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Can acute admissions of older patients be avoided? The role of primary health care

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Introduction: Population ageing leads to increases in acute admissions of older adults. To match existing hospital bed capacity, health organizers focus on reducing acute hospitalizations. We aim at identifying markers of acute hospitalization in older adults.
Methods: Cross-sectional and -sectorial data collection on non-institutionalized 70+ year Danish, citizens in Svendborg municipality, acutely admitted in November 2013 to the emergency department, OUH Svendborg Hospital and discharged within 48 hours. Individual socio-demographic and clinical data were extracted from electronic hospital records and matched with organizational electronic data from primary care physicians (PCP) and home care 12 months prior to admission. For each individual necessity of acute admission was retrospectively and separately assessed by two geriatricians, and the relevant PCP.
Results: Twenty-six patients were identified; mean age 78.6 y (±7.6), 62% women and 58% received home care. The geriatricians deemed 8 of 26 acute admissions unnecessary, whereas PCP found all 26 necessary. Both the use of home care (time) and number of PCP contacts increased significantly from 12 month to 1 month prior the admission, (Wilcoxon signed rank; $p < 0.05$, respectively).
Conclusions: Our results suggest a discrepancy between geriatricians and primary care physicians' perception of the necessity of acute short-term admissions of older patients. Furthermore, increasing need of home care and contacts to primary care physician might predict acute hospital admission in older patients. Encouraged by these results and using the same criteria we are currently collecting similar data for the year of 2013 ($n = 444$), and expect to present the results at the EUGMS conference.

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Epidemiology of Vitamin D deficiency among the elderly population: insights from the tertiary geriatric hospital in Qatar

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Introduction: Vitamin D deficiency (VDD) is an important public health problem which leads to poor outcomes in geriatric population. It is important to assess the prevalence of VDD and the associated co-morbidities in elderly patients to reduce subsequent morbidity and mortality. This present study investigated the epidemiology of VDD among elderly population in Qatar.
Methods: This was a retrospective study conducted between April 2010 to April 2012 and involved chart review to collect data on all geriatric patients (≥65 yrs). Correlation between age, HbA1c, HDL and VDL were also analysed using Pearson's correlation method.
Results: A total of 889 patients were enrolled in the study; majority (66%) of the sample were females and the mean age of 74.9±8.7 years. The patients' comorbidities included hypertension (76.5%), Diabetes Mellitus (63.2%), dyslipidemia, (47.5%), dementia (26%) coronary artery disease (24%) and cerebrovascular accident (24%). The mean serum VDL at baseline was 24.4±13.5 IU; majority of patients (72%) had VD deficiency [mild (31%); moderate (30%), and severe (11%), respectively]. Patients with severe VDD had significantly higher HbA1c levels compared to patients with optimal VDL ($P = 0.03$). On the other hand, HDL levels were significantly lower in severe VDD patients compared to optimal vitamin D patients ($p = 0.04$). There was a positive correlation between HDL and VDL ($r = 0.17$, $P = 0.001$) whereas, HbA1c levels showed negative correlation with VDL ($r = -0.15$, $P = 0.009$).
Conclusions: A high prevalence of VDD (72%) was observed among elderly population in Qatar. Lower VDL was associated with higher HbA1c and lower HDL levels. Further studies are warranted to evaluate whether vitamin D supplementation controls DM and low HDL levels among elderly population.

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Multi-component health PROmotion and primary preventive intervention programmes and LONG-term evaluation in HEALTHy community-dwelling senior citizens (PROLONG-HEALTH)

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Introduction: Primary prevention in ageing populations is a major challenge for public-health policy, welfare systems, healthcare providers and payers. The overall aim of PROLONG-HEALTH (2014–2016 BMBF01EL1407) is to examine sustainable health promotion (HP) and primary prevention (PP) in an ageing population. Positive one-year effects of interventions in small group sessions or preventive home visits were seen in a randomised controlled trial (PRO-AGE 2000–2002) in community-dwelling senior citizens 60+ years without need of help in daily activities. This RCT was embedded in the Longitudinal Urban Cohort Ageing Study (LUCAS 2000–2013) to evaluate long-term effects (Figure).
Methods: Data capture for each of the 3,326 participants (baseline) covers 12 years of observation by using periodic questionnaires (4 waves), resulting in 30,000 person years. Primary endpoints are health behaviour, preventive care use, functional competence, need of nursing care, mortality. An interdisciplinary team will determine appropriate methods for complex analyses: visualisation by Kaplan–Meier curves, competing risk analysis and multistate models, mixed models for functional measures to describe transitions over time, Rasch models to study variables not directly measurable.
Selected result: Survival and time to need of nursing care analyses showed significant differences: the initially robust survived longest, the initially frail shortest ($p < 0.0001$). Significant differences persisted after adjustment for age, sex, self-reported health.
Conclusions: Established preventive regional and European networks will be used for translation of the results for sustainable behavioural and structural HP and PP interventions such as definition of target groups and health responders or suitable settings (get to a place/receive home visit).

Figure time line flow PROLONG HEALTH:
RCT of Health Promotion & Primary Prevention (HP&PP) at wave 1 of the Longitudinal Urban Cohort Ageing Study (LUCAS)