

# 19th EuGMS Congress – September 20-22 Helsinki, Finland

## ORAL COMMUNICATIONS ABSTRACTS

**ROOM 204 - SEPTEMBER 20, 13:00-14:15**

**O-001 Elderly patients with non-specific complaints at the Emergency Department have a high risk for admission and 30-days mortality**

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**BACKGROUND:** Older adults have more complex medical needs that causes increased use of resources at the emergency department (ED). The prevalence of non-specific complaint (NSC) as a chief-complaint in the ED is common among older adults and is not highly prioritized. NSC are one of the most challenging conditions for an emergency physician since there are not any specific protocols to follow and the cause of NSC can be caused by everything from life threatening conditions, lack of home health care or natural aging. Due to this patients with NSC could have a worse clinical outcome compared to patients with specific complaint. The objective was to study hospital admission and mortality for older adults visiting the ED with NSC compared to specific complaints such as dyspnea, chest pain and abdominal pain. **METHOD:** Retrospective observational study of older adults visiting the ED with NSC and specific complaint was performed. Chief-complaint were collected from electronic medical records. Fatigue, confusion, non-specific complaints, generalized weakness and risk of falling were defined as non-specific complaint (NSC) when registered as chief-complaint at the ED. Admission rate and 30-days mortality were the primary outcomes. **RESULTS:** A total of 4927 patients were included in the study based on chief-complaint; patients with chest pain 1599 (32%), dyspnea 1343 (27%), abdominal pain 1460 (30%) and NSC 525 (11%). Patients with dyspnea and NSC had the highest hospital admission rate 79% vs 70% compared to patients with chest pain (63%) and abdominal pain (61%) ( $p < 0.001$ ). Patients with NSC had a mean LOS 4,7 hours at the ED which was significantly higher compared to chest pain, dyspnea and abdominal pain. Mean bed-days for the whole population was 4.2 days compared to patients with NSC who had a mean LOS of 5.6 days. NSC and dyspnea were both associated with the highest 30-day mortality. **CONCLUSION:** Older patients who present with NSC at the ED are at high risk for admission and 30-days mortality. They are often low prioritized at the ED and spend longer time at the ED compared to patients with dyspnea, chest pain and abdominal pain. This study demonstrate that NSC in older adults can be difficult to assess for ED staff even though these individuals may be at significant risk for hospital requirements and 30-day mortality. There may be a need to improve routines regarding the handling of this patient group in the ED and previous study have reported there are limitations in existing risk stratification instruments for older adults visiting the ED. Further research is needed to approach how to best care for older patients with NSC to reduce morbidity and mortality.

**ROOM 204 - SEPTEMBER 20, 13:00-14:15**

**O-002 Improving the completion of Mental Capacity Act (MCA) Assessments and Deprivation of Liberty Safeguards (DoLS) on Complex Medical Units at the John Radcliffe Hospital**

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**Introduction:**Cognitive disorders can impair decision-making ability in older adults. The Mental Capacity Act (MCA) 2005 protects people who lack capacity to make decisions [1]. Deprivation of Liberty Safeguards (DoLS) are legally required where restrictions deprive someone's liberty [2]. This two-cycle audit evaluates whether MCA and DoLS are used appropriately across the four Complex Medical Units (CMUs), which treat multimorbid patients, at the John Radcliffe Hospital.**Methods:**The first and second cycles were completed on 26/09/22 (n=65) and 13/12/22 (n=66) respectively. Inpatients in CMUs aged  $\geq 70$  years were assessed for records of Abbreviated Mental Test Score (AMTS)  $< 8$ , or diagnosis of delirium or cognitive impairment. Where these criteria were met, we assessed whether patients had a mental capacity assessment regarding hospital admission and DoLS application.**Results:**Patient characteristics were similar across the two cycles. In the first cycle, 66.2% (n=43) had AMTS assessment completed. Of the 62 eligible patients, 27.4% had a mental capacity assessment and 17.7% had DoLS in place. Interventions included MCA-DoLS teaching to CMU doctors and a week-long pilot measure in CMU-B to discuss MCA-DoLS during daily board rounds. In the second cycle, 72.7% (n=48) had AMTS assessment completed. Of the 58 eligible patients, 25.9% had a mental capacity assessment and 12.1% had DoLS in place.**Conclusion:**MCA and DoLS protect patient's rights while delivering quality care. Our audit has identified gaps in current practice. Though educating doctors is effective, further work, including educating the multidisciplinary team, could help achieve higher rates of MCA-DoLS completion.**References**1.

**Recommendations:** Decision-making and mental capacity: Guidance [Internet]. NICE. 2018 [cited 2023Mar30]. Available from: <https://www.nice.org.uk/guidance/ng108/chapter/Recommendations#assessment-of-mental-capacity2>.

**Deprivation of liberty safeguards at a glance** [Internet]. Social Care Institute for Excellence (SCIE). 2022 [cited 2023Mar30]. Available from: <https://www.scie.org.uk/mca/dols/at-a-glance>

**ROOM 204 - SEPTEMBER 20, 13:00-14:15**

**O-003 Hospital-Induced Immobility – A Backstage Story of Lack of Chairs, Time, and Assistance**

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**Introduction**Inactivity and bedrest during hospitalisation have numerous adverse consequences, and it is especially important that older patients are mobile during hospitalisation. This study aimed to identify whether the introduction of formal education of clinical staff and a Mobilisation Initiative (MI) could increase mobilisation of patients in a geriatric and a medical ward. Furthermore, to explore patients' and health care staffs' view on facilitators and barriers for mobilisation during hospitalisation.  
**Methods**The study was a pragmatic clinical study. Both qualitative and quantitative methods were used. The patients' level of mobilisation was obtained through short interview-based surveys and observations. Focus group interviews and formal education of clinical staff was initiated to increase awareness of mobilisation along with the implementation of a MI.  
**Results**596 patient surveys were included. Patients in the geriatric (50%) and the medical (70%) ward were able to independently mobilise. The highest percentage of patients sitting in a chair for breakfast and lunch in the geriatric ward was 57% and 65%, and in the medical ward 23% and 26%, respectively. A facilitator for mobilisation was interdisciplinary collaboration and barriers were lack of chairs and time, and the patients' lack of help transferring.  
**Key conclusions**This study adds new knowledge regarding the lack of in-hospital mobilisation in geriatric and medical departments. Mealtimes are obvious mobilisation opportunities, but most patients consume their meals in bed. A potential for a MI is present, however, it must be interdisciplinarily and organisationally anchored for further investigation of effectiveness.

**ROOM 204 - SEPTEMBER 20, 13:00-14:15**

**O-004 Diagnostic yield of coupled digestive investigations in iron deficiency of elderly patients**

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**Introduction** Iron deficiency is frequently encountered in elderly. Various international learned societies recommend endoscopic digestive investigations to explore iron deficiency, with or without anemia. Our study aims to evaluate the diagnostic yield and safety of coupled digestive investigations (gastroscopy, and colonoscopy or computed tomography virtual colonoscopy ) in cases of iron deficiency in the elderly, for whom very little specific data are available. **Methods** Multicenter retrospective study conducted on patients over 75 years of age hospitalized in acute geriatric units between January 01, 2013 and December 31, 2017, and with iron deficiency explored by gastroscopy and colonoscopy, or gastroscopy and computed tomography virtual colonoscopy. The main objective was to evaluate the diagnostic yield of coupled digestive investigations. The explorations performed were considered contributory if a digestive lesion of the upper or lower digestive tract, explaining the iron deficiency, was found. The secondary objectives of the study were :  
- assess the occurrence of complications related to digestive investigations, as well as the number of incomplete colonic preparations. - identify predictive factors for the overall diagnostic yield of digestive explorations - identify predictive factors for the diagnosis of digestive cancer. **Results** 439 patients over 75 years of age with iron deficiency explored by coupled digestive investigations were included. Complications related to colonic preparation, anesthesia or the procedure itself occurred in 5% of cases. 18% of colonoscopies were non-contributory because they were incomplete. A lesion explaining the iron deficiency was found in 70% of cases. 57 malignant lesions (5 gastric cancers and 52 colorectal cancers) were found. Several types of lesion in the same patient were found in 88 cases. No clinical or biological features were found to predict overall diagnostic yield. In multivariate analysis, the factors associated with the diagnosis of digestive cancer were age, weight loss, hemoglobin level, antiplatelet aggregation and anticoagulant use, and male gender. **Discussion** About the diagnostic yield of coupled digestive investigations in case of iron deficiency, our results are in line with the literature, which notes a rate of diagnosis of potentially responsible digestive lesions of 63% to 87% of cases in elderly patients. The rate of complications is low, and simple treatment is usually possible (ulcerative lesion, Helicobacter Pylori infection, angiodysplasia or polyp). These explorations also frequently enable the diagnosis of cancer that may be at an early stage and therefore still curable, or with a significant prognostic impact on management. As in our study, no predictive factor for the diagnostic yield of digestive tract investigations has been identified in the literature. This suggests that iron deficiency should not be overlooked, and should be investigated even in the absence of anemia, and even in the oldest patients. We have highlighted certain factors associated with the diagnosis of digestive cancer in elderly, which are rarely investigated in other studies. Further studies on this subject could be of interest. **Conclusion** Coupled digestive investigations are efficient and safe in patients over 75 years of age with iron deficiency.

**ROOM 204 - SEPTEMBER 20, 13:00-14:15**

**O-005 Predictors of avoidable and unavoidable hospitalizations in older adults: results from a Swedish population-based study**

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Introduction: Older adults frequently have complex health and social needs, which can result in multiple transitions across care settings, including an increased risk of avoidable hospitalizations. Therefore, our objective was to characterize older adults' risk associated with avoidable and unavoidable hospitalizations with a focus on avoidable hospitalizations due to chronic or acute causes. Method: The study used data from the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K), in Stockholm, to evaluate transition across chronic avoidable hospitalization, acute avoidable hospitalization, and unavoidable hospitalization in a sample study of 3067 individuals over 60 years of age. Results: 26% of the study participants experienced at least one avoidable hospitalization. Specifically, 18% of them experienced at least one due to chronic cause and 11% due to acute cause. Formal care was related to a higher risk of the transition to unavoidable hospitalization (HR 1.09). Informal care was associated with a higher risk of chronic avoidable hospitalization (HR 1.73). Multimorbidity or a slow gait speed generally increased the risk of avoidable and unavoidable hospitalization (HR range 1.17-2.38). Cognitive impairment was associated with a lower hazard of having avoidable chronic and unavoidable hospitalization (HR range 0.52-0.84). Key Conclusion: The study found that a significant number of older adults were hospitalized for avoidable reasons and that various factors within their control were linked to both avoidable and unavoidable hospitalizations. These findings highlight the importance of targeted interventions to prevent avoidable hospitalizations in older adults and improve their overall care outcomes.

**ROOM 204 - SEPTEMBER 20, 13:00-14:15**

**O-006 Optimizing Pharmacotherapy And Deprescribing Strategies In Older Adults Living With Multimorbidity And Polypharmacy: EUGMS SIG On Pharmacology Recommendations.**

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Introduction: Inappropriate polypharmacy is highly prevalent among older adults and presents a significant healthcare concern. Conducting medication reviews and implementing deprescribing strategies in multimorbid older adults with polypharmacy is an inherently complex and challenging task. Methods: The Special Interest Group on Pharmacology of the European Geriatric Medicine Society has formulated recommendations to improve prescribing medications in older, multimorbid adults with polypharmacy. Our recommendations are based on a literature review and expert knowledge on medication review and deprescribing. Results: Current evidence demonstrates a need for a multifaceted and wide-scale change in education, guidelines, research, advocacy, and policy to improve the management of polypharmacy in older people, and to make deprescribing part of routine care for the ageing generations to come. Key conclusions: Our recommendations can promote appropriate drug prescribing, reduce inappropriate polypharmacy, and improve patient outcomes. In addition, our recommendations aim to enhance the evidence base, improve (de)prescribing practices, and optimize interventions for older adults with multimorbidity and polypharmacy.

**ROOM 205 - SEPTEMBER 20, 13:00-14:15**

**O-007 Association Between The Absence Of Fever In S. Aureus Bacteremia And In-Hospital Death: VIRSTAge, An Ancillary Study From A Prospective And Multi-Center French Cohort.**

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**INTRODUCTION** Older people are at greater risk of developing S. aureus bacteremia (SAB), and are less likely to develop signs of infection such as fever, which may increase diagnostic, and antibiotic initiation delay and consequently mortality. Therefore, this study was designed to determine whether the absence of fever was associated with in-hospital death in patients with SAB. **METHODS** This ancillary study of the French multicenter VIRSTA cohort enrolled 2008 patients with incident SAB between 2009 and 2011. Patients' characteristics were compared according to fever status and logistic regression analyses were performed to evaluate the association between fever status and in-hospital death. **RESULTS** Patients' mean age was 65.1 (17.2) and 713 (35.5%) were women. Absence of fever was documented in 233 (11.6%) patients. The no-fever group was older [69.3 (14.5) vs. 64.6 (17.4),  $p < .001$ ], had more comorbidities [1.6 (1.1) vs. 1.4 (1.2),  $p = 0.041$ ], less echocardiograms (59.7% vs. 67.8%,  $p = 0.016$ ), and longer delays from symptom onset to treatment [2.9 (11.5) vs 2.3 (4.5) days,  $p = 0.037$ ]. The no-fever status was associated with in-hospital death after adjusting for confounding variables including the delay before initiating treatment (aOR 1.65; 95% CI, 1.07-2.53;  $p = 0.021$ ). **KEY CONCLUSIONS** Absence of fever in the context of SAB was associated with higher mortality after adjusting for confounding variables including the delay before treatment, suggesting that absence of fever is a sign of vulnerability. Fever should not be a determining factor to start a diagnostic approach especially in the older population.

**ROOM 205 - SEPTEMBER 20, 13:00-14:15**

**O-008 Prevalence of Missed Nursing Care at a University Hospital – a Survey**

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Introduction: Nurses faced with multiple demands in hospitals are often compelled to prioritize nursing care. Knowledge about Missed Nursing Care (MNC) provides insight into whether necessary nursing care is delivered and what is left undone. The aim was to investigate the prevalence of MNC in medical wards, with approximately 60% of the patients aged 65 years or older. Methods: The design was a cross-sectional survey including nursing staff providing direct patient care across 21 medical wards for adults at a single tertiary university hospital in Denmark. The nurses were invited by email to respond anonymously to the 'MISSCARE Survey' in November and December 2020. Nurses were asked to rate how frequently the staff missed 25 necessary nursing elements in their ward. Results: In total, 42% of nurses responded to the questionnaire. More than two-thirds of the nurses reported that patient bathing (79%), emotional support (77%), ambulation (77%), documentation (73%) and mouth care (71%) were the most frequently missed elements of nursing care. Nursing care less missed were patient assessment (10%), staff's hand washing (12%), setting up meals for patients who feed themselves (25%), bedside glucose monitoring (26%), and vital signs assessed (28%). Key conclusions: Nurses prioritize nursing care. Nursing elements to avoid potentially life-threatening situations and nursing related to treatment observations were rarely missed, while nursing care mainly visible to solely patient and nurse were most often missed. Patient outcomes related to care left undone need further research.



**ROOM 205 - SEPTEMBER 20, 13:00-14:15**

**O-009 A retrospective evaluation of the sensitivity and specificity of age-adjusted D-dimer for the exclusion of pulmonary embolism at Mater Dei Hospital**

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**Introduction** A D-dimer level of  $<500 \mu\text{g/L}$  can safely rule out a PE in patients having a low clinical pretest probability. Studies have shown that D-dimer rises with age, resulting in higher false-positive rates in the elderly [1,2]. This will lead to further investigation using computed tomography pulmonary angiography (CTPA) which may have complications, especially in the elderly population. Therefore, the idea of an age-adjusted D-dimer (AADD) has been explored consisting of a cutoff  $<(\text{age} \times 10) \mu\text{g/L}$  in patients  $>50$  years of age. In this study, we investigated whether AADD could have been safely used to exclude PE in patients at Mater Dei Hospital, Malta. **Method** A retrospective list of patients who underwent CTPA between the months of June and August 2022 was obtained. The exclusion criteria included patients  $<50$  years of age, patients with no D-dimer taken, patients with a D-dimer level  $<500 \mu\text{g/L}$  and patients with a Wells score  $>4$  (likely PE). The AADD was calculated for each patient to help determine the difference in specificity for diagnosing PE. **Results** In total 847 CTPAs were performed over the study period. After application of exclusion criteria, there were 291 patients left in the final low-risk patient cohort. The overall positive diagnostic rate of 11.68% was seen amongst this low-risk patient cohort. The sensitivity of AADD was 94% (95% CI 80% to 99%) and specificity was 19% (95% CI 15% to 25%). The positive predictive value was 13.40% (95% CI 12.24% to 14.63%) and the negative predictive value was 96.20% (95% CI 86.43% to 98.99%) 52 patients had a D-Dimer  $\geq 500 \mu\text{g/L}$  but less than the AADD cut-off. Of these, 2 patients had a PE corresponding to a failure rate of 3.85%. One PE was segmental in the context of COVID-19 infection and the other was a sub-segmental PE. **Key Conclusions**-AADD demonstrated a reduction in false-positive results, sparing patients from unnecessary CTPAs.-AADD adoption would decrease radiation exposure, contrast use, and hospital costs, benefiting the elderly with higher risks of contrast-induced nephropathy and avoiding transfers from long-term care facilities. **References** 1. Harper PL, Theakston E, Ahmed J, Ockelford P. D-dimer concentration increases with age reducing the clinical value of the D-dimer assay in the elderly. Intern Med J2007;37:607-13. 2. Righini M, Le Gal G, Perrier A, Bounameaux H. The challenge of diagnosing pulmonary embolism in elderly patients: influence of age on commonly used diagnostic tests and strategies. J Am Geriatr Soc2005;53:1039-45

**ROOM 205 - SEPTEMBER 20, 13:00-14:15**

**O-010 External Validation of FAINT Score in Older Adults Presenting to an Academic Tertiary Care Center with Syncope**

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Introduction: Syncope in older adults ( $\geq 65$  years) is associated with increased mortality, irrespective of the cause. Risk stratification of older adults presenting to the ED with syncope remains challenging. We aim to externally validate the FAINT score as a risk stratification tool to predict short-term adverse outcomes in older adults. Methods: In this single-center retrospective cohort study, we evaluated 350 patients  $\geq 65$  years who presented to a tertiary care ED (Emergency Department) from 01/01/2018 to 12/31/2019 with a primary diagnosis of syncope. Patients with confirmed non-syncopal syndromes, acute medical conditions, and drug or alcohol use prior to the event were excluded from the study. Patients were risk stratified into high or low risk based on the FAINT score. Composite outcome analysis was based on adverse events within 48 hours and 30 days of syncope. It included death, myocardial infarction, arrhythmia, pulmonary embolism, stroke, aortic dissection, serious hemorrhage, any condition causing a return ED visit, hospitalization, or procedural intervention. Using a univariate logistic regression model, we explored the FAINT score's ability to predict the outcomes assessed. The receiver operator curve (ROC) was examined, and the area under the curves (AUC) was calculated. Results: For predicting 48-hour composite outcome High-Risk FAINT Score ( $>0$ ) had an AUC of 0.6120 (95% CI: 0.510-0.715) and Odds Ratio of 5.19 (95% CI: 1.54-17.45). For the 30-day composite outcome, the AUC of the FAINT Score was 0.61 (95% CI: 0.530-0.682), and the Odds Ratio of 4.83 (95% CI: 2.23-10.49) in predicting high-risk Syncope. Atrial fibrillation/flutter on EKG, CHF, antiarrhythmic, systolic blood pressure  $<90$  mm Hg at triage, and associated chest pain highly correlated with 48-hour outcomes. An EKG abnormality, heart disease history, severe pulmonary hypertension, BNP  $> 300$ , vasovagal predisposition, and anti-depressants highly correlated with 30-day outcomes. Conclusions: Performance and accuracy of the FAINT score were suboptimal in identifying high-risk older adults with short-term adverse outcomes. We identified significant clinical and laboratory information that may help predict short-term adverse events in a geriatric cohort. |

**ROOM 205 - SEPTEMBER 20, 13:00-14:15**

**O-011 The impact of a bespoke nursing home team in on nursing home residents mortality in a tertiary referral university teaching hospital**

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Nursing Home Residents (NHR) are the frailest group of older people in society and require a gerontologically attuned approach to address multiple challenges presented to the practitioner. Due to multiple comorbidities and increased frailty, this group are the most vulnerable for increased morbidity and mortality during acute care episodes. Methods Mortality rates on all NHRs attending a tertiary referral university teaching hospital was collected from 2015-2022. Impact of a bespoke nursing home specific service on hospital mortality rates are presented in this abstract. Results Over the years 2015 to 2018, there was a total of 875 NHR admitted to the acute hospital with an inpatient mortality rate of 12% (n=133). A Nursing Home specific gerontologically attuned service was then developed in 2019. Over the next 4 years from 2019 to 2022, number of admission was similar (n=886). However, in patient mortality rate was reduced, from 12% to 8% (n=75). There was a marked increase in mortality rates in 2020 with the impact of COVID-19. The reduction in mortality could be due to new measures put in place to support nursing homes to provide end of life care on site. Conclusion The impact of a bespoke nursing home liaison team has reduced the rate of inpatient mortality rates of NHR. The complexity and multiple comorbidities of this cohort of patients requires a timely, comprehensive gerontological approach in order to provide holistic care in throughout this acute admission and end of life journey.

**ROOM 205 - SEPTEMBER 20, 13:00-14:15**

**O-012 Physical restraint use in older patients: preliminary results from the 2017 Italian Delirium Day initiative.**

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Introduction: There is an ongoing and enduring debate surrounding the use of physical restraints (PR) and the potential for employing alternative approaches to minimize their use. The aim of the present study is to investigate the clinical, functional and therapeutical factors associated to the use of PR in the cohorts of people recruited in the 2017 "Delirium Day" (DD) initiative. Methods: The analyses were conducted using data from the 2017 "DD", a point-prevalence study on patient aged >65 years who were admitted to acute hospital medical wards, emergency departments, rehabilitation wards, nursing homes and hospices in Italy in 2017. Descriptive analyses were performed based on groups categorized by PR use and logistic regression models were used to explore the association between PR and significantly related clinical, functional, and therapeutical variables. Results: A sample of 2844 patients was analysed. Overall, 52.3% of individuals were subjected to at least one type of PR, with bedrails being the most common (98.2%). Patients with older age, higher comorbidity, greater dependence in the basic activities of daily living, delirium, the use of antibiotics, antipsychotics, and antidepressants on the index day were associated with the use of at least one PR at the logistic regression analysis; the highest OR was found for delirium (OR=3.018, 95%CI: 2.249-4.051). Discussion and conclusion: We provided an overview of the clinical, functional, and pharmacological variables associated with the use of PR. Among all the variables, the presence of delirium appears to be the most significantly associated factor with PR use.

**ROOM 204 - SEPTEMBER 20, 14:20-15:35**

**O-013 Relationship between hemoglobin and grip strength in older adults – the ActiFE Study.**

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Background: Although anemia is associated with low muscle strength and sarcopenia, hemoglobin (Hb) has been rarely studied in this context. We analyze the association between Hb and grip strength (GS) in community-dwelling older adults taking into account iron storage. Methods: We used data from a German cohort of adults  $\geq 65$  years, excluding those with CRP  $> 10$  mg/l. GS (kg) was measured using a Jamar dynamometer. The association was analyzed using multiple linear regression, adjusted for established confounders. Due to interaction, age-stratified ( $<80$ ,  $80+$ ), and sex-stratified analysis in those  $<80$  years old were performed. For men  $< 80$  years effect modification with ferritin was detected. Results: In total, 1297 participants were included in this analysis (mean age 75.5 years, 549 (42.3%) women, 912 (70.3%)  $<80$  years). On average Hb and GS were 14.9 g/dl and 41.3 kg for men, 13.9 g/dl and 25.1 kg for women. Hb was significantly associated with GS only among women  $<80$  years ( $\beta$  0.92 (95% CI 0.20, 1.65)). For men  $<80$  years, the association was significant when ferritin was  $\geq 300$  ng/ml ( $\beta$  2.04 (95% CI 0.92, 3.16)). No association was detected among those  $80+$ . Conclusions: Our data show an association between Hb and GS only in women  $<80$  years old. For men  $<80$  years, the association was only significant in those with ferritin levels  $\geq 300$   $\mu$ g/l. By a high prevalence of anemia and decreased hand GS in older adults further analyses investigating a possible causal relationship and more specific parameters such as transferrin saturation are warranted.

**ROOM 204 - SEPTEMBER 20, 14:20-15:35**

**O-014 Protein epigenetic scores and all-cause mortality in the longitudinal Swedish Adoption/Twin Study of Aging (SATSA).**

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**Introduction** DNA methylation (DNAm) has a functional role in gene regulation, and it has been used to estimate a variety of human characteristics. Variation in DNAm is associated with aging and variability of the proteome. Therefore, understanding the relationship between blood circulating proteins, aging, diseases, and mortality is critical to identify disease-causing pathways. Thus, this study aimed to investigate the association between protein epigenetic scores (EpiScores) with all-cause mortality in the longitudinal Swedish Adoption/Twin Study of Aging (SATSA). **Methods** We included information from 509 individuals. Our exposures were 109 protein EpiScores generated using longitudinal DNAm data and prediction models by the MethylDetectR shiny app. All-cause mortality was the outcome of interest. To estimate the proteins' EpiScores associations with all-cause mortality, we fitted Cox proportional hazard models adjusted for age, sex, body mass index, and smoking. We also conducted co-twin control analyses to control for shared familial factors. **Results** In total, 19 protein EpiScores (e.g., CRP and Stanniocalcin-1) were associated with a higher risk for all-cause mortality. In contrast, 12 protein EpiScores (e.g., Osteomodulin and Insulin-receptor) were associated with a lower risk for all-cause mortality. The co-twin control analyses showed higher hazard ratios for monozygotic twins, however not significant. **Conclusions** The protein EpiScores involved in immune response were associated with a higher risk of all-cause mortality. Conversely, the protein EpiScores within cell signalling/neural guidance/vascular and neural cell adhesion/neurogenesis pathways were associated with a lower risk of all-cause mortality. Overall, it is possible to predict protein levels from DNAm data that show clinical relevance.

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**O-015 Long-term changes in cardiovascular risk factors in the context of dementia prevention trial– the Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER)**

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Introduction: The Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER) showed that a 2-year multidomain lifestyle intervention among older people benefits cognition and cerebrovascular morbidity. We investigated long-term changes in CVD risk factors during and after the intervention. Methods: FINGER included 1260 individuals aged 60-77 years at risk of dementia, randomized into intensive lifestyle intervention or general health advice. Fasting blood sampling and oral glucose tolerance test (OGTT) were executed three times during the intervention (baseline, years 1 and 2; n=1105) and twice during the extended follow-up (years 5 and 7; n=842) periods. The analyses were conducted using the linear mixed effects models. Results: BMI decreased in both groups through the follow-up, with more weight loss in the intervention group during the active period ( $p=0.003$ ). Levels of total and LDL cholesterol remained stable, but HDL increased, without significant between-group differences. Fasting glucose and OGTT increased over time, but HbA1c decreased during the active period in both groups. Systolic blood pressure decreased during the active period, with more decrease in the intervention group at the first year ( $p=0.004$ ). Key conclusions: A multidomain lifestyle intervention for a group of older adults with vascular risk factors resulted in steeper short-term decreases in BMI and systolic blood pressure than participation in the control receiving general health advice, which also lowered these outcomes. No differences in CVD risk factors were detected between the groups in longer term, despite the benefits earlier shown for cognition and CVD morbidity.

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**O-016 The Growing Impact of Ethnic Diversity on Acute Stroke Presentations in an Irish Population**

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**Introduction:**The Irish population is changing rapidly to become more ethnically diverse. Differences in race and ethnicity are associated with variability in risk of disease, access to medical care and treatment. Recent studies demonstrate the variability of aetiology, presentation and mortality between different ethnic groups presenting with acute stroke. **Methods:** We reviewed our hospital stroke registry over a 24-month period (January 2021 to December 2022). Key parameters assessed included country of birth, ethnicity, clinical presentation, time of symptom onset, time of presentation to hospital, aetiology and subtype of stroke, stroke management and clinical outcomes. **Results:**Of the 504 acute strokes admitted to our hospital in the 2 year period, non-ethnically Irish patients made up 13.3% (n = 67). The average age of non-ethnically Irish stroke presentations was younger than Irish stroke presentations (62 versus 69 years). Hemorrhagic strokes were more common in the non-Irish population (15.8% in non-Irish cohort vs 7.6% in Irish cohort). Median time from symptom onset to presentation to hospital was greater in the non-ethnically Irish cohort, with 18% (n=6) presenting to hospital within the thrombolysis window of 4.5 hours, compared to 31.5% (n=67) of the ethnically Irish cohort. **Key Conclusions:**This study identifies the continued disparities in acute stroke presentation between the Irish and non-Irish population presenting to a Dublin hospital. We demonstrated the importance of further research to record the variability of strokes in different ethnic groups in order to adequately plan primary and secondary stroke care. The disparities in access and presentations warrant further study but indicate the need to provide targeted public health campaigns to remain inclusive to Ireland's growing and increasingly diverse population.



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**O-017 Factors related to the event-free survival in nonagenarians with acute myocardial infarction.**

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**Introduction** Myocardial infarction (MI) has been stated as a major cause of death in developed countries. The aim of the present study was to evaluate factors related to the event-free survival in patients aged at least 90 years diagnosed with acute MI. **Methods** We included all patients aged at least 90 years hospitalized for acute MI (the ICD-10 codes I21-I22) in Poland from 2014 to 2020 and reported to the National Health Fund (NHF) database. **Results** A total of 14970 patients (mean age, 92.7 ±2.3 years, 4 666 men/10 304 women ) were hospitalized for acute MI. Factors independently related to in-hospital mortality were age per one year - OR 1.06 (1.04-1.08, CI 95%), stroke in the history 1.22 (1.01-1.47), male sex OR 0.88 (0.81-0.95), hypertension OR 0.88 (0.75-0.89), MI or percutaneous coronary intervention (PCI) in the history, respectively OR 0.75 (0.65-0.88) and OR 0.60 (0.49-0.75), cardiology or internal medicine department, respectively OR 0.64(0.56-0.74) and OR 0.74 (0.63-0.85). Factors independently related to post-hospital all cause death were: age -per one year - HR 1.06 (1.05-1.07), male sex HR 1.14 (1.09- 1.20), hypertension HR 0.89 (0.84 - 0.92), invasive management HR 0.61(0.58-0.64), PCI in the history HR 0.88 (0.8-0.97), cardiology department HR 0.90 (0.86-0.95), participation in Managed Care Programme 0.74 (0.57-0.96). **Conclusions** Age per one year remains to be a main predictor of medical outcomes in patients with MI. Hypertension and treatment proceeded in cardiology department or internal medicine department are factors related to event-free survival in nonagenarians with MI.

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**O-018 Direct Oral Anticoagulant Prescribing Practices and Acute Stroke Presentations in Older Irish Adults**

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Introduction: Since their introduction, direct-acting oral anticoagulants (DOACs) have been seen as a user-friendly and effective alternative to vitamin K agonists for the prevention of stroke associated with non-valvular atrial fibrillation. Historically, older adults were under-anticoagulated due to fears of drug interactions and the need for therapeutic monitoring. We aimed to assess the impact of direct-acting oral anticoagulants on the rate of stroke presentations in older adults. Methods: Post-hoc analysis of the published Irish National Stroke Audit (2013–2021) data was carried out. The audit collects stroke data from all hospitals providing acute stroke care in Ireland. Results: Between 2013 and 2021, the percentage of people with known atrial fibrillation who were anticoagulated increased from 55.6% to 91.2%. There was a statistically significant negative correlation between the percentage of people over 80 who were anticoagulated and the proportion of strokes in those over 80 ( $r=-0.769472455$ ,  $p=0.015$ ). Key Conclusions: The introduction of DOACs in Ireland has led to increased anticoagulation prescribing for older adults with NVAf, leading to an overall trend towards reduction in the proportion of older people presenting with acute stroke.

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**O-019 GEMINI: Developing an Atlas of Multiple Long-Term Conditions**

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Background: The ageing population has increasingly complex health needs. Multimorbidity, defined as the co-existence of two or more health conditions, is increasing globally, making it a research priority. GEMINI combines observational cohort data and genetic approaches to aim to understand shared pathological mechanisms of long-term conditions. Methods: Chronic conditions were defined by a diverse research team including clinicians and patient advisors. We estimated prevalence of conditions in two population-representative primary care cohorts. Single nucleotide polymorphism (SNP)-based heritability and pairwise genetic correlations were estimated using independent data from UK Biobank and FinnGen cohorts. Results: 76 conditions were defined as chronic with prevalence >0.5%. Multiple pairs of conditions showed genetic correlation. This was both within known disease domains: for example, in UKB coronary artery disease and peripheral arterial disease had a high genetic correlation (0.81; 95% CI=0.68-0.92). Genetic correlations were also identified across disease domains, for example between asthma and ischaemic stroke the combined genetic correlation estimate was 0.25, with significant genetic correlation in both UK Biobank (p value=2\*10<sup>-5</sup>) and FinnGen (p value=2\*10<sup>-3</sup>). Another example is type-2 diabetes and osteoarthritis (genetic correlation=0.36; 95% CI=0.31-0.41), which may be explained by BMI. Conclusions: We have systematically analysed the shared genetics between multiple long-term conditions to develop an atlas of multimorbidity. We have identified novel pairs with previously unexplored genetic correlation. Next, we aim to understand the causal pathways of pairs of conditions and outcomes prioritised by patient and clinician advisors. Through this work we hope to identify potentials for clinical intervention.

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**O-020 Exploring the knowledge and perceptions of middle and older aged men in socially deprived areas of brain health and dementia**

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**Introduction:** It is estimated that 40% of dementia is attributable to modifiable risk factors, but risk reduction messaging may not reach people living in low socio-economic status (SES) areas, or with less education. Moreover, men are known to be reluctant to engage with health screening/assessments. This study therefore aimed to explore the knowledge and perceptions of middle and older age men in low-SES areas about brain health and dementia. **Methods:** Focus groups were conducted with men in low SES areas in an Irish city. Discussions were transcribed verbatim; a thematic approach was used to analyse the data. **Results:** Twenty-four participants took part, across five focus groups. 'Brain health' was often described in terms of mental health (e.g., avoiding anxiety). Although physical activity was considered important, cognitive activities and social engagement were prioritised over cerebrovascular risk factor modification; smoking and alcohol intake were under-recognised as risks. The term "dementia" was poorly understood by some; while all had heard of "new medications to cure dementia". Barriers to lifestyle changes included physical health, cost, and socio-cultural barriers including technology, masculinity, retirement, and distrust of the health service. Motivators included experience of ill-health, wanting to keep well 'for family', and engaging with younger generations. **Conclusions:** This study is the first to explore the understanding and perceptions of brain health in men in low SES areas in Ireland. The findings can support healthcare professionals, in partnership with key stakeholders, to design tailor-made programmes on brain health and dementia risk reduction for this group.

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**O-021 Frailty and behavioral and psychological symptoms of dementia: a single center study**

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**Background:** Behavioral and Psychological Symptoms of Dementia (BPSD) frequently arise in the disease trajectory, with negative outcomes and considerable distress. **Methods:** aim of this retrospective study was to evaluate the correlation between frailty and BPSD in a population of older patients with dementia. BPSD were classified in three clusters: "mood/apathy", "psychosis" and "hyperactivity". Using the Clinical Frailty Scale (CFS), patients were categorized as "severely frail", "mild/moderately frail" and "robust" (CFS  $\geq 7$ , 4-6 and  $\leq 3$ , respectively). In order to better understand the complex pattern of relationships between the different factors, we performed a network analysis. **Results:** 209 patients (71.3% women, mean age  $83.24 \pm 4.98$  years) with a clinical diagnosis of dementia were enrolled. The most represented group was the mild/moderately frail one (n=155, 74%); lower numbers were seen in the robust (n=18, 9%) and severely frail (n=36, 17%) ones. Among the "severely frail" the percentage of BPSD was higher compared to the other groups. A significant correlation between frailty and "hyperactivity" cluster emerged, both at baseline and follow up visits ( $p < 0.001$ ,  $p = 0.022$ ,  $p = 0.028$  respectively). The degree of frailty related to BPSD of the hyperactivity cluster, such as agitation and motor aberrant activity. **Conclusion:** in this study an association between frailty and the number of neuropsychiatric symptoms of the "hyperactivity" cluster was found; whether the loss of independence is a possible cause of frailty or viceversa is still to be determined. The assessment of frailty may help identifying patients at risk of developing BPSD, suggesting a time-window to target early intervention

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**O-022 Validation of a new, three-item cognitive screening instrument for use in the Survey of Health, Ageing and Retirement in Europe (SHARE-Cog)**

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Background: Cognitive impairment is common among older adults. More comparable and standardised assessments of cognitive decline are needed for epidemiological studies. We developed and validated a novel, short, cognitive screen instrument (CSI) for the Survey of Health, Ageing and Retirement in Europe (SHARE). Methods: Three subtests were available across all main waves of SHARE (2004-2020): 10-word registration, verbal fluency (animal naming) and 10-word recall. These were combined into the 3-item SHARE Cognitive Screen (SHARE-Cog). Diagnostic accuracy for participant-reported dementia was compared to the 10-point Cognitive Screener (10-CS), Mini-Cog, Six-Item Screener (SIS) and three cognitive batteries mimicking the Qmci screen, MMSE and MoCA. The Area Under the Curve (AUC) of Receiver Operating Characteristic curves were used to assess diagnostic accuracy. Subjective memory complaints (SMC) were defined by "fair" or "poor" self-rated memory. Results: The sample included 24,124 people. The mean age was 75 years and 56% were female. The SHARE-Cog had good diagnostic accuracy for dementia (AUC=0.82, 95% CI:0.80-0.84), which was more accurate than the 10-CS (AUC=0.80,  $p=0.003$ ), Mini-Cog (AUC=0.77,  $p<0.001$ ) or SIS (AUC=0.79,  $p<0.001$ ) and similar to the other cognitive batteries ( $p$ -values  $>0.05$ ). In its ability to differentiate dementia from SMC and SMC from normal cognition, the SHARE-Cog had similar or better diagnostic accuracy compared with the other CSIs. Conclusions: The SHARE-Cog is available in all main waves of SHARE and has good diagnostic accuracy for dementia and SMC compared with other available tests, making it useful for epidemiological studies comparing cognitive decline between countries and over time in Europe.

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**O-023 Plasma p-tau<sub>217</sub> is associated to cerebrospinal fluid A $\beta$ <sub>42</sub> concentrations and incident Alzheimer's Disease in very old men**

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**Introduction** Increased concentrations of plasma phosphorylated tau (p-tau) have been shown to be robust biomarkers of Alzheimer's Disease (AD) pathology. These associations have mainly been described in strictly selected cohorts and their full potential need to be verified also in population-based cohorts, not the least in very old persons, i.e. those with the highest AD incidence. We examined the longitudinal associations between plasma p-tau<sub>217</sub> and AD, and the cross-sectional associations with cerebrospinal fluid (CSF) amyloid beta (A $\beta$ <sub>42</sub>) and p-tau<sub>181</sub> concentrations, in a very old population. **Methods** Concentrations of plasma p-tau<sub>217</sub> were analyzed in 505 men aged approximately 82 years. Incident dementia diagnoses were identified through medical records review up to 20 years follow up. A subgroup of 36 men underwent lumbar punctures with analyses of CSF AD biomarkers together with plasma p-tau<sub>217</sub> at age approximately 87-89 years. Plasma p-tau<sub>217</sub> concentrations were measured using immunoassays and CSF A $\beta$ <sub>42</sub> and p-tau<sub>181</sub> concentrations using ELISA. **Results** Levels of plasma p-tau<sub>217</sub> were higher among individuals who developed AD than among the cognitively healthy (n=73 vs 344, Mann Whitney U test: p<0.001). Concentrations of plasma p-tau<sub>217</sub> strongly correlated with CSF A $\beta$ <sub>42</sub> and CSF p-tau<sub>181</sub> in cross-sectional analysis (Spearman  $\rho$ : rho = -0.68, p<0.001 and rho = 0.33, p<0.05, resp.) **Key Conclusions** Elevated plasma p-tau<sub>217</sub> levels may precede development of AD also in very old age. Plasma p-tau<sub>217</sub> and CSF A $\beta$ <sub>42</sub> concentrations are strongly correlated also in the very old, suggesting that plasma p-tau<sub>217</sub> concentrations primarily reflect brain amyloid beta deposition.

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**O-024 Cholinesterase inhibitors are associated with slower cognitive decline in dementia with Lewy bodies**

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Introduction: Treatment with cholinesterase inhibitors (ChEIs) is often used in individuals with dementia with Lewy bodies (DLB), but long-term effects on cognition is lacking. Recent studies have shown associations with ChEI use and decreased risk of cardiovascular events and death in Alzheimer patients. This study explores the long-term effects of ChEIs on cognition, the risk for major cardiovascular events (MACE) and death in persons with DLB. Methods: The Swedish Dementia Registry (SveDem) was linked to several national registries. Data on persons with incident DLB and associations with ChEI use or not were collected as were MACE (the composite of hospitalization of myocardial infarction, congestive heart failure or stroke) and mortality. In an inverse probability of treatment weighting cohort, the associations were examined with mixed or Cox regression models. Results: In the weighed cohort 893 with incident DLB started on ChEI and 305 did not. During a median follow up time of 3.2 years, ChEI users showed slower cognitive decline (-1.4 MMSE points/y) compared to non-users (-2.8 MMSE p/y). Of the ChEIs, galantamine was associated with the slowest cognitive decline (-0.9 MMSE p/y). Compared to non-users, ChEI use was not associated with risk of MACE or death. Similar results were found in a 1:1 propensity score matched cohort. Conclusions: Long-term use of ChEI in persons with DLB was associated with slower cognitive decline where galantamine presented the strongest effect. In contrast to our previous findings in AD, ChEI use in DLB was not associated with reduced MACE nor mortality risk.



**ROOM 205 - SEPTEMBER 20, 14:20-15:35**

**O-025 Smoking and Risk of Dementia: The HUNT Study, Norway**

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Background: Even though smoking is considered a risk factor for dementia, uncertainty remains. The main objective of this study was to investigate smoking as an independent risk factor for all-cause dementia in a large longitudinal population-based cohort study. As a secondary objective we investigated the association between smoking and dementia subtypes. Methods: This study was based on data from the Trøndelag Health Study (HUNT). Participants' smoking status was collected at baseline (HUNT2, 1995-97), and their cognitive status assessed after two decades of follow-up (HUNT4 70+, 2017-19, N= 8532). Pack-years were calculated at HUNT4 (2017-19). Risk ratios (RR) were estimated by applying Poisson regression models after adjustment for covariates, with stratification by age ( $\geq$ / $<$ 85 years) and separate analyses for women and men. Results: Current smokers had a 31% higher dementia risk (RR 1.31, 95% confidence interval (CI) 1.12-1.52). Women  $<$ 85 had a 54% increased risk (RR 1.54, 95% CI 1.20-1.98). Men  $<$ 85 had a 36% increased risk (RR 1.35, 95% CI 1.01, 1.82). No associations were found for persons  $\geq$ 85. Current smokers had an increased risk for other dementias, but not for Alzheimer dementia in subgroup analyses. Former smoking and pack-years were not associated with dementia risk. Key conclusions: Current smoking was associated with higher dementia risk. This association was not found for persons  $\geq$ 85, probably due to death as a competing risk. Former smokers did not show increased dementia risk. Our results add to the literature an optimism about the effect of changing smoking habits and may encourage smoking cessation.

**ROOM 205 - SEPTEMBER 20, 14:20-15:35**

**O-026 Symptomatic and preventive medication use in community-dwelling older people with and without Alzheimer's disease**

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Introduction: Priorities of care among people with Alzheimer's disease (AD) may transition from prevention of chronic diseases to focus on symptomatic care for better quality of life. This study aimed to investigate longitudinal changes in symptomatic and preventive medication use among community-dwelling people with and without AD five years pre- and post-diagnosis. Methods: Retrospective matched cohort study comprising 58,496 people with AD and 58,496 people without AD in Finland from 2005-2010. Prevalence of symptomatic and preventive medication use were evaluated every six months from five years pre- to post-diagnosis and further stratified by age and sex. Results: Among people with AD, the prevalence of both symptomatic and preventive medications increased from five years before until the time of diagnosis. This increase was most pronounced in the oldest age group ( $\geq 85$  years) in comparison to younger age groups. After diagnosis, symptomatic medication use plateaued over the next five years, while preventive medication use gradually declined. While most symptomatic medication classes became less prevalent after AD diagnosis, use of paracetamol, antipsychotics, proton pump inhibitors, and opioids increased continuously post-diagnosis. Prevalence of preventive medication classes including antidepressants, calcium supplements, beta-blockers, and statins decreased following AD diagnosis. In contrast, people without AD had a continuous increase for both medication categories throughout the 10-year period. Conclusions: AD diagnosis is the key timepoint for change in symptomatic and preventive medication use. The time of AD diagnosis prompts for regular medication reviews to re-evaluate the appropriateness of each nominated treatment and better align regimens to individual priorities of care.

**ROOM 205 - SEPTEMBER 20, 14:20-15:35**

**O-027 Prevalence of Mild Cognitive Impairment (MCI) and probable Dementia in a selected cohort of senior citizens residents of Dar es Salaam, Tanzania**

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Background: Africa is rapidly undergoing demographic transition. Ageing Initiative in sub-Saharan Africa (AISA) is a programme that aims at analyzing biological, clinical, demographic and public health aspects associated with ageing process in Africa. We assessed prevalence of Mild Cognitive Impairment (MCI) and probable dementia incorporating adult residents of a sub-urb in Dar es Salaam city. Methods: A cross-sectional community screening was conducted in two villages at Ubungo ward. Mini-cog test was used as a screening tool. Demographic, past medical/surgical history, risk factors for cardio-metabolic risks were also assessed. Prevalence of MCI and dementia were outcome variables. Multivariable logistic regression model was fitted after appropriate model validation. Continuous data were summarized as median (with corresponding IQR) while categorical data as frequency (proportion). Unless otherwise specified,  $\alpha$ -level of 5% was used as a limit of type 1 error. All participants signed written informed consent prior to inclusion into screening. Results: We screened 912 adults. They had a median age of 67.1 (IQR: 64 - 70) years. M: F = 1:3.2. Prevalence of MCI and probable dementia were 71.2% (95% C.I.: 68.6% – 74.2%) and 34.1% (95% C.I.: 25.5% - 40.0%) respectively. Age (AOR= 1.45, 95% C.I.: 1.11 – 1.73) and systolic BP (AOR = 3.0, 95% C.I.: 2.4-3.6) were the most significant risk factors for MCI. Age (AOR: 2.03, 95% C.I.: 1.99-2.06), female gender (AOR: 1.2, 95% C.I.: 1.0-1.6) and diabetes mellitus (AOR: 1.01, 95% C.I.: 1.00-1.03) were significantly associated with probable dementia. Conclusion: MCI and probable dementia were highly prevalent. Cardiometabolic risks were associated with MCI and probable dementia

**ROOM 204 - SEPTEMBER 21, 08:30-09:45**

**O-028 Factors associated with changes in walking performance in individuals three months after stroke or TIA—secondary analyses from a randomized controlled trial of SMS-delivered training instructions**

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Introduction: After a stroke, individuals are predisposed to functional limitations and a sedentary lifestyle that may further jeopardize cardiovascular health. Objectives: To identify factors related to changes in walking performance in individuals three months after a stroke or TIA. Methods: This post-hoc analysis of a randomized controlled study included 79 community-living individuals, 64 (10) years, 37% women, who were acutely hospitalized because of stroke during 2016–2018. The major eligibility criterion was the ability to perform the 6-Minute Walking Test (6MWT, meters). The intervention group received standard care plus daily mobile phone text messages (SMS) with instructions to perform regular outdoor walking and functional leg exercises in combination with step counting and training diaries. The control group received standard care without restrictions on physical activity. Multivariate analysis was performed and age, sex, group allocation, baseline 6MWT, BMI, cognition, and chair-stand tests were entered as possible determinants for changes in 6MWT. Results: Multiple regression analyses showed that age ( $P < 0.001$ ), sex ( $P = 0.006$ ), baseline BMI ( $P < 0.001$ ), and baseline 6MWT ( $P < 0.001$ ), and possibly allocation to the SMS group ( $P = 0.06$ ) were associated with changes in 6MWT three months after the stroke event. The regression model described 37% of the variance in changes in 6MWT. Conclusions: Post-hoc regression analyses indicated that younger age, male sex, lower BMI, shorter 6MWT at baseline, and allocation to the SMS group contributed to improvement in walking performance at three months in patients with a recent stroke or TIA. These factors may be important when planning SMS or similar rehabilitation services.

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**O-029 Including older people in health and social care research: best practice recommendations based on the INCLUDE framework**

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**Introduction**Older people are often explicitly or implicitly excluded from research, in particular clinical trials. This means that study findings may not be applicable to them, or that older people may not be offered treatments due to an absence of evidence. The aim of this work was to develop recommendations to guide all research relevant to older people. **Methods**A diverse stakeholder group identified barriers and solutions to including older people in research. In parallel, a rapid literature review of published papers was undertaken to identify existing papers on the inclusion of older people in research. The findings were synthesised and mapped onto a socio-ecological model. From the synthesis we identified themes that were developed into initial recommendations that were iteratively refined with the stakeholder group. **Results**A range of individual, interpersonal, organisational, community and policy factors impact on the inclusion of older people in research. Fourteen recommendations were developed such as removing upper age limits and comorbidity exclusions, involving older people, advocates and health and social care professionals with expertise in ageing in designing the research, and considering flexible or alternative approaches to data collection to maximise opportunities for participation. We also developed four questions that may guide those developing, reviewing, and funding research that is inclusive of older people. **Key Conclusions**Our recommendations provide up to date, practical advice on ways to improve the inclusion of older people in health and care research.

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**O-030 DESCRIPTION OF SURVIVAL AND ANALYSIS OF PREDICTIVE SURVIVAL FACTORS FOR OLDER CANCER PATIENTS IN THE SONGALP COHORT (ONCOGÉRIATRIC FOLLOW-UP ON THE ALPINE SILLON: UCOGAlp)**

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**Introduction** – A third of patients diagnosed with cancer are 75 years of age and older, and cancer-related mortality increases with age. Predicting the risk of death in a comprehensive geriatric assessment (CGA) is a challenging exercise in this heterogeneous population. In addition to the recognized prognostic factors in oncology, the impact of the different CGA domains exploring fragility is to be specified. Our objective was to describe overall patient survival for all cancers, by most common type of cancer, and to study the factors predicting mortality. **Material and Method** – A retrospective observational study carried out in 5 centers in the French Alpine Arc, involving patients aged 70 and over, with cancer, referred for a thorough geriatric evaluation between January 2016 and December 2019. The main objective was to describe the overall patient survival of all types of cancer. The primary study endpoint was the time between the date of cancer diagnosis and the occurrence of death. Our secondary study endpoints were to describe overall survival in elderly patients with breast, colorectal, prostate and lung cancers; and finally, to identify among CGA and cancer data the factors predicting mortality. **Results** – 1272 patients were included in the study with a median age of 83 years. At 6 months, a mortality rate of 27% was observed. At 2 years, the overall survival rate was 40% for all cancers combined. For breast cancer, overall survival was 63%, for colorectal cancer 43%, for prostate cancer 41%, and for lung cancer 18%, at 2 years respectively. Independent mortality predictors for all cancers were the Performance Status (PS) > 0 (incrementally with maximum impact for PS = 4 with HR: 5.00; CI [2.72-9.19]), creatinine clearance < 30 ml/min (HR: 1.85; CI [1.31-2.63]), the existence of an inflammatory syndrome with a CRP ≥ 100 mg/l (HR: 1.80; CI [1.33-2.43]), the existence of malnourishment measured by a Mini-Nutritional Assessment (MNA) < 17 (HR: 1.56; CI [1.11-2.19]) and an albumin < 35g/l (HR: 1.27; IC [1.02-1.58] between 30 and 35 g/l and HR: 1.43; IC [1.10-1.87] if less than 30 g/l). A curative treatment goal (HR: 0.46; IC [0.33-0.64] for standard therapy and HR: 0.43; IC [0.32-0.59] for adapted therapy) as well as female gender (HR: 0.81; IC [0.67-0.99]) were significantly associated with survival. In our study, a lengthier delay between diagnosis and CGA and a poor performance on the Get Up and Go test (GUG) also appeared to be associated with better survival (HR: 0.62; CI [0.49-0.78] if delay ≥ 21-days and HR: 0.65; CI [0.43-1.00] if GUG ≥ 30 seconds). The study found no significant impact of age, metastatic status, comorbidities, G8 score, functional status, cognitive status, thymic status, monopodal support, gait speed, and hemoglobin. **Conclusion** – The population included in our study was representative of the elderly population of interest: in a state of health which was neither robust nor significantly deteriorated, for whom there are questions about the relevance of oncology treatment in terms of the balance between the expected benefits and risks. A high mortality rate of 27% was observed during the first 6 months after cancer diagnosis, followed by an overall patient survival rate of 40% for all types of cancers combined at 2 years. The identification of independent mortality predictors is a valuable guide in therapeutic decision-making. Further studies could clarify the impact of the various prognostic factors, in particular by studying these factors more specifically by type of cancer. **Keywords** – cancer, elderly, overall survival, mortality predictors, comprehensive geriatric assessment, therapeutic decision-making support

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**O-031 Natural History of Intrinsic capacity impairments in the INSPIRE ICOPE CARE cohort of real-life users of the health system in France.**

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**Introduction**Intrinsic capacity (IC) comprises the domains of cognition, locomotion, nutrition, sensory and psychological. From 2019, a stepwise approach to IC in clinical practice has been implemented as a standard of care in Southern France to screen for IC impairments (step 1), followed by an in-depth assessment, a care plan and monitoring of IC. This study aimed to describe the evolution of IC impairments and their implications for improving current practice.**Methods**We analysed IC impairments detected by a professional screening (ICOPE Step1) in real-life health system users of the INSPIRE ICOPE CARE cohort. We identified combinations of IC impairments (IC clusters) and followed their clinical evolution (incidence/reversibility). We tested the IC clusters' association with frailty (Fried's phenotype) and IADLs and ADLs disability. **Results**Over 20,000 participants were assessed (female 62.2%, mean age76.2 SD8.9), with a mean of 2.6 alerts and a mean interval of ~190 days between two screenings. Cognition and sensory alerts held the highest baseline frequency. Cognition+Psychological and Cognition+locomotion were among the most frequent IC clusters. Participants with all negative screenings at baseline tended to remain alert-free at follow-up. Nutrition and psychological domains reached the highest reversibility. Cognition+Locomotion and Cognition+Locomotion+Psychological clusters and the number of positive screenings were significantly associated cross-sectionally with frailty, IADLs and ADLs disability, and the incidence of ADL disability.**Conclusions**Screening for older people's IC impairments might enable the health system to provide timely preventive interventions. Targeting populations at high risk of care dependency might lead to efficient resource use.

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**O-032 Validity, reliability, responsiveness, and feasibility of the Life-Space Assessment administered via telephone in community-dwelling older adults**

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Introduction: The Life-Space Assessment (LSA) is the most commonly used questionnaire to assess life-space mobility (LSM) in older adults, with well-established psychometric properties for face-to-face (FF) administration. However, these properties have not yet been explicitly studied when the LSA is administered by telephone. The study aim was to evaluate the concurrent and construct validity, test-retest reliability, responsiveness and feasibility of a telephone-based LSA version (TE-LSA) in older adults. Methods: Fifty community-dwelling older adults (age=79.3±5.3 years) participated in the study. Concurrent validity was assessed against the FF-LSA, construct validity by testing 15 a priori hypotheses on expected associations with LSM determinants, test-retest reliability via two telephone surveys one week apart, responsiveness after 8.5±1.8 months in participants with improved, stable, and worsened mobility defined by two external criteria, and feasibility by the completion rate/time and ceiling/floor effects. Results: Good to excellent agreement between the two different administration methods was found (intraclass correlation coefficient [ICC<sub>2,1</sub>]=0.73-0.98). Twelve of 15 (80%) hypotheses on construct validity were confirmed. ICCs for test-retest reliability were good to excellent (ICC<sub>2,1</sub>=0.62-0.94). Minimal detectable change for the TE-LSA total score was 20 points. Standardized response means were large for worsened (0.88), moderate for improved (0.68), and trivial for stable participants (0.04). Completion rate was 100% and mean completion time was 5.5±3.3 min. No ceiling or floor effects were observed for the TE-LSA total score. Key conclusions: Telephone administration of the LSA is valid, reliable, responsive, and feasible for assessing LSM in community-dwelling older adults.



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**O-033 Stakeholders experiences of comprehensive geriatric assessment in an inpatient hospital setting: a qualitative systematic review and meta-ethnography**

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Background: comprehensive geriatric assessment (CGA) is considered the gold standard approach to improving a range of outcomes for older adults living with frailty admitted to hospital. To date, research has predominantly focused on quantitative syntheses of the international evidence with limited focus on qualitative synthesis of stakeholder perspectives. This review aims to resolve this research gap by identifying and synthesising qualitative studies reporting multiple stakeholders' experiences of inpatient CGA. Method: a systematic search of five electronic databases was conducted. Qualitative or mixed methods studies that included qualitative findings on the experiences of CGA in an inpatient hospital setting from the perspective of healthcare professionals (HCP), older adults and those important to them were included. The protocol was registered on PROSPERO (Registration: CRD42021283167) and the 10-item Critical Appraisal Skills Programme checklist was used to appraise the methodological quality of included studies. Results were synthesised as a meta-ethnography. Results: eleven studies, which reported on the experiences of 153 HCPs, 91 older adults and 57 caregivers were included. The studies dated from 2011–2021 and three key themes were identified: (1) HCPs, older adults and caregivers report conflicting views on CGA as a holistic assessment process, (2) most HCPs, but only some older adults and caregivers, experience CGA goal-setting and care planning as collaborative, and (3) all stakeholders value care continuity during the transition from hospital to home but often fail to achieve it. Conclusion: While HCPs, older adults and caregivers' values and ambitions related to CGA broadly align, their experiences often differ. The identified themes highlight organisational and relational factors, which positively and negatively influence CGA practices and processes in an inpatient hospital setting.

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**O-034 Pilot project concerning quality assessment of cognitive functions, sarcopenia, and frailty in a primary care in a system without geriatric medicine experience**

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**Introduction**In medical systems where specialization in geriatrics has not been established, the approach to frailty assessment, early detection of cognitive problems and determination of sarcopenia in elderly patients is insufficient and delayed. This pilot project aims to assess frailty, cognition, and sarcopenia in patients older than 65 years in a joint approach between doctors and nurses.  
**Methods**A non-selective population of 200 patients in a family medicine practice had the task of completing the Clock Test (cognition), grip strength by dynamometer (sarcopenia), and the doctor and nurse independently assessed the degree of frailty according to the Rockwood scale. The medical team was briefly educated on the testing methodology. A time of 15 minutes per patient was sufficient for testing.  
**Results**The age of the population was equal between 110 men and 90 women (73y+9 and 71y+9). According to the Rockwood scale, 14% of men and 11% of women had initial signs of frailty (score >4). A mild sign of sarcopenia is considered a grip strength of the dominant hand below <30 kg for 15% of men and below <20 kg for 17% of women. The clock test was pathological in 36% of men and 44% of women. Frailty was assessed separately by a doctor and a nurse with the degree of agreement measured by Cohen Weighted Kappa = 0.77 (p<0.001).  
**Key conclusions**Assessment of frailty, cognition and sarcopenia is applicable in primary care and in systems that do not have a developed geriatric service experience. Pathological frailty, reduced cognition and initial sarcopenia can be detected early with a simple approach. Educational measures achieve a high degree of agreement in the assessment of frailty between health workers and thereby influence prevention and treatment.

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**O-035 How complete is our medical clerking? A project aimed to improve medical admission clerking by creating a standardised medical admission proforma**

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Introduction: The Admission Clerking of residents to a long-care institution is a crucial initial contact between the medical team and the client. It provides information that maintains clients' safety when they are reviewed during on-call hours. The aim of this project was to improve and standardise the medical clerking of clients admitted in the largest long-term care unit in Malta. Methods: Using an audit approach, the 1st phase assessed where the medical notes were being recorded and completeness of medical clerking. Thereafter, we developed a standardised proforma (including the Comprehensive Geriatric Assessment parameters), which was introduced in an admission booklet to document the clerking. A re-assessment of the above was done in the 2nd phase with a retrospective approach being used in both cycles. The Z-score for two population proportions was used to compare results from the two cycles. Results: Analysis of 100 patient files in both cycles showed significant improvement ( $p$  value  $<0.05$ ) in multiple sections, including brief reason for admission, brief recent history, allergies, continence, speech language pathologist advice, pressure injuries, and parameters. No significant improvement was noted in the documentation of a cognitive screening tool. Conclusions: The project concludes that the medical admission proforma improved clerking, leading to standardised and comprehensive documentation. Areas for improvement include better documentation of a cognitive screening tool. To sustain these improvements, it is recommended to conduct educational sessions on the importance of clerking and proper proforma completion. Additionally, periodic audits of the proforma are essential for continuous refinement.

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**O-036 Equal and high-quality in-hospital care for older patients with frailty – establishing a national clinical quality database; DANFRAIL.**

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Introduction: Achieving high quality care for acutely admitted older patients with frailty requires an interdisciplinary and inter-sectoral approach. To address deficiencies and inequity in provided care across Danish hospitals, the Danish Geriatric Society suggested the establishment of a national clinical quality database. Method: Through co-design and patient-journey-mapping methodology, DANFRAIL's steering committee of clinicians, relatives, and specialists from the Danish Clinical Quality Program established a construct-of-interest anchored in the Comprehensive Geriatric Assessment (CGA) framework. Based on Donabedian and Deming theories, a content-balanced indicator set was designed with focus on level-of-evidence and use-of-resources. Pragmatically, the population was defined as acutely admitted patients aged  $\geq 80$  years with frailty corresponding to a Clinical Frailty Scale (CFS) score of 5-8 two weeks prior to admission. CFS is a 9-level validated assessment-based measure developed to determine baseline health state and has been shown to be easy to implement in acute care settings. Based on data from 2021 the database is expected to assess 160.000 patient-contacts/year for patients  $\geq 80$  years. Results: Initially, CGA-related process indicators have been established: 1. Delirium screening, 2. Do-not-resuscitate preference, 3. Early mobilization within 24 hours, 4. Activities of Daily Living, and 5. Nutrition assessment. When successfully implemented, further indicators such as Medicine review, Basic Needs Assessment, and inter-sectoral communication will be introduced. To monitor the effect of the process indicators, result indicators including all-cause mortality and acute all-cause readmissions, both within 7 and 30 days were included. Conclusion: DANFRAIL is planned to be implemented nationwide in 2024 preceded by a public consultation.

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**O-037 INVESTIGATION OF THE PREVALENCE OF CONSTIPATION AND ITS RELATED FACTORS FOR IN OLDER OUTPATIENTS**

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Introduction: Functional constipation (FC) is a geriatric syndrome that is common in the elderly population and can seriously affect the quality of life and may be a frequent cause of hospital visits. In this study, we planned to investigate the relationship between FC and its related factors for in older outpatients. Methods: Participants aged 65 and over whose data on FC could be accessed, who applied to the geriatrics outpatient between June 2016 and March 2023 were included in the study. They were defined on the basis of having at least two of the FC presence, ROME IV criteria. Frailty was screened by the using FRAIL scale,  $\geq 3$  a score of were evaluated as frail. Malnutrition was screened by the using the Mini Nutritional Assessment-Short Form (MNA-SF). MNA-SF score of  $7 \leq$  was evaluated as malnutrition. Participants quality of life was evaluated by Euro-Quality of Life Visual Analog Scale (EQVAS). Results: The study included 602 participants whose median age was 73 (65-96) and 138 (71.3%) were male. FC prevalence was found 28.7%. In univariate analyses, FC was found related to age, having a diagnosis of depression or Parkinson diseases, frailty, urinary incontinence, sleep disorders, number of chronic diseases, and EQ-VAS. In multivariate analyses, FC was not found to be associated by the frailty while the number of chronic diseases [OR=1.212, 95%CI (1.084-1.355), p=0.001] and EQVAS were found to be related [OR=0.988, 95%CI (0.978-0.997), p=0.012]. Key conclusion: In the results of this study, FC was not found to be associated by frailty in older outpatients but it emerged as a syndrome that should be screened frequently in patients with a high number of chronic diseases and a low general quality of life. Keywords: functional constipation, frailty subgroups, older adults

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**O-038 Medication Risk Checklist for Older Adults (LOTTA) – Development and Validation of a Self-assessment Tool**

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**Introduction** Patient safety strategies highlight patients' own role in ensuring medication safety [1]. In order to manage with this, especially older people need suitable screening tools. This study aimed to develop, validate and assess the feasibility of a self-administered medication risk checklist for home-dwelling older adults  $\geq 65$  years. **Methods** The draft checklist was formed based on a validated practical nurse administered Drug Related Problem Risk Assessment Tool [2] supplemented with findings of two systematic literature reviews [3, an unpublished one]. Content validity of the draft checklist was determined by three-round Delphi survey with a panel of 19 experts in geriatric care and pharmacotherapy. An agreement of  $\geq 80\%$  was required. Feasibility assessment of the content validated checklist was conducted among older adults visiting community pharmacy (n=84). Data were analyzed using qualitative content analysis. **Results** The final 8-item patient self-administered Medication Risk Checklist (LOTTA) is designed to screen highest priority systemic risks, potentially drug-induced symptoms, adherence and self-management problems in medications among home-dwelling older adults. The checklist proved to be feasible for older adults and suitable for their skills. Mean time to fill out the checklist was 6.1 minutes. **Key conclusions** The developed Medication Risk Checklist (LOTTA) can be used to screen a wide range of medication risks. It serves as a communication tool between the patient and healthcare. Electronic version of the checklist, integrated to patient information systems, could enable its wider use in health care. More research is needed to assess the usability of the checklist in clinical practice. **References** 1. World Health Organization (WHO). Medication without harm: Third Global Patient Safety Challenge, 2017. <https://apps.who.int/iris/handle/10665/255263>. 2. Dimitrow MS, Mykkänen SI, Leikola SN, Kivelä SL, Lyles A, Airaksinen MS: Content validation of a tool for assessing risks for drug-related problems to be used by practical nurses caring for home-dwelling clients aged  $\geq 65$  years: a Delphi survey. *Eur J Clin Pharmacol* 70: 991–1002, 2014. 3. Puumalainen E, Airaksinen M, Jalava SE, Chen TF, Dimitrow M. Comparison of drug-related problem risk assessment tools for older adults: a systematic review. *Eur J Clin Pharmacol*. 2019 Dec 10. doi: 10.1007/s00228-019-02796-w. Review.

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**O-039 SARS-CoV-2 Vaccination and Risk of Infectious Diseases in Hospitalized Older Patients**

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**INTRODUCTION:** Common vaccinations may cause a cross-reactive immunostimulation that prevents a larger spectrum of infections. However, whether SARS-CoV-2 vaccinations may also determine this effect is unclear. This study aims to assess the incidence of infections at hospital admission and during the hospitalization in older inpatients vaccinated and unvaccinated against SARS-CoV-2, and to compare the length of hospital stay and in-hospital mortality between vaccinated and unvaccinated individuals.**METHODS:** This retrospective study included 754 older inpatients admitted to the Geriatric and Orthogeriatric Units of the University Hospital of Ferrara (Italy) between March 2021 and November 2021. Sociodemographic, health- and hospitalization-related data, including the diagnosis of infections at hospital admission and during hospitalization were collected from medical records. **RESULTS:** The sample's mean age was 87.2 years, 59.2% were females, and 75.5% were vaccinated against SARS-CoV-2. Vaccinated individuals had a 33% and 40% lower risks of in-hospital infections (Odds Ratio=0.67, 95%CI: 0.46-0.98) and death (Hazard Ratio=0.60, 95%CI: 0.39-0.94), respectively, also after adjusting for potential confounders. No significant results emerged about infections at hospital admission. Considering the hospitalization's endpoints, SARS-CoV-2 vaccination was associated with a lower probability of being transferred to long-term care or other hospital departments than returning home (Odds Ratio=0.63, 95%CI: 0.40-0.99).**KEY CONCLUSIONS:** SARS-CoV-2 vaccination may reduce the risk of infectious diseases also not caused by SARS-CoV-2 and in-hospital mortality in older inpatients. The vaccination coverage in the older population could limit not only the onset and severity of COVID-19 but also the occurrence of other infectious diseases.

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**O-040 Effect of delirium on activities of daily living in older people after major surgery**

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**Aims:** To assess the association of postoperative delirium developed in the post-anaesthetic care unit (PACU) with older patients' ability to perform activities of daily living during the first five postoperative days. **Background:** Previous studies have focused on the association between postoperative delirium and long-term function decline, however the association between postoperative delirium and the ability to perform ADL, particularly in the immediate postoperative period, needs further investigation. **Design:** A prospective cohort study. **Methods:** A total of 271 older patients who underwent elective or emergency surgery at a tertiary care hospital in Victoria, Australia, participated in the study. Data were collected between July 2021 and December 2021. Delirium was assessed using the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5). The Katz Index of Independence in Activities of Daily Living (KATZ ADL) scale was used to measure ADL. Activities of daily living was assessed preoperatively and daily during the first five postoperative days. **Results:** Results showed that 44 (16.2%) patients developed new episode of delirium. Postoperative delirium was independently associated with decline in ADL (OR = 7.01, 95% CI = 3.34-14.68;  $p < 0.001$ ). **Conclusions:** Postoperative delirium was associated with a decline in ADL among older people during the first five postoperative days. Screening for delirium in the PACU is essential to identify delirium during the early stages of postoperative period and implement a timely comprehensive plan including engagement of patients in a focused physical and cognitive daily activity program, particularly for older patients undergoing major surgery.



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**O-041 'Pad Culture: The Use of Continence Wear in older people in an Irish University Hospital'**

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Background: Incontinence in hospital patients can result in a longer length of stay, a greater risk of being discharged to a residential care setting, as well as increased healthcare and personal costs. Older adults may find it difficult to regain continence post discharge contributing to caregiver strain, social isolation and functional decline. There is evidence to suggest that there is an over-reliance on continence aids (wearable absorbent 'pads' & urinary catheters) for older adults in hospital. Aim: The aim of this study was to assess the prevalence of continence aids amongst older in-patients in an Irish University Hospital, as part of wider service improvement project. Methods: Data was collected on consecutive in-patients 65 years or older on a single day. Medical, surgical, oncology, coronary care and medical assessment unit were included. Current incontinence aid usage and pre-admission continence aid usage was recorded, along with demographics and current mobility status. Results: 156 older adults were included. 53.5% were male and the median age was 81. A total of 57.4% (N=89) of older patients were wearing disposable pads. Of these, 64.5% (N=58) were not wearing continence pads pre-admission. A total of 23.2% (N=36) had a urinary catheter inserted. Of these, 91% (N=33) did not have a urinary catheter pre-admission. 38.3% (N=61) of those wearing pads could mobilise either independently or with assistance of one. We also found a direct correlation between pad use and length of stay. Conclusion: This study highlights the high prevalence of continence aid deployment in the care of older adults admitted to an acute hospital, with conversion to an aid occurring even in those who are able to mobilise independently or with supervision. Continence care and rehabilitation may benefit from interdisciplinary assessment and management, similar to other complications of aging and hospitalisation, such as delirium.

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**O-042 Development and validation of a hospitalization risk stratification tool for patients with atrial fibrillation and multimorbidity**

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**Background.** Atrial fibrillation (AF) is prevalent among older adults with multimorbidity, leading to an increased risk of hospitalization. Reliable tools are needed to predict hospital care utilisation in these patients.**Methods.** Using data from the Swedish National Patient Register, we analysed 203,042 individuals aged 65 and above with AF and at least one other chronic condition on January 1, 2017. We developed a logistic regression model on a random subset of the dataset (50%) to predict the 1-year hospitalization risk. We employed a forward stepwise approach and evaluated model performance using a 20-fold cross-validation, with the Area Under the ROC curve (AUC) as the metric. We subsequently applied the derived model to the remaining validation subset for calibration and discriminative ability assessment.**Results.** The study population (mean age:79.6 years, females: 44.8%). The 1-year hospitalization risk was 34.6%. The selected model included age and total number of chronic conditions (including their interaction), COPD, heart failure, anaemia, chronic kidney disease, dementia, asthma, and the total number of drugs. In the derivation subset, the AUC was 0.67 (95%CI: 0.67-0.67) and calibration was optimal. The predicted probability was stratified in four risk categories: low (<15%), moderate (15-33%), high (33-50%), and very high (50%+), accounting for 4.5%, 49.5%, 34.4%, and 11.6% of the sample, respectively. The score was associated with 2-year hospitalization, as well as 1-year and 2-year mortality.**Conclusion.** A simple risk score can predict the probability of all-cause 1-year hospitalization in older adults with AF and multimorbidity.

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**O-043 Association between Clinical Frailty Scale score and mortality 24-months after hospitalization in adult patients with COVID-19**

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Background: The clinical frailty scale (CFS) was used as a triage tool for medical decision making during the COVID-19 pandemic. The CFS has been posed as a suitable risk marker for in-hospital mortality in COVID-19 patients. We evaluated whether the CFS score is associated with mortality 24-months after hospitalisation for COVID-19. Methods: The COvid MEDicaTion (COMET) study is an international, multicenter, observational cohort study, including adult patients hospitalised for COVID-19 between March 2020 – May 2020. Patients' characteristics, prescribed medication, clinical characteristics, and CFS score were collected at admission, survival data were collected 24-months after hospital discharge. Multivariable cox proportional hazard models adjusted for covariates (age, sex, number of drugs, and type of drug class as a proxy for comorbidities) were used to study the association between the CFS and 24-months mortality. Results: 1385 fit (CFS 1-3), 638 mildly frail (CFS 4–5), and 376 frail (CFS 6-9) patients were included for baseline analysis (mean age 71 years (IQR 60-80); 60.2% male). 135 (9.9%) fit, 166 (26.2%) mildly frail and 152 (40.4%) frail patients deceased in hospital, and 32 (2.4%) fit, 49 (7.7%) mildly frail and 28 (7.4%) frail patients in the following 24-months. After adjustment for covariates, mildly frail patients (HR 1.62, 95% CI 1.31–2.01) and frail patients (HR 1.96, 95% CI 1.54–2.48) had significantly higher risk for mortality 24-months after hospitalisation compared to fit patients. Conclusion: The results suggest that the CFS is a suitable risk marker for mortality 24-months after hospitalisation in COVID-19 patients.

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**O-044 Alcohol-related Diagnoses Were More Prevalent during the Covid-19 Pandemic than Before and After. A Quality Study from a General Hospital.**

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Introduction: Alcohol sales in Norway increased during the covid-19 pandemic. Living in Oslo and having higher education are among self-reported risk factors associated with increased alcohol consumption in this period. We previously found that Diakonhjemmet, a general hospital in Oslo covering an above average highly educated population, discharged more patients with alcohol-related diagnoses during pandemic restrictions than before. We aimed to investigate whether this increase persisted after restrictions were lifted. Methods: We extracted anonymous diagnosis data from electronic health records for patients aged 65 or older admitted to geriatric, stroke and internal medicine wards at Diakonhjemmet between 2018-22. We compared probabilities of discharge with alcohol-related diagnoses (ICD-10 chapter F10) in periods before (2018-19), during (2020-21) and after (2022) pandemic restrictions were in force in Norway, applying multiple logistic regression and a Tukey post-hoc test, correcting for multiple comparisons. Results: The probability of discharge with F10 diagnoses during pandemic restrictions (3.9%, 95% confidence interval [CI] 3.4-4.4%, n=5380) was higher than in the period before (2.8%, 95% CI 2.3-3.3%, n=4533), but not significantly (odds ratio [OR] 1.30, p=0.06). The incidence of F10 diagnoses after restrictions were lifted was not significantly higher than before the pandemic (3.3%, 95% CI 2.5-4.4%, n=1398; OR 1.07, p=0.86). Key conclusions: More patients admitted to medical wards at a general hospital in Oslo were discharged with alcohol-related diagnoses during pandemic restrictions than before and after. Although only bordering on statistical significance, findings concur with a self-reported increased alcohol consumption in higher-education populations and in Oslo during the pandemic.

**ROOM 204 - SEPTEMBER 21, 10:30-11:45**

**O-045 Covid-19 and Influenza: Appropriate measures to prevent and control outbreaks in nursing homes (the CIAO study) - Pillar II 'Outbreak management performance'**

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**Introduction**Infection prevention and control (IPC) measures in nursing homes (NHs) are needed, but also negatively impact quality of life for residents, and quality of work for professionals. The CIAO study investigates what useful and proportional measures are to prevent and control outbreaks of Covid-19 and Influenza in NHs. Pillar II aims to investigate whether and how NH organizations succeeded in realizing their developed IPC strategy to control outbreaks in Winter 2022/2023, and what are corresponding barriers and facilitators. **Methods**This study has a mixed method design. In a prospective cohort, we followed Covid-19/Influenza outbreaks in 14 Dutch NH organizations. By weekly telephone interviews, epidemiological data on outbreaks, and executed IPC measures were registered. Maximum variation sampling was used to select outbreaks for further evaluation. These outbreaks were evaluated with involved NH professionals using qualitative group interviews to investigate barriers and facilitators in the execution of their IPC strategy. **Results** In total 24 outbreaks (17 Covid-19, 4 Influenza, 3 mix) were monitored, with an average duration of 12.5 days. During all outbreaks, dilemmas in IPC measures and quality of life occurred. Seven outbreaks were evaluated in qualitative interviews. (A lack of) support for measures; updated, clear and customized IPC protocols; available material; clear communication; knowledge; cooperation and support were identified barriers and facilitators. **Key conclusions** IPC strategies in NHs largely vary and during all outbreak adjustments to protocols are made to handle dilemmas with quality of life. Important themes were derived that need attention in IPC strategies of NHs.

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**O-046 The use of health care services before and during the COVID-19 pandemic for home dwelling older adults with and without dementia in Norway. A HUNT-study**

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**Introduction** Older adults were particularly unable to use health care services during the lockdown period caused by the COVID-19 pandemic. **Aim** We aimed to investigate whether health care services use was reduced during the pandemic, and whether those at higher ages and/or with dementia had a higher degree of reduction than their counterparts. **Methods** Data from the Trøndelag Health Study (HUNT4 70+, 2017-2019) was linked with two national health registries on use of primary- and specialist health care services. A multilevel mixed-effects linear regression-model was used to calculate changes in service use from 18-month before the lockdown, March 12th, 2020, to 18-months after the lockdown. **Results** We included 10,607 participants, 54% were women, 11% had dementia. Mean age was 76 years (SD 5.7, range 68-102 years). There was an immediate decrease in primary health care services use, except contact with general practitioners, during the lockdown period for people with dementia ( $p < 0.001$ ), and those 80 years or older without dementia ( $p = 0.006$ ), compared to the six-month period before the lockdown. The use of specialist health care services decreased during the lock period for all groups ( $p \leq 0.011$ ), except for those younger than 80 years with dementia. The services use reached levels comparable to pre-pandemic data within one year after lockdown. **Conclusion** Older adults, especially those aged 80 years or older, experienced an immediate reduction in services use during the covid-19-lockdown, with only small variations between those with and without dementia. The connection between older adults' services needs and services use requires further research.

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**O-047 Increased risk of severe COVID-19 outcomes in fully vaccinated older adults aged over 65 with comorbidities during Omicron predominance period: initial results from INFORM, a retrospective, observational health cohort database study in England**

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**Introduction**Elderly individuals are at higher risk of severe COVID-19 outcomes due to immunosenescence and comorbidities, and as such may have weak immunological response to vaccines. Vaccination provides protection, but the effectiveness in this population is less certain. Results from the INFORM study on severe COVID-19 outcomes in non-immunocompromised, vaccinated individuals aged  $\geq 65$  with and without comorbidities are presented.**Methods**This is an observational, retrospective cohort study in England using a 25% random sample of data from National Health Service databases. COVID-19-related outcomes (hospitalisations and death) in fully vaccinated ( $\geq 3$  doses) individuals aged  $\geq 65$  from 1 Jan–31 Dec 2022 are reported. Incidence rates (IR) and mortality rates (MR) per 100 person-years (95% confidence intervals) are calculated.**Results**In 7.2 million included individuals who received  $\geq 3$  vaccine doses, 31% (2.2m) were aged  $\geq 65$  years. 26% of those aged  $\geq 65$  years had no high-risk comorbidity or IC. IR of hospitalisation among those without immunocompromising conditions (IC) or selected comorbidities was 0.2 (0.17-0.23) and MR 0.06 (0.03-0.09). Event rates were higher among elderly subjects without IC but with the following selected comorbidities: cerebrovascular disease (IR=1.57 [1.52-1.62], MR=0.47 [0.42-0.52]); cardiovascular disease (IR=1.43 [1.39-1.47], MR=0.44 [0.40-0.48]) chronic liver disease (IR=1.03 [0.92-1.14], MR=0.26 [0.15-0.37]); diabetes (IR=0.86 [0.83-0.89], MR=0.19 [0.16-0.22]) and obesity (IR=0.54 [0.51-0.57], MR=0.10 [0.07-0.13]).**Conclusion**Risk of COVID-19 hospitalisation and death is high among individuals aged  $\geq 65$ , especially those with specific risk factors, who may benefit from additional interventions to prevent severe COVID-19.

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**O-048 The effects of COVID-19 on cognitive performance in a community-based cohort: A COVID Symptom Study Biobank observational study**

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Introduction SARS-CoV-2 infection has been associated with cognitive impairment and increased risk of dementia diagnosis [1,2]. Whether deficits following SARS-CoV-2 improve over time is unclear. The presence, magnitude, persistence of effects in community-based cases remain relatively unexplored, with implications on cognitive ageing. Methods Cognitive performance (working memory, attention, reasoning, motor control) was assessed in 3,335 participants of the COVID Symptom Study Biobank cohort (median age = 57 years). We used multivariable linear regression to test associations between SARS-CoV-2 infection and symptom duration as exposures, and accuracy and reaction time in cognitive testing as outcomes. Models weighted for inverse probability of participation, adjusting for potential confounders and mediators. Results We found lower cognitive accuracy scores among individuals with evidence of SARS-CoV-2 infection in comparison to healthy controls [3]. Deficits were largest for individuals with  $\geq 12$  weeks of symptoms, with effect size comparable to a 10 year age difference. Stratification by self-reported recovery revealed that deficits were only detectable in SARS-CoV-2 positive individuals who did not feel recovered from COVID-19, whereas individuals who reported full recovery showed no deficits. Longitudinal analysis showed no evidence of cognitive change between 2 rounds of testing 9 months apart, suggesting that deficits persisted at almost 2 years since initial infection for affected individuals. Conclusions Cognitive deficits following SARS-CoV-2 infection were detectable nearly two years post-infection, and largest for individuals with longer symptom durations and ongoing symptoms. Our work highlights to the need to monitor cognitive ageing of affected individuals.[1] <https://doi.org/10.1016/j.eclinm.2021.101044> [2] [https://doi.org/10.1016/S2215-0366\(22\)00260-7](https://doi.org/10.1016/S2215-0366(22)00260-7) [3] <https://doi.org/10.1101/2023.03.14.23287211>



**ROOM 204 - SEPTEMBER 21, 10:30-11:45**

**O-049 A pandemic of delirium: an updated systematic review and metanalysis of occurrence of delirium in older adults with COVID-19**

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Delirium has been recognized as an atypical presenting symptom of COVID-19 in older adults and is independently associated with increased mortality. We performed an updated systematic review of the literature and proportional meta-analysis to assess prevalence and incidence of delirium in older adults with COVID-19. PubMed, Web of Science, and Google Scholar databases were searched for English-language articles on prevalence and incidence of delirium in older adults with COVID-19, published between March 2020 - January 2023. Overall, 1,172 articles were identified, 66 met selection criteria and were included in the meta-analysis (N= 35,035 participants, age range 66-90 years old, 46.6% females). A similar pooled prevalence (20.6% [95% Confidence Interval (CI) 17.8-23.8%]) and incidence (21.3% [95% CI: 14.7- 30%]) of delirium was observed in older adults with COVID-19, more frequently in males and frail subjects. Delirium pooled prevalence varied in the subgroup analysis according to the study setting ("Nursing home" 22.3% [95% CI: 15-31%]; "Hospital" 19% [95% CI: 15-22.4%],  $p = 0.39$ ). The utilization of delirium definitions and assessment tools largely varied across studies, while frailty was assessed using the Clinical Frailty Scale (CFS) in most of them. This study delineates delirium as a common symptom of SARS-CoV2 infection, particularly in frail older adults, and supports for the formal inclusion of delirium as a COVID-19 symptom. The considerable heterogeneity in delirium assessment highlights the need for an operational strategy to standardize definitions and tools utilization to facilitate its integration into daily clinical practice, especially in the management of frail older adults.

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**O-050 Perceptions and Attitudes Of Health Care Professionals Regarding The Management Of Medications Among Older Adults With Complex Chronic Conditions In Europe: Results From The I-Care4old Survey.**

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**Introduction:** Among older adults with multiple complex chronic conditions, multimorbidity and polypharmacy make the response to treatment variable and increase the risk of adverse effects. It is difficult to make evidence-based choices for these individuals, because their complexity is disregarded in clinical trials. The aim of the survey was to investigate perceptions and attitudes of healthcare professionals regarding management of medications in complex older adults (COA) and to explore which tools are considered useful to support decisions in clinical practice. **Methods:** An e-survey of healthcare professionals across Europe was conducted as part of the EU funded I-Care4 old project (EU H2020 No 965341). The survey was developed in English and translated into Italian, Finnish, Czech, and Polish through face and linguistic validation. The survey was disseminated through e-mails, social media, I-Care4old website, EUGMS and other societies, from May 1st to July 8th, 2022. **Results:** The overall number of responses was 527. The most problematic medications in terms of efficacy and safety included hypnotics (58.8%), NSAIDs (49.0%), anticoagulants (42.3%), antipsychotics (37.2%), strong opioids (30.6%). Polypharmacy was the most frequently reported critical factor in clinical practice (49.3%), followed by multimorbidity (46.3%), cognitive impairment (41.9%), and frailty (37.4%). Alert systems for drug-drug or drug-disease interactions (38%), systems that may predict side-effects and provide recommendations based on patients' individual clinical profile (34.7%) were indicated as helpful tools to assist clinical practice. **Key Conclusions:** Psychotropic agents, opioids, NSAIDs and anticoagulants are perceived as the most problematic agents to manage pharmacotherapy in COA. Intelligent systems that may help predict individual response-to-treatment and adverse-effects are awaited by healthcare professionals.

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**O-051 Future Polish Specialists - Anything But A Geriatrician. A Pilot Survey Among Young Polish Doctors.**

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Introduction: There are 560 active geriatricians in Poland, which gives 0.06 geriatricians per 1000 citizens aged 65+. The objective of the study was to assess interest in geriatrics as a specialty and determine factors influencing medical specialty choices among young Polish doctors. The PROGRAMMING COST Action (CA21122) aims to develop educational content in the field of geriatric medicine. A framework dedicated for students and young doctors should be build, tooMethods: An online survey was distributed among young doctors. The link to the questionnaire was published on nationwide social platforms used by young doctors. Results: We collected 283 responses from medical doctors who have not started their residency yet (65% female, mean age 26.5 (SD 1.70) years): 25 (8.8%) before the internship, 231 (81.6%) during the internship, 27 (9.5%) that completed the internship. Only one respondent (during the internship) considered geriatrics as the future specialty of choice. When applying for residency programs, young Polish doctors take into consideration their interests, chances to start a private practice and the ability to maintain a work-life balance. Knowledge and experience obtained during university studies are not crucial factors.Conclusion: Among young doctors in Poland geriatrics as the specialty is not a preferable first choice. Moreover, university experience does not affect that preference. Polish stakeholders, authorities and decision-makers should take steps to promote geriatrics as an attractive specialty. European initiatives, such as the PROGRAMMING CA21122 (<https://cost-programming.eu/>) seem to be the opportunity to make it public and join the efforts that start the change.

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**O-052 Stakeholders to Promote Geriatric Medicine in terms of COST Action CA21122-PROMoting GeRIatric Medicine in countries where it is still eMerging (PROGRAMMING)**

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Introduction: Geriatric Medicine (GM), concerned with well-being and health of older adults, can play a crucial role in the alignment of healthcare systems to the needs of the aged populations. However, countries have varying GM development backgrounds. PROGRAMMING-CA21122 goal is to propose the content of education and training activities in GM for healthcare professionals across various clinical settings, adapted to the local context, needs, and assets. One of the aims of our Action is to define relevant stakeholders and to address them internationally and country-specific. Methods: Potential stakeholders will be defined by a report (including practical examples) summarizing the main conclusions of the online focus group meetings. In order to ensure diversity, the participants will be divided into groups based on country, profession, and gender. Feedback will also be requested from the Management Committee members, and a comprehensive summary of the meetings will be provided. Results: There are 37 members from 17 countries (26 women, 11 men) of multidisciplinary professions involved in this task. Comprehensive templates that will help to retrieve stakeholders representing the complex needs of GM were created and delivered to the COST Action members. [www.cost-programming.eu](http://www.cost-programming.eu) Conclusion: Overall objective is to develop specialized geriatric care delivered to older persons. This particular task will contribute to research coordination, capacity-building objectives of CA21122, dissemination, and maximization of the impact of the Action by defining and mapping multidisciplinary stakeholders involved in older people's care who might benefit from cooperation with our Action.

**ROOM 205 - SEPTEMBER 21, 10:30-11:45**

**O-053 An All-teach, All-learn International Collaboration to Educate the Interprofessional Geriatric Workforce**

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Introduction: Currently, the healthcare system does not sufficiently meet the complex needs of the older population. [1] This imperative has led the World Health Organization (WHO) to suggest the need to develop “age-friendly” healthcare systems. [2] Over the last ten years, the University of Maryland, Baltimore, has evolved its “Aging in Place” interprofessional program, and in 2020, an international dimension was added. The goal of this program is to increase interprofessional collaboration locally and globally to meet the needs of Older Adults.

Methods: The Aging in Place program has involved interprofessional students from both the University of Maryland, Baltimore and the University of Helsinki, Finland. Students have joined remotely in patient care as well as with the provision of health education at three different sites in West Baltimore. They participated in various patient assessments (e.g., annual wellness visits), debriefed in clinical huddles, and kept reflective journal entries.

Results: From January 2020 to May 2023, students involved: 2 increased to 105; Number of one-on-one resident encounters: 765; Number of clinical debriefings: 75; Number of journals gathered: 145; Number of student-led presentations: 49; Topics included healthy physical therapy, medication safety, stroke prevention, cardiac health, mental, hearing, eye and dental health, and the relevance of vaccinations.

Key Conclusions: The international collaboration enhanced the University of Helsinki’s learners’ engagement in geriatric pharmacotherapy resulting in the development of an additional learning opportunity in Finland. Moreover, this all-teach, all-learn environment among older adults and the interprofessional/international partnerships and community have positively impacted students’ learning.

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**ROOM 205 - SEPTEMBER 21, 10:30-11:45**

**O-054 Palliative care for cardiovascular patients: description of motives for referral and actual care provided**

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Background: Palliative care (PC) for cardiovascular patients remains suboptimal, whereby only a small proportion of patients are referred to specialist palliative care, and often too late in the disease course. We investigated the reasons that prompted cardiologists to request an intervention from the PC team, and we describe the actions implemented by the PC in response to referrals from the cardiology department. Methods: This retrospective study included all patients with cardiovascular disease who were referred to the mobile palliative care team of a large University Hospital in France between 2010 and 2020. All data were extracted from the medical hospital files. For all patients referred to PC during the study period, we recorded the original motive for requesting assistance, as cited in request sent from cardiology to PC. We also recorded the types of services provided by PC, the date of the first and last consultation of the patient with PC, and the number of PC consultations per patient. Results: From a total of 142 cardiology patients for whom PC assistance was requested, 136 (95.8%) died, while 6 (4.2%) are still alive. In 42 patients (29.6%), there was a generic request for intervention without indicating any particular domain where specific assistance was needed. In other cases, a motive for referral to the PC mobile team was provided by cardiologists, with ethical dilemmas (35 patients; 24.6%), symptom management (23 patients; 16.2%), and discussion about where the patient could live (11 patients; 7.7%), as the most common motive. In response to these referrals, the PC team provided assistance with ethical dilemmas in 69 patients (48.6%), symptom management in 28 patients (19.7%), discussion about where the patient could live in 15 patients (10.6%), 2 or more of these issues in 16 patients (11.3%), and other issues in 14 patients (9.8%) (e.g. reorientation to oncology or family support). The majority of patients had 1 (n=90, 63.4%) or 2 PC consultations (n=27, 19%), while 10 patients (7%) had 3, 9 patients (6.4%) had 4, and 6 (4.2%) had 5 or more PC consultations. Among those who died, the median number of days between the first and the last PC consultation was 0 (quartile 1=0, quartile 3=3). Conclusion: This study shows that cardiologists do not necessarily have a specific motive in mind when referring patients to PC. Because many more patients received assistance with ethical dilemmas than was requested, this indicates that cardiologists may not be aware of the ethical issues at stake in the care of cardiology patients, or that they only refer patients to PC when they have no other solution or do not know what else to do for the patient. There is clearly a need to raise awareness among cardiologists about ethical issues and about the services that the PC team can provide.

**ROOM 205 - SEPTEMBER 21, 10:30-11:45**

**O-055 Physical restraints: a wake-up call.**

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(1) HURYC

Objective: To determine the prevalence of physical restraint (PR) use in an acute care hospital in patients with cognitive impairment (CI) diagnosed with SARS-CoV-2. The secondary objectives were to identify main reasons for their usage and to assess the adequate quality prescription. Methods: cross-sectional study. Inclusion criteria: hospitalized patients aged 65 years or older with microbiologically confirmed SARS-CoV-2 infection during three intervals (January 13, 2022; January 20, 2022 and February 14, 2022). Patients previously registered due to prolonged hospitalization or readmission were excluded. The presence of physical restraints was assessed. Data collected included demographic information, history of cognitive impairment, type of PR, reason for use, physician prescription, informed consent, and nursing documentation. Results: 195 patients were included, mean age 82.2 years (SD 9.23), women (42%), cognitive impairment (35%). The prevalence of physical restraints use was 21%. Among restrained patients, 85% had history of cognitive impairment. Most frequent type of PR used: abdominal (85%), wrist (55%) and combined (40%). In quality control prescription: physician written order was only present in 35% of the cases, nursing written documentation (90%), reason of use (5%) and informed consent (0%). Conclusions: One in five hospitalized COVID-19 patients had physical restraints, proportion rising to half among those with cognitive impairment. In most cases, restraints were not appropriately prescribed, and consent was not obtained. The use of restraints indicates poor quality of care and highlights the need for educational measures, protocols, and restraint removal policies.

**ROOM 205 - SEPTEMBER 21, 10:30-11:45**

**O-056 Validation Of The Selfy-Brief-MPI A Self-Administered Short Version Of The Multidimensional Prognostic Index To Assess Multidimensional Frailty In Older Patients.**

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Introduction. Clinicians are constantly seeking tools to identify older subjects at risk of multidimensional frailty to provide people with adequate and prompt care in different clinical settings. Therefore, this study aimed to test the agreement between the standard version of the Multidimensional Prognostic Index (MPI), derived from the gold standard Comprehensive Geriatric Assessment (CGA), and a new shorter, self-administered version (i.e., Selfy-Brief-MPI). Methods. This new Selfy-Brief-MPI tool evaluates all the 8 MPI's domains through 18 items, compared to the original 53. Hence, people over the age of 65 were consecutively enrolled in four Italian hospitals. Participants were evaluated through the full-MPI and completed the SELFY-BRIEF-MPI. The agreement was tested through means' comparison, correlation analysis, and Bland-Altman Plot (BAP). Results. In the recruited sample of 105 participants (mean age=78.8 years, 53.3% females), the two versions overall showed no clinically significant differences (mean difference=0.018±0.01, p=0.062). Correlation analysis revealed a very strong correlation between the two versions (R=0.86, p<.001), and the BAP analysis revealed that only 5 participants (4.76%) were outside the limits of agreement. Moreover, Selfy-Brief-MPI's accuracy in identifying frail people (full-MPI score > 0.66) was excellent (AUC=0.90, p<.001), then the corresponding Selfy-Brief-MPI cut-off score for frailty, which maximizes the sensitivity/specificity ratio, was set at 0.60. Key conclusions. These results demonstrated the good agreement of the Selfy-Brief-MPI with the full-MPI, providing evidence of its appropriateness for the screening of multidimensional frailty in older people and the utility to identify target domains for the intervention.



**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-057 Gender predictive power of muscle mass, muscle functionality, and fall-related concerns on mobility - a SPRINTT substudy.**

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Background: A self-reinforcing cycle of decreased appendicular lean mass (ALM) and functionality, increased fall-related concerns (FrPCs), and decreased mobility is hypothesized to exist. However, if sex-specific mobility can be predicted by the aforementioned parameters has not been investigated. Methods: Data comes from the Nuremberg Center of the SPRINTT study (Sarcopenia and Physical fRaiLTY IN older people: multi-component Treatment strategies). Independent living individuals aged 70 years and older who had a Short Physical Performance Battery (SPPB) score of 3 to 9 and low ALM were randomly assigned to either a multicomponent intervention or an active control group. FrPCs were measured with the Falls Efficacy Scale-International (FES-I). Mobility was assessed using average daily step counts (by actigraphy) after at least 24 months. Linear regression analysis was performed separately for each sex with step count as the dependent variable and ALM/BMI, SPPB, FES-I, age at baseline examination and intervention group allocation as independent variables. RESULTS: In both sexes, ALM/BMI was associated with step count at 24 months (w:  $\beta$ : 0.34; m:  $\beta$ : 0.31, both  $p < 0.05$ ). In contrast, no associations were shown between mobility and SPPB, age or intervention group. FES-I was only related to steps traveled in men but not in women (w:  $\beta$ : -0.07,  $p = 0.62$ ; m: -0.38,  $p < 0.05$ ), although men reported significantly fewer FRPCs than women (24.9 vs. 29.7,  $p < 0.01$ ). Summary: Only muscle mass at baseline could predict mobility at 24 months. Addressing FrPCs appears to be particularly important for maintaining mobility in men.

**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-058 Machine Learning System To Predict Imminent Fall at Home (within 3-weeks) For Older People**

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Introduction: Falls in the older population are a major health problem. Very few falls prediction models exist and fail to fully consider home behavior as variables. No model can predict fall within 3 weeks. Method Retrospective observational multicenter study. We developed random forest models which predict imminent fall (fall within 3 weeks) and fall risk within 6 or 12 months based on weekly report from Home Aides (HA) observations. The performance of these models was evaluated using the area under the receiver operating characteristic curve (AUC), sensibility and specificity. SHapley Additive exPlanation values were also used to identify predictors and protectors of fall. Results A total of 1472 patients followed between Jan 2020 to Dec 2022 were enrolled. One thousand seven falls were noted for 357 patients (24%). AUC was 0,91 [95 IC: 0.88 - 0.93] for 12 months prediction and 0.84 [95 IC: 0.81 - 0.88] for 3 weeks. Sensibility was 97% (12 months) and 74% (3 weeks prediction) and specificity was 86% (12 months) and 79% (3 weeks). Predictors were "Has no visit from relatives", "Communicate little", "Do not leave home", "Do not groom himself/herself". Protectors were "is not tired", "Recognize HA", "Prepare meals", "Do not forget when home care came", "Is not painful", "Leave home", "Groom himself". 8 features contributed to 98% of the prediction model. Key Conclusion In this study, machine learning methods were successfully established to predict imminent fall following daily life activity and environment situation in a smartphone to prevent unplanned hospitalizations for seniors.

**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-059 Retrospective Validation of the World Falls Guidelines-algorithm in Community-Dwelling Older Adults**

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Introduction: The recently published World Falls Guidelines propose an algorithm that clinicians can use to classify patients as low-, intermediate-, and high-risk. For each risk category, recommendations are provided on further risk assessment and prevention strategies. We evaluated the algorithm's predictive performance in community-dwelling older adults. Methods: We included data of 1446 older adults from the population-based Longitudinal Aging Study Amsterdam (LASA). Participants recorded falls using a fall calendar for 12 months. Input variables of the algorithm were assessed at baseline. Proxies were used for unavailable variables. We assessed the algorithm's sensitivity and specificity in classifying non-fallers as low-risk and fallers as intermediate- or high-risk. The algorithm's performance was compared against that of fall history and the 3 Key Questions (3KQ), i.e.: "Have you fallen in the past year?", "Do you feel unsteady when standing or walking?", and "Do you have worries about falling?". Results: During follow-up, 451 participants (33.8%) reported a fall. The algorithm classified 919 participants (63.6%) as low-risk, 139 (9.6%) as intermediate-risk, and 388 (26.8%) as high-risk. The algorithm's sensitivity and a specificity were 45.9% (95% CI 43.2-48.6%) and 70.4% (95% CI 68.0-72.8%), respectively. Respective sensitivity and specificity were 47.9% and 75.5% for fall history and 76.2% and 43.0% for the 3KQ. Conclusion: Undertreatment is generally a greater concern than overtreatment in falls prevention. Therefore, the 3KQ may be preferable to the algorithm and fall history, which both showed low sensitivity. A limitation of this study is the use of proxies for some variables, including unsteadiness.

**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-060 Effects of a multi-modal resistance and impact exercise program on knee cartilage structure, cartilage defects and bone marrow lesions in older adults – An 18-month randomised controlled trial**

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Introduction: Osteoporosis and osteoarthritis (OA) often coexist in older adults, and questions remain whether bone loading exercises are harmful to joints. This study examined the effects of an 18-month, progressive resistance training (PRT) and impact exercise (Impact-Ex) program, which we have shown improved in hip and spine bone density, on knee cartilage volume (CV), cartilage defects (CD) and bone marrow lesions (BMLs) in older adults at falls/fracture risk. CDs and BMLs were assessed as they are linked to cartilage loss and may be indicative of incipient OA. Methods: 162 adults (60+y) were randomised to Ex (n=81) consisting of PRT+Impact-Ex (60-180 impacts/session) 3/week or usual-care (UC, n=81). Knee MRI scans were used to assess tibial CV, CDs [tibiofemoral (TF) and patella] and TF BMLs. Average weekly PRT volume and impact loads were correlated with changes in cartilage health. Results: 150 participants completed the study. Tibial CV loss was not significantly different between Ex and UC (medial -2.5% vs -1.5%, P=0.27; lateral -3.2% vs -2.5%, P=0.33), nor was progression of CD (TF medial, 14% vs 15%; lateral 26% vs 28%; patella 12% vs 19%) and BMLs (TF medial 14% vs 17%; lateral 7% vs 5%). CV loss was no different between groups according to baseline CDs or BMLs. Average weekly PRT volume and number of impacts were not related to changes in cartilage volume. Key Conclusion: A multi-modal resistance and impact exercise program was safe and effective for improving bone health in older adults, with no adverse effects on knee cartilage structure.

**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-061 Anaemia early after discharge is associated with reduced mobility two months after hip fracture surgery**

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**Aims** Haemoglobin is essential for optimal skeletal muscle function. Anaemia may be a limiting factor in rehabilitation after acute disease. We examined the association between haemoglobin early after discharge and mobility two months after a surgically treated hip fracture. **Methods** Older patients ( $\geq 65$  years) surgically treated for a hip fracture between January and December 2021 and seen at the outpatient clinic two months after discharge were eligible for inclusion to the study. Haemoglobin was measured 9 days after hospital discharge. Mobility was measured using New Mobility Score (NMS, 0-9 points, 9 best mobility). NMS was evaluated by a physiotherapist at the two month outpatient visit. Anaemia was defined according to the WHO definition (haemoglobin  $< 13$  g/dL in men,  $< 12$  g/dL in women). The association between haemoglobin and NMS was evaluated by linear regression, with age and sex as covariates. **Results** We included 102 out of 121 eligible patients. They had a mean age of 78 (SD 9) years; 75 (74%) were women. Mean haemoglobin at the 9-day visit was 10.6 g/dL (SD 1.3). 89 (87%) had anaemia. The average NMS at the 2-month outpatient visit was 4.7 (2.2). Linear regression showed a significant association between haemoglobin at the 9-day visit and NMS at the two month outpatient visit ( $B=0.80$ , 95% CI 0.36-1.38,  $p=0.002$ ). **Conclusions** We showed that low haemoglobin early after hospital discharge was associated with reduced mobility two months after surgery. Treatments to increase haemoglobin in the late postoperative phase might enhance rehabilitation and recovery in these frail patients.

**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-062 Whole Body Vibration Technology Improves Mobility and Decreases Fall Risk in Post-Stroke Elderly: A Meta-Analysis of Randomized Controlled Trials**

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**Introduction:** Stroke is a significant global health burden with 50% of stroke cases occurring in elderly population. Mobility and fall risk are two major concerns in post-stroke elderly. [1] Whole body vibration (WBV) was found to be effective in elderly with lack of physical mobility. [2,3] Thus, We would like to include post-stroke elderly and investigate the role of WBV in improving mobility and decreasing fall risk  
**Method:** This study was conducted using Preferred Reporting Items of Systematic Review and Meta-Analysis (PRISMA) reporting guidelines on several databases. Article screening, selection and data extraction were done independently by the authors. Quantitative analysis was done using Review Manager 5.4 Software, while risk of bias was assessed using the Cochrane RoB 2.0 tool.  
**Results:** Seven studies with mostly low risk of bias were included. Improvement of mobility and reducing fall risk were found, observed in reduce Time Up and Go Test (TUG) (MD -3.05 [95% CI -5.92, -0.18; p=0.04]) and increase 6 Minute Walking Test distance (MD 6.18 [95% CI -27.80, 40.16; p=0.72]). Further subgroup analysis specifically showed better performance of Low WBV (LWBV) compared to High WBV (HWBV). Other than that, LWBV was reported to be safer than HWBV.  
**Conclusion:** WBV is beneficial for the improvement of mobility and reducing the fall risk in post-stroke elderly. However, future larger scale studies have to be conducted to compare the effectiveness and safety between HWBV and LWBV for post-stroke elderly.  
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**ROOM 204 - SEPTEMBER 21, 14:50-16:05**

**O-063 Identifying and Estimating Frailty Phenotypes by Vocal Biomarkers**

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**Introduction:** Recent research indicates that the human voice reflects frailty status. Frailty phenotypes are little discussed in the literature on the aging voice. This study aims to discover potential phenotypes of frail older adults and examine their relationship with vocal biomarkers. **Methods:** Participants aged  $\geq 60$  years who visited the geriatric outpatient clinic of a teaching hospital in middle Taiwan between 2020 and 2021 were recruited. We identified two frailty phenotypes: energy-based frailty (EBF: weight loss and fatigue) and sarcopenia-based frailty (SBF: inability to rise from a chair, low handgrip strength, low walking speed, and low physical activity). Participants were asked to pronounce a sustained vowel /a/ for approximately 1 s. The speech signals were digitised using a 16-bit A/D converter and analysed using LabVIEW. Two voice parameters, average number of zero crossings (A1) and variations in local peaks and valleys (A2), were applied to analyse voice changes. Multinomial logistic regression was used for the elaboration of the prediction model. **Results:** Among 277 older adults, an increase in A1 values was associated with a lower likelihood of EBF (Relative Risk Ratio [RRR] = 0.75, 95% confidence interval [CI] = 0.57–0.99), whereas an increase in A2 values resulted in a higher likelihood of SBF (RRR = 1.25, 95% CI = 1.09–1.44). No statistically significant relationship was found between A1 and the SBF likelihood (and between A2 and the EBF likelihood).

**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-064 Co-occurrence of frailty and sarcopenia in acutely admitted older patients: results from the Copenhagen PROTECT study**

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**Introduction** Frailty and sarcopenia are often used interchangeably in clinical practice yet representing distinct conditions with separate therapeutic approaches. Studies regarding the co-occurrence of both conditions in older patients is scarce, as they have often been investigated separately. We aim to evaluate the prevalence and co-occurrence of frailty and sarcopenia in a large sample of acutely admitted older medical patients. **Methods** The study was based on the Copenhagen PROTECT study including acutely admitted older ( $\geq 65$  years) medical patients. Frailty was present at scores  $\geq 5$  on the Clinical Frailty Scale (CFS) by Rockwood. Handgrip strength (HGS) was investigated using a handheld dynamometer. Muscle mass (SMI) was investigated using direct-segmental multifrequency bioelectrical impedance analyses (DSM-BIA). Low HGS, low SMI, and sarcopenia were defined according to the consensus definition from the European Working Group of Sarcopenia in Older People (EWGSOP). **Results** This study included 638 patients (mean age: 78.2  $\pm$  7.6, 55% women) with complete records of SMI, HGS, and CFS. The prevalence of low HGS, low SMI, sarcopenia, and frailty were 39.0%, 33.1%, 19.7%, and 39.0%, respectively. The co-occurrence of frailty and sarcopenia was evident in 12.1% of the total sample. **Key conclusions** Frailty and sarcopenia represent clinical manifestations of ageing and overlap in terms of the impairment in physical function observed in both conditions. We demonstrate that frailty and sarcopenia do not necessarily co-occur within the older patient, highlighting the need for separate assessments of both conditions to ensure the accurate characterization of the health status of older patients.



**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-065 Preferred Health Outcomes Of Older Adults In The Netherlands In Relationship To Frailty Status – The COOP Study.**

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Introduction: Older patients' preferences of health outcomes are essential to personalized medicine. As these preferences vary widely among the heterogenous older population, we explored to what extent these preferences in case of hypothetical acute and/or severe disease relate to frailty status. Methods: Dutch adults aged 70+ completed an online or hard copy questionnaire between May and October 2022 (embedded in the COOP-study). Participants were divided into three groups based on a self-reported Clinical Frailty Scale (CFS): fit (CFS 1-3), mildly frail (CFS 4-5) and severely frail (CFS 6-8). Seven health outcomes were assessed: extending life, preserving quality of life, staying independent, relieving symptoms, supporting others, preventing hospital admission and preventing nursing home admission. These outcomes were graded as unimportant (1-5), somewhat important (6-7) or very important (8-10). Results: Out of the 1,278 participants (median age 76 years, 63% female and 53% higher educated), 57% was considered fit, 32% mildly frail and 12% severely frail. For 87% of the participants, preventing nursing home admission was regarded as very important, followed by staying independent (85%) and preserving quality of life (83%). Extending life was most frequently regarded as unimportant (41%). These preferences were similar across frailty subgroups. However, the importance rating of all health outcomes slightly declined with an increasing frailty status (p-values for trend  $\leq 0.034$ ). Key conclusions: Preferred health outcomes of older adults in case of hypothetical acute and/or severe disease are not related to frailty status. Our ongoing qualitative analysis explores personal preferences more in-depth and possible explanations.

**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-066 Frailty and avoidable hospitalizations in older adults: the role of clinical, functional, and contextual factors**

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Introduction: This study aims to investigate the relationship between frailty, its interplay with individual and contextual factors, and avoidable hospitalization risk. Methods: We included 2883 community-dwelling individuals from the Swedish National study on Aging and Care in Kungsholmen (SNAC-K). We operationalized frailty in accordance with Fried's frailty phenotype using baseline SNAC-K data (2001-2004). Avoidable hospitalizations were identified through the Swedish National Patient Register and classified as inpatient care that could have been prevented through proper and timely outpatient care. Participants were followed (median 9.3 years) from baseline until first avoidable hospitalization, death, drop out, or December 31, 2016. The association between frailty and avoidable hospitalization was examined through flexible parametric survival models, with stratified analyses to test for effect modification. Results: There was a higher rate of avoidable hospitalization among those with frailty (hazard ratio [HR]=1.76; 95% confidence interval [CI]=1.35-2.29) and pre-frailty (HR=1.19; 95% CI=1.00-1.41) compared to non-frail participants. The association between frailty and avoidable hospitalization was particularly strong in those who were women (HR=2.11; 95% CI=1.51-2.94), unpartnered (HR=1.91; 95% CI=1.37-2.66) and not receiving formal care (HR=1.92; 95% CI=1.42-2.59). There was evidence of a negative multiplicative interaction between frailty and age ( $p$ -value=0.001) in relation to avoidable hospitalization. Key conclusions: Community-dwelling older adults with frailty and prefrailty are at higher risk of experiencing avoidable hospitalizations compared to those who are non-frail. Age, sex, civil status, formal care, and informal care were some of the identified potential effect modifiers, indicating a need to closely monitor specific subgroups of frail and pre-frail persons.

**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-067 Comparing frailty assessment tools for outcome prediction during the COVID-19 pandemic: Correlation, agreement, and comparative performance of Hospital Electronic Frailty Indexes and Clinical Frailty Scale with clinical decision-making implications.**

Vicky Kamwa (1), Jemma Mytton (1), Elizabeth Sapey (1), Thomas Jackson (1)

(1) UoB

**Introduction**We aimed to assess the performance of previously developed and validated frailty indexes (FI-QEHB and HerFI) against the clinical frailty scale (CFS) administered as part of clinical practice during the COVID-19 pandemic.**Methods**We included all patients aged  $\geq 65$  years, assessed with CFS between 1st March 2020 and 1st April 2022. FI-QEHB and HerFI scores were calculated and compared to CFS. Correlation coefficients ( $r$ ) with  $p$ -values determined tool correlations, while cronbach-alpha ( $\alpha$ ) with confidence intervals (CI) measured agreement. AUROC curves assessed the performance of CFS and FI-QEHB in multivariable logistic regression for outcomes prediction.**Results**The correlation between FI-QEHB and HerFI ( $r = 0.67$ ;  $p = 0$ ) was stronger than CFS with FI-QEHB ( $0.29$ ;  $0$ ) or HerFI ( $0.29$ ;  $0$ ). Overall, there was poor agreement between the three assessment tools ( $\alpha$  [CI]:  $0.48$  [ $0.45 - 0.51$ ]). A total of 2701 patients were included, with 32.1% having COVID-19 (mean age 77.4 [SD 8.44]; 48.6% Female) vs 67.9% without ( $79$  [8.39]; 52.3%). In COVID-19, assessment using FI-QEHB conferred a higher likelihood of hospital mortality (OR 2.07; CI 1.54 – 2.81;  $p < 0.001$ ) compared to CFS (1.40; 1.01 – 1.95; 0.045); FI-QEHB outperformed CFS in predicting in-patient mortality (AUROC - 0.739 vs 0.678) and 30-day readmission (AUROC - 0.607 vs 0.603, respectively) while CFS performed better in predicting 7-day readmission (AUROC - 0.642 vs 0.604, respectively) compared to FI-QEHB.**Key conclusions**Despite poor agreement, good performance across all tools indicates the importance of considering patients' accumulated deficits at admission for clinical decision-making, enabling risk identification and targeted interventions like comprehensive geriatric assessment.

**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-068 Association Between Pollution and Frailty in Older People: A Cross-Sectional Analysis of the UK Biobank**

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(1) University of Palermo

Background: Frailty is a relevant issue in older people, being associated with several negative outcomes. Increasing literature is reporting that pollution (particularly air pollution) can increase the risk of frailty, but the research is still limited. We aimed to investigate the potential association of pollution (air, noise) with frailty and prefrailty among participants 60 years and older of the UK Biobank study. Methods: In this cross-sectional study, frailty and prefrailty presence were ascertained using a model including 5 indicators (weakness, slowness, weight loss, low physical activity, and exhaustion). Air pollution was measured through residential exposures to nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM<sub>2.5</sub>, PM<sub>2.5-10</sub>, PM<sub>10</sub>). The average residential sound level during the daytime, the evening, and night was used as an index for noise pollution. Results: A total of 220,079 subjects, aged 60 years and older, was included. The partial proportional odds model, adjusted for several confounders, showed that the increment in the exposure to NO<sub>x</sub> was associated with a higher probability of being in both the prefrail and frail category [odds ratio (OR) 1.003; 95% CI 1.001-1.004]. Similarly, the increase in the exposure to PM<sub>2.5-10</sub> was associated with a higher probability of being prefrail and frail (OR 1.014; 95% CI 1.001-1.036), such as the increment in the exposure to PM<sub>2.5</sub> that was associated with a higher probability of being frail (OR 1.018; 95% CI 1.001-1.037). Conclusions: Our study indicates that the exposure to air pollutants as PM<sub>2.5</sub>, PM<sub>2.5-10</sub>, or NO<sub>x</sub> might be associated with frailty and prefrailty, suggesting that air pollution can contribute to frailty and indicating that the frailty prevention and intervention strategies should take into account the dangerous impact of air pollutants.

**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-069 Mortality Prediction Among Community-dwelling Older Adults: A Systematic Review**

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**Introduction:** In aging societies, clinicians increasingly have to deal with complex clinical decisions on effective medical care. Estimations of mortality may help inform these decisions, but current research on mortality prediction in community-dwelling older populations is inconclusive. In this systematic review, we evaluate current mortality prediction models' performance and methods, valuating their findings to inform clinical practice and future research. **Methods:** A systematic search with terms related to artificial intelligence, mortality prediction and older populations was performed in four databases without time restrictions. Two independent reviewers filtered results on predetermined eligibility criteria. The CHARMS Checklist [1] and the PROBAST tool [2] were used for data extraction and quality assessment. **Results:** 36 articles were included in the review of which 17 articles were judged as a high risk of bias. 13 articles used a cumulative deficit based frailty index and 7 used artificial intelligence in their statistical procedure. Performance measures were poorly reported, AUC being reported in 47.2% and calibration plots in 36.1% of the articles. Diagnostic information, functional status and healthcare usage were the most common predictor categories. **Conclusion:** Although mortality is an often studied outcome in older populations, there is a lack of well-validated prediction models for mortality. Most models show moderate performance and included information is usually restricted to the same predictor categories. To improve mortality predictions in older adults, more research is needed on optimal combinations of different types of information, as well as more transparent reporting of the performance measures and statistical procedures. 1. Moons KG, de Groot JA, Bouwmeester W, Vergouwe Y, Mallett S, Altman DG, et al. Critical appraisal and data extraction for systematic reviews of prediction modelling studies: the CHARMS checklist. *PLoS medicine*. 2014;11(10):e1001744. 2. Wolff RF, Moons KG, Riley RD, Whiting PF, Westwood M, Collins GS, et al. PROBAST: a tool to assess the risk of bias and applicability of prediction model studies. *Annals of internal medicine*. 2019;170(1):51-8.

## ROOM 205 - SEPTEMBER 21, 14:50-16:05

### O-070 Tempoforme®, ageing well in Hauts-de-France

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Introduction. "tempoforme® aging well in Hauts-de-France" is a public health program whose mission is to promote successful ageing. tempoforme is composed by : 1/ a tempoforme application, 2/ a website (tempoforme.fr), 3/ training with a Complementary University Course Certificate (CUCC) "Aging Well", offered in e-learning for health professionals and webinars for actors in the social field and 4/a tempoforme space (the 1st in Lille) where teleconsultations and Aging Well Assessments are performed. This program, launched in May 2022, allows everyone to self-assess thanks to the tempoforme application its aging profile: "Robust", "Prefrail" or "Frail". This anonymous, quick, fun and free self-assessment makes it possible to identify its (pre)frailty(ies) to promote their reversibility thanks to a personalized prevention plan linked to primary care actors. Methods After completing their self-assessment on the tempoforme application, the user receives a summary of the results which, in the event of detection of (pre)frailty(ies), encourages him to consult his GP in order to offer adapted care or to drive him towards the tempoforme space in Lille to benefit from teleconsultation or an Aging Well Assessment during which the physical, cognitive, neurosensory, respiratory and cardiometabolic (pre)frailties will be assessed. At the end of the assessment, an Aging Well Multidisciplinary Meeting (AWMM) allows the synthesis of identified (pre)frailties and priority actions to be carried out and send to the patient and his GP. Results 1 year after the launch of the tempoforme program, the results are as following:- Application: 20,145 self-questionnaires created, and 14,537 self-questionnaires completed: 25% of users are self-identified "Frail" among those over 50;- Website: 51,500 users, 71,000 sessions and 133,000 page views;- Trainings: 198 health professionals were trained by CUCC;- Aging Well Assessments at the tempoforme® space in Lille: 154 assessments were carried out. On the first 100 patients, we observe the following (pre)frailties: physical (39%), cognitive (32%), neurosensory (36%), respiratory (28%) and cardio-metabolic (55%). Recommendations to promote the reversibility of identified (pre)frailties are of a non-health nature for 16.7% between them. Regarding health recommendations, 27.2% concern the physical domain, 24.1% relate to the neurosensory domain and 19% relate to the thymic and cognitive domain. We now want to assess the reversibility of (pre)frailties identified within the framework of a research project. Conclusion With the support of the various regional supports, the tempoforme program has been successfully developed in the Hauts-de-France region with the aim of promote "ageing well", identify (pre)frailties to enable their reversibility and to delay or even avoid entry into dependency. A spin-off of tempoforme spaces in France and Europe is planned.

**ROOM 205 - SEPTEMBER 21, 14:50-16:05**

**O-071 Associations between physical activity and hospital care use in Swedish older adults: a 6-year longitudinal study**

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Introduction: Although higher levels of physical activity (PA) are associated with a reduced risk of chronic diseases, few studies have explored its impact on hospital care use. We aimed to examine the association between objectively assessed PA and risk of unplanned hospital admissions and length of stay. Methods: We analyzed data from 665 older adults aged  $\geq 66$  years from the Swedish SNAC-K study (2016-2019). The ActivPAL3 accelerometer was used to assess PA (number of steps/day, hours/day of sedentary behaviour [SB], minutes/day of low PA [LPA] and of moderate to vigorous PA [MVPA]). Cox and Laplace regressions were used for 6-year unplanned hospitalizations, and Poisson regressions for total hospitalization days. All analysis were adjusted by age, sex, education, number of chronic diseases, chair-stand test, and cohabitation status. Results: A higher number of steps/day and more time spent in MVPA were associated with a lower risk of unplanned admissions (hazard ratio [HR] 0.95, 95% confidence interval [CI] 0.91-0.99 and HR 0.68, 95%CI 0.47-0.99, respectively) and shorter length of stay (incidence rate ratio [IRR] 0.97, 95%CI 0.95-0.98 and IRR 0.72, 95%CI 0.65-0.80, respectively). For every 1000-step and 60-minute increase in MVPA, the median time to first admission was postponed by 92 (95%CI 3-81) and 382.7 (95%CI 12.7-752.5) days, respectively. No significant associations were found between SB or LPA and any of the outcomes. Conclusions: Our results support the importance of promoting more steps and more time in MVPA to reduce the risk of hospital admissions and length of stay in older adults.

**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-072 Addressing Frailty & Healthy Ageing in the London Borough of Newham: Outcomes from Newham University Hospital's (NUH) Pilot Acute Frailty Service**

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**Introduction:**Newham is one of the most diverse and deprived neighbourhoods in the UK with a relatively young but increasingly frail and ageing population. Comprehensive Geriatric Assessments (CGA) improve outcomes in patients living with frailty. The NHS Long Term Plan mandates a 70-hour per week Acute Frailty Service (AFS) in hospitals with 24-hour Emergency Departments (ED). NUH implemented a pilot 40-hour per week AFS in May 2022, comprising a Consultant Geriatrician, Senior House Officer, and ED therapy team, aiming to improve patient outcomes, optimise length of stay (LOS) and avoid admissions.**Methodology:**Patients meeting specific criteria (age  $\geq 65$  years, Clinical Frailty Score  $\geq 4$ , expected same-day discharge, National Early Warning Score  $\leq 3$ , and at least one frailty syndrome) were identified. Over 12 months, 151 Frailty patients (average age 83.5 years) underwent CGAs. 71 Control patients from April 2022 ED visits were identified (average age 82.7 years).**Results:**Of the 151 patients, 60% were discharged, while the remaining were admitted with a shorter average LOS (13.4 days) compared to other Care of the Elderly patients (15.1 days). Admissions were avoided in 62% of Frailty patients and re-attendances within 7, 30, and 60 days decreased by 2.5% (Number Needed to Treat (NNT)=41), 5.2% (NNT=19), and 3.0% (NNT=34) respectively compared to Control patients, with an overall NNT to prevent re-attendances of 28. The estimated annual cost saving of a full 70-hour per week AFS at NUH is £2,908,934.**Conclusions:**NUH's pilot AFS improved patient care by reducing LOS, admissions and re-attendances in Frailty patients.



**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-073 Frailty among adults with intellectual disability: the importance and necessity of targeted frailty screening**

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Introduction Frailty is a common health issue that occurs 20 years earlier among adults with intellectual disability (ID) than in the general population (1). During care-intensive times, like COVID-19, the Clinical Frailty Scale (CFS) is recommended to measure frailty, predict hospital outcomes, and determine admission for overflow cases in hospitals. However, NICE guidelines caution against using the CFS in the ID population due to the lack of validation, potentially leading to unjust exclusion from care (2). Therefore, the ID-frailty index (ID-FI) was created to measure frailty in the ID population (3). Our objective is to compare the ID-FI to the CFS and to assess the utilization of the ID-FI. Methods Using the Healthy Ageing and Intellectual Disability (HA-ID) cohort study data, we compared the ID-FI with the CFS, examining the disparities in frailty categories and mortality prediction between the indices. Additionally, we conducted interviews with intellectual disability physicians, behavioral therapists, and personal caretakers about the utilization of the ID-FI. Results Compared to the ID-FI, the CFS overestimated 92% of individuals as moderately frail, 74.9% as severely frail and predicted mortality less accurately (4). Regarding the utilization of the index, our interviews revealed several key themes: 'index improvements', 'reasons for scoring differences', 'practical use', and 'added value'. Key findings Compared to the ID-FI the CFS overestimates frailty, predicts mortality less accurately and is therefore unsuitable for frailty screening among adults with ID. Our Interviews confirmed the ID-FI's potential for clinical practice, while also highlighting the need for future clarification and refinement. 1. Schoufour JD, Mitnitski A, Rockwood K, Evenhuis HM, Echteld MA. Development of a frailty index for older people with intellectual disabilities: results from the HA-ID study. *Res Dev Disabil.* mei 2013;34(5):1541-55. 2. NICE. (2023). COVID-19 rapid guideline: Managing COVID-19 (28.0). Retrieved from <https://www.nice.org.uk/guidance/ng191/resources/fully-accessible-version-of-the-guideline-pdf-pdf-51035553326>. 3. Schoufour JD, Oppewal A, van Maurik MC, Hilgenkamp TIM, Elbers RG, Maes-Festen D a. M. Development and validation of a shortened and practical frailty index for people with intellectual disabilities. *Journal of Intellectual Disability Research.* 2022;66(3):240-9. 4. Festen DAM, Schoufour JD, Hilgenkamp TIM, Oppewal A. Determining Frailty in People With Intellectual Disabilities in the COVID-19 Pandemic. *J Policy Pract Intellect Disabil.* september 2021;18(3):203-6.

**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-074 Risk Assessment by the Emergency Medical Services Identifies Older Patients at Risk for Emergency Department Readmissions: A Retrospective Observational Study**

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Background: Malnutrition, falls, and cognitive impairment are common underlying causes for older patients' emergency department (ED) visits, but they often remain unrecognized. Aim: To observe whether a simple risk assessment protocol in the emergency medical services (EMS) can identify older patients at risk for ED readmissions. Methods: This retrospective observational study took place between November 2018 and July 2019 in Espoo, Finland. The EMS assessed the falls risk, nutritional risk, and cognition (using FRAT, NRS-2002, and 4AT, respectively) of 472 patients (median age 82.6, range 70.3-103.7; 62% female) with non-urgent transportation to the ED. Data on the risk assessment, Charlson Comorbidity Index (CCI), and ED readmissions were collected from patient records. Data were analyzed using negative binomial regression and the results are presented as incidence rate ratios (IRR). Results: During the 12-month follow-up, 312 patients (66%) experienced 880 ED readmissions. When adjusted for age, gender, and CCI, the nutritional risk was associated with an increased ED readmission rate throughout all time categories (<1, 1-3, 3-6, and ≥6 months; IRRs 1.38-1.79, p-values <0.05), and the falls risk with fall-related ED readmissions from one month of the index visit (IRR 1.41-1.57, p-values <0.02). Cognitive impairment had no effect on ED readmissions. Conclusions: Patients with nutritional risk or falls risk had higher ED readmission rates independent of comorbidity. The EMS risk assessment could supplement the clinical assessment at ED to identify older patients who might benefit from more detailed assessment of health status and different interventions to reduce the risk of ED readmissions.

**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-075 PhoneFrail: A Rapid Frailty Screening Questionnaire for Telephone-based Triage Systems**

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**Introduction:**Traditional symptom-based triage systems used in emergency services have limited accuracy in older adults, often presenting with “atypical” symptoms. To better risk stratify older adults, incorporating frailty screening has been suggested. However, rapid frailty screening tools suitable for use by telephone is lacking. We aimed to develop a brief questionnaire for frailty identification by telephone.**Methods:**We performed a cross-sectional study of patients aged  $\geq 70$  years attending a Norwegian emergency primary care centre. Patients were assessed with the Clinical Frailty Scale (CFS) and answered 9 potential screening tool questions. We excluded high acuity patients and those unable to answer questions. We performed linear regression with CFS score as dependent variable and potential screening tool questions as independent variables. Based on adjusted R squared values of the potential screening tool questions, PhoneFrail was developed. **Results:**We included 200 patients (59% female) of which 48% were 70-79 years, 38% were 80-89 years and 14% were  $\geq 90$  years. Median CFS score was 4. Adjusted R squared values were highest for potential screening tool questions on receiving help weekly (59%), homeboundness (48%) and using a walking aid (43%). Together, these factors could explain 77% of the variation in CFS score.**Key conclusion:**We developed a rapid frailty screening questionnaire for telephone-based services – PhoneFrail – consisting of three simple questions. Next, we plan to pilot and validate the questionnaire for use in clinical practice. We hypothesise that PhoneFrail can supplement traditional symptom-based triage and enable more accurate assessment of older adults in emergency services.

**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-076 The impact of frailty Screening of Older adults with multidisciplinary assessment of those At Risk during emergency hospital attendance on the quality and safety of care (SOLAR): a randomised controlled trial**

Aoife Leahy (1), Louise Barry (1), Gillian Corey (1), Aoife Whiston (1), Helen Purtill (2), SOLAR team (3), Denys Shchetkovsky (4), Damien Ryan (4), Ahmed Gabr (3), Elaine Shanahan (5), Margaret O'Connor (5), Rose Galvin (1)

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**Abstract**BackgroundComprehensive multidisciplinary geriatric assessment (CGA) has been proven to improve outcomes in hospitalised older adults but there is limited evidence of its effectiveness in the Emergency Department (ED). We aim to assess the benefits of CGA in the ED for frail older adults. **Methods**Older adults over 75 who presented with medical complaints and screened positive for frailty on the ISAR ( $\geq 2$ ) were randomised to geriatrician-led multidisciplinary comprehensive geriatric assessment and management or to usual care (randomisation allocation 1:1). The primary outcome was waiting time in the ED. Secondary outcomes were mortality, ED re-attendance, hospitalisation, nursing home admission, quality of life and functionality at 30 days and 180 days. **Results**228 patients were recruited with a mean age of 83.75. (113 in intervention group, 115 in control group). There was a statistically significant improvement in ED waiting times in the intervention group (17.4 hours vs 21.1 hours  $p = 0.013$ ). The intervention group had significantly lower rates of ED re-attendance, hospitalisation, nursing home admission and higher self-reported function as per Barthel score at 180 days but not 30 days. There was a statistically significant benefit in self-reported quality of life scores in the CGA group (EQ5D5L). **Conclusion**Multidisciplinary assessment of older frail adults in the ED setting conferred a statistically significant improvement in ED waiting times at index visit and lower rates of ED re-attendance, nursing home admission, quality of life and function at 180 days. Further multi-centre trials are warranted to explore the external validity of the findings.

**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-077 Easy and quick to use depression screening in old age: diagnostic power of Whooley questions compared with geriatric depression scale (GDS-15)**

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Introduction: aim of the study was to investigate sensitivity and specificity of a simple bed-side depression screening tool in hospitalized geriatric patients, the two-item Whooley questions. The test was compared to the Geriatric Depression Scale (GDS-15) using the the Montgomery-Asberg Depression Rating Scale (MADRS) as gold standard. The Whooley questions have not yet been investigated in this population. Methods: 248 hospitalized geriatric patients were included prospectively and all tests were performed on all patients: Whooley questions were asked within 24 hours of admission, GDS-15 was part of the usual geriatric assessment. The MADRS was taken within 72 hours of admission. In addition, all patients were examined for cognition (mini-mental status examination), vision and hearing (finger rub test). Results: in 248 patients (mean age 83, 73% female), whooley questions had a sensitivity of 74,2% and a specificity of 65,3% to detect depressive symptoms. This is compared to sensitivity of 39,5% and specificity of 70,2% for GDS-15. In addition to diagnostic power of both whooley questions and GDS-15, the influence of cognition, vision and hearing on test quality will be examined. Complete evaluation of all data will be completed by August 2023. Key conclusions: First data evaluation indicates better diagnostic sensitivity of Whooley questions compared to GDS-15 in hospitalized geriatric patients. Final data and impact of other factors on test quality will be presented.

**ROOM 204 - SEPTEMBER 22, 08:30-09:45**

**O-078 What is a prescribing cascade? A scoping review of definitions**

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**Introduction** Prescribing cascades, first described where the “misinterpretation of an adverse reaction as another medical condition may lead to the prescription of additional medications” [1,2], are an important medication issue – particularly for multimorbid older adults with polypharmacy. The definition has been debated, for example, on whether the side effect may be misinterpreted or recognised/unrecognised, and consequently whether cascades are intentional/unintentional [3]. This scoping review aimed to map how prescribing cascades have been defined/described in the published literature.  
**Methods** Seven electronic databases were searched from inception to January 2023. Studies were included if they i) were published full-text articles in English, ii) mentioned prescribing cascade (or synonymous term) in the title/abstract, and iii) provided a definition/description of a prescribing cascade in the full text. Specific terminology and images used to define/describe the prescribing cascade were extracted, and the findings were narratively synthesised. **Results** Ninety-six articles were included. Half included a definition stating the side effect was misinterpreted (n=48), whilst 12.5% indicated a possible misinterpretation. Twenty-two articles mentioned the side effect could be recognised/unrecognised (22.9%), 20.8% addressed the cascade's appropriateness/inappropriateness, and 5.2% referenced their intentional/unintentional nature. Nearly one quarter (22.9%) included an image or map to describe a prescribing cascade. Nuances and expanded concepts identified included 'prophylactic prescribing cascade', 'prescribing cascade relic', and 'deprescribing cascade'.  
**Key conclusions** This review has uniquely mapped how prescribing cascades have been conceptualised in the literature, finding considerable heterogeneity between studies. These findings suggest the need for consensus and/or operational definitions for prescribing cascades going forward.  
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**ROOM 205 - SEPTEMBER 22, 08:30-09:45**

**O-079 Effectiveness of home-based exercise delivered by digital health in older adults: a systematic review and meta-analysis**

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**Background:** regular physical exercise is essential to maintain or improve functional capacity in older adults. Multimorbidity, functional limitation, social barriers and currently, coronavirus disease of 2019, among others, have increased the need for home-based exercise (HBE) programmes and digital health interventions (DHI). Our objective was to evaluate the effectiveness of HBE programs delivered by DHI on physical function, health-related quality of life (HRQoL) improvement and falls reduction in older adults. **Methods:** A systematic review and meta-analysis were performed. Randomised clinical trials were included on community-dwelling older adults over 65 years whose intervention consisted of exercises at home through DHI. The included studies aimed to assess physical function, HRQoL, and accidental falls. All the outcomes included were measured with validated clinical scales. **Results:** twenty-six studies have met the inclusion criteria, including 5,133 participants (range age  $69.5 \pm 4.0$ - $83.0 \pm 6.7$ ). The HBE programmes delivered with DHI improve muscular strength (five times sit-to-stand test,  $-0.56$  s, 95% confidence interval, CI  $-1.00$  to  $-0.11$ ;  $P = 0.01$ ), functional capacity (Barthel index,  $5.01$  points, 95% CI  $0.24$ - $9.79$ ;  $P = 0.04$ ) and HRQoL (SMD  $0.18$ ; 95% CI  $0.05$ - $0.30$ ;  $P = 0.004$ ); and reduce events of falls (odds ratio, OR  $0.77$ , 95% CI  $0.64$ - $0.93$ ;  $P = 0.008$ ). In addition, in the subgroup analysis, older adults with diseases improve mobility (SMD  $-0.23$ ; 95% CI  $-0.45$  to  $-0.01$ ;  $P = 0.04$ ), and balance (SMD  $0.28$ ; 95% CI  $0.09$ - $0.48$ ;  $P = 0.004$ ). **Conclusion:** the HBE programmes carried out by DHI improve physical function in terms of lower extremity strength and functional capacity. It also significantly reduces the number of falls and improves the HRQoL. In addition, in analysis of only older adults with diseases, it also improves the balance and mobility.

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**O-080 Recovery of Daily Functioning and Quality of Life in Post-COVID-19 Patients in Geriatric Rehabilitation**

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Introduction: After a COVID-19 infection older persons may benefit from geriatric rehabilitation (GR). In referral to GR frailty status is often considered. However, little is known about functional recovery and quality of life (QoL) of post-COVID-19 patients with different frailty levels admitted to GR. Methods: The EU-COGER study is a pan-European multicenter study in 59 GR facilities across 10 countries. Patients' characteristics, functional status (Barthel Index; BI), QoL (EQ-5D-5L) and frailty (Clinical Frailty Scale; CFS) were collected from medical records at GR admission, discharge, and at 6 weeks and 6 months follow-up. Linear mixed models were applied to examine the course of functional recovery and QoL. Results: 723 patients were included (mean age 75.5 (SD 9.9) years; 52.4% male). Most patients were mildly frail to severely frail (median CFS 6.0) at admission. After admission patients' BI increased with 2.73 points per month (SE 0.14, p-value <0.00), and this growth was quadratic (estimate -0.30, (SE 0.02) p-value <0.00). Severely frail and mildly frail patients' BI increased parallel until 15.73 (CFS 8) and 19.22 (CFS 4) five months after admission. Similarly patients' EQ-5D-5D increased quadratically (linear estimate 0.12 (SE 0.01), p-value <0.00; quadratic estimate < -0.00, (SE <0.00) p-value <0.00) to almost equal scores of 0.87 (CFS 4) and 0.85 (CFS 8) 5 months after admission. Conclusions: Post-COVID-19 patients admitted to GR show substantial and similar recovery in ADL functioning and QoL. COVID-19 induced frailty appeared to be not distinctive for the outcome and should therefore not be considered in GR referral.



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**O-081 Perspectives of rehabilitation professionals on implementing a validated home telerehabilitation intervention for older adults in geriatric rehabilitation: a multi-site qualitative study**

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**Introduction** Telerehabilitation has been identified as a promising tool to support rehabilitation at home. This study aims to depict the factors that influence the implementation of an evidence-based sensor monitoring intervention for older adults from the perspectives of 1) rehabilitation professionals in the Netherlands, and, 2) rehabilitation professionals in the province of Manitoba (Canada). **Methods** We adopted a qualitative study design to conduct two focus groups, one in-person in the Netherlands and one online via Zoom (due to covid-19) in Canada. Qualitative data obtained were analyzed using thematic analysis. **Results** The participants expressed different characteristics of the telerehabilitation intervention that contributed to making the intervention successful for the at-home rehabilitation: 1) Focus on future participation goals; 2) The telerehabilitation provides the professionals with objective and additional insight into the daily functioning of the older adults at home; 3) The intervention can be used as a goal-setting tool; 4) The telerehabilitation deepens their contact with older adults. The analysis showed facilitators and barriers to the implementation of the telerehabilitation intervention. These included i. personal/client related, ii. therapist related, and iii. technology related. **Conclusions** To better guide the implementation of telerehabilitation in the daily practice of rehabilitation professionals, the following steps are needed: 1) ensuring technology is feasible for communities with limited digital health literacy, and cognitive impairments; 2) developing instruction tools and guidelines and 3) training of rehabilitation professionals.

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**O-082 Disability prevention through individualized multicomponent training in hospitalized adults: randomized clinical trial - pilot study**

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**Objectives:** To analyze the effects of an individualized multicomponent training program in acutely hospitalized patients over 75 years on maximal dynamic and isometric strength after 3 days of training. **Methods:** 97 patients, 53% women, with a mean age of  $86 \pm 5$  years, participated in the Randomized Clinical Trial. It was carried out in the Geriatrics Service of the University Hospital of Navarra. Three gym machines were used: leg press (LP), chest press (CP) and knee extension (KE). After a comprehensive assessment, the intervention group (IG) trained for 3 consecutive days, progressively. First day, after the initial assessment, 2 sets of 10 repetitions at 50% of 1RM. On the second day, 3 sets of 10 squats and 3 sets of 10 repetitions at 60% of 1RM. On the third and last training day, 3 sets of 10 squats and 3 sets of 8 repetitions at 70% of 1RM. The control group (CG) received treatment as usual. The geriatrician could prescribe physiotherapy treatment if deemed necessary. **Results:** Maximum dynamic strength in LP, CP and KE improved by 14.3% ( $p < 0.001$ ), 7.3% ( $p < 0.05$ ) and 19.2% ( $p < 0.001$ ), respectively, in the IG, while it worsened in the CG; -1.1% in LP, -2% in CP and -5.1% in KE ( $p > 0.05$ ). Manual grip strength through the HandGrip improved by 6% ( $p < 0.01$ ) in the IG and presented no changes in the CG (0%). **Conclusions:** In geriatric patients, functional deterioration associated with hospital stay is an aspect to be improved in current health systems. Generally, treatments are focused on the pathology, ignoring the functional and/or cognitive domains. This protocol of only 3 days of intervention is capable of reversing the negative functional consequences of hospital stay in the geriatric population, so multicenter randomized clinical studies should be carried out to confirm the improvements noted.

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**O-083 Management of falls in older adults living in nursing homes: impact of a gerontopreventive telemedicine programme: analysis of the randomized study, GERONTACCESS**

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**Introduction**Falls are common events in nursing homes (NHs), especially in areas where geriatric expertise is lacking. 10% to 25% of them result in hospital admission and/or fractures. We present results from the GERONTACCESS trial which objective was to evaluate the impact of a gerontopreventive teleconsultation program (GTLM-prog) reducing indoor falls. **Methods**We conducted a prospective multicentre randomized cluster trial in 9 NHs located in medical deserts areas in France. Multimorbidity participants aged > 60 years were included. Only for participants randomized in the intervention group (IG), a care plan was proposed within the 10 days after the baseline comprehensive geriatric assessment, followed by geriatric teleconsultations scheduled every 3 months to assess gerontological issues. The objective was to evaluate at 12 months the impact of the GTLM-prog on falls. **Results**426 participants were randomized. 1086 falls occurred during the study without significant difference between the two groups. Regarding non-serious falls (which did not require medical assistance): 107 residents fell in the IG versus 134 in the control group ( $p=0.006$ ). There was 31 repeated fallers in the IG and 49 in the control group ( $p=0.02$ ). The incremental cost effectiveness ratio was €3 926 gained per fall avoided. **Conclusion**GTLM-prog significantly reduces the incidence of falls and delays the first fall occurrence in NH' residents. This program could be an innovative health preventive care delivery model to cope with falls.

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**O-084 Effectiveness and acceptability of an autonomous digital solution in older versus younger persons**

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The objective of this project is to compare the effectiveness and acceptability of a digital application (virtual companion) in older people (> 65 years old) versus younger people (18-35 years old). Methods : In these analyses of a self-selected sample (n=5660) of older adults (> 65 years) and young (18-35 years) subjects downloading a free app that delivers, aided by a virtual companion, a brief behavioral intervention for insomnia was realized. The approval of the ethics committee of the University of Bordeaux has been obtained, as well as the GDPR agreement by the French authorities (CNIL). The analysis focused on: 1) the perception of the app's functionalities in both groups studied; 2) participant engagement using credibility and trust scores (ETQ score: ECA-trust questionnaire); 3) the acceptability of the application in both groups (Acceptability E-scale) and 4) the effectiveness of the application on insomnia. Results: A total of 9030 participants downloaded the application and a sample of 5660 adults (3692 aged under 35 and 1968 aged over 65) was selected for this study. Results showed that in older group: perceived credibility, trust in the application, as well as the empathic character of the virtual companion are associated with a higher probability of completing the program: trust score by age groups: OR = 1, 12, [95% CI=1.01-1.25], p=0.03, and credibility scores by age group: OR=1.25, [95% CI=1.06-1, 47], p=0.007. Furthermore, at the end of treatment, insomnia remission and insomnia response rates were comparable across both age groups. In conclusion, acceptability is an essential lever to allow seniors to adhere and use digital solutions. These findings suggest that empathic interactions with virtual companions may be particularly helpful in maintaining older users engaged with effective fully automated digital treatments.

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**O-085 Safety and Efficacy of a Respiratory Syncytial Virus Vaccine (mRNA-1345), Against a Spectrum of Symptomatic Disease in Adults Aged  $\geq 60$  Years**

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Introduction: Respiratory syncytial virus (RSV) is a significant public health burden. Here, we present an interim analysis from a pivotal phase 2/3 clinical trial in adults aged  $\geq 60$  years assessing mRNA-1345, an investigational mRNA-based RSV vaccine encoding the RSV prefusion-stabilized F glycoprotein. Methods: In this ongoing, phase 3, randomized, observer-blind, placebo-controlled, case-driven study, adults aged  $\geq 60$  years (NCT05127434) were randomised 1:1 to receive 1 dose of mRNA-1345 (50  $\mu\text{g}$ ) or placebo. The primary efficacy endpoints were prevention of a first episode of RSV-associated lower respiratory tract disease (LRTD; RSV-LRTD) with  $\geq 2$  or  $\geq 3$  lower respiratory symptoms between 14 days and 12 months post-injection; secondary efficacy endpoints include RSV-associated acute respiratory disease (RSV-ARD) with  $\geq 1$  respiratory symptom between 14 days and 12 months post-injection. Results: mRNA-1345 was well-tolerated, and no safety concerns were identified (solicited local adverse reactions (AR): mRNA-1345=58.7%, placebo=16.2%; solicited systemic ARs: mRNA 1345=47.7%, placebo=32.9%). Primary efficacy endpoints were met in the in the per-protocol efficacy set (n=35,088) including a vaccine efficacy of 83.7% (95.88% CI, 66.0-92.2;  $P < 0.0001$ ) against RSV-LRTD cases with  $\geq 2$  lower respiratory symptoms and 82.4% (96.36% CI, 34.8-95.3;  $P = 0.0078$ ) against RSV-LRTD cases with  $\geq 3$  lower respiratory symptoms. For the secondary efficacy endpoint, vaccine efficacy was 68.4% (95% CI, 50.9-79.7) against RSV-ARD. Symptom distribution between participants receiving mRNA-1345 and placebo and additional efficacy analyses by RSV subtype will be discussed. Key Conclusions: mRNA-1345 had a favourable safety and tolerability profile in adults aged  $\geq 60$  years and is efficacious in preventing a spectrum of symptomatic RSV disease.

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**O-086 Efficacy And Feasibility Of A Technology-Based Multicomponent Intervention For The Discharge Of Multimorbid Older Patients From The Hospital To A Protected Smart-Home Area: The PRO-HOME Study.**

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Introduction. Prolonged hospital stays increase the risk of multidimensional impairment especially in frail older patients. The PRO-HOME study is a Net-Research Program co-funded by the Italian Ministry of Health aimed to assess the efficacy of a technology-based multicomponent intervention in older multimorbid patients discharged from the hospital acute ward to a protected smart-home, featuring domotics, robotics and other assistive technologies, to reduce the length of hospital stay and prevent multidimensional impairment of hospitalized older patients. Methods. In this Randomized Clinical Trial (RCT), 60 patients aged over 65 years, considered stable and dischargeable from the Acute Geriatric Unit, were recruited: 30 patients were included in the technology-based multicomponent intervention group inside the PRO-HOME smart-home facility while 30 patients were included in the usual care group as controls. Multicomponent intervention includes technology-based cognitive and physical activity training, educational programs on lifestyles, chronic disease care and a protocol of music therapy. The Multidimensional Prognostic Index (MPI), based on Comprehensive Geriatric Assessment (CGA), were administered and motility and sleep parameters were assessed using infra-red camera and smart-watch. Length of hospital-stay were compared between groups using Mann-Whitney test. Results. No differences in mean age ( $82.7 \pm 6.43$ ) and gender (50% females) were observed between the two groups. Patients of intervention group report a statistically significant reduction in hospitalization length-of-stay compared to the control group (mean difference reduction: days = 2.00;  $p < .001$ ). Key conclusions. The multicomponent intervention program Pro-Home significantly reduced length-of-hospital-stay in multimorbid older patients, A protected discharge smart-home facility based on technologies can decrease the length-of-hospital-stay.

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**O-087 Geriatrics and artificial intelligence in Spain (Ger-IA Project): talking to ChatGPT. A nationwide survey.**

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Introduction: Artificial intelligence (AI) is broadly defined as a computer program that is capable of making intelligent decisions. The objective was to describe the degree of agreement between specialist geriatricians/residents in Geriatrics, with the answers given by an AI tool (Chat-GPT) in response to questions related to different areas in Geriatrics. Methods: Descriptive, observational nationwide study. Ten (10) questions about different areas in Geriatrics (generalist, pharmacology, treatment, complex decisions-end of life and diagnosis/complementary tests) were asked to an AI (ChatGPT). Each question with its own answer was sent to doctors. A Likert scale was presented for each question-answer: score from 1-5 was given to each level of agreement with the answer provided by the AI (1=disagree; 5=totally agree). Results: 126 doctors included. 69.8% women. Mean age 41.4y. 71.4% specialist geriatricians; 28.6% residents. 94.4% responses from 41 Spanish hospitals. Average score obtained by AI was 3.10/5. Specialists geriatricians gave ChatGPT a lower score compared to residents (3.02 vs. 3.28), respectively ( $p < 0.05$ ). Answers for generalist questions obtained better mean score (3.96/5) than other areas (pharmacology: 2.99/5; treatment: 3.00/5; complex decisions-end of life: 2.50/5; diagnosis-complementary tests: 2.48/5). Key conclusions: ● Scores with great variability, depending on the questions/area of knowledge. It seems those about complex decisions (care level/therapeutic level) obtained worse scores. ● Questions related to theoretical aspects of challenges/future forecasts in Geriatrics obtained better scores. ● AI is likely to be incorporated into some areas of medicine, but according to our study, it would still present important limitations.

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**O-088 The Prevalence of Non-pharmacological Interventions in Older Homecare Recipients: an Overview From Six European Countries**

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Introduction: Non-pharmacological interventions (NPIs) play an important role in the management of older people receiving homecare. However, little is known about the prevalence of NPIs and to what extent usage varies between countries. Therefore, the aim of the current study was to investigate the prevalence of NPIs in older homecare recipients in six European countries. Methods: The prevalence of 24 NPIs was analyzed cross-sectionally in a population of older homecare recipients (65+) using the interRAI Home Care Instrument in six European countries. Data collection took place between 2014 and 2016 within the longitudinal cohort study 'Identifying best practices for care-dependent elderly by Benchmarking Costs and outcomes of community care' (IBenC). Results: A total of 2884 homecare recipients were included. Interventions in the field of psychosocial interaction (eg participation in social activities, 33%), special therapies (eg speech therapy, 0.4%), physical activity (eg physical therapy, 14.6%), preventive measures (eg physical restraints, 9.2%), regular care interventions (eg home health aides, 60.3%) special aids (eg urinary collection device, 6.9%) and environmental interventions (eg emergency assistance available, 74.1%) were analyzed. Large differences between countries in the use of NPIs were observed and included, for example, 'going outside' (range: 7%-82%), 'home health aides' (range: 12%-93%), and 'physician visit' (range: 24%-94%). Key conclusions: There were large differences in the prevalence of NPIs between homecare users in European countries. It is important to better understand the barriers and facilitators of use of these potentially beneficial interventions in order to design successful uptake strategies.



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**O-089 Ageism behind bars and its associated factors**

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Introduction: Prison is considered a microcosmos of society, hence the incarcerated population is also growing older. Ageism is a type of discrimination based on age. It is a pervasive societal issue, which has been shown to have a health impact on older adults. There is scarce information regarding the experience of ageism by older inmates in prison. This study aims to characterize older inmates' experience of ageism. Methods: This is secondary analysis of the National Survey of Incarcerated People 2021, the sample consisted only of prisoners 50 years and older. Descriptive analysis was performed, and logistic regression was used to determine associated factors to ageism. Results: out of 8010 inmates 50 years and older, 13.7% were women. 12.4% of older inmates reported experiencing ageism. Other inmates (86.1%), guards (25.7%) and personnel (9.0%) were perpetrators. Inmates reported discrimination through mockery (89.54%), threats (12.04%), physical abuse (18.2%), theft (7.7%), damage to their belongings (5.7%), being ignored (18.7%), limitation to services (8.39%) and activities (6.8%). Ageism is associated with gender identity (OR 1.81 IC 95% 1.56-2.09), education (OR 1.12 IC 95% 1.05-1.19), diabetes (OR 1.28 IC 95% 1.09-.51), hypertension (OR 1.60 IC 95% 1.39-1.83), visual impairment (OR 1.72 IC 95% 1.50- 1.97), hearing impairment (OR 1.92 IC 95% 1.64- 2. 24), and mobility impairments (OR 2.5 IC 95% 2.15-2.90). However, there is no association with ethnicity (OR 1.04 IC 95% 0.97-1.12)Conclusion: ageism is less prevalent than reported in other populations, it is associated with major sociodemographic and health factors.

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**O-090 Hospital-based nursing homes (NH) versus independent nursing homes: do their infection prevention & control practices and their use of antibiotics differ ?**

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**Introduction**We describe and analyze the infection prevention and control (IPC) practices and the appropriate use of antibiotics (AUA) in these two types of NH. **Methods**An online survey was proposed to coordinating teams working in NH and distributed via several networks promoting IPC and AUA in France from June to July 2022. We compared the answers to the survey between NH associated with a hospital and not associated. **Results**We collected 535 usable surveys: 133(24.9%) were from doctors or nurses working in a hospital-based NH. These professionals (n=107/133(80.5%)) were significantly more likely to work in public NH ( $p<0.001$ ), compared to professionals working in independent NH. They had significantly better antibiotics stewardship compared to independent NH: availability of a prescription protocol for antibiotic therapy: (73 - 55.3% vs 109 -27.6%,  $p<0.001$ ), better assessment of antibiotic therapy at 48-72 hours (76-57.6% vs 184-46.5%,  $p=0.016$ ). No difference was found in practices such as urine collection (urine dipstick or urine cytobacteriological examination) without a medical prescription; nor on the computerization of the medical prescription. Physicians working in a hospital-based NH were more likely to seek advice for prosthetic infections ( $p<0.001$ ), for the management of a resident carrying a multiresistant bacteria ( $p=0.006$ ), or implement an IPC program ( $p=0.008$ ). **Key conclusion**According to French National Strategy, deploying intervention teams in AUA and IPC should strengthen IPC, especially in remote settings with no hospital surroundings.

## ROOM 204 - SEPTEMBER 22, 10:30-11:45

### **O-091 Implementation of a tailored multifaceted antibiotic stewardship intervention with a participatory-action-research approach to improve antibiotic prescribing for urinary tract infections in frail older adults in four European countries: a process evaluation**

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**Introduction:** In a recent cluster randomized controlled trial in general practices and older adult care organizations in Poland, the Netherlands, Norway, and Sweden, we found that a multifaceted antibiotic stewardship intervention effectively reduced antibiotic use for suspected urinary tract infections in frail older adults compared with usual care [1]. We aimed to evaluate the implementation of this intervention. **Methods:** We conducted a process evaluation alongside the trial. The antibiotic stewardship intervention consisted of a decision-tool and a toolbox, and was implemented using a participatory-action-research (PAR) approach through sessions for education and evaluation. We documented the implementation process of the intervention, and conducted a questionnaire with health care professionals (HCPs) in intervention and usual care clusters. We evaluated whether intervention components were delivered and used in clinical practice, the opinion of HCPs, perceived barriers and facilitators to their use, and contextual factors. **Results:** The questionnaire was completed by 254 HCPs from the 38 participating clusters. The use of the decision-tool and toolbox materials appeared to vary in practice; nevertheless, HCPs evaluated them as useful. The PAR-approach stimulated local tailoring of the implementation process. During the educational and evaluation sessions, HCPs reflected on barriers for implementation and how to overcome them. Across clusters, HCPs varied in which actions they undertook for implementation. The COVID-19 pandemic and staff changes were important barriers for implementation. **Key Conclusions:** A decision-tool, toolbox, and a PAR-approach with educational and evaluation sessions all appear to contribute to a tailored implementation process within the local older adult care setting. **References:**1. Hartman EAR, van de Pol AC, Heltveit-Olsen SR, Lindbaek M, Høye S, Lithén SS, et al. Effect of a multifaceted antibiotic stewardship intervention to improve antibiotic prescribing for suspected urinary tract infections in frail older adults (ImpresU): pragmatic cluster randomised controlled trial in four European countries. *BMJ.* 2023;380:e072319.

**ROOM 204 - SEPTEMBER 22, 10:30-11:45**

**O-092 Comorbidity patterns and health outcomes in older adults with atrial fibrillation: Nationwide population-based findings from the Swedish National Patient Register**

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Introduction: Older adults with atrial fibrillation (AF) often present with multiple comorbidities that challenge their clinical management and worsen their prognosis. We aimed to characterize the comorbidity patterns in AF and explore their prognostic value for health outcomes. Methods: We used cross-sectional data from the Swedish National Patient Register (2012-2017) and identified adults with AF  $\geq 65$  years by 1st January 2017. We performed latent class analysis (LCA) to identify groups of adults with similar comorbidity patterns; disease exclusivity  $\geq 25\%$ , and observed/expected ratio  $\geq 2$  were applied to determine overexpressed diseases in each class. Cox regression models adjusted for relevant confounders were fitted to investigate the association between comorbidity patterns and 2-year health outcomes. Results: We included 203,042 adults with AF (79.6 [7.9] years, 45% female). Seven comorbidity patterns were identified: unspecific, metabolic disease, complex comorbidity, neuropsychiatric disease, cardiovascular disease, musculoskeletal disease, and eye disease. Compared with the unspecific pattern, adults with complex comorbidity had the strongest association with all-cause mortality (hazard ratio, HR 2.02, 95% confidence interval, 1.96-2.08), cardiovascular mortality (HR 2.31, 2.20-2.41), all-cause hospitalization (HR 2.45, 2.40-2.50), cardiovascular hospitalization (HR 2.68, 2.60-2.77), and bleedings (HR 1.55, 1.40-1.72); adults with neuropsychiatric disease had highest risk of stroke (HR 1.44, 1.30-1.59); and adults with musculoskeletal disease had reduced risk of all-cause (HR 0.70, 0.66-0.74) and cardiovascular (HR 0.67, 0.62-0.74) mortality and increased risk of all-cause (HR 1.37, 1.34-1.41) and cardiovascular hospitalization (HR 1.19, 1.14-1.25). Conclusions: The characterization of comorbidity patterns may help identifying subjects more needed to receive integrated care among older adults with AF.

**ROOM 204 - SEPTEMBER 22, 10:30-11:45**

**O-093 Obstructive Sleep Apnea and oxygenation in very old adults: a Propensity-Score match study**

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**Introduction:** Obstructive sleep apnea (OSA) is a highly prevalent respiratory disorder and its prevalence increases with age. Its severity is determined by apnea hypopnea index (AHI). This classification does not contemplate other parameters that have influence on the disease's development especially in elderly. Other oximetric parameters appear to be better predictors of cardiometabolic effects. This could lead to defining different groups of OSA and identifying patients with high risk phenotypes, even if they have the same AHI. **Methods:** A Retrospective observational study was carried out in 11,747 participants, 210 were 80 years or older and had valid data. A Propensity Score matching process was held creating 4 groups of age. The main result variables were total sleep time spent with arterial oxygen saturation (SaO<sub>2</sub>) < 90% (T90), medium oxygen saturation, minimal oxygen saturation and AHI. **Results:** Participants 80 years or older had higher percentages of T90 (44%; IQR 80-8) and greater probability of higher percentages of T90 in density curves. They also had lower percentages of minimum O<sub>2</sub> saturation (medium: 75%; IQR 80-59) and lower percentages of average O<sub>2</sub> saturation (medium: 89%; IQR 92-86). The percentage of T90 increases with the value of AHI, but if we select patients with the same AHI, very old patients had higher values of T90. **Key Conclusions:** among patients with the same severity of OSA (measured by AHI), the group of oldest adults had increased values of T90. This emphasizes the possible limitations that AHI has to define severe OSA in very old patients.

**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-094 Community-dwelling older adults' experiences of a home visiting programme led by nursing students: a qualitative evaluation of the VISITAME trial.**

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Introduction: Although home visiting programmes led by nurses can improve biopsychosocial health in older adults, their the cost-effectiveness has not been proven. Home visiting programmes implemented by nursing students could be an effective alternative. The aim of this study was to comprehend the experiences of community-dwelling older adults with chronic multimorbidity in relation to a home visiting programme implemented by nursing students. Methods: A descriptive qualitative study included 31 in-depth interviews with community-dwelling older adults with chronic multimorbidity who had completed a home visiting programme implemented by nursing students in 10 community centres in the southeast of Spain. Data were analysed following the reflexive thematic analysis method developed by Braun & Clarke. Results: Two main themes were developed. The first theme was 'Empowering the older adult to manage their own health' and had three subthemes: 'learning how to manage their health and condition', 'gaining awareness in order to take control of one's own health', and 'changing unhealthy behaviours and habits'. The second theme was 'Home visits to promote health in older adults' and included two subthemes: 'filling the gap in the care offered by the public healthcare system' and 'the older adults' perception of improved biopsychosocial health'. Key conclusions: The home visiting programme implemented by nursing students led to community-dwelling older adults perceiving their autonomy and health improved. Nursing regulatory bodies should collaborate with nursing faculties to design policies that promote the integration of nursing students as a health asset for community-dwelling older adults with chronic multimorbidity.

**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-095 Amyopathic dermatomyositis in an older woman: clinical case.**

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**Introduction**Dermatomyositis (DM) is an idiopathic inflammatory disease, the amyopathic subtype is rare (10-20%), manifesting only with pathognomonic findings of the skin, without clinical or laboratory evidence of muscle involvement [1,2]. We present the case of a woman with amyopathic DM. **Case**A 77-year-old female with a history of hypertension, diabetes, heart failure, chronic obstructive pulmonary disease, and gastroesophageal reflux disease, with no family nor pathological history of autoimmune disease.Dermatosis presented 9 years ago, described as pruritic and erythematous plaques on the forehead, with progression to the eyelids, anterior thorax, upper extremities, and back of the hands. Fatigue and proximal, symmetric muscle weakness in the upper extremities were reported 4 years later.Upon physical examination: heliotrope rash was present on the face, heliotrope edema and erythema on the upper eyelids, V sign in thorax, and Gottron's papules over the metacarpophalangeal joints. MMT8 score: 150.Katz: 6/6, Lawton-Brody: 7/8, PHQ 9: 18, Mini-Mental: 23CPK (60 IU/L) and aldolase (3.6 U/L) were normal. ANA were negative. The Myopathy panel: TIF1 gamma positivity (147.0) and borderline MDA5 (8.0). Skin biopsy reported the presence of interstitial mucin. The screening was performed to rule out malignancy. Hydroxychloroquine, methotrexate, folic acid, prednisone, and topical steroids were started, with excellent clinical response and improved quality of life.**Conclusion**We present an unusual case of amyopathic DM. Accurate diagnosis and multidisciplinary management are essential for an optimal therapeutic approach to DM and the prevention of its complications [3].

**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-096 Patterns of multimorbidity in primary care electronic health records: a systematic review**

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**Background**Multimorbidity, the coexistence of multiple chronic conditions in an individual, is a complex geriatric syndrome that is highly prevalent in primary care settings. This systematic review aimed to summarise the current evidence on multimorbidity patterns identified in primary care using electronic health record (EHR) data.**Methods**Multiple databases were searched from inception to April 2022 to identify studies that derived original multimorbidity patterns from primary care EHR data. The quality of the included studies was assessed using a modified version of the Newcastle-Ottawa Quality Assessment Scale.**Results**Sixteen studies were included in this systematic review, none of which was of low quality. Most studies were conducted in Spain, and only one study was conducted outside of Europe. The prevalence of multimorbidity (i.e. two or more conditions) ranged from 14.0% to 93.9%. The most common stratification variable was sex, followed by age and calendar year. Despite significant heterogeneity in clustering methods and disease classification tools, consistent patterns of multimorbidity emerged. Mental health and cardiovascular patterns were identified in all studies, often in combination with diseases of other organ systems (e.g. neurological, endocrine).**Key conclusions**These findings emphasise the frequent coexistence of physical and mental health conditions in primary care, and provide useful information for the development of targeted preventive and management strategies. Future research should explore mechanisms underlying the multimorbidity patterns, prioritise methodological systematicity to facilitate the comparability of findings, and promote the use of EHR data globally to enhance our understanding of multimorbidity in more diverse populations.



**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-097 Paravertebral myosteatosi is associated with 1-year mortality in older adults hospitalized with COVID-19 infection**

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Rationale: Low muscle mass has emerged as predictor of poor outcomes in COVID-19, but the predictive value of muscle fat infiltration (myosteatosi) on subsequent mortality has been rarely assessed in older adults. We aimed to determine if myosteatosi was associated with 1-year mortality in hospitalized older adults with COVID-19. Methods: This is an ancillary study of a multicenter retrospective study that included adults aged  $\geq 70$ , hospitalized with COVID-19 in geriatric acute care wards. We included subjects with a thoracic CT-scan performed within 5 days after the diagnosis in two centers. We considered paravertebral muscle area at T12 level, as indicator of muscle mass, and the severity of myosteatosi using the Goutallier classification (five-level visual scale ranging from 0 (no myosteatosi) to 4 (very severe myosteatosi)), as indicator of muscle quality. Cox model evaluated the associations with 1-year mortality. Results: Among the 90 participants (46% women, mean age 84 years), 29 (32%) died within one year. The severity of lung injury and of paravertebral myosteatosi were associated with 1-year mortality, whereas the paravertebral skeletal area was not. In Cox model adjusted on lung injury severity, hypertension, obesity and Charlson index, the most severe degrees of myosteatosi were associated with 1-year mortality: HR (95% CI) for Goutallier classification 3-4 vs 0-1, 2.46 [1.20 - 6.48],  $p=0.01$ . Conclusion: The myosteatosi was independently associated with 1-year mortality in older adults hospitalized with COVID-19. Muscle quality, and not only muscle mass, should be considered. The Goutallier classification is an easy-to-use, visual method to quantify myosteatosi. Disclosure of Interest: None Declared Keywords: COVID-19, Goutallier classification, Muscle quality, Myosteatosi, Older Adults

**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-098 A qualitative study to identify the determinants of dietary intake in community-dwelling older adults to inform the development of a digital service to prevent malnutrition**

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Introduction: Understanding the determinants of dietary intake in older adults is important to develop appropriate strategies to improve nutritional status. Furthermore, interventions that have been co-developed with consumers are more likely to be acceptable and increase the likelihood of long-term utilisation. The aim of the current study is to explore the factors that influence the eating habits of community-dwelling older adults and identify possible features and potential barriers of a digital service designed to prevent malnutrition and improve dietary intake. Methods: Adults aged 65 and older were recruited from assisted living facilities across Greater Manchester. Five focus groups involving 33 older adults (aged 69-96 years) were conducted between October and December 2022. Conversations were audio-recorded, transcribed verbatim and analysed using an inductive thematic approach. Results: Four themes and nine sub-themes emerged from the dataset. The main determinants of dietary intake were personal preference (taste, cooking habits), perceptions of foods (food quality, health claims, calorie content) and psycho-social/ physiological factors (change to living situation, reduced sense of smell/ taste). The ability, engagement and willingness to use digital technology varied among participants. The majority of participants had a positive attitude towards the digital service with suggestions often relating to an educational component, recipes and motivational support. Key conclusions: The findings from this study will inform the design of a digital health app to prevent malnutrition specifically tailored to the needs of older adults.

**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-099 Inflammatory diets influence iron metabolism in older and younger adults**

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Background: An inflammation promoting diet is known to contribute to systemic inflammation, thus interfering with iron metabolism. This analysis examined the effects of an inflammatory diet on iron metabolism in older and younger healthy adults. Methods: 24-hour dietary recalls were assessed and dietary Inflammatory Index [DII] was computed based and dietary iron intake was also derived. Median DII score was used as a cut-off for an either less or more inflammatory diet. Markers of iron metabolism (ferritin, transferrin, iron, transferrin saturation [TSAT], soluble transferrin receptor [sTfR], hepcidin) were quantified colorimetrically or by ELISA. Ferritin index was calculated as sTfR/log ferritin. Mann-Whitney-U-test was used for group comparisons, spearman-rho for correlation analysis. Results: Younger adults (n=60, 26.5±4.13years) exhibited a similar DII, but lower ferritin concentrations (50.8±44.3 vs 110±80.5ng/mL, p<0.001) and TSAT (23.8±11.7 vs 29.5±11.4%, p=0.001) as well as higher dietary iron intake (11.9±5.01 vs 10.4±4.77mg/day, p=0.038) compared to older adults (n=80, 72.5±5.51years). In both age groups, subjects with a more inflammatory diet had higher ferritin (young: 60.9±49.0 vs 40.6±38.4ng/mL, p=0.029; old: 140±87.3 vs 80.1±60.1ng/mL; p=0.001) and lower dietary iron intake (young: 9.70±4.68 vs 13.7±4.57mg/day, p=0.002; old: 7.89±2.46 vs 13.1±5.21mg/day, p<0.001). Only in older adults, subjects with a higher DII score also exhibited higher hepcidin concentrations (young: 46.0±62.4 vs 35.9±58.2ng/mL p=0.205, old: 102±93.3 vs 49.5±73.5ng/mL, p=0.025). Independent of age, DII was correlated with ferritin concentrations (rho=0.309, p<0.001), ferritin index (r=-0.231, p=0.007) and dietary iron intake (rho=-0.624, p<0.001). Conclusion: Our results suggest that an inflammation driving diet results in insufficient iron intake and supply.

**ROOM 205 - SEPTEMBER 22, 10:30-11:45**

**O-100 Using frailty screening instruments in daily clinical practice: conclusions from a diagnostic comparative study in patients aged 70 and over undergoing elective colorectal surgery.**

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**Background:** Pre-operative frailty screening has been recommended as an easy way to identify older adults who would benefit from peri-operative comprehensive geriatric assessment (CGA). However, because comparative research is lacking, there is no consensus on which screening instrument to choose. This study compares the diagnostic performance of seven frailty screening instruments for adverse postoperative outcomes in patients aged  $\geq 70$  years undergoing colorectal surgery. **Methods:** Prospective cohort study in an academic hospital, examining the predictive accuracy of the Fried and Robinson frailty criteria, Edmonton Frail Scale, Rockwood Clinical Frailty Scale, Modified Frailty Index, FRAIL questionnaire, and Geriatric 8 for postoperative complications with Clavien-Dindo severity grade  $\geq 2$ . Secondary outcomes were prolonged length of stay, increased care level after discharge, and functional decline in basic or instrumental activities of daily living up to 1 month after surgery. **Results:** The study included 172 consecutive patients. Frailty prevalence ranged from 10.6% to 76.2%. Clavien-Dindo severity grade  $\geq 2$  complications were present in 37.8% of patients. Most instruments had a high specificity (76.7% - 92.4%) at the expense of sensitivity (21.5% - 38.5%) for predicting postoperative complications. The Geriatric 8 showed the opposite pattern (sensitivity 86.2% - specificity 29.9%). Comparable results were found for the secondary outcomes. **Conclusions:** Based on predictive accuracy for adverse postoperative outcomes, no screening instrument could be selected as best. To identify patients for peri-operative CGA, we propose to use a self-reported geriatric assessment questionnaire. Future research should further explore how to select patients who would benefit from CGA and integrated geriatric-surgical care.

**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-101 Loneliness, social inactivity and social isolation and their association with health-related quality of life and mortality in home-dwelling older adults**

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Introduction: Loneliness, social inactivity and social isolation are interrelated concepts. They indicate poor well-being, adverse health effects and increased mortality [1-3]. There are scarce of studies exploring the overlapping and prognosis of these concepts. Our aim was to investigate 1) the overlapping of loneliness, social inactivity, and social isolation, 2) characteristics of lonely compared to other groups, 3) health-related quality of life (HRQoL), psychological well-being (PWB), and 3.5 years mortality of these groups. Methods: We retrieved a randomly selected sample (n=989) from the 2019 wave of the population-based Helsinki Aging Study postal survey. The sample consisted of home-dwelling older adults aged  $\geq 75$ . Participants were classified as 1) not lonely, not socially inactive nor socially isolated (n=494); 2) lonely (n=280); 3) not lonely but socially inactive or/and socially isolated (n=215). Participants were assessed for MMSE, ADL, comorbidities, and self-rated health. Participants' PWB score was calculated and the HRQoL was investigated using 15D. Follow-up for all-cause mortality was 3.5 years. Results: Only 2% of the whole sample were simultaneously lonely, socially inactive, and socially isolated. Of lonely participants, 38% were also socially inactive and/or socially isolated. Participants' suffering from loneliness were significantly more often widowed, lived alone, and had the lowest HRQoL and poorest PWB compared to other groups. There was no difference in mortality between the groups. Key conclusions: Loneliness is an independent and strong determinant of poor HRQoL and PWB and should be considered separately from social inactivity and social isolation. [1] Freak-Poli R, Ryan J, Tran T, et al. 2022. Social isolation, social support and loneliness as independent concepts, and their relationship with health-related quality of life among older women. *Aging & Mental Health*. 2022;26(7):1335-1344. doi:10.1080/13607863.2021.1940097 [2] Cacioppo S, Grippo AJ, London S, Goossens L, Cacioppo JT. Loneliness: clinical import and interventions. *Perspect Psychol Sci*. 2015 Mar;10(2):238-49. doi: 10.1177/1745691615570616. [3] Tilvis RS, Routasalo P, Karppinen H, Strandberg TE, Kautiainen H & Pitkala KH. 2012. Social isolation, social activity and loneliness as survival indicators in old age: a nationwide survey with a 7-year follow-up. *European Geriatric Medicine* 3: 18-22. doi: 10.1016/j.eurger.2011.08.004

**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-102 Validation of the Hospital Anxiety and Depression Scale (HADS) in Geriatric Patients: A Cross-Sectional Study.**

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Introduction: The aim of this study is to evaluate the validity of the Hospital Anxiety and Depression Scale (HADS) as screening tool for both anxiety and depression in geriatric outpatients and to determine the optimal cut-off value for this population. Methods: A cross-sectional, single-center validation study including geriatric outclinic patients aged 65 years and older. The performance of the HADS-D (depression) and HADS-A (anxiety) were assessed using respectively the GDS-15 and Geriatric Anxiety Inventory (GAI) as gold standard. The GDS-15 and GAI were conducted by a trained nurse, the HADS by an independent researcher. Results: In total, 98 patients (mean age: 79.7 years old, male: 50.0%) were included. The prevalence of depressive symptoms was 20.4% (GDS) and of anxiety symptoms 24.5% (GAI). The cut-off value of 8 yielded a sensitivity of 60.0% (95% Confidence Interval (CI): 38.3-79.3) and a specificity of 97.4% (95% CI: 92.3-99.6) for the HADS-D; for the HADS-A this was 50% (95%CI: 30.8-69.2) and 98.6% (95%CI: 94.2-99.9), respectively. The optimal cut-off value for both HADS-subscales was 5 (HADS-D: Youden Index (YI)= 0.81, HADS-A: YI = 0.80). The AUC for the HADS-D was 0.94 and for the HADS-A 0.96. The sensitivity and specificity were respectively 95.0% and 85.9% for the HADS-D and 95.8% and 83.8% for the HADS-A. Conclusion: The HADS detected symptoms of depression and anxiety comparable to the GDS-15 and GAI, respectively, when using a cut-off point of 5 for both HADS-subscales.

**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-103 Early retirement intentions among employees aged 50–65 years: Prevalence across 17 European countries and association with loneliness**

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**Introduction.** Optimal age for retirement has raised discussions across the Europe. In the meantime, loneliness has been recognized as a new geriatric giant. The aim is to explore the extent to which individuals across Europe have early retirement intentions and if loneliness is associated with intended early retirement. **Methods.** Data come from the Survey of Health, Ageing and Retirement in Europe (SHARE) study wave 7, collected in 2017 in 27 European countries. Altogether 15,405 individuals aged 50–65 years reported if they were looking for an early retirement (yes/no before the age of 65 years) and of these 1,041 individuals had reported how often they feel lonely (often, some of the time or hardly ever/never). Logistic regression model with early retirement intentions as the dependent factor and loneliness as an independent factor was used. The model was adjusted for age, sex, depression, sum of chronic conditions and physical activity. **Results.** The proportion of individuals who looked for an early retirement ranged from 24% in Israel to 77% in Hungary, with overall proportion being 49%. Individuals who felt often lonely were 2.7 times more likely (95% CI 1.2–6.5) to look for an early retirement as compared to individuals feeling never/very rarely lonely. Feeling lonely some of the time did not increase the odds for early retirement intentions (OR 1.4, 95% CI 0.94–2.1). **Conclusions.** Attitudes towards early retirement vary greatly across the Europe. Loneliness was independently associated with early retirement intentions. Intervening loneliness might increase willingness to prolong work careers.

**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-104 What is the Association between Psychotropic Medication Use and Orthostatic Hypotension in Community-Dwelling Older People: Data from TILDA**

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**Background**The aim of this study is to examine the link between psychotropic medication use and orthostatic hypotension (OH)**Methods** Participants  $\geq 65$  years at TILDA Wave 1 had an active stand to assess orthostatic blood pressure. OH was defined as a blood pressure (BP) drop  $\geq 20$  mmHg systolic and/or  $\geq 10$  mm Hg diastolic beyond 30 seconds post-standing. Medication lists were examined for the following anatomic therapeutic chemical classification codes: N06A (Antidepressants); N05BA, N05CD, N03AE (Benzodiazepines); 'N05CF ('Z' Drugs); N05A (Antipsychotics). Logistic regression models assessed the association between psychotropic use and OH. Analyses were adjusted for age, sex, education, alcohol excess, depression, cognition, chronic disease, heart disease and sleep quality.**Results** Of the 1,875 participants (mean age 71 years, 52% female), 12% were prescribed  $\geq 1$  psychotropic medication (234/1,875), while 4% (78/1,875) were prescribed  $\geq 2$ . Psychotropic medication use was associated with a larger drop in systolic BP at 30 seconds (7.81 (95% CI 5.61-10.02) vs 3.46 (95% CI 2.61-4.32) mm Hg;  $p < 0.001$ ) and 60 seconds (4.02 (95% CI 1.82-6.21) vs 1.28 (0.44-2.13);  $p = 0.025$ ) post standing. Psychotropic medication use was associated with a higher likelihood of OH (OR 1.50 (95% CI 1.10–2.08;  $p = 0.013$ ), with a stronger association noted for those taking  $\geq 2$  psychotropics (OR 2.19 (95% CI 1.34-3.57);  $p = 0.002$ ).**Conclusion** Psychotropic medication use is independently associated with delayed BP recovery after standing. Older people prescribed psychotropics have a 50% higher likelihood of OH related to their use, highlighting the importance of reviewing these medications in a comprehensive geriatric assessment



**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-105 The Association Between Sarcopenia and Blood Pressure Recovery After Standing**

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**Introduction**Sarcopenia and orthostatic hypotension (OH) are growing age-related health challenges associated with adverse outcomes in older adults. Despite a possible pathophysiological link via the skeletal muscle pump of the lower limbs, their relationship is not well elucidated. We sought to characterise the relationship between sarcopenia, blood pressure (BP) recovery and OH in attendees to a falls and syncope clinic aged 50 years and older.**Methods**Participants underwent active stand with beat-to-beat BP measurements. Hand grip strength and 5-chair stands time were measured. Bioelectrical impedance analysis was performed, and the European Working Group on Sarcopenia in Older People guidelines were used to classify participants into robust, probable sarcopenia and sarcopenia groups. Mixed effects models with linear splines were used to model the effect of sarcopenia status on BP after standing while controlling for potential confounders and heart rate.**Results**In 109 participants (mean age 70 years, 58% women), the prevalence of probable sarcopenia was 32% and sarcopenia 15%. Probable sarcopenia and sarcopenia were independently associated with an attenuated rate of recovery of both systolic and diastolic BP in the 10-20s period after standing, when compared to the robust group (systolic BP  $\beta$  -0.59, -0.85,  $P < 0.01$ ; diastolic BP  $\beta$  -0.45, -0.65,  $P < 0.001$ ).**Conclusion**Sarcopenia is associated with an attenuated recovery of BP during a key time-period after standing, increasing the risk of OH. This effect is independent of the heart rate response, and other confounders, and therefore may be mediated via the skeletal muscle pump.

**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-106 Sarcopenia Prevalence and Outcomes in Older Men With Obesity: EWGSOP2 vs. ESPEN-EASO Definitions**

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**INTRODUCTION:** Operational definitions of sarcopenia may underestimate its prevalence and consequences in older adults with obesity. We aimed to compare the prevalence and functional outcomes of sarcopenic obesity in older men using recent consensus operational definitions of sarcopenia and sarcopenic obesity. **METHODS:** We classified 1,416 community-dwelling men ( $\geq 70$  years) into obesity categories according to body mass index (BMI;  $\geq 30$  kg/m<sup>2</sup>), sarcopenia categories according to the European Working Group on Sarcopenia in Older People (EWGSOP2) definition, and sarcopenic obesity categories according to the European Society for Clinical Nutrition and Metabolism and the European Association for the Study of Obesity (ESPEN-EASO) definition. We analysed the prevalence of sarcopenic obesity and its associations with functional outcomes including activity of daily living (ADL) and instrumental activity of daily living (IADL) disability, and 12-month falls. **RESULTS:** Only 0.3% of men had EWGSOP2 sarcopenia with obesity whereas 9.6% had ESPEN-EASO sarcopenic obesity. No participant with BMI  $\geq 32$  kg/m<sup>2</sup> had EWGSOP2-confirmed sarcopenia, despite 60.8% of these participants having probable sarcopenia (low muscle strength). Men with ESPEN-EASO sarcopenic obesity had significantly lower hand grip strength, higher chair-stands time and slower gait speed (all  $P < 0.05$ ), increased odds for ADL (odds ratio: 5.02, 95% CI: 1.85-13.58) and IADL (2.18, 1.38-3.45) disability, and higher 12-month incident falls rates (incident rate ratio: 1.59, 95% CI: 1.03-2.44) than men with neither sarcopenia nor obesity. **CONCLUSION:** The EWGSOP2 sarcopenia definition may underestimate sarcopenia prevalence in older men with obesity. The ESPEN-EASO sarcopenic obesity definition consistently identified older men at risk of poor functional outcomes.

**ROOM 204 - SEPTEMBER 22, 14:50-16:05**

**O-107 Creatinine-to-cystatin C ratio, as a novel marker of skeletal muscle mass and myosteatorsis**

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Objective: Sarcopenia is a risk factor for poor outcomes in older adults. We investigated associations of creatinine-to-cystatin C ratio (CCR) with skeletal muscle mass and fat deposition in the muscle (myosteatorsis), as well as physical performance measures, to clarify the usefulness of CCR as a plasma marker of sarcopenia. Methods: The study population consisted of community dwelling older adults (N = 1,329). Skeletal muscle mass and fat deposition in the muscle was assessed using CT images obtained at mid-thigh. Results: Quartiles of CCR was strongly associated with mid-thigh muscle cross-sectional area (Q1:  $104 \pm 22$ , Q2:  $108 \pm 24$ , Q3:  $110 \pm 23$ , and Q4:  $114 \pm 25$  cm<sup>2</sup>, F = 10.38, P < 0.001) and the mean attenuation value of the muscle, a surrogate measure of fat deposition in the muscle (Q1:  $47.4 \pm 4.8$ , Q2:  $48.9 \pm 4.4$ , Q3:  $49.8 \pm 4.1$ , Q4:  $50.9 \pm 3.7$  HU, P < 0.001). These associations were independent of major covariates. Although creatinine alone was independently associated with muscle cross-sectional area, the association was weaker than that of CCR, particularly in the individuals with renal functional decline. Furthermore, CCR was associated with grip strength and one-leg standing time independently of muscle cross-sectional area. Conclusion: CCR was associated with skeletal muscle mass and myosteatorsis in older adults, as well as physical performance measures. CCR may serve as a convenient marker of sarcopenia.

## ROOM 205 - SEPTEMBER 22, 14:50-16:05

### O-108 European survey on subcutaneous antibiotics administration

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Introduction. While the subcutaneous (SC) administration of antibiotics (AB) is off label, this practice is very common in France, especially for older patients. This survey aims to determine the proportion of physicians prescribing SC AB in different European countries. Methods: An electronic questionnaire was emailed to the members of ESCMID Study Group for Infection in the Elderly (ESGIE) and former European Academy for Medicine of Ageing (EAMA) students from October 2022 to January 2023. Results: 345 practitioners (mainly geriatricians (46%) or ID specialists (34%)) from 19 different European countries responded on the survey. France (n=93), UK (n=69), Belgium (n=24), Poland (n=22) and Italy (n=21) were the main responders. 140 (41%) practitioners declared prescribing SC AB. This practice varies from 98% in France to 0% in England or Germany. The main reasons for using the SC route were a poor venous access (n=130, 92%), delirium (n=67, 47%), managing pain and comfort (n=83, 59%) or ambulatory care (n=66, 47%). Yet, 205 physicians never used SC for administrating AB: 135 (63%) never heard of this practice, 76 (36%) because it was off-label and 56 (26%) because of the lack of available PK/PD data. 200 (98%, n=205) of these physicians however, replied that the SC route could be an interesting alternative if on-label. Key conclusions: There is a great heterogeneity in AB SC practice across Europe, but the majority of physicians underlined that this practice could be useful in common situations in geriatrics. SC route should be integrated in AB research and development.

**ROOM 205 - SEPTEMBER 22, 14:50-16:05**

**O-109 Pharmacokinetics Of Ceftriaxone Administered by Subcutaneous Or Intravenous Route In Patients Aged Over 65 Years: the Phasage Study**

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Ceftriaxone is frequently administered by subcutaneous (SC) route in older patients in France [1], although this practice is off-label since 2014 due to a lack of pharmacological evidence. The Phasage study aimed to compare the intravenous (IV) and SC pharmacokinetics (PK) of several antibiotics in older patients. This report describes the first results for ceftriaxone. Patients aged > 65 years who were administered ceftriaxone (1g/24h) by IV or SC route were included in this national multicentric study. Steady state ceftriaxone concentrations were measured at several times: pre-infusion (H0), at the end of infusion (H0.5), and at 2h (H2, SC only) and 5h post-infusion (H5). Concentrations of ceftriaxone and patients' characteristics were compared between the two groups (IV and SC). To assess pharmacological efficacy, the proportions of H0 unbound concentrations  $\geq 1$  mg/L [2] were compared. Data from 47 patients (23 under IV and 24 under SC ceftriaxone) were analyzed. Sex-ratio, mean age, weight, creatinine clearance, and median Charlson and ADL scores were not significantly different between IV and SC groups. Concentrations of ceftriaxone at H0.5 were significantly higher in the IV group (p-value < 0.001), while H0 and H5 concentrations were similar. In the SC group, H2 concentrations were higher than H0.5 concentrations (p-value = 0.003). The target concentration was achieved in 23/23 (IV) and 23/24 (SC) patients, without significant difference. These first results support favorable PK of ceftriaxone administered by SC route in older patients. PK modeling is ongoing, to evaluate optimal doses for each route of administration. 1. Forestier E, Paccalin M, Roubaud-Baudron C, Fraisse T, Gavazzi G, Gaillat J. Subcutaneously administered antibiotics: a national survey of current practice from the French Infectious Diseases (SPILF) and Geriatric Medicine (SFGG) society networks. *Clin Microbiol Infect.* 1 avr 2015;21(4):370.e1-370.e3. 2. EUCAST Breakpoint Tables. 1 janv 2023;13.0.

**ROOM 205 - SEPTEMBER 22, 14:50-16:05**

**O-110 Medication Adherence in Hospitalized Patients Enrolled in the APPROACH Randomized Controlled Trial**

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**Introduction**The effective management of chronic diseases in older people often needs of multiple long-term therapies, which may hamper maintaining high medication adherence. We aimed to evaluate how much older adults adhere to medical recommendations and identify the factors associated with poor medication adherence.  
**Methods**We used data from the baseline examination of the APPROACH randomized controlled trial (clinicaltrial.gov: NCT05719870), involving patients (and, eventually, their caregivers) hospitalized in the Geriatrics Units of Ferrara and Padova University Hospitals. Medication adherence in the pre-admission period was measured through the Medication Adherence Report Scale-5 (MARS-5) and Morisky Medication Adherence Scale-4 (MMSA-4). Sociodemographic data and information from the Comprehensive Geriatric Assessment were collected for each participant. The association between these factors and low medication adherence (i.e. MARS-5 score <24 or MMSA-4 score 3-4) was tested through binary logistic regressions.  
**Results**The analysis included a subsample of 156 individuals with a mean age of 84.6 and 60.9% of women. A caregiver was interviewed in 58.5% of cases. At baseline, the frequency of high medication adherence ranged between 61.2% (MMSA-4) and 65.7% (MARS-5). Except for a borderline result for cognitive deficits, we found no significant associations of low medication adherence with sociodemographic characteristics, clinical and functional status.  
**Key conclusions**In line with previous findings [1], the preliminary data from the APPROACH trial show a prevalence of high medication adherence of around 60%. Analyses of the total sample will help delineate the profile of older patients lesser adherent to medical recommendations.  
**Citations**[1] I. B. Félix et al, «Medication adherence and related determinants in older people with multimorbidity: A cross-sectional study» Nurse Forum, vol. 56(4), pp. 834-843, 2021 doi: 10.1111/nuf.12619.  
**Acknowledgements:** The project is supported by a Pfizer Quality Improvement grant (n. 53789559).

**ROOM 205 - SEPTEMBER 22, 14:50-16:05**

**O-111 Trends in Drug Duplications in Swedish Older Adults: A Nationwide Register Study from 2006 to 2019**

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Introduction: Drug duplication, the use of two identical drugs simultaneously, is a medication error increasing the risk of adverse drug events. We describe the trends, and implicated drugs, in drug duplications in older adults from 2006 to 2019 in Sweden. Methods: Repeated register-based cross-sectional study of all older adults ( $\geq 75$  years) dispensed drugs at a community pharmacy in 2006-2019. Drug duplication was defined as a  $\geq 30$  day overlap of two dispenses of drugs with the same 7-character ATC-code (Anatomical Therapeutic Chemical (ATC) Classification System), but with different brand names, within a three-month period. Results: Among Swedish older adults ( $n \approx 600,000/\text{year}$ ), the prevalence of users of duplicated drugs increased from 6% to 12% in 75–79-year-olds and from 7% to 13% in  $\geq 80$ -olds. The drug classes most frequently implicated in drug duplications were beta blocking agents, high-ceiling diuretics and ACE inhibitors in 2006, and Vitamin B12 and folic acid, lipid modifying agents and Angiotensin II receptor blockers in 2019. Key conclusion: Drug duplication represents a common but unnecessary and potentially hazardous medication error. Our study indicates that the prevalence of drug duplications in older adults has almost doubled during the two last decades affecting more than 10% in 2019. Cardiovascular medications were the drug class most often implicated in drug duplications. National efforts are needed to revert this increasing trend, such as improved computerised systems to detect drug duplications.

**ROOM 205 - SEPTEMBER 22, 14:50-16:05**

**O-112 The burden of managing medicines for older people with sensory impairment: an ethnographically-informed study**

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**Introduction** Ageing is associated with an increased risk of visual and/or hearing impairment and rising medication usage, leading to substantial medicine-related challenges and potential for medicine-related harm. We set out to explore the daily 'medicines' journey' of older people with sensory impairment (OPwSI). **Methods** We recruited community-dwelling adults aged over 65 years with visual and/or hearing impairment and using > 4 medicines to this ethnographically informed qualitative study. Participants created audio- and video-recordings, and made diary notes about their medicines' journey. They then participated in semi-structured interviews and provided information about their daily medicine regime. **Results** Fourteen OPwSI were recruited of whom seven had dual impairment, four had hearing impairment, and three had visual impairment. The mean age was 75 (SD 7.7) (range 65-89) years, nine were female, and five lived alone. The participants used a mean of 11 (SD 5.0) medicines (range 5 to 22) and a wide variety of formulations. Participants reported challenges at all stages of the medicines' journey (i.e. medicine ordering, obtaining, storing, administering and disposing). They had developed elaborate, individualised strategies to facilitate medicine use in their home. These included bespoke storage systems, fixed routines, simple aids, communication, and assistive technologies to facilitate medicine use. **Key conclusions** OPwSI experience a significant burden in managing their medicines to ensure their safe and effective administration. There is an urgent need for person-centred medicine-related services that accommodate individual needs and abilities. The individualisation of medicine regimens and more effective use of assistive technologies could provide greater support to OPwSI.



## ROOM 205 - SEPTEMBER 22, 14:50-16:05

### **O-113 Inappropriate medication use in older inpatients according to the TIME criteria: a multicenter, cross-sectional study from Türkiye**

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**Objective:** The Turkish Inappropriate Medication Use in the Elderly (TIME) criteria set is an internationally validated explicit tool developed to help the management of pharmacotherapy in older adults. It includes a total of 153 criteria: 112 on the medications that are potentially harmful to use (TIME-to-STOP) and 41 on the potentially beneficial but often overlooked medications (TIME-to-START). Here, we aimed to study the prevalence of inappropriate medication use (IMU) in older inpatients according to the TIME criteria set, and to reveal the criteria most commonly seen in general and causing hospitalization. **Methods:** This is a cross-sectional study conducted on 13 inpatient clinics (geriatrics and internal diseases) in Türkiye between January 2020-April 2021. Participants aged  $\geq 60$  were evaluated in terms of demographic and clinical characteristics and geriatric syndromes. "IMU in general" and "IMU causing hospitalization" were assessed by using the TIME criteria on the first day of their admission. **Results:** A total of 405 older inpatients were included (mean age:  $77 \pm 8$ , 55.2% female). The prevalence of "IMU in general" and "IMU causing hospitalization" was 82.5% ( $n=334$ ) and 34.1% ( $n=138$ ), respectively. The most common TIME-to-STOP criterion in general was "PPIs for multiple drug use indication (no benefit, potential harm)" (7.2%,  $n=29$ ) and the TIME-to-START criterion was "Vaccination for herpes zoster (reduction in risk of shingles infection and post-herpetic neuralgia)" (73.6%,  $n=298$ ). The most common TIME-to-STOP criterion causing hospitalization was "Strict blood pressure control ( $<140/90$  mmHg) in patients with orthostatic hypotension/ cognitive impairment (e.g. dementia)/ functional limitation/ low life expectancy ( $<2$  years)/ high risk of falling" (2.5%,  $n=10$ ). The most common IMU causing hospitalization according to the TIME-to-START was "ONS with MN or MNR if nutritional counseling/dietary supplementation are not sufficient to achieve nutritional goals." (11.6%,  $n=47$ ). **Conclusion:** Our findings suggest that the prevalence of IMU both in general and resulting in hospitalization are both remarkably high in older inpatients. Since the criteria leading to hospitalization of the older adults in particular point to the

frail and malnourished individuals, it can be realized that the more frequent use of the TIME criteria in validated populations has the potential to protect risky groups from adverse outcomes. Longitudinal studies are needed to determine whether the use of the TIME criteria will be successful in reducing IMU in general and IMU causing hospitalization in older adults.

**ROOM 205 - SEPTEMBER 22, 14:50-16:05**

**O-114 Physical Activity Timing Associated With The Risk Of Incident Depression: Evidence From The UK Biobank That Timing Matters**

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Introduction: Physical activity (PA) is associated with mental health outcomes. Although there are some indications PA timing is important in mental health, no largescale epidemiological cohort studies have been performed to date. We aimed to investigate the association between PA timing and incident depression in middle-aged and older participants from UK Biobank. Methods: 89,934 European participants (56.2±7.8 years, 44.8% men) without history of depression were analyzed. Hourly PA levels (derived from accelerometry) were standardized for the total daily amount of PA. Participants were followed until depression occurrence, death or lost-to-follow up over a median of 7 (interquartile range: 6.4, 7.5) years period. Data was analyzed per standardized hourly PA level as well as in groups derived from k-means clustering using cox proportional hazard models, adjusted for confounding factors. Results: 1,748 participants developed depression. Using the hourly standardized PA measures, we observed higher risks for incident depression in people most active during the night and lower depression risks for people most active during the early morning. In line, compared with participants who were most active during the afternoon, participants with most PA in the early morning had a lower risk for incident depression (hazard ratio: 0.83 [95% confidence interval, 0.76, 0.91]). No differences were observed when analyses were stratified for chronotype nor for the overall objective physical activity level. Conclusions: Increased PA during the night and early morning were associated with the risk of incident depression, which suggests time-dependent PA interventions for mental health might be of added clinical value.

**ROOM 205 - SEPTEMBER 22, 14:50-16:05**

**O-115 End stage kidney disease treatments: a difficult choice to elderly patients?**

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Introduction: End stage kidney disease (ESKD) treatment choice may be difficult for elderly patients. Dialysis can be burdensome for the frail (more aggressive procedures and less quality of life) and Conservative Care (CC) may shorten life in fit patients. This study aimed to describe our elderly patients' trajectories regarding ESKD treatment options. Methods: We designed a single center retrospective observational, cross-sectional study regarding patients (pts) over 80 years old (yo) who attended the ESKD treatment modalities appointment between July 2015 and December 2021. Results: During 6,5 years, 113 pts over 80 yo were attended. Mean age was 85 yo (range 80-103). 66% were male and mean charlson comorbidity index (CCI) was 7 (sd  $\pm$ 1,2). Mean estimated glomerular filtration rate was 14,64 (sd  $\pm$ 7,6) ml/min/1.73m<sup>2</sup>. Regarding treatment options, 54% chose dialysis (HD), 38,9% chose conservative care, 2,7% chose peritoneal dialysis and 2,7% refused any treatment. Of those who chose dialysis, 62,3% started on a regular program of HD, 22,95% died before starting HD and 14,75% are still in follow-up. Considering those who chose CC, 54,5% started on a dedicated CC program, 31,8% died before starting that follow-up and 4,5% lately decided for HD. We found no difference between CCI and the treatment chosen (p=0.709). The mean time lived between those who chose HD vs CC was no different too. Key conclusions: The majority of patients over 80 yo still chose HD. CC should be an alternative to patients who might not benefit from dialysis. Geriatric assessment may help distinguish these groups.