

Dementia

Current Awareness Newsletter

Delirium Edition



December 2015

Lunchtime Drop-in Sessions

The **Library and Information Service** provides free specialist information skills training for all UHBristol staff and students.

To book a place, email: library@uhbristol.nhs.uk

If you're unable to attend we also provide **one-to-one** or **small group** sessions. Contact library@uhbristol.nhs.uk to arrange a session.

Literature Searching

An in-depth guide to formulating an effective search strategy and getting the most out of searching key healthcare databases.

Understanding Articles

How to assess the strengths and weaknesses of research methods.

Examining different research designs, bias and validity, and frameworks for systematically appraising a medical paper.

Medical Statistics

A basic introduction to the key statistics in medical articles.

Giving an overview of statistics that compare risk, test confidence, analyse clinical investigations, and test difference.

Information Resources

A comprehensive overview of Library subscription resources, freely available online resources and 'grey literature'.

January (1pm)

Mon 4th	Literature Searching
Tues 12th	Understanding articles
Weds 20th	Statistics
Thurs 28th	Information resources

February (12pm)

Fri 5th	Literature Searching
Mon 8th	Understanding articles
Tues 16th	Statistics
Weds 24th	Information resources

March (1pm)

Thurs 3rd	Literature Searching
Fri 11th	Understanding articles
Mon 14th	Statistics
Tues 22nd	Information resources
Weds 30th	Literature Searching

April (12pm)

Thurs 7th	Understanding articles
Fri 15th	Statistics
Mon 18th	Information resources
Tues 26th	Literature Searching

May (1pm)

Weds 4th	Understanding articles
Thurs 12th	Statistics
Fri 20th	Information resources
Tues 31st	Literature Searching

June (12pm)

Weds 8th	Understanding articles
Thurs 16th	Statistics
Fri 24th	Information resources

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Your Friendly Local Librarian...

Whatever your information needs, the library is here to help. As your outreach librarian I offer **literature searching services** as well as training and guidance in **searching the evidence** and **critical appraisal** – just email me at library@uhbristol.nhs.uk

OUTREACH: Your Outreach Librarian can help facilitate evidence-based practise for all in the dementia team, as well as assisting with academic study and research. We can help with **literature searching, obtaining journal articles and books**, and setting up individual **current awareness alerts**.

We also offer one-to-one or small group training in **literature searching, accessing electronic journals, and critical appraisal**. Get in touch: library@uhbristol.nhs.uk

LITERATURE SEARCHING: We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence. Please email requests to library@uhbristol.nhs.uk

New from Cochrane Library

[Management of neuropsychiatric symptoms of dementia](#)

Authors: Daniel Press, MD; Michael Alexander, MD

Literature review current through: Nov 2015. | **This topic last updated:** Oct 07, 2015.

INTRODUCTION — Neuropsychiatric symptoms in Alzheimer disease (AD) and other types of dementia are extremely common and often much more troubling than amnesic symptoms. This topic will review the causes and treatment of behavioral disturbance and other neuropsychiatric symptoms related to dementia.

New from NICE guidelines

[Dementia, disability and frailty in later life – mid-life approaches to delay or prevent onset](#)

NICE guidelines [NG16] Published date: October 2015

Guidance:

This guideline covers mid-life approaches to delay or prevent the onset of dementia, disability and frailty in later life. The guideline aims to increase the amount of time that people can be independent, healthy and active in later life.

Current Awareness Database Articles on Dementia

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: library@uhbristol.nhs.uk

This edition of the Dementia Current Awareness Bulletin focus on the latest peer reviewed evidence relating to dementia and delirium.

Title: Agitation and care... This reflective account is based on NS786 Pritchard JC, Brighty A (2015) Caring for older people experiencing agitation. Nursing Standard. 29, 30, 49-58.

Citation: Nursing Standard, 2015, vol./is. 30/12(61-62),

Abstract: In my practice I care for older and fragile people, who often experience agitation, delirium and dementia. Agitation can be challenging for staff as well as for the person being cared for and their relatives.

Title: Dementia in older people admitted to hospital: a regional multi-hospital observational study of prevalence, associations and case recognition.

Citation: Age & Ageing, 2015, vol./is. 44/6(993-999),

Abstract: Background: previous studies have indicated a prevalence of dementia in older admissions of ~42% in a single London teaching hospital, and 21 % in four Queensland hospitals. However, there is a lack of published data from any European country on the prevalence of dementia across hospitals and between patient groups. Objective: to determine the prevalence and associations of dementia in older patients admitted to acute hospitals in Ireland. Methods: six hundred and six patients aged ≥ 70 years were recruited on admission to six hospitals in Cork County. Screening consisted of Standardised Mini-Mental State Examination (SMMSE); patients with scores $< 27/30$ had further assessment with the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE). Final expert diagnosis was based on SMMSE, IQCODE and relevant medical and demographic history. Patients were screened for delirium and depression, and assessed for co-morbidity functional ability and nutritional status. Results: of 598 older patients admitted to acute hospitals, 25% overall had dementia; with 29% in public hospitals. Prevalence varied between hospitals ($P < 0.001$); most common in rural hospitals and acute medical admissions. Only 35.6% of patients with dementia had a previous diagnosis. Patients with dementia were older and frailer, with higher co-morbidity, malnutrition and lower functional status ($P < 0.001$). Delirium was commonly superimposed on dementia (57%) on admission. Conclusion: dementia is common in older people admitted to acute hospitals, particularly in acute medical admissions, and rural hospitals, where services may be less available. Most

dementia is not previously diagnosed, emphasising the necessity for cognitive assessment in older people on presentation to hospital.

Title: Routine cognitive screening in older patients admitted to acute medicine: abbreviated mental test score (AMTS) and subjective memory complaint versus Montreal Cognitive Assessment and IQCODE.

Citation: Age & Ageing, 2015, vol./is. 44/6(1000-1005),

Abstract: Introduction: routine cognitive screening for in-patients aged ≥ 75 years is recommended, but there is uncertainty around how this should be operationalised. We therefore determined the feasibility and reliability of the Abbreviated mental test score (AMTS/10) and its relationship to subjective memory complaint, Montreal Cognitive Assessment (MoCA/30) and informant report in unselected older admissions. Methods: consecutive acute general medicine patients aged ≥ 75 years admitted over 10 weeks (March--May 2013) had AMTS and a question regarding subjective memory complaint (if no known dementia/delirium). At ≥ 72 h, the 30-point Montreal Cognitive Assessment (MoCA) and Informant Questionnaire for Cognitive Decline in the Elderly (IQCODE) were done. Cognitive impairment was defined as AMTS < 9 or MoCA < 26 (mild impairment) and MoCA < 20 (moderate/severe impairment) or IQCODE ≥ 3.6 . Results: among 264 patients (mean age/SD = 84.3/5.6 years, 117 (44%) male), 228 (86%) were testable with AMTS. 49/50 (98%) testable patients with dementia/delirium had low AMTS compared with 79/199 (44%) of those without ($P < 0.001$). Subjective memory complaint agreed poorly with objective cognitive deficit (39% denying a memory problem had AMTS < 9 ($\kappa = 0.134$, $P = 0.086$)) as did informant report ($\kappa = 0.18$, $P = 0.15$). In contrast, correlation between AMTS and MoCA was strong ($R^2 = 0.59$, $P < 0.001$) with good agreement between AMTS < 9 and MoCA < 20 ($\kappa = 0.50$, $P < 0.01$), although 85% of patients with normal AMTS had MoCA < 26 . Conclusions: the AMTS was feasible and valid in older acute medicine patients agreeing well with the MoCA albeit with a ceiling effect. Objective cognitive deficits were prevalent in patients without known dementia or delirium but were not reliably identified by subjective cognitive complaint or informant report.

Title: The 3D-CAM provides a brief, easy to use, sensitive and specific delirium assessment tool for older hospitalised patients, both with and without dementia.

Citation: Evidence Based Mental Health, 2015, vol./is. 18/4(120-120),

Abstract: The article discusses how the 3-D CAM (computer-aided manufacturing) provides easy to use, specific delirium assessment tool for older hospitalised patients, with and without dementia. Topics discussed include in-depth patient assessment to serve as the reference standard for delirium detection, assessment of inter-rater reliability on 50 percent of participants, which was found to be excellent with 95 percent, and research priority to validate 3D-CAM in critically ill patients.

Title: Licensed Nurse and Nursing Assistant Recognition of Delirium in Nursing Home Residents With Dementia.

Citation: Annals of Long Term Care, 2015, vol./is. 23/10(15-20),

Author(s): Steis, Melinda R., Behrens, Liza, Colancecco, Elise M., Mulhall, Paula M., Hill, Nikki L., Fick, Donna M., Kolankowski, Ann M.

Title: The diurnal profile of melatonin during delirium in elderly patients-preliminary results.

Citation: Experimental gerontology, Dec 2015, vol. 72, p. 45-49 (December 2015)

Author(s): Piotrowicz, Karolina, Klich-Rączka, Alicja, Pac, Agnieszka, Zdzienicka, Anna,

Abstract: Delirium is an acute-onset syndrome that exacerbates patients' condition and significantly increases consequential morbidity and mortality. There is no comprehensive, cellular and tissue-level, pathophysiological theory. The melatonin hormone imbalance has been shown to be linked to circadian rhythms, sleep-wake cycle disturbances, and delirium incidence. There has been relatively little research about melatonin in delirium, and there has been no such study done in the group of elderly patients of a general medicine ward yet. The aim of our study was to compare melatonin hormone concentration in relation to the presence of delirium in elderly patients hospitalized in the general medicine ward. Blood samples were collected four times a day for two days (at 12:00, 18:00, 00:00 and 6:00), on the day when delirium was diagnosed and 72h after the delirium resolution. Delirium was diagnosed with the Confusion Assessment Method and the criteria of the Diagnostic and Statistic Manual of Mental Disorders, 4th Revision. The mean age of 30 patients (73.3% women) was 86.5 ± 5.2 years. Delirium was diagnosed most often on the second and third day of hospitalization. A lot of predisposing and precipitating factors for delirium were identified. There was a significant difference in the melatonin hormone concentration measurement at 12:00 when patients had acute delirium and after its resolution [18.5 (13.8, 27.5) vs 12.9 (9.8, 17.8), $p < 0.01$]. Different patterns of the melatonin hormone concentration were shown in analyses in the subgroups defined according to the patients' diagnosis of dementia. We found that the delirium recovery was, in fact, associated with the alteration of the daily profile of melatonin. Copyright © 2015 Elsevier Inc. All rights reserved.

Title: Delirium Associated With Memantine Use in a Patient With Vascular Dementia.

Citation: Journal of clinical psychopharmacology, Dec 2015, vol. 35, no. 6, p. 736-738

Author(s): Witter, Daniel, McCord, Matt, Suryadevara, Uma

Title: Symptom Assessment for a Palliative Care Approach in People With Dementia Admitted to Acute Hospitals: Results From a National Audit.

Citation: Journal of geriatric psychiatry and neurology, Dec 2015, vol. 28, no. 4, p. 255-259,

Author(s): O'Shea, Emma, Timmons, Suzanne, Kennelly, Sean, Siún, Anna de, Gallagher, Paul, O'Neill, Desmond

Abstract: As the prevalence of dementia increases, more people will need dementia palliative and end-of-life (EOL) care in acute hospitals. Published literature suggests that good quality care is not always provided. To evaluate the prescription of antipsychotics and performance of multidisciplinary assessments relevant to palliative care for people with dementia, including those at EOL, during hospital admission. As part of a national audit of dementia care, 660 case notes were reviewed across 35 acute hospitals. In the entire cohort, many assessments essential to dementia palliative care were not performed. Of the total sample, 76 patients died, were documented to be receiving EOL care, and/or were referred for specialist palliative care. In this cohort, even less symptom assessment was performed (eg, no pain assessment in 27%, no delirium screening in 68%, and no mood or behavioral and psychological symptoms of dementia in 93%). In all, 37% had antipsychotic drugs during their admission and 71% of these received a new prescription in hospital, most commonly for "agitation." This study suggests a picture of poor symptom assessment and possible inappropriate prescription of antipsychotic medication, including at EOL, hindering the planning and delivery of effective dementia palliative care in acute hospitals. © The Author(s) 2015.

Title: Delirium Screening: A Systematic Review of Delirium Screening Tools in Hospitalized Patients.

Citation: The Gerontologist, Dec 2015, vol. 55, no. 6, p. 1079-1099 (December 2015)

Author(s): De, Jayita, Wand, Anne P F

Abstract: Delirium occurs commonly in hospitalized older patients but is poorly recognized. Although there are a plethora of validated delirium screening tools, it is unclear which tool best suits particular populations. To evaluate validation studies of delirium screening tools in non-critically ill hospital inpatients and provide guidance on the choice of screening tool. The MEDLINE, CINAHL, and PsychInfo databases were searched for studies comparing delirium bedside screening tools with either the Diagnostic and Statistical Manual or International Classification of Diseases defined diagnosis of delirium in hospital inpatients. Information was also drawn from conference proceedings and discussion with delirium researchers. Thirty-one studies describing 21 delirium screening tools were included in the systematic review. The majority of studies were conducted across a broad range of inpatient settings internationally in elderly inpatients, including patients with dementia but most excluded nonnative language speakers. The Confusion Assessment Method was the most widely used instrument to identify delirium, however, specific training is required to ensure optimum performance. The Delirium Rating Scale and its revised version performed best in the psychogeriatric population but requires an operator with psychiatric training. The Nurses' Delirium Screening Checklist appears best suited to the surgical and recovery room setting. The Single Question in Delirium shows promise in oncology patients. The Memorial

Delirium Assessment Scale, while demonstrating good measures of validity in the surgical and palliative care setting, may be better used a measure of delirium severity. The 4As Test performed well when delirium was superimposed on dementia, but it requires further study. © The Author 2015. Published by Oxford University Press on behalf of The Gerontological Society of America. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

Title: A New Frontier: Improving Nursing Care for People With Dementia and Delirium in Hospitals.

Citation: The Journal of nursing administration, Dec 2015, vol. 45, no. 12, p. 589-591

Author(s): Graham, Frederick

Abstract: Frederick Graham, a clinical nurse consultant from Princess Alexandra Hospital in Brisbane, Australia, presents this month's column focused on improving nursing care for people with dementia and delirium in hospitals.

Title: Associations of Mental Health and Substance Use Disorders With Presenting Problems and Outcomes in Older Adults' Emergency Department Visits.

Citation: Academic emergency medicine : official journal of the Society for Academic Emergency Medicine, Nov 2015, vol. 22, no. 11, p. 1316-1326 (November 2015)

Author(s): Choi, Namkee G, DiNitto, Diana M, Marti, C Nathan, Choi, Bryan Y

Abstract: The increasing prevalence of mental health and/or substance use disorders in older adults is a significant public health issue affecting their health, health care use, and health care outcomes. These disorders are especially prevalent in emergency department (ED) visits. This study examined the effect of mental health and substance use disorders on older adults' ED presenting problems and outcomes. Data were from the publicly available 2012 Nationwide Emergency Department Sample data set (unweighted n = 5,344,743 visits by the 65+ years age group). We used binary logistic regression analysis to test relationships between mental health and substance use disorders and suicide attempts, falls, and other injuries and multinomial logistic regression analysis to test relationships between the disorders and ED outcomes of death, hospital admission, transfer to institutional care, home health care, leaving against medical advice (AMA), or other or unknown destinations, as opposed to routine care. Of ED visits by older adults, 5.1% involved anxiety disorders, 7.1% involved mood disorders, 10.45% involved delirium/dementia, 1.4% involved alcohol use disorders, and 0.6% involved drug use disorders; 0.2% were suicide-related, 12.0% involved falls, and 10.2% involved other injuries. Mental health and substance use disorders had large-to-medium effects on suicide attempts. Both dementia and delirium and alcohol use disorders had a small effect on falls. Drug use disorders had a small effect on other injuries. Anxiety disorder had a small effect on the risk of death in the ED or in the hospital, relative to routine care. Suicide attempts and drug use disorders had a medium effect on hospital

admission. Suicide attempts had a large effect, delirium and dementia and other mental disorders had medium effects, and mood disorder had a small effect on the risk of transfer to another facility. Delirium and dementia, suicide attempts, and drug use disorders had small effects on the risk of discharge with home health care. Alcohol use disorders and drug use disorders had a small effect on the risk of leaving AMA. Finally, suicide attempts had a medium effect on the risk of other outcomes and unknown destinations. Late-life mental health and substance use disorders are significant risk factors for both intentional self-harm and unintentional injuries that bring older adults to the ED and contribute to ED dispositions and outcomes that involve more intensive and longer-term health care services. The findings underscore the importance of detection and treatment of these disorders among older adults before they end up in the ED. © 2015 by the Society for Academic Emergency Medicine.

Title: Beyond Urinary Tract Infections (UTIs) and Delirium: A Systematic Review of UTIs and Neuropsychiatric Disorders.

Citation: Journal of psychiatric practice, Nov 2015, vol. 21, no. 6, p. 402-411

Author(s): Chae, Jung Hee Jennifer, Miller, Brian J

Abstract: Urinary tract infections (UTIs) are among the most common bacterial infections. Although comorbid UTI in geriatric patients with delirium or dementia is well known, the prevalence and scope of the association with other neuropsychiatric disorders is unclear. We performed a systematic review of the association between UTIs and delirium, dementia, psychotic disorders, and mood disorders in hospitalized patients. We identified studies by searching PubMed, PsycInfo, and Web of Knowledge, and the reference lists of identified studies and review papers. Seventeen publications met the inclusion criteria. The primary findings were: (1) 88% of publications reported a positive association between UTIs and neuropsychiatric disorders; (2) 47% reported that the clinical course of a neuropsychiatric disorder may be precipitated or exacerbated by a UTI; (3) the mean weighted prevalence of UTIs in subjects was 19.4% for delirium, 11.2% for dementia, 21.7% for nonaffective psychotic disorders, and 17.8% for mood disorders. Our findings, which must be interpreted carefully given the heterogeneity among the studies, suggest that UTIs are highly comorbid in hospitalized patients and may precipitate or exacerbate some neuropsychiatric disorders. The association extends beyond geriatric patients with delirium, affects males and females, and includes adults with psychotic and mood disorders. These findings underscore the important interface between physical and mental health. Potential underlying mechanisms are also reviewed, including complex interactions between the immune system and the brain.

Title: Partial and No Recovery from Delirium in Older Hospitalized Adults: Frequency and Baseline Risk Factors.

Citation: Journal of the American Geriatrics Society, Nov 2015, vol. 63, no. 11, p. 2340-2348

Author(s): Cole, Martin G, Bailey, Robert, Bonnycastle, Michael, McCusker, Jane, Fung, Shek,

Abstract: To determine the frequency and baseline risk factors for partial and no recovery from delirium in older hospitalized adults. Cohort study with assessment of recovery status approximately 1 and 3 months after enrollment. University-affiliated, primary, acute-care hospital. Medical or surgical inpatients aged 65 and older with delirium (N = 278). The Mini-Mental State Examination (MMSE), Confusion Assessment Method (CAM), Delirium Index (DI), and activities of daily living (ADLs) were completed at enrollment and each follow-up. Primary outcome categories were full recovery (absence of CAM core symptoms of delirium), partial recovery (presence of ≥ 1 CAM core symptoms but not meeting criteria for delirium), no recovery (met CAM criteria for delirium), or death. Secondary outcomes were changes in MMSE, DI, and ADL scores between the baseline and last assessment. Potential risk factors included many clinical and laboratory variables. In participants with dementia, frequencies of full, partial, and no recovery and death at first follow-up were 6.3%, 11.3%, 74.6%, and 7.7%, respectively; in participants without dementia, frequencies were 14.3%, 17%, 50.9%, and 17.9%, respectively. In participants with dementia, frequencies at the second follow-up were 7.9%, 15.1%, 57.6%, and 19.4%, respectively; in participants without dementia, frequencies were 19.2%, 20.2%, 31.7%, and 28.8%, respectively. Frequencies were similar in participants with prevalent and incident delirium and in medical and surgical participants. The DI, MMSE, and ADL scores of many participants with partial and no recovery improved. Independent baseline risk factors for delirium persistence were chart diagnosis of dementia (odds ratio (OR) = 2.51, 95% confidence interval (CI) = 1.38, 4.56), presence of any malignancy (OR = 5.79, 95% CI = 1.51, 22.19), and greater severity of delirium (OR = 9.39, 95% CI = 3.95, 22.35). Delirium in many older hospitalized adults appears to be much more protracted than previously thought, especially in those with dementia, although delirium symptoms, cognition, and function improved in many participants with partial and no recovery. It may be important to monitor the longer-term course of delirium in older hospitalized adults and develop strategies to ensure full recovery. © 2015, Copyright the Authors Journal compilation © 2015, The American Geriatrics Society.

Title: Informed Consent Challenges in Frail, Delirious, Demented, and Do-Not-Resuscitate Adult Patients.

Citation: Journal of vascular and interventional radiology : JVIR, Nov 2015, vol. 26, no. 11, p. 1647-1651 (November 2015)

Author(s): Requarth, Jay A

Abstract: Without informed consent, any invasive procedure becomes an assault. The prevailing legal and ethical standard is that the physician has a fiduciary duty to give enough information to the patient so that a reasonable person can make an informed decision to accept or refuse the proposed treatment. The patient's frailty, delirium and/or dementia, and end-of-life concerns and expectations can make informed consent a difficult task. This review examines informed consent requirements for adults and provides communication

tools to enable shared decision making while engendering patient-physician trust. Copyright © 2015 SIR. Published by Elsevier Inc. All rights reserved.

Title: The Impact of Admission Diagnosis on Recurrent or Frequent Hospitalizations in 3 Dementia Subtypes: A Hospital-Based Cohort in Taiwan with 4 Years Longitudinal Follow-Ups.

Citation: *Medicine*, Nov 2015, vol. 94, no. 46, p. e2091. (November 2015)

Author(s): Chang, Chiung-Chih, Lin, Pin-Hsuan, Chang, Ya-Ting, Chen, Nai-Ching, Huang, Chi-Wei, Lui, Chun-Chung, Huang, Shu-Hua, Chang, Yen-Hsiang, Lee, Chen-Chang, Lai, Wei-An

Abstract: Increasing numbers of patients with different types of dementia have resulted in the increasing medical care loads. It is not known whether explanatory factors for recurrent or prolonged hospitalization were driven by the subtypes of dementia. We analyzed 203 dementia patients aged >65-year-old with a clinical diagnosis of Alzheimer disease (AD), vascular dementia (VaD), or Parkinsonism-related dementia (PRD). With a 4-year follow-up period, logistic regression analyses were used to identify predictors of dementia diagnosis, cerebrovascular risk factors, chronic systemic diseases, and the etiology for admission for recurrent (>4 times/4 years) or prolonged hospitalization stay (>14 days per hospitalization). There were 48 AD, 96 VaD, and 59 PRD patients that completed the 4-year study. The average length of hospital stay was significant, the shortest in AD and the longest in PRD ($P = 0.01$), whereas the frequency of hospitalization was not different among 3 dementia subtypes. Although delirium is the most common etiology for admission in the patients, diabetes mellitus (Odds ratio, OR = 2.79, $P = 0.02$), pneumonia (OR = 11.21, $P < 0.001$), and fall-related hip fracture (OR = 4.762, $P = 0.029$) were significantly associated with prolonged hospitalization. Patients with coronary artery disease (OR = 9.87, $P = 0.02$), pneumonia (OR = 84.48, $P < 0.001$), urinary tract infection (OR = 55.09, $P < 0.001$), and fall-related fracture (OR = 141.7, $P < 0.001$) predict recurrent hospitalization. Dementia subtypes did not influence directly on the hospitalization courses. The etiologies for admission carried higher clinical significance, compared with the coexisted systemic diseases.

Title: Under-recognition of delirium in older adults by nurses in the intensive care unit setting.

Citation: *Aging clinical and experimental research*, Oct 2015, vol. 27, no. 5, p. 735-740

Author(s): Panitchote, Anupon, Tangvoraphonkchai, Kawin, Suebsoh, Naluttaporn, Eamma, Wanaporn, Chanthonglarng, Bunruam, Tiamkao, Somsak, Limpawattana, Panita

Abstract: Nurses have the key roles to detect delirium in hospitalized older patients but under-recognition of delirium among nurses is prevalent. The objectives of this study were to identify the under-recognition rate of delirium by intensive care nurses (ICU) using Confusion Assessment Method for the ICU (CAM-ICU) and factors associated with under-recognition. Participants were older patients aged ≥ 65 years who were admitted to the ICU

of Srinagarind Medical School, Khon Kaen, Thailand from May 2013 to August 2014. Baseline characteristics were collected. Delirium was rated by a trained clinical researcher using the CAM-ICU. Demographic data were analyzed using descriptive statistics. Univariate and multiple logistic regressions were used to analyze the outcomes. Delirium occurred in 44 of 99 patients (44.4 %). Nurses could not identify delirium in 29.6 % of patients compared with researchers. Pre-existing dementia and depression were found in 47.7 % of patients. Pneumonia or other causes of respiratory failure were the most common causes of admission to ICU (47.7 %). Independent factors associated with under-recognition by nurses were identified-heart failure [adjusted odds ratio (OR), 77.8; 95 % confidence interval (CI) 2.5-2,543, $p = 0.01$] and pre-existing taking treatment with benzodiazepines (adjusted OR, 22.6; 95 % CI 1.8-85, $p = 0.01$). Under-recognition of delirium is a frequent issue. New independent factors associated with under-recognition were identified. Awareness of delirium in the patients with these factors is recommended. This study supports the finding of high under-recognition rates of delirium among hospitalized older adults in ICU. Patients with heart failure and receiving benzodiazepines were identified as barriers of recognition of delirium.

Title: A Prospective Comparison of Informant-based and Performance-based Dementia Screening Tools to Predict In-Hospital Delirium.

Citation: Alzheimer disease and associated disorders, Oct 2015, vol. 29, no. 4, p. 312-316

Author(s): Zeng, Lily, Josephson, S Andrew, Fukuda, Keiko A, Neuhaus, John, Douglas,

Abstract: Dementia is an important risk factor for delirium, but the optimal strategy for incorporating cognitive impairment into delirium risk assessment at the time of hospital admission is unknown. We compared 2 informant-based screening tools for dementia and mild cognitive impairment [AD8 and D=(MC)] to the Mini Mental State Examination (MMSE) and Mini-cog in predicting hospital-acquired delirium. This prospective cohort study at an academic medical center consisted of 162 medical inpatients over age 50 years without delirium upon admission. Each participant was evaluated using the MMSE, Mini-cog, AD8, and D=(MC) upon admission and was assessed daily for delirium. An $MMSE \leq 24$ carried a 5.5 [95% confidence intervals (CI), 2.7-11.1] relative risk for delirium, whereas cognitive impairment detected by the Mini-cog, D=(MC), or AD8 carried a 2-fold risk. Adding the D=(MC) to the MMSE increased the sensitivity for predicting delirium from 52% (range, 32% to 73%) for the MMSE alone to 65% (range, 46% to 85%) if either test was positive. If both were positive, specificity was maximized at 97% (range, 94% to 100%), but sensitivity was 17% (range, 2% to 33%). The MMSE and Mini-cog identify a large proportion of patients at risk for hospital-acquired delirium, but the combination of performance-based and an informant-based screens may maximize specificity and sensitivity.

Title: Adverse drug reactions in special populations - the elderly.

Citation: British journal of clinical pharmacology, Oct 2015, vol. 80, no. 4, p. 796-807

Author(s): Davies, E A, O'Mahony, M S

Abstract: The International Conference on Harmonization considers older people a 'special population', as they differ from younger adults in terms of comorbidity, polypharmacy, pharmacokinetics and greater vulnerability to adverse drug reactions (ADRs). Medical practice is often based on single disease guidelines derived from clinical trials that have not included frail older people or those with multiple morbidities. This presents a challenge caring for older people, as drug doses in trials may not be achievable in real world patients and risks of ADRs are underestimated in clinical trial populations. The majority of ADRs in older people are Type A, potentially avoidable and associated with commonly prescribed medications. Several ADRs are particularly associated with major adverse consequences in the elderly and their reduction is therefore a clinical priority. Falls are strongly associated with benzodiazepines, neuroleptics, antidepressants and antihypertensives. There is good evidence for medication review as part of a multifactorial intervention to reduce falls risk in community dwelling elderly. Multiple medications also contribute to delirium, another multifactorial syndrome resulting in excess mortality particularly in frail older people. Clostridium difficile associated with use of broad spectrum antibiotics mainly affects frail older people and results in prolonged hospital stay with substantial morbidity and mortality. Antipsychotics increase the risk of stroke by more than three-fold in patients with dementia. Inappropriate prescribing can be reduced by adherence to prescribing guidelines, suitable monitoring and regular medication review. Given the heterogeneity within the older population, providing individualized care is pivotal to preventing ADRs. © 2015 The British Pharmacological Society.

Title: Identifying phenomenological differences and recovery of cognitive and non-cognitive symptomatology among delirium superimposed upon dementia patients (DsD) versus those without dementia (DaD) in an acute geriatric care setting.

Citation: International psychogeriatrics / IPA, Oct 2015, vol. 27, no. 10, p. 1695-1705

Author(s): Chong, Edward, Tay, Laura, Chong, Mei Sian

Abstract: Phenomenological differences between delirium superimposed on dementia (DsD) versus delirium in the absence of dementia (DaD) remain poorly understood. We aimed to identify phenomenological differences in delirium symptoms (cognitive and non-cognitive) and compare delirium recovery trajectories between DsD and DaD. We conducted a prospective observational study on individuals admitted to the Geriatric Monitoring Unit (GMU), a five-bed unit specializing in managing older adults with delirium, between December 2010 and August 2012 (n = 234; mean age 84.1 ± 7.4). We collected data on demographics, comorbidities, severity of illness, cognitive and functional scores, and number of precipitants. Cognitive status was assessed using locally validated Chinese Mini-Mental State Examination (CMMSE) and delirium severity assessed using Delirium Rating Scale-Revised-98 (DRS-R98). Delirium disease trajectory was plotted over five days. DsD patients had a longer duration of delirium with slower recovery in terms of cognition and delirium severity scores compared with DaD patients (0.33 (0.0-1.00) vs. 1.0 (0.36-2.00) increase in CMMSE per day, p < 0.001, and 1.49 ± 1.62 vs. 2.63 ± 2.28 decrease in DRS-R98

severity per day, $p < 0.001$). When cognitive and non-cognitive sub-scores of DRS-R98 were examined separately, we observed steeper recovery in both sub-scores in DaD patients. These findings remained significant after adjusting for significant baseline differences. Our findings of slower cognitive symptom recovery in DsD patients suggest cognitive reserve play a role in delirium syndrome development and recovery. This merits further studies to potentially aid in appropriate discharge planning and to identify potential pharmacological and non-pharmacological cognitive interventions for hospitalized older persons with delirium.

Title: Delirium superimposed on dementia: A quantitative and qualitative evaluation of informal caregivers and health care staff experience.

Citation: Journal of psychosomatic research, Oct 2015, vol. 79, no. 4, p. 272-280

Author(s): Morandi, Alessandro, Lucchi, Elena, Turco, Renato, Morghen, Sara, Guerini, Fabio, Santi, Rossana, Gentile, Simona, Meagher, David, Voyer, Philippe, Fick, Donna M, Schmitt, Eva M, Inouye, Sharon K, Trabucchi, Marco, Bellelli, Giuseppe

Abstract: Delirium superimposed on dementia is common and potentially distressing for patients, caregivers, and health care staff. We quantitatively and qualitatively assessed the experience of informal caregiver and staff (staff nurses, nurse aides, physical therapists) caring for patients with delirium superimposed on dementia. Caregivers' and staff experience was evaluated three days after delirium superimposed on dementia resolution (T0) with a standardized questionnaire (quantitative interview) and open-ended questions (qualitative interview); caregivers were also evaluated at 1-month follow-up (T1). A total of 74 subjects were included; 33 caregivers and 41 health care staff (8 staff nurses, 20 physical therapists, 13 staff nurse aides/health care assistants). Overall, at both T0 and T1, the distress level was moderate among caregivers and mild among health care staff. Caregivers reported, at both T0 and T1, higher distress related to deficits of sustained attention and orientation, hypokinesia/psychomotor retardation, incoherence and delusions. The distress of health care staff related to each specific item of the Delirium-O-Meter was relatively low except for the physical therapists who reported higher level of distress on deficits of sustained/shifting attention and orientation, apathy, hypokinesia/psychomotor retardation, incoherence, delusion, hallucinations, and anxiety/fear. The qualitative evaluation identified important categories of caregivers' and staff feelings related to the delirium experience. This study provides information on the implication of the experience of delirium on caregivers and staff. The distress related to delirium superimposed on dementia underlines the importance of providing continuous training, support and experience for both the caregivers and health care staff to improve the care of patients with delirium superimposed on dementia. Copyright © 2015 Elsevier Inc. All rights reserved.

Title: Delirium superimposed on dementia: A quantitative and qualitative evaluation of patient experience.

Citation: Journal of psychosomatic research, Oct 2015, vol. 79, no. 4, p. 281-287

Author(s): Morandi, Alessandro, Lucchi, Elena, Turco, Renato, Morghen, Sara, Guerini, Fabio, Santi, Rossana, Gentile, Simona, Meagher, David, Voyer, Philippe, Fick, Donna, Schmitt, Eva M, Inouye, Sharon K, Trabucchi, Marco, Bellelli, Giuseppe

Abstract: Delirium superimposed on dementia is common and is associated with adverse outcomes. Yet little is known about the patients' personal delirium experiences. We used quantitative and qualitative methods to assess the delirium superimposed on dementia experience among older patients. We conducted a prospective cohort study among patients with delirium superimposed on dementia who were admitted to a rehabilitation ward. Delirium was diagnosed using DSM-IV-TR criteria. Delirium severity and symptoms were evaluated with the Delirium-O-Meter (D-O-M). The experience of delirium was assessed after delirium resolution (T0) and one month later (T1) with a standardized questionnaire and a qualitative interview. Level of distress was measured with the Delirium Experience Questionnaire. Of the 30 patients included in the study, 50% had mild dementia; 33% and 17% had moderate and severe dementia. Half of the patients had evidence of the full range of D-O-M delirium symptoms. We evaluated 30 patients at T0 and 20 at T1. At T0, half of the patients remembered being confused as part of the delirium episode, and reported an overall moderate level of related distress. Patients reported high distress related to memories of anxiety/fear, delusions, restlessness, hypokinesia, and impaired orientation. Qualitative interviews revealed six main aspects of patient delirium experiences: Emotions; Cognitive Impairment; Psychosis; Memories; Awareness of Change; and Physical Symptoms. The study provides novel information on the delirium experience in patients with dementia. These findings are the key for health care providers to improve the everyday care of this important group of frail older patients. Copyright © 2015 Elsevier Inc. All rights reserved.

Title: The Mortality Risk of Conventional Antipsychotics in Elderly Patients: A Systematic Review and Meta-analysis of Randomized Placebo-Controlled Trials.

Citation: Journal of the American Medical Directors Association, Oct 2015, vol. 16, no. 10, p. 817-824

Author(s): Hulshof, Tessa A, Zuidema, Sytse U, Ostelo, Raymond W J G, Luijendijk, Hendrika J

Abstract: Numerous observational studies have reported an increased risk of mortality for conventional antipsychotics in elderly patients, and for haloperidol in particular. Subsequently, health authorities have warned against use of conventional antipsychotics in dementia. Experimental evidence is lacking. To assess the mortality risk of conventional antipsychotics in elderly patients with a meta-analysis of trials. Original studies were identified in electronic databases, online trial registers, and hand-searched references of published reviews. Two investigators found 28 potentially eligible studies, and they selected 17 randomized placebo-controlled trials in elderly patients with dementia, delirium, or a high risk of delirium. Two investigators independently abstracted trial characteristics and deaths, and 3 investigators assessed the risk of bias. Deaths were pooled with RevMan to obtain risk differences and risk ratios. Data of 17 trials with a total of 2387 participants were available. Thirty-two deaths occurred. The pooled risk difference of 0.1% was not

statistically significant (95% confidence interval (CI) -1.0%-1.2%). The risk ratio was 1.07 (95% CI 0.54-2.13). Eleven of 17 trials tested haloperidol (n = 1799). The risk difference was 0.4% (95% CI -0.9%-1.6%), the risk ratio was 1.25 (95% CI 0.59-2.65). This meta-analysis of placebo-controlled randomized trials does not show that conventional antipsychotics in general or haloperidol in particular increase the risk of mortality in elderly patients. It questions the observational findings and the warning based on these findings. Copyright © 2015 AMDA – The Society for Post-Acute and Long-Term Care Medicine. Published by Elsevier Inc. All rights reserved.

Title: Does Apolipoprotein E Genotype Increase Risk of Postoperative Delirium?

Citation: The American journal of geriatric psychiatry : official journal of the American Association for Geriatric Psychiatry, Oct 2015, vol. 23, no. 10, p. 1029-1037

Author(s): Vasunilashorn, Sarinnapha M, Ngo, Long, Kosar, Cyrus M, Fong, Tamara G, Jones, Richard N, Inouye, Sharon K, Marcantonio, Edward R

Abstract: To determine whether apolipoprotein E (ApoE) is associated with postoperative delirium incidence, severity, and duration in older patients free of dementia at baseline. The authors examined 557 nondemented patients aged 70 years or older undergoing major noncardiac surgery enrolled in the Successful Aging after Elective Surgery Study. Three ApoE measures were considered: $\epsilon 2$, $\epsilon 4$ carriers versus noncarriers, and a three-category ApoE measure. Delirium was determined using the Confusion Assessment Method (CAM) and chart review. We used generalized linear models to estimate the association between ApoE and delirium incidence, severity (peak CAM Severity [CAM-S] score), and days. ApoE $\epsilon 2$ and $\epsilon 4$ was present in 15% and 19%, respectively, and postoperative delirium occurred in 24%. Among patients with delirium, the mean peak CAM-S score was 8.0 (standard deviation: 4), with most patients experiencing 1 or 2 delirium days (51% or 28%, respectively). After adjusting for age, sex, surgical procedure, and preoperative cognitive function, ApoE $\epsilon 4$ and $\epsilon 2$ carrier status were not associated with postoperative delirium: RR for $\epsilon 4$ = 1.0, 95% CI: 0.7-1.5 and RR for $\epsilon 2$ = 0.9, 95% CI: 0.6-1.4. No association between ApoE and delirium severity or number of delirium days was observed. In older surgery patients free of dementia, our findings do not support the hypothesis that the ApoE genotype does not confer either risk or protection in postoperative delirium incidence, severity, or duration. Thus, an important genetic risk factor for Alzheimer disease does not affect risk of delirium. Copyright © 2015 American Association for Geriatric Psychiatry. Published by Elsevier Inc. All rights reserved.

Title: Delirium and hypovitaminosis D: neuroimaging findings

Citation: The Journal of neuropsychiatry and clinical neurosciences, December 2015, vol./is. 27/1(69-71),

Author(s): Bourgeois J.A., Hategan A., Ford J., Tisi D.K., Xiong G.L.

Abstract: The authors examined the frequency of neuroimaging findings of cortical atrophy and/or cerebrovascular disease in patients with delirium with hypovitaminosis D and normal vitamin D levels. Of 32 patients with delirium with hypovitaminosis D who were neuroimaged, 91.4% had neuroimaging findings, despite only five cases having a comorbid diagnosis of dementia. Similar frequencies of cortical atrophy and/or cerebrovascular disease were found in patients with delirium with normal vitamin D levels. Further research with a larger sample size is needed to compare neuroimaging findings between normal patients and patients with hypovitaminosis D with delirium.

Title: Pain assessment in patients with dementia

Citation: Journal of the Neurological Sciences, October 2015, vol./is. 357/(e123)

Author(s): Agit A., Cankurtaran M., Yavuz B., Kuyumcu M., Yesil Y., Halil M., Cankurtaran E.,

Abstract: Background: Pain severely impairs quality of life, increases delirium risk and may lead to progression of dementia. Assessment of pain performed by taking anamnesis is not reliable in dementia patients due to cooperation and communication problems. Therefore, pain is usually underdiagnosed in dementia patients. Objective: The aim of this study was to assess pain in dementia patients. Method: Seventy five nursing home residents with dementia were enrolled. After comprehensive geriatric assessment presence of pain was asked, PAINAD(Pain Assessment in Advanced Dementia), DSDAT(Discomfort Scale for Dementia of the Alzheimer's Type), PADE(Pain Assessment for the Dementing Elderly), FACES(Wong- Baker Faces Pain Rating Scale), and NS(Numeric Rating Scale) tests were performed. Results: Mean age was 81.1 +/- 7.0 and 46.7% was female. Thirty two percent of the patients were at early stage, 24% at moderate stage, and 44% at severe stage. Number of patients that declared they had pain was 23, however, PADE, PAINAD, DS-DAT pain scales scores were similar between groups declaring and not declaring pain. Number of patients declaring pain was lower in moderate and severe stage (early stage 48.7%; moderate stage 22.2%; severe stage 27.3%). However, scores of PADE, PAINAD, and DS-DAT were significantly higher in severe stage showing the presence of pain ($p < 0.001$). Conclusion: These results demonstrate that in dementia patients pain is not rare, but they are not usually capable of expressing it, especially in the severe stage. For pain assessment in dementia, anamnesis is not sufficient, objective pain assessment scales developed for dementia should be routinely used.

Title: Development of a smartphone application for the objective detection of attentional deficits in delirium

Citation: International Psychogeriatrics, October 2015, vol./is. 27/8(1251-1262),

Author(s): Tiegies Z., Stiobhairt A., Scott K., Suchorab K., Weir A., Parks S., Shenkin S.,

Abstract: Background: Delirium is an acute, severe deterioration in mental functioning. Inattention is the core feature, yet there are few objective methods for assessing

attentional deficits in delirium. We previously developed a novel, graded test for objectively detecting inattention in delirium, implemented on a computerized device (Edinburgh Delirium Test Box (EDTB)). Although the EDTB is effective, tests on universally available devices have potential for greater impact. Here we assessed feasibility and validity of the DelApp, a smartphone application based on the EDTB. Methods: This was a preliminary case-control study in hospital inpatients (aged 60-96 years) with delirium (N = 50), dementia (N = 52), or no cognitive impairment (N = 54) who performed the DelApp assessment, which comprises an arousal assessment followed by counting of lights presented serially. Delirium was assessed using the Confusion Assessment Method and Delirium Rating Scale-Revised-98 (DRS-R98), and cognition with conventional tests of attention (e.g. digit span) and the short Orientation-Memory-Concentration Test (OMCT). Results: DelApp scores (maximum score = 10) were lower in delirium (scores (median(IQR)): 6 (4-7)) compared to dementia (10 (9-10)) and control groups (10 (10-10), p-values < 0.001). Receiver operating characteristic (ROC) analyses revealed excellent accuracy of the DelApp for discriminating delirium from dementia (AUC = 0.93), and delirium from controls (AUC = 0.99, p-values < 0.001). DelApp and DRS-R98 severity scores were moderately well correlated (Kendall's tau = -0.60, p < 0.001). OMCT scores did not differ between delirium and dementia. Conclusions: The DelApp test showed good performance, supporting the utility of objectively measuring attention in delirium assessment. This study provides evidence of the feasibility of using a smartphone test for attentional assessment in hospital inpatients with possible delirium, with potential applications in research and clinical practice.

Title: Falls in hospital and new placement in a nursing home among older people hospitalized with acute illness

Citation: Clinical Interventions in Aging, October 2015, vol./is. 10/(1637-1643

Author(s): Basic D., Hartwell T.J.

Abstract: Purpose: To examine the association between falls in hospital and new placement in a nursing home among older people hospitalized with acute illness. Materials and methods: This prospective cohort study of 2,945 consecutive patients discharged alive from an acute geriatric medicine service used multivariate logistic regression to model the association between one or more falls and nursing home placement (primary analysis). Secondary analyses stratified falls by injury and occurrence of multiple falls. Demographic, medical, and frailty measures were considered in adjusted models. Results: The mean age of all patients was 82.8+/-7.6 years and 94% were admitted through the emergency department. During a median length of stay (LOS) of 11 days, 257 (8.7%) patients had a fall. Of these, 66 (25.7%) sustained an injury and 53 (20.6%) had two or more falls. Compared with nonfallers, fallers were more likely to be placed in a nursing home (odds ratio [OR]: 2.03, 95% confidence interval [CI]: 1.37-3.00), after adjustment for age, sex, frailty, and selected medical variables (including dementia and delirium). Patients without injury (OR: 1.83, 95% CI: 1.17-2.85) and those with injury (OR: 2.35, 95% CI: 1.15-4.77) were also more likely to be placed. Patients who fell had a longer LOS (median 19 days vs 10 days; P,0.001). Conclusion: This study of older people in acute care shows that falls in the hospital are significantly associated with new placement in a nursing home. Given the predominantly

negative experiences and the financial costs associated with placement in a nursing home, fall prevention should be a high priority in older people hospitalized with acute illness.

Title: Stereotactic brain injection of human umbilical cord blood mesenchymal stem cells in patients with Alzheimer's disease dementia: A phase 1 clinical trial

Citation: Alzheimer's and Dementia: Translational Research and Clinical Interventions, October 2015, vol./is. 1/2(95-102),

Author(s): Kim H.J., Seo S.W., Chang J.W., Lee J.I., Kim C.H., Chin J., Choi S.J., Kwon H., Y

Abstract: Introduction We conducted a phase 1 clinical trial in nine patients with mild-to-moderate Alzheimer's disease to evaluate the safety and dose-limiting toxicity of stereotactic brain injection of human umbilical cord blood-derived mesenchymal stem cells (hUCB-MSCs). Methods The low- (n = 3) and high-dose (n = 6) groups received a total of 3.0×10^6 cells/60 μ L and 6.0×10^6 cells/60 μ L, respectively, into the bilateral hippocampi and right precuneus. Results No patient showed serious adverse events including fever during the 24-month follow-up period. During the 12-week follow-up period, the most common acute adverse event was wound pain from the surgical procedure (n = 9), followed by headache (n = 4), dizziness (n = 3), and postoperative delirium (n = 3). There was no dose-limiting toxicity. Discussion Administration of hUCB-MSCs into the hippocampus and precuneus by stereotactic injection was feasible, safe, and well tolerated. Further trials are warranted to test the efficacy. Clinical Trial Registration ClinicalTrial.gov identifier NCT01297218 and NCT01696591.



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Vol. 15, iss.1, January 2016

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Vol.44, iss. 6, November 2015

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Vol. 63, iss. 11, November 2015

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John's Campaign



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