



# EUMASS Congress 2021

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# Abstract-Book

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## Co-Organisers



**Swiss Insurance Medicine**  
Versicherungsmedizin Schweiz  
Médecine d'assurance suisse  
Medicina assicurativa svizzera



# EUMASS 2021 – Abstracts

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## Workshop 2

### Working on a Core Outcome Set (COS) for Work Participation

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#### **Background**

Many randomized controlled trials and systematic reviews are conducted to establish the effectiveness of interventions that aim to improve work participation for workers with a health problem. Yet, heterogeneity in outcomes and measurement methods hinders evidence synthesis. Cochrane Insurance Medicine and Cochrane Work are working on the development of a Core Outcome Set for Work Participation. A core outcome set is an agreed minimum set of outcomes that should be measured and reported in all trials in a specific health area.

#### **Objectives**

- To gain insight in the variety of outcomes and measurement instruments on work participation
- To better understand the conceptual and practical implications of deciding what are the most relevant work participation outcomes
- To gain practical experience in COMET methods like Delphi procedure to establish priorities in work participation outcomes/instruments.

The workshop will be suitable for practitioners/researchers with an interest in work participation outcomes/instruments. Participants do not need to have prior experience of COS development.

#### **Description of the outline & interactive elements:**

This workshop will comprise a mixture of presentations, exercises and participant discussion to consider methods for COS development as outlined by the Core Outcome Measures in Effectiveness Trials (COMET) handbook.

- Presentation: an introduction to the workshop will introduce methodological issues and considerations involved in developing a COS for work participation, illustrated with examples relevant to insurance medicine.
- Exercises: based on a recent literature review and COMET guidelines participants choose outcomes/ instruments to measure work participation using a mini Delphi procedure. Participants will be provided with copies of evidence summaries on available outcomes/measurement instruments with relevant selection criteria.

- Plenary discussion: participants will discuss their responses in selecting outcomes/ measurement instruments on work participation and conceptual considerations will be provided by the workshop presenters.

The organisers will provide knowledge and practical experience on Core Outcome Set development and provide opportunities for participants to become involved in this COS initiative in collaboration with Cochrane Work and Cochrane Insurance Medicine.

**Presenting authors workshop:**

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## Workshop 3

### Performance Based Measures: How to Interpret and Use Results in Insurance Medicine and Vocational Rehabilitation

*Maurizio Trippolini*<sup>1</sup>, *Michiel Reneman*<sup>2</sup>, *Doug Gross*<sup>3</sup>, *Martin Schindl*<sup>4</sup>, *Peter Oesch*<sup>5</sup>  
(<sup>1</sup> Bern, CH; <sup>2</sup> Groningen, NL; <sup>3</sup> Edmonton CA; <sup>4</sup> Klosterneuburg AUT; <sup>5</sup> Valens, CH)

#### **Background**

Health care professionals are routinely asked to make determinations about functional ability, such as ability to work. Performance-based measures may be used to inform these determinations e.g. within functional capacity evaluations (FCE) in addition to self-reported measurements or clinician-based evaluations. Clinician-based evaluations within insurance medicine (IM), however, still have major challenges with basic clinimetric properties, including reliability. Several performance-based measures have been shown to be reliable, they have been developed mainly in rehabilitation settings and are used in the IM field. Testing, interpreting and applying the results of performance-based measures in the IM field poses challenges.

#### **Objectives**

This workshop aims to

1. Provide the participant an overview of the scientific status of performance-based measures;
2. Discuss opportunities and challenges to integrating and using results of performance-based measures in IM.

We will discuss examples from clinical research on performance-based measures used in IM and vocational rehabilitation. Ultimately, the workshop aims to improve the appropriate use and interpretation of the results of performance-based measures within IM.

#### **Format/structure of the workshop**

Before the workshop, participants will be asked (through email) to answer questions about the topic, such as, their experiences about: 1) the interpretation and use of performance-based measures; 2) the perceived barriers and facilitators of the interpretation and use of results of performance-based measures; and 3) unanswered questions you have about performance-based measures in IM

**Duration:** 90 Min

**Structure:**

- 10 min: Introduction & discussion of findings of pre-workshop survey (Trippolini)
- 10 min: Presentation 1 - Use of performance-based measures: a global perspective on functional capacity evaluations and its scientific status (Reneman/Gross)
- 10 min: Presentation 2 - Bridging the gap between vocational rehabilitation and insurance medicine with the results of performance-based measures (Oesch)
- 10 min: Presentation 3 - Impact of performance-based measures (FCE) on Patient-Reported Functional Ability in vocational rehabilitation (Schindl)
- 10 min: Presentation 4 - Interpreting performance-based measures: assessor training and effort determination (Trippolini)
- 30 min: How can we better integrate performance-based measures into Insurance Medicine? What are opportunities and pitfalls? (All)
- 10 min: Conclusions: what have we learned from this workshop? Writing-up the a report about the workshop, next steps (All)

**Desired outcomes**

- Increasing empirical and clinical knowledge about the interpretation and use of performance-based measures in IM
- Identifying gaps in knowledge that could be answered to improve the interpretation and use of performance-based measures in IM
- Summarize the survey findings, discussion, and learning outcomes from the workshop in a manuscript for submission to a peer-reviewed scientific journal

**Target Audience**

Congress delegates with an interest in understanding the value of performance-based measures in IM. All participants should be willing and able to think and discuss beyond the commonly used approaches. Participants using 2 sequential words 'Yes, but ...' should not attend this workshop. Those that use the words 'Yes, and ...' are absolutely welcome to attend and contribute to this WS.

## Workshop 4

### A NEW JOB TO IMPROVE THE MANAGEMENT OF SICK LEAVES: HEALTH INSURANCE ADVISOR

*P. Gaidamour<sup>1</sup>, K. Bécourt<sup>2</sup>, B. Bouttet Cavallier<sup>2</sup>, K. Girard<sup>2</sup>, M. Morvan<sup>1</sup>, S. Ruggieri<sup>1</sup> (<sup>1</sup>Orléans FR; <sup>2</sup>Tours FR)*

#### **Context**

While global health expenditure progression is more and more limited, there is a steady increase in certain items. In France, in 2016, the cost of work interruption for sickness represented a total of 10.2 billion euros, an increase of more than 4% compared to 2015.

At the same time, the French Health Insurance Medical Service is suffering the consequences of the decline in medical demography. Therefore, release medical time through the delegation of tasks has become an absolute necessity.

In this aim, an experiment of a new framework has been carried out, based on a new profession: the "Health Insurance Advisor" (HIA).

#### **Objectives**

The purpose of the HIA is to contact the patient in a double goal:

Avoid a time consuming medical consultation by collecting information on the patient status

Initiate, if necessary, the prevention of professional exclusion.

#### **Methods**

The targeted persons had to be out of work for more than 18 months, with poor information in our medical file.

The assessment of the patient's condition was conducted by the HIA, through a telephone contact, using a specific questionnaire.

According to the information collected, a discussion took place between the medical advisor and the HIA to define the best strategy. When appropriate, the team could contact the treating doctor for further information.

## **Results**

144 telephone interviews were conducted between April and May 2019.

78 medical consultations (54 %) were avoided because of an evolving medical status. However, our medical file was efficiently completed in order to set a follow-up by the HIA.

Of the remaining 66 cases, a decision could be made by the medical advisor 30 times (45 %) without clinical examination: full or part-time return to work, permanent disability admission, stable medical condition after accident at work.

For 17 patients (25 %), the medical advisor has considered that the sick leave was justified after discussion with the treating doctor.

Only 19 patients (29 %) needed a medical consultation by the medical advisor before a return to work decision or a disability admission could be made.

To summarize, nearly 87 % of the physical examinations (125/144) were avoided by this method.

For 26% of all the situations analyzed, a prevention of professional exclusion was initiated in connection with the occupational physician and the social service, in agreement with the patient and his treating physician.

With a follow-up of nearly six months, none of the decisions was contested.

## **Conclusion**

The role of the HIA in the management of sick leave was essential in the medical decision-making. It allowed to "save doctor time", either by avoiding medical examinations or by allowing prevention of professional exclusion.

## Role of the nurses in acceptance of denying Sick-leave benefits in depressive disorders

I. Bohn<sup>1</sup>, A. Pialot<sup>1</sup>, P. Nicolle<sup>1</sup> (<sup>1</sup>PARIS FR)

### **Background**

The medical service of the French National Health fund (CNAM) has to cope with a physician shortage. Introducing service medical nurse (SMN) in a multidisciplinary approach enables the physician to tackle this situation. The consequences of this task support or shifting on the outcome of sick-leave (SL) assessment has never been extensively studied. They are some questions in the field. Does the task transfert affect the perception of the claimant when denying the provision of benefit, and, beyond the rebuttal rate?

### **Methods**

A control study has been carried out in the department of Val d'Oise, from 2018/04/01 to 2019/3/31. The claimants presenting a depressive disorders on sick-leave for less than 180 days and needed an advise to carry on the benefits were divided in two groups. The outcome of the process was a continuation of sick-leave, or a return to work with refusal to pay.

*Study group:* the SMN collected the data from a standardized form relevant to set up the medical record by interview of claimants. They could suggest an advice towards the physician about the case but not practice any physical examination. The physician had to give the advise from the completed record and could practice any additional examination

*Control group:* It is a traditional face to face meeting of the claimant with the insurance physician.

### **Results**

A total of 1291 interview by SMN were performed vs 304 by physician in the control group. The reported of work disability assessment could be carried out to the decision from the record by the nurses in 75% of the cases leading to a corresponding saving of medical time (see table).

There was no difference in agreements of the SL benefit between the groups, but there was a much lower rate of challenged and rebuttal rate in the SMN group. ( $p < 0$ )

## Discussion

The medical skills of nurses who cannot realize a physical examination are limited, but this should not be so awkward in depressive disorders. The rebuttal rate may be underestimated because the decision can be changed through amicable settlement by the physician before a dispute notice.

These results overlap another parallel controlled study performed in Long term SL management by phone that had not be presented because of a possible bias in assessment. The challenged decision came down dramatically in the SMN group too.

The synergy of professions enables a saving of medical resources, does not change the refusal rate (for depressive disorder) through a better acceptance of decisions by the claimants. The reasons why is unclear and should need further investigations.

**ANNEX TABLE**

	Pre study by SMN	Only physician (control group)	
Number of patients	1291	304	
Number of patients whith additionnal examination by doctor	324 (25%)	304	
Number of agreements	1134	255	
Denying benefit	157 (12%)	49 (16%)	p= 0,06 NS
Of which Challenged decisions & Rebutal rate	4 (2,8%)	6 (12%)	p= 0,006

**Results of the examinations carried out by the SMN vs physician alone in sick leave**

## Task transfer in work disability assessments in European social security

*A. de Wind<sup>1</sup>, S. Brage<sup>2</sup>, F. Latil<sup>3</sup>, N. Williams<sup>4</sup> (1Leuven BE; 2Drammen NO; 3Paris FR; 4Birmingham GB)*

### **Background**

There is a shortage of insurance physicians in several social security administrations in Europe. Transfer of job tasks from the physicians to other professionals can offer a solution to such capacity problems, but it has not been known where, when, and how task transfers have been implemented. EUMASS has carried out an exploratory survey and collected case studies on task transfer (task shifting, delegation, and support) in European social security systems. The results published in 2019-20 indicated two important areas for further study: The quality of assessments before/after task transfer and claimant satisfaction after the reforms.

### **Objective**

The objective of the workshop is to increase the knowledge about task transfer, to discuss examples how this has been carried out, to learn about new emerging professional groups for disability assessments, and to discuss ways to measure outcomes, quality of assessments and claimant satisfaction after task transfer.

### **Description – Outline of workshop**

1. Introduction (5 min, de Wind)
2. Background, definitions and the EUMASS report 2019 (10 min, Brage)
3. “A new job to improve the management of sick leaves: health insurance advisor” (15 min, Bécourt)
4. “Acting together with the new professions of the medical department of the Assurance Maladie” (15 min, Pialot)
5. Comments, reports from other countries (10 min)
6. Experiences with quality measurements, presentation of a Dutch method, question to audience, discussion (25 min, de Wind)
7. Claimant satisfaction measurements (10 min)
8. Is a follow-up survey possible?

The audience is continuously asked to give examples and contribute to knowledge of task transfer in European social security.

## Short Orals Session 1

### Interventions on cognitions and perceptions that influence work participation of employees with chronic health problems: a scoping review

*M. de Wit<sup>1</sup>, B. Horreh<sup>1</sup>, J. G. Daams<sup>1</sup>, C. T. J. Hulshof<sup>1</sup>, H. Wind<sup>1</sup>, A. G. E. M. de Boer<sup>1</sup>  
(<sup>1</sup>Amsterdam NL)*

#### **Background**

Cognitions and perceptions, such as motivation and expectations regarding recovery or return to work (RTW), can influence work participation of employees with chronic health problems. Therefore, insurance physicians and occupational physicians need to recommend interventions that are focused on these cognitions and perceptions when these factors limit work participation. There is however no overview of interventions that are aimed at increasing work participation by intervening on these cognitions and perceptions.

#### **Objectives**

The purpose of this scoping review is to identify available interventions that are focused on cognitions and perceptions of employees with chronic health problems and aimed at increasing work participation.

#### **Methods**

A scoping review was carried out following the framework of Arksey and O'Malley. Ovid MEDLINE and PsycINFO were searched for original papers published between January 2013 and November 2018. We included studies that described interventions that focus on work participation and at least one of ten cognitions and perceptions: expectations regarding recovery or RTW, optimism/pessimism, self-efficacy, motivation, feelings of control, perceived health, coping strategies, fear-avoidance beliefs, perceived work-relatedness, and catastrophizing. The quality of the studies included was assessed using quality assessment tools from the Joanna Briggs Institute.

## **Results**

In total, 24 papers were identified that studied interventions aimed at changing at least one of ten cognitions and perceptions in order to increase work participation. No interventions were found that focused on changing motivation or on optimism/pessimism. Four interventions were judged as effective in changing coping, fear-avoidance beliefs, perceived general health or perceived work-relatedness and work participation according to results of randomized controlled trials. Interventions consisted of individual sessions or group sessions. The interventions were given by one provider, such as a nurse, physiotherapist, psychological therapist or occupational physician. The interventions focused on different psychological aspects such as the problem solving process or the vicious circle of pain, but also on physical aspects with for example movement exercises.

## **Conclusions**

This review provides an overview of interventions aimed at increasing work participation by intervening on cognitions and perceptions. Evidence was found for four effective interventions focused on changing some of these cognitions and perceptions and increasing work participation.

## **Impact on insurance medicine practice**

Insurance physicians may use the overview to help employees with chronic health problems to increase work participation by referring them to the right intervention. In addition, this overview of interventions can be used by insurance physicians to judge if meaningful activities were carried out in order to increase work participation.

Barriers for Return-to Work, prevalence and characteristics of multiple problems among work disability benefit recipients.

*K. Brongers<sup>1</sup>, P. Roelofs<sup>1</sup>, T. Hoekstra<sup>1</sup>, S. Brouwer<sup>1</sup> (<sup>1</sup>Groningen NL)*

## **Background**

Disability benefit recipients face participation restrictions due to health issues. Besides, they often perceive additional problems like financial problems, addiction. Multiple problems may hamper social inclusion and (work) participation and therefore should be taken into account in the return-to-work and rehabilitations guidance. However, up to now it is unknown which (combination) of problems exist beside poor health from claimants' perspectives.

## **Objectives**

The aim of this study is to examine the prevalence, type and combinations of multiple problems in a sample of work disability benefit recipients. Furthermore, we studied associations between multiple problems and age, gender, education level, living status, diagnosis and work status.

## **Method**

A cross-sectional study among Dutch disability benefit recipients was conducted. Participants with remaining work capacity were recruited by labour experts from the Dutch Social Security Institute(UWV). Data on diagnosed disorders were retrieved from UWV register data. Additionally, data were collected on socio demographics, the presence (yes/no) and experienced severity (none/mild/moderate/severe) of ten problems that may hinder the participant in daily participation, i.e. physical ill-health, mental ill-health, financial problems, care for family, a too low or not suitable educational level, problems with the Dutch language, contact with police, problems with housing, addiction and domestic violence.

## **Results**

The sample consisted of 208 participants, 95 male (45.5%) with a mean age of 35.7 years (SD 13.0). One third (33.3%) was low educated, 34.8 % lived alone and 16.7% was working.

The majority of the participants were primary diagnosed with a psychiatric or developmental disorder (51.2%), followed by somatic diseases (35.6%) and intellectual disabilities (13.2%). In total, 86% experienced multiple problems, the average number of experienced problems was 3.3 (SD 1.7). Most participants experienced problems with physical health (75.8%) or mental health (75.5%), often combined with problems with educational level (55.4%), financial problems (48%) or care for family (40%). Multiple regression analyses showed associations between a low educational level and a higher number of perceived problems.

## **Conclusion**

Most disability benefit recipients experienced multiple problems that may hinder the return-to-work process. Besides physical and mental health, not suitable educational level, financial problems and care for family were often reported. These findings indicate which barriers should be taken into account in the disability claim assessment, and showed that the focus should not only be on health, but also on additional problems in daily life. These findings may provide directions for interventions to improve social participation, including work.

*E. Friberg<sup>1</sup>, P. Lytsy<sup>1</sup> (Stockholm SE)*

## **Background**

The psychosocial work environment has been shown to be of importance for the health and wellbeing of individuals as well as for the productivity, sickness absence levels, and wellbeing of an organization. Many different measures have been taken trying to improve this environment.

## **Objectives**

To map the existing knowledge, as presented in relevant and well performed systematic reviews, that have investigated the effects of work-related interventions, aiming to affect the psychosocial work environment and health related outcomes in workers/employees and in organizations.

## **Methods**

A systematic literature review of published systematic literature reviews was performed to map the knowledge on psychosocial interventions at the workplace. The search strategies used several terms and expressions which capture different aspects of the psychosocial interventions aimed at affecting the wellbeing of individuals or the workplace organization. The search was performed in three electronic databases: PubMed, PsycINFO, and Cinahl. Two authors independently screened all references and assessed quality using a validated instrument. Systematic literature reviews of moderate or good quality were included in the systematic review.

## **Results**

A total of 44 relevant and well-executed systematic literature reviews related to studies on effects of workplace-related psychosocial interventions on health-related outcomes of the employees and the organization, respectively, were included. The types of interventions that were carried out mainly concerned different forms of stress-reducing or stress-management programs, or different forms of health-promotion either aimed specifically for mental ill-health or more general. Interventions aimed at bullying, social support, work efficiency and psychosocial climate in the workplace were also identified. A very large variety of outcome measures were identified. The vast majority of outcomes were related to mental or general health. But also stress and work-related issues were common. The majority of the systematic literature reviews reported several different outcome measures. A large proportion of the systematic literature reviews included interventions aimed at a general group of 'workers', or healthcare personnel.

## **Conclusions**

A substantial amount of research regarding effects of psychosocial workplace interventions, have been published to date. Much of the existing knowledge indicates that the psychosocial work environment affects the individual and that active workplace interventions may promote health for the individual as well as the organization.

## **Impact on insurance medicine practice**

Active psychosocial workplace interventions can have beneficial effects for the levels of sickness absence both for individuals and organizations.

Predicting return to work after long-term sickness absence for workers with subjective health complaints: a prospective cohort study.

*K. Weerdesteijn<sup>1</sup>, F. Schaafsma<sup>2</sup>, K. Bonefaas<sup>2</sup>, M. Heymans<sup>2</sup>, J. Anema<sup>2</sup>, A. van der Beek<sup>2</sup> (<sup>1</sup>Den Haag NL; <sup>2</sup>Amsterdam NL)*

## **Background**

Subjective Health complaints (SHC) are associated with long-term sickness absence. In most European countries, physicians have to support workers with sickness absence in their return to work (RTW) process. Physicians, however, report difficulties in supporting the RTW process of especially workers with SHC due to the lack of objective medical findings and limited knowledge on relevant factors to deal with and to support the RTW for those workers.

## **Objectives**

The main purpose of this study is to evaluate the prognostic factors for partial or full RTW to a paid job for at least 28 days after long-term sickness absence for workers with SHC and to compare these factors with workers with other disorders (reference group).

## **Methods**

Data of 213 participants with SHC, and 1.037 reference participants, were used from a prospective cohort study. These participants answered a questionnaire just before their medical work disability assessment, but after >84 weeks of sickness absence. RTW were measured with questionnaires after one and two years. Univariable logistic regression analyses were performed ( $p \leq 0.157$ ) for variables per domain (i.e. demographic, socio-economic and work-related, health-related, and self-perceived ability) with RTW. Subsequently, multivariable logistic regression analyses with backward selection per domain ( $P \leq 0.157$ ) were performed. Remaining factors were combined in one multivariable model ( $P < 0$ )

## **Results**

For workers with SHC as well as for the reference group, non-health-related factors like receiving a partial (OR 0.62, 95% CI 0.26-1.47 respectively OR 0.63, 95% CI 0.39-1.03) or complete (OR 0.24, 95% CI 0.10-0.58 respectively OR 0.12, 95% CI 0.07-0.20) work disability benefit, and having a positive self-perceived possibility for RTW (OR 1.06, 95% CI 1.01-1.11 respectively OR 1.08, 95% CI 1.05-1.11) remained statistically significant in the final model.

## **Conclusions**

Non-health-related factors seem to be more important than health-related factors in predicting RTW. Receiving a work disability benefit and not having positive expectation for RTW seem to complicate RTW most for workers with SHC. With respect to RTW predictors, workers with SHC do not differ compared to the reference group.

## **Impact on insurance medicine practice**

Based on the current study, support of RTW after long-term sickness absence have to be especially based on modifiable non-health-related factors, irrespective of the underlying pathology of the disorder. It is therefore advised to put more effort on the possibilities for changing expectations to RTW of workers themselves, or to change the work disability system, so that permanent work disability may be prevented.

## 7 years on “back to work” strategies for people with disabilities in Belgium

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### **Background**

For several years now, the number of people who are unable to work due to a disease or private accident has been increasing in Belgium, generating significant social and financial costs. To this end, the Belgian government has taken several measures since 2010 to encourage the return to work (RTW) of disabled people.

### **Objectives**

The National Institute for Health and Disability Insurance (NIHDI) set up a collaboration with the regional employment services and the social insurance companies. The objective is to give patients the opportunity to undertake qualifying training free of charge on a voluntary basis (under certain conditions) and return to the job market.

### **Description**

The RTW program is launched by the medical advisor. The vocational reintegration projects, undertaken on a voluntary basis, include three phases: the vocational guidance phase (allow a clear idea of the need for vocational rehabilitation and the possibilities of reorientation), the vocational training phase (study program aimed to acquire –new or updated- professional skills) and the vocational reintegration phase (6-month period after the successful training phase, which includes all actions aimed on finding and returning on the job market).

We observe a significant increase in the number of projects started. From just over 1000 in 2012 to over 5300 in 2018, more than 24 500 program have been launched today. The duration of the programme is on average 16 months. Variables such as age, gender, disease and duration of sick leave influence the probability of undertaking a RTW project. In 2017 half of the patients starting a training program and for which we received a final evaluation successfully completed their training, 6% failed, and 44% stopped the program prematurely. 6 months after successfully ending their training, about 1 in 2 returned to the labour market (increasing to 4 in 5 after 18 months).

## **Conclusions**

These findings confirm that training programs to encourage RTW are efficient. A multidisciplinary approach (with employment professionals) and continued support allow the reactivation of patients. In the upcoming years further research is needed to have a full understanding of these programs, their return on investment and critical success factors.

## **Relevance for an international audience**

RTW programs allow to decrease the number of workers on long term in incapacity. Impacts are positive for all: patients can be back to work earlier and the insurance system seems to be sustainable with a reduction in long-term costs.

## Short Orals Session 2

### The incidence of inability to work fulltime among work disability claimants and its associated factors

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#### **Background**

Many chronic diseases are associated with reduced functioning and activity limitations, which may lead to limited work performance and inability to work fulltime (IWF). Inability to work fulltime is an important aspect of work disability claim assessment in European countries. Knowledge on the incidence of IWF and its association with diagnoses and demography might improve the quality of the assessment, but is lacking. Therefore, this study aims to examine incidence of IWF and the association of health and socio-demographic variables with IWF among disability benefit claimants with different types of diagnoses.

#### **Method**

The study is a cross-sectional register based cohort study among applicants for a disability benefit according to the Work and Income Act (WIA) in 2016. The data was provided by the Dutch Social Security Institute (UWV). Only WIA claimants with residual work capacity were included in the study. All diagnoses were categorized in diagnosis groups following the ICD-10 chapters.

Descriptive statistics were used to gain insight in the incidence of IWF, defined as being unable to work >6 hours per day. Multivariable logistic regression analyzes were performed, to investigate the associations of health and socio-demographic variables with IWF. All analyses were performed for the total sample and separately for the four ICD-10 diagnosis chapters with the highest frequencies .

## **Results**

The incidence of IWF in the total group (n=30177; mean age: 48.8 ±11.0; 53.9% females) was 39.4%. A higher age, female gender, middle and high educational level (compared to low educational level), and multimorbidity were significantly associated with IWF.

The four largest diagnosis chapters comprised 72.5% of the sample and were all significantly associated with IWF: Mental (29.5%, OR 1.13; CI 1.07-1.19), musculoskeletal (28.5%, OR 0.29; CI 0.27-0.30), cardiovascular disorders (7.8%, OR 2.75; CI 2.52- 3.01), and injuries (6.7%, OR 0.56; CI 0.50-0.62). Female gender was positively associated with IWF within all four diagnosis chapters. Higher age was associated with IWF within mental and musculoskeletal disorders, higher education within injuries, musculoskeletal and cardiovascular disorders, and multimorbidity was positively associated within musculoskeletal disorders and injuries, but negatively within cardiovascular disorders.

## **Conclusion**

The incidence of IWF in work disability assessment among claimants with residual work capacity is substantial. Across the ICD-10 diagnosis chapters incidence and associations differ. Especially females, older and higher educated claimants with more than one disorder have a higher risk for IWF.

## **Impact**

When assessing work disability attention for IWF and its determinants is important.

## The importance of prognostic aspects considered during work disability evaluation.

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SHOW DETAILS

### **Background**

The assessment of prognosis is an important part of work disability evaluations and has profound individual and societal consequences. In a previous qualitative study we identified 23 aspects that physicians consider when assessing prognosis during disability evaluations. These aspects were divided into six categories: disease, treatment, course, information, patient-related aspects and physician-related aspects. Although physicians consider a wide range of aspects, we didn't know the perceived importance of those aspects. We also wanted to know whether physicians need any support for prognosis assessment.

### **Objectives**

The aim of the current study was to investigate the importance of these aspects and to assess what type of support physicians need in assessing these prognostic aspects during disability evaluations.

### **Methods**

Using a mixed-methods survey design, 76 insurance physicians were asked to score the importance (scale 1-10) of the 23 prognostic aspects. In addition, participants were asked to apply the same list of aspects to a case-vignette and again score the importance of these prognostic aspects. They were also asked to motivate their answers, and to reflect on their needs regarding support using open questions. Analyses consisted of both descriptive analysis and qualitative thematic analysis.

### **Results**

Medical categories ('disease', 'treatment' and 'course') and also the category 'information' were rated as most important (median scores 7-9, IQR 1-3) during prognostic assessment. Overall, scores within the categories of patient- and physician-related aspects (median scores 4-8, IQR 2-5) were lower and fell within a wider range. The case-vignette concerned a severe neurological disease. Here, medical aspects were scored higher and patient-related aspects scored lower than those aspects in general did.

Open answers pointed out that physician-related aspects were considered noteworthy, but should not be part of the assessment. Physicians mentioned the relevance of the support from a digital prognosis tool, providing them with 'pre-appraised evidence', an overview of 'prognostic factors' or 'search strings', applicable to the individual case.

### **Conclusions**

(1) A prognosis assessment tool should always contain medical aspects. The importance of patient-related aspects varies per case. Physician-related aspects should remain implicit.

(2) Case-specific prognostic evidence, preferably from pre-appraised sources, is desired in a digital format.

### **Impact on insurance medicine practice**

The (conditional) importance of the aspects and the desired support, will serve as input for the development of a prognosis assessment tool. This tool will assist the physician in founding the prognosis by means of case-specific evidence.

## Assessment of visual impairments by physicians working in the field of disability evaluation: a qualitative study

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### **Introduction**

Work disability assessment of visual impaired patients can be challenging and evidence on this topic is lacking in the field of insurance medicine. This qualitative study aimed to explore problems and solutions experienced by insurance physicians in assessing visual impaired patients during their work capacity evaluation.

### **Methods**

Two focus group interviews were conducted with six insurance physicians in each group. All participants (n=12) work in the field of disability evaluation at the Dutch Social Security Institute (UWV). The interviews were semi-structured with a topic list concerning the knowledge, experience and claims of visual impaired clients. All interviews were typed verbatim. After a member check, acquired data were independently analyzed thematically by two researchers.

### **Results**

The following main problems were found: insufficient knowledge and absence of a guideline, difficulties to interpret, objectify and quantify visual complaints and tests, and the translation of these findings into impairments. The participants also suggested solutions that included more training for insurance physicians, development of a guideline, and opportunities to consult other occupational experts or medical specialists, and more expertises.

### **Discussion**

In conclusion, this study provides first insights in problems and possible solutions concerning assessments of work disability claims of visually impaired patients. Further research on this subject is needed with a focus on developing practical tools for insurance physicians.

## The recognition of probable malingering of health complaints: Experiences of Dutch Social Security professionals

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In the Netherlands, disability benefits are assessed by the Dutch Social Security Institute (SSI). Insurance physicians and labor experts, employed by the SSI, assess the client medical abilities and work capabilities. It is important that the assigned disability benefits match the functional disabilities and work capabilities of the client. Some clients may however exaggerate their symptoms or not report the improvement of medical conditions, causing mismatch between the client's work activities and his/her true work capacities. Intentional over-reporting of symptoms, motivated by financial or legal benefits, is called malingering. The recognition of probable malingering is a challenge for social insurance organizations.

The objective of this research is gaining insight into experiences of employees of the SSI regarding the recognition of probable malingering by clients, and into ways of dealing with them.

In May 2019 1113 professionals, currently engaged in client's assessments, filled in anonymous digital surveys, containing general opinion questions about probable malingering, subjective estimates of possible malingering reasons by clients, ways of recognition, actions and barriers to report about suspects.

Most of the SSI employees acknowledge the feeling that some clients might be involved in malingering. Almost half of the employees base that feeling on intuition, inconsistencies within dossiers or implausible exaggerated complaints. Most of the professionals estimate psychological complaints as the most probable health problems for over-reporting. However, they do not always know how to deal with their feelings about suspects and experience barriers to discuss these within a special department, conducting further investigation by clients. The most prevalent barriers are doctor-patient confidentiality, complexity of reporting process, unwillingness to (unfairly) blame or mistrust the client, and unwillingness to act in this role. In most of the cases that professionals feel that a client might be over-reporting, they do not report this.

The results emphasize the complexity of this phenomenon within social security practices, its ethical aspects and the ambivalence of financial disability benefits as a matter of fairness and trust. Developing an evidence-based tool, test or training, supporting the professional in recognition of probable malingering fitting into the context of social security organizations might help creating more clarity when dealing with this subject. The issue of over-reporting or malingering is recognized in the international psychology and psychiatry literature. Addressing this topic within this research can be especially relevant for an international audience representing countries where the social insurance system is an integrated part of welfare.

## Short Orals Session 3

### The relationship between awarding disability pension and waiting lists in mental health care: a cross-sectional study

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#### Background

Waiting lists for mental health care are more prevalent and longer than for somatic health care in the Netherlands. It is unknown whether this affects the outcome of the work capacity evaluation. This study aimed to get insight in: (1) the prevalence of being on a waiting list for care among clients applying for disability pension (DP); (2) differences regarding being on a waiting list, DP and work incapacity percentages between those with mental disorders and physical disorders; (3) the relationship between being granted DP and being on a waiting list, and if being granted DP, the relationship between being on a waiting list and work incapacity percentage for clients with mental and physical disorders.

#### Methods

During cross-sectional research, 44 insurance physicians completed questionnaires for 145 clients, aged 18-65 years, applying for DP at one Dutch Employee Insurance Agency between February 1- June 15 2018. Obtained information included: demographic variables; type of disorder (mental, physical or both); and being on a waiting list for care. After the assessment for DP, the work incapacity percentage was assessed by the vocational experts and added to the data collection. Chi-square tests as well as logistic regression were used to test relations between independent and dependent variables.

#### Results

Clients with mental health complaints, who applied for DP, were more often on a waiting list for care compared to clients with physical disorders ( $\chi^2=6.30$ ,  $p=0.02$ ). In addition, for clients with mental disorders, there was an indication that people on a waiting list, more often were being granted DP ( $\chi^2=2.72$ ,  $p=0.09$ ), and had a higher work incapacity percentage ( $\chi^2=2.86$ ,  $p=0.06$ ). No significant effects or trends were found for the relationships between physical disorders on the one hand and being on a waiting list, granted DP or work incapacity percentage on the other hand.

## **Conclusion**

Clients with mental disorders applying for disability pension are more often on a waiting list compared to those with physical disorders, and they seem to be granted DP more often, and when granted DP, have a higher work incapacity percentage. No relations were found between physical disorders and being on a waiting list or being granted DP.

## **Impact on social insurance practice**

Waiting lists in mental health care and not in somatic health care affect work capacity evaluation. Social insurance physicians might need to mediate with mental health care to improve access to the necessary treatment.

## Adverse outcomes of chronic widespread pain and common mental disorders in sick-listed individuals – a prospective study of Swedish twins

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### **Background**

Chronic widespread pain (CWP) and common mental disorders (CMDs) are common public health problems, but little is known about the role of CWP and CMDs on future adverse outcomes related to labour market participation and health among individuals with a history of sickness absence (SA).

### **Objectives**

The aims of the study were to investigate the associations between CWP and CMDs with subsequent disability pension (DP), long-term unemployment (>90 days) and all-cause mortality in individuals with SA and whether the associations were confounded by familial factors.

### **Methods**

In this prospective cohort study, 7884 Swedish twins born between 1933 and 1985 were included and baseline data on CWP and CMDs were gathered from surveys in 1998 to 2006. Register data were used for obtaining information regarding demographics, SA, DP, unemployment and mortality. Cox proportional hazards regressions were used to calculate Hazard Ratios (HR) with 95% Confidence Intervals (CI) for the associations between CWP and/or CMDs with DP, unemployment and mortality, while conditional Cox models for twin pairs provided control for familial confounding.

### **Results**

Having either CWP or CMDs among those with a history of SA was associated with a higher risk of DP and all-cause mortality compared to individuals without CWP and CMDs after controlling for socio-demographic and health factors. Moreover, sick-listed individuals with both CWP and CMDs had a higher risk of DP while those who only had CMDs had a higher risk of long-term unemployment compared to those without CWP and CMDs. The associations between CMDs with DP and long-term unemployment was no longer significant when controlling for familial factors.

## **Conclusions**

CMDs was a risk factor for DP, unemployment and mortality among individuals with SA, while CWP seems to be important in relation to future DP and mortality. Familial factors played a role in the associations between CMDs and DP and CMDs and unemployment.

## **Impact on insurance medicine practice**

CWP and CMDs should be considered when monitoring individuals with SA, which may prevent future DP, unemployment and mortality.

## Work disability benefit claimants with a mental disorder: incidence and associations with the inability to work full-time

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### **Background**

In work disability assessment, insurance physicians evaluate the work capacity of claimants with a chronic disease. If residual work capacity is established, it is then indicated whether someone can work full-time (i.e. the (in)ability to work full time (IWF)). Employees with mental disorders frequently face challenges to work (full-time). However, up to now there is no insight in the incidence of residual work capacity and IWF among claimants with mental disorders.

### **Objective**

To gain insight in the (in)ability to work full-time among disability benefit claimants with a mental disorder.

### **Methods**

The study is a cross-sectional register based cohort study including all assessment data, registered by insurance physicians, of claimants for a disability benefit according to the Work and Income Act (WIA) in 2016. Data was provided by the Dutch Social Security Institute (UWV). Descriptive statistics were used to gain insight into the incidence of residual work capacity and IWF (unable to work >6 hours per day) in all claimants with a mental disorder as a primary diagnosis, and additionally for the 10 most prevalent diagnoses within the sample. Multivariable logistic regression analyzes were performed to study the associations of socio-demographic and health variables with IWF in claimants with mental disorders, work capacity and complete data.

### **Results**

Of the 40,263 disability benefit claimants in 2016 (mean age 48.7 years; 53.6% female), 12,901 (32%) were diagnosed with a mental disorder as the primary diagnosis (mean age 44.4 years; 55.4% female). Of the claimants with a mental disorder, the majority (77.2%) was assessed with residual work capacity. Complete data of 8902 claimants with residual work capacity and a mental disorder showed an incidence of IWF of 41.3%. Six out of the 10 most prevalent diagnoses showed similar results on the incidence of IWF as the total sample. Higher incidences were assessed for bipolar disorder (63.5%), post-traumatic stress disorder (49.5%) and depression (48.1%), whereas being overworked showed a lower incidence (16.6%). Multivariable logistic regression analysis (n=8902) indicates that female gender (OR 1.52, 95%CI 1.39-1.66), age (OR 1.004, 95%CI 1.00-1.01), and a high educational level (OR 1.14, 95%CI 1.02-1.29) are associated with IWF.

## **Conclusions and impact**

Our study shows that the majority of disability benefit claimants diagnosed with a mental disorder were evaluated as still having residual work capacity. Within this group, a majority was indicated as still being able to work full time. Inability to work full time differed between specific diagnoses and was associated with gender, age and educational level.

## Effects of Case Management after Psychosomatic Rehabilitation: A Propensity Score Matching Analysis

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### **Background**

In Germany, 16% of sickness absence and 43% of new disability pensions are due to mental disorders. To support work participation of patients with mental disorders and a high risk of not returning to work, a case management after psychosomatic rehabilitation was implemented by the German Pension Insurance North.

### **Objective**

The aim of our study was to describe the implementation of case management on the basis of perceived professional support for returning to work and to describe effects of the intervention using further outcomes.

### **Methods**

Case management clients were recruited during psychosomatic rehabilitation at three rehabilitation centers (German Clinical Trials Register: DRKS00014564). The intervention group (IG) received case management after rehabilitation. The control group (CG) got no further care. Questionnaire data were assessed at the end of rehabilitation and after six months. The primary outcome was perceived professional support for returning to work (0-24 points). Secondary outcomes were employment, self-rated work ability (0-10 points) and restrictions of participation (0-90 points). Propensity score matching was used in order to generate samples with comparable characteristics. Effects were estimated using regression models.

### **Results**

343 rehabilitants were included at T1 (IG: n = 54; CG: n = 289). 86 persons, 43 in both treatment arms, were included when analysing the 6-month follow-up. 65.1% were women, mean age was 48.3 years (SD = 9.7), 34.9% were employed and 72.9% had been on sick leave for more than 26 weeks in the 12 months prior to rehabilitation. After 6 months, participants of the case management reported higher perceived professional support than the controls (b = 8.50; 95% CI: 5.63 to 11.36) but were less employed (OR = 0.49; 95% CI: 0.18 to 1.33) and were less frequently returned to work (OR = 0.42; 95% CI: 0.15 to 1.13). Case management clients reported lower self-rated work ability (b = -1.18; 95% CI = -2.10 to -0.26) and stronger restrictions of participation (b = 8.97; 95% CI 0.06 to 17.88).

## **Conclusions**

Our analyses show, that case management is perceived by rehabilitants as supportive for returning to work. However, case management participants did not return to work more frequently after 6 months and reported worse work ability and greater participation restrictions than the control group.

## **Impact on insurance medicine practice**

Case management is discussed as a possible answer to complex supply needs. However, our results suggest that the implemented case management approach had a negative impact on return to work in the short-term.

## Short Orals Session 4

What is Belgian medical advisors' perception about the use of ICF core-sets when assessing work incapacity related to back pain?

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### **Background**

There is a willingness in Europe and in Belgium to implement the use of a bio-psycho-social model such as the International Classification of Functioning, Disability and Health (ICF) for assessing work incapacity.

### **Objective**

We conducted a preliminary study to measure the perception of medical advisors (MA) about the interest of structuring the client's bio-psycho-social information in an ICF based report when it comes to take a decision regarding work incapacity or the relevance of initiating a reintegration process for clients suffering from back pain.

### **Method**

We first conducted a semi-exhaustive literature review related to our initial theme. After this theoretical part, a practical part was conducted. First of all, we met 4 clients in order to obtain a real clinical case. The latter was built on a medical examination carried out by the MA and an interview with an occupational therapist (OT). The interview was conducted following ICF's core-sets. Then we proposed a perception questionnaire to a sample composed of 92 MA and 9 paramedics working in Belgian mutual health insurance companies after showing them 2 comparative videos based on the clinical case we made. The first video was the medical examination and the second was the ICF based interview. The perception questionnaire had 22 questions related to 4 axes : the clinical and diagnostic relevance of the ICF, the impact of the ICF on management, its impact on communication as well as its impact on the enhancement of respondents' role.

The data were analyzed using quantitative methods. Free comments from 48 respondents were also collected and taken into account.

## **Results**

Offering a bio-psycho-social tool for decision support to MA allows a more complete client's picture. Respondents recognize the relevance of ICF at the clinical and diagnostic level but say it cannot be implemented in the current context for various reasons such as the time required or having a multidisciplinary team and an effective coordination. These should be addressed before a possible implementation of ICF in the assessment work incapacity or in the relevance of initiating a reintegration process. Older doctors are less enthusiastic about the relevance of using ICF than their younger colleagues.

Challenges in disability evaluation and the need for a goal-oriented ICF-based approach: A stakeholder analysis at the Swiss accident insurance

*U. Schwegler<sup>1</sup>, B. Trezzini<sup>1</sup>, B. Schiffmann<sup>1</sup> (Nottwil CH)*

## **Challenges in disability evaluation and the need for a goal-oriented ICF-based approach: A stakeholder analysis at the Swiss accident insurance**

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### **Background**

While poor standardization and transparency as well as objectivity and efficiency issues have been addressed as key challenges in disability evaluation, these challenges were hardly empirically explored so far. The same is true for the often ascribed added value of using an approach based on the International Classification of Functioning, Disability and Health (ICF) in the eligibility determination context.

### **Objectives**

By using the eligibility determination process of the Swiss accident insurance (Suva) as a case in point, the present study examined current challenges and the need for a goal-oriented ICF-based approach in disability evaluation as experienced by different stakeholder groups.

### **Methods**

Descriptive qualitative design involving semi-structured expert interviews with five main stakeholder groups of Suva's eligibility determination process (i.e., Suva insurance officers, Suva insurance physicians, treating physicians, lawyers and judges). The interviews were thematically analyzed and their results reflected upon in focus groups with selected interview participants.

## **Results**

Forty-three interviews and three focus groups were conducted. Participants pointed to challenges related to standardization, transparency, objectivity, efficiency and the assessment of contextual factors. An ICF-based standard documenting claimant-job mismatches and their determinants (see Figure 1) was deemed promising for ensuring comprehensible and valid work and earning capacity decisions, systematic and uniform reporting and a goal-oriented eligibility determination process focusing on claimants' work integration. Concerns primarily addressed a potential pseudo-accuracy when using the standard for eligibility decisions.

## **Conclusions and impact on insurance medicine practice:**

Implementing a goal-oriented ICF-based standard may help to approach current challenges in disability evaluation such as poor transparency, validity and comparability of work capacity decisions as well as low efficiency of the eligibility determination process. Our findings support the development of such a standard for Suva's eligibility determination, but also point at the importance of involving key stakeholders to ensure its applicability and cross-disciplinary acceptance.

## **References**

Schwegler U, Trezzini B, Schiffmann B. Current challenges in disability evaluation and the need for a goal-oriented approach based on the ICF: a qualitative stakeholder analysis in the context of the Swiss accident insurance. *Disabil Rehabil.* 2019. [Epub ahead of print]

## Applying the refined ICF-linking rules on the Ergokit Functional Capacity Evaluation protocol

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### **Background**

Linking of the Ergo-Kit Functional Capacity Evaluation (FCE) to the International Classification of Functioning, Disability & Health (ICF; World Health Organization, 2001) provides valuable information.

### **Objective**

This study aimed at linking the Ergo-Kit FCE protocol to the ICF (WHO, 2001). The degree in which the Ergo-Kit covers the (comprehensive and brief) core set vocational rehabilitation was also examined. Since observations are a relevant source of information within the Ergo-Kit, observations were also linked to ICF.

### **Methods**

The linking rules developed and refined by Cieza and colleagues (2002, 2005, 2016) were used to link the meaningful concepts of the Ergo-Kit standard protocol (composed of 55 parts) to the most precise ICF category. Two independent raters performed the linking process independently; the items for which no consensus was reached, were evaluated by a third rater. By means of summary linkage indicators (Mac Dermid, 2014) it was also assessed to which degree the Ergo-Kit protocol covers the comprehensive and brief core set of vocational rehabilitation. The observations for 65 Ergo-Kit tests were linked to the ICF by one rater.

### **Results**

The 55 components of the Ergokit FCE protocol and 65 observations of FCE tests were linked to the ICF. Items were linked to the 4 components of the ICF model with the highest percentage for the chapter “mobility” within the ICF-component of activities and participation.

### **Conclusion**

The ICF linkage process of the Ergo-Kit adds to the operational definition of FCE (Soer et al, 2008 ) that an FCE is an evaluation of capacity of activities that is used to make recommendations for participation in work while considering the person’s body functions and structures, environmental factors, personal factors and health status.

### **Impact on insurance medicine practice**

These study results can contribute to the further implementation of ICF within the domain of disability evaluation and return to work and the use of FCE to obtain a higher transparency in disability evaluation.

## Short Orals Session 5

### Evolution of the Socio-Economic Position of Belgian Workers with Cancer. A Population-based Cohort Study Using a Life Course Perspective Approach

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#### **Introduction**

The prevalence of cancer survivors increases though in the workforce. The issue of their return-to-work represents an important matter for their quality of life, but also a great challenge for the social security systems. This population-based cohort study aims at quantifying the return-to-work of Belgian cancer survivors and at identifying the determining factors.

#### **Methods**

We requested data from the Belgian Cancer Registry and the Crossroad Bank for Social Security. We included all socially insured Belgian workers diagnosed between 2004 and 2011 with colorectal, breast, head & neck, prostate, testis, lung and corpus uteri cancer. The end of (administrative) follow-up was 31st December 2012.

After having solved legal, ethical and technical issues for the coupling, we performed group-based modeling for longitudinal data using the 'proc traj' package in SAS. We included demographic, health-related and work-related factors in the analysis and observed how these factors interplay to determine the working status.

#### **Results**

Among the 38 930 survivors included, after 5 years follow-up, 18% died, 69% were (partially) active, 31% were (pre-)retired, unemployed or disabled.

The group-based modeling revealed the existence of 3 types of work trajectories: high and stable; low and stable and changing across time. Different trajectories appear according to the follow-up time. Among the workers with high working probability, we mainly find women with breast cancer; men with prostate cancer and workers aged 36-50 years old.

## **Conclusion**

The results of our study reported that workers with cancer who resumed work were mainly self-employed and middle-age workers (36-50) with testis or breast cancers. Lung and prostate were negatively associated with the RTW and young workers seem to be at risk of unemployment.

It suggests that an early assessment of the worker's profile would allow the identification of those who would require support in order to prevent their exclusion from the labour market.

## Cancer and inability to work fulltime: incidence and associations among work disability claimants

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### **Background**

In work disability assessment, insurance physicians evaluate the (residual) work capacity of workers with a (chronic) disease. If there is work capacity, it is then indicated whether someone can still work full-time (the (in)ability to work full time). Employees with cancer, a common serious disease, frequently experience such (energy) deficit that they cannot work (full time). However, up to now there is no insight in the incidence of (residual) work capacity and (in)ability to work full time among disability claimants with cancer.

### **Method**

The study is a cross-sectional register based cohort study with claimants for a disability benefit according to the Work and Income Act (WIA), in 2016. The data was provided by the Dutch Social Security Institute (UWV).

Descriptive statistics were used to gain insight into the number of WIA claimants with a primary diagnosis of cancer and residual work capacity. Within this group the incidence of the inability to work fulltime (IWF), defined as being unable to work > 6 hours per day, was studied for the total group and for specific cancer diagnoses. Multivariable logistic regression analyses were performed, including claimants with cancer and complete data on all variables, to investigate the associations (significance level  $p < 0.05$ ).

### **Results**

Data from 40,263 people who applied for a WIA benefit in 2016 (average age 48.7 years; 53.6% women) were used. Of these, 3757 (9.3%) had cancer as the primary diagnosis (average age 53.3 years; 60.3% women) from which 57.8% were assessed with residual work capacity.

Complete data of 1908 claimants with cancer and residual work capacity (average age 52.8 years; 63.0% women) showed an incidence of IWF of 69.6%. Incidences of IWF were highest for leukemia (82.5%) and lung cancer (81.9%). In the largest group (breast cancer,  $n=648$ ) the incidence of IWF was 67.4%. Multivariable logistic regression analyses in total group showed that female gender (OR 1.31, 95% CI 1.07-1.61) and age (OR 1.02, 95% CI 1.01-1.03) were positively associated with IWF.

**Conclusion**

Our study shows that 58% of the claimants diagnosed with cancer do have residual work capacity, however, almost 70% of this group was indicated by the insurance physician as unable to work full time. Female gender and older claimants have a higher risk of IWF.

**Impact**

Insight in IWF of cancer patients may contribute to evidence based practice in work disability assessment.

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## Background

More than 85% of breast cancer (BC) patients live more than five years after diagnosis in Western countries. One-third of BC patients is younger than 55 years old at time of diagnosis, with several years within the workforce ahead before retirement, in an era where the legal retirement age is globally increasing. Employment issues among BC survivors are therefore a major challenge.

## Objective

The aim of this study was to understand the impact of work environment on return-to-work (RTW) after breast cancer diagnosis.

## Methods

CANTO is a French multicenter prospective cohort study including patients with stage I-III breast cancer aiming at characterizing long-term toxicities of BC treatment. We used data from 1003 patients enrolled from 2012-15 (First data lock), who were  $\geq 5$  years younger than minimum legal retirement age (62) at diagnosis and professionally active. Detailed working conditions were collected at diagnosis and updated work status was collected 2 years post-diagnosis. Working conditions included information on type of contract, size of the firm, working hours, strenuous work conditions, employer's accommodation, supportive environment, control over the work situation, and perception of work. Logistic regression models evaluated the impact of pre-diagnosis working conditions on return to work (RTW). Models were adjusted for stage and treatment, socioeconomic characteristics, health status at inclusion and health status at the end of treatment, using the common toxicity criteria adverse events (CTCAE) scale and patient reported outcomes (PROs): EORTC QLQ-BR23 and QLQ-FA12, and the Hospital Anxiety and Depression Scale.

## Results

Overall, 21% of survivors had not returned to work 2 years post-diagnosis. In the multivariate models, odds of RTW were reduced among women who had shift working hours (OR=0.47 [95%CI 0.28-0.80]) and who did not work in a supportive environment before diagnosis (OR=0.46 [0.27-0.79] among women without support from colleagues (OR=0.66 [0.36-1.19] among women who received support only from colleagues vs those who received support from colleagues and supervisor). Odds of RTW were elevated among women who did not find their job boring (rather not boring work OR=2.96 [1.29-6.81], not at all boring work 4.26 [2.00-9.07] vs boring work).

## **Conclusions**

Among a set of factors relating to work environment, nature of work, working hours and psychosocial working conditions were strongly associated with RTW.

## **Impact on insurance medicine practice**

The study shows the importance of working conditions, rather than the characteristics of the firm, on return-to-work after breast cancer. These results highlight the need of accounting for them when designing interventions.

## Workshop 5

### How to read a Cochrane Review: the basics

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#### **Background**

Cochrane's mission aims to make healthcare decisions get better. By conducting systematic reviews Cochrane contributed to transform the way decisions on health are made. Systematic reviews attempt to identify, appraise and synthesize research evidence that meets pre-specified eligibility criteria to answer a medical question.

#### **Description**

Practitioners in insurance medicine have reported difficulties navigating through Cochrane reviews which often are extensive documents. However, it is rarely necessary to read a full Cochrane review to find research evidence for a medical decision. Understanding the structure of a review and knowing where to look for the relevant information can substantially shorten the time to find the answer. Cochrane Insurance Medicine strives to enable professionals in insurance medicine to use Cochrane reviews for decision making.

#### **Description**

This workshop offered by Cochrane Insurance Medicine takes the participants through a Cochrane review, explains the methodology of a systematic review and how to read the findings. It guides to the relevant parts needed for decision making and demonstrate how to apply the results to a case.

#### **Objectives & interactive elements**

In this hands-on workshop participants will learn about the type of questions that can be answered with a Cochrane review. They will learn how to rephrase a specific question arising from the insurance setting into a question that can be answered by scientific literature. They will master the skills to navigate through a Cochrane review and to gather the information relevant for decision making. This way decisions and judgements in the field of insurance medicine can become more evidence-based.

#### **Co- author(s)**

J. Verbeek, A. Verbel, R. Kok, S. Brouwer, F. Abma, Yvonne Suikerbuik

## Short Orals Session 6

Implementation of a Certified Return to Work Coordinator (CRTWC) in a Belgian social security organization.

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### **Background**

In 2014 the Belgian National Institute for Health and Disability Insurance acquired the NIDMAR-license (National Institute of Disability Management and Research) to organize a Belgian certified Disability Management (DM) course. Since 2016, legislation initiates a more prominent focus on prevention of work-disability, describing a specific role for social security physicians. Hereby creating an opportunity to implement a DM approach within the social security context of insurance physicians. This study aims to clarify what is needed to enhance prevention of work-disability including how a CRTWC can contribute to that goal within the Belgian social security context.

### **Methods**

A combined approach of evidence-based practices (as provided by DM) and practice-based evidence (by case-study) will found development of a guideline for supporting return to work by a CRTWC. By using a mixed method design, analysis of current practices will also be carried out to determine what barriers and opportunities are already present.

### **Expected output**

A first phase (January – April 2020) will clarify how -when integrated in a health insurance institute - a CRTWC's contribution supports prevention of work-disability. This will be studied through analysis of the current employed healthcare professionals (except physicians: occupational therapists, physiotherapists, psychologist, nurses,...) within the interdisciplinary team and weighing their educational competencies to requirements of a CRTWC. Furthermore we will describe how this service is currently provided and use this as practice base to develop a conceptual model.

A second phase (may 2020 – October 2021) aims to implement a CRTWC in the interdisciplinary service and to adapt the current practices, based on the evidence gathered in a literature review and by live-prototyping. Resulting in the development of a pilot project that will be applied within the various interdisciplinary teams of the health insurance institute.

## **Impact**

Stakeholder inclusive support is expected to create a positive effect on preventing work-disability. By focusing on capacities instead of illness or disabilities, including attention on customization of jobs, people on sick leave will be retained from exclusion from the labor market. A guideline that identifies barriers and opportunities will enhance evidence-based practice of using a CRTWC in a health insurance institute. Moreover, it might have impact on employers' engagement as well as deliver societal benefits by reducing sick leave costs, removing RTW-barriers, an inclusive organizational policy... On an individual level, positive effects are expected that are linked to the ability to work (participation, recognition, financial improvement...), leading to an increased quality of life.

## Disability Case Managers in the rehabilitation teams: a necessary member for a successful return to work process?

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### **Background**

Returning to work for patients with an acquired brain injury after an intensive rehabilitation period is sometimes an enormous challenge. It is shown that chances of reintegration decrease with 50% after 4 to 6 months, and decrease further to 20% after one year<sup>1</sup>. Work has shown to be beneficial on the quality of life and the level of functioning, as persons feel more accepted and integrated in the society. In Jessa Hospital, an early interdisciplinary intervention program (Weer-Werk) is started, which focuses on work-oriented rehabilitation and involves a Disability Case Manager (DCM) to facilitate the patient's return to work on several aspects. The present study aims to assess the benefits of DCM within the Weer-Werk program with regard to work status, health status and general functioning.

### **Methods**

We conducted a quantitative, longitudinal and controlled intervention study on patients, aged between 18-62 years, with neurological conditions and amputations. Patients in the experimental group (Rehabilitation Center Sint-Ursula, Jessa Hospital, Herk-de-Stad) received a rehabilitation therapy according to the Weer-Werk methodology and the involvement of a DCM. Patients in the control group (Revalidation & MS Centre, Overpelt) received the standard rehabilitation therapy. At the start, the end and 6 months after the rehabilitation, participants were asked to complete questionnaires concerning work status, quality of life (Short Form 36), mental functioning (Depression, Anxiety and Stress Scale), functional status (Barthel Index), participation (Nottingham ADL Index), coping (Utrecht Coping List), self-efficacy (Dutch Self-Efficacy Scale) and general satisfaction with the revalidation track.

### **Results**

A total of 80 patients participated in this study. Of these, 60 patients were included in the experimental group and 20 in the control group. For 8 patients, the rehabilitation is still ongoing, and 26 follow up's needs to be done. At this moment, only preliminary results on work status are available. After 6 months, 50 % of the experimental group is returned to its same or alternative work place, compared to 36% in the control group. Further results are expected around July 2020.

## **Conclusions**

The preliminary results show a promising effect of the DCM on work status. However, more in-depth analyses, associated with the health status, will give a better and more specific insight in the added value of the DCM.

## **References**

1. Depypere M, Donceel P. Gedeeltelijke werkhervatting bij arbeidsongeschikte werknemers op ziekteverzekering in België: een retrospectieve studie. TIJDSCHRIFT VOOR BEDRIJFS- EN VERZEKERINGSGENEESKUNDE. 2010 2010/04/01;18(4):151-6. Dutch.

Lower sick leave claims with a rehabilitation coordinator for patients with longstanding pain or mild to moderate mental illness.

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## **Background**

Longstanding pain and mild to moderate mental illness cause high sick leave claims, low quality of life and high societal and health care costs. There is a need of better methods to identify and offer the right support to these patients. A distinct focus on work ability is needed and the contacts with employers and Social Security Insurance Agency must be strengthened. International experiences tell us that case management programs can be successful models. In Sweden there are good experiences from patients and care givers of a rehabilitation coordinator for the rehabilitation process in primary care. The effects on these efforts on sick leave claims, life quality and health care consumption are scarce.

## **Objectives**

To evaluate the effects of rehabilitation coordination and work out a feasible model for the function within primary care.

## **Methods**

939 patients were recruited in a randomized controlled study, where effects of the structured model with a rehabilitation coordinator is evaluated on sick leave rates, health care consumption and health related quality of life. Satisfaction of patients, physicians and employers were assessed. The model consisted of (1) identifying patients at risk for long term sick leave (2) individually support to identified patients for return to work from special educated coordinators (3) follow ups to adjust the efforts for the patient.

## **Results**

Patients with previous sick leave and mild to moderate mental illness or longstanding pain in the intervention group had a lower sick leave rate on average in the long run compared to the control group. Small differences were reported on health care consumption between the groups. Patients, physicians and employers were satisfied with the function. Quality of life was increased in the intervention group.

## **Conclusions**

A well-structured model of a rehabilitation coordinator showed good effects on patients with long standing pain or mental health concerning sick leave claims and quality of life. Minimal differences on health care consumption between the groups were reported.

### **Impact on insurance medicine**

The role of a well-educated rehabilitation coordinator can have positive effects on patient support, sick leave claims, collaboration between health professionals in primary care, but also for the employers and the financiers of the social insurances.

The role of a Disability Case Manager in return-to-work: experiences from patients, healthcare professionals and employers.

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## **Background**

Returning to work for patients with an acquired brain injury after an intensive rehabilitation period is often an enormous challenge. It is shown that chances of reintegration decrease with 50 % after 4 to 6 months, and decrease further to 20% after one year<sup>1</sup>. In Jessa Hospital, an early interdisciplinary intervention program (Weer-Werk) is started with the involvement of a Disability Case Manager (DCM). The DCM facilitates the patient's return to work on several aspects, and acts as a tailored contact person for the patient, its family, the healthcare professionals, the employers and other potential stakeholders. This study aims to map all the personal experiences from different stakeholders around the involvement of a DCM in the reintegration process.

## **Methods**

For this study, we performed semi-structured interviews in three groups of stakeholders: (1) patients; (2) healthcare professionals from the interdisciplinary intervention program (Weer-Werk); (3) external stakeholders, which included employers, social insurance physicians or occupational physicians, all involved with the reintegration process of 1 or more patients. Questions prompted participants to describe their experiences concerning the involvement of a DCM in the reintegration process. Interviews transcribed verbatim and analyzed with descriptive phenomenology using NVIVO 12.

## **Results**

For now, we included 24 patients in group 1, 7 healthcare professionals in group 2 and 7 external stakeholders in group 3. The semi-structured interviews in group 1 are finished, but for group 2 and 3 more semi-structured interviews will be added in January/February 2020. A preliminary analysis of group 1 showed already a predominantly positive tendency towards the involvement of a DCM in the reintegration process.

## **Conclusions**

An overview of the most relevant experiences in the three different groups, with corresponding conclusions, are expected the first half year of 2020.

## **References**

1. Depypere M, Donceel P. Gedeeltelijke werkhervatting bij arbeidsongeschikte werknemers op ziekteverzekering in België: een retrospectieve studie. TIJDSCHRIFT VOOR BEDRIJFS- EN VERZEKERINGSGENEESKUNDE. 2010 2010/04/01;18(4):151-6. Dutch.

## Establishing a new function within health care for return to work – a Swedish example

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### **Background**

The sick leave rates raised during the last decade especially within mental health and long-standing pain, the majority being women. Therefore, the Swedish government over the last years has financially supported the regions to establish coordinating functions within the health care to enhance the sick leave and rehabilitation process.

### **Objectives**

The coordinating function aims to make the sick leave and rehabilitation process more effective and also enhances the patients returning to work.

### **Description**

Producing the medical certificate and leading the sick leave process is demanding for the physician concerning patients with longstanding health conditions. So are also the follow ups and the external contacts around the patients with the employer and the Social Security Insurance Agency (SSIA), which is the main financier of sick leave costs in Sweden. Assessment of activity limitation in relation to work, has not historically been included in the ordinary Swedish health care. According to the current state of knowledge, early assessment of activity limitations is necessary with patients at risk for long time sick leave. With a rehabilitation coordinator, who often is an occupational-, a physiotherapist or a psychologist with long experience of rehabilitation and understanding functional abilities, this process can be enhanced for all parts. The coordinator early identifies patients at risk through monitoring sick leave rates digitally through the medical record or in dialogue with the physician. Then mapping the level of functioning and work conditions of the patient, assessing the needs of rehabilitation for return to work, and participating in constructing a rehabilitation plan. Further then gives an individual support to the patient encouraging to self-management, coordinates the rehabilitating treatments and activities, promotes collaboration between health care, employers and authorities, mainly the SSIA. Other important parts of the function are to collaborate with the physician and the leader of the unit in sick leave issues as to statistic and educational matters.

## **Conclusions**

The experiences of the function are positive from patients, physicians, health professionals and external actors involved in the sick leave process. Ongoing research in Sweden evaluates the effects and the experiences of the function.

## **Relevance for an international audience**

The rehabilitation coordinator within health care is unusual and new. Experiences show that team work increases and the sick leave process is enhanced with the function. The concept could be of great interest for countries with similar health care system as Sweden.

## Short Orals Session 7

### Work-related medical rehabilitation in patients with musculoskeletal diseases in Germany: a propensity score analysis

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#### **Background**

Musculoskeletal diseases are a leading cause of work absenteeism and work disability. Work-related medical rehabilitation is a multimodal interdisciplinary approach to reduce health-related discrepancies between work capacity and job demands in order to achieve work participation for patients with poor work ability. Randomised controlled trials in patients with musculoskeletal diseases showed that patients who received a work-related medical rehabilitation programme reported higher return to work rates than patients who received a common medical rehabilitation programme.

#### **Objective**

The study tested the relative effectiveness of a work-related medical rehabilitation programme, implemented in routine care, compared with common medical rehabilitation in patients with musculoskeletal disorders (Funding: German Pension Insurance North).

#### **Methods**

Questionnaire data were assessed in 2014 and 2015. By means of propensity-score-matching, participants of work-related medical rehabilitation (intervention group) were compared with similar participants of common medical rehabilitation (control group). The primary outcome was work participation one year after discharge of rehabilitation, extracted from administrative data. Treatment effects were analysed by logistic regression models. Moreover, absolute risk reductions (ARR) and the corresponding number needed to treat (NNT) were calculated.

## **Results**

In total, the data of 859 persons having participated in a rehabilitation programme were considered. By means of propensity score matching, samples with comparable characteristics were created. One year after discharge of rehabilitation, the data of 312 patients (IG: n = 156) were included in the analysis. The analysis of the treatment credibility revealed significant differences in the received dose of work-related therapies between the two treatment arms. One year after rehabilitation, work-related medical rehabilitation increased work participation by eleven percentage points (ARR = 0.11, 95% CI: 0.02 to 0.20, p = 0.020) compared to the common medical rehabilitation. Nine persons would have to be treated in a work-related medical rehabilitation programme in order to achieve one additional employed person (NNT = 9.05, 95% CI: 1.40 to 16.70).

## **Conclusions**

Work-related medical rehabilitation achieved better work participation outcomes after one year compared to common medical rehabilitation. The results indicate the effectiveness of work-related medical rehabilitation under real-life conditions.

## **Impact on insurance medicine practice**

Interventions that work in efficacy studies with carefully selected patients and high treatment fidelity might not necessarily also perform well in real-world settings. Our study showed the effectiveness of an intervention under real-life conditions implemented nationwide by the Federal German Pension Insurance.

## Predictive validity for a non-return to work of the Modified Spinal Function Sort (M-SFS)

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### **Introduction**

According to the Global Burden of Disease Study, musculoskeletal disorders (MSD) are a major cause of incapacity for work. Long-term disability in patients with MSD is often associated with low perceived self-efficacy (PSE). In addition, lower PSE is associated with poorer health outcomes and return to work (RTW). The Modified Spinal Function Sort (M-SFS) is a patient reported health measure to evaluate work-related PSE. The M-SFS contains 20 drawings of physical activities with simple written descriptions. Each task is rated on a 5-point Likert scale ranging from “able” (4 points), to “restricted” (3, 2 or 1 points) or “unable” (0 points) adding up to a total score from 0 to 80. Previous research supports reliable and validity of the M-SFS. However, the predictive validity of the M-SFS for RTW is unknown and is evaluated in this study.

### **Method**

Multi-centre prospective cohort study in patients with MSD with PSE assessment at baseline and evaluation of work activity at three months follow-up. Inclusion criteria were non-specific MSD > 3 months, no co-morbidity limiting work ability and informed consent. PSE was evaluated with the M-SFS with a total of 0-80 points and higher scores representing higher PSE. RTW was dichotomized depending on the number of work days (0 or 1-90). We investigated the predictive validity of the M-SFS to predict RTW by receiver operating characteristic (ROC) curve analysis. An Area Under the Curve (AUC) was considered acceptable if >0.7 and excellent if >0.8. We determined the cut-off value for the optimal prediction of RTW and non-RTW and determined specificity and sensitivity.

### **Results**

Preliminary results concern 105/164 participants. The mean M-SFS score was 62.7 (SD 13.6). RTW rate was 58%. M-SFS prediction of RTW was excellent, the AUC was 0.828 (95% CI 0.749 – 0.907). M-SFS values <57>

### **Conclusion**

The M-SFS for the evaluation of perceived self-efficacy for work-related tasks has excellent predictive validity for RTW. Scores <57>80% sensitivity and specificity.

## Cost-utility analysis of arthroscopic rotator cuff repair: real-world data of reintegration

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### Background and Objectives

To examine the influence of arthroscopic rotator cuff repair (aRCR) on quality of life (QOL), direct medical costs and productivity losses, and evaluate the cost-utility ratio of aRCR compared to an alternative scenario of ongoing nonoperative (nonOP) management from a societal perspective in Switzerland.

### Methods

Patients indicated for aRCR were included in a prospective study and followed up to two years after surgery (postOP) for all measurements. QOL (EQ-5D-5L) and shoulder function (Constant Score, Oxford Shoulder Score, Subjective Shoulder Value) were assessed. Sixteen major insurance companies provided all-diagnoses direct medical costs and patients reported their loss of productivity using the Work Productivity and Activity Impairment Questionnaire. Baseline data at recruitment and costs sustained over one year before (preOP) surgery served as a proxy for nonOP management. Total direct medical costs to gain one extra quality-adjusted life year (QALY) were calculated as the incremental cost-effectiveness ratio (ICER; mean of 2 years postOP compared to 1 year preOP control period). Subgroup analyses were separately performed for traumatic (Trauma-OP) and degenerative (Degen-OP) rotator cuff tear patients. Sensitivity analyses for aRCR patients included intensive nonOP treatment with corresponding QOL gain. The relationship between QOL and shoulder function was explored using regression analysis.

### Results

For 153 aRCR patients (mean age 57 years; 63% male), the mean EQ-5D index improved from 0.71 (preOP) to 0.94 (1 year postOP) and 0.96 (2 years postOP). Mean total costs increased from 5,499 Swiss Francs (CHF) (preOP) to 17,116 CHF (1 year postOP), then decreased to 4,226 CHF (2 years postOP). The ICER for all aRCR patients was 24,924 CHF/QALY (95%CI: 16,742 to 33,106) and 17,357 CHF/QALY (95%CI: 10,951 to 23,763) and 36,474 CHF/QALY (95%CI: 16,301 to 56,648) for the Trauma-OP and Degen-OP groups, respectively. One-hundred-and-six from 110 working patients returned to work on average 77 days after surgery. Mean productivity losses for the aRCR group were 42,001 CHF per patient in the year before surgery and decreased to 5,415 CHF until 2 years after surgery. QOL and shoulder function were significantly associated ( $p < 0.05$ )

## **Conclusions**

For RC patients treated at a specialized Swiss orthopedic clinic, aRCR is a cost-effective intervention associated with clinically relevant improvement in QOL and productivity gains up to 2 years after repair compared to prior nonOP management.

## Short Orals Session 8

Functional Impairment and Requirement Analysis (FIRA): A novel quantitative approach for the systematic evaluation of working capacity in insurance medicine

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### **Background**

According to the guidelines established by Swiss Insurance Medicine, work incapacity assessment should be based on consideration of both worker functional limitations and workplace requirements. In practice, this process includes generation of neither a detailed functional impairment profile nor a detailed requirement profile for the previous or current workplace, which is outside of the formal training of medical experts. As a result, work capacity is usually estimated by medical experts using heuristic approaches based on personal clinical experience, without incorporating quantitative functional information or using algorithms for deriving work capacity from impairment and job requirement profiles. Although heuristic estimates of work incapacity are faster than systematic ones, they may be more error-prone because of the associated broader range of examiner discretion. Variability in estimates resulting from reliance on heuristic approaches may substantially contribute to poor reliability in work capacity estimation among medical experts.

### **Objectives**

Functional Impairment and Requirement Analysis (FIRA) is a novel quantitative and systematic approach to work capacity evaluation in insurance medicine across medical disciplines.

## **Description**

The assessment, which is jointly conducted by medical experts and work psychologists, includes A) Administering of a semi-structured interview to determine the claimant's past and current daily life activities; B) Assigning requirement ratings for the daily activities used to designate past and current performance and determine performance decline; C) Assigning causality ratings to determine the degree of symptom-related functional impairment; D) Statistically modelling the association between functional requirement and functional impairment; E) Exploring professional task domains; F) Assigning requirement ratings for professional task domains to determine the degree of functional requirements in the claimant's job; G) Statistically estimating the degree of functional impairment related to the job requirements; H) Deriving global working capability from the functional impairment profiles. The FIRA is based on the International Classification of Functioning, Disability and Health (ICF), a framework and language for describing health-related conditions in a uniform and standardized manner.

## **Conclusion and Relevance**

The FIRA has the potential to improve reliability among medical experts in work capacity evaluations in insurance medicine, which is one of the major issues in insurance medicine in Switzerland and other countries.

“RE-Toolbox” – a tool providing statistical support in case of incapacity for work, per ICD diagnosis or ICD diagnosis group

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The application “RE-Toolbox” developed for the Swiss Insurance Association (Schweizerischer Versicherungsverband SVV) enables insurance companies and healthcare professionals to compare specific cases per disease within a given population. Appropriate (re-)integration measures can be planned and realized in a standardized way by the integration of standardized catalogues of measures for each disease and corresponding deflection points. Today, data regarding accidents and daily sickness allowances is already being collected automatically and in a standardized way through the interface between insurance companies and “RE-Toolbox”.

The primary objective is that only those cases are handled which are statistically “conspicuous or abnormal in relation to incapacity for work (IW)”. For each reference population, information regarding gender, age segment, job profile, duration of incapacity for work (IW) and the amount of treatment costs is shown both in a table and graphically. The ICD diagnoses or ICD diagnosis groups are the keys to every comparison[1]. The selected intervention points support the specific measures “return-to-work” or “early intervention”. A methodical comparison between the Swiss IW statistics and the data of absence reporting[2] or the American ODG Guidelines[3] and Return-to-Work Guidelines is possible. ODG stands for Official Disability Guidelines.

The clinical guidelines and analyses of ODG aim to improve and evaluate the profitability of work, as do RE-toolbox and the absence report. This facilitates quality care and simultaneously restricts inappropriate use. The evaluation based on industry data of the risk of damage resulting from interventional triage allows to build up adequate reserves. The German absence report, encompassing all economic sectors, provides information on absences, structure and development of the sickness rates of employees in Germany. This is also the future objective in data collection using RE-Toolbox.

Health & Medical Service AG compares the two methods, ODG as well as data of the absence report with their corresponding country specific attributes and figures, with the Swiss standard reference RE-Toolbox. By doing so, it is shown how statistical figures regarding the incapacity for work and its underlying causes can assist medical experts in Switzerland in making decisions. Furthermore, the tool indicates from which additional key figures medical experts can benefit in the insurance sector as well as in routine medical work, including insurance medicine, and at what time during the disease progression such a support seems reasonable or not.

[1] ICD-10-GM Version 2019:

<https://www.dimdi.de/static/de/klassifikationen/icd/icd-10-gm/kode-suche/htmlgm2019/>

[2] Absence report: <https://www.wido.de/publikationen-produkte/buchreihen/fehlzeiten-report/>

[3] ODG: <https://www.mcg.com/odg/odg-solutions/return-work-guidelines-modeling/>

## Using administrative data to assess the risk of permanent work disability: a cohort study

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### **Background**

Rehabilitation can restore and improve work ability in patients with chronic diseases. In Germany, rehabilitation services are provided by the pension agencies. However, about half of the people receiving a disability pension did not use rehabilitation services before their health-related early retirement.

### **Objective**

We developed a risk score using administrative data to assess the risk of permanent work disability. Such a score may support identification of individuals with a high likelihood of receiving a disability pension.

### **Methods**

Our sample was a random and stratified 1-percent sample of individuals aged 18 to 65 years paying pension contributions. We extracted socio-demographic data and data about employment and welfare benefits covering 2010 to 2012 from administrative records. Our outcome was a pension due to work disability that was requested between January 2013 and December 2017. We developed a comprehensive logistic regression model and used the model estimates to determine our risk score weights. Our standardized risk score has a mean of 50 points and a standard deviation of 10 points. Several measures of prognostic accuracy were determined.

### **Results**

We included 352,140 individuals and counted 6,360 (1.8%) disability pensions during the 5-year follow-up. The risk score clearly discriminated individuals with and without a disability pension. The area under the receiver operating characteristic curve was 0.84 (95% CI: 0.83 to 0.84). Using a threshold of  $\geq 50$  points we correctly classified 80.6% of all individuals (sensitivity: 71.5%; specificity: 80.8%). Using  $\geq 60$  points we correctly classified 90.3% (sensitivity: 54.9%; specificity: 91.0%). Individuals with moderate ( $\geq 50$  to less than 60 points) or high risk scores ( $\geq 60$  points) had a 5 times or 17 times higher risk of a disability pension compared to individuals with low scores.

## **Conclusions**

The risk score offers an opportunity to screen for people with high risks of permanent work disability. Individuals with a high risk may be invited by rehabilitation providers or rehabilitation funding agencies to discuss which services and strategies can be used to avoid permanent work disability.

## **Impact on insurance medicine practice**

Our risk index enables us to actively approach people with an increased risk of a health-related exit from the workforce. It can support work capacity evaluation and the assessment of requested rehabilitation and pension benefits. Our risk index can also be used to make the comparison of rehabilitation facilities fairer and to take into account the different case mix of rehabilitation facilities as it is a simple administrative measure of the severity of impairments.

## Short Orals Session 9

### Hiding your heart: What do heart rate signals tell us about mental effort?

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#### **Background**

The validity of neuropsychological assessments depends on the subject's exertion. Exertion can be assessed by symptom validity tests, self-reports and observation. A shortcoming of all three measures is that they cannot provide a continuous monitoring of the associated feeling of mental effort although this is a time dynamic mental state driven by multiple external and internal factors. Theoretically, certain brain- and psychophysiological signals might correlate with mental effort.

#### **Objectives**

Studying the feasibility of monitoring mental effort by heart rate changes in a standardized comprehensive neuropsychological assessment.

#### **Methods**

We measured heart rate in 40 neurological patients showing maximal performance (NP) and 80 healthy individuals, 40 showing maximal performance (MP) and 40 showing consciously reduced performance (RP).

#### **Results**

Random forest analysis was performed to distinguish between MP and RP based on heart rate, which was successful in 90% of the cases. The same algorithm classified more than 50% of NPs as RP, yet NPs were highly committed to the assessment.

#### **Conclusions**

Our study shows systematic changes in heart rate driven by mental exertion in healthy individuals but not in NPs. Further analyses will be presented at the conference to clarify whether NPs mental exertion can be inferred from heart rate with a psychophysiological approach.

## Partner Loss and its Effect on Frailty Trajectories: Results from the Longitudinal Survey of Health, Ageing and Retirement in Europe (SHARE)

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### **Background**

Frailty is a geriatric syndrome closely linked to a variety of adverse health outcomes such as falls, fractures, hospitalization and institutionalization which also contribute to high health care costs. Thus, it is important to identify factors associated with the development of frailty. Previous studies have focused on physical activity, nutrition and socioeconomic status as risk factors for the development of frailty. However, partner loss and its effect on individual frailty trajectories has not been assessed before.

### **Objectives**

It was the aim of this study to examine, if, and to what extent partner loss, a highly stressful life event, presents a risk factor for the development of frailty.

### **Methods**

Using data from the Survey of Health, Ageing and Retirement in Europe (SHARE), we assessed the effect of partner loss on frailty trajectories applying growth curve models. Our study sample included a longitudinal cohort (2004-2017) of 20,848 community-dwelling individuals aged 50 or older from fifteen European countries. Frailty was measured using the validated sex-specific SHARE-Frailty Instrument including muscular weakness, unintended weight loss, decrease in walking capacity, low physical activity, and exhaustion.

### **Results**

The analysed sample contained 18,723 participants who lived in a partnership during their entire observation period and 2,125 participants who lost their partner during the observation period. On average participants were observed over a period of 7.89 years (SD = 3.76, min.: 3 – max.: 14 years). Women experienced an initial increase in frailty following partner loss ( $\beta=0.293$ , [SE=0.081],  $p<0.009$ , SE=0.141], SE=0.018],  $>0.05$ ) (figure 2). However, men's social network connectedness had a significant compensatory effect on the effect of partner loss on frailty levels ( $\beta=-0.129$ , [SE=0.063],  $p<0.05$ )

### **Conclusions**

Partner loss can lead to a significant worsening of frailty among elderly people. After an initial increase in frailty, only women tended to stabilise. However, especially for men, the compensatory effect of social networks suggests a powerful mediator modifying the response of frailty trajectories to partner loss.

### **Impact on insurance medicine practice**

Being a risk factor for the development of frailty, approaches to mitigate the effect of partner loss on frailty trajectories, especially in men, are needed to curb adverse health outcomes and therefore costs. Notable differences in the response of frailty trajectories to partner loss and the compensatory effect of social networks suggest potential for such approaches.

## Intervention studies regarding physicians' sickness certification practice – a scoping review

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### **Background**

Many interventions have been undertaken in order to increase the quality of physician's work with sickness certification of patients. However, they are seldom scientifically evaluated and the knowledge is limited regarding the content and outcomes of such interventions.

### **Objectives**

The aim was to map and compile contents and outcomes measured in intervention studies aimed to influence physicians' sickness certification practices.

### **Methods**

For this scoping review, we searched for peer-reviewed studies on controlled interventions aimed at physicians' sickness certification practices and reporting physician-related outcomes, published in English in January 2009 through February 2019. We searched in PubMed and Web of Science and conducted electronic tracking of citations, references, and author names.

### **Results**

The search resulted in 1399 publications, of these, 37 studies were assessed as relevant. A majority of the studies were from the Netherlands, most (n=26) designed as controlled trials and 11 as randomized controlled trials. The types of interventions were either training, introduction of different guidelines or checklists, collaboration between stakeholders, changes in regulations, or combinations of these four. Follow-up time ranged from immediately after the intervention and up to 4.5 years after. Type of data used were either self-reported, or from registers or medical records. In total, 54 different outcome measures were used, we categorized them as: adherence to and use of guidelines (n=20), competence measured as increase in knowledge or skills regarding sickness certification (n=20), change of attitude to consultation management regarding sickness certification/fit note (n=5), organizational aspects for handling sickness certification e.g. lack of time for such tasks (n=4), and other aspects (n=5). These outcomes were reported as, e.g., frequencies of sickness certification consultations, proportions of information regarding work on sickness certificates (yes/no), or mean score for variation in work capacity assessment, but also as probabilities or ratings. Intended effects were found in most of the interventions.

## **Conclusions**

Most of the interventions measured physicians adherence and use of guidelines as well as competence in terms of increase in knowledge and skills, mainly reported as frequencies and proportions, and it was shown that physicians' sickness certification practice can be influenced by interventions. However, more studies with comparable outcomes are needed to be able to compile the success factors and the effect sizes of interventions targeted at physicians' sickness certification practice.

## **Impact on insurance medicine practice**

The results may provide a basis and an inspiration for other interventions and studies concerning interventions on physicians' sickness certification practice.

The claimants 's sick leave diagnosis does not correspond to what is determined following an independent medical examination.

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### **Background**

Sick-leave certification serves as the basis for compensation in Sweden. We have previously reported that there in 2016 was a 22% discrepancy between the diagnose on the sick-leave certificate and the diagnose established after an independent insurance medicine assessment

### **Objectives**

In the present trial we set out to to investigate the the sick-leave certificates of patients with more than three years sick leave and their diagnoses following an independent insurance medicine assessment.

### **Description**

One hundred and fifty claimants (with a long term sick-leave of 3 years or more) referred from the Swedish Insurance Agency for an independent medical examination during 2018 were randomly selceted. The diagnoses (ICD-10) on their sick-leave certificate were then compared with the diagnose/diagnosis of the assessing physician.

### **Conclusion**

In 62 out 150 `` (41%) with a long term sick-leave their diagnose/diagnosis was/were found to be different from the one on their sick-leave certificate. Our findings suggest that there may be fundamental problems relating to the sick-leave certification process in Sweden.

### **Relevance for an international audience**

Sick-leave certificates need to adopt to disease plasticity (feks neuroplastic changes realting to development from a nocicepetive pain state into a nociplastic state) to allow for a better classification.

## Workshop 7

Workshop: implementation of the training programme “acquired brain injury and return to work”

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### **Background**

As part of a recently finished PhD project scientific knowledge concerning acquired brain injury (ABI) and return to work (RTW) was obtained to support insurance physicians' (IPs)' assessments. In addition, to help Dutch IPs to acquire this knowledge, the “ABI and RTW” training programme was developed and evaluated. The results of this project demonstrated that participating IPs' knowledge increased significantly over time and IPs perceived the training programme to be relevant, useful and appropriate for daily practice. However, the challenge remains to implement this training programme broadly.

### **Objectives**

We aim, first, to present a short version of the “ABI and RTW” training programme. Second, we intend to deliver an outline of determinants that are relevant for implementation of innovations. Third, we purpose to apply the measurement instrument for determinants of innovations (MIDI) to the “ABI and RTW” training programme in an international context. We specifically aim to focus on facilitators of and barriers impacting on broad implementation. Finally, fourth, we aim to identify a spectrum of possible solutions for perceived implementation challenges with an international audience comprising IPs, scientists and educational experts.

### **Description of the outline**

To achieve the four objectives, we will organize an interactive workshop at the EUMASS congress. This workshop contains four parts: first, participants are briefly informed about the content of the “ABI and RTW” training programme, specifically about relevant factors for RTW after ABI, effective RTW-interventions and patients’ and employers’ personal experiences regarding the RTW-process. Second, participants receive information about determinants that are relevant for implementation of innovations: 1) the characteristics of the innovation, 2) the intended users, 3) the organisation, and 4) the social and political context, according to the MIDI. Third, participants are, if they agree to take part, divided into four subgroups. Each subgroup is asked to indicate facilitators of and barriers to implementation of the training programme according to the four main determinants of the MIDI: 1) innovation, 2) users, 3) organisation, and 4) social and political context. The subgroups rotate along these four determinants, and each subgroup elaborates further on the reported barriers and facilitators of the previous subgroup. Fourth, in a final plenary session overall conclusions regarding the reported facilitators and barriers are drawn. Based on these conclusions we intend to identify solutions to address implementation challenges.

### **Interactive elements**

The workshop comprises interactive lectures, quizzes, exercises, case scenarios, small group- and plenary discussions, facilitated by the moderators.

## Workshop 8

Spinal Cord stimulation for chronic pain management: Novel technology or hoax? Insights from a meta-analysis from an insurer's perspective.

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### **Background**

Following accidents and chronic disease, chronic pain can be a long-term complication in patients that is difficult to treat and that may result in long-term work disability. In recent years, electric stimulation therapy of the spinal cord (SCS), an invasive and expensive intervention, is increasingly promoted in the management of intractable chronic pain. To better understand the benefits of SCS, we followed Cochrane guidance and conducted two systematic reviews of randomized trials (RCTs) a) comparing medical management versus SCS (3 studies), and b) comparing novel systems of SCS vs. classic systems (*high vs. low frequency; burst wave vs. tonic; dorsal root ganglion vs. dorsal column*) on patient reported outcomes (5 studies). Given the heterogeneous findings in the systematic reviews, we will use the technique of evidence-based medicine to critically appraise the evidence and determine our certainty in the observed findings.

### **Objectives**

We inform participants about the current body of evidence from RCTs about the benefit of spinal cord stimulation versus other treatment options. We guide participants through key issues of randomized studies (small and large group) that determine the certainty in the evidence. We introduce patient important outcomes in pain trials. We determine the certainty that SCS are beneficial interventions

### **Description of the outline**

Patient scenario; The technology 'Spinal Cord Stimulation'; The evidence: Summary of RCTs; Critical appraisal of methodological features with strengths and weaknesses (examples); Discussion of selected results; Conclusions by the audience.

**Interactive components**

Interactive presentations by all three speakers set up as a discourse with the audience with slots of presenting content followed by discussion slots, planned by speakers or initiated by the audience. Engagement with the audience will be stimulated by questions and little exercises that should be discussed with their neighbors and results being shared with the large group.

**Target audience**

Insurance medicine professionals with an interest in evidence based medicine applied to the practice of insurance medicine when steering the provision of novel health technologies; Professionals want to learn about current knowledge of spinal cord stimulation in the management of chronic pain; Participants have a understanding of the principles and basic concepts of evidence-based medicine.

## Workshop 9

### Return to work with and after Cancer – a multi perspective point of view

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#### **Background**

Return-to-work (RTW) is an important step in the healing process of cancer patients. There are a lot of benefits associated with return-to-work such as financial, purpose, structure, social interactions, etc. However, a lot of (ex-) patients experience physical, cognitive and psychological side-effects that negatively influence their return-to-work.

In the process of RTW there are a lot of actors involved that contribute to the process and that all have a specific point of view.

It is important that all actors and points of view work together to realize a successful RTW.

#### **Objectives**

- \* Clarify the role and perspective off the different actors involved in the process of the RTW. (employer, employee, advisory physician from the health insurance, occupational physician; jobcoach, consultant)
- \* Empathize into different point of view
- \* Exchange experiences
- \* Guidance through each step of the RTW process with or after Cancer
- \* Share good practices (e.g. Rentree, Entree, [www.kankerenwerk.be](http://www.kankerenwerk.be) ) and the critical success factors

#### **Description of the outline**

By playing an interactive game we guide the participants through some aspects of the RTW process with or after cancer. The game brings in the perspective off the multipotential team around the patient involved in the RTW.

#### **Interactive elements**

By questions, quotes, propositions,... participants are invited to share their opinions and experiences.

It's a life boardgame where each participant is necessary to reach the finish, i.e; getting back to work RTW)

## Mini-Symposium 1

### Measurement of (Work) Capacities with the Mini-ICF-APP Social Functioning Scale

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Chronic illness must not only be described on the level of symptoms, but in respect to capacity restrictions and disability. This reflects a bio-psycho-social understanding of illness as outlined also in the ICF (WHO, 2001). For the measurement of capacities special instruments are needed. In the context of mental disorders the Mini-ICF-APP was developed (Linden et al., 2009). It is an internationally validated and used observer rating instrument, which is also suggested in social-medicine guidelines (DRV, 2012; SGPP, 2016).

The Mini-ICF-APP allows to describe the capacity status of a mentally ill person differentiated on 13 (skill) dimensions, with respect to the specific context of the respective case (e.g. cook, manager, teacher, nurse, IT specialist or any other).

The Mini-ICF-APP capacity rating has been validated until now in several languages. Trainings for clinicians are done in order to improve inter-rater reliability and enable conclusions about social-medicine decisions, such as work ability of mentally ill persons.

The symposium reports new developments and empirical data from studies with the Mini-ICF-APP in different contexts: type and degree of capacity disorders according to Mini-ICF-APP in the German outpatient context, in Swiss social insurance context, and rater training outcomes.

## Short Orals Session 11

### Social insurance physician burnout in Romania - stress factors and coping strategies

*C. Oancea<sup>1</sup>, A. Cernamoriti<sup>1</sup>, D. Gherman<sup>1</sup> (<sup>1</sup>Bucharest RO)*

#### **Background**

Burnout syndrome is well documented and highly prevalent among healthcare professionals. Literature search found studies mainly aimed at front line medical specialties, cardiologists or physicians working in intensive care units. Work load and work conditions favor the occurrence of burnout syndrome among social insurance physicians, with many consequences on health status and decrease of the quality of their work.

#### **Objectives**

We aimed to assess the degree of vulnerability to develop burnout syndrome, factors associated with stress and coping strategies at social insurance physicians.

#### **Description**

Social insurance physicians working in territorial services for medical assessment of work capacity from all over the country participated at the study. An observational study was performed to describe the magnitude of the exhaustion syndrome among social insurance doctors. Three questionnaires were filled out by the participants, regarding the degree of burnout, source of stress, stress resistance and stress control. Brief demographic data were also collected. Data were statistically analyzed with appropriate tests using PSPP software. A pilot study on 26 participants was performed in order to analyze the questionnaires and methods to be used and to examine the feasibility of our approach. Of the 26 respondents, 16 were females (61.54%). 38.46% had moderate burnout and irritability resulted as side-effect ( $p < 0.041$ ,  $p = 0.003$ ,  $p = 0.005$ )>

#### **Conclusion**

More than one-third of social insurance physicians had moderate burnout syndrome. Development of strategies to standardize workload was identified as an important action area, along with long-term preservation of health status and professional performance.

Work Home Interaction and self-perceived health. A cross-sectional study in self-employed health care professionals.

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## **Background**

Balancing work and home responsibilities is a challenge for many. Self-employment is often seen as a way of reducing the conflict between home and work as it is thought to allow more flexible work-schedules. However, not all self-employed dictate their own work hours. Especially self-employed health care professionals generally experience long working hours and limited flexibility, which may negatively affect the balance between home and work.

## **Objectives**

To examine the levels of work home interaction (WHI) and home work interaction (HWI) among self-employed health professionals and the relation of WHI/HWI with self-perceived mental and physical health. Furthermore the impact of demographic and family variables and work characteristics on this relationship was investigated.

## **Methods**

A cross-sectional survey among 1406 self-employed health care professionals was performed. Levels of WHI/HWI were measured by the Survey Work-home Interaction—NijmeGen (SWING). Self-perceived mental and physical health was measured by the SF12. Linear regression analysis was used to evaluate the association between work home interaction (WHI) and home work interaction (HWI) and perceived mental and physical health was evaluated using linear regression analysis. Age, gender, family characteristics and work characteristic variables were included in the models to assess whether they could (partly) modify and/or explain the relationships.

## **Results**

Levels of WHI and HWI were moderate for both male and female respondents. Both genders experienced negative influence from negative HWI and negative WHI on their self-perceived mental health. Neither age, family characteristics nor work characteristics could partly explain of the relation between WHI/HWI and self-perceived mental health.

## **Conclusion**

Work home interaction and home work interaction occur in all age groups and in both male and female self-employed health care workers. Levels of WHI and HWI were moderate. In both genders the imbalance between work and home was associated with their self-perceived mental health, but not with their self-perceived physical health. These associations could not be explained by any of the demographic, family or work characteristics in our study.

## **Impact on insurance medicine practice**

Our findings indicate that attention should be given to the balance between home and work in both men and women during the entire working life course.

*G. Grant<sup>1</sup>, B. Kilgour<sup>1</sup> (1Melbourne AU)*

## **Background**

Medical assessments are widely used by government and private insurance organisations to generate evidence for decision-making about claimants' injuries, work capacity and eligibility for entitlements. They operate in a broader context of policies, laws and practices that shape the conduct and duties of stakeholders (including claimants, doctors, lawyers and claims decision-makers). In Australia, as in many other settings, there has been a lack of attention to the diverse regulatory influences on insurance physicians' work. Better understanding of the legal and policy frameworks will inform improved practice by and support for insurance physicians, quality in their work and use of evidence by decision-makers.

## **Objectives**

This research maps the various sources of regulation on insurance physicians operating in Australian social insurance and compensation schemes. It also interviews both insurance physicians and the lawyers who engage them in order to shed light on this underexplored area of practice.

## **Description**

This presentation combines (1) findings from interviews with medical assessors and lawyers and (2) legal analysis of policies, legislation and case law relevant to the regulation of insurance physicians' work. It identifies a range of formal and informal factors shaping the work of insurance physicians undertaking medical and work capacity assessments, including legislation and case law; health practitioner regulation and codes of ethics; contractual agreements; training and accreditation requirements; quality assurance frameworks; court rules and codes of conduct for expert witnesses; and the operation of the market for the selection of insurance physicians as experts for hire.

## **Conclusion**

A diverse range of sources of regulation establish the processes and standards relevant to medical assessments in social insurance and compensation schemes and the obligations of stakeholders. The range and complexity of these influences creates confusion about who is responsible for facilitating quality assurance and improved practice in Australian insurance medicine.

### **Relevance for an international audience**

Our research offers useful insight about how to identify and reconcile the wide range of sources of regulatory influence on the work of insurance physicians and how these influences may contribute to (or even detract from) the quality of assessments in a range of settings.

## Social inequalities in health

*V. Fabri (BRUXELLES BE)*

### **AIM**

The Intermutualist Agency (IMA) describes the health inequalities within the Belgian population using data from the 7 Belgian health insurance funds

### **Method**

To study social inequalities in health, the AIM is linking

(1) a social stratification scale: via the tax statistics relating to the statistical sectors in which members reside, it constitutes a social scale composed of five classes of statistical sectors, ranging from the lowest to the highest tax revenues ;

(2) health indicators constructed with administrative data of members and individual data on care reimbursed and medication consumption

The study considers various indicators of health care utilization, health status, mortality and work disability.

### **Results**

Prevention is less achieved when one goes down the social ladder, despite the fact that preventive care (dental care, screening, contraception) is free of charge. Recourse to general practitioners at home and at the hospital emergencies is higher among the most disadvantaged members. The percentage of members treated for chronic bronchopneumopathy and diabetes is higher in the lower social strata. This applies to treatment of mental illnesses such as depression, psychosis or admission to a psychiatric hospital (factor 2.5). The Standardized Mortality Ratio (SMR) shows a particularly strong gradient: individuals belonging to the lowest class have a 56% higher risk of excess mortality in 2016 compared to the highest class. Finally, the number of members with primary work disability (less than one year) is multiplied by 1.5 and those with work disability (more than one year) by 2.2 in the lowest classes.

### **Conclusion**

Financial accessibility to care should be improved, but the health system is not the only one to blame. Inequalities in health are the result of all the social inequalities present in our society

## Short Orals Session 12

### Psychosocial work environmental factors and workplace health, a systematic literature review

*P. Lytsy<sup>1</sup>, E. Friberg<sup>1</sup> (<sup>1</sup>Stockholm SE)*

#### **Background**

The psychosocial work environment is of importance for the health of individuals and organizations.

#### **Objectives**

To map the existing knowledge, as presented in relevant and well performed systematic reviews, that have investigated associations between psychosocial work environment factors and relevant health related outcomes for the individual as well as for the organization.

#### **Methods**

Systematic reviews of existing knowledge in relevant and well performed systematic reviews were sought without time restriction in three electronic databases: PubMed, PsycINFO, and Cinahl. Two authors independently screened all references and abstracts. Potentially interesting articles were read in full text and their relevance for the objectives were assessed independently by two authors. The quality of the relevant systematic reviews was then independently assessed using a validated instrument. Systematic reviews of moderate or good quality were included in the systematic review.

## **Results**

A total of 42 systematic reviews studying psychosocial work factors' associations to individuals' health or the wellbeing of the organization were included. The main psychosocial work environment factors which were investigated were different models of strain due to stress, conflict and mobbing. About half of the included systematic reviews investigated associations between psychosocial work environment factors and mental health and about half of the systematic reviews investigated associations to somatic disorders, mainly cardiovascular disease, musculoskeletal disorders and pain. Most of the included systematic reviews based their results on workers/employees in general, whereas five systematic reviews focused on workers within health care and veterinary organizations, and a few focuses on other work areas such as industrial workers, police and correctional workers, and people working with occupational groups affected by disasters. Only a few of the included systematic reviews investigated or presented the results as psychosocial factors being protective or salutogenic. The vast majority of the included systematic reviews investigated psychosocial work environment factors as being risk factors for the development of illness, disease or consequences of disease, such as sick leave.

## **Conclusion**

A substantial amount of well performed systematic reviews add to the evidence that psychosocial work environmental factors can both be viewed as risk factors for the development of illness, disease and consequences of diseases such as sick leave, whereas sometimes also described as being protective and balancing factors in such regard.

## **Impact on insurance medicine practice**

The psychosocial work environment is of importance for the health of individuals as well as for the levels of sickness absence in organizations.

The need of and access to medical rehabilitation. A retrospective secondary data analysis.

*T. Petzold<sup>1</sup>, J. Hiebsch<sup>1</sup>, W. Klene<sup>1</sup> (<sup>1</sup>Dresden DE)*

## **Background**

The access and demands of rehabilitation services serve to prevent disability, to improve chronic illnesses and disabilities, and to promote vocational reintegration. In order to determine the need and access for rehabilitation in Germany, the medical service of the health insurance (MDK) must examine applications of the insured. The statutory health insurance funds are obliged to have at least every fourth application for rehabilitation services assessed by MDK-physicians. The aim of the assessment is to evaluate the need for and access to rehabilitation.

## **Objectives**

The aim of the study is to analyse the prevalence in the application behaviour of rehabilitation service as well as its regional variance in Saxony.

## **Methods**

A retrospective secondary data analysis of Saxon insured persons for the years 2017 and 2018 was carried out. All application for rehabilitation services awarded by the MDK Saxony was included in the study. The descriptive analysis of the data included the concrete reason of the assessment, the result of the MDK-assessment, and the regional variation of the application behaviour. For regional representation and comparability, age and gender adjustments were made so as raw values were reported. The district data of the population of the Federal Statistical Office from the GENESIS database were used for standardisation.

## **Results**

There were 35,282 applications for rehabilitation services. The most frequent assessment reasons included the initial application of inpatient rehabilitation (50%; n=17,818) and the extension of inpatient rehabilitation (17%; n=6,114). In 57% (n=20,024) of the applications, the MDK-physician considered the medical prerequisites for granting to be fulfilled. In 27% (n=9,570) the medical requirements were assessed as not fulfilled and in 16% (n=5,688) the available information was incomplete and a new assessment recommended. The regional analysis revealed differences between the Leipzig with 53.1 applications per 100,000 inhabitants and the district of Saxon Switzerland with 137.4 applications per 100,000 inhabitants. With increasing age the application behaviour raises up to 295.3 applications per 100,000 inhabitants.

## **Conclusions**

The results show significant regional as well as age-specific variations in the application behaviour of rehabilitation services of insured inhabitants in Saxony. Even as this is a selective, non-quantifiable sample, determinants influencing the application behaviour are distinct. Further research is necessary to clearly identify the determinants.

## **Impact**

The linkage of the available data with further data can make an important contribution to the evaluation of rehabilitation services, the socio-medical status of insured and for the further development of health care.

## Variation of work participation outcomes and measurement methods in trials: a systematic review.

*M. Ravinskaya<sup>1</sup>, M. Langendam<sup>1</sup>, R. Kunz<sup>2</sup>, J. Verbeek<sup>3</sup>, S. Verstappen<sup>4</sup>, I. Madan<sup>5</sup>, J. Daams<sup>1</sup>, C. Hulshof<sup>1</sup>, J. Hoving<sup>1</sup> (<sup>1</sup>Amsterdam NL; <sup>2</sup>Basel CH; <sup>3</sup>Kuopio FI; <sup>4</sup>Manchester GB; <sup>5</sup>London GB)*

### **Methods**

We performed a systematic review to explore the extent of outcomes and measurement methods heterogeneity in trials that directly and indirectly impact work participation. We searched Medline, Embase, PsycINFO and Cochrane Library for RCT's published between 01/01/2014 and 21/05/2019. Trials were included on any type of intervention which measured work participation outcomes, with participants of the working age, who were either currently employed or seeking competitive employment. A total of 10,222 abstracts and 819 full text articles were screened, and 500 articles were eligible for inclusion. We looked for patterns in work participation outcome reporting in relation to disease type, intervention type and geographic location.

### **Results**

A large amount of heterogeneity in outcome reporting was established. Authors rarely report on why certain outcome measurement methods are chosen. Results show that outcomes can be distributed around four pre-defined main outcome categories: employment status; employability; absence from paid work and at-work productivity loss. The results of our study will be used as input for developing a Core Outcome Set for Work Participation.

### **Conclusion**

The results of this systematic review will be presented during EUMASS 2020. Interim analyses show a great need for a set of consistent definitions on key constructs and outcomes on the outcome concept work participation.

## Perspectives of mental health professionals on labor participation for their clients: a qualitative study

*A. de Rijk<sup>1</sup>, M. Moritz<sup>1</sup>, F. Feron<sup>1</sup> (<sup>1</sup>Maastricht NL)*

### **Background**

The participation in paid work of persons with mental health disorders is significantly lower than for persons without mental health disorders. The setting of mental health care offers opportunities to support labor participation though. The aim of the current study was to explore the perspectives of mental health professionals regarding whether they incorporated aspects of paid work in their treatment and if so, why and how they realized this.

### **Methods**

Qualitative thematic analysis was performed after obtaining data from semi-structured interviews with a purposive sample of diverse mental health professionals (n=11) of a middle-sized mental health institute in the Netherlands. The topic list included: the intake process, importance of paid work and involvement of paid work in the treatment, aligning the treatment with other professionals, awareness of the option to refer to the Individual Placement and Support (IPS-) trajectory and use of this option. Data was transcribed verbatim, coded and themes were distinguished.

### **Results**

Whether keeping paid work or finding paid work were addressed during treatment depended on: type of treatment; professional-related and client-related factors. The professionals emphasized that treatment of the diagnosis was their first goal, not keeping or finding work. Professionals felt further hampered by lack of knowledge on labor participation. To clients who had employment, some recommended work adaptations or encouraged them to use the workplace as a setting to practice new behaviors. How mental health care professionals addressed the issue of paid work depended on how they aligned the treatment with other professionals, whether they were aware of the availability of IPS, whether they referred to other types of health care and depended on their contact with the client's social insurance and occupational health physician.

## **Conclusion**

Treating the diagnosis of the client seems the primary goal, and as long as it does not interfere with the treatment, the issue of paid work is ignored. The support by mental health professionals of participation in paid work might be improved by: increased attention to paid work by mental health professionals, improved collaboration with other professionals (among which social insurance physicians), and financial investment in the availability of IPS might improve.

## **Impact on social insurance practice**

Mental health care professionals shape their treatments differently when they contact the client's social insurance physician, but scarcely do so. More intense collaboration is expected to increase opportunities to participate in (part-time) paid work for persons with mental health disorders.

## Short Orals Session 13

Diagnosis-specific sickness absence and disability pension before and after multiple sclerosis diagnosis with a matched reference group: a Swedish study

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### **Background**

Multiple sclerosis (MS) typically onsets in the years one is active on the labour market and may lead to reduced work capacity. Knowledge about the diagnoses for sickness absence (SA) and disability pension (DP) among people with MS (PwMS) is lacking.

### **Objectives**

Explore diagnosis-specific SA and DP among PwMS and matched references in the years before and after MS diagnosis and analyse the risk of being granted DP after MS diagnosis.

### **Methods**

Longitudinal nationwide Swedish register data on 2567 people who in 2009-2012 were diagnosed with MS when aged 25-59, and 10,268 population-based references (matched on sex, age, educational level, type of living area, and country of birth) were analysed regarding annual diagnosis-specific SA and DP in the 4 years before and 4 years after the MS diagnosis date. Annual differences in mean numbers of SA and/or DP net days were calculated with 95% confidence intervals (CI). Hazard ratios (HR) with 95% CI were estimated with Cox proportional hazard models for being granted DP (all-diagnoses and diagnosis-specific) after MS diagnosis, comparing the PwMS and references.

### **Results**

The mean SA/DP days/year increased among PwMS over follow-up, due to both MS and other diagnoses. During follow-up, around 50% of PwMS had some SA/DP compared to 20% of references. The mean days of SA/DP among the PwMS compared to references increased from 10.3 more days (95% CI: 6.6-14.2) 4 years prior to MS diagnosis to 68.9 days (62.8-75.1) 4 years after MS diagnosis. Although most future DP among PwMS were with MS, 15% were not. The adjusted HR for a new DP spell (all-diagnoses) among PwMS during follow-up was 23.1 (18.1-29.5). The risks of being granted DP with musculoskeletal or mental diagnoses were higher among PwMS (HR 2.6 and 2.0, respectively) compared to references.

## **Conclusions**

PwMS had higher levels of SA and DP days/year than the references, already 4 years before the MS diagnosis, and increasingly so thereafter. The excess of SA/DP prior to MS diagnosis could be related to MS onset. However, the excess of SA/DP were not all due to MS diagnoses, even after being diagnosed with MS. PwMS had a higher risk of having a new DP after being diagnosed with MS in total, but also for diagnoses other than MS.

## **Impact on insurance medicine practice**

PwMS have more SA and DP days than references and higher proportions on SA/DP, not only due to MS but also other diagnoses.

Evaluation of influencing factors for Return To Work (RTW) in patients with chronic pain: the use of a screening tool.

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## **Background**

With about 20%, prevalence of chronic pain is very high in Europe. As we know, the burden of chronic pain is very high, on personal (physical, emotional, social) as well as on societal level, resulting in high (in)direct costs. The latter is caused by among others high rates of work incapacity, with especially an increase in long term incapacity (one year or more). The risk of long term work incapacity rises especially after a sick leave period of 3 months or more.

Furthermore, there is a relation between not working and early death, higher incidence of suicide and higher risk on psychological problems and general health issues.

Therefore, supporting the chronic pain patient towards a feasible return to work (RTW) is essential and therefore early identification of influencing factors for RTW is needed.

## **Objectives**

The objective of this study is to develop a screening tool in order to detect as soon as feasible the focus of follow-up towards RTW and to facilitate communication between all parties.

## **Methods**

After performing a literature study, three expert groups were organized. By means of a nominal group technique work and pain related indicators who should be assessed were selected. Moreover, short clinical tests evaluating functional capacity which should be used were listed, based on literature and expert opinion.

## **Results**

The tool consists of a brief questionnaire and a short clinical test. Results are shown in two parts: part one summarizes the motivational aspects and clinical test. The results of part two (influencing factors) are shown in a visual (Figure 1).

**Conclusions**

A screening tool has been developed, of which the rough version is finalized; it was successfully evaluated on user friendliness (medical doctor and patient). Further validation studies will be done before broad implementation.

**Impact on insurance medicine practice**

The broad implementation of a screening tool could facilitate the communication and approach needed for supporting chronic pain patients towards a successful RTW.

## Barriers and facilitators to sustainable employment: the case of spinal cord injury and acquired brain injury

*K. Karcz<sup>1</sup>, B. Trezzini<sup>1</sup>, B. Schiffman<sup>2</sup>, M. Finger<sup>1</sup> (<sup>1</sup>Nottwil, Lucerne CH; <sup>2</sup>Nottwil CH)*

### **Introduction**

Sustainable employment refers to a match between a person – job – workplace that enables a person to stay healthy and satisfied at work over time, with a work performance that meets the expectations of the person and the employer. Achieving sustainable employment for people with a spinal cord injury (SCI) or an acquired brain injury (ABI) remains to be a challenge as shown by their lower work participation in comparison to the general population. The aim of this study was to identify barriers and facilitators to sustainable employment as reported by people with SCI or ABI.

### **Methods**

To explore barriers and facilitators to sustainable employment of people with SCI or ABI 14 focus groups were conducted (7 SCI, 7 ABI). All participants (n = 46) had been employed at some point after injury. A maximum variation sampling strategy was applied in order to select participants who represent a wide range of demographic attributes, injury characteristics, work features and labor market participation. Data were synthesized using a thematic analysis.

### **Results**

The gathered data reveals the importance of person characteristics and environmental factors. The participants of all groups highlighted that besides personal motivation, learning to be a strong self-advocate plays a crucial role in staying employed. Environmental factors such as flexible work schedules, adapted task profiles, committed employers and understanding colleagues seem to be the main facilitators of long-term employment. As a consequence of their higher mobility limitations, individuals with SCI encounter more difficulties in accessing the workplace and time organization. Furthermore, secondary health conditions, such as chronic pain, urinary tract infections, or pressure sores are prevalent problems and barriers to work sustainability. In contrast, individuals with ABI emphasized experiencing difficulties in particular because of invisible impairments such as fatigue, problems with concentration, memory and personality changes. In addition, individuals with ABI tend to struggle with performance limitations due to cognitive, emotional, and behavioural problems.

## **Conclusions**

Findings from this study inform about the main barriers and facilitators encountered by people with SCI or ABI on the labour market. Both personal and environmental factors, directly and indirectly related to work, emerged as crucial for sustained employment. Identifying barriers and facilitators to sustainable employment of people with SCI or ABI provides practitioners with the knowledge essential to design effective interventions, which are fundamental to support not only vocational reintegration but also to promote sustainable employment.

## Sustainable employment for person with spinal cord injury or acquired brain injury: A qualitative study from the employer's perspective

*B. Schiffmann<sup>1</sup>, B. Trezzini<sup>1</sup>, K. Karcz<sup>1</sup>, M. Finger<sup>1</sup> (<sup>1</sup>Nottwil CH)*

### **Background**

Sustainable employment refers to a match between a person – job – workplace that enables a person to stay healthy and satisfied at work over time, with a work performance that meets the expectations of the person and the employer. Achieving sustainable employment for people with a spinal cord injury (SCI) or an acquired brain injury (ABI) remains to be a challenge. Employers are essential stakeholders in the return-to work integration as well as a sustained employment.

### **Objective**

The aim of this study is to find success factors and challenges for sustained employment of person with SCI or ABI from the employer's perspective.

### **Methods**

The study applies qualitative design. 20 Semi-structured interviews with employers of persons with SCI or TBI were conducted. The thematic content analysis of the interviews has started.

### **Preliminary Results**

Overall success factors for sustained employment from employer's perspective are disability friendly culture in the organization, access of workplace, flexible work organization and establishing an open communication between the person with SCI or TBI and their supervisor about their needs and abilities and between supervisor and the co-workers about agreements regarding the person's situation. Additionally, a stable health and insurance situation of the person and an ongoing improvement of the person-job match contribute to a long-term Win-Win situation for the employers and the employees.

Challenges for employers derive from lack of knowledge and communication or not congruent views between employer and employee about the person's abilities and needs, especially for employees with TBI due to lack of visibility of cognitive impairments. Difficulties also derive from very small or unstable workloads leading to extra effort for supervisors and co-workers. Employers with no experience regarding person with disability benefit from a neutral coaching (not insurance) to bridge the understanding of the person and the employer in the beginning and over work-life-course.

## **Conclusions**

Employers play a key role for sustainable employment of people with SCI and TBI. The study informs about main success factors and challenges encountered by employers of people with SCI and TBI. Employers as well as people with TBI and SCI need to be enabled to establish an open communicate culture to talk about the person's abilities and needs to continuously improve the person-job-workplace match and overcome challenging situations.

## **Relevance for insurance medicine**

Sustainable employment of people with SCI and TBI lead to cost effectiveness of disability insurance and social support system overall.

Developing an occupation-specific job matching tool for reintegrating persons with spinal cord injury into the labor market.

*M. Nützi<sup>1</sup>, B. Trezzini<sup>1</sup>, S. Staubli<sup>1</sup>, E. Ronca<sup>1</sup>, U. Schwegler<sup>1</sup> (<sup>1</sup>Nottwil CH)*

## **Background**

Sustainable return to work of persons with disabilities requires a good match of a person's capabilities, characteristics and health condition-specific needs with the demands and characteristics of their job. Therefore, job matching represents a key procedure in vocational rehabilitation of persons with disabilities. However, currently available job matching tools do neither allow for a comprehensive documentation of the key aspects of job matching, nor do they lend themselves to describe the demands and characteristics of particular occupations.

## **Objectives**

The present study thus aimed at developing and pretesting a comprehensive occupation- and health condition-specific job matching tool for vocational rehabilitation by using persons with spinal cord injury as a case in point.

## **Methods**

The study design involved qualitative and quantitative steps. First, an interdisciplinary scoping review covering return-to-work, organizational and vocational psychology research was conducted to devise a conceptual job matching framework for vocational rehabilitation. Then, the occupation- and health condition-specific tool content was determined based on a database analysis of jobs performed by persons with spinal cord injury and focus groups with affected persons. Finally, a tool prototype was developed and pretested in a simulation exercise with vocational rehabilitation professionals.

## **Results**

The study yielded a tool prototype with matching profiles that structure the demands and characteristics of 415 occupations as well as spinal cord injury-related needs and limitations into a stable, a modifiable, and a needs-supplies dimension of person-job match. Vocational rehabilitation professionals perceived the tool as helpful for determining customized target jobs for vocational retraining and for deriving goal-oriented interventions in the interdisciplinary setting of vocational rehabilitation.

## **Conclusions**

By comprehensively assessing the person-job match of individuals with spinal cord injury, the tool facilitates a customized determination of target jobs and a goal-oriented intervention planning in vocational rehabilitation and is thus likely to promote sustainable return to work of the affected persons.

Reference: Nützi, M., Trezzini, B., Staubli, S., Ronca, E. & Schwegler, U. (2019): An interdisciplinary approach to job matching: developing an occupation-specific job matching tool for reintegrating persons with spinal cord injury into the labor market. *Disability and Rehabilitation*, DOI: 10.1080/09638288.2018.1561958

## Workshop 11

Welcome to the Future: the practical applications of new technologies in social insurance medicine

*E. Muller<sup>1</sup>, J. van Rijssen<sup>1</sup>, M. Huysmans<sup>1</sup>, J. Anema<sup>1</sup> (<sup>1</sup>Amsterdam NL)*

### **Background**

New technologies, such as e-health applications, tele-medicine, social media, and artificial intelligence, are all around. These technologies are fastly developing, and increasingly applied in the medical field, yet are scarce in the field of social insurance medicine. This offers the interesting opportunity to integrate promising new technological in daily practice of insurance physicians, to improve their work disability assessments, the guidance of people with work disabilities, and to facilitate clients' return to work.

### **Objectives**

We aim to create insight into the opportunities and pitfalls of applying new technologies in insurance medicine, and into the broad range of technologies that are potentially applicable. By connecting researchers with interest in this field, we aim to create a sustainable international network that continues sharing experiences on studying and applying new technologies in social insurance medicine.

### **Description of the outline**

After a short introduction, a small quiz will be conducted. This promotes interaction and we will get insight in the knowledge, expertise, and background of the participants attending the workshop.

Next, we will present the intermediate results of a PhD study that we are performing; an overview of applications and tools that seem promising to be used in Dutch insurance medicine setting. Several applications and tools will be presented by short pitches, and will be illustrated with a short video or real life demonstration if possible. Participants are asked to grade the usability (using a digital rating system or post-its, depending on the number of participants) of the presented technologies for use in the insurance medicine field. Furthermore, participant are challenged to name one benefit and one disadvantage of the presented technologies.

Finally, we will explore which new technologies are missing and what other possibilities the participants see for using technologies in the work of the insurance physician, from their own perspectives. We will combine the ideas in clusters of technological approaches. For this, we will use a qualitative research technique for brainstorming, such as the nominal group technique (NGT). NTG is a structured method for group brainstorming that facilitates quick agreement. It involves identifying the problems, generating solutions, and making decisions (by ranking or by a more 'subjective' form of evaluation). We will facilitate sharing and discussing the reasons for the choices made by each participant, thereby identifying common ground, and a variety of (combined) ideas.

### **Interactive elements**

Short interactive lecture/pitches, plenary discussion/brainstorm (e.g. using nominal group technique), small group discussions, quiz, networking.

## Mini-Symposium 2

### Sustainable work for persons with disabilities: Bridging rehabilitation, integration and disability evaluation

*U. Schwegler<sup>1</sup>, M. Finger<sup>1</sup>, M. Nützi<sup>1</sup>, K. Karcz<sup>1</sup> (<sup>1</sup>Nottwil CH)*

Sustainable work is a core topic in social security schemes because it not only fosters health and quality of life of persons with disabilities but also promises cost savings for social security insurance providers and the entire social security system. The recent years, however, were characterized by an increasing fragmentation in social security systems along with a focus on short-term outcomes such as a fast return to work or isolated questions such as work capacity determination without sufficiently taking into account the long-term perspective of employment retention. Yet taking a life course perspective on affected persons' vocational integration paths is crucial to overcome interfaces between different settings (i.e. rehabilitation, integration, disability evaluation) and providers in a social security scheme (i.e. health, accident and disability insurers).

By taking Switzerland as a case in point, the symposium aims to

- (1) introduce a life-course approach to sustainable work integration of persons with disabilities;
- (2) present the development of goal-oriented tools and strategies for a systematic alignment of vocational rehabilitation, integration and employment retention services and disability evaluation procedures towards a sustainable work;
- (3) discuss efforts fostering a sustainable work integration and an effective interface management in social security schemes from an international perspective.

## Short Orals Session 14

### Occupational diseases in self-employed workers in France

*F. Latil<sup>1</sup>, B. Neme<sup>2</sup> (1PARIS FR; 2SAINT-OUEN FR)*

#### **Occupational diseases in self-employed workers in France**

##### **Background**

In France, self-employed workers receive disability benefits, but are outside of the specific legislation protecting employees from occupational accident and diseases. Physicians are generally not aware of this shortcoming and ask for occupational diseases benefits, for their patients as they do for salaried employees. The health fund of independent workers (HFIW), dismiss the application, which is uphold by law, but can be a threat to the patient, if it shuts hope for other available benefits. Our aim was to see if the request for occupational diseases was related to significant disability in self-employed workers, and if such a disability could be handled by available benefits from HFIW. This survey could be instructive for countries without occupational diseases frame for self-employed workers.

##### **Methods**

A prospective study was conducted on self-employed claimants applying for occupational disease, from June 2015 to September 2017, with an 18 month period follow-up, in the Ile- de- France region. A questionnaire was sent to the claimant and the data were completed through a phone call or appointment. The main outcome was the number of claimants qualifying for disability benefit available at the HFIW.

##### **Results**

148 claimants were identified and 141 (95%) matched with the occupational diseases legal setting. The causative agents were close to those observed in employed workers: musculoskeletal, asbestosis. Disability allowance, complete or partial, could be provided by the HFIW because the medical criteria were met in 38 claimants(27%) ; benefits for asbestosis exposure were possible through a specialized body for 16 claimants (11%).

**Conclusion**

The occupational disease request from self-employed workers matched with medical conditions granted by the HFIW, or external social bodies. An Immediate apply for disability benefit could be set up for 27% of the claimants.

**Impact on insurance medicine practice**

A screening of the claim for occupational disease in self-employed patients could be routinely implemented by nurses or any insurance officer.

## The effectiveness of living labs for successful implementation of innovation in healthcare: a systematic review

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(<sup>1</sup>Amsterdam NL)*

### **Background**

The concept of living labs gained increasing attention over the past decade as a research method to enhance participation of end-users in the development and implementation process of an innovation. In healthcare it is unknown if the living lab approach can achieve better practice-wide implementation.

### **Objectives**

The objective of this systematic literature review is to summarize the literature on the effectiveness of a living lab approach on successful implementation of innovations.

### **Methods**

A systematic literature review was conducted searching the Pubmed, Embase, Psycinfo and CINAHL databases to identify papers reporting on living labs and successful implementation. The search terms for the concept of living labs include : living lab, collaborative innovation, co-creation, co-creation of knowledge, co-design, co-production, collaborative action research and participatory action research. To evaluate the effect of living labs on successful implementation, studies are included that describe successful implementation as innovations that are implemented in standard practice . Data extraction is performed using a pre-defined data extraction form and risk of bias is assessed with the Critical Appraisal Skills Programme (CASP) checklist for qualitative research. No restriction on study type is incurred. For the data synthesis a narrative synthesis is used. We anticipate that there will be limited scope for meta-analysis and pooling of data as the studies are expected to be heterogeneous.

### **Results**

A preliminary search yielded 1095 unique papers that will be screened. The results will be available at the time of the conferences and are currently underway.

## **Conclusions**

It is anticipated that living labs add value to the implementation of innovations due to its interactive and iterative nature with end-users and other important stakeholders. More insight into the added-value of living labs may guide future healthcare innovation projects, including the field of insurance medicine.

## **Impact on Insurance medicine in practice**

The results of this review may help insurance medicine to enhance participation in co-creation of innovations with the goal of improving quality of practice. Furthermore, the results may support introduction of living labs as surplus value to enhance practice-wide update of innovations in insurance medicine.

## Design of hospital care billing controls in Slovenia

*I. Querrioux<sup>1</sup>, M. Gaber<sup>1</sup> (Ljubljana SI)*

### **Issue**

Controlling the billing for hospital care is part of the control activity performed by the Health Insurance Institute of Slovenia (HIIS or ZZZS: Zavod za Zdravstveno Zavarovanje Slovenije).

Every year significant miscalculations are discovered while performing controls of the billing for hospital care.

### **Description**

In Slovenia, hospital activity is calculated on the basis of DRG codes (Diagnosis Related Group). The coding applies the Coding Standards - Australian Version 6, Slovenian Supplement.

Appendix C to the Coding Standards, called the Slovenian Supplement, resolves some of the ambiguities encountered while performing our controls and gives instructions for correct coding in typical types of hospital treatments.

The ZZZS regularly monitors the number and the types of DRG codes reported by each contractor. By analyzing the received information, we monitor compliance with coding standards, billing rules applicable in Slovenia and with the instructions given while performing controls.

ZZZS carries out controls every year in all hospitals. The number of controls performed depends on the size of the hospital and on the data obtained.

Part of the controls are specifically planned at contractors who significantly step out in the calculation of different DRG codes, based on the size of the institution and the data they reported. A significant number of controls are planned in a way that we check the same types of DRG at most contractors.

### **Results**

In 2018, ZZZS performed 790 controls in total. 400 were administrative controls and 390 were performed by healthcare professionals directly at the contractors, 66 of which were controls over billing for hospital activity.

In the year 2018, 346 782 cases of acute hospital treatment were counted. Slovenian population that year was just over 2 millions inhabitants, which means that on average every 6th person benefited from hospital care. The services were provided by 29 contractors, including 2 university hospitals, 10 general hospitals, 7 specialized hospitals and 10 private hospitals.

Last year, an average of 19.8% of miscalculations were found. Thus there was a total of 1 221 857,38 EUR of inadequately charged services, which represents just over 18 500 EUR per individual control.

### **Lessons**

Designing controls of the billing for hospital care is a challenging task. Their main goal is to ensure fair and unified coding practices over the slovenian territory.

*M. Nöpflin<sup>1</sup>, C. Huber<sup>1</sup>, E. Blozik<sup>1</sup> (<sup>1</sup>Dübendorf CH)*

## **Background**

In absence of valid population-based clinical data, claims data from mandatory health insurance provide a valuable data source for health services research in Switzerland. The claims data are routinely collected, available from all parts of the country, across all age groups of the population, and cover detailed information from both the outpatient and the inpatient healthcare setting.

## **Objective**

The aim of this presentation is to describe the potential of health insurance claims data by giving insights into one such database, and by providing an overview of health services research studies based on this database.

## **Methods**

All presented studies are based on anonymized records from the mandatory health insurance claims database of the Helsana Group. Helsana is one of the largest health insurances in Switzerland, covering about 1.2 million obligatory insured persons across all 26 cantons. Descriptive and multivariable regression analyses were performed to determine the study results.

## **Results**

The presentation shows the strengths and limitations of health insurance claims data as a data source and its potential to draw conclusions about the use of health services. In addition, presented examples demonstrate how illustrative real-life information can be derived from claims data. Particular attention will be paid to analyzing patient and health care provider behavior (such as guideline adherence) and patterns of resource utilization (e.g. medication use).

## **Conclusions**

The presentation illustrates applied examples of health services research based on health insurance claims data. The results help to describe and quantify the burden of potential over-, under- and misuse of health care. Providing these findings is important to implement instruments for improvement of healthcare quality. Moreover, the data are very useful as a basis for decisions making in health care management. The presented methods may also be transferable to other sources of routine data.

## **Impact**

The presentation shows how insurance companies can use own resources to monitor the use of the health care system and implement quality measurements.

## Short Orals Session 15

### Labor market trajectories of young disabled people applying for disability benefits

*F. Abma<sup>1</sup>, T. Hoekstra<sup>1</sup>, S. Brouwer<sup>1</sup> (<sup>1</sup>Groningen NL)*

#### **Background**

For young disabled persons the transition into entering and staying in the labor market is not without difficulties. Their labor market entry often shows an insecure and volatile nature. However, existing studies often have short follow-up periods and look at single periods instead of transitions as sequences.

#### **Objective**

The main aim of this study is to gain insight in the various long-term labor market trajectories of young disabled workers.

#### **Methods**

Data from the 'Young Disabled at Work' prospective cohort study was used, following N=3455 young adults with disabilities, aged between 15-27, applying for disability benefits. Seven year follow-up data regarding labor market status were obtained by data-linkage with Statistics Netherlands (CBS). Labor market outcomes were divided into 3 mutually exclusive categories: 1= Working (either with contract or self-employed); 2= Partially active (Recipient of any social security benefits and working; in education; and working member in family business); 3= Inactive (Recipient of social security benefits (including young disability benefits, unemployment, work disability, welfare old age pension; or other without income) for each month.

#### **Results**

The mean age of applicants was 23.4 years, and 45.1% was female. Psychiatric and developmental disorders was the most common diagnosis in both granted and rejected applications, respectively 41.2% and 44.3%. When looking at the 20 most common trajectories, the stable Inactive group (N=926, 71,7%) is by far the largest group. N=62 (4,8%) applicants were stable at work in the years after application for benefits. Of the group starting in the Partially active group, the vast majority ends up in the Inactive group in the follow-up period, while a small group ends up in the Working group or remains in the Partially active group.

## **Conclusion and impact**

These findings show a problematic transition into work for many young adults with disabilities. The vast majority ends up inactive on the labor market receiving. Many young adults that enter the labor market at some point are unable to maintain their active role in the labor market. The challenge is to help these adults persevere their labor market participation by providing the activating support and guidance.

## Vocational rehabilitation services for young persons without precondition of illness or impairment - new approaches to assessment for disability prevention

*J. Löfstedt<sup>1</sup>, K. Koskenvuo<sup>1</sup>, J. Rouvinen<sup>2</sup> (<sup>1</sup>Helsinki FI; <sup>2</sup>Kuopio FI)*

### **Background**

In Finland, as in the most OECD countries, the number of young adults receiving disability pension has increased. The use of sickness-based benefits, such as the disability pension, has more than doubled among young people during the past twenty years. In addition, the proportion of young people neither in employment nor in education or training (the NEET rate) is high in Finland compared to the other Nordic countries.

### **Objectives**

Kela, the Social Insurance Institution of Finland, looks after basic security for all persons resident in Finland through the different stages of their lives. The statutory duties of Kela include proposing improvements to the legislation governing social security. In addition, Kela is responsible for carrying out research contributing to the development of social security.

### **Description**

In 2017, Kela was tasked with developing rehabilitation services targeted to young people under the age of 30. The aim was to ease the criteria for the vocational rehabilitation services and make the process of applying for vocational rehabilitation services more flexible. A development project focusing on rehabilitation services for NEETs was established to prepare the amendments (2018-2019).

### **Conclusions**

Based on the experiences of the development project, including the new vocational rehabilitation service titled “NUOTTI-coaching”, the criteria for the vocational rehabilitation of young people were eased by removing the preconditions of illness or impairment. As part of the project a recommendation was made (in collaboration with the National Institute for Health and Welfare), based on the ICF framework, on how to evaluate the functional capacity of young people without having performed a diagnosis. This recommendation is aimed at experts, such as youth workers, who are in direct contact with young people.

## **Relevance**

Substituting the terms used in the ICF framework for the preconditions of illness or impairment represents a new approach to assessment aiming at disability prevention. The possibility for young persons to have more timely and flexible access to rehabilitation services has been received positively. The number of recipients of vocational rehabilitation services for young persons has increased significantly during 2019. By the end of October over 1 300 young people had received such services.

During the development project focusing on rehabilitation services for NEETs, a total of 1 143 young persons received vocational rehabilitation services. A register-based follow-up study on the use of benefits and services before, during and after the development project is in progress at Kela.

*J. Narusyte<sup>1</sup>, P. Svedberg<sup>1</sup>, A. Ropponen<sup>1</sup> (<sup>1</sup>Stockholm SE)*

## **Background**

Mental health problems as well as sickness absence (SA) due to mental diagnoses are public health problems among young adults in Sweden. However, knowledge is lacking on whether experiencing mental health problems at young ages is of importance for future SA.

## **Objectives**

The aim was to investigate whether occurrence of SA among young adults employed in the private sector differed depending on presence of depression and/or anxiety symptoms in adolescence .

## **Methods**

The study included data on 11,441 twins born in Sweden 1959-1986 and employed in private sector. A total of 9698 twins were participants of a web-based survey STAGE conducted in 2005, and 1743 twins were participants of a longitudinal study of development of behaviour problems, TCHAD. Information on depression and anxiety was obtained from the surveys, when participants were 20-44 (STAGE) and 16-17 (TCHAD) years old. Data on employment sector and on occurrence of SA until 2013 were obtained from national registries. Frequencies and length of SA and among those who experienced depression and/or anxiety in adolescence (TCHAD) and young adulthood (STAGE) stratified by sex.

## **Results**

Preliminary results showed that 45% of the women and 28% of the men had at least one SA spell during the follow-up. Among STAGE participants who have experienced depression and/or anxiety in young adulthood, the occurrence of SA was higher (66% and 44% among women and men, respectively) compared to those who did not experience depression or anxiety in young adulthood (45% and 28% among women and men, respectively). Among TCHAD participants who have had depression/anxiety in adolescence, 38% of the women had at least one SA-spell during follow-up, which was only slightly higher than SA-occurrence among women without depression/anxiety in adolescence (35%). The majority of the men with SA during follow-up did not have depression/anxiety in adolescence.

## **Conclusions**

Occurrence of SA among both women and men were more common among those who have experienced depression and/or anxiety in young adulthood.

## **Impact on insurance medicine practice**

Depression and anxiety in young adulthood seem to have a long-term impact on work capacity. The results suggest that aspects related to work capacity may be an important part of treatment of depression and anxiety with a purpose to prevent future sickness absence.

## Enhancing Return-To-Work Among Partially Work Disabled Persons: Development Of A Triage Instrument And Decision Aid For Vocational Rehabilitation Experts.

*C. de Geus<sup>1</sup>, M. Huysmans<sup>1</sup>, J. van Rijssen<sup>2</sup>, J. Anema<sup>1</sup> (<sup>1</sup>Amsterdam NL; <sup>2</sup>Amsterdam NL)*

### **Background**

The vocational rehabilitation of partially disabled persons who have been partially work disabled for more than 90 days due to longstanding health problems or a disability can be difficult for vocational rehabilitation experts. A triage instrument and decision aid can give vocational rehabilitation experts such as insurance physicians an evidence-based understanding of the most relevant return to work (RTW) factors and effective RTW interventions for this population.

### **Objectives**

We aim to develop a triage instrument and decision aid to support professionals in delivering evidence-based, individually tailored service to improve RTW of partially work disabled persons receiving a long term disability benefit. The instrument and decision aid will be developed along the lines of the International Classification of Functioning, Disability and Health (ICF model). The decision aid provides the professional with relevant options for effective interventions. These interventions are selected with the goal to reduce the obstructing RTW factors and strengthen supportive factors. The factors that serve as input for the instrument are provided by, amongst others, the insurance physician.

### **Methods**

Currently, two literature reviews have been conducted. The first review is a meta-review that focusses on relevant barriers and facilitators for RTW for employees who have been sick-listed for at least 90 days. The second review focusses on effective RTW interventions for employees who have been sick listed for at least 90 days. Based on the results of the systematic reviews, a Delphi study among vocational rehabilitation experts - including insurance physicians - will be held in the beginning of 2020 to reach consensus on the content and design of the final instrument.

### **Results**

The preliminary results of the meta-review of relevant RTW-factors show 101 factors such as: motivation to RTW and self-efficacy. The preliminary results of the review on RTW-interventions show, amongst other things, that Individual Placement and Support is an effective RTW intervention for persons with a mental illness.

## **Conclusions**

The aim of this study is to develop a triage instrument and decision aid for vocational rehabilitation experts to enhance and support evidence-based, individually tailored service to partially disabled persons. The instrument will be developed based on the results of a Delphi study, of which the results will be available in September. In our next study we plan to evaluate the (cost)effectiveness of the instrument in a randomized controlled trial.

## **Impact on insurance medicine practice.**

The instrument and decision aid will help vocational rehabilitation experts in making evidence-based decisions on effective interventions for partially work disabled workers.

## Short Orals Session 16

How to measure motivation in work disability: an assessment tool and its influence on return to work

C. Vanovenberghe<sup>1</sup>, A. Van Den Broeck<sup>2</sup>, E. Lauwerier<sup>3</sup>, M. Du Bois<sup>2</sup>  
(<sup>1</sup>Gentbrugge BE, <sup>2</sup>Leuven BE, <sup>3</sup>Gent BE)

### **Background**

We report on a project commissioned by the UK Government's executive agency Public Health England (PHE) to develop and pilot a set of curriculum resources on health and work that were available to six medical schools in England. This project is underpinned by the 2018 *Outcomes for Graduates* developed by the UK's General Medical Council (or GMC), which sets the standards for medical schools in the UK. It includes an expectation that newly qualified doctors will be able *describe the principles of holding a fitness for work conversation with patients...and how to make referrals to colleagues and other agencies.*

The aim of this project was to improve the health and work dialogue between doctors of the future and patients. The background to this work lies within the UK Government's national vision to reduce health-related worklessness and help individuals achieve their work and health potential, which it set out in its command paper *Improving Lives: the Future of Work, Health and Disability.*

The purpose of the pilot was to answer the question, "Is it feasible to implement the teaching of health and work topics into the medical school curriculum?"

### **Objectives**

The overarching aim of the project was to design and pilot an integrated curriculum for future doctors that addresses how to communicate with service users/patients about staying in and returning to work.

### **Methods**

Qualitative and quantitative methods were employed involving telephone interviews with course tutors prior to and following the teaching pilot, student surveys and focus groups in each of the six medical schools who took part in the pilot.

**Results** The results indicated: where aspects of the curriculum improved understanding of broaching health and work conversations; helped to recognise what factors facilitated further learning; what support and advice the tutors required to teach the materials, and where additional resources were needed to help deliver the teaching resources. Lastly, the results highlighted what some of the limitations were with introducing the health and work curriculum.

### **Conclusions**

This pilot study showed it was possible to introduce a set of curriculum resources on health and work in English medical schools, with course tutors welcoming the opportunity of using a range of teaching materials aimed at undergraduate medical education.

### **Impact on insurance medicine practice**

None.

## Exploring “practice-based evidence” to maintain/regain employment for cancer-patients in Belgian oncology care

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### **Background**

For cancer-survivors at working age, labour-participation is part of their quality of life (QoL) and therefore an important element in care-services that aim to enhance QoL. A growing amount of scientific evidence emphasises on the importance of early administrated and hospital-based support of RTW in cancer-survivors. However, the implementation of available evidence and knowledge on RTW-focused practice in oncological healthcare seems to be very limited.

### **Objectives**

In order to develop a guideline on RTW in cancer-survivors in Belgium, this study inventories practice based evidence to understand what barriers hinder health-care professionals (HcP) to apply the available knowledge. HcP will also be asked about their needs to integrate RTW-oriented knowledge into their practice.

### **Methods**

A scoping review was carried out to update literature that founded a Belgian mimic RCT on hospitalbased RTW-support for cancer-patients. The outcome was used to develop two qualitative studies: 1) in dept interviews with leaders of multidisciplinary teams in oncological care in Belgian hospitals (n = 79); 2) focus group-discussion with multidisciplinary groups of HcP involved in direct patient-contact with cancer survivors. Analyses of transcribed recordings of both studies will be realised by using Nvivo, with contribution of the members of the research-committee (all co-authors).

**Results** The analysis of the first study reveals on one hand the low focus on RTW in hospitals and on the other hand the provision of no cure-related additional services. The need for multidisciplinary team support is recognised but not realised due to lack of time, finances, knowledge, and specific (assessment-) instruments. Only one of the interviewees declared to use scientific evidence to develop additional care-services including RTW-support. The other interviewees mention that when cancer-survivors themselves have question on work-related issues, they look for specific answers (on case-by-case basis). Few hospitals provide some kind of RTW support (often delivered by volunteers or external organisations), but a great part of the interviewees indicate that they regret to be unable to do so in a systematic way. The second study's focusgroup-discussions are planned in January 2020. Full results will be available in July 2020.

### **Impact**

The identification of the barriers and facilitators that influence the way in which oncologic care-practice can or cannot integrate scientific evidence enables not only to set up policies that enhance hospital based quality of RTW-support. It creates a practice based foundation that will provide knowledge to construct the following steps of an implementable guideline.

## Do diagnosis group play a role in associations between sickness absence and inpatient- and specialized outpatient care

*A. Ropponen<sup>1</sup>, L. Mather<sup>1</sup>, M. Wang<sup>1</sup>, J. Narusyte<sup>1</sup>, S. Kärkkäinen<sup>1</sup>, V. Blom<sup>1</sup>, G. Bergström<sup>2</sup>, P. Svedberg<sup>1</sup> (<sup>1</sup>Stockholm SE; <sup>2</sup>Gävle SE)*

### **Background**

Sickness absence (SA) is a common practice in health care. Consequences of SA have merited interest in recent years as the effects are considerable for the individual, employers and for society. The adverse effects of SA include medical (such as hospitalization), psychosocial (comorbidity or related to exclusion from labour market), but also economic (i.e. loss of income or extra costs) aspects. Until now, relatively few studies have investigated the consequences of various SA diagnosis groups.

### **Objectives**

To investigate associations between the main diagnosis groups of SA and subsequent inpatient- and specialized outpatient care.

### **Methods**

Follow-up was based on the national registries included in the Swedish Twin project Of Disability pension and Sickness absence (STODS) from 2003 to 2013. The open cohort sample of twins was limited to those with a first incident SA due to musculoskeletal (ICD-10 M00-M99), mental (F00-F99) and other diagnoses, being alive and living in Sweden, and not having SA due to pregnancy related diagnoses (O00-O99), DP, or attendance to any patient care at baseline. Hence, the final sample consisted of 18,568 individuals of which 5,284 had in- or outpatient care during the follow-up. Mean age at SA was 39.5 years [range 16-79, standard deviation (SD) 12.0] and 61% were women. Cox proportional hazards regression models with covariates including familial factors (i.e. genetics and early shared environment) were utilized to calculate hazard ratios (HR) with 95% confidence intervals (CI).

## **Results**

The mean follow-up time was 5.6 years (range 0-11, SD 3.6 years). During the follow-up 2040 individuals from sample had been admitted to inpatient care whereas 3329 individuals to outpatient care. The main diagnoses for inpatient care were O00-O99 23%, M00-M99 11%, and S00-T98 10%, and for outpatient care M00-M99 17%, S00-T98 14%, and Z00-Z99 12%. Both SA due to mental diagnoses (HR 1.37, 95%CI 1.23, 1.50) and SA due to musculoskeletal diagnoses (HR 1.33, 95%CI 1.22, 1.45) showed increased risk of outpatient care in the models controlling for covariates and familial confounding compared to other diagnoses. Associations between SA and inpatient care attenuated to statistical non-significance when accounting for covariates.

## **Conclusions**

These preliminary findings indicate that SA due to mental or musculoskeletal diagnoses predict outpatient care which should be considered for preventive measures in occupational or other care.

## **Impact on insurance medicine**

Consequences of SA merit attention since SA could be considered as a first indicator for preventive measures to improve health and work capacity.

## Keynote Speakers

Thursday, 16<sup>th</sup> of September 2021



Social Security in a Globalised World - Experiences and Concepts in the Swiss Context

**Thomas Gächter, Prof. Dr. iur.**

Institute of Law, University of Zurich, Zurich CH

**Abstract:** The globalisation of the economy poses a growing challenge to national social security systems. Particularly in connection with digitalisation, it is becoming increasingly difficult to ensure the social protection of all those involved in the economic process. The social security of the future will look different and will have to set different priorities compared to the current systems. The lecture will shed light on the Swiss perspective on these issues. Which approaches can be expanded on in the future, which systems no longer fit into a globalised world?



TOWARDS INTEGRATED HEALTH AND WORK POLICIES.  
First results from the implementation of an OECD Recommendation.

**Shunta Takino**

Shunta Takino will replace Christopher Prinz who unfortunately has been unable to give the talk himself. Shunta Takino is policy analyst at the OECD Directorate for Employment, Labour and Social Affairs. He co-authored OECD's work on mental health and youth policies in response to the COVID-19 crisis.

**Abstract:** Mental ill-health is a key challenge for education, social and labour market policy. The challenge results from the high prevalence and early onset of mental health problems, and the fact that it has long been neglected because of widespread stigma and misconceptions. Recognising the high costs of this neglect for people, employers and society, in 2015 OECD governments have endorsed a number of policy principles to achieve better social and economic outcomes for people with mental health problems. These policy principles were laid down in the "OECD Recommendation of the Council on Integrated Mental Health, Skills and Work Policy" (<https://legalinstruments.oecd.org/en/instruments/334>). This presentation will look at the question if, five years later,

countries have been successful in promoting a more integrated policy stance and especially a stronger integration between health and employment policies



### Mental Health and Work: Challenges and Solutions for Assessing and Improving Work Capacity

**Niklas Baer, PhD, Psychologist**

WorkMed, Psychiatrie Baselland, Liestal CH

**Abstract:** Working problems, sick leaves or disability benefits due to mental ill-health have steadily increased over in past decades in most European countries. Because the prevalence of mental disorders has not changed in the same period, there must be other drivers for this development, e.g. an increased awareness of mental health problems, an improved access to the psychiatric service system, a changed behaviour in sick employees, or a reduced tolerance at the workplace. The presentation highlights some major challenges of the different actors – the people with a mental health problem, the employers, the doctors, and the insurance systems - and provides some possible solutions



### Migration, mental disorders and insurance medicine

**Professor Ellenor Mittendorfer-Rutz**

Head of Division of Insurance Medicine, Acting Head of Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden

**Abstract:** Many European countries have experienced dramatic demographic changes due to increasing global migration. A considerable proportion of these migrants, particularly refugees, have traumatic experiences, placing them at an elevated risk of developing mental disorders, which in turn may lead to long-term work disability. Despite these recent trends, consideration of transcultural aspects in research on work disability is sparse. The presentation will show recent findings on patterns of and pathways to work disability due to mental disorders in migrant populations resettling in European countries. The need for a research field dealing with transcultural insurance medicine will be highlighted.



INDEPENDENT MEDICAL EXAMINATION at 6 months sick leave in Norway. A randomized controlled trial and qualitative evaluations of stakeholders experiences.

**Silje Maeland**

Associate professor, phd

**Abstract:** Independent medical examinations (IME) entail evaluation of a sick listed workers physical or psychological medical condition by a medical practitioner who are required to present an independent opinion, representing neither the compensation insurer nor the injured worker's interests. Every day 330 workers reach six months continuous sickness absence in Norway. The effect of IMEs on return to work have never been evaluated. To develop a knowledgebase, the Norwegian government ordered an effect evaluation of IME in 2015 asking the following research question: What is the effect of IME on return to work for workers sick listed for six months by their general practitioner in Norway.



Social security disability assessments: how to directly assess work capacity, and the challenges that remain

**Ben Baumberg Geiger**

Senior Lecturer in Sociology and Social Policy,  
University of Kent, UK

**Abstract:** There is a strong argument that social security disability assessments should directly assess claimants' work capacity, rather than relying on proxies such as on functioning. However, there is little academic discussion of how such assessments can occur. Based on case studies of eight countries, I argue that these assessments take three forms: (i) "demonstrated assessments" (using claimants' experiences in the labour market), (ii) "structured assessments" (matching functional requirements to workplace demands), and (iii) "expert assessments" (the judgement of skilled professionals). However, we must still develop our knowledge – and accept the limitations – of each way of directly assessing capacity.

## Keynote Speakers

Friday, 17<sup>th</sup> of September 2021



Persistent symptoms after COVID-19:  
the post-COVID-19 syndrome?

**Dr. Anouk W. Vaes**

Department of Research and Development, Ciro, NM Horn,  
Netherlands

**Abstract:** Recovery from COVID-19 can take weeks up to months in previously hospitalized and non-hospitalized patients. Although a large proportion recover fully, part of the patients experience persistent symptoms, such as fatigue, dyspnoea, chest tightness, headache and muscle pain. These persistent symptoms are associated with an impaired quality of life and seriously limit patients' daily life, as patients experience functional limitations and impaired work productivity, or are even unable to return to work. Many of these so-called 'long haulers' or 'long COVID patients' feel unheard, perceive insufficient support from clinicians, and lack clearly defined healthcare pathways. Therefore, action is needed to improve the management and healthcare of these patients.



Using neuroscience to enhance personnel wellbeing and  
productivity

**Professor Minna Huotilainen**

Professor of educational sciences, neuroscientists, University of  
Helsinki, FI

**Abstract:** This talk discusses neuroscientific findings relevant to worklife. Research related to sleep, nutrition, or physical activity helps employers support the wellbeing of their personnel in long term. In contrast, even during one working day, research shows the benefits of short physical activity to cognitive functions. In addition, research on multitasking and task switching gives important understanding for the development of work strategies. Brain research on cognitive ergonomics covers areas of tools, programs, work arrangements as well as work spaces. Finally, the talk also discusses recent research on empathy skills, highly relevant for workplace wellbeing and leadership.



COVID-19 and rehabilitation: current evidence, and impact on services from a European and Italian perspective

**Professor Stefano Negrini**

Full professor, Department of Biomedical, Surgical and Dental Sciences, University "La Statale", Milan, Italy  
Director Laboratory of Evidence Based Rehabilitation, IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

**Abstract:** The presentation will be two-fold: current rehabilitation evidence and impact on services of COVID-19. Cochrane Rehabilitation has launched the REH-COVER (REHAbilitation COVID-19 Evidence-based Response) Action (<https://rehabilitation.cochrane.org/resources/cochrane-rehabilitation-versus-covid-19>) since March 2020 to systematically collect and make available to all the stakeholders the current evidence on the topic. Research questions have been developed with the World Health Organization Rehabilitation Programme and are at the base of the literature mapping updated monthly (<https://rehabilitation.cochrane.org/covid-19/reh-cover-interactive-living-evidence>). These services are available for free to the whole community. Since the start of the pandemic, the impact on rehabilitation services has been huge.

We calculated (an published) that in the first lockdown up to 2.2 million people did not receive the rehabilitation services they needed. Now the situation has partly recovered, but the impact is still huge.



Socioeconomic outcomes in multiple sclerosis – consequence or tell-tale?

**Jan Hillert**

MD, PhD, Professor of Neurology, Department of Clinical Neuroscience Karolinska Institutet, Sweden

**Abstract:** Multiple Sclerosis (MS) is chronic disease of the brain and spinal cord that, if untreated, often leads to devastating consequences for the individual, physically, psychologically and socially. 25 years after the introduction of costly disease modifying

MS therapies we are starting to see a positive change at the population level with less disability and decreasing costs of illness. To optimize interventions, such as treatments, outcomes are needed that are patient centered, objective and data dense. Here, socioeconomic outcomes, as high level proxies for a biological event, a progressing brain disease, may help not only to direct resources but also to optimize their use.



### Total Worker Health: a framework for achieving well-being

#### **Paul A. Schulte**

Ph.D., Division Director, Centers for Disease Control and Prevention (CDC)/National Institute for Occupational Safety and Health (NIOSH)

**Abstract:** Well-being is an overarching construct to address the impact on workers of the changing nature of work, the workforce, and the workplace. Total Worker Health® merges health protection and health promotion and treats the wholeness of workers. The future of work requires that enhanced perspective. An expanded focus for the occupational safety and health professions will help achieve Total Worker Health.



### Multimorbidity as a Challenge of the 21<sup>st</sup> century and its Impact for Rehabilitation

#### **Professor Wolfgang Seger**

Chairman of the Medical Advisory Board, Federal Rehabilitation Council in Frankfurt, Wennigsen GE

**Abstract:** Multimorbidity is a highly prevalent phenomenon of growing public health impact in the 21st century. Multimorbidity is more than an addition of different diseases. It comprises a complex net of mutually influencing factors like physical functioning, mental well-being, social relationships and environmental factors. People with multimorbidity are more sensitive for contextual factors and need multimodal and multidisciplinary support with attention to the patient`s resources. Due to the increasing proportion of multimorbid people in acute medicine the established rehabilitation system is also coming into focus. Manifold action fields are proposed as being crucial for the future of rehabilitation.



What are the „real“ challenges of future medicine and health insurance?

**Professor Dr Joachim Breuer**

President of the International Social Security Association (ISSA) and Prof. Insurance Medicine, Univ. Luebeck GE

**Abstract:** Future medicine and health insurance are facing undisputedly dramatic changes. It is thus no surprise that conferences are focussing on issues like digitalization, artificial intelligence, electronic health records or new technical options for treatments. But is this not just a view from the „inside“, too much concentrated of what medicine and doctors could and health insurance should do? Are there no (other) factors and (e.g. political) developments „outside of medicine“, which have a comparable or even higher impact on the future? The presentation seeks to give a different perspective of what is driving the future of medicine and the health insurance area.



Work disability prevention through interdisciplinary collaboration

**Kari-Pekka Martimo**

Director, Foresight and Research in WDP, at Ilmarinen Pension Insurance Company, Helsinki FI

**Abstract:** Work disability (WD) is a complex problem. Its prevention calls for multiple disciplinary approaches focusing on risks at population level (primary), on incipient work disability (secondary), and on return to work (tertiary prevention). In addition to the individual and workplace issues, risks related to health care and social security systems can delay return to work and even induce WD. In collaboration between various actors, the concept of WD should be clarified, as divergent emphases might hamper successful prevention. Solutions to service coordination, work modification and health-focused practices will be discussed together with proposals for improvement.



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