494 ANALYSIS ON THE CHARACTERISTICS OF FALLS AMONG OLDER PERSON FROM CHINESE NATIONAL INJUTY SURVEILLANCE SYSTEM, 2008–2014

Er Yuliang, Duan Leilei, Ye Pengpeng, Wang Yuan, Ji Cuirong, Deng xiao, Gao Xin, Jin Ye, Wang Linhong. *National Centre for Chronic and Noncommunicable Disease Control and Prevention, Chinese Centre for Disease Control and Prevention, Beijing, China*

Background For elder person, fall is the leading cause of injury death in China. Besides death, fall leads to disability and other nonfatal results. The population of people aged over 60 is 178 million; elder person fall is an important public health problem in China.

Methods Data of falls was descriptively analysed from Chinese NISS from 2008 to 2014.

Results Totally 216,676 falls among older person were analysed, which accounted for 52.12% of all unintentional injury cases among older person. The gender ratio is 0.76. The case number showed an increasing trend by year, while the proportion of fall among all unintentional injuries did not change much. In 2014 NISS database, 41,073 falls among older person were analysed. The proportion of fall among all unintentional injuries is 52.81%, and it increased by age group. The gender ratio is 0.77 and more female felled with age increase. The peak hour in a day is 8:00–11:59 in morning (33.31% of total). The top three place injuries happened is at home (55.66%), in the public residents (20.52%) and on the roads (16.14%). Recreation activates (68.94%) and housework/study (16.14%) were the two major activities. The most common injured parts of body were low limbs (29.28%), head (24.40%) and body (20.04%), while the most common natures of falls were bruise (45.76%) and fractures (29.52%). 64.20% of all cased were minor, while the proportion of moderate and serious injuries increased with age increased.

Conclusions Fall was the main injury type in China, which showed an increasing trend in proportion among all unintentional injuries. The prevention of falls among older person should be put into priority.

495 FEAR OF FALLING RELATED TO PERCEIVED EFFECTS OF PHYSICAL EXERCISE

[1]Zeren Basaran, [2]Erja Rappe, [2]Jere Rajaniemi, [2]Elina Karvinen, [2]Päivi Topo. [1]*University of Helsinki, Finland*; [2]*The Age Institute, Helsinki, Finland*

Background Physical exercise has been shown to reduce falls and subsequent injuries. In a low cost, cross-sectoral program "The Strength in Old Age" health exercise interventions for elderly people were implemented in 38 municipalities in Finland. It is known that fear of falling predicts falling among elderly people. The aim of this study was to find out the possible relationships between the perceived effects of health exercise interventions and fear of falling.

Methods A questionnaire consisting of questions about demographic and socioeconomic status, intervention group, physical activity habits, perceived effects of intervention and general well-being was mailed to 2563 participants of health exercise program in April 2015. The response rate was 32.5% (78% women and 22% men). The data were analysed by descriptive statistics, correlation and t-tests, and binary regression analysis.

Results Of the respondents, 22% had fallen during the last year and 65% of them experienced fear of falling. There were no differences in reported falls and fear of falling between the genders. Fear of falling predicted falls when age was taken into account (OR = 2.660, p = 0.000). The older the respondent was, the more participation in the intervention reduced the fear of falling (Spearman's rho 0.093, p = 0.036). Fear of falling reduced more among those who participated in the exercise group twice or more times per week than once or less times per week ($t_{(523)}$ = 2.933, p = 0.004). If the participation in the exercise group was felt to improve physical condition (OR = 3.592), balance (OR = 4.439), muscle strength (OR = 2.810), or mood (OR = 3.660) to some extent or more, it predicted reduction in fear of falling when adjusted for age (all p-values 0.000).

Conclusions Tailored health exercise interventions may reduce perceived fear of falling among elderly people and, in that way, decrease the occurrence of falls.

496 FALLS AND CATARACT: INVESTIGATING RISK AND PREDICTORS IN OLDER ADULTS DURING THEIR WAIT FOR SURGERY

[1]Anna Palagyi, [1]Kris Rogers, [2]Lynn Meuleners, [3]Peter McCluskey, [3,4,5]Andrew White, [6]Jonathon Ng, [2]Nigel Morlet, [1]Lisa Keay. [1]*The George Institute for Global Health, Sydney Medical School, University of Sydney, NSW, Australia*; [2]*Curtin-Monash Accident Research Centre (C-MARC), Faculty of Health Sciences, Curtin University, Perth, WA, Australia*; [3]*Save Sight Institute, Sydney Medical School, University of Sydney, NSW, Australia*; [4]*Westmead Institute, Sydney, NSW, Australia*; [5]*Department of Ophthalmology, Westmead Hospital, Sydney, NSW, Australia*; [6]*School of Population Health, the University of Western Australia, Perth, WA, Australia*

Background There is strong evidence of increased falls risk associated with cataract. Although cataract surgery can restore sight, lengthy waiting times are common in many high income countries, including Australia. Here, we report the risk and determinants of falls in older people with cataract during their surgical wait.

Methods Data from a prospective study of falls in a cohort of patients aged ≥65 years on Australian cataract surgery waiting lists were analysed. Participants underwent assessment of vision, comorbidity, physical activity and health-related quality of life (HRQoL), and recalled falls in the previous 12 months. Falls were also self-reported prospectively using monthly calendars; the context and outcomes of any falls were determined by interview.

Results Of 329 participants, mean age was 76 years and 55% were female. Participants' habitual vision was an average of 20/40 (20/16 to 20/160) and 10% were vision impaired (<20/60). Falling in the previous 12 months (129 [39%] participants) was associated with the use of antidepressant medication (odds ratio [OR] 3.6, 95% confidence interval [CI]: 1.7−7.5) and older age (OR 1.3, 95% CI: 1.1−1.6; five year increase in age). A total of 242 falls were reported prospectively by 98/298 (33%) participants during the surgical wait – a falls rate of 1.2 per year. Poorer vision function (incidence rate ratio [IRR] 1.1, 95% CI: 1.0−1.2), lower self-rated HRQoL (IRR 1.1, 95% CI: 1.0−1.2), increased walking activity (IRR 1.1, 95% CI: 1.0−1.1) and lower BMI (IRR 1.1, 95% CI: 1.0−1.1) were predictive of falls risk. Over one half (51%) of falls were injurious, including 11 head injuries and 2 fractures.

Conclusions These findings provide insight into associations with increased falls risk in older adults with cataract. We demonstrate the negative impact of impaired vision function on falls risk and injury, and reinforce the need for improved efficiency of

surgical services to avoid escalation of this critical public health issue.

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497 IMPLEMENTATION OF EVIDENCE-BASED EXERCISE IN PROMOTION OF MOBILITY IN STRENGTH IN OLD AGE PROGRAMME

Elina Karvinen, Pirjo Kalmari, Päivi Topo. *The Age Institute, Finland*

Backround In the ageing societies one of the main aims of social and health policies is to find the best ways in promoting the independent living of old people. The Strength in Old Age Programme aims to promote the mobility of older adults (75+) with decreased functional capacity by physical exercise. The programme is coordinated by the Age Institute and financed by Finland's Slot Machine Association, Ministry of Education and Culture, and Ministry of Social Affairs and Health.

Methods 38 municipalities (2010–2015) were chosen for the three-year development in order to implement the best practices in exercise counselling, strength and balance exercise and outdoor exercise. The municipalities committed to implementation through multisectoral collaboration without extra funding. The sectors included municipal social, health care and sports services, and NGOs. Each sector appointed one of their regular staff to coordinate and cooperate with the Age Institute. Local cross-sectoral work was supported by the mentoring of the Age Institute including counselling, training and development tools.

Results The number of exercise groups (1500) and participating old people (22 044) in the target group doubled. In total, 70 percent of the target population living in the 38 municipalities have been reached. Based on the assessment of 2,000 participants, strength and balance were improved in 53% and maintained in 38% during the exercise period. A cross-sectoral cooperation group and the implementation of best practices was established in 30 municipalities, and in 36 municipalities the health enhancing physical activity of old people was included in the welfare strategies.

Conclusions With the help of the three-year mentoring including training and support for cross-sectoral collaboration it is possible to implement research-based good practices within older people's physical exercise and improve the mobility of older adults.

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498 INVESTIGATING FALL-RELATED INJURY HOSPITALISATIONS FOR OLDER INDIGENOUS PEOPLE IN AUSTRALIA

[1,2]C Lukaszyk, [3]L Harvey, [3]J Close, [1]R Ivers. [1]*The George Institute for Global Health, Australia;* [2]*The University of Sydney, Australia;* [3]*Neuroscience Research Australia*

Background It is estimated that one in three people aged 65 years and above fall each year in Australia. Despite high injury rates across Australia's Indigenous population and worse general health outcomes for older age groups, little is known about the incidence, nature and outcomes of fall-related hospitalisations specifically in older Indigenous people.

Methods Linked hospitalisation and death records for individuals aged 50 years and over admitted to a hospital in New South Wales, Australia for a fall-related injury were analysed. Indigenous status was identified if reported on at least 50% of an individual's hospitalisation records. Descriptive statistics, age-standardised hospitalisation rates and rate-ratios (ARR) were calculated. Trends over time were analysed using negative binomial regression.

Results Of the 312,785 fall-related injury hospitalisations, 0.7% reported to be Indigenous. Compared to non-Indigenous people, a higher proportion of Indigenous people were aged 50–55 years (23.7% vs 5.2%, p < 0.0001), admitted for a head injury (23.8% vs 19.0%, p < 0.0001) whilst a lower proportion were admitted for hip fracture (9.2% vs 18.4%, p < 0.0001). Age-adjusted 30 day mortality was lower for Indigenous people (1.9% vs 4.2%, p = 0.0002). Indigenous people had consistently lower hospitalisation rates for fall-related injury than non-Indigenous people (ARR 0.83; 95% CI: 0.78–0.87, p < 0.0001). However, fall injury rates for Indigenous people increased at a greater rate of 5.6% (95% CI: 3.6–7.6, p < 0.0001) per annum compared to 2.6% (95% CI: 2.1–3.1, p < 0.0001) per annum for non-Indigenous people.

Conclusions Although fall-related injury rates appeared to be relatively low in Indigenous patients, this study demonstrates that fall injury is rapidly becoming a growing issue for Australia's older Indigenous population.

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499 KAATUMISSEULA® – IMPLEMENTATION OF EVIDENCE-BASED FALL PREVENTION FOR COMMUNITIES

Saija Karinkanta, Elina Ahlstedt-Kivelä, Pekka Kannus, Tommi Vasankari, Harri Sievänen. *The UKK Institute for Health Promotion Research, Finland*

Background Fall injuries are a growing global health problem in older adults. Compelling scientific evidence shows that every third fall can be prevented. Effective measures need to be based on knowledge of individual fall risk. This underscores importance of fall risk screening. In Finland, risk screening and preventive measures are not used systematically. Thus, implementation of evidence-based methods for communities is necessary. In the present economic situation, resources of the third (voluntary and non-profit) sector (NGOs) should also be utilised.

Objective The main objective of KaatumisSeula® project is to create local models for fall risk screening and implementing evidence-based preventive measures. The models are based on co-operation between local public sector and NGOs. Primary risk screening is offered for older people by public sector and NGOs. People with high fall risk are referred to comprehensive assessment of individual fall risk and tailored implementation of fall prevention measures by educated health care professional(s). This approach is based on the *multifactorial* Chaos Falls Clinic Study. NGOs play a central role in not only screening but also informing about fall prevention measures and offering accessible balance and strength training - the most effective *single intervention* in fall prevention.

Results The project models are now in operation in 2 municipalities, and the third is starting. NGOs are active and keen in their role. Two Falls Clinics have started and high risk older adults have found their ways to the multifactorial assessment. Public sector and NGOs have received education. New exercise groups have been established and fall prevention materials have been given. So far, the most challenging task has been implementation of systematic fall screening for public sector.

Conclusions KaatumisSeula® is a feasible approach to screen the fall risk of older adults and implement preventive measures in community.