimate personal biological age and more recently in pre-clinical models. From cellular to social inquiries the metrics of the frailty index can grade clinical risk and can facilitate the study of ageing, resilience and age-related illnesses.

#### CLINICAL APPLICATIONS OF THE CLINICAL FRAILTY SCALE AND THE PICTORIAL FIT-FRAIL SCALE

O. Theou, *Dalhousie University, Halifax, Nova Scotia, Canada*

Most health care professionals would agree on the importance of frailty assessment in clinical settings. Even so, there is no agreement on which frailty tool is feasible to implement in clinical settings and whether the same tool should be used across settings. In this presentation we will provide evidence about the clinical applications of the Clinical Frailty Scale and the Pictorial Fit-Frail scale. The Clinical Frailty Scale is based on the clinical evaluation of a patient’s status in the domains of mobility, energy, physical activity, and function and is now expanded to include nine levels from very fit to terminal ill. The Pictorial Fit-Frail scale recently developed to be simpler and easier to administer within clinical settings, measures levels of fitness to frailty using visual prompts.

#### IDENTIFICATION OF FRAILTY IN PRIMARY CARE: THE GÉRONTOPÔLE FRAILTY SCREENING TOOL

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In 2011, the GÉRONTOPÔLE of the Centre Hospitalier Universitaire de Toulouse (Toulouse, France) developed a Frailty Clinic for providing multidisciplinary evaluation (and consequent personalized plan of intervention) to community-dwelling frail elders. An ad hoc screening instrument for frailty (the so-called GÉRONTOPÔLE Frailty Screening Tool, GFST) was specifically conceived and proposed to the local general practitioners (GPs). The instrument was designed for 1) being formative for GPs in the identification of a usually underestimated clinical condition as frailty, 2) being easy to implement in the busy clinical routine, 3) largely relying on the subjective evaluation of the GP, and 4) supporting a multidimensional approach to frailty. Given the success of the initiative, the GFST (today available in nine different languages) and the Frailty Clinic model are today largely diffused in France.