leadership on this issue. The results of Safe Roads | Safe Kids provide support for achieving these goals through public-private partnerships.

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## IN-DEPTH ON-THE-SPOT ROAD ACCIDENT INVESTIGATION IN FINLAND

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Background In Finland, all fatal road traffic accidents are investigated in-depth, on-the-spot by multidisciplinary Accident Investigation Teams (Act on the Investigation of Road and Cross-country Traffic Accidents 24/2001). The Finnish Motor Insurers' Centre maintains the investigations. The purpose of the teams is to find out what happened in the accident, uncover risk factors that turned an ordinary driving situation into a serious accident and give safety recommendations for improving road safety. Investigation teams do not take a stand on guilt or insurance compensation.

Methods General goal of Finnish road accident investigation is to prevent accidents from happening again and reduce serious consequences by learning from accidents. Currently there are 20 independent teams across Finland. The basic team members are police, road and vehicle specialists, physician and a psychologist. Teams use a standardised investigation method called VALT Method 2003. Focus of the investigation is on pre-crash circumstances, but also the crash and post-crash stages are investigated. Results Teams produce safety recommendations which are connected to the risk factors. According to the investigation method teams look for both immediate and background risk factors which have contributed to the accident. Risk factors and safety recommendations are sought from the road user, vehicle, environment and the traffic system. Teams produce an investigation report on each case.

Compiled investigation folders of each case contain investigation forms from each member, pre-investigation protocol, forensic documents (autopsy and toxicology), photographs, sketches etc. The collected information form an accident database.

Conclusions The findings are used for making safety proposals and initiatives, and the information is used in statements, working groups and other cooperation efforts. The data is used for safety work of the authorities, safety research, education and public awareness campaigns.

### Safety Culture

Parallel Mon 1.4



OCCUPATIONAL SAFETY AND HEALTH AND WELL-BEING IN FUTURE WORK AND WORKING LIFE

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Background Work and working life are changing rapidly. The changes affect also occupational safety and health and well-being at work. The occupational safety and health administration

should be aware and present actions which have to be taken by today in order to be able to meet the future challenges in time. The aim is to avoid undesired development, change the anticipated development or to achieve a course of development that is better than expected.

Description of the problem Several reviews considering changes in future's working life have been published in Finland and elsewhere in the world. They have not, however, described changes from the perspective of occupational safety and health and wellbeing at work, nor proposed any actions to be taken by the occupational safety and health administration. The Working Life 2025 review which the occupational safety and health administration drew up responds to this need.

Results The future review looks at working life comprehensively starting from the question what kind of work will be done and who will be the future employees and ends up considering the employees' health and safety at work, well-being at work and the effects of new technologies on work.

Conclusions The technological development is more and more quickly, the risks of occupational safety and health are changing and they grow ever more complex as well as totally new risks will arise. The working life in future needs widely recognised perspective and flexibility. The diversification and the polarisation of the working life require a change also of the occupational safety and health administration.

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# THE NEW CAMPAIGN OF THE GERMAN SOCIAL ACCIDENT INSURANCE ON "PREVENTION CULTURE"

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Statistics show that there has been a significant decline in the number of occupational and commuting accidents over the last 100 years. Nevertheless, they also show that decline to have slowed over the last few years when compared with the twentieth century. Hence, the approaches taken to prevention to date may not be sufficient for the achievement of effective further progress towards the goal of Vision Zero- a world without serious or fatal accidents either in or on the way to and from the workplace or school.

It is now almost twenty years since the term "culture of prevention" was first used within the context of occupational safety and health in Germany. It heralded a newly developed appreciation for the fact that safety awareness among managers and employees alike is of key importance to the success of workplace prevention activities. The DGUV and its members tackle the topic of "prevention culture" in their new campaign.

They are the only organisation with responsibility for prevention and insurance cover all the way from preschool childcare, school, further education and working life right through to nursing care. This puts them in a position to credibly communicate and emphasise the message of prevention culture throughout all phases of human life. This message is: "Safety and health are values for every individual, organisation and society as a whole. They are to become an integral part of all actions. Preventative action is worthwhile and meaningful."

Therefore, the goal of the campaign is to highlight safety and health as values for every individual, organisation and society as a whole as well as to integrate them into societal mindset and action. In order to reach this goal, the campaign encompasses six fields of action: "Leadership", "Communication",

"Participation", "Error Culture", "Social Climate/Organisational Climate" and "Prevention as an Integral Part of all Tasks". The campaign is scheduled to start in 2017 for duration of 10 years.

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#### THE EFFECTS OF EXERCISE PROGRAMS IN THE REDUCTION OF WORKPLACE INJURIES AMONGST THE STAFFING COHORT OF RESIDENTIAL AGED CARE SERVICES

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Background Staffing wellness and physical capacity to undertake care tasks are essential to ensuring a resident/consumer focussed approach to care delivery. The Salvation Army Aged Care Plus implemented a staff exercise program with the intention of improving workplace culture and wellness amongst our staff. The program involves two streams of the workforce – direct care givers and administration/office based staff.

Description of Problem The workforce in our organisation identified a higher than average injury rate than industry norm. Our staff were experiencing higher injury rates as a result of undertaking manual handling activities. The most common approach is to 'fix the person', a reactive measure applied once an injury has occurred. This is considered a medical management approach whereby the employer reacts to an injury and the treatment required, and then manages the return to work process. An alternative strategy to reduce or prevent work related musculoskeletal pain and disorders may be achieved by increasing an employee's physical capacity through exercise training interventions.

**Results** The positive effects of the program are a decrease in Lost Time Injury Frequency Rate and a decrease in Injury Notifications of staff resulting from manual handling injuries

Results for staff have shown increase in satisfaction which is directly related to improvements in wellness and increased dexterity. Happy and Healthy staff who sustain less physical injury as a result of manual handling tasks in the aged care work environment result in improved manual handling techniques utilised in physical care for residents. This program has significantly reduced staff injury and resulted in an increased retention of staff and greater continuity of care for residents.

Conclusions The implementation of the program has had a significant effect on qualitative measures such as satisfaction and resulted in measured reduction of lost time injuries and frequency rates. The anecdotal experience indicates the program has been successful in enhancing a safety management approach in a health care environment.



# INTER-ORGANISATIONAL COMPLEXITY AND SAFETY CULTURE IN NUCLEAR INDUSTRY PROJECTS

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Background Typically, safety culture models aim at grasping a culture of a coherent unit, and it is vague how to apply them in large-scale project networks that consist of multiple varied agents with somewhat conflicting objectives. Recent studies in the nuclear industry identified a set of practical and theoretical

challenges for applying the concept of safety culture in a dynamic network of subcontractors involved in the construction of a new nuclear power plant (Macchi *et al.*, 2013; Oedewald and Gotcheva, 2015). The present work focuses on exploring the links between inter-organisational complexity and safety culture with the understanding that projects are complex systems composed of numerous, heterogeneous and interdependent agents.

Methods Complex nuclear industry projects provide a relevant context for studying inter-organisational aspects and their relations to safety culture, since they involve multiple different companies and coordination across organisational boundaries is required to achieve the project objectives safely and efficiently. The method is literature review and case studies carried out in the nuclear industry in Finland.

Results The study results in characterisation of inter-organisational dynamics and sources of complexity in nuclear industry projects, and discusses implications for safety culture. Some key aspects refer to fragmentation due to many different stakeholders with own practices and value frameworks, local interactions between agents from various national cultures and subcultures, uncertainty, increased diversity and interdependency.

Conclusions The study advances the current understanding of inter-organisational complexity and its implications for safety culture in nuclear industry projects.

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## TEAMING UP FOR SAFETY – USING RISK ASSESSEMENT TOOLS

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Background Public health work in Norway is mainly focused on lifestyle diseases, diabetes and cardiovascular diseases and the prevention of these. Much less interest is put into injury prevention and safety promotion, although life lost due to injuries is a major cause of death up to 45 years of age, and caring for injuries is a costly part of the national health service. We need to increase awareness about the scope of injuries, causes of injuries and the potential for injury prevention and safety promotion.

Objective The objective is saving lives and protecting people from injuries, by spreading information, and inviting groups to take part in risk assessment work. We want to put safety and injury prevention on the radar of organisations, NGOs, institutions, societies, teams, families, neighbours and individuals. By increasing knowledge and awareness we hope to change attitude and practice.

By sharing facts, information and best practice – easily accessible on a website – we want to increase knowledge and give insight about injuries and safety promotion. We will supply tools, checklists and suggestion on how to carry out safety checks in private homes, playgrounds, outdoor areas around elderly centres etc.

The program can be used by Safe Communities to invite new groups to take part in the local safety scheme. But organisations in all parts of Norway will be invited to take part and get involved in local risk assessment. We hope that the project can be a way to promote interest in injury prevention and safety promotion on a community level.

Results The project is developed in 2015 and will be tested by communities and organisations early 2016. The initial phase; dialogue with stakeholders, developing web site, basic information