Abstracts 44e Wintermeeting Belgische Vereniging voor Gerontologie en Geriatrie 2021

Auteurs: Belgische Vereniging voor Gerontologie en Geriatrie

Kernwoorden: geriatrie, gerontologie

Keywords: Geriatrics, Gerontology

Functionele abstracts

F1 Fatigue and the prediction of negative health outcomes: a systematic review with meta-analysis

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Introduction: Fatigue is a common complaint among older adults. Evidence grows that fatigue is linked to several negative health outcomes. A general overview of fatigue and its relationship with negative health outcomes still lacks in the existing literature. This brings complications fort healthcare professionals and researchers to identify fatigue-related health risks. Therefore, this study gives an overview of the prospective predictive value of the main negative health outcomes for fatigue in community-dwelling older adults. We aimed to provide important information for clinical practice to counter the development of fatigue and the fatigue related outcomes.

Methods: PubMed, Web of Knowledge and PsycINFO were systematically screened for prospective studies regarding the relationship between fatigue and potential health outcomes. Meta-analyses were conducted in OpenMeta[Analyst] using Odds ratios (ORs), Hazard ratios (HRs) and relative risk ratios (RR) that were extracted from the included studies. Subgroup analyses were performed based on (1) gender (male/female), (2) length of follow-up and (3) fatigue level (low, medium and high).

Results: In total, thirty articles were included for this systematic review and meta-analysis providing information on the relationship between fatigue and health outcomes. The results showed that fatigue is related to an increased risk for the occurrence of all studies health outcomes (range OR 1,299 – 3,094, HR/RR 1,038 – 1,471); for example, mortality OR 2.14 [1.74–2.63]; HR/RR 1.44 [1.28-1.62]), the development of disabilities in basic activities of daily living (OR 3.22 [2.05–5.38]), or the development of physical functioning (OR 1.42 [1.29–1.57]).

Conclusion: Overall; fatigue increases the risk for developing any discussed negative health outcome. The analyses presented in this study show that fatigue related physical decline occurs earlier than hospitalization, diseases and mortality suggesting the importance of early interventions.

F2 The interrelationship between muscle endurance, self-perceived fatigue and pre-frailty in community-dwelling octogenarians

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Purpose: This study aimed to investigate the relationship between muscle endurance, self-perceived fatigue and pre-frailty in well-functioning older adults aged 80 and over.

Methods: Four-hundred and five community-dwelling older adults aged 80 and over (214 robust and 191 pre-frail) were assessed for muscle endurance (Grip Work (GW)), self-perceived fatigue (MFI-20) and frailty state by the Fried Frailty Index (FFI). Capacity to Perceived Vitality (CPV) ratio was calculated by dividing Grip Work by the MFI-20. Binary logistic regressions were applied to analyse the relationship between pre-frailty and fatigue.

Results: The risk for pre-frailty is related to a higher age, the gender of the patient and the CPV ratios (interaction effect). For the CPV-total ratio e.g., odds ratios were respectively 1.296 and 2.910 for the age effect and the interaction effect between gender and CPV ratio.

Conclusions: Results indicated that also those participants who are pre-frail but are not showing clinical signs of exhaustion on the frailty scale, still experienced significantly higher fatigue levels (muscle endurance, self-perceived fatigue and CPV levels) compared to their counterparts. Inclusion of the self-perceived fatigue and muscle endurance could be a good approach in the operationalization of physical frailty as it captures features that were not detected by the FFI.

F3 Patient-related risk factors for in-hospital functional decline in older adults: a systematic review and meta-analysis

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Purpose: To identify patient-related risk factors for in-hospital functional decline (FD) in older adults.

Methods: Articles of published reviews from 2007 and older were combined with a new database search from January 2007 until December 2019 in Pubmed, Embase and CINAHL. English articles studying patient-related risk factors for FD from (pre)admission to discharge in older patients hospitalised in an acute care setting were included. Study quality was assessed using the Newcastle-Ottawa Scale (NOS). The Inverse Variance method was used to estimate the pooled prevalence of FD and the pooled odds ratios (ORs) of risk factors.

Results: Nineteen studies were included. The pooled prevalence of FD was 28% (range 17-39%) from preadmission to discharge and 16% (range 11-22%) from admission to discharge. Meta-analyses identified ten statistically significant risk factors: older age (OR, 2.05 [95% CI, 1.68-2.49]), nursing home resident (OR, 2.55 [95% CI, 1.84-3.54]), impairment in instrumental activities of daily living (OR, 2.10 [95% CI, 1.51-2.93]), cognitive impairment (OR, 1.65 [95% CI, 1.46-1.88]), delirium (OR, 2.41 [95% CI, 1.90-3.04]), malnutrition (OR, 1.83 [95% CI,1.40-2.41]), low albumin (OR, 1.59 [95% CI, 1.35-1.87]), low body mass index (OR, 3.04 [95% CI, 1.65-5.63]), taking eight or more medications (OR, 1.89 [95% CI, 1.40-2.56]), and having a decubitus ulcer (OR, 4.01 [95% CI, 1.88-8.52]).

Conclusions: Several patient-related risk factors were statistically significant predictors for FD and can be used to develop and update screening instruments that identify older patients at risk of FD.

Medische abstracts

M1 Prognostische indicatoren en uitkomst bij gehospitaliseerde geriatrische patiënten met COVID-19

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Inleiding: De COVID-19 pandemie heeft wereldwijd een belangrijke impact. Ouderen worden in het bijzonder zwaar getroffen. Mortaliteit lijkt exponentieel te stijgen met de leeftijd. Desalniettemin is er ook bij ouderen een aanzienlijke groep waarbij de infectie asymptomatisch verloopt. Is een multidimensionele prognostische index (MPI) een screeningsmethode om de uitkomst van COVID-19 bij ouderen te voorspellen?

Methodologie: Gegevens werden verzameld van gehospitaliseerde patiënten op de geriatrische COVIDafdeling van ZNA Middelheim Antwerpen in de periode van maart 2020 tot juni 2020. Bij opname werden Multidimensional Prognostic Index (MPI) vragenlijsten afgenomen. SARC-F, FRAIL en CIRS (Cumulative Illness Rating Scale) scores werden gerapporteerd. Telefonische opvolging werd voorzien drie tot vier maanden later. Retrospectieve statistische analyse werd uitgevoerd in SPSS. De onafhankelijke t-toets en Mann-Whitney U toets werden gebruikt om twee groepen te vergelijken.

Resultaten: Van de 138 opgenomen patiënten vertoonden 54 geen symptomen bij opname, 35 onder hen bleven klachtenvrij over de volledige hospitalisatieperiode. In totaal werden 30 overlijdens gerapporteerd (21.7%), waarvan 23 mannen en 7 vrouwen. Bij het vergelijken van de groepen van overlevers en overledenen, werd enkel voor geslacht (p=0.015) en CIRS-SI (p=0.022) een significant verschil gevonden. MPI score verschilde niet significant tussen beide groepen (p=0.375). 97 patiënten konden bereikt worden voor follow-up. In deze groep overleden 14 patiënten, aan niet-covid gerelateerde oorzaken.

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Conclusie: Uit deze studie blijkt dat de Multidimensional Prognostic Index geen uitspraken lijkt te doen om overlijden bij gehospitaliseerde geriatrische COVID-19 patiënten te voorspellen. Het mannelijk geslacht en de ernst van de Cumulative Illness Rating Scale lijken wel prognostische waarde te hebben.

M2 Inflammatory markers are associated with quality of life, physical activity and gait speed in middle-aged and older European men

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Purpose: To determine the association between inflammatory markers, prevalent and incident sarcopenia, sarcopenia-defining parameters, quality of life (QoL) and physical activity in a cohort of European middle-aged and older men from the European Male Ageing Study (EMAS).

Methods: EMAS is a five-year prospective cohort study. The baseline phase took place during 2003-2005, with men aged 40-79 years recruited from population registers in eight centres. Median follow-up duration was 4.29 years. In 2562 participants, associations between baseline inflammatory markers (hs-CRP, white blood cell count (WBC), albumin) and baseline physical activity (PASE) and QoL (SF-36) were analysed. Only in the Leuven and Manchester cohort (n=444) data were available on muscle mass (whole-body DXA) and muscle strength, both at baseline and at follow-up. In this subgroup, associations between baseline inflammatory markers and sarcopenia-defining parameters (handgrip strength, chair stand test, knee extensor muscle strength, appendicular lean mass, gait speed) or prevalent/incident sarcopenia were examined. Linear and logistic regression were used, adjusted for age, BMI, centre and smoking.

Results: At baseline, hs-CRP and WBC were negatively associated with PASE score and physical component score (SF-36). Additionally, baseline hs-CRP was negatively associated with the mental component score (SF-36) and WBC was negatively associated with gait speed and quadriceps isokinetic 60°/s peak torque/body weight. Sarcopenia incidence was 18.66%(n=64). There were no significant associations with a decline of these parameters at follow-up, nor between baseline inflammatory markers and prevalent or incident sarcopenia.

Conclusions: Persons with higher levels of hs-CRP or WBC have lower QoL and PASE scores. With increasing WBC levels, gait speed was found to be lower. In this study, baseline inflammatory markers did not predict functional decline or the development of sarcopenia.

M3 Physical activity, inflammation, T-cell phenotypes and pre-frailty in the oldest old: first results from the BUTTERFLY study

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Purpose: Frailty, immunosenescence and inflammation seriously threaten healthy ageing. Growing evidence indicates that physical exercise may counteract these phenomena, however, in a dose-response using specific exercise interventions. The aim of this study was to investigate whether physical activity performed during daily life activities (PADL, such as walking or household) could also interfere with pre-frailty, immunosenescence and inflammation in people aged 80+.

Methods: The BUTTERFLY-study aims to identify early predictors of frailty in non-frail elderly aged 80 and over. Subjects were categorized as robust or pre-frail using the Fried Frailty Index. The Yale Physical Activity Survey questionnaire was used to map PADL. Flow cytometry was used to identify immunosenescence markers on blood leukocytes. Independent T-tests, correlation analyses and binary or linear regressions were performed using SPSS.

Results: Preliminary data from 309 participants showed a prevalence of 46.60% prefrailty. Being older (p<.001) and being a man (p<.001) contributed significantly to pre-frailty. No associations were found between pre-frailty and PADL in our population (r=-.063,p=.269). PADL was associated with a lower percentage of CD8+CD28+CD57- (naïve) (r=-.142,p=.013) and a higher percentage of CD8+CD28-CD57- (memory) (r=.119,p=.038) immunosenescence phenotypes, except in men (respectively r=-.100,p=.192, r=.064,p=.406). In men, PADL was correlated with lower counts of CD8-CD28+CD57- T-cells (r=-

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.249,p=.019). Additionally, a higher PADL profile was associated with lower C-reactive protein (CRP) levels in women (r=-.205,p=.016).

M4 Physical exercise to counteract cellular immunosenescence – latest insights

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Purpose: Aging is characterized by a gradual remodelling of the immune system that leads to an increased susceptibility to auto-immunity, infections and a reduced vaccination response, termed 'immunosenescence'. Although a growing consensus supports the view that physical exercise may counteract immunosenescence, evidence regarding the effects of exercise on markers of cellular immunosenescence lacked uniformity at the time of a review published in 2017 (Calcif Tissue Int 2017;100(2):193-215). The aim of this systematic literature search was to collect and appraise newly available data in the rapidly evolving domain of exercise immunology.

Methods: Literature databases PubMed and Web-of-Science were searched for relevant articles published since 2016 using an identical search strategy. Fifty-five articles were included.

Results: Importantly, long-term exercise was shown to reduce senescent-prone T-lymphocytes in older adults. In general however, data regarding long-term exercise-induced effects in older adults remain scarce. Although a high number of articles describing the effects of physical exercise on regulatory T-cells were retrieved, exercise-induced effects on these cells remain unclear. Additionally, newly retrieved evidence suggests an acute exercise-induced mobilization of naïve and memory cells in older adults. Moreover, recent evidence regarding dendritic cells mostly described an increase after exercise. Numerous studies on exercise-induced effects on natural killer cell counts did not provide uniformity among data that was already available.

Conclusions: Our literature update provides new evidence to prescribe physical exercise to counter immunosenescence in young, middle-aged and older adults.

M5 Can resistance exercise training affect the immune cell function in humans? A systematic review

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Purpose: Ageing is accompanied by a chronic low-grade inflammatory profile. Resistance exercise is a common non-pharmacological means to decrease inflammation in older adults. Physical exercise has been reported to be beneficial for the immune system, and particularly, to decrease susceptibility to infections, to improve effectiveness of vaccinations, and to improve wound healing. However, the underlying mechanisms are not yet understood and might involve changes in immune cell function. In this review, our aim is to provide a systematic analysis of the literature regarding the impact of resistance exercise on immune cells in the blood circulation. The impact of a stress challenge on the immune cell response will also be examined.

Methods: The protocol of this review conformed to the PRISMA guidelines and was registered with PROSPERO (ID: CRD42020157834). PubMed and Web-of-Science were systematically searched for relevant articles using the keywords: humans, exercise, and blood cells. Exercise intervention studies, which investigated immune cell function in humans, and written in English, Dutch or French were eligible. Title and abstracts were screened for eligibility by two independent reviewers. The Cochrane risk of bias tool (Rob-2 and ROBINS-I) will be used to assess internal validity.

Results: The search stream of databases Pubmed and Web-of-Science yielded respectively, 4311 and 3106 articles, of which 1303 were duplicates. At this moment, 77 articles are eligible for full-text analysis.

Conclusions: This systematic review will give an overview of the most recent literature regarding the effects of resistance exercise on the immune cell function and the results will be available in January 2021.

M6 The effects of resistance training on the immunology of the skin: the SPRINT substudy

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Purpose: Ageing is accompanied with sarcopenia and immunosenescence. With ageing, the skin will become thinner and

partially lose its protective capabilities. Also, wound healing becomes impaired. Physical exercise can be a potential nonpharmacological means to improve the immune status in older persons. Furthermore, people who exercise show decreased susceptibility to infections, improved wound healing and enhanced effectiveness of vaccinations. In this SPRINT sub study (NCT04534049), we will investigate whether exercise exerts anti-inflammatory effects in the skin-associated lymphoid tissue.

Methods: Participants aged ≥65 years, living independently in the community, will be randomly assigned to three months of an exercise intervention (intensive strength training or strength endurance training) or a control intervention. At baseline and after three months, biopsies with or without saline injection will be obtained using 5 mm skin punch from abdominal skin. Furthermore, wound healing will be evaluated by sequential photographs of the biopsy site every two weeks until complete wound closure. Skin prick test, skin barrier function and skin elasticity will also be evaluated. The SARQOL questionnaire will evaluate the quality of life related to muscle wasting.

Results: The protocol for this randomized controlled trial is approved by the ethical committee (UZ Brussel and VUB). Unfortunately, due to COVID requirements, the expected start date for the enrolment of study participants will be in January 2021.

Conclusions: We hypothesize that similar effects of physical exercises in skin tissue as in the blood circulation will be observed. The results of this project will give new insights into the non-pharmacological immunological treatment effects of physical exercises.

M7 Update van het aantal huidige en toekomstige personen met dementie in België

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Doel: Om een goed zorgbeleid te kunnen voeren in België is het belangrijk dat er betrouwbare cijfers zijn over het aantal personen met dementie. Het doel van deze studie is om een schatting te maken van de huidige en toekomstige prevalentie en incidentie van 65+ers met dementie in België.

Methodologie: Op bevolkingscijfers van het Federaal Planbureau en Algemene Directie Statistiek (FPADS) werden West-Europese prevalentie- en incidentiecijfers van dementie en cijfers uit het Dementia UK-rapport toegepast. Er werd rekening gehouden met 3 scenario's: 1) constante leeftijdsspecifieke dementie, 2) constante leeftijdsspecifieke dementie met een 13% lager startpunt en 3) een jaarlijkse daling van de leeftijdsspecifieke prevalentiecijfers met 1,7%.

Resultaten: In België lijden 194.900 personen aan dementie. Dementie treft meer vrouwen dan mannen en komt het meest voor bij 90-plussers. Rekening houdend met scenario 1 dat uitgaat van constante leeftijdsspecifieke prevalentie, wordt er tegen 2070 een toename van het aantal personen met dementie verwacht met 94%. Scenario 2 illustreert een stijging van het aantal personen met dementie met 109% tegen 2070. Echter, indien we uitgaan van scenario 3, zou er tegen 2070 een reductie van het aantal personen met dementie zijn met 77%.

Conclusie: De resultaten van deze studie dienen voorzichtig geïnterpreteerd te worden en de uiteindelijke uitkomsten zullen afhangen van de manier waarop we als maatschappij omgaan met dementie. Prognoses over het toekomstig aantal personen met dementie kunnen dienen als input voor beslissingen over het toekomstig zorg- en preventiebeleid. Door middel van een goed preventiebeleid, kunnen we als maatschappij een impact hebben op de evolutie van het aantal personen met dementie.

M8 Associations of frailty with in-hospital mortality and treatment limitation decisions in oldest-old with COVID-19

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Background: Older people are at risk of mortality due to corona virus disease 2019 (COVID-19). There is lack of knowledge on outcome related to frailty combined with severity of COVID-19.

Objective: To describe the relation between frailty and (1) in-hospital mortality in combination with respiratory failure, (2) early treatment limitation decisions in oldest-old admitted with COVID-19.

Methods: Multicentre retrospective cohort study including patients 80+ admitted in March and April 2020. Main outcome was all-cause in-hospital mortality, covariates are premorbid Clinical Frailty Scale (CFS) and comorbidities, early treatment limitation decisions (within 72 hours after admission), respiratory failure, ICU treatment.

Results: From 711 octogenarians with median CFS 7, early treatment limitation decisions not to refer to ICU were taken in 474 (66.7%) patients; of whom 58.4% survived on the regular ward. The degree of treatment limitation was significantly associated with the degree of CFS (p<0.001). There was a significant interaction between CFS and respiratory failure (p = 0.027): more pronounced association with in-hospital mortality in older persons not developing respiratory failure versus with respiratory failure (respectively OR=2.185 (95% CI 1.469;3.249) versus OR=1.333 (95% CI 1.054;1.687)). Other variables associated were peripheral oxygen saturation (OR=0.918 (95% CI 0.883;0.954)), amount of supplemental oxygen delivery (OR=1.227 (95% CI 1.154;1.304)), acute renal failure (OR=1.715 (95% CI 1.038;2.836)) and septic shock (OR=15.713 (95% CI 4.12;59.927)). Age, gender, residence and number of comorbidities and ICU treatment (OR=1.981 (95% CI 0.501;7.834)) were not significantly associated with mortality.

Conclusions: The association between frailty and in-hospital mortality related to COVID-19 is stronger in oldest-old without respiratory failure. We found no evidence for a difference in mortality between ICU versus non-ICU treated patients.

M9 Policy regarding sexuality in older age in nursing homes Flanders, Belgium

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Doel: The aim of this study was to describe the quality of institutional policy regarding sexuality of residents, and to explore the relationship between that policy and the manager's personal attitude and knowledge about sexuality.

Methodologie: We contacted 100 nursing home managers recruited from listings of all nursing homes in Flanders, Belgium which we randomized. Email was used to send a link to an anonymous survey. We achieved a 20% response rate after three reminders (by telephone). For this survey we used the 69 item Sexuality Assessment Tool (SexAT, Messelis & Bauer, 2017) for measurement of quality of policy about sexuality. Personal attitude was assessed by using the 12 item Sexual Attitudes and Beliefs Survey (SABS, Reynolds & Magnan, 2005), knowledge with the 14 item Knowledge Comfort Approach and Attitude towards Sexuality Scale (KCAASS, Hoïng & Bender, 2005). For the exploratory analysis we used Pearson correlation and hierarchic linear regression.

Resultaten: We found that no facility was rated excellent, 23% very good, 52% good, 23% improvement needed. Between knowledge of manager and quality of policy there was a strong positive association (r=.678, p<.01). Introducing attitude as an independent variable to the regression analysis did not lead to an increase in explained variance in quality of policy.

Conclusie: In two thirds of Flemish nursing homes there is room for improvement regarding their policy of resident's sexuality. Education efforts should include improvement of knowledge of managers of nursing homes. The low response rate limits generalizability.

M10 Personalized protein supplementation improves protein and leucine intake and distribution in sarcopenic older adults without affecting regular intake

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Purpose: Recommendations concerning protein quantity, quality (amino-acid content), protein source and leucine intake are formulated for sarcopenic older adults. To achieve these recommended levels in (pre)sarcopenic community-dwelling older adults, a personalized protein supplementation protocol was developed. This is the first study assessing leucine distribution over the day in (pre)sarcopenic community-dwelling older adults.

Methods: Protein intake of (pre)sarcopenic community-dwelling older adults was evaluated by 4-day estimated dietary records before and after a 12-week period of personalized supplementation in the ENHANce study. The personalized supplementation protocol aimed for a total (dietary and supplemental) intake of 1.5g protein/kg BW/d.

Results: The regular dietary protein intake of 51 (pre)sarcopenic adults (73.6 ±6.5 years) was 1.06 ±0.3 g/kg BW/d. Protein supplementation (n =20) significantly improved total protein intake to 1.55 ±0.3 g/kg BW/d without affecting regular dietary protein or energy intake. Placebo supplementation (n =15) did not affect regular dietary protein intake but decreased regular dietary energy intake (from 29 kcal/kg BW/d to 26 kcal/kg BW/d). Regular protein and leucine intake were unevenly distributed over the day, but personalized supplementation significantly improved this distribution to at least 28g protein/meal and 2.46g leucine/meal, without reducing regular dietary protein, leucine or energy intake.

Conclusions: Although community-dwelling (pre)sarcopenic adults did not reach recommended levels of protein intake, personalized protein supplementation could ensure an adequate quantity and quality, and a more even distribution of protein over the day, without affecting regular dietary protein or energy intake.

M11 A new technique to investigate the role of Heat Shock Proteins in senescent T-cells and Immunosenescence

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Background: Heat shock proteins (HSPs) protect other proteins from denaturation and aggregation. In this way, HSPs help cells to resist various noxious factors. Immunosenescence (IS) results in changes that weaken the immune function. IS is characterized by a decrease of naive T-cells and an accumulation of deleterious senescent T-cells (STCs), that contribute to aging-associated inflammation. In previous work, we observed the increase with age, not only of STCs, but also of several HSPs. Our hypothesis is that HSPs might contribute to the survival of STCs. In that case, targeting HSPs might provide a novel approach to eliminate STCs. As a first step for further investigation, we developed a new technique for determining HSPs in immune cells.

Methods: We used a single molecule assay technology, combining two distinct HSP-specific antibodies that recognize different HSP epitopes. The assay is performed in three steps: after mixing samples and standards with capture beads, biotinylated HSP-specific antibody is added; after incubation, streptavidin-β-galactosidase and resorufin β-D-galactopyranoside are added.

Results: The detection limit was 0.16 and 2 ng/mL for HSP27 and HSP70, respectively. Inter- and intra-assay coefficients of variation were <20% in all conditions. Serial dilution of samples resulted in dilutional linearity (on average 109%, R^2=0.998, p< 0.001, for HSP27; 93%, R^2=0.994, p<0.001, for HSP70).

Conclusion: The assay demonstrates excellent analytical performance for accurate assessment of HSP and offers the advantage of a huge range of dilution linearity. It can be used for studying the role of HSPs in STCs and IS.

M12 Was COVID already spreading in Belgium on 25th of February 2020?

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On 3rd of February, the first Belgium COVID-patient arrived from Wuhan. Quarantine was installed. On the 29 of February, a Belgian citizen returning from France was diagnosed with COVID. On 13th of March, Belgium went in lock down. On 25th of February, a 90-year old lady was admitted to our geriatric ward. She had anorexia for one week and gait problems. She was known with bronchiectasia and coughing. On admission (day 8 from beginning of her symptoms) her CRP was 463 mg/dl, leucocytosis with lymphopenia (1,16.10^3/μL) was present, oxygen saturation 95 % taking 2-liter oxygen per minute. She was treated with beta-lactam antibiotics, moxifloxacin, and anti-thrombotic prophylaxis; vit D substation. She already was on chronic therapy with azithromycine (250 mg/3 times a week). On day 11 (from beginning of her symptoms) she developed bilateral pneumonic infiltrates with high oxygen demand (15 l/pmin). Droplet isolation was installed, not knowing the causative organism. PCR-Covid test was not allowed, because it did not fulfil the criteria of the official case definition in Belgium at that moment. Because of persistent fever on day 16, a nasopharyngeal swab was taken for PCR COVID and other respiratory pathogens (virus, bacteria, fungi), with permission of our clinical biologist. This PCR test was negative. Broad-spectrum antibiotics were continued. On day 26 (13/3) her lymphopenia resolved, and her oxygen demand reduced to 2,5 l/pmin. A second PCR test later, was also negative. She went home on day 66 (15/4). She still needs oxygen and is dependent for all ADL

due to sarcopenia. Because of persistent anaemia, she was referred on day 86 (5/6) to our geriatric day hospital for transfusion. COVID-IgG antibodies were slightly positive: 7,6 AU/ml at that moment. Refrigerated serum of day 32 (19/3) was tested and strongly positive: 76,6 AU/ml. Contact tracing led us to her grandson. Her grandson went skiing in Livigno (Lombardy, Italy) from 7th till 13th February and joined the football match in Rome on 18th of February (AA Gent – AS Roma). At home he got respiratory symptoms and on 17/3 he started his quarantine. His colleagues were sick too, but they stayed at work (without testing) in de steel industry of Ghent Ports.

Conclusion: On 25th of February COVID-disease was already in our hospital in Eeklo, Belgium.

M13 Autonomic dysfunction and frailty in elderly: a systematic review and meta-analysis

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Aim: Autonomic dysfunction and frailty are two common and complex geriatric syndromes. Their prevalence increases with age and they have similar negative health outcomes (increased morbidity and mortality). The aim was to systematically review the current literature to determine the relationship between autonomic dysfunction and frailty.

Methods: PubMed and Web of Science were screened for studies reporting a relationship between autonomic function (AD) and frailty in elderly aged 65 and over. A meta-analysis (OpenMetaAnalyst) was performed for the articles measuring orthostatic hypotension (OH). NIH quality assessment of included articles was performed.

Results: 13 cross-sectional studies were included (n=2902). 7 studies measured AD by measuring consensus OH. The other 6 studies used other ways to measure autonomic function such as heart rate variability and blood pressure recovery. A clear correlation was found between OH and frailty (OR 2,435 (1,503;3,946) (I² 82%, p<0,0005, CI 95%) when measured for each type of OH. A trend towards greater association between initial OH and Frailty was observed but significance (p=0,06) could not be met.

Discussion: Most studies observed an association between OH and frailty, Therefore, clinical measurements of Frailty in elderly should be followed by an autonomic stress test. Moreover, frail elderly presenting with OH might benefit from additional therapeutical strategies.

Conclusion: This systematic review shows a clear trend towards an association between frailty and autonomic dysfunction when measured as OH. Still, there is a great need for a golden standard and uniformization within emerging measurements of autonomic dysfunction. OH interventions could potentially benefit certain frail elderly as prospective studies should emerge.

M14 Autonomic failure in a geriatric patient: orthostatic hypotension combined with nocturnal hypertension

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Objective: The prevalence of autonomic failure (AF) increases with aging. AF is considered as pure, when patients have no neurologic symptoms, or as multisystem atrophy (MSA), when motor disturbance (Parkinsonism or Parkinson disease) is present. AF frequently leads to disturbed blood pressure (BP). Here, we describe a geriatric patient with orthostatic hypotension (OH) and nocturnal hypertension (NHT), suggesting AF.

Case presentation: An 87-year-old man was hospitalised for long-lasting OH with frequent falls. His history mentioned several fractures and heart failure. The patient clearly presented a therapeutic dilemma, as heart failure treatment worsened the OH and vice versa. Continuous BP registration showed that his day-night rhythm was reversed, with daytime OH and NHT. The diagnosis of AF with MSA was made by 18-FDG PET brain CT that revealed cerebellar hypometabolism.

Conclusion: This case report illustrates the utility of continuous BP registration in geriatric patients. It draws the attention to the frequently occurring of NHT in geriatric patients with OH. 18-FDG PET brain CT scan can reveal the nature of the AF. The patient also illustrates the therapeutic dilemma in managing heart failure and NHT, combined with OH.

M15 Influence of a specific ward on the care of a geriatric patient

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Objective: Geriatric patients should preferably be hospitalized on a geriatric ward. This is often not possible due to underlying conditions and practical circumstances. Whereas the geriatric ward is specialised in the care of complex geriatric syndromes

that affect these patients, this is not the case for the other wards. The aim of the present study was to analyse the differences between geriatric patients hospitalized on a geriatric ward compared to other wards.

Methods: A cross-sectional, retrospective study, comprising data of 100 geriatric patients (Geriatric Risk Profile (GRP) >2), consecutively admitted via the accident and emergency department to a geriatric ward, and 100 patients admitted to other wards of the UZ Brussel (2017-2018) was conducted. The study compared age, gender, severity of illness (SOI), GRP, number of diagnoses, admission and discharge location, and length of stay (LOS). Billet LOS, justified LOS and their disparity were measured. Univariate (Chi^2-test, t-test) and multivariate (generalized linear models) statistics were performed.

Results: Patients on the geriatric ward were older, had higher SOI and GRP scores, and number of diagnoses, and longer billet LOS (all p<0.05). The disparity between billet LOS and justified LOS was greater on non-geriatric wards in comparison to geriatric wards, however non-significant (p= 0.057).

Conclusion: Geriatric patients hospitalized on a geriatric ward had a higher burden of disease and a longer LOS. The causes of these differences could not be identified. Possibly, selection bias, medical approach or other factors might have interfered. Furthermore, larger prospective studies are required.

M16 Effects of delayed surgery for hip fracture patients: characteristics and outcome

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Objective: This study compared characteristics of hip fracture patients who underwent surgery within 24 hours after hospitalisation, as recommended by the Belgian quality standards, and after 24 hours.

Methods: the medical files (2014-2017; UZ-Brussel) of surgically treated hip fracture patients were studied. Two treatment groups were analysed: A) patients operated within 24 hours; B) patients operated later than 24 hours after admission. Reasons for delay were analysed descriptively. Binary logistic regression was used for characteristics and Kaplan-Meier curves with log-rank test for mortality analysis.

Results: Group A included 543 patients and Group B 297 patients. The most prominent reason for delaying surgery in Group B was that patients were not fit enough for surgery (21.2%). Compared to Group A, Group B had more cardiovascular (p=0.010), pulmonary (p<0.001), but less hematologic complications (p=0.037). Group A showed a better survival (p<0.001). Mortality after 30 days of discharge was associated with higher age (p<0.001), absence of complications (p=0.004), hematologic (p<0.001) and endocrinologic-metabolic complications (p=0.001). Mortality at the end of the data collection was significantly associated with delayed surgery (p<0.001), higher age (p=0.006), being male (p<0.001), residing in long-term care (p=0.009), pulmonary (p=0.002) and endocrinologic-metabolic complications (p=0.003).

Conclusions: delay in surgery for hip fracture was related to the medical condition of the patients. The mortality rate was higher in the delayed Group B. Optimizing organization of hip fracture treatment and early geriatric intervention could help to improve the outcome and survival of these patients.

M17 The Greater Trochanteric Pain Syndrome (GTPS): case report and review of the literature

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Background: In primary care setting, the greater trochanteric pain syndrome (GTPS) is diagnosed in 10-20% of patients with hip pain. It is related to abnormal hip biomechanics, which predispose to gluteal tendinopathies. Subjects are often obese, with concomitant low back pain and osteoarthritis. GTPS occurs mainly in women, aged 40 to 60 years.

Case description: An active, 84-year-old, community dwelling woman was hospitalised for an exacerbation of chronic low back pain, irradiating to the right hip and knee, sometimes also towards the foot. The pain was affecting her sleep notwithstanding treatment with tramadol and corticosteroids IM. Her general health was good except for ischemic heart disease, Physical examination excluded discogenic pain; mobilisation of knees and hips was normal. Upon palpation, the right greater trochanteric region was painful, as well as the adduction of the right hip. Her neurologic examination was normal. The diagnosis of GTPS was confirmed by ultrasound examination, showing a thickened, inflamed, and fluid-filled trochanteric bursa, and a tendinopathy of the M. gluteus medius. A CT scan revealed enthesophytosis of the right greater trochanteric region. She was successfully treated with NSAID's, locally applied corticosteroid infiltration and physical therapy, focusing on

positioning and strengthening of hip abduction.

Conclusion: This case report shows that GTPS is not limited to younger adults, but also occurs in geriatric patients. It can resemble various medical conditions and needs to be included in the differential diagnosis of chronic lumbar and hip pain. A more systematic study of GTPS in geriatric patients is warranted.

M18 Feasibility of using continuous glucose monitoring in geriatric patients using a Dexcom G6 device

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Objective: Serious hypoglycaemia, especially in geriatric patients, can lead to falls and cognitive problems. The aim of our study was to investigate the feasibility of using continuous glucose monitoring (CGM) in geriatric patients with type-2 diabetes mellitus and secondly, the use of CGM for detecting "silent" hypoglycaemia.

Methods: In an open, interventional study we analysed the practical issues of CGM and the frequency and duration of hypoglycaemia /hyperglycaemia in ambulatory geriatric patients (>75y) with type 2 diabetes having HbA1c levels <7.5% (Group 1), and in age- and sex-matched non-diabetic patients (Group 2), using real time CGM (Dexcom G6). This device was used during 20 days per patient, who were blinded for the values on the receiver (except in case of severe hypo- or hyperglycaemia). Data were stored for further analysis on the Dexcom Clarity Clinic Portal.

Results: The use of the CGM in diabetic patients over 75 years old is feasible and analysis of the data showed frequent hyperglycaemia during daytime especially in the diabetic group. No severe hypoglycaemia was observed and some technical problems were recognized during the placement of the sensor.

Conclusions:

1) CGM appears to be an interesting tool for refining treatment and elderly age does not prove to be an obstruction.

2) In the present study no hypoglycaemia was observed possibly related to high inclusion values for HbA1c.

3) Further studies are needed to define the role of CGM to detect hypoglycaemia in elderly patients.

M19 Exercise-induced effects on inflammatory markers and BDNF in knee osteoarthritic patients: A systematic review

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Aim: To summarize literature regarding effects of exercises on circulating or intra-articular inflammatory markers and BDNF in knee osteoarthritis (KOA) patients with focus on acute and basal effects.

Methods: This review was registered at PROSPERO (CRD42020162746) and conducted according to the PRISMA guidelines. PubMed, Web-Of-Science, and Pedro were systematically searched. Studies (pre- and true-experimental) describing effects of exercises on inflammatory markers or BDNF in KOA patients were included. Risk of bias was scored using the Cochrane ROB 2.0 or ROBINS-I.

Results: 24 studies involving KOA patients (n=1586) were included. Seventeen articles focused on basal effects, 4 on acute effects, and 3 on both. Four exercise interventions were investigated: strength (n=10); aerobic (n=5); strength + aerobic (n=8); other (n=2). Twenty-eight different inflammatory markers, i.e. CRP, IL-6, TNF-α were investigated. Due to study heterogeneity, no meta-analysis was performed. After exercise therapy, basal (n=4) and acute (n=1) CRP levels did not change. Neither basal TNF-α changed (n=5), nor after acute exercises (n=2), except 1 study reported acute increases. Basal IL-6 did not change in 6 studies, however, 2 others reported a decrease. After acute exercises, 2 articles reported an IL-6 increase, whereas others (n=2) demonstrated no changes. BDNF was increased after an acute exercise bout (n=1), and basal BDNF also increased after exercises (n=2), though, 1 study reported no difference.

Conclusion: This is the first systematic review that distinguishes between acute and basal exercise-induced effects on inflammatory markers and BDNF in KOA. A best evidence synthesis (ongoing) will provide more insights in the acute and basal training effects.

M20 Guillain-Barré syndrome as a symptom of Covid-19. Case Report.

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A female patient of 84 years old was admitted because of a sudden onset of frequently falling. During her hospital stay she developed new symptoms, starting on the second day when she no longer could stand on her legs. The following day she couldn't hold her cutlery, nor her phone. She had no fever and no respiratory symptoms. This progressive ascending paresis was characteristic for Guillain-Barré Syndrome. A lumbar puncture confirmed the albumin-cytologic dissociation. Since the NEJM published an article about the association between COVID-19 and Guillain-Barré syndrome, we performed a swab test, which was positive for COVID-19. The patient recovered within a few weeks with immune globulins. She never having developed any respiratory symptoms, nor gastrointestinal symptoms.

A second female patient (92yrs) was admitted for a COVID-19 associated respiratory disease. While recovering from her COVID, with declining need for oxygen, she redeveloped a fever and started falling frequently. A few days later, she complained about dysesthesias in fingers and toes. She could no longer hold her glass. A progressive paralysis of legs and arms was apparent. A lumbar puncture was performed and indicated an albumin-cytologic dissociation. She fully recovered after therapy with immunoglobulins.

Conclusion: Guillain-Barré Syndrome is usually associated with viral infections and vaccinations. It is not surprising to see this syndrome associated with COVID-19, but in the first case it was the only symptom.

M21 A Belgian cohort of nonagenarians hospitalized with COVID-19 disease

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Objectives: Describe demographic, symptoms, co-morbidities, frailty and 28- days all-cause mortality (28-days-ACM) of nonagenarians patients hospitalized with COVID-19 disease. Compare clinical characteristics of deceased and surviving patients.

Methods: retrospective single-centre study. 50 patients aged ≥ 90 years with COVID-19 infection were included. Data were extracted from the patient's medical file for history, demographic data, Clinical Frailty Score (CFS), Cumulative Illness Rating Scale-Geriatric (CIRS-G), symptoms, others diagnosis, vital signs, laboratory and chest CT scan (Total Severity Score and percentage of damage).

Results: 50 patients (female: 58%) ≥ 90 years with a mean age of 92.3 years whose 72% are coming from nursing homes, were analysed. This population was moderately frail (CFS : 5.8) and had multiple comorbidities (CIRS-G: 14.8 points). Most frequent symptoms at onset were respiratory symptoms (68%), fever (50%) and confusion (40%). Other acute medical conditions at admission were acute renal failure (54%), infection (52%) and cardiac event (50%). 28- days-ACM was 48%. No statistical difference was found between the two groups for their place of residence, frailty, co-morbidities, symptoms, vital sign at onset, other diagnosis at admission and specific treatment for COVID-19. Deceased patients were 1.3 year older, needed more frequently oxygen therapy with a FiO2 > 50% and had a higher C-reactive protein and creatine kinase than surviving patients.

Conclusion: Despite their frailty and multiple co-morbidities, more than half of the nonagenarians in our cohort survived at 28 days. Maximal oxygen requirements during hospitalization, CK and troponin levels suggestive of myocardial injury were higher among deceased patients.

M22 How are telephone triage services used by older persons over the age of 65 during the Covid-19 pandemic? A longitudinal analysis.

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Purpose: The use of telephone triage services for managing patients remotely has rapidly escalated during the Covid-19 pandemic. Older segments of the population are amongst the most complex population groups to manage using these

services, and they are also amongst those who are at the highest risks for experiencing negative health-related consequences due to Covid-19. As part of the TRANS-SENIOR international training and research network, we seek to compare the use of telephone triage services by older persons (over 65 years of age) before-, during, and after the Covid-19 pandemic.

Methods: Data will include an estimated 30,000 call records from the 1733-out-of-hours telephone triage call centre in Belgium (more information available at: https://www.health.belgium.be/en/health/need-call-doctor-call-1733) obtained between March 1, 2020 and August 31, 2020. All cases concerning medical assistance for older patients (over 65 years of age) four month(s) prior to-, during-, and after the Covid-19 pandemic peak will be included for analysis. Variables related to patient-related characteristics and user-trends (i.e. age, sex, time of day, location, estimated level of urgency, dispatch outcome) will be explored using descriptive and comparative statistics.

Results: Data collection is currently in process. Findings will be analysed and made available for presentation at the upcoming Wintermeeting.

Conclusions: The current research will allow us to better understand how telephone triage services are used by older persons during the ongoing Covid-19 pandemic.

Nursing abstracts

N1 Prediction Of Hospitalization And Unplanned Readmission Among Older Adults In The Emergency Department: Accuracy of Three Screening Tools

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Purpose: We aimed to compare the diagnostic accuracies of the Identification of Seniors At Risk (ISAR), the Flemish version of Triage Risk Screening Tool (fTRST), and the interRAI Emergency Department Screener (iEDS) for predicting hospitalization and 90-day unplanned emergency department (ED) readmission among older (≥ 70 years) community dwelling adults admitted to the ED.

Methods: A prospectively included 'usual care' cohort of a monocentric, quasi experimental study, 'Unplanned Readmission prevention by Geriatric Emergency Network for Transitional care' (URGENT), was analysed (n=794 with median age 80 years and 55% female). Sensitivity, specificity, accuracy and area under the receiver operating characteristics curves (AUC) were categorized as low (≤0,69), moderate (0,70-0,89) or high (≥0,90).

Results: For the prediction of hospitalization, occurring in 67% (527/787) of patients, all screening tools (at cut-off 2) had moderate to high sensitivity (fTRST: 0.76; ISAR: 0.90; iEDS: 0.80) combined with very low specificity (0.22-0.32), low accuracy (0.61-0.67) and low AUC (0.56-0.62). For the prediction of readmission, occurring in 22% (168/761) of patients, all screening tools (at cut-off 2) had moderate sensitivity (fTRST: 0.75; ISAR: 0.86; iEDS: 0.82) combined with very low specificity (0.14-0.27), very low accuracy (0.30-0.39) and low AUC (0.52-0.53).

Conclusions: Diagnostic characteristics of all screening tools were comparable. None of the tools accurately predicted the outcomes as a stand-alone index. Future studies should explore the clinical effectiveness and implementation aspects of ED-specific minimum geriatric assessment and intervention strategies.

Psychosociale abstracts

PS1 Op safari door het leven na pensioen

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Doel: Uit wetenschappelijk onderzoek en ervaring zijn gebleken dat bepaalde personen zeer blij zijn om met pensioen te gaan, anderen hebben er gemengde of negatieve gevoelens bij. Het interesseert ons om na tientallen jaren als trainer VOP te werken, via een pilotonderzoek te weten te komen welke uitdagingen zij voor ogen zien en met welke 'angsten' zij leven richting pensioen.

Methodologie: Via een schriftelijke bevraging werd in 2019 aan 500 deelnemers van onze cursus voorbereiding op pensioen gevraagd om een top 3 op te schrijven van zaken waar ze naar uit kijken en waar ze 'bang' voor zijn.

Resultaten: Uit de bevraging is algemeen gebleken dat Beleving en Verbinding (vooral met zichzelf maar ook met anderen) belangrijke issues zijn. De top 3 waar mensen specifiek naar uitkijken, zijn 1. Op reis gaan; 2. Alles in het werk stellen om gezond ouder te worden; 3. Een sport beoefenen. De top 3 van de 'angsten' ligt vooral in 1. De angst voor ziekte (zichzelf of geliefden); 2. De angst voor aftakeling (die vooral dan gepaard gaat met ouder worden); 3. Gebrek aan zingeving.

Conclusie: Het betreft hier geen representatief onderzoek van de Belgische bevolking die met pensioen gaat. Toch zijn de resultaten belangrijk om mee te nemen in onze psychosociale cursus voorbereiding op pensioen. Daarbij is het belangrijk om inspiratie en perspectief te bieden, 5-jaren plannen en plannen 'Once I'll be old' op te maken. Waar het kan ook in te spelen op de Silver Lining.

PS2 Does psychological resilience mediate the relation between daily functioning and prefrailty status?

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Purpose: Understanding of prefrailty's relationship with limitations in activities of daily functioning (ADLs) moderated by psychological resilience is needed, as resilience might support ADLs' maintenance and thus protect against frailty. Therefore, this study aims to analyse the role of psychological resilience and its subfactors (using the Connor-Davidson Resilience Scale; CD-RISC), on the relation between ADLs and frailty status of older individuals (i.e. prefrail versus robust).

Methods: Robust (Fried 0/4;n=214; Agerobust=82.3±2.1 yrs) and prefrail (Fried 1-2/4;n=191; Ageprefrail=83.8±3.2yrs) community-dwelling older individuals were included. Frailty scores were obtained from weight loss, exhaustion, gait speed, and grip strength. Confirmatory factor analyses (CFA) were conducted to select the best fitting model of CD-RISC based psychological resilience factors. A total Disability Index (DI) expressed dependency for basic (b-), instrumental (i-), and advanced (a-)ADLs. Mediation was investigated by estimating direct and indirect effects of all levels of ADLs and CD-RISC total score and its factors on prefrailty/robustness using a stepwise multiple regression approach.

Results: The best model fit of CFA resulted in a 4-factor solution according to Laird et al. (2019). Prefrailty/robustness significantly correlated with a-ADL-DI (rpb=0.099; p=0.048) and a total CD-RISC score (rpb=-0.108; p=0.031). Adjusted for age and gender, both a-ADL-DI (p=0.0284) and total CD-RISC score (p=0.0484; p=0.0497) significantly had a direct effect on prefrailty/robustness.

Conclusions: Limitations in a-ADLs and the total resilience score are two directly associated factors of prefrailty status. Independence and high psychological resilience might lead to maintenance of robustness.

PS3 Crucial factors promoting clinical leadership in Flemish nursing homes: a qualitative study of care professional's perceptions

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Purpose: Increasing evidence suggests that the quality of care in nursing homes (NH) can be improved by empowering the roles of care professionals. Therefore, clinical leadership (CL) might be a promising concept. However, in literature CL is often solely linked to nursing and only to a limited extent CL has been linked to NH. In this study we examined which factors encourage and reward care professionals to take roles as clinical leaders.

Methods: Based on an exploratory qualitative design, five semi-structured focus groups with NH-care professionals (n=41) were undertaken. Data were thematically analysed by two independent researchers using a constant comparison method. Consensus was reached by discussing the coding and clustering of the data. Synthesized member checking was used to explore to accuracy and resonance of the results.

Results: Based on the thematic analysis, six crucial factors promoting CL were determined: (1) accessibility, contact and leadership styles of formal leaders, (2) a culture of open communication, (3) an overall stimulating and talent focused organizational climate, (4) a valuable recruitment and professional development of care professionals, (5) an adequate dynamic in the interprofessional team and (6) formal and informal educational opportunities.

Conclusion: These factors determine the context and culture in which NH-care professionals work and contribute to CL. Understanding the dynamic interplay of these factors could lead to effective strategies on how NH can support and empower care professionals in taking roles as clinical leaders. Research on interventions developing and promoting CL is needed and could lead to achieving higher job satisfaction among NH-care professionals and optimizing quality of care for NH-residents.

PS4 How care professionals perceive clinical leadership in Flemish nursing homes: a qualitative study

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Belgische Vereniging voor Gerontologie en Geriatrie Belgische Vereniging voor Gerontologie en Geriatrie Abstracts 44e Wintermeeting Belgische Vereniging voor Gerontologie en Geriatrie 2021. 10.36613/tgg.1875-6832/2021.01.05

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Purpose: Clinical leadership (CL) has recently been promoted as critical to achieve and sustain improvements in quality of care and patient-related outcomes. Until now, it has mainly been seen as relevant to areas of hospital care since empirical evidence of CL in nursing homes (NH) is scarce. Therefore, this study aimed to examine (1) if NH-caregivers recognize CL in their daily work, and – if yes – (2) how they perceive CL in a NH, and (3) which characteristics they contribute to a clinical leader.

Methods: Based on an exploratory qualitative design, five semi-structured focus groups with NH-caregivers (n=41) were undertaken. Data were thematically analysed by two independent researchers using a constant comparison method. Consensus was reached by discussing the coding and clustering of the data. Synthesized member checking was used to explore to accuracy and resonance of the results.

Results: All participants recognized CL as an important concept in NH. It is not solely related to nursing but also to other care professions working in NH with residents. Thematic analysis led to eight characteristics describing a clinical leader in a NH: responsiveness, resident-centred, effective communicator, great clinical expertise, team-based worker, resilience, commitment and vision. CL in NH considerably improve quality of care and job satisfaction.

Conclusion: In NH, any frontline care profession can be a clinical leader. Facilitating the potential of clinical leaders in NH through specific educational activities and by modelling and practicing the characteristics of a CL is an opportunity for residents and caregivers.

PS5 Role model caregivers in nursing homes: an integrative review about clinical leadership in residential care for older persons

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Purpose: A wide array of caregiver competencies are needed to ensure the wellbeing and quality of life of vulnerable nursing home (NH) residents. Some caregivers are real "clinical leaders" in providing qualitative care, without having a formal leadership position. However, it is unclear (1) how the concept of clinical leadership (CL) is described in NH-caregivers and if (2) CL is associated with resident-related outcomes.

Methods: We searched for peer-reviewed studies between 2009 and 2019 using Medline, Ebsco and Elsevier Science Direct. Based on the method of Whittemore and Knafl's (2005), we included quantitative, qualitative and mixed method empirical studies. The quality of the studies was assessed by using Joanna Briggs Institute critical appraisal tools. The data was analyzed by applying qualitative content analysis by two independent researchers.

Results: Six articles were included. All studies focused on nurses' and NH managers' work who need attitudinal and ethical, interactional, evidence-based care, pedagogical, and leadership and development competencies. Adequate CL impacts higher quality of care and person-centred care, staff perception of lesser job strain and higher level of mastery, innovative NH-climate and lower staff turnover rates.

Conclusion: Empirical evidence of CL in NH-caregivers is scarce. Until now, CL is not related to the multidisciplinary entity of all care professionals in a NH. Nonetheless, it seemed to be a promising concept since it describes multifaceted competencies and it is related to important outcomes for residents and care professionals.

PS6 Comparison of two surveys using the Sexuality Assessment tool (SexAT) in Flanders, Belgium

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Purpose: Comparison of two surveys (Messelis & Bauer, 2020 and Vander Stichele, e.a., 2020) in Flanders, Belgium, both using the Sexuality Assessment Tool (SexAT, Messelis & Bauer, 2017). Both studies aimed to assess how supportive residential aged care facilities are of residents' sexual expression.

Methods: In the survey of Messelis & Bauer 750 aged care facilities were contacted in 2017-2018 and 69 (9,2%) completed the SexAT survey after three reminders. Vander Stichele, e.a. contacted 100 aged care facilities managers in 2019. Twenty of them (20% response rate) completed the SexAT after three reminders.

Results: Findings of the Messelis & Bauer survey indicate that 70% of the facilities rated 'very good' to good (score between 21–59/69), while Vander Stichele e.a. found a prevalence of 76% of this score. Both found no facility was rated 'excellent' (score greater than 60/69). In the category 'improvement needed' (score less than 20/69), percentages were 30% and 23%; a difference of 7% (CI95% of difference in percentage includes zero, not significant).

Conclusion: There is room for improvement in residential aged care facilities for the support of sexual expression of residents. The more recent study confirms results of the previous one, and no significant evolution was observed in two consecutive cross-sectional surveys.

PS7 ICT use in cognitively frail older adults: an explorative study

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Doel: Amongst other strategies, ICT solutions have the potential to facilitate ageing in place in cognitively frail older adults. With the narrowing of the digital divide, an increasing share of older adults are adopting ICT. Since little is known about ICT use in cognitively frail older adults, we investigated the factors contributing this use.

Methodologie: Cross-sectional survey data of the Belgian Ageing Studies (BAS) were used. Results of 1840 community-dwelling older adults living in Flanders were included. The dataset contains both information on ICT use and cognitive frailty. Cognitive frailty was defined as having experienced few to multiple subjective memory complaints. In addition to descriptive analyses, inferential statistics were used to examine the factors contributing to ICT use in this sample.

Resultaten: Preliminary analyses show that the majority of the included older adults use ICT and that a variety of demographic factors contribute to this use (e.g. age, gender, education,...). The most prevalent online activities were navigating the web and sending e-mails. The severity of cognitive frailty was inversely related to frequency of use. Further analyses on the moderating effects of physical, social, psychological and environmental frailty on the relationship between cognitive frailty and ICT use are ongoing and will be presented.

Conclusie: The use of ICT in older populations is becoming omnipresent, although cognitive frailty limits this. The expected results of this study will generate a comprehensive understanding of factors that affect ICT use in cognitively frail older adults, and ultimately can inform care policies.

PS8 The relevance of the A-ADL tool in the assessment of daily activities and diagnosis of dementia in the older Sub-Saharan African migrant population in physical exercise to counteract cellular immunosenescence – latest insights

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Purpose: Early diagnosis of dementia is pivotal for effective treatment. Yet most diagnostic-assessment tools are developed in the western world and might not be effective in other cultures, such as the Sub-Saharan African population although prevalence is high. The diagnosis of dementia is partly based on the evaluation of the basic (b-), instrumental (i-) and advanced (a-) activities of daily living (ADL). The recently developed a-ADL tool has good psychometric properties and is effective in the evaluation of complex ADLs but the content (not just the language) had to be adapted for effective use in the SSA population.

Methods: Two focus groups were carried out with 12 members of the SSA community to verify if the items in the tool were relevant by the older population, the items were easily understood, and if new items were needed. The results were verified through semi-structured interview questionnaires with 100 community dwelling SSA older persons.

Results: The focus group discussions identified 15 relevant, 23 irrelevant, 15 unclear and 13 new items. In the quantitative study, the new items registered the highest scores for relevance and for decline in performance.

Conclusions: The studies demonstrate the need for the adaptation of not just the language but the content of assessment tools.

Varia abstracts

V1 INSPIRE: implementation and evaluation of a nurse-led integrated care model for home-dwelling older adults

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Purpose: To implement and evaluate an integrated care model for home-dwelling older adults

Methods: INSPIRE is a multi-phase project positioned within phases 1 to 3 of the Medical Research Council Framework for the development and evaluation of complex interventions. Following the development of the INSPIRE care model and logic model, a feasibility study will be conducted to assess its feasibility and acceptability. An observational pre-post study with a hybrid 1 effectiveness-implementation approach will be conducted to evaluate the impact of the care model on the level of person-centred and coordinated care in frail home-dwelling older adults. Additionally, a process evaluation will be performed to understand how the intervention is being implemented and to determine why it is or is not successful.

Results: The INSPIRE care model, led by a nurse and a social worker, consists of: screening, comprehensive geriatric assessment, individualized care planning and care coordination, and follow-up. Besides changes in the level of person-centred and coordinated care at 6 and 12 months follow up, we will measure changes in functional decline, potentially inappropriate medications (PIMS), symptom burden, incidence of ED-visits, nursing home admissions, among others. The implementation and evaluation will be rolled out in 2021.

Conclusions: INSPIRE will contribute to the evidence-base regarding integrated care models for home-dwelling older persons in real world settings. The integration of implementation science components should increase the likelihood of successful implementation of the INSPIRE care model. The evaluation will provide insight on the effectiveness of the model as well on the implementation pathway.

V2 Palliatieve maaltijdzorg: over genieten en comfort

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Doel: Het delen van praktijkervaringen over hoe we maaltijdzorg kunnen aanpassen naar de levensfase van de individuele bewoner/patiënt. Dit zowel vanuit een ambulante als een residentiële setting in de ouderenzorg.

Methodologie: Het delen van "best practices" vanuit de thuiszorg, het ziekenhuis en het woonzorgcentrum in samenwerking met experten in de palliatieve zorg.

Resultaten: Bij maaltijdzorg in de palliatieve zorg voor ouderen, komt de focus van de maaltijdzorg eerder te liggen op genieten en het bieden van comfort in plaats van het beantwoorden aan een nutritionele behoefte.

Conclusie: Kwaliteit geven aan het levenseinde van de bewoner/patiënt, vraagt ook om na te denken over maaltijdzorg. Vanuit deze benadering zijn genieten en comfort de kernbegrippen. Het is belangrijk hier rekening mee te houden wanneer het voedingsbehandelingsplan van de bewoners/patiënt wordt opgesteld.

V3 The effectiveness of e-Health applications in nursing homes: a systematic review.

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Purpose: The recent increase in e-Health technologies could provide innovative solutions in meeting the diverse healthcare needs of residents, reduce staff work burden and promote quality of life in nursing homes. The aim of this review is to examine the effectiveness of e-Health technologies in nursing homes.

Methods: Searches were conducted in the following electronic databases: PubMed, Web of Science and PsycInfo. A total of 6,077 studies were identified, of which 49 studies met eligibility criteria. Details on study characteristics, application domain, intervention types, outcomes, and appraisal quality were extracted. The Mixed Method Appraisal tool MMAT was used to assess the quality of studies. A qualitative narrative approach was applied for analysis.

Results: Forty-nine e-Health applications were identified. The overall quality of analysed studies was moderate. Their application domains supported therapeutic treatment; education and training; and health care delivery. Resident

interventions mainly focused on cognitive, communication and balance training. Computerised cognitive training devices, exergames and assistive robotic devices were the most reported therapies among residents. Telemonitoring was least applied despite an overall positive outcome with regard to cost effectiveness and quality of life outcomes among residents. Web-based education among staff were prominent while electronic medical records presented positive outcomes related to work burden and care delivery.

Conclusions: e-Health technologies show overall potential benefits in access to care, treatment and work efficiency. Future recommendations show the need for large trials with robust designs and a special emphasis on telemonitoring systems in nursing homes.

V4 Pneumatic and Hydraulic system measurements of fatigue resistance are not interchangeable

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Introduction: Fatigue resistance (FR), as can be measured with the FORTO mobile tooling, here defined as the time (in seconds) during which grip strength drops to 50% of its maximum during sustained contraction, can detect early loss of intrinsic capacity. But different grip strength systems exist and their relationship to frailty remains unclear. Therefore we compared FR obtained by using a pneumatic (Pneu) and hydraulic (Hydr) system.

Methods: In a large sample (n=1381, 18-100y) of (no-)frail: young healthy, middle-aged & old community dwelling persons, and hospitalized patients FR was measured with both systems. 53 community-dwelling women (63–100y) of the sample were categorized according to tertiles on the Frailty Index score (FI) as: low-frail (FI<0.19), intermediate-frail (FI 0.19–0.36), and high-frail (FI>0.36).

Results: Overall, independent of age category and frailty category, FR measured by Pneu (54.9 ± 34.8s) was higher compared to Hydr (33.7 ± 18.2s,$p<0.001$). FR, when measured with Pneu was approximately double in low-frail (44.3 ± 24.6s) compared to high-frail participants (23.9 ± 12.7s,$p=0.011$), whereas FR was similar across frailty groups when measured with Hydr. There was a proportional difference in FR measured with both systems ($R^2=0.36,p<0.001$), highlighting the longer participants could sustain the maximal effort, the higher the difference in FR measured with both systems.

Conclusion: Our results suggest that Pneu is a more appropriate handgrip system compared with Hydr in a (no-)frail sample. Moreover, Hydr is less able to identify community-dwelling women with higher levels of FR. Pneu assessed FR might be a good additional intrinsic capacity marker to include in frailty tools.

V5 Development of a heart failure clinic for vulnerable older adults at the Jessa hospital.

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Doel: To develop a heart failure clinic for vulnerable older adults, a shared care model between the cardiology and the geriatrics department.

Methodologie: The development took place between January and October 2020, at the Jessa hospital, a 981 bed non-teaching hospital. One cardiologist, one geriatrician, two cardiology nurses and an APN geriatrics were involved.

Resultaten: After analysing the standard heart failure clinic (Jessa hospital, cardiology department) the geriatrics department developed an additional assessment of prevalent geriatric syndromes in older patients with heart failure based on a literature search. After piloting and feedback from stakeholders, patients and caregivers, the assessment form was finalized in September 2020. Second, an interdisciplinary heart failure care pathway was created for the geriatric day clinic based on international models and experience from other care pathways. Main focus of the care pathway is adapting standard heart failure therapy to the vulnerable patients while trying to mend geriatric problems. The medical records of all hospitalized patients in the geriatrics department are reviewed weekly to check for potential candidates, which is discussed with the treating geriatrician. Alternatively, older patients with a 'vulnerable' profile, followed till now by the cardiologist, are referred to the heart failure clinic for vulnerable older adults, according to FRAIL criteria.

Conclusie: We developed a model for shared care between the cardiology and geriatrics department, for older vulnerable heart failure patients, in ambulatory setting. To determine effectiveness of this model further research will focus on the prevention of hospitalization, functional decline and survival.

Auteurs

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