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Free Communications

FC01.01

Competencies for professionals facilitating shared decision-making in care networks of people with dementia

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Introduction: People with dementia and their caregivers must make many different decisions over time. Shared decision-making is the preferred way of decision-making in health care. Shared decision-making in care networks of people with dementia is not self-evident, partly due to the cognitive decline of the person with dementia. We aim to identify professional competencies in facilitating shared decision-making in care networks of people with dementia.
Methods: We interviewed individuals of 15 care networks (person with dementia, two informal caregivers, and two professionals, n = 75 interviews). Our topics involved: decision-making, the role of the case manager, need for support in decision-making by the care network, experiences with decision-making. We analysed the interviews using framework analysis. The results from the interviews were tested and elaborated during three focus group interviews (one with people with dementia, one with informal caregivers, one with case managers).
Results: Five competencies and a basic attitude were identified: 1) Facilitating patient autonomy of the person with dementia and informal caregivers, 2) Planning decisions over time, 3) Facilitating reciprocal information-exchange within the care network, 4) Using a step-wise approach of reaching shared decisions, and 5) Sharing responsibility for decision-making within the care network.
Conclusion: Results indicate that in order to facilitate shared decision-making in care networks of people with dementia professionals need to reflect on their own role within and their contribution to the decision-making process. They need to find a balance between following and leading persons with dementia and their informal caregivers through the decision-making process, keeping in mind the right timing of decisions and particular values of the unique care network. Further studies are needed to determine effects of these competencies on reaching shared decisions in care networks of people with dementia.

FC01.02

Development of e-learning for multidisciplinary psychogeriatric education

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Introduction: The Irish National Dementia Strategy, published in December 2014, included "Better awareness and understanding" and "Training and education" as two of its six priority action areas. It was stated that the health services would engage with relevant professional and academic organisations to encourage and facilitate the provision of dementia-specific training, including continuous professional development, to relevant occupational and professional groups, including peer-led support and education for GPs, and to staff of nursing homes. The College of Psychiatrists of Ireland (CPsychI) is the responsible body in Ireland for postgraduate education and training in psychiatry and sought to develop appropriate educational initiatives to meet the targets described in the strategy and the wider needs for education in the area of psychogeriatrics.
Methods: CPsychI engaged with other post-graduate medical training bodies including the Irish College of General Practitioners and the Royal College of Physicians in Ireland to develop

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cost-effective educational initiatives aimed at multidisciplinary education and training.

Results: E-modules were developed initially to address delirium and dementia with a later expansion to other areas of psychogeriatrics. It was possible to build on existing materials and to develop interactive materials in a number of formats with with built-in options for assessment. These were found to be both relevant and effective for multidisciplinary audiences.

Conclusions: E-modules may be developed as a cost-effective methodology for education and training of multidisciplary healthcare workers in dementia care and related topics in psychogeriatrics. The presentation will demonstrate the range of materials developed, the built-in assessments, acceptability and relevance to healthcare workers from varied professional backgrounds.

FC01.03

Psychogriatric services in Nigeria

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Objective: In 2000, it was reported that there were no geriatric assessment units in Nigeria, but the first psychogeriatric clinic was established in 2001.This is an update on what has happened in the last decade as we now have five psychogeriatric treatment centers in Nigeria.

Method: The clinics are located in three teaching hospitals and two psychiatric hospitals. None of the hospitals has admission facility dedicated to older persons. All the clinics accept patients aged 60 years and older and have access to necessary radiological and laboratory services but neuropsychiatric assessment is only conducted routinely in one. Information was extracted from case records of patients seen in these centers between 01 June 2013 and 31 May 2014. Diagnosis in all centers was based on ICD-10 criteria.

Result: A total of 337 first time attendees were seen in the five hospitals over a one year period. One hundred and forty eight patients (43.9%) dementia, 50(15%) had depression, schizophrenia 81(24.0%), bipolar disorder 9(2.7%) anxiety 9 (2.7%) others 18 (5.3%).There were 106(31.5%) male and 231(68.5%) females. Mean age for dementia was 73.0(7.89) years vs 70.41(8.036) years for non-dementia patients ($p < 0.002$). Among those who have dementia, hypertension and diabetes mellitus were the most common comorbid condition; 48 persons had hypertension, 3 had diabetes mellitus alone;16 persons had a combination of both, while 62 persons had neither condition. One hundred and seventeen persons had between one and four BPSD symptoms only one had none, 10 persons had family history of dementia, 16 persons had records of neurological symptoms. One hundred and thirty one persons were on antidementia drugs. Eighty-two of 113 caregivers are females; 32 of these caregivers are spouses, 88 are children, 8 are siblings and 1 a non- relative. Eighty of these caregivers lived with the patient.

Conclusion: In this multisite study of psychogeriatric clinic attendees, dementia was the most common diagnosis. Most person diagnosed with dementia lived with family, had BPSD as well as comorbid medical conditions. They are also older than other patients in the clinic with diagnoses others. Our results have important implications for planning in a society where there is currently no policy on dementia care.

Dementia	148(43.9%)
acute psychotic disorder	3(0.9%)
anxiety disorder	9(2.7%)
bipolar disorder	9(2.7%)
Schizophrenia	81(24.0%)
Delirium	2 (0.6%)
substance use	4(1.2%))
organic psychosis	7(2.1%)
persistent delusional disorder	6(1.8%)
Depression	50(14.8)%)
Others	18(5.3)%

FC01.04

Translating an evidence based intervention from the Netherlands to Italy, Poland and United Kingdom: The meeting centres support programme for people and families living with dementia at home

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Objective: MEETINGDEM is a three-year JPND research study. It aims to implement and evaluate the Meeting Centres Support Programme (MCSP) in three European countries (Italy, Poland and the United Kingdom). This combined person-centred integrated service has been implemented in 125 locations in the Netherlands. Demonstrated benefits include high user satisfaction, reduced BPSD, delayed admission to residential care, increased carer sense of competence, and improved integration of care and welfare (Dröes et al, 2000, 2004a, b, 2011). Implementation research in care innovation suggests that translating practice to other countries is much more than just translating words and ideas (Meiland et al, 2004, 2005; Moniz-Cook et al, 2011). The first phase of MEETINGDEM has focused on the preparation of the adaptive implementation of the MCSP in the three countries.
Methods: Utilising the detailed guidance from the Netherlands, four fully operational pilot MCSP's have been set up in Italy (2), Poland (1) and the United Kingdom (1). Each has established an initiative group of care, welfare, voluntary and local governmental and non-governmental organisations (including the Alzheimer Associations); inventoried care-pathways to MCSP compared to usual day care; and prepared country specific implementation plans according to a standardised procedure.
Results: Each country inventoried potential barriers and facilitators to implementing the programme such as the motivation and collaboration with different organisations, funding and integration in the care-pathway; adapted implementation materials (e.g. practical guide for setting-up a meeting center and training for personel). The four pilots encapsulate the essential features of the MCSP both for people with dementia and for their informal carers to help them to adapt to dementia and to optimise their quality of life. Each MCSP includes an easily accessed, non-stigmatising community-based 3-day per week social club providing a programme of evidence-based enjoyable activities. The small staff team is trained and works together with volunteers, families and the local community providing support attuned to individual needs of people living with dementia and family carers.
Conclusion: Phase one was completed succesfully, resulting in country specific implementation plans and collaboration protocols with regional care, welfare and voluntary organisations and four active meeting centers.

FC01.05

A measure of occupational communion to inform the design and evaluation of dementia care workforce development interventions

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Objective: Occupational communion is defined as a sense of belonging based on social interaction at work, found to be a central part of the employees' experiences of positive emotions in dementia care workplaces (Elliott *et al.*, 2013). The aim was to develop a measure of this newly identified construct (OC) to apply to the design and evaluation of workforce development interventions. Enhancing the dementia care workforce through tailored intervention may lead to indirect effects on quality care for older adults.
Methods: A staged procedure was applied to examine the pilot measure with items derived from qualitative data. Items were reviewed by a development sample of dementia care workers and experts (N = 15). An exploratory factor analysis followed by a confirmatory factor analysis on the first and second split of a convenience sample of Australian dementia care workers (N = 662) was conducted. Convergent validity was examined by exploring simple correlations on measures of similar psychological constructs.
Results: Sound psychometric properties were found for a 20 item Occupational Communion Scale (Cronbach's alpha = 0.84). The final five factor structure of OC included *connection with clients, connection with co-workers, desiring professional development with co-workers, prioritizing other's needs* and *caring focus*.
Conclusion: Results show promise for a measurement approach for the new construct of OC. This construct informs the design and evaluation of aged care organisational interventions, particularly when targeting ways to build capacity and resilience in the dementia care workforce.

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FC01.06

Assessing people with dementia: The role of the aged care assessment team and memory clinics

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Objective: To determine the numbers and outcomes of assessments for cognitive problems in patients by the Aged Care Assessment Team (ACAT) and hospital memory clinics, within a single ACAT catchment area.
Methods: This is a cross-sectional study of all patients reviewed by the ACAT service and memory clinics of the Perth Inner City Geriatric Service in 2012. The ACAT catchment included an estimated 14,325 people over the age of 70. Data were collected on patient demographics, diagnoses and management to determine the flow of referrals to the services that diagnose and manage dementia, and the number of incident dementia cases diagnosed in 2012.
Results: The ACAT service assessed 1005 patients from the catchment, of which 240 patients already had a diagnosis of dementia. Based on the estimated dementia prevalence in Australia, approximately 19% of prevalent dementia cases (n = 1260) within the catchment were reviewed by the ACAT.The two memory clinics saw a combined 186 (91 and 95 respectively) patients from within the catchment, with a total of 83 (23 and 60 respectively) receiving a new diagnosis of dementia. Using Australian estimates of dementia incidence this would suggest that 29% of incident cases (n = 286) are managed through these memory clinics.
Conclusions: Geriatric services are responsible for assessment and management of a large proportion of the estimated number of patients with dementia in this catchment area. There needs to be further resourcing and standardization of the pathways to dementia assessment in Australia, in order to effectively diagnose and manage dementia.

FC02.01

Rapids and ripples: Decisions over the course of the dementia trajectory

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Introduction: Over the course of time people with dementia and their informal caregivers are confronted with many different decisions about daily life due to continuous changes in their situation. Uncertainty about what decisions to expect when, lead to difficulties in planning ahead. We aim to provide insight into what decisions are made, and when they are made in care networks of people with dementia.
Methods: In this longitudinal, multiperspective study, we interviewed members of 23 care networks of people with dementia (23 people with dementia, 44 informal caregivers, and 46 professional caregivers) in 12 months (285 interviews). We used content analysis to study what decisions are made and the timeline method to study when decisions are made.
Results: Four themes of decisions emerged: independence, arranging support, agency, and medical and end-of-life issues. Decisions in our care networks are not distributed equally in time. Peak periods with clusters of many decisions alternate with periods of relative rest. We found different characteristic patterns in the timing and the content of peak periods for people with dementia with a caregiver, those living alone, and those diagnosed during hospitalization.
Conclusion and practical implications: Decisions focus mainly on daily living with the dementia. Care transitions are just one aspect of this. Those living alone, those living with a caregiver, and those diagnosed during hospitalization experience different kinds of peaks. The periods of relative rest allow care networks to restore hope and focus on living a good life with the dementia.

FC02.02

Effects of participation in robot-assisted activity groups for nursing home patients with dementia on symptoms of agitation and depression – a cluster-randomized controlled trial

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Objective: In Norwegian nursing home (NH) studies at least one neuropsychiatric symptom (NPS), such as agitation or depression, is described in 70–80 % of the residents (Bergh *et al.*, 2012; Selbaek *et al.*, 2007), a prevalence confirmed in international studies (Selbaek *et al.*, 2013). NPS is considered as difficult to handle and complicated to treat (Cohen-Mansfield, 1995). Medical treatment has limited effect in addition to harmful side effects, hence non-pharmacological treatments are recommended as first choice (Salzman *et al.*, 2008). Interaction with animal-looking, socially assistive robots is an alternative to human-animal-interaction, developed for people with dementia and used in NH to stimulate communication, mood and social interaction (Bemelmans *et al.*, 2012; Broekens *et al.*, 2009; Mordoch *et al.*, 2013). This study aims to examine effects of participation in a Paro-group activity on symptoms of agitation and depression in nursing home participants with moderate to severe dementia compared to a control group.
Methods: A cluster-randomized controlled trial including 10 adapted nursing home units from three counties in Eastern Norway was conducted. The nursing home units as clusters were randomized into Paro-intervention (n = 30) or control group (treatment as usual) (n = 30). Activity sessions were arranged using Paro in groups of 5–6 participants with dementia. The group activity was lead by nurses from the units. Sessions took place in a separate room for 30 minutes twice a week through 12 weeks. Participants completed baseline measurements assessing cognitive status, regular medication, agitation and depression with repeated data collection (except on cognitive status) at end of intervention and at follow up (three months after). Mixed models were used to analyze treatment and time effects. Medication were analyzed by chi-square tests.
Results: A significant difference in agitation and depression was shown between the groups from baseline to follow up. The intervention group had a decline in symptoms, the control group had a development in the opposite direction. There were no significant differences on change in medication between the groups.
Conclusion: This study reveals a long-term effect on depression and agitation by using Paro in activity groups for elderly with dementia in nursing homes. Our findings make probable the use of PARO to be a suitable treatment to moderate NPS and should be considered as a useful tool in clinical practice.

FC02.03

Supporting carers with peripatetic specialist Admiral Nurse clinics

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Admiral Nurses are dementia specialist nurses working in various health and care settings in the United Kingdom. Currently there are 135 Admiral Nurses in the country. In 2013 and 2014, Admiral Nurses provided one to one drop in clinic sessions for families at two national Alzheimer's Shows in the United Kingdom. The clinics proved extremely popular and accommodated a high volume of visitors seeking help and advice on many aspects of dementia, including the following topics and percentage of enquires on each topic: Physical health and wellbeing of the person with dementia (82%); Mental health and wellbeing of the person with dementia (72%); Skills in coping with behaviour/ symptoms (72%); Knowledge and understanding of dementia (58%); Mental health and wellbeing of the carer (58%); Practical support (44%); Physical health and wellbeing of the carer (34%); Understanding treatments and managing medication (24%); Allowing time for self (carer) (24%); Looking to the future (carer) (17%). Following this success, Dementia UK aims to develop a Peripatetic clinic model both in the community and in the workplace as follows:

1. In partnership with the Charity for Civil Servants, Admiral Nurses will provide one to one clinics in two identified major workplace sites in the United Kingdom every month for a year. The clinics will offer appointments to employees who may not have access to specialist dementia services or support, and who may also find it difficult to take time off work to attend appointments. Admiral Nurses will also provide educational sessions to managers at the sites to help understand the needs of carers, and explore greater flexibility for staff who are carers. Developing in house peer support groups will also be explored.
2. Dementia UK will develop roadshow clinics around the United Kingdom. Working with local stakeholders and commissioners, Admiral Nurses will provide one to one clinics across the country to increase access for carers of someone with dementia to specialist nurses.

This pilot will be the first of its kind in delivering a fully peripatetic Dementia Care Specialist Nurse lead clinical service across the United Kingdom.

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FC02.04

What makes people with dementia get lost in the supermarket? Relating cognition to everyday activities

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Objective: Getting lost when following familiar routes and not remembering the steps to prepare a hot meal are some of the common everyday activity problems which people with dementia (PwD) encounter (Giebel *et al.*, 2014). This gradual loss of independence can cause burden on their family carer and result in care home admission (Afram *et al.*, 2014). Therefore, understanding the underlying causes of dependence are vital to prolong living well at home. Deterioration in cognition is the primary cause (Liu-Seifert *et al.*, 2015). However, there is very little evidence about how individual forms of cognition are related to complex instrumental and basic activities of daily living. Consequently, we conducted a study into this important relationship, and hypothesised that different forms of cognition underlie performance of different daily activities.

Methods: Twenty-two PwD and their family carers were interviewed in their own home. PwD completed measures on general cognition, long-term, short-term and prospective memory, as well as attention, processing speed and executive function. Carers completed a newly revised questionnaire, the revised Interview for Deteriorations in Daily Living Activities in Dementia 2, on the *intention* to perform, and actual *performance* of everyday activities of the PwD. Carers also rated their own well-being and that of their relatives with dementia. Data were analysed using bivariate correlation and multiple regression analyses.

Results: The *intention* to perform cleaning activities, managing medication and maintaining an active social life deteriorated to a greater extent than other activities. The *performance* of finance and medication management, as well as transportation, deteriorated more than other activities. The activities of bathing and dressing were the most impaired basic activities. Varied associations between cognitive functions and everyday activities were found, with delayed memory being significantly associated with the intention and performance of dressing. Processing speed was significantly related to the intention and performance of meal preparation, whilst executive functioning was related to the intention to use the telephone or computer.

Conclusion: Corroborating our hypotheses, different activities were underpinned by different forms of cognition. This evidence can be employed in the development of cognitive interventions addressing impaired forms of cognition to maintain or improve specific activities.

FC02.05

Using SenseCam to stimulate cognitive function and decrease depressive symptoms in mild Alzheimer disease

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Objective: Neuropsychologists' interventions in Alzheimer's disease tend to focus upon training with tasks such as shopping lists, news, and personal events. These require the patients' motivation and the use of internal cognitive strategies that can be compromised by the disease (1, 2). External strategies (like diaries, writing a journal, electronic agendas) depend less upon intact cognition. SenseCam (a wearable camera created by Microsoft Research that captures pictures automatically) was developed as an external memory aid for daily life (3, 4). Such technological developments promise much, but require a sound evidence base (5). We examined whether SenseCam improves cognitive performance, but also functional status, depression and perceived quality of life.

Methods: A between subjects design with 60 patients with mild Alzheimer's disease (MMSE mean = 21.60, SD = 3.11) compared SenseCam, a traditional memory training program (Memo+) and a diary. Patients were randomly assigned to one of three groups: Memo+ group - Participants had 10 sessions (twice a week) of a memory training program (e.g. cancellation tasks, shopping list retention); SenseCam group - Participants wore the SenseCam for 5 weeks, and reviewed the pictures captured twice a week; Diary group - Participants wrote a diary (one page per day) for 5 weeks and read the content twice a week. For the objective assessment of cognitive, functional and emotional gains, a neuropsychological battery was carried out before the intervention, immediately after and at six months follow-up.

Results: The results indicate that the Memo + and the SenseCam groups had a superior

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autobiographical (interaction $F(1,27) = 15.27$, $p < .0001$) and episodic memory (interaction, ($F(1,27) = 13.48$, $p < .0001$) than the diary group at the end of the intervention. Follow up data is still being gathered, but the same pattern holds for the autobiographical memory measure. From the non-cognitive measures, the SenseCam, and the Memo + interventions helped to decrease depressive symptoms whereas in the diary group depressive symptoms did not decrease (interaction, ($F(1,27) = 7.65$, $p = .006$). The same result was observed in the assessment of functional incapacity, where the SenseCam and Memo + groups showed a decrease in perceived functional incapacity. No changes in the three groups were found concerning quality of life.

Conclusion: Rehabiliation using a wearable camera, Sensecam, appears to yield the same benefits as an intensive course of memory training and testing in Alzheimer's patients, but such a benefit is achieved relatively passively, without expert intervention.

FC02.06

Physical activity for older adults with cognitive impairment: How to translate the evidence into practice

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Objective: Regular physical activity is associated with multiple benefits for physical and mental health across the lifespan. There is growing evidence that physical activity may play the most important role of all known modifiable risk factors when aiming to reduce dementia and Alzheimer's disease risk in the cognitively healthy global population. Studies have also shown that regular physical activity can be beneficial for older adults with mild cognitive impairment and dementia. Reported benefits include physical health, risk of falls, quality of life, behavioural and psychological symptoms of dementia and cognition. However these findings are not consistent and there are still many knowledge gaps in relation to the type of physical activity, duration, frequency, intensity, safety and health economics. Because of these knowledge gaps translating the evidence into communities and clinical practice can be a challenge.

Methods: This paper aims to summarise the current knowledge by scoping and identifying the relevant information necessary to translate current evidence into practice. What does a health or community service need to consider in order to start a physical activity program specifically for older adults with cognitive impairment? Practical considerations include assessing the needs of the consumer, how to support behaviour change, how to assess fitness capacities of consumers, determining the benefits of various different types of physical activity and how to select the most suitable type of physical activity and will the physical activity be supervised or unsupervised. How to identify and overcome barriers to participation, providing feedback, ensuring safety of the program and evaluating outcomes are key elements. Further, identification of the appropriate skills and professional backgrounds of staff and developing strategies to ensure consumer involvement when planning the program are essential considerations for successful translation.

Results: Despite the current knowledge gaps, targeted physical activity programs for people with cognitive impairment can be developed successfully in the community and clinical settings by carefully planning the details of the program with a multidisciplinary team and with consumer involvement.

Conclusion: In addition to further research to address the current knowledge gaps, more practical advice needs to be developed to inform communities and clinical practice on how to best start physical activity programs for older people with cognitive impairment. Despite these existing knowledge gaps, people with cognitive impairment should not miss out on the benefits of regular physical activity.

FC03.01

Translational research for quality use of medications in dementia: The QUM-D tool and emergency sedation guidelines

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Objective: IPA has been long-committed to the development of best practice guidelines for the management of behavioural and psychological symptoms of dementia (BPSD), culminating in the IPA Complete Guides to BPSD. The challenge remains to disseminate and translate such guides into practice. This presentation will address the development and implementation of a tool used to promote quality prescribing in dementia as well as guidelines for emergency sedation in dementia.

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Methods: In 2011 a set of guidelines for emergency sedation of the agitated elderly patient were developed[1] followed by the QUM-D (Quality Use of Medications in Dementia), a tool developed using Delphi methodology to identify elements of quality prescribing in BPSD.[2]
Results: The QUM-D was tested by a range of medical and nursing professionals on 48 patients in inpatient and ambulatory (including residential care) settings in Northern Sydney Local Health District, Australia, with significant change in medication burden scores between baseline and post-use of the tool ($t = 9.5$; $df = 47$; $p < 0.001$). The development of the emergency guidelines and the QUM-D tool has been followed by a dissemination strategy with integration into local health district and state policy and guidelines, education and training. There have been a number of challenges to this dissemination.
Conclusion: BPSD are virtually ubiquitous in dementia and despite the development of a range of guidelines and de-prescribing initiatives, excessive recourse to the use of psychotropics without age-specific constraints remains a problem at the coalface. We have developed tools and guidelines with a dissemination strategy to address this problem, recognising the resistances and barriers to such.

FC03.02

Neuropsychiatric prodrome of AD: When are diagnostic biomarkers indicated?

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Objectives: Initiate a discussion on guidelines for use of imaging biomarkers in the early diagnosis of AD before dementia.
Methods: Literature review of recent publications from cohort observational studies in health older persons, patients with AD both familial early onset and sporadic late-onset.
Results: Using NPI-Q data from the National Alzheimer's Coordinating Center (NACC), neuropsychiatric symptoms (NPS) such as depression, irritability and night-time behavior changes were more often present in cognitively normal subjects age >50 who later progress to dementia (Masters et al, 2015). The Dominantly Inherited Alzheimer Network (DIAN) has collected NPI data in young mutation carriers and their siblings, showing surprisingly more depressive symptoms in the non-mutation carriers, but emerging NPS in the MCI stage of mutation carriers, suggesting that cognitive decline and NPS emerge when a threshold of neurodegeneration is reached (Ringman et al, 2015). In this regard PET-tau may be more relevant to emergence of NPS than PET-amyloid (Chase, 2014). Data on NPS in the Alzheimer Disease NeuroImaging (ADNI) study used MRI and CSF biomarkers: one study using data from the Development of screening guidelines and criteria for pre-dementia Alzheimer's disease (DESCRIPA) and ADNI suggest that anxiety, agitation and irritability reflect underlying AD pathology more than depression and apathy (Ramakers et al, 2013), whereas another using a local cohort at the Karolinska Institute and ADNI found that depressive symptoms are associated with cortical thinning in temporal and parietal regions and elevated phosphorylated tau levels (Lebedeva et al, 2014).
Conclusions: More observational studies are needed to correlate biomarkers and clinical pre-dementia manifestations such as NPS, and it is premature to recommend the use of biomarkers in asymptomatic subjects or with non-specific NPS outside of a research project.

FC03.03

A deprescribing intervention to reduce the inappopriate use of antipcyhotics to manage BPSD in residential aged care: The HALT project

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Objectives: Inappropriate use of antipsychotic medications to manage behavioural and psychological symptoms of dementia (BPSD) is a persistent issue despite mounting evidence for the associated risks including stroke and death. In the long term care setting, the HALT project aims to identify suitable residents on antipsychotic medications and undertake a deprescribing intervention. Care staff, pharmacist and GP training were provided to improve non-pharmacological behaviour management and promote appropriate clinical review processes.
Method: Twenty four Residential Aged Care Facilities (RACFs) were recruited across the greater Sydney area. Potential participants were over 60 years old, on regular antipsychotic medication, not being treated for a primary psychotic illness and with a total Neuropsychiatric Inventory (NPI) score

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below 50, individual domain scores score below 12 and occupational disruptiveness scores of less than 4 in 2 out of the domains delusions, hallucinations, agitation/aggression, anxiety and disinhibition. Consenting participants were assessed at least one month and again at least one week prior to commencement of deprescribing; an agreed dose reduction schedule for this had been established by project pharmacists and participant GP. Following deprescribing, participants were re-assessed 3, 6 and 12 months later. The primary outcome was reduction of regular antipsychotic medication without use of substitute psychotropic medications. Secondary outcomes are rates of antipsychotic prescriptions in RACFs, rates of cognitive and functional decline, falls, Drug Burden Index, rates of pneumonia, stroke and hospitalization. Baseline demographics, cognition, function, neuropsychiatric symptoms, agitation and quality of life were covariates.

Results: At the time of writing, 81 participants had been taking the current course of antipsychotic medication for an average of 2.1 years. Of these, 54 participants had commenced deprescribing and 49 had achieved cessation, of whom 26.5% had recommenced taking an antipsychotic due to recurrence of BPSD. Preliminary data show stability of NPI scores from baseline through to follow up and the significance of this will become clearer as the sample size increases. Organisational culture appears to play a significant role in the success of the deprescribing intervention.

Conclusion: Preliminary data demonstrate that deprescribing of antipsychotics in nursing home residents with previous BPSD is feasible. This is best achieved against a background of organisational support and positive attitudes to practice development regarding behaviour management from whole healthcare teams. The impact of facility and individual factors on outcomes and reasons for recommencement following deprescribing warrant further investigation.

FC03.04

Existing socio-professional relationships to improve dementia care: The social study

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Aims: The Social Orientation of Care in Aged Living (SOCIAL) study seeks to describe how the network of professionals and non-professionals providing care to residents who experience behavioural and psychological symptoms of dementia (BPSD) in long term care, influences the care provided. Via a systematic literature review (SLR) and analysis of networks of residents with BPSD, the study will assess network factors most influencing care and recommend how network strengths could improve care to residents and other network members.

Method:

1. SLR using seven search engines and criteria spanning social network analysis (SNA), dementia, care facility and service providers, cross-referenced to multiple synonyms. Eligible studies directly and indirectly involved residents with dementia and examined SNA.
2. Study of four residential aged care facilities (RACF) in Sydney Australia, using ego- and sociocentric networks of 12 randomly selected residents who experience BPSD. Networks include residents with dementia > 50 years, family and friends, all RACF staff as well as visiting professionals who have had contact with the 12 residents in the prior month.
3. Analysis of communication, advice and trust networks supported by observational evidence and Person Centred Environment Care Assessment.

Results: Of 153 papers from the literature search, nine met study criteria. Key findings were:

1. Where staff have more connections with relatives and friends of residents, residents receive better treatment. Residents also receive better treatment when nursing staff are more motivated.
2. Among nursing staff, organisational identification results in higher work motivation. Communication among nursing staff is important for job satisfaction.
3. Individuals identified with high centrality have the potential to influence others and help acclimatise new residents.
4. The study has Ethics clearance. Interviews will commence June 2015.

Discussion: It is believed that mutually supportive social-professional networks result in good care, less staff turnover, more motivated staff as well as less use of antipsychotic and psychotropic drugs. They have the potential to improve quality of life of residents with BPSD and their carers. The SOCIAL study is the first to include a wide range of professionals and non-professionals. An anticipated downstream effect is reduction in care costs, of relevance given projected care costs in the United States alone of USD 20 trillion over the next 40 years.

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FC03.05

Online focus groups to explore family caregivers' self-management of challenging behavior in their relatives with dementia

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Objective: To gain insight into family caregivers' self-management and needs for self-management support to effectively deal with challenging behavior of their relative with dementia.

Methods: A qualitative study was conducted with four online focus groups with 36 family caregivers of persons with dementia. Topics in the online focus groups were related to caregivers' 1) self-management of challenging behavior of their relative and 2) needs for support in this. Transcripts of the online focus groups were independently analyzed by two researchers using a thematic analysis approach.

Results: Caregivers experienced changes in behavior and mood of their relative, like apathy, agitation and depressed mood. Four strategies of family caregivers to manage this were identified: 1) stay calm and be patient, 2) reassure, 3) tell positive stories and make use of humor and 4) stimulate undertaking activities. Caregivers' needs for professional support to manage challenging behavior were mainly related to 1) the need for being heard, 2) the need for sharing experiences and 3) the need for information and learning skills.

Conclusion: The results from this study show that managing changes in behavior and mood is a daily challenge for family caregivers. They indicated different strategies to manage with these challenging behaviors. Despite these strategies, family caregivers revealed that they are not always capable of applying the strategies. This is an important topic for professional self-management support and future research. Additionally, professional self-management support should be tailored to caregivers' needs and focus on listing to the caregiver, providing information and learning caregivers (new) skills.

FC04.01

Development and validation of a new index for quantifying a brain-healthy lifestyle: The innovative midlife intervention for dementia deterrence (In-MINDD) study

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Background: Dementia is a global public health priority with primary prevention as a major aim. Several factors have been identified that contribute to the risk for dementia, with most effects attributable to non-modifiable factors such as age, education and APOE genotype. Such information is of limited utility if the aim is to calculate someone's "room for improvement" or "preventive fraction". We developed a new index based on modifiable risk factors only using a multi-method approach. We validated the index in a population-based dataset.

Methods: Risk factors were identified by means of a systematic literature review and online-Delphi study. From the literature, we extracted factors, their number of studies and effect consistency. The results were presented to a group of eight dementia experts from different countries, who confirmed their importance for dementia prevention. A weight was then assigned to each factor based on their risk estimate as reported in meta-analyses, and these were summed up to yield a final score: The Lifestyle for Brain Health (LIBRA) score. Whether individual LIBRA scores predicted risk for dementia (n = 62) or incident cognitive impairment no dementia (CIND, n = 143) was then tested in 955 participants from the Maastricht Ageing Study aged 50–81 years using Cox proportional hazard regression.

Results: Out of 291 relevant articles, twelve factors were deemed most important after triangulation (review and expert consensus): physical inactivity, smoking, alcohol use, cognitive activity, Mediterranean diet, depression, hypertension, obesity, diabetes, hypercholesterolemia, coronary heart disease, renal disease. In MAAS, information on 11 factors was available (not for Mediterranean diet). A lower LIBRA score was associated with decreasing risk for dementia ($p = .004$) and CIND ($p < .001$). The effect was independent of age, gender and education.

Conclusion: The LIBRA score could be a promising tool for quantifying an individual's potential for prevention of dementia. Individual

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reductions in the LIBRA score could also be a new proxy outcome for trial success given the long latent period for the dementia outcome, but further validation in different dataset is welcomed. The score is currently tested in the In-MINDD trial in four European countries.

FC04.02

Increasing cognitive reserve in older adults attending university enhances language capacity, but not executive function, episodic memory, or working memory: The Tasmanian Healthy Brain Project

Nichole Saunders[1]; Megan Lenehan[2]; Mathew Summers[1,3]; Jeffery Summers[4]; James Vickers[1]

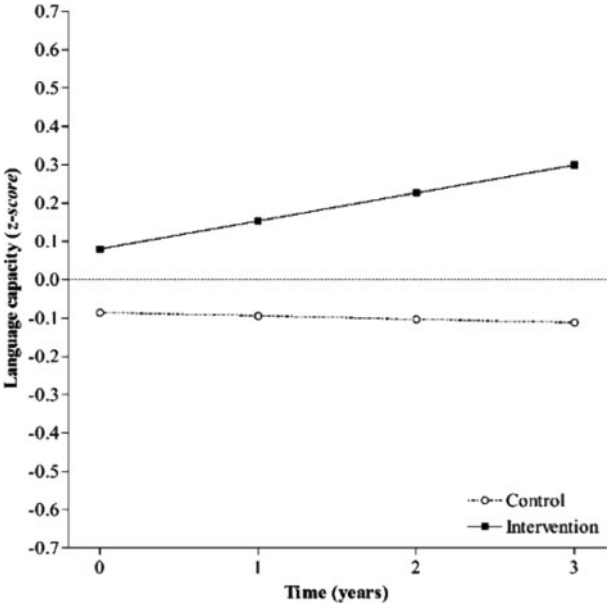
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Background: The strong link between education and cognitive performance suggests that a period of education in later-life could enhance cognitive function. This is suggested as a non-pharmacological approach to reduce age-related cognitive decline and protect against AD.

Methods: Changes in episodic memory, working memory, executive function and language processing in older adults participating over four years in the Tasmanian Healthy Brain Project (THBP) were examined. The annual cognitive performance of 459 participants enrolled in the THBP were examined. We compared a previously identified group of participants who undertook university study and demonstrated increased cognitive reserve (CR) (intervention) against a group who did not engage in further education and did not display a change in CR (control).

Results: Multiple group Latent Growth Curve Modelling revealed no significant group differences in the trajectory of scores in episodic memory, working memory or executive function between the two groups. However, the intervention group had significantly better performance at baseline relative to controls for language processing (Figure 1). Further, the intervention group displayed a significant improvement in language processing over time, with the control group remaining stable.

Conclusions: In a group of older adults with improved cognitive reserve resulting from attending university, we found that there is a commensurate improvement in language processing capacity over time but no improvement was detected in episodic memory, working memory or executive function. These results suggest that complex mental stimulation that triggers improved cognitive reserve also enhances language processing capacity but no improvement to other cognitive functions. These results suggest that enhancement of CR in older adult's leads to improved crystallised cognitive abilities but no improvement to fluid cognitive abilities. It remains possible that over an extended period of time differences may emerge in these other cognitive domains reflecting a decrease in the rate of age-related cognitive decline.



FC04.03

Social engagement is more important for memory function in older than middle aged adults

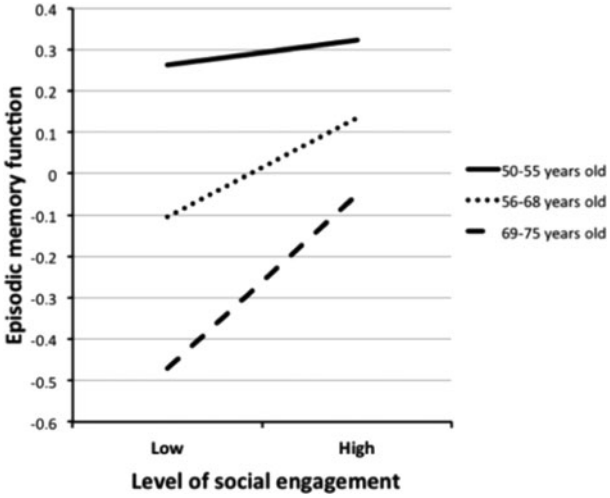
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Objective: It has been suggested that social engagement plays an important role in the cognitive function of older adults. However, the extent to which social engagement in later-life is uniquely associated with healthy cognitive function, after having controlled for traditional cognitive reserve variables, is unclear. In this investigation, we aimed to quantify the contribution of social engagement on cognitive performance and to investigate whether age moderates the strength of the association, while considering cognitive and genetic covariates.
Methods: Participants were 412 healthy older adults, aged 50–79 years, who underwent neuropsychological assessment as part of the on-going longitudinal Tasmanian Healthy Brain Project (THBP). The assessment process involved the completion of the Lubben Social Network Scale (LSNS), a valid and reliable 18-item tool used for assessing the frequency and type of social interactions with family, neighbours and friends. A total LSNS scaled score was used as an estimate of social engagement while a previously developed multivariate model was used to estimate cognitive reserve, which comprises estimates of lifetime education, occupational attainment, participation in cognitive activities, and intelligence. Composite cognitive variables representing the domains of episodic memory, working memory, executive function and language processing were assessed using PROCESS to determine the effects of social engagement and age, while covarying for cognitive reserve, gender, and *APOE* and *BDNF* Val66Met polymorphisms.
Results: Overall, after controlling for covariates, higher social engagement showed small but significant positive effects on function in all age-susceptible cognitive processes: episodic memory ($p = .01$, $\Delta R^2 = .01$), working memory ($p < .01$, $\Delta R^2 = .02$) and executive function ($p < .01$, $\Delta R^2 = .02$). Social engagement did not significantly predict language processing ($p = .38$). A significant social engagement x age interaction was identified in episodic memory function ($p = .05$; see Figure 1). Here, examination of simple slopes revealed an increased strength of association between social engagement and episodic memory function as a result of advancing age (50–55 years: $B = .00$, $p = .62$; 56–68 years: $B = .01$, $p = .01$; 69–79 years: $B = .02$, $p < .01$). In the oldest age bracket, social engagement accounted for 6.4% of the variance in episodic memory scores.
Conclusion: We have demonstrated that social engagement is uniquely associated with the cognitive function of healthy older adults, even after controlling for cognitive reserve and other covariates. In addition, our analyses indicated that the relative importance of social engagement for memory function is greater among older than younger individuals.



FC04.04

Impact of factors related to retirement transition on cognitive functioning: Results from the AMI study

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Objectives: Recent studies reported adverse effects of retirement on cognitive functioning of older adults (Adam *et al.*, 2013; Bonsang *et al.*, 2012). Nevertheless, the departure from the workforce is a major life course transition that causes substantial changes in one's life (e.g., role status, social network). Taking only into consideration the retirement age is therefore not sufficient to reveal the complexity of the association between retirement and cognition. A better understanding of the retirement transition related factors would be essential for the development of future senior health policies. Thus, this study aimed to identify psychosocial factors related to retirement transition that are likely to influence cognition of older adults.
Methods: The study sample was gathered from the AMI cohort, a prospective study of 1002 retirees aged 65 and over living in rural setting in South-Western France. A multiple correspondence analysis (MCA) was first conducted, based on 23-item instrument administered to 590 non-demented subjects with no missing data, to highlight

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different dimensions associated with the retirement transition. Then, regression analyses adjusted for potential confounding factors were performed to examine the association between each of the dimensions highlighted by the MCA and cognitive performance measured by the Isaacs set test score, a verbal fluency score.

Results: Results indicated that 4 of the 5 dimensions highlighted by the MCA were significantly associated with verbal fluency score. In particular, better performances were observed when: (1) the transition into retirement was experienced as a gain (greater well-being and quality time) ($p < 0.0001$); (2) the work setting was perceived as pleasant (good working relationships, sense of purpose) ($p = 0.03$); (3) individuals feel that they have busy days and are not bored ($p = 0.02$); (4) subjects seem to have, paradoxically, as many worries, as many accountabilities and do not save more energy as compared to before ($p = 0.001$). However, the voluntary nature of the retirement was not significantly associated with cognition ($p = 0.17$).

Conclusion: This study highlights that the conditions under which the transition from work to retirement took place are differently associated with cognition. These data also suggest the importance of adopting a positive attitude toward retirement as well as the beneficial effect of activity after retirement.

FC04.05

Stability of life satisfaction in community dwelling older adults

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Objective: Life satisfaction refers to a general evaluation of the overall quality of one's life (Pavot & Diener, 2008). Paradoxically, as people get older and experience associated cognitive or physical decline, there is not a commensurate decline in subjective well-being (Gana *et al.*, 2013) even though cognitive function has been positively related to life satisfaction (Enkvist *et al.*, 2013). This is possibly because those with more cognitive resources are better able to deal with age related changes (Jones et al., 2003). This study examined the stability and associates of life satisfaction in community dwelling older adults over four years.

Methods: The sample was drawn from the Sydney Memory and Ageing Study (MAS) which is an ongoing longitudinal study of community dwelling adults aged 70–90 years at recruitment. Participants (n = 635) were included if they had baseline data on life satisfaction (Satisfaction With Life Scale), frailty, health related quality of life (Assessment of Quality of Life), function (instrumental activities of daily living) and cognition (mild cognitive impairment assessment). Stepwise logistic regression was used to determine the associates of life satisfaction at baseline and at follow-up four years later. All models included age, education and sex. Follow-up analysis controlled for baseline life satisfaction.

Results: At baseline, 68% of participants reported being satisfied with life. These participants (vs dissatisfied) had more years of education (OR 1.1 95% CI 1.0–1.1), lower neuroticism (OR 0.9 95% CI 0.9–1.0) and greater health related quality of life (OR 1.1 95% CI 1.1–1.1). Cognition and function were not associated with life satisfaction. At follow-up (n = 488), 65% of participants reported being satisfied. Predictors of life-satisfaction at 4-years were years of education (OR 1.1 95% CI 1.0–1.2) and improved health related quality of life (OR 1.1 95% CI 1.1–1.2)

Conclusion: This study showed that most community dwelling older adults are satisfied with life and remain so over time. Personality and health related factors had the strongest influence on life satisfaction cross-sectionally. Improvement in health related quality of life was associated with being satisfied with life over time. There was no evidence either cross-sectionally or over time of links between cognition and life satisfaction (in either direction). This is reassuring for persons with Mild Cognitive Impairment.

FC04.06

What would encourage help-seeking for memory problems amongst South Asians? A qualitative study

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Objectives: People from Minority Ethnic groups tend to present late to dementia services, often in crisis. Culture-specific barriers to help-seeking

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seem to underlie this. We sought to determine these barriers to timely help-seeking for dementia among people from South Asian backgrounds and what the features of an intervention to overcome them would be.
Study design: Qualitative study to delineate barriers to and facilitators of help-seeking for South Asian adults with dementia through focus groups and individual interviews.
Setting: Community settings in Greater London.
Participants: We recruited English or Bengali-speaking South Asian adults without a known diagnosis of dementia through community centres and snowballing.
Results: We purposively recruited 53 participants for a maximum variation sample. Participants identified six main barriers to timely diagnosis: the belief that memory problems were an inevitable part of ageing or due to social or spiritual factors; that the individual or their family or religion could make memory problems better; that it was disrespectful to ask for help outside the family and good families look after people with dementia without help; that dementia was a mental illness and it was therefore stigmatising to receive a diagnosis; lack of knowledge that there was any health or social help available or useful, and having a high threshold for when to seek help for memory problems. They described potential ways to overcome barriers as an intervention from a trusted source, in the form of a personal story about someone from a South Asian background to normalise and guide help-seeking, show its usefulness and break down stigma; and that it should be in film form as well as written.
Conclusions: We have identified the features of an intervention with the potential to improve timely dementia diagnosis in South Asians. The next steps are to devise and test such an intervention.

FC05.01

Early intervention for early stages of dementia

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Background: In Norway, the prevalence of dementia is estimated to affect 70.000 and will increase during the next decades. In order to plan future services, Drammen municipality initiated a pilot project that aimed to investigate whether interventions like home modification (HM) and assistive technology (AT) could support people with dementia in the early phases to stay safely at home.
Objective: The aim was to identify types of HM and AT-interventions that could enable people with early phase of dementia to live safely and longer at home.
Methods: Five people with early stage of dementia were included in the pilot study and followed for 10 months. The baseline assessment included both evaluation of home environment, occupational needs, and needs for AT. Thereafter, HM and AT-interventions were suggested and implemented. Data from interviews and observations were collected from participants, family caregivers and from employees providing home services.
Results: This pilot intervention revealed findings on three levels; person, product and system levels. All five participants had different diagnoses, conditions and living arrangements. Even if assessment methods for HM and AT existed in other branches of the community services, they were not included in the home services team. Needs for HM were low in these five participants, however access to AT improved coping and safety. Engagement and interest from family caregivers and employees of the home services nourished the daily use and benefit of AT. On the product level, devices lacked robustness, provision was slow and responsibilities fragmented. On the system level, there seems to be a need for improving community services by utilizing skills and competence from the existing Occupational Therapy-services, preventive health care team, geriatric team and assistive technology team in a more collaborative way than today.
Conclusion: These findings call for the innovation of existing working methods and organization of home services, in order to reach the authorities aim of integrating AT as part of the community services by 2020.

FC05.02

What is the role of modifiable environmental and lifestyle risk factors in young onset dementia?

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Objective: Young onset dementia (YOD) is associated with significant personal and financial burden, but little is understood about its cause. The aim of this review was to determine whether environmental and lifestyle factors are associated with risk for non-autosomal dominant degenerative and vascular YOD.
Method: Academic databases were searched to December 2014 for studies assessing the impact of modifiable risk and protective factors (e.g. education, cardiovascular illness, psychiatric illness, alcohol use and so on) in participants under 65 at dementia symptom onset.
Results: A dose-response relationship was found between multifactorial or increasing severity of risk exposure and the likelihood of developing YOD. The risk associated with specific factors was less clear, though there was some evidence that psychiatric illness, heavy alcohol use, estrogen and traumatic brain injury may be more important to YOD than they appear to be to older populations.
Conclusion: Environmental and lifestyle risk factors are relevant to YOD, and the field may overestimate the burden of genetic factors. Factors that confer the highest risk in younger populations may differ from those for older groups. People with YOD can provide insight into the most important risk factors for dementia at any age, but more work is required to determine which risk factors or combination of factors is most important and when exposure is most detrimental.

FC05.03

Let's start at the beginning: Childhood adversity and late-life outcomes in a community sample of Aboriginal Australians

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Objective: To assess the impact of adverse early life experiences on late-life cognitive, psychological and health outcomes for older Aboriginal Australians.
Methods: A population-based, cross-sectional study of ageing and dementia recruited 336 participants (aged 60 – 92 years; 60% female) from urban and rural Aboriginal communities in Australia. All participants completed a structured interview documenting health and social experiences from birth, including current cognitive, physical, social and emotional health. Adverse early life experiences were measured using the Childhood Trauma Questionnaire (CTQ). "All cause" dementia was diagnosed by clinical consensus using NIA-AA criteria. Standardized scales assessed depression and alcohol abuse. Multivariate logistic regression analyses examined the association between CTQ scores and late-life outcomes.
Results: We observed a 94% CTQ response rate and good internal consistency (Cronbach's alpha = 0.95) supporting the acceptability and reliability of this measure in an Aboriginal population. Higher CTQ scores were associated with younger age ($p < .01$), but not with sex or years of education. Controlling for age, CTQ score was a significant predictor of late-life outcomes including depression (OR = 1.63, 95% CI = 1.09–2.44), history of head injury (1.43, 1.12–1.84), and dementia diagnosis (1.62, 1.11–2.37). There was no relationship between CTQ scores and cigarette smoking, alcohol abuse, obesity or history of stroke. A multivariate regression model (including age, sex, education, depression, and head injury) revealed CTQ to be a steadfast independent predictor of dementia (1.56, 1.03–2.39).
Conclusion: This study provides initial evidence that childhood adversity could be contributing to higher rates of dementia observed in Indigenous communities across Australia. The mechanisms underlying this relationship require further investigation but the current results suggest that the effect on dementia is independent of depression and potential (adult) risk factors, and may therefore be a direct consequence of early life factors on neurodevelopment. Understanding the links between childhood experiences and later-life outcomes are crucial for reducing the excess burden of disability, chronic disease and dementia faced by Aboriginal Australians.

FC05.04

Utilisation of physician care, therapies and aids in people with dementia cared for in dementia networks

Jochen René Thyrian[1]; Markus Wübbeler[1]; Bernhard Michalowsky[1]; Pia Erdmann[1]; Bernhard Holle[2]; Johannes Gräske[3]; Johannes Herte[1]; Franziska Laporte Uribe[2]; Karin Wolf-Ostermann[3]; Susanne Schäfer-Walkmann[4]; Wolfgang Hoffmann[5]

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Background: Utilisation of physicians, non-pharmacological therapies and the provision of aids are described to be supportive in the treatment of people with dementia (PWD). They aim to maintain individuals' participation in daily activities as long as possible, to slow the progression of their disease, and to support their independent living at home. However, there is a lack of knowledge about the utilization of therapies and aids among community-dwelling people with dementia.
Objective: The aims of the study are (a) to describe the utilisation of physicians, (b) the utilisation of non-pharmacological therapies and aids among community-dwelling people with dementia and (b) to analyze the factors associated with utilization.
Method: As part of a cross-sectional study of n = 560 caregivers of people with dementia in dementia networks throughout Germany, we assessed socio-demographics, clinical variables and the utilization of general physician, physician specialists, non-pharmacological therapies (physiotherapy (PT), occupational therapy (OT)) and aids (sensory, mobility and others) using face-to-face interviews and questionnaires.
Results: Overall, the users of networks received high rates of physician care; 93% of the sample stated at least one contact with a principal care physician within the last 6 months, and 74% had been treated by a specialist (neurology/ psychiatry physician).Approximately every 4th PWD received PT and every 7th PWD received OT. Sensory aids were utilized by 91.1%, personal hygiene aids by 77.2%, mobility aids by 58.6%, and medical aids by 57.7% of the sample. Regression analysis revealed that the utilization of PT and medical aids was associated with comorbidities (OR 1.17; OR 1.27) and that the utilization of OT and sensory aids was associated with age (OR 1.06, OR 0.95).
Conclusion: The utilization of physicians and non-pharmacological treatments and aids among community-dwelling people served by dementia networks is more frequent than that reported for people in other settings. This result indicates that PWD in integrated care models such as dementia networks receive better health care.

FC06.01

Validation and utility of a brief computerised cognitive test battery for detection of mild neurocognitive disorders and early dementia

Nicole A. Kochan[1]; Sarah Pont[1]; Henry Brodaty[1,2]; Claudia Woolf[1]; John Crawford[1]; Perminder Sachdev[1]

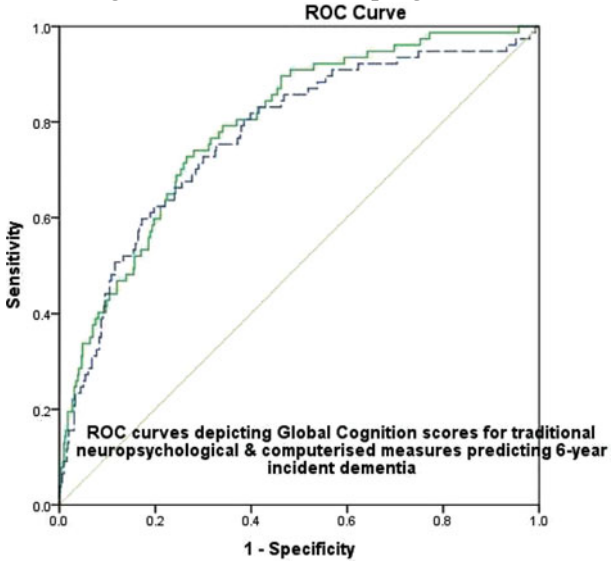
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Objective: Neuropsychological tests sensitive to late-life neurocognitive disorders that are time and cost efficient, accessible and have lower requirement for professional neuropsychology resources are needed for clinical use, research, and clinical trials[1]. We report the development of a brief computerised neuropsychological battery for use as a screening and diagnostic instrument for Mild Cognitive Impairment (MCI) and dementia in older adults.
Methods: 860 initially non-demented native English-speakers aged 70–90 from the Sydney Memory and Ageing Study, a prospective longitudinal community-based study completed the sensus© battery at baseline and 2-years. Tests administered via a touch screen tablet computer with millisecond accuracy included measures of attention and processing speed (simple and complex reaction time), visuo-spatial associative memory (picture location memory) and executive function (inhibition and set-shifting using Stroop paradigm). The battery typically takes 30 minutes under supervision of trained research assistants. Cognitive groups were classified independently of computerised test performance. Incident dementia was diagnosed by an expert panel biannually over 6 years (n = 82). Construct validity was examined against a comprehensive traditional neuropsychological battery. ROC analyses examined classification accuracy cross-sectionally (normal, MCI, dementia [at wave 2]), and predictive utility of baseline performance for incident dementia.
Results: Good convergent validity was found with psychometric tests of attention/processing speed, executive abilities and memory (r = .47-.53). Global composite score (and individual measures separately) significantly discriminated those with dementia at 2 years from those that remained non-demented (AUC of .93; sensitivity 92% specificity 82%) and cognitively normal individuals from those with MCI at baseline (AUC of .71 p < .001; sensitivity 74% specificity 56%). Baseline global score significantly predicted 6-year incident dementia (AUC .77 sensitivity 73% specificity 70%) performing better than MMSE and Bayer

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ADL score ($p < 0.05$), and virtually identically to a global score derived from 12 traditional neuropsychological measures (see Figure).

Conclusion: This computerised cognitive battery has satisfactory breadth in assessing several cognitive domains typically affected in late-life neurocognitive disorders and excellent diagnostic properties for early dementia, and to a lesser extent for MCI, in a community-based older cohort. The predictive power for future dementia for this much briefer computerised battery which has minimal training requirements for administration was comparable to in-depth neuropsychological testing, highlighting its considerable potential as an efficient and practical screening tool for identifying those at greatest risk of developing dementia.



FC06.02

MRI measures of the brain and depressive symptoms in normal cognitive aging: A population-based study

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Objective: To examine the association between cortical thickness, hippocampal volume and white matter hyperintensities (WMH) as measured by MRI and depressive symptoms among community-dwelling cognitively normal subjects.

Background: Biomarkers are important in examining the biological underpinnings of presymptomatic Alzheimer's disease. Studies derived from clinical samples have reported an association between MRI measures of the brain and major depression. However, it is unclear if such an association is applicable to population-based samples.

Design/ Methods: We conducted a cross-sectional study derived from the population-based Mayo Clinic Study of Aging, involving cognitively normal subjects (N = 1509) aged ≥ 70 years (median [interquartile range, IQR] = 77 [74, 82] years, 51 % males) that underwent magnetic resonance imaging (MRI) of the head at 3T within 120 days of the administration of the Beck Depression Inventory (BDI). Normal cognitive aging was classified by an expert panel based on published criteria and after reviewing data from neurological evaluation, risk factor assessment, and neuropsychological testing; depression symptoms as measured by BDI (median [IQR] BDI = 4 [1,7]). Cortical thickness was measured by using Freesurfer software, version 5.3. We calculated regions of interest (ROIs) including frontal, occipital, parietal and temporal cortex, which were combinations of smaller ROIs; global cortical thickness was the mean of all ROIs. In addition, hippocampal volume was measured by using Freesurfer; volume of white matter hyperintensities (WMH) was expressed as a percent of total intracranial volume (TIV), calculated using SPM 12. We calculated Spearman rank-order correlations of the imaging variables with BDI (as continuos variable), after adjusting for age, sex and education.

Results: Depressive symptoms were negatively associated with global cortical thickness ($R = -0.10$; $P < 0.01$) and thickness of frontal ($R = -0.10$; $P < 0.01$) and temporal ($R = -0.12$; $P < 0.01$) ROIs. In addition, depression was associated with reduced hippocampal volume ($R = -0.06$; $P = 0.03$).The association between depression and WMH volume approached significance ($R = 0.05$; $P = 0.06$).

Conclusion: We observed weak correlations between depressive symptoms and cortical thinning, in frontal and temporal ROIs, as well as between depression and reduced hippocampal volume in a population-based sample of cognitively normal elderly subjects. These findings are preliminary until confirmed by a prospective cohort study.

FC06.03

The relation between subjective and objective cognitive decline

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Background: Cognitive complaints are very common in older age and are often the reason for worrying and for seeking help in health care facilities. Whether this subjective perceived cognitive decline reflects real cognitive deterioration and whether it is predictive for developing dementia remains largely unclear. The aim of the present study was to investigate the relation between subjectively perceived cognitive decline and decline objectified by neuropsychological test performances.
Methods: Non-demented patients with Mild Cognitive Impairment or Subjective Cognitive Decline (n = 573, age: 71±12 years, 44% female, and MMSE score: 26.1±3) were included from the memory clinic of the Maastricht University Medical Center. All patients underwent a standardized neuropsychological assessment (including tests for measuring mental speed (Trail Making Test (TMT) part A and Stroop Color Word Test (SCWT) part I), executive functioning (TMT part B and SCWT part III), memory (15-Word Learning Tests (WLT)), and verbal fluency (1-minute animals)). All cognitive test performances were translated to age, sex, and education adjusted z-scores. In addition, subjective experiences about the change in functioning were measured by the Subjective Cognitive Functioning (SCF) questionnaire, including the domains memory, concentration, vitality and mental fatigue. Follow-up assessments, comparable to baseline, were performed yearly for three years.
Results: At baseline, 76% of the patients subjectively perceived decline in memory functioning, 55% in concentration, 46% in vitality, and 48% in mental fatigue. Preliminary findings showed that, cross-sectionally, more subjective perceived decline in memory functioning was related to more impaired performances on memory tests. No associations were found between the other SCF domains and any of the cognitive test performances. Longitudinal analyses investigating decline in SCF compared to decline in test performances, the influence of cognitive status or depressive symptomatology, and the predictive value of SCF for the development of dementia will be presented.
Conclusion: Preliminary findings suggest that the subjective perceived memory complaints are related to more impaired memory test performances in patients seeking for help at a memory clinic. Longitudinal analyses, which will be presented at the conference, will give more insight into the similarities and differences between subjective and objective cognitive changes over time.

FC06.04

Brain morphological changes associated with subjective cognitive functioning in nondemented 85-year-olds

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Background: With an increased requirement for diagnosis of dementia at the primary care level, it is important to validate the role of brain CT, a readily accesible investigation worldwide, in the early stages of dementia. The correlation between reported subjective symptoms, the usual trigger of cognitive investigation in primary care, and brain changes using CT has been less explored.
Objective: To evaluate the association of cognitive symptoms obtained from self- and informant reports with brain atrophy and white matter lesions (WML) in preclinical stages of dementia.
Methods: A representative population sample of non-demented 85-year-olds underwent CT scans of the brain (n = 135) and was examined regarding memory and executive functions using self- and informant reports. Brain atrophy and WML were classified using visual rating scales.
Results: Impaired executive functioning using self-reports was associated with frontal (OR 3.2, 95%CI 1.1–9.1) and parietal atrophy (OR 2.8, 95%CI 1.01–7.9) only in participants without mood disorder, and negatively associated with WML (OR 0.3, 95% CI 0.1–0.9) irrespective of mood disorder. Impaired memory performance according to informant-reports was negatively associated with frontal (OR 0.3, 95%CI 0.1–0.7) and occipital atrophy (OR 0.3, 95%CI 0.1–0.96) only in those with intact memory according to self-reports. Self-reported memory and informant-reported executive function were not associated with brain changes. The risk of incident dementia increased in those with WML and self-reported executive problems and in those with frontal atrophy and informant-reported impaired memory, although the associations did not reach significance.
Conclusions: The association between subjective cognitive symptoms and brain changes seem to be modulated by the presence of mood disorders and self-awareness of cognitive changes. Taking into consideration the interactions between these factors

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and the risk to develop dementia may add diagnostic value to CT examinations in dementia work-up.

FC06.05

Near infrared spectrometry application on dementia with depression

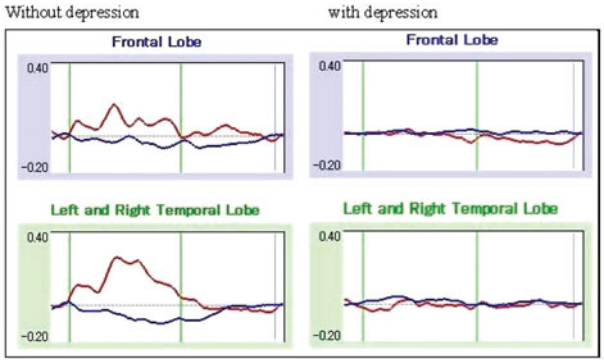
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Depressive symptoms are commonly seen in patients with dementia with estimates of 40–60%. Poor outcomes have been noted with increased disability, greater stress to caregivers, more functional and behavioral problems in dementia patient with depression. The relationship between depression and dementia has gained increasing attention over recent years.

The term of 'pseudodementia' was used to describe a broad range of reversible cognitive impairments associated with psychiatric syndrome such as depression. Furthermore, depression symptoms such as psychomotor retardation, social withdrawal, and cognitive decline were all overlaps with dementia, which makes differential diagnosis between these two groups more difficult.

There is evidence to show that depression might be a prodrome of dementia and even an increased risk of subsequent dementia. Morphologic alterations in the brain had been reported in patients with dementia and depression separately by using magnetic resonance imaging (MRI). However, the cost and time consumption for an older person is usually heavy loading or difficult to tolerate.

In this study, we collected 30 demented patients with depression and 30 demented patients without depression. We applied the Near Infrered Spectrometry (NIRS) to compare the event related brain function difference by the word fluency task manipulation. We also recorded the clinical data between these two groups. We found a significantly more severe rating of CDR on dementia with depression group compared to those without depression (p-value = 0.028). We also found a flater elevation of oxygenated blood flow on dementia with depression during the word fluency test period, while the elevation of oxygenated blood flow is significant evoked during test period among demented people without depression. We concluded that NIRS might be a good and efficient clinical diagnostic instrument for people with dementia to differentiate whether they suffer from depression or not.



FC06.06

Experiences in dementia care networks in using an interactive web tool for shared decision making

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Background: An interactive web tool is developed for facilitating shared decision-making in dementia-care networks. The *DecideGuide* provides a *chat* function for communication between network members, a *deciding together* function for step-by-step decision-making, and an *individual opinion* function for eight dementia-related life domains. The aim of this study was to gain insight in the user friendliness of the *DecideGuide*, user acceptance and satisfaction, and participants' opinion of the *DecideGuide* for making decisions.

Materials and methods: A 5-month field study included four dementia-care networks (19 participants in total). The data derived from structured interviews, observations, and information that participants logged in the *DecideGuide*. Structured interviews took place at the start, middle, and end of the field study with people with dementia, informal caregivers, and case managers. Four observations of case managers' home visits focused on members' responses and use of the tool.

Results

1. The user friendliness of the *chat* and *individual opinion* functions was adequate for case managers and most informal caregivers. Older participants, with or without dementia, had some difficulties using a tablet and the *DecideGuide*. The *deciding together* function does not yet provide adequate

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instructions for all. The user interface needs simplification.
2. User acceptance and satisfaction: everybody liked the *chat*'s easy communication, handling difficult issues for discussion, and the option of individual opinions.
3. The *DecideGuide* helped participants structure their thoughts. They felt more involved and shared more information about daily issues than they had done previously.

Conclusion: Participants considered the *DecideGuide* as valuable in decision-making. The *chat* function seems powerful in helping members engage with one another constructively. Such engagement is a prerequisite for making shared decisions.

FC07.01

Burden of informal caregivers and neuropsychiatric symptoms of people with dementia in primary care

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Objective: The course of caregiver burden has been investigated in some longitudinal studies with conflicting outcomes and most of these studies were performed in cohorts of patients visiting memory, psychiatric or geriatric outpatient clinics. The aim of this study is to investigate the course and determinants of burden as perceived by informal caregivers of people with dementia in primary care.
Methods: This study was a prospective observational cohort study with a follow-up of 18 months. Data were collected at baseline, after 9 months and after 18 months. In addition to measuring cognition and neuropsychiatric symptoms of the patient (MMSE and NPI), we measured caregiver burden (SCQ) and mental health (CES-D and GHQ-12) of the informal caregivers. Determinants for the course of caregiver burden over time were caregivers' age, gender and relation with the patient, patients' cognition and neuropsychiatric symptoms, participation in a care program and admission to long term care facilities. We used linear mixed models to explore the course over time for caregiver burden and mental health and its determinants.
Results: We included 117 patients with dementia and their informal caregivers. We found a heterogeneous pattern in caregiver burden over time. Univariate analysis of the course of caregiver burden showed a different course over time for cognition and for mental health for cognition and gender. Multivariate analysis showed that the presence of patients' neuropsychiatric symptoms, being a partner or between 50 to 70 years of age increased caregiver burden and decreased mental health. Being a female informal caregiver also decreased mental health. In addition, patients' admission to a long term care facility decreased both caregiver burden and improved mental health of the informal caregivers.
Conclusion: Most of the people with dementia are community-dwelling and live with their informal caregiver. General practitioners are most often the first physicians consulted for dementia-related problems for both the patient and informal caregiver. They should give attention to neuropsychiatric symptoms in patients with dementia and also to caregiver burden and mental health in informal caregivers of these patients. Specifically to those who are a spouse, female or between 50 and 70 years of age.

FC07.02

Correlates of depression in older carers

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Objectives: Although there is increased life expectancy, there will also be many older people who will require support in order to remain living at home. Often family members take on this role, and it has been recognised that the older informal carer group are at high risk of depression (Neri et al., 2012; Dahlberg et al., 2007). This study investigated factors associated with depression in older carers.
Methods: This cross-sectional study obtained data from the IMPACCT study, and 202 older carers were recruited who completed the Geriatric Depression Scale (GDS), the NEO-Five Factor Inventory, and the Attitudes to Ageing Questionnaire (AAQ). Carer health information such as prescribed medications and quantity of physical activity, as well as the hours spent caring and care-recipient diagnoses were also collected.
Results: The mean age of the carers was 70.8 years and almost 75% were female. They spent on average 79.6 hours a week caring for people with a variety of diagnoses, most commonly dementia (42.1%) and

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impaired physical conditions (21.8%). Increased hours spent caring, higher levels of neuroticism and domestic physical activity were all factors significantly associated with depression.
Conclusion: These findings provide further evidence that carer-related factors are important in determining their mental health outcomes. Interventions which address these factors, such as additional support for household tasks and respite care may assist in alleviating depression.

FC07.03

Homicidal ideation in family carers of people with dementia

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Objective: Family carers of people with dementia have higher than average rates of suicidal ideation, but there has been no research on homicidal ideation in this population. The aim of this study was to explore thoughts of homicide in family carers of people with dementia.
Methods: A descriptive, qualitative study was conducted in Australia. Twenty-one carers (14 women, 7 men) participated in individual, in-depth interviews and the transcripts were analysed thematically.
Results: The majority of participants were spousal carers, five lived in rural/remote areas, and the average age was 67 years. Seven themes were identified in the data – active thoughts of homicide; understanding homicidal thoughts in others; passive thoughts of death; euthanasia; homicidal thoughts in other caregiving situations; abuse; and disclosing thoughts of harm. Two of the 21 participants had actively contemplated the homicide of their care recipient, four expressed a passive desire for the care recipient's death, and four reported physically or verbally abusing the care recipient. Only one carer had previously disclosed these thoughts, but disclosing helped to normalise the experience and facilitated access to support. Carers who had not contemplated homicide said they understood why others had.
Conclusions: To our knowledge this is the first study of homicidal ideation among family carers of people with dementia. Although further research is required to quantify the rate of homicidal ideation among family carers and identify risk and protective factors, these findings have clear implications for policy and practice. In terms of practice, health professionals and service providers must work to identify and support carers contemplating homicide. Any screening, however, must be conducted carefully and with an understanding that homicidal ideation may be independent of mental illness and suicidal ideation and may be couched in language about euthanasia or abuse. Family carers play a vital role in dementia care and their contribution is the key to mitigating the rising social and economic costs of dementia, but the presence of homicidal thoughts among family carers suggests that the current model of care is unsustainable. So in terms of policy, as the international community seeks to balance the search for a cure with the need for better dementia care, it must not ignore the needs of family carers.

FC07.04

Caregiver burden and psychological distress in study partners of older people with normal cognitive function, mild cognitive impairment (MCI) and dementia

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Objective: Caring for someone with cognitive impairment is linked to negative psychological outcomes (Pinquart and Sörensen, 2003; Seeher et al., 2013). Multi-dimensional models can determine the correlates of these outcomes. However, few studies assess multiple outcomes simultaneously in one model.
Methods: Cross-sectional data from 189 participants of the Sydney Memory and Ageing Study and their study partners (i.e. family members/friends) were used. Caregiver (CG) burden and psychological distress were compared for study partners of cognitively healthy participants (54%) and those with MCI (22%) or dementia (7%). A theory-based path analysis with CG burden and psychological distress as co-primary outcomes included the following predictors: participant/informant demographics, participants' impairment on cognition, function and behaviour, and study partners' subjective task-burden, behaviour distress, secondary role strain, mastery, neuroticism, self-rated health and coping abilities (Pearlin et al., 1990).

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Results: CG burden was highest in dementia study partners ($F(2;155) = 8.76$; $p < .001$), while psychological distress did not differ by participants' diagnoses ($p = .709$). The final path model fitted the data well ($\chi^2/df = 1.24$; CFI = .96; SRMR = .07; RMSEA = .036). Psychological distress was mainly predicted by informant indicators; other variables accounted for no or very little variance ($R^2 = .57$). Conversely, CG burden was explained equally by informant demographics (esp. middle-aged children), participants' memory, functional and behaviour impairment and study partners' task-burden and neuroticism ($R^2 = .41$).
Conclusion: While CG burden tends to increase with participants' impairment, most predictors of psychological distress are modifiable. High neuroticism and poor coping abilities make study partners particularly vulnerable to psychological distress. Targeting high-risk potential CGs for early intervention may lead to better outcomes long-term.

FC07.05

"I had friends when we were young": Social interactions of residents with moderate to severe dementia in a nursing home

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Objective: Perceived quality of relationships influences physical and mental health outcomes. People with mild dementia in nursing homes are at greater risk of social isolation than those in home care (Nikmat et al., 2015). Relationship quality influences residents' perceptions of social support (Leedahl et al., 2014). The research aimed to describe patterns and quality of interactions within a nursing home from the perspective of residents with moderate to severe dementia.
Methods: Observational data were collected in three care units of a 94-bed Sydney nursing home. Ninety-one residents were included in observations. One-hundred and eighty hours of observations were recorded in field notes. Background information was collected and cognitive-functional impairment assessed for 36 residents aged 63–94 years (M = 81.8).
Results: Of the 36 residents assessed, four (11.1%) had moderate, 14 (38.9%) had moderately severe and nine (25%) had severe dementia. Unique patterns of interactions emerged between residents and peers, staff and visitors. Residents' attempts to reach out for attention and conversation were often ignored or repelled. Brief interactions between residents involved mismatched intentions leading to being pursued or rejected. Misaligned emotions between residents created confusion, aggression and disconnection. Conversations with staff were pleasant and superficial, generally involving instructions or monitoring. Residents were ignored, fobbed off, or left to their own devices. Visitors were friendly toward residents, engaging them with acts of kindness.
Conclusion: The pattern and quality of residents' social interactions varied according to the role of relational partners. Residents with moderate to severe dementia continued to seek comfort and companionship but were ignored or thwarted in their attempts to connect with others in a meaningful way. Greater attention to residents' socio-emotional needs and facilitation of positive social interactions is required in care practice.

FC07.06

The natural course of anxiety disorders in the elderly: A systematic review of longitudinal trials

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Background: Anxiety disorders are a prevalent mental health problem in older age with a considerable impact on quality of life. Until recently there have been few longitudinal studies on anxiety in this age group, consequently most of the evidence to date has been cross-sectional in nature.
Methods: We undertook a literature search of Medline, PsycINFO, the Cochrane trials database and the TRIP medical database to identify longitudinal studies which would help elucidate natural history and prognosis of anxiety disorders in the elderly.
Results: We identified 12 papers of 10 longitudinal studies in our Review. This represented 34,691 older age participants with 5,199 with anxiety disorders including anxious depression and 3,532 individuals with depression without anxiety. Relapse rates of anxiety disorders are high over 6 year follow-up with considerable migration to mixed anxiety-depression and pure depressive mood episodes. Mixed anxiety-depression appears to be a poorer prognostic state than pure anxiety or pure depression with higher relapse rates across studies. In community settings treatment rates are

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low with 7–44% of the anxious elderly treated on antidepressant medications.
Conclusion: To our knowledge this is the first Systematic Review of longitudinal trials of anxiety disorders in older people. Major longitudinal studies of the anxious elderly are establishing the high risk of relapse and persistence alongside the progression to depression and anxiety depression states. There remains considerable under-treatment in community studies. Specialist assessment and treatment and major public health awareness of the challenges of anxiety disorders in the elderly are required.

FC08.01

The assessment of needs in the oldest old with and without depression using the German version of the Camberwell Assessment of Need for the Elderly (CANE): Results of the AgeMooDe study

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The current demographic aging and the growing number of older people suffering from common mental disorders in late life, such as depression, will lead to a significant increase of treatment and health care needs in the future. Undetected and unmet needs of older patients can lead to inadequate treatments or to suboptimal health care arrangements and are important target fields of health services research. The Camberwell Assessment of Need for the Elderly (CANE) was developed in the United Kingdom to accurately and comprehensively evaluate the physical, psychological and environment-related treatment and health care needs of older people in order to identify their unmet needs. The aim of the present study was to identify the met and unmet needs in older primary care patients with or without depression using the current German version of the CANE. Furthermore, the evaluation of the impact of unmet needs as a predictor of depressive symptoms and the identification of groups at high risk were the focus. As part of the study "Late-life depression in primary care: needs, health care utilization and costs (AgeMooDe)", a large sample of primary care patients aged 75 years and older was assessed. Descriptive statistics, inference-statistical and regression analyses are currently in preparation and will be reported. This study, for the first time in Germany, provides data of the distribution of met and unmet needs in depressive and non-depressive older primary care patients as well as information about high risk groups. Thus, the study results provide an important contribution to an effective and good-quality health and social care as well as to an appropriate allocation of health care resources in the elderly population.

FC08.02

Suicide in centenarians: The international landscape

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Background: The elderly population size is growing worldwide due increased life expectancy and decreased mortality in the elderly. This has lead to an increase in the number of centenarians, and their numbers are predicted to increase further. Little is known about suicide rates in centenarians.
Methods: Data on the number of suicides (ICD-10 codes, X60–84) in centenarians of both genders for as many years as possible from 2000 were ascertained from three sources: colleagues, national statisics office websites and e-mail contact with the national statistics offices of as many countries as possible. The number of centernarians for the corresponding years was estimated for each country using data provided by the United Nations website.
Results: Data were available from 17 countries. The suicide rate was 57 (95% confidence interval 45–69) per 100,000 person years in men and 6.8

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(95% confidence interval 5.1–8.5) per 100,000 person years in women.
Conclusions: Suicide rates were sufficiently large amongst centenarians for there to constitute a public health concern given the anticipated rise in the centenarian population and the paucity of data on risk and protective factors for suicide in this age group.

FC08.03

Suicidality-based prediction of suicide attempts in a community-dwelling elderly

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Objective: Data on outcomes of suicidality in the community-dwelling elderly are scarce. We investigated the association of suicidality with the risk of suicide attempts in a community-dwelling elderly cohort.
Methods: We evaluated suicidality of 848 randomly sampled elderly Koreans using the Mini-International Neuropsychiatric Interview (MINI) Suicidality Module and followed their outcomes after 2 years. The socio-demographic and clinical risk factors of the participants were also obtained.
Results: 623 completed the 2-year follow-up evaluation. The incidences of suicidality and suicide attempts were 73.5 and 13.3 per 1000 persons per year, respectively. Suicidality increased the risk of suicide attempts (odds ratio (OR) = 3.90, 95% CI 1.17–13.05). Two men with suicidality committed suicide by self-poisoning. Moderate- to high-intensity daily exercise decreased the risk of suicidality to become persistent or recurrent (OR = 0.31, 95% CI 0.12–0.81). Low education, absence of spouse, and depression associated with risk of incident suicidality.
Conclusion: Suicidality assessed by MINI module could predict future suicide attempt. Implementation of exercise programs may reduce suicide in the community-dwelling elderly people with suicidality.

FC08.04

Catatonia in elderly people: Correlation with psychopathology and cognition

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Background: Catatonia is a psychomotor symptom cluster characterized by a heterogeneous group of mental, motor, vegetative, and behavioral signs. This psychomotor syndrome results from many etiologies.
Objective: The aim of the present study was to determine the prevalence of catatonia in acute psychiatric intensive ward elderly population (≥65-year-old). We also compared psychopatological and cognitive profile in catatonic patients with that of non catatonic patients. Finally, we searched for possible correlations between catatonia and psychopathological and cognitive profiles.
Methods: Study design was a one-phase observational study. Our sample consisted of 107 patients aged 65 or older who were admitted in the Psychiatric acute ward of Parc Sanitari Sant Joan de Déu (Spain) between May 2013 and April 2014. All patients were assessed with the Bush-Francis Catatonia Rating Scale (BFCRS), to recognize and score catatonic signs and symptoms. The pychopathological profile was evaluated using the Hamilton Anxiety Rating Scale (HARS), the Young Mania Rating Scale (YMRS), the Geriatric Depresion Scale (GDS), and the Neuropsychiatric Inventory (NPI). CAMCOG and Mini-Mental Status Examination (MMSE) were used for measuring cognitive performance before leaving the hospital.

Statistical analyses were performed using SPSS 20.0. Student's t-test and Pearson's correlation coeficient were calculated. Simple linear regression analysis was used to asses the relationship between BFCRS score and psychopathological and cognitives scores.
Results: Catatonia prevalence in our sample was 55,1% (N = 59) (BFCRS criteria). We found statistically differences ($p < 0,05$) on NPI and HARS mean score between catatonic and non catatonic patients (See table). High correlations were found between BFCRS score and HARS score $p = 0,41$ ($P < 0,001$) and NPI score $p = 0,58$ ($P < 0,001$) . Similar but smaller correlations were found between BFCRS score and CAMCOG score $p = -0,31$ ($P < 0,05$). Linear regression analysis

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showed that NPI score (B = 0,35, 95% CI = 0,21 to 0,49, p < 0,001), HARS score (B = 0,38, 95% CI = 0,19 to 0,57, p < 0,001), and CAMCOG score (B = −0,11, 95% CI = −0,21 to 0,00, p < 0,05) made an important contribution to the prediction of BFCRS score.

Conclusion: There was a high prevalence of catatonic symptomatology. Anxiety, neuropsychiatric symptoms and deficits in cognitive performance are associated with catatonic syndrome. Future research is needed to determine diagnostical criteria of catatonia in elderly people

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
npitot	Equal variances assumed	,825	,368	-3,823	54	,000	-13,019	3,405	-19,846	-6,192
	Equal variances not assumed			-4,042	49,461	,000	-13,019	3,221	-19,490	-6,548
young	Equal variances assumed	,047	,830	-,507	77	,614	-1,236	2,438	-6,090	3,619
	Equal variances not assumed			-,509	76,975	,612	-1,236	2,429	-6,073	3,602
hamtotal	Equal variances assumed	4,179	,044	-3,701	97	,000	-6,255	1,690	-9,608	-2,901
	Equal variances not assumed			-3,823	96,519	,000	-6,255	1,636	-9,501	-3,008
yestotal	Equal variances assumed	1,368	,245	-1,362	98	,176	-1,324	,972	-3,254	,605
	Equal variances not assumed			-1,372	97,494	,173	-1,324	,965	-3,240	,591
camcog	Equal variances assumed	,084	,773	,581	42	,564	2,645	4,550	-6,538	11,828
	Equal variances not assumed			,580	36,345	,566	2,645	4,563	-6,607	11,897
mmse	Equal variances assumed	,062	,805	,493	45	,624	,591	1,198	-1,822	3,003
	Equal variances not assumed			,492	40,622	,626	,591	1,201	-1,836	3,018

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