P1-222 PREDICTORS OF INSTITUTIONALISATION IN INDIVIDUALS WITH AND WITHOUT DEMENTIA: RESULTS FROM THE LEIPZIG LONGITUDINAL STUDY OF THE AGED (LEILA75+)

doi:10.1136/jech.2011.142976e.15

[1]M Luppa,* [1,2]T Luck, [3]H Matschinger, [4]H H König, [3]S G Riedel-Heller. *[1]Institute of Social Medicine, Occupational Health and Public Health, Public Health Research Unit, Leipzig, Germany; [2]LIFE—Leipzig Research Center for Civilisation Diseases, University of Leipzig, Leipzig, Germany; [3]Institute of Social Medicine, Occupational Health and Public Health, Leipzig, Germany; [4]Department of Medical Sociology and Health Economics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany*

Background In previous decades a substantial number of studies examined predictors of nursing home admission (NHA) among elderly individuals with and without dementia. As the first, this study aims to analyse predictors of NHA of incident dementia cases and of individuals without developing dementia before NHA.
Methods Data were derived from the Leipzig Longitudinal Study of the Aged (LEILA 75+), a population-based study of individuals aged 75 years and older. Socio-demographic, clinical, and psychometric parameters were requested every 1.5 years over six waves. Kaplan-Meier estimates were used to determine mean time to NHA. Cox proportional hazards regression was used to examine predictors of long-term institutionalisation for both subsamples.
Results Of 109 subjects with incident dementia who resided in private home at the time of the dementia diagnosis, 52 had become residents by the end of the study. Being widowed/divorced (compared to being married) was associated with a significantly shorter time until institutionalisation (univariate model: HR = 4.50, 95% CI 1.09 to 18.57). Of the dementia-free elderly individuals, 7.8% (n=59) were institutionalised during the study period. Characteristics associated with a shorter time to NHA were increased age, living alone, functional and cognitive impairment, major depression, stroke, myocardial infarction, a low number of specialist visits and paid home helper use.
Conclusions Being without a spouse seems to be a predictor of institutionalisation in incident dementia cases. For dementia-free individuals, the effect of severe physical or psychiatric diseases and living alone on NHA is considerably increased.

P1-223 MILD COGNITIVE IMPAIRMENT: INCIDENCE AND RISK FACTORS: RESULTS OF THE LEIPZIG LONGITUDINAL STUDY OF THE AGED (LEILA75+)

doi:10.1136/jech.2011.142976e.16

[1,2]T Luck, [1]M Luppa,* [1]S Briel, [5]H Matschinger, [3]H H König, [4]A Villringer, [5]S G Riedel-Heller. *[1]Institute of Social Medicine, Occupational Health and Public Health, Public Health Research Unit, University of Leipzig, Leipzig, Germany; [2]LIFE—Leipzig Research Center for Civilisation Diseases, University of Leipzig, Leipzig, Germany; [3]Department of Medical Sociology and Health Economics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; [4]Max Planck Institute for Human Cognitive and Brain Sciences and Day Clinic of Cognitive Neurology, University of Leipzig, Leipzig, Germany; [5]Institute of Social Medicine, Occupational Health and Public Health, University of Leipzig, Leipzig, Germany*

Objectives Mild Cognitive Impairment (MCI) constitutes a pre-stage of dementia in many cases. The aims of the present study were to estimate age- and gender-specific incidence of MCI and to identify risk factors for incident MCI in a population-based sample of cognitively healthy subjects aged 75 years and older.
Methods Data were derived from the Leipzig Longitudinal Study of the Aged (LEILA75+), a population-based study of individuals aged 75 years and older. Incidence was calculated according to the 'person-years-at-risk' method. Cox proportional hazards models were used to identify risk factors for incident MCI.
Results During the 8-year follow-up period, roughly one fourth (n=137; 26.4%) of the population at risk developed MCI. The overall incidence of MCI for subjects aged 75 years and older was 76.5 (95% PCI 64.7 to 90.4) per 1,000 person-years (overall person-years =1791.08). The incidence rate was highest in age group 85+ years and higher in women than men (80.8, 95% PCI 66.6 to 98.0 vs 65.8, 95% PCI 47.0 to 92.1). Cox proportional hazards model identified older age, subjective memory complaints, impairment in instrumental activities of daily living, and lower cognitive performance as significant risk factors for incident MCI.
Conclusions MCI has high incidence in the elderly population. The inclusion of restrictions in instrumental activities of daily living in the criteria of MCI particularly might be useful to improve the prediction of dementia. Subjective memory complaints in previously cognitively healthy individuals should be taken seriously as a possible pre-stage of MCI.

P1-224 IMPACT OF IMPAIRMENT IN INSTRUMENTAL ACTIVITIES OF DAILY LIVING AND MILD COGNITIVE IMPAIRMENT ON TIME TO INCIDENT DEMENTIA: RESULTS OF THE LEIPZIG LONGITUDINAL STUDY OF THE AGED (LEILA75+)

doi:10.1136/jech.2011.142976e.17

[1,2]T Luck, [1]M Luppa,* [3,4]M C Angermeyer, [5]A Villringer, [6]Hans-Helmut König, [7]S G Riedel-Heller. *[1]Institute of Social Medicine, Occupational Health and Public Health, Public Health Research Unit, University of Leipzig, Leipzig, Germany; [2]LIFE—Leipzig Research Center for Civilisation Diseases, University of Leipzig, Leipzig, Germany; [3]Center for Public Mental Health, Gösing a. W., Austria; [4]Department of Public Health, University of Cagliary, Cagliary, Italy; [5]Max Planck Institute for Human Cognitive and Brain Sciences and Day Clinic of Cognitive Neurology, University of Leipzig, Leipzig, Germany; [6]Department of Medical Sociology and Health Economics, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; [7]Institute of Social Medicine, Occupational Health and Public Health, University of Leipzig, Leipzig, Germany*

Background Early diagnosis of dementia requires knowledge about associated predictors. The aim of this study was to determine the impact of mild cognitive impairment (MCI) and impairment in instrumental activities of daily living (IADL) on the time to an incident dementia diagnosis.
Methods Data were derived from the Leipzig Longitudinal Study of the Aged (LEILA75+), a population-based study of individuals aged 75 years and older. Kaplan-Meier survival analysis was used to determine time to incident dementia. Cox proportional hazards models were applied to determine the impact of MCI and impairment in IADL on the time to incident dementia.
Results 180 (22.0%) of 819 initially dementia-free subjects developed dementia by the end of the study. Mean time to incident dementia was 6.7 years (95% CI 6.5 to 6.9). MCI combined with impairment in IADL was associated with a higher conversion rate to dementia and a shorter time to clinically manifest diagnosis. The highest risk for a shorter time to incident dementia was found for amnestic MCI combined with impairment in IADL: the mean time to incident dementia was 3.7 years (95% CI 2.9 to 4.4) and thus half as long as in subjects without MCI and impairment in IADL.
Conclusions Subjects with MCI and impairment in IADL constitute a high-risk population for the development of dementia. The consideration of impairment in IADL should constitute an important step towards an MCI concept being clinically more useful for prediction of dementia.

P1-225 INCIDENCE OF MILD COGNITIVE IMPAIRMENT: A SYSTEMATIC REVIEW

doi:10.1136/jech.2011.142976e.18

[1,2]T Luck, [1]M Luppa,* [1]S Briel, [3]S G Riedel-Heller. *[1]Institute of Social Medicine, Occupational Health and Public Health, Public Health Research Unit, University of*

Leipzig, Leipzig, Germany; [2]LIFE—Leipzig Research Center for Civilisation Diseases, University of Leipzig, Leipzig, Germany; [3]Institute of Social Medicine, Occupational Health and Public Health, University of Leipzig, Leipzig, Germany

Background/Aims Subjects with Mild Cognitive Impairment (MCI) constitute a risk population of developing dementia and thus a population of clinical interest. This study reviews recent work on the incidence of MCI in the elderly.
Methods Incidence papers were identified by a systematic literature search. Studies on incidence of MCI were considered if they identified 'cognitively mild impaired' subjects by application of the MCI criteria, used the 'person-years-at-risk' method, and were based on population-based or community-based samples.
Results Nine studies were identified. Incidence of *Amnestic MCI subtypes* ranged between 9.9 and 40.6 per 1000 person-years, and incidence of *Non-amnestic MCI subtypes* was found to be 28 and 36.3 per 1000 person-years. Regarding *any MCI*, incidence rates of 51 and 76.8 per 1000 person-years have been found. A higher risk of incident MCI mainly was found for higher age, lower education and hypertension.
Discussion Incidence rates of MCI varied widely, and possible risk factors for incident MCI were analysed only to a limited extent. Findings call for an agreement concerning the criteria used for MCI and the operationalisation of these criteria.
Declaration of Interest This review was published with affiliation of the Leipzig Research Center for Civilisation Diseases (LIFE, Universität Leipzig). LIFE is financed by means of the European Union, by the European Regional Development Fund (ERDF) and by means of the Free State of Saxony within the framework of the excellence initiative.

P1-226 THE POSSIBILITY OF ADVENTURE IS NOT EXCLUDED: THE CAREER OF INTERNATIONAL EPIDEMIOLOGIST MELVILLE DOUGLAS MACKENZIE (1889–1972)

doi:10.1136/jech.2011.142976e.19

D Macfadyen.* *Royal College of Physicians of Edinburgh, UK*

Introduction The International Health Conference convened in New York in 1946 recorded its appreciation to Mackenzie. He chaired the Drafting Committee and signed the final act to establish the WHO, on authority granted by the British Foreign Minister. Mackenzie arrived at this position after a range of international health work that was unmatched.
Method The paper draws on family papers, Mackenzie's publications, League of Nations' Health Organization Archives, Sprigings recent biographic essay Feed the people and prevent disease, and be damned to their politics,[1] and Haswell's unpublished biography, The Man Who Stopped a War.
Results In 1922/1923, Mackenzie served in Russia with Nansen in the world's first large-scale multinational humanitarian intervention. He encountered not only famine, but cholera and epidemics of typhus and malaria of unprecedented scale. In 1928, now with the League of Nations' Health Organization, he helped to control a dengue epidemic that was paralysing economic life in Greece. Mackenzie's successes in epidemic control permitted him to nudge the Organization towards wider health engagement with several European countries, including England, Ireland and Scotland, and to dramatic assignments in Bolivia, Liberia and China.
Conclusions The scope and working methods of today's international health institutions evolved from the epidemiological work of pioneers in the League of Nations' Health Organization from Australia, Denmark, France, Germany, Italy, Poland, Switzerland, the UK, the USA and other countries. Those seeking to reform practices in humanitarian relief or in global health would benefit from studying this historical background.

REFERENCE

1. **Sprigings Z,** Mackenzie M. (1889–1972) 'Feed the people and prevent disease, and be damned to their politics'. In: Borowy I, Hardy A, eds. *Biographies and Ideas in European Social Medicine between the World Wars*: Peter Lang, 2008:103–23.

P1-227 FACTORS ASSOCIATED WITH RENAL TRANSPLANTATION AND MORTALITY IN PATIENTS WITH TERMINAL CHRONIC RENAL DISEASE IN BRAZIL, 2000–2003

doi:10.1136/jech.2011.142976e.20

E Machado,* W Caiaffa, C C César, I Gomes, E Andrade, F Acúrcio, M Cherchiglia. *Federal University of Minas Gerais, Belo Horizonte, Brazil*

Background Inequalities have been reported in access to kidney transplantation in relation to demographic, socioeconomic, clinical and geographical. Patients waiting for kidney transplant face a number of competitive outcomes.
Objective To investigate factors associated with access to kidney transplantation, considering the type of donor and death as competitive events.
Design and Source of Data observational, prospective non-concurrent, from the National Data Base on renal replacement therapies in Brazil. Relationship was conducted from deterministic-probabilistic System Authorisation Procedures of High Complexity/Cost, Hospital Information System and Information System on Mortality.
Participants 17 084 adult patients starting renal replacement therapy in Brazil from 01/01/2000 to 31/01/2000.
Variables Impact of individual variables (age, gender, region of residence, primary renal disease, hospitalisations) in the context of the dialysis unit (level of complexity, legal, HD machines and location) and the city (geographical region, location and Human Development Index-HDI) in likelihood of transplantation and death.
Results younger patients without diabetes, no history of hospitalisation, in dialysis treatment unit located in the state capital, living in the countryside, in cities with high HDI were more likely to transplant. Sex and level of complexity has only been associated with a living donor transplant. The results indicate differences in access to kidney transplantation, however, regarding gender, age 45 years and diabetes were lower inequality cadaver donor for transplantation. Older patients with diabetes, with hospitalisation, being treated in dialysis units are less complex, located in state capitals and municipalities with low HDI had a higher risk of death.

P1-228 DECREASED BONE MASS IN WOMEN: IMPORTANCE OF EARLY DIAGNOSIS FOR HEALTHY AGEING

doi:10.1136/jech.2011.142976e.21

[1]R M da Silva, [1]M V de L Saintrain,* [1]Z V Bruno, [1]A P G F Vieira, [1]S V Saintrain. *[1]Universidade de Fortaleza, Fortaleza, Ceará, Brazil; [2]Universidade Federal do Ceará, Fortaleza, Ceará, Brazil*

Objectives Presuming that osteoporosis begins in middle aged women, the present study had as an objective to identify the prevalence of osteopenia and osteoporosis in women whose ages vary from 45 to 59 and from 60 or more.
Methodology The study analysed data from a gynaecologic outpatient clinic, related to patients files from 2000 to 2006. The following variables were analysed: age, the first and the last appointment's dates, the result of the bones mineral's density (DMO) classified by the categories: normal, osteopenia and osteoporosis. χ^2 Test was used to verify associations between variables, considering $p<0.05$.
Results Osteopororis was more frequent in the older age group (42.5% vs 5.6%, $p<0.05$), although osteopenia was more frequent in the younger group (55.0% vs 47.1%, $p<0.05$).