

Participation To Healthy Workplaces And inclusive Strategies in the Work Sector



EUROPEAN STRATEGIES

FOR INTEGRATION AND RE-INTEGRATION TO WORK FOR PERSONS WITH CHRONIC CONDITIONS

REPORT ON AVAILABLE EVIDENCE ON EFFECTIVENESS



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PATHWAYS PROJECT

“Participation To Healthy Workplaces And inclusive Strategies in the Work Sector”



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REPORT ON AVAILABLE EVIDENCE ON EFFECTIVENESS

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SCOPING PAPER ON THE AVAILABLE EVIDENCE ON THE EFFECTIVENESS OF EXISTING INTEGRATION
AND RE-INTEGRATION INTO WORK STRATEGIES FOR PERSONS WITH CHRONIC CONDITIONS

The PATHWAYS Project

“Participation To Healthy Workplaces And inclusive Strategies in the Work Sector”

PATHWAYS is a 3-year EC funded project for the development of innovative approaches to promote professional integration and reintegration of persons with chronic diseases and improve their employability.

PATHWAYS aims are:

1. To identify integration and re-integration strategies available in Europe and beyond,
2. To determine their effectiveness,
3. To assess the employment related needs of persons with chronic diseases
4. To develop guidelines supporting the implementation of effective professional integration and reintegration strategies.

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1. KEY FINDINGS

BACKGROUND

- ✓ The present evidence synthesis was carried out in the scope of **PATHWAYS** and focuses on the effectiveness of strategies – including policies, systems and services – targeting integration and reintegration to work of people with chronic diseases in Europe.

Policies are binding and non-binding legislative frameworks, provisions and approaches that set a course or a principle of action at local, regional, national or international level, for instance anti-discrimination law.

System strategies include supports, programmes or schemes (including financial support) aimed at promoting employment.

Services strategies encompass activities by private or public entities aimed at assisting jobseekers in finding employment as well as social services that directly or indirectly contribute to the employability of persons with chronic diseases.

- ✓ **Systematic literature review** methodology was used and both scientific publications available in electronic databases and structured reports evaluating national strategies published in countries of the PATHWAYS Consortium were included.
- ✓ Documents contained **quantitative** and **qualitative** information on the impact of integration and re-integration into work strategies
- ✓ **Work- or employment-related outcomes** were employment status, sickness absence, maintaining a job, return to work for employed individuals on sick leave, and obtaining a job

OVERALL FINDINGS

- ✓ **Scientific publications** in English report rather on services while **structured national reports** focus primarily on policy and system evaluations.
- ✓ **Structured reports** were generally very comprehensive, used complex language, focused on descriptive information and were structured according to information required by government agencies.
- ✓ **Findings** of evaluations published in structured national reports are mostly **consistent** with results of scientific publications.

SPECIFIC FINDINGS

Positive change regarding employment status, return to work and sick leave has been reported in **scientific publications** for:

- **Graded sickness-absence certificates** in Norway for persons with chronic disease and disability in general;
- **Part-Time Sick Leave** in Sweden for persons with mental disorders, in Sweden and Finland for persons with musculoskeletal disorders and in Denmark and Finland for persons with chronic conditions but no mental disorders;
- **Early ergonomic intervention** in Finland for women with upper-extremity back pain;
- **Cognitive Behavioural Therapy (CBT)** and, where needed, **Individual Placement and Support (IPS)** in Norway for persons with mental disorders;
- **IPS** in the UK, Netherlands, Switzerland and Sweden, applied exclusively to unemployed persons with mental disorders. IPS was effective in all studies included in the present review;

- **Work-focused CBT** in Germany and in the Netherlands, for persons with mental disorders;
- **Five-step problem-solving process** in the Netherlands for persons with mental disorders;
- **A Behavioural Web-Based** intervention in the Netherlands for persons with mental disorders;
- **A multidisciplinary, coordinated and tailored return to work** intervention in Denmark for persons with chronic disease and disability in general and for persons with low back pain.
- **A multidisciplinary intervention promoting involvement of stakeholders** in the Netherlands for persons with musculoskeletal disorders
- **Occupational therapy** adjuvant to treatment as usual in the Netherlands for persons with mental disorders.
- **Disability evaluation followed by information and advice** in Belgium for persons with low back pain.

The **co-existence of a) active labour market policies** to promote the employment of people with disabilities **and b) passive measures to support people with disabilities** (e.g. disability pensions) has been explored in Italy. A positive association between the co-existence of both measures and the probability of finding a job for individuals with a disability was found.

COMPONENTS OF STRATEGIES APPRECIATED BY STAKEHOLDERS

The following **components** of strategies are appreciated by stakeholders, such as persons with chronic diseases, professionals involved in the rehabilitation process, and employers:

- ✚ **Holistic view of the person and the problem**, as this leads to a comprehensive evaluation and planning of strategies.

- ✚ **Inclusion and planning of sound alongside evaluations of strategies.** This ensures that all aspects, such as outcomes or target population, are clearly defined, can be measured and the implementation of the strategy (or the strategy itself) can be timely improved.
- ✚ **Allocation of appropriate time, personnel, financial resources** to meet the complex challenge posed by reintegration.
- ✚ **Focus on capacity or ability** of the person and not on disability.
- ✚ **Early intervention**, implemented to avoid stagnation of the problem, development of “sick” and “excluded” identity by affected persons and decrease or loss of abilities due to inactivity.
- ✚ **Individualized, flexible structures** regarding to what extend they can be accommodated to the needs of each affected person over time.
- ✚ **Quality of service offered**, in terms of level of expertise of personnel implementing the strategy.
- ✚ **Quality and appropriateness of training** received by personnel implementing the strategy.
- ✚ **Effective coordination and communication among agencies**, for example employment services, health care and social insurance services.
- ✚ **Modules of strategies integrated into other services**, for example employment counselling is integrated within mental health care.
- ✚ **Coordination and organization** of services to avoid or reduce unnecessary and demotivating waiting times for users.
- ✚ **Integration and openness to creative solutions** such as peer counselling. For instance, engaging affected persons with paid employed to support affected persons in the reintegration process.

- ✚ **Simple procedures.** Regulations, contracts and laws formulated in accessible and easy language; formularies easy to fill out, etc.
- ✚ **Long-term perspective** in terms of understanding that there are no simple solutions for work reintegration and that it can be a long, often not straightforward process that requires follow-ups.
- ✚ **Alternative further and timely strategies for affected persons** that could not be reintegrated to work after specific strategies to avoid “falling out of the system”, losing resources acquired through previous interventions and becoming identified with failure (“losers”).
- ✚ **Raising awareness through public dissemination strategies** which i) inform about disease, impact on work, available support programs and benefits; ii) reduce stigma and associated stereotypes and fears; iii) inform employers about long-term benefits for the company.
- ✚ **Taking into account the perspective, including fears and real risks, of employers**, who usually need different kinds of support. Financial incentives are important but information about consequences of chronic disease, help with formal procedures,

support when communicating with the affected person or implementing adaptations are also important.

IMPORTANT ASPECTS ASSOCIATED WITH EVALUATIONS

The following **aspects** proved to be particularly relevant when evaluating the effectiveness of strategies:

- ✚ **Use of qualitative data that meets the challenge posed by the complexity of the reintegration process and captures the experience of all stakeholders involved**, for example employers or persons evaluating benefits applications and barriers they face.
- ✚ **Use of meaningful criteria to measure work reintegration** that integrate different relevant aspects, including for instance type of work, remuneration or sick absence periods.
- ✚ **Plan and record in a structured protocol** how the evaluation of an intervention will be performed before implementing it. Specify the goal of the evaluation, variables to be measured, instruments and time points for the measurements, among others.

2. EXECUTIVE SUMMARY

PATHWAYS is an EC funded project aiming the development of recommendations about which are innovative approaches to promote professional integration and reintegration of people with chronic diseases and improve their employability. The present evidence synthesis was carried out in the scope of **PATHWAYS** and focuses on the effectiveness of strategies – including policies, systems and services – targeting integration and reintegration to work of people with chronic diseases in Europe.

Policies are binding and non-binding legislative frameworks, provisions and policy approaches that set a course or a principle of action at local, regional, national or international level, for instance anti-discrimination law.

System strategies include supports, programmes or schemes (including financial support) aimed at:

- Supporting unemployed and inactive persons in obtaining or returning to paid employment;
- Supporting employed persons in remaining at work;
- Supporting employers and employment services in facilitating the participation of persons with chronic diseases in paid employment, for instance through supported employment programmes.

Services strategies encompass services and activities by private or public entities aimed at assisting jobseekers in finding employment as well as social services that directly or indirectly contribute to the employability of persons with chronic diseases.

Systematic literature review methodology was used and both scientific publications available in electronic databases and structured reports evaluating national strategies published in countries of the **PATHWAYS** Consortium and in Europe were included.

Scientific publications in English report rather on services while structured national reports focus rather on policy and system evaluations. Moreover, **structured national reports** were generally very comprehensive, used complex language, focused on descriptive information and were structured according to information required by government agencies. While scientific articles allow for the learning about the effectiveness of strategies, structured reports can only be described in the present review.

A total of **101 scientific publications** were identified, 55 of them focused on the effectiveness of strategies and 46 articles using qualitative methodology reported on aspects related to the strategies that were experienced by different stakeholders as positive or negative, i.e. aspects that influence effectiveness. After assessing the quality of the studies reported in the 55 publications targeting effectiveness, **34 unique studies** were considered to provide reliable data on the effectiveness of professional integration and reintegration strategies. Regarding structured national reports, 32 documents were identified.

It is important to note that the present review included scientific publications and reports published between 2011 and 2016, and that almost all evaluations were therefore carried out either during or right after the financial crisis of 2008.

POLICIES

Denmark has published an evaluation of the reform of the public pension system in a **peer review** journal. No positive impact was reported for the reform of the public pension system focusing on abilities of employees and introducing “flexjobs”. The amount of people obtaining a disability pension, and thus being excluded from the open labour market, increased after the reform.

The co-existence of a) active labour market policies to promote the employment of people with disabilities and b) passive measures to support people with disabilities (e.g. disability pensions) was explored in Italy in a **peer reviewed** scientific publication. A positive association between the co-existence of both measures and the probability of finding a job for individuals with a disability was found.

Structured National Reports were identified in Poland, Italy, Spain, Austria, Germany and Norway. Italy, Austria, Germany and Norway have monitored the impact of national laws, at national and regional level:

- Law 68/99 in Italy, which aims to regulate and promote employment of persons with disabilities;
- the Amendment to the Disabled Employment Act in Austria, a liberalisation of dismissal protection for people with disabilities plus higher, staggered compensatory payment when companies don't fulfil their quota;
- The Equality Law (BGG) for People with Disabilities in Germany, aiming to implement equal rights for people with disabilities in public and private areas and enable them to live with as little assistance as possible;
- The Anti-Discrimination and Accessibility Act and the Work Environment Act in Norway, which incorporate an agreement between the government and the main representative organisation for Norwegian employers about steps to recruit persons with disabilities.

Poland has evaluated the separation of the system for granting pensions from the system of the assessment of disability, and the contracting model of labour market services for the people with disabilities. Spain has evaluated the labour market situation in the light of their specific Action Plan for persons with disability.

One report evaluated the “European Strategy on Safety and Health at Work” which run from 2007 to 2012. One of the aspects targeted by this strategy was the reintegration and rehabilitation of injured or sick workers, and the need to deal with a changing workforce.

SYSTEMS

Denmark, Norway, Finland and Sweden have published evaluations of Part-Time Sick Leave (PTSL) or PTSL benefits – either for persons with chronic diseases and disability in general or for persons with musculoskeletal and mental disorders – in **peer review journals**. PTSL are strategies that allow for a reduction in the contracted working hours or changes in the work tasks, while oft compensating the worker for the resulting reduction in income. Positive change was reported in Norway for graded sickness absence certificates and in Finland for partial sick leave, both targeted at persons with chronic disease and disability in general. Positive results have been reported for PTSL in Sweden for persons with mental disorders, in Sweden and Finland for persons with

musculoskeletal disorders and in Denmark for persons with a chronic health condition other than no mental disorders.

Spain has published an evaluation of the disability support benefit for persons with long-lasting disability. Receiving the benefit was associated with employment only in one group of individuals: persons with the lowest level of disability showed a lower probability of working.

Structured National Reports evaluating systems were identified in Greece, Poland, Slovenia, Austria, Germany and Norway. Greece, Poland, Austria and Norway evaluated financial schemes:

- Greece evaluated a financial assistance project aiming the development, support and promotion of entrepreneurship of persons with disabilities;
- Poland evaluated the National Fund for the Rehabilitation of Persons with Disabilities which provides financial support for employing persons with disabilities;
- Austria evaluated two financial instruments: the "Integration Benefit, a temporary wage subsidy for employers and "combi wage", a financial benefit for persons who take a job with low payment under certain limits or preconditions;
- Norway evaluated wage subsidies to employers who hire persons on vocational rehabilitation benefit.

Austria evaluated as well a tool for assessment of work ability aiming to reduce or avoid multiple assessments and shorten the procedure, and the "Work Integration Social Enterprises" which offer transitional jobs to unemployed persons with placement difficulties.

Poland evaluated three different programmes targeting professional activation, development of adaptation potential of enterprises and its employees, sheltered work and support to socially excluded and marginalized people with disabilities living in rural areas and small towns, among others. A further report evaluated the organization and funding of occupational therapy workshops.

Germany evaluated a project creating regional services for all consulting and service needs related to occupational health of small- and middle-sized enterprises, and a programme focused on employment, professional training and support of persons with disability by specialized integration services.

Slovenia monitored the implementation of the Vocational Rehabilitation and Employment of Persons with Disabilities Act in general and in vocational rehabilitation services, supported employment and workplace adaptations.

Norway evaluated two systems, work placement and "Job Strategy", an initiative of the government aimed at incorporating young people with disabilities in employment through different measures such as work placement, mentoring, and financial incentives.

SERVICES

Several service strategies have been evaluated and results published in **peer review journals**.



Individual Placement and Support (IPS) include different **strategies** in line with the following principles:

- the goal is competitive employment,
- eligibility for IPS programs are based on participant choice and zero exclusion (all persons willing to get a job will receive IPS, no exclusion criteria),
- rapid job search,
- service and job search are based on person's preferences,
- integration of employment service with the mental healthcare team,
- ongoing individualized support,
- personalized counselling on benefits including social insurance, and
- systematic recruitment of job opportunities and engagement with employers based on person's preferences.

IPS strategies have been evaluated in the UK, Netherlands, Switzerland and Sweden and applied exclusively to unemployed persons with mental disorders. IPS improved work-related outcomes in all studies included in the present review.

Work-focused strategies have a main focus on factors directly related to the workplace and the work activity, for instance addressing workplace barriers and physical activity, have been evaluated in Denmark, Norway, the Netherlands and Finland and applied to persons with musculoskeletal disorders and mental disorders. Positive change was achieved in Finland through an early ergonomic intervention for employed persons, mostly women, with upper-extremity back pain and in the Netherlands with occupational therapy adjuvant to treatment as usual for employees with major depression.

Psychological or behavioural analysis and training are strategies offered exclusively to persons with mental disorders and mostly including or following the principles of Cognitive Behavioral Therapy (CBT). These strategies have been evaluated in Norway, Netherlands and Germany, mostly on employed persons with common mental disorders, such as depression and anxiety, either on sick leave or at risk of going on sick leave. Positive change was reported for CBT combined with IPS in Norway, Work-focused CBT in the Netherlands and Germany, a five-step problem-solving process in the Netherlands and a Web-Based Intervention in the Netherlands.

Multidisciplinary interventions are characterized by teams including several professionals with different backgrounds, who evaluate and intervene in different areas involved in the participation in working life. Nine studies, carried out in Sweden, Denmark, Netherlands and Switzerland evaluated different multidisciplinary interventions for persons with chronic disease and disability in general, mental disorders, musculoskeletal disorders and cancer. Positive change was reported for a multidisciplinary, coordinated and tailored return to work intervention in Denmark for persons with chronic disease and disability in general and for persons with low back pain. A further evaluation of the same intervention in Denmark brought, however, no change for persons with common mental disorders. A multidisciplinary intervention

promoting involvement of persons with musculoskeletal disorders and labour experts was effective in the Netherlands.

Educational interventions focus usually on information and advice, education about nature and course of the disease and about physical and psychological factors involved. A single study in Belgium was identified and reported positive change achieved by a disability evaluation followed by information and advice for persons with low back pain.

Early return to work strategies are interventions carried out at early stages of disease treatment. A single study evaluating an early strategy in the Netherlands was identified but reported no change of a hospital-based work support intervention for women with cancer.

Structured National Reports evaluating services were identified in Austria where two reports evaluated a counselling service for persons with health impairments.

FACTORS INFLUENCING EFFECTIVENESS

Qualitative studies evaluating factors that influence effectiveness point out following aspects as positive:

- ✦ **Use a holistic view of the person and the problem**, as this leads to a comprehensive evaluation and planning of strategies.
- ✦ **Include sound alongside evaluations**. This ensures that all aspects, such as outcomes or target population, are clearly defined, can be measured and the implementation of the strategy (or the strategy itself) can be timely improved.
- ✦ **Allocate appropriate time, personnel and financial resources** to meet the complex challenge posed by reintegration.
- ✦ **Focus on capacity or ability** of the person and not on disability.
- ✦ **Be an early intervention**, implemented to avoid stagnation of the problem, development of “sick” and “excluded” identity by affected persons and decrease or loss of abilities due to inactivity.
- ✦ **Be individualized and have flexible structures** regarding to what extend they can be accommodated to the needs of each affected person over time.
- ✦ **Offer users services of good quality** in terms of level of expertise of personnel implementing the strategy.
- ✦ **Offer professionals implementing the strategy appropriate training of good quality**.
- ✦ **Have an effective coordination and communication among agencies**, for example employment services, health care and social insurance services.
- ✦ **Have modules integrated into other services**, for example employment counselling is integrated within mental health care.
- ✦ **Have good coordination and organization** of services to avoid or reduce unnecessary and demotivating waiting times for users.
- ✦ **Integrate and be open to creative solutions** such as peer counselling. For instance, engaging affected persons with paid employed to support affected persons in the reintegration process.
- ✦ **Have simple procedures**. Regulations, contracts and laws formulated in accessible and easy language; formularies easy to fill out, etc.

- ✦ **Provide a long-term perspective** in terms of understanding that there are no simple solutions for work reintegration and that it can be a long, often not straightforward process that requires follow-ups.
- ✦ **Provide further alternative and timely strategies for affected persons** that could not be reintegrated to work after specific strategies to avoid “falling out of the system”, losing resources acquired through previous interventions and becoming identified with failure (“losers”).
- ✦ **Raise awareness in the general population through public dissemination strategies** which i) inform about disease, impact on work, available support programs and benefits; ii) reduce stigma and associated stereotypes and fears; iii) inform employers about long-term benefits of reintegration for the company.
- ✦ **Take into account the perspective, including fears and real risks, of employers**, who usually need different kinds of support. Financial incentives are important but information about consequences of chronic disease, help with formal procedures, support when communicating with the affected person or implementing adaptations are also important.

PATHWAYS RECOMMENDATIONS

- ✦ **Improve the evaluation of the effectiveness of strategies targeting integration and re-integration into work strategies for persons with chronic conditions.** The present report disclosed several shortcomings of scientific studies, such as a large variability on how the core outcome of interest, such as return to work, is defined and measured, large variability in the length of follow ups, and lack of clarity on what exactly specific interventions are supposed to change and how this change is expected to happen. Additionally, based on these shortcomings, it is recommended that evaluations alongside implementations of policies, systems and services are planned in detail using research protocols. A clear definition of primary and secondary outcomes, information about how these will be measured, a clear hypotheses of what interventions are supposed to change and what changes are meaningful for participants, definition of assessment time points, planning of follow ups with sufficient length to capture change and a clear strategy for reporting findings are needed. The inclusion of control groups or measures to guarantee comparability with usual care, alternative interventions or “natural” trajectories of work problems should be mandatory, so that results can be attributed to the interventions.
- ✦ **Coordinate the evaluation of the effectiveness of services targeting integration and re-integration into work strategies for persons with chronic conditions within countries.** Evaluations of several services have been included in the present review. However, many evaluations seem to be single efforts of specific researchers or research institutes. As a consequence, evidence is fragmented. Based on this, a coordination of research efforts evaluating services in a country by governing bodies is highly recommended.
- ✦ **Improve the accessibility of structured national reports to different stakeholders.** Structured national reports are of core importance in the field since they report on official efforts to evaluate mostly systems and policies. However, several barriers hinder the use of reports by a broader audience. Besides the

language barrier, reports include very detailed description of results in technical language and fail to provide a transparent and accountable reporting of the evaluation process including definition of clear outcomes, description of the methodology used to measure them and corresponding results. A brief and straightforward summary of key results was generally missing and consequently, a summary of findings of reports could not be achieved. Based on these shortcomings, it is recommended that structured national reports include a structured executive summary in English and plain language, accessible to patients, health professionals, employers representatives, policy makers and further stakeholders. It is recommended that this summary includes the following information: objectives, definition of the intervention, definition of the outcomes of interest and how these were measured, length of follow up, brief description of the target population and core findings.

- ✚ **Broaden the evaluation of the effectiveness of the combination of passive and active strategies for integration and re-integration into work for persons with chronic conditions.** This review points out that combining active strategies, such as supported employment or active labour market policies, with passive strategies, such as disability benefits, is a promising way of effectively keeping persons with chronic conditions at work. However, how passive and active strategies can be combined, and how much of each bring the best results are still open questions. Such combinations, also called Flexicurity, are a core topic of European debates about social security reforms, having being integrated in the European Employment Strategy. Sound research in this area is therefore highly recommended.
- ✚ **Broaden the target population of strategies.** This review makes clear that return or maintenance of work is a complex process where many actors play a relevant role, not only the affected persons. Efforts on the part of families, employers, work reintegration and health professionals as well as the broaden community have a major impact on the outcomes. All these actors need therefore information and guidance about what a health condition is, the impact on work, available disease management strategies, available support strategies, ranging from simple strategies, such as a hotline for employers, to complex strategies, such as individual placement and support (IPS). Strategies that take into account needs and problems of patients, families, employers, work reintegration and health professionals as well as strategies that encompass awareness interventions for the general population to lower stigma should be therefore prioritized and fostered.

3. INTRODUCTION

Individuals with chronic diseases and mental disorders frequently experience problems in finding and maintaining work and problems returning to work after periods of sick leave. These problems have a negative impact at the individual, national and European level.

The rising prevalence of chronic diseases and mental disorders coupled with the economic crisis of 2008 and the associated current economic instability in several European countries, make the productivity loss of persons with chronic diseases and mental disorders a major societal challenge. This challenge requires action in terms of innovative strategies to ensure the participation of these persons in the labor market.

“Participation To Healthy Workplaces And inclusive Strategies in the Work Sector” or PATHWAYS is a 3-year EC funded project that focuses on the development of recommendations about innovative approaches to promote professional integration and reintegration to work of persons with chronic diseases and mental disorders and improve their employability. PATHWAYS aims are:

1. To identify integration and re-integration to work strategies available in Europe and beyond,
- 2. To determine their effectiveness,**
3. To assess the employment-related needs of persons with chronic diseases
4. To develop guidelines supporting the implementation of effective professional integration and reintegration to work strategies.

Policies are binding and non-binding legislative frameworks, provisions and policy approaches that set a course or a principle of action at local, regional, national or international level, for instance anti-discrimination law.

System strategies include supports, programmes or schemes (including financial support) aimed at:

- Supporting unemployed and inactive persons in obtaining or returning to paid employment;
- Supporting employed persons in remaining at work;
- Supporting employers and employment services in facilitating the participation of persons with chronic diseases in paid employment, for instance through supported employment programmes.

Services strategies encompass services and activities by private or public entities aimed at assisting jobseekers in finding employment as well as social services that directly or indirectly contribute to the employability of persons with chronic diseases.

The present evidence synthesis answers PATHWAYS’ aim 2 and focused on effectiveness of strategies – including policies, systems and services – targeting integration and reintegration to work of persons with chronic diseases in Europe.

4. METHODOLOGY

A systematic literature review was conducted to answer the question:

“For patients with chronic diseases including mental issues in European countries, which strategies aiming to improve professional (re)integration, compared to alternative strategies or usual practice, do improve their employment prospects?”

Data sources	(a) Scientific publications available in electronic bibliographic databases (b) Structured reports evaluating national strategies published in countries of the PATHWAYS Consortium and in Europe
Databases	For (a): Medline, PsycINFO, CDR-HTA, CDR-DARE and Cochrane Library For (b): national websites, especially from ministries of health or social affairs
Time frame	2011 to 2016
Language	(a) Scientific publications available in electronic databases in English (b) Structured reports evaluating national and European strategies published in countries of the PATHWAYS Consortium in English or in the language of the country: Italy, Spain, Greece, Poland, Slovenia, Germany, Austria, Norway, Europe
Study designs included	- Intervention studies: randomized trials, non-randomized controlled trials, non-controlled pre-post intervention studies - Observational studies: cohort studies, case-control studies, cross-sectional studies, descriptive longitudinal studies - Qualitative studies: focus groups, interviews, other
Search strategy	See Appendix 1
Target groups	i) Persons with disabilities and chronic diseases in general ii) Disease groups: mental disorders, musculoskeletal disorders, cancer, neurological, metabolic, respiratory and cardiovascular diseases iii) Specific diseases: depression, back and neck pain, migraine, diabetes mellitus, chronic obstructive pulmonary disease and ischemic heart disease ¹
Country groups	(1) EU-28 countries, Norway, Lichtenstein, Iceland or Switzerland (2) Other European countries (3) Non-European countries with western lifestyle: Canada, USA, Australia
Work outcomes	(1) employment status (employed/unemployed) (2) return to work (3) absenteeism (sick leave) (4) maintain a job (5) obtain a job
Further factors	Contextual factors and characteristics of a strategy, for instance use or dissemination of a strategy, and views of the persons involved
Quality checklists	For (a): Quality appraisal checklists: quantitative intervention studies (NICE, 2012) and quantitative studies reporting correlations and associations (NICE, 2012); Methodology checklist: qualitative studies (NICE, 2009) and COREQ (COnsolidated criteria for REporting Qualitative research) Checklist (Tong, 2007) For (b): UNEG Quality Checklist for Evaluation Reports (UNEG, 2010)– shortened version adapted for PATHWAYS
Quality classification	Two groups have been defined for scientific publications. Shortcomings of study or corresponding publication are: i) unlikely to change study’s conclusions regarding the outcomes of interest ii) likely or very likely change study’s conclusions regarding outcomes of interest Only studies classified as “i” have been included in this synthesis.

¹ These diseases were selected based on their contribution to years lost to disability for the people in working age (using the 2012 estimates of the WHO):

5. FINDINGS

5.1. WHAT INFORMATION IS AVAILABLE IN EUROPE?

5.1.1. Scientific publications

In total, **101 scientific publications**² reporting on a study evaluating a strategy or group of strategies to promote the professional (re-)integration of persons with chronic diseases in one or more European countries have been included in the present review.

→ About **half of these publications** (n=55) target primarily a **quantitative evaluation of the strategy's effectiveness** to change relevant work-outcomes

→ **Factors affecting the effectiveness** of these strategies, such as barriers found when implementing the measure, are reported in **46 papers using qualitative methods**.

The majority of these publications evaluated strategies for persons with **mental disorders (N=39)**, followed by strategies for persons with **chronic diseases or disabilities in general (N=32)**, **musculoskeletal disorders (N=24)** and **cancer (N=8)**. No publications evaluating strategies for persons with neurological, metabolic, respiratory and cardiovascular diseases, intended as broad categories, were identified. It is important to note that studies evaluating strategies focusing on a specific single disease not defined in the search strategy, for example multiple sclerosis, stroke or arthrosis, have not been included in the present work.

About half of the publications assessing effectiveness quantitatively (N=31) focused on **employed persons** – being or not in sick-leave. **Unemployed individuals**, seeking a job or not, were the recipients of strategies evaluated in 11 publications while 13 publications evaluated strategies targeting individuals **both employed and unemployed**.

Studies investigating the effectiveness of strategies focused their evaluation mostly on strategies supporting persons **employed and in sick leave to return to (former) work** (N=18) followed by strategies proving **support to obtain** (N=11), reduce sickness absence (N=10) **or maintain** (N=4) **a job**.

In total 37 scientific publications were considered to be reliable, i.e. to have shortcomings in study design or reporting that are unlikely to change the study's conclusions. These are the studies presented in this section. A table with specific characteristics of each publication and their references has been added to the appendix.

² Scientific papers published in English, two publications report data for both persons with mental disorders and persons with chronic diseases or disabilities in general

5.1.2. Structured reports evaluating national strategies

A total of 32 **structured reports evaluating national strategies** have been included in the present review: seven each in Austria and in Poland, five in Norway, four in Slovenia, three each in Italy and Germany, one in Spain and one in Greece. Additionally, a European report, namely the Evaluation of the European Strategy on Safety and Health at Work 2007-2012, led by COWI A/S, has been included as well. Included reports are:

Country	Author	Year	Title (in English)
Greece	Greek Organization of SMEs and Handicraft SA	2011	Evaluation study for the programme [Supporting Entrepreneurship for Persons with Disabilities] and list of good practices under «ISEDENET/SOUTH EAST»
Italy	Ministry of Labour and Social Policies	2012	Sixth annual report to parliament on the state of implementation of Law 12 March 1999, n. 68 "rules for the right to work of people with disabilities", years 2010 – 2011
Italy	Chiozza, A	2011	Qualitative-quantitative survey on the inclusion of people with mental disorders in private companies. Company, work and mental disorder.
Italy	Ministry of Labour and Social Policies	2014	Progress report on the implementation of the law laying down rules for the right to work of people with disabilities.
Belgium	COWI	2013	Evaluation Of The European Strategy On Safety And Health At Work 2007-2012
Poland	Strategic Consulting Centre in Krakow	2013	Evaluation of the support for people with disabilities provided within the framework of the regional component of the Human Capital Operational Programme.
Poland	The Supreme Control Chamber	2013	Organization of the system of medical certification for pension purposes, and of disability
Poland	Magdalena Kocejko	2015	The final report on the implementation of the systemic project entitled "Support of the environment of people with disabilities in rural areas and in small towns"
Poland	Przemysław Szamburski	2014	Final report from internal evaluation of the project entitled "The contracting model of labour market services for the people with disabilities"
Poland	Magdalena Sęk, Magdalena Hędrzak-Mącznik, Wioleta Kmieć	2014	Evaluation ex-post of the project entitled "Support for the physically disabled people at the labour market III"
Poland	The Supreme Control Chamber	2011	Organization and funding of the occupational therapy workshops from the National Fund for the Rehabilitation of Disabled in Malopolska Voivodeship
Poland	The Supreme Control Chamber	2011b	Information about results of the control of the programs supporting the increase in employment of persons with disabilities.
Spain	ODISMET, Observatory for Disability and Labour Market in Spain	2014	The situation of people with disabilities in the labor market

Country	Author	Year	Title (in English)
Slovenia	Tabaj, A., et al.	2014	Multi-annual evaluation of the employment outcomes of persons with disabilities
Slovenia	Brecelj et all	2015a	Annual Evaluation of the Vocational Rehabilitation – for the year 2014
Slovenia	Brecelj et all	2015b	Development of the supported employment and workplace adaptation – evaluation for the year 2015
Slovenia	The Court of Audit of the Republic of Slovenia	2011	Audit Report: Employment of People with Disabilities in the Republic of Slovenia
Austria	Danzer, Lisa; Lechner, Ferdinand; Wetzl, Petra	2014	Final Report on the Project 'Evaluation of the Impact of the Amendment to the Disabled Employment Act (BGBl. Nr. 111/2010)'
Austria	Eppel, Rainer; Horvath, Thomas; et al (prospect Unternehmensberatung)	2014	Evaluation of Work Integration Social Enterprises in the Context of New Challenges
Austria	Löffler, Roland; Schmid, Kurt	2011	Combi wage. An evaluation.
Austria	Eppel, R.; Mahringer, H.; Weber, A.; Zulehner, C.	2011	Evaluation of "Integration Benefit" (=Wage Subsidy for Employers)
Austria	Hausegger, Trude; Reidl, Christine	2012	Accompanying evaluation of "Health Road". Utilisation of "Gesundheitsstraße" 2010/2011 and results of a telephone survey of persons who asked for pension due to reduced work capacity without having used "Gesundheitsstraße", final report, vol. 1
Austria	Klotz, Johannes et al.	2015	fit2work-reporting 2014. Evaluation of (person) counselling. Report.
Austria	Egger-Subotitsch, Andrea; Stark, Martin	2013	fit2work Implementation Evaluation Report II. Evaluation commissioned by Bundessozialamt (former name of Social Ministry Service - service organization of ministry of labour, social affairs and consumer protection)
Germany	Prof. Dr. iur. Felix Welti	2014	Evaluation of the equality law for Disabled persons-Final report (# see name in WP4)
Germany	Harald Kaiser	2011	Final report - Project: "Healthy Work"
Germany	FAF GmbH, BAG BBW, BAG UB	2014	Final report of the comprehensive supervision of the program Job4000
Norway	Svalund, J; Hansen, I LS	2013	Inclusion of persons with disabilities in working life.
Norway	Zhang, T	2015	Effects of work placement in ordinary enterprises: multiple and sequential interventions
Norway	Dyrstad, K; Mandal, R; Ose, SO	2012-2013	Evaluation of the Job strategy for persons with disabilities
Norway	Falkum, E; Solberg, AG	2015	Employers' ability to include persons with disabilities
Norway	Spjelkavik, Ø; Terjesen, HCA	2016	Evaluation of the pilot study Wage subsidy for persons in receipt of vocational rehabilitation benefit

National reports were generally very **comprehensive**, used **complex** language, focused on **descriptive information** and were **structured** according to the information required by the instances they should inform, for instance health and social affairs ministries. Because of their heterogeneity and the detailed description of results, this document provides only a brief summary of the strategies evaluated in the light of findings in the scientific literature. A detailed overview of all the information extracted from national reports, including results, can be accessed in www.path-ways.eu.

In general terms, **most structured reports evaluating national strategies**:

- Evaluated strategies concerning persons with disabilities in general;
- Used mostly mixed methods evaluations (qualitative and quantitative);
- Evaluated mostly policy and system strategies;
- Were mostly assessed as having at least good quality.

Key information about strategies identified in structured reports can be found in the blue boxes in each heading of this section.

5.2. WHICH STRATEGIES HAVE BEEN EVALUATED IN EUROPE?

Effectiveness data obtained from 37 scientific publications considered to be reliable, i.e. to have shortcomings in study design or reporting that are unlikely to change the study's conclusions, are described in this section. In addition, strategies evaluated in structured national reports are briefly described.

5.2.1. POLICY strategies evaluated in scientific studies

Policies are binding and non-binding legislative frameworks, provisions and policy approaches that set a course or a principle of action at local, regional, national or international level, for instance anti-discrimination law.

KEY FINDINGS

Italy and Denmark have formally evaluated policies and published results in peer review journals. All three identified studies used register-based data.

Positive results were reported in an explorative study showing that persons with disability living in Italian regions with high levels of Flexicurity index, a combination of passive and active strategies, had a higher probability of obtaining work.

No change was reported:

- in Denmark for the reform of the public pension system focusing on abilities of employees and introducing "flexjobs"

Studies reporting positive change

In **Italy**, **Agovino and Rapposelli** (2015) investigated whether the co-existence of a) active labour market policies to promote the employment of people with disabilities and b) passive measures to support people with disabilities (e.g. disability pensions) was positively related to the probability of obtaining work, i.e., whether the combination of passive and active strategies – a core concept behind the Flexicurity strategy – could increase employability of people with disability. More specifically, Agovino and Rapposelli calculated different indexes of "Flexicurity" giving different weights to

existing active and passive measures in Italy – the estimate for active measures was the amount of Regional Fund for Employment of People with Disabilities assigned to a region while the estimate for existing passive measures was the amount of percipients of civilian disability pensions in working age – and assigned each Italian region a value. They explored, whether there was an association between the different indexes and the amount of people with a disability searching a job who obtained a job. After controlling for context variables, their results support a positive effect on employment of the combination of active and passive measures, an effect not given when active and passive measures are considered separately.

Studies reporting no change

Horwitz and colleagues (2014) evaluated a reform of the public pension system in **Denmark** introduced in 2003 to create a more flexible and inclusive labour market. The strategy focusing on abilities of employees and not on their limitations and introducing “flexjobs” was evaluated using a cohort study and register data, and a 6 months follow-up. Using job status – more specifically getting an invalidity pension as the indicator of leaving the labour market – as the outcome of interest, this study did not detect any effects of the reform for persons with chronic diseases and disability in general. Differences in incidence of invalidity pension – registered continuously in the period from January 1, 1997 to May 1, 2009 – seemed to be related to labour market and financial situation of the country than to the reform. It is important to mention that all available register data (complete sample) has been used.

5.2.2. POLICY strategies evaluated in Structured National Reports

Policies are binding and non-binding legislative frameworks, provisions and policy approaches that sets a course or a principle of action at local, regional, national or international level, for instance anti-discrimination law.

BRIEF SUMMARY

- ✓ **Policy strategies have been evaluated in Poland, Norway, Italy, Spain, Austria and Germany. Additionally, a European evaluation was identified.**
- ✓ **Italy, Norway, Austria and Germany have monitored the impact of national laws, at the national and regional level:**
 - **Italy evaluated annually from 2011 to 2014 the Law 68/99, which aims to regulate and promote employment of persons with disabilities, and consequently to their social inclusion**
 - **Austria evaluated in 2014 the Amendment to the Disabled Employment Act, a liberalisation of dismissal protection for persons with disabilities plus higher, staggered compensatory payment when companies do not fulfil their quota**
 - **Germany evaluated in 2014 the equality law (BGG) for persons with disabilities aiming to implement equal rights for persons with disabilities in public and private areas and enable them to live with as little assistance as possible.**
 - **Norway evaluated in 2013 and 2015 the Anti-Discrimination and Accessibility Act and the Work Environment Act, which incorporate an agreement between the government and the main representative organisation for Norwegian employers about steps to recruit persons**

with disabilities

- ✓ **Spain has evaluated the labour market situation in the light of their specific Action Plan for persons with Disability**
- ✓ **Poland evaluated:**
 - **In 2013 the separation of two systems: (1) the system of the granting of pension purposes and (2) the system of the assessment of disability in order to increase the role of medical and professional rehabilitation and change the function of benefits from compensatory forms to activation ones.**
 - **In 2014 the contracting model of labour market services for the persons with disabilities**
- ✓ **The European Strategy On Safety And Health At Work 2007-2012 has been evaluated in countries of the European Union.**

Reports

Poland, Supreme Control Chamber, 2013: The report called "Organization of the system of medical certification for pension purposes, and of the system for disability assessment" evaluated the effectiveness of a reform carried out in 1997 that established the separation of two systems: (1) the system of the granting of pension purposes and (2) the system of the prediction of disability in order to increase the role of medical and professional rehabilitation and changing of the function of benefits from compensatory forms to activation. The evaluation has been carried out in response for a series of parliamentary interpellations challenging the effectiveness of the existing system. In brief, the evaluation has shown that the separation of systems was unjustified because the competences of the sectors are convergent.

Poland, Przemysław Szamburski, 2014: The report evaluated the project entitled "The contracting model of labour market services for the persons with disabilities". There are three contracting models that were compared in this evaluation: 1) a model based on the Act on promotion of employment and labour market institutions (paragraph 61b): the service is published (in the internet, etc.), interested parties apply and then the best offer is selected; 2) the Dutch model: a set of criteria is established and if the criteria is met by the potential contractors, oral negotiations are conducted and the price revealed; 3) the model based on the public procurement law: an auction is publicly announced and sent to potential contractors, then negotiations with eligible and interested contractors are conducted, after these negotiations the contracting authority makes an official offer to the selected contractors and the best offer is contracted. The goal of the evaluation was the effectiveness of these different models. Authors conclude that the model based on the Act was ineffective due to a lack of response from potential contractors, the Dutch model was the better one with respect to effectiveness and efficacy, and the model based on the public procurement law was too time consuming taking twice as much time as in Dutch model.

Italy, Chiozza, 2011: The report is based on a qualitative-quantitative survey and monitors the national implementation of Law 68/99, which aims to regulate and promote the employment of persons with disabilities and contributed significantly to the employment of persons with disabilities, and consequently to their social inclusion. The purposes of the evaluation were to 1) identify the prevalence of persons with mental disorder in companies; 2) to identify socio-cultural elements that hinder their

employment; 3) to analyse and disseminate knowledge on successful experiences; 4) to identify strengths and weaknesses of the most significant experiences. Results showed that 6.2% of companies employ a person with disability and 2.2% of companies employ a person with mental disorder. More than 70% of the sample was aware of the Law 68/99, over 70% was aware of incentives and about 54% was informed about the possibility of hiring through conventions. The general evaluation of job integration was perceived by 70% of employers as very positive or fairly positive. However, 47% of employers declared not being willing to hire persons with disabilities. Their main concerns were the need of continuous supervision of the employee and the inability to perform some tasks.

Italy, Ministry of Labour and Social Policies, 2012: The annual mandatory report to the Parliament evaluated the state of implementation of Law 68/99 "rules for the right to work of persons with disabilities", years 2010 – 2011. Main results , among others, were: a) Surveys on the number of persons with disabilities registered in the list of targeted placement show an increase in the number of entries for 2010 (743,623) compared to the previous two years (respectively +3 and +5% on 2008 and 2009), while in 2011 the number decreases (650,000 persons); b) the number of organizations obliged by the Law 68/99 to employ persons with disabilities amounted to 4,073 in 2010 and to 2,557 in 2011; c) between 2004 and 2011 a reduction of job placement for persons with disabilities persisted compared to the previous years of application of the Law 68/99; d) among persons with disabilities, the main field of employment is "services" (61%) and the most people find jobs through the help of relatives and friends (32.9%), and through open competitions (22.7% participated in public contests). In 2010 and in 2011 the proportion of women with disabilities entered in the records of targeted placement was above 50% in Central Italy, and this percentage remains lower in all other areas of Italy.

Italy, Ministry of Labour and Social Policies, 2014: The progress report on the implementation of the Law 68/99 lays down the rules for the right to work of persons with disabilities. Among others, results show that: 1) The number of unemployed persons with disabilities registered in the lists of targeted placement were 728,326 in 2012 while this number was 676,775 in 2013; 2) In 2013, the percentage of persons with disabilities in the South declined to 52%, and the number of subscribers in the Centre and in the North-East of Italy increased; 3) 47.5% of job placements in 2012 used the convention established by the law while in 2013 this percentage increased to 48.7%; 4) The job placements of workers with disabilities in companies that are not subject to obligation (placed below the quota of 15 employees) was about 11% in 2013.

Spain, Observatory for Disability and Labour Market in Spain, 2014: The report evaluates the situation of persons with disabilities in the labour market in the light of the Action Plan of the Spanish Disability Strategy, approved by the Council of Ministers on September 12, 2014. The report analysed the impact of existing measures in order to facilitate employment of persons with disabilities and the factors that facilitate or hinder access to employment of this group. Results are, among others: 1) One in four persons with disabilities is currently working; 2) Persons with disabilities are a diverse group in terms of demographic characteristics; 3) The educational level is a key element for job inclusion; 4) Hiring persons with disabilities is characterized by insecurity, instability, as is the case for the whole of the workforce in Spain; 5) Employment of persons with

disabilities focuses on elementary, fundamental for the service sector occupations. As it regards new contracts, economic activity that generates a larger number of contracts for persons with disabilities is encompassing services to construction and gardening activities; 6) The Special Employment Centres offer shelter from the economic crisis; 7) Wages are 10% lower than the rest of the employed population; 8) Most companies with more than 50 workers violate the quota rule of 2%; 9) Working poverty affects more persons with disabilities; 10) Almost 83,000 of persons with disabilities take benefits from employment government grants.

Austria, Danzer, Lechner and Wetzl, 2014: Evaluation of the Impact of the Amendment to the Disabled Employment Act (BGBl. I Nr. 111/2010), a liberalisation of dismissal protection for people with disabilities (§ 8 BEinstG - Austrian Disabled Employment Act) plus higher, staggered compensatory payment when companies do not fulfil their quota (§ 9, 1 BEinstG). Quota obligations apply to companies of minimum 25 employees; this makes about 3 % of all employers (around 22.000) but those employing about 72% (2012) of all employees. There are about 90.000 (eligible) persons with disabilities in Austria. No significant effects, no improvement of labour market integration of persons with disabilities after amendment. The liberalisation of dismissal protection does not change the employment rate of persons with disabilities. It even decreased slightly from 2010 (before amendment) to 2011 and 2012 while the number of eligible persons with disabilities slightly increased in that period. Despite of these results, for some employers (about 30%) the changes in legislation were a motivation to employ persons with disabilities. On the other hand a number of Small Businesses - that are not obligated - employ nonetheless persons with disabilities. Authors conclude that since higher employment rates could not be reached, further measures seem necessary.

Germany, Welti, 2014: Evaluation of the German Equality Law (BGG) for persons with disabilities by the Federal Ministry for Labour and Social Affairs. The law came into force in May 1, 2002, and altered several other laws. It was later expanded by three other laws: the Communication Assistive Technologies Act, the Act about Barrier Free Documents in the federal administration, and the Barrier Free Information Technology Act. The BGG targets people with impairments and/or chronic illnesses and their relatives as well as relevant authorities and organizations/associations. It aims to implement equal rights for persons with disabilities in public and private areas and enable them to live with as little assistance as possible. The objective of the report was to evaluate to what extent the law has been implemented and if it yielded the intended effect, including an evaluation of the law as a law (jurisprudential analysis) and in terms of the sociological success of the law (socio-scientific analysis). Results show that there is a lack of clarity of how this law can be applied (to private persons, courts, administrative actions of German Parliament, and federal and state law) and who is responsible for the implementation. General factors contributing to poor implementation of the BGG are: 1) high variability in the factors associated with disability and the understanding of what is disability (lack of agreement between the BGG, international definitions like the ICF, and the definition of disability in each disabled persons' association); 2) respondents think the goals of some parts of BGG of the law are almost meaningless while other parts, such as § 13, are regarded as unlikely to succeed; 3) At least some parts of BGG are not yet well known by all respondents and

some familiar parts are not utilized due to lack of resources. Specific problems in BGG are: 1) some groups are not reached or helped by BGG, especially persons with intellectual or learning disabilities, communication or language or speech or hearing difficulties, women with disabilities (who especially need protection from sexual abuse and violence), and people with a history of migration or limited knowledge of the German language.

Norway, Svalund and Hansen, 2013: The report evaluate an agreement between the government and the main representative organisation for Norwegian employers (IA-avtalen) about steps to recruit persons with disabilities, effective as of 2001, as well as The Anti-Discrimination and Accessibility Act, effective as of 20.06.2008. To study explore businesses attitudes to job applicants and employees with disabilities, and evaluate their actual recruitment of disabled employees. The study also investigate corporate knowledge of activity and reporting obligation imposed by law on prohibition of discrimination on grounds of disability, as well as employers' assessment of the relevance of measures and incentives to hire people with disabilities. Furthermore, the evaluation included a mapping of the share of businesses that have disabled employees, and in which type of businesses that have disabled employees. The survey demonstrates that few employers are aware of their duties to anticipate and report on their activities to include persons with disabilities at the workplace. Employers tend to be sceptic to use of moderate quota (giving priority to employees with disabilities if they have equal qualifications as the other applicants). National public services have more often adopted action plans and taken steps to recruit persons with disabilities compared municipal public agencies and private enterprises.

Norway, Falkum and Solberg, 2015: The study reports on an attempt to evaluate the agreement between the government and the main representative organisation for Norwegian employers (IA-avtalen) about steps to recruit persons with disabilities, with a special focus on employers' ability to employ individuals with limited functional abilities, and to identify factors that explain variations in inclusive ability. Employers that were more likely to include individuals with disabilities was characterised by a relatively large size, flexible organisational structure, alternative working hours, part time work, job rotation, shifts and a relatively high percentage of unskilled work. Employers with previous experiences with disabled employees were more likely to hire, and a relatively small number of enterprises employed a relatively large total share of all disabled in the workforce.

Europe, COWI, 2013: The overall objective of the evaluation was to provide a sound and evidence-based evaluation of the 2007-2012 EU strategy on safety and health at work and to provide reasoned recommendations for the development of future EU policy instruments in this area (e.g. a new post-2012 strategy). The analysis assessed the European Strategy in the external setting in terms of the OSH situation in Europe and the socio-economic context, in particular in light of the EU 2020 strategy. This task thus identified and analysed emerging trends in the face of the changing economic and social environment. The dimensions of these included economic, industrial and social/human factors. The evaluation concluded that there is a need to continue to focus on the persisting issues related to occupational health and safety, which exist throughout the EU. This should be seen in conjunction with the EU strategies for economic growth, most

notably the EU2020 agenda. There is also a need for a stronger integration of a new strategy with broader EU health and environmental strategies (in particular), through enhanced coordination with other DGs. The evaluation also recommended that a new strategy should focus clearly on musculoskeletal disorders, stress and occupational cancer deaths and should target in particular the challenges related to the implementation of the legal framework with an explicit focus on SMEs and micro-enterprises.

5.2.3. SYSTEM strategies evaluated in scientific studies

System strategies include supports, programmes or schemes (including financial support) aimed at:

- **Supporting unemployed and inactive persons in obtaining or returning to paid employment;**
- **Supporting employed persons in remaining at work;**
- **Supporting employers and employment services in facilitating the participation of persons with chronic diseases in paid employment, for instance through supported employment programmes.**

5.2.3.1. Disability support benefit for persons with long-lasting disability

A single study in Spain evaluated an economic benefit for individuals affected by a pathologic or traumatic process causing long-lasting disability.

KEY FINDINGS

No change: receiving an economic benefit in Spain had a significant negative effect on the probability of working for persons with moderate disability and no statistically effect for individuals with severe disability.

A disability support benefit, defined as an economic benefit for individuals affected by a pathologic or traumatic process causing long-lasting disability, was evaluated in 2014 in Spain by López Frutos and colleagues (2014). Two groups were compared in this cross-sectional study using register-based data: a large group of persons with a certificate of disability and disability support benefit (n=27,660) and a control group of persons with the certificate of disability but no benefit (n=19,976). The sample included persons who had a certificate of disability in 2008, 2009 or 2010. Using employment status as the outcome of interest, receiving a benefit had a significant negative direct effect on the probability of working for individuals on the disability threshold (disability level of 33–44%) and no statistically effect for individuals with a higher degree of disability (more than 45%). It is important to stress that Spain has been facing a rising unemployment rate since the global financial crisis in 2008, which overlaps with the time frame of this study: from 8% in June 2007 to a maximum rate of 27.2 % in March 2013 (National Institute of Statistics).

5.2.3.2. *Part-Time Sick Leave (PTSL)*

Part-Time Sick Leave (PTSL) or PTSL benefits are primarily a system strategy that allows reduction in the contracted working hours or changes in the work tasks, while often compensating the worker for the resulting reduction in income.

KEY FINDINGS

PTSL have been evaluated in Denmark, Norway, Finland and Sweden either for persons with chronic diseases and disability in general or for persons with musculoskeletal and mental disorders. Four out of five included studies used register-based data with mostly very large samples in the evaluation, and most studies compared PTSL to full-time sick leave.

Positive change was reported for:

- graded sickness-absence certificates in Norway for persons with chronic disease and disability in general
- partial sick leave in Finland for persons with chronic disease and disability in general
- PTSL in Sweden for persons with mental disorders
- PTSL in Sweden and Finland for persons with musculoskeletal disorders
- PTSL in Denmark for persons with no mental disorders

No change was reported in Denmark for PTSL for persons with mental disorders

Studies reporting positive change

Kausto and colleagues (2012) evaluated PTSL in **Finland** using a register-based cohort study and including persons with mental or musculoskeletal disorders, cancer and trauma, who were full-time employed and on sick leave for at least 60 days. Persons in PTSL (n= 1047, 71.1% females) and persons in full sick leave (n= 28380, 53% females) were compared and followed for at least 12 months. PTSL was associated with increased use of partial disability pension – an indicator of retaining a job despite impaired work ability – and decreased use of full disability pension – an indicator of leaving of the labour market – in persons with mental or musculoskeletal disorders, being the effect stronger for men. Overall results suggest enhanced work retention after PTSL.

Viikari-Juntura evaluated as well PTSL in **Finland** (2012) but used a randomised controlled trial (RCT), a 12 months follow-up and relatively small samples of mostly women (97%) in PTSL (n=31) and in full sick leave (n=31) to evaluate the effectiveness of PTSL on time to sustained return to work – defined as working without recurrent sick leave - for ≥ 2 weeks and for ≥ 4 weeks. Findings suggest better work participation outcomes in the PTSL group, who achieved sooner return to work that sustained for at least 4 weeks and showed lower sick absence. It is important to stress that the samples in the study were quite healthy.

PTSL was evaluated in **Sweden** by **Andrén and colleagues** (2014) using a register-based cohort study and following persons with mental disorders, who were employed and on sick leave for at least 15 days. Similar to the previous studies, persons in PTSL were compared to persons in full-time sick leave for one year. Six samples were included in the study: three samples receiving PTSL (N1=548, 78% females; N2=367, 73% females; N3=172, 74% females) were compared to three samples receiving full-time sick leave (N1=79, 68% females; N2=181, 66% females; N3=155, 69% females). PTSL was

associated with a low likelihood of full recovery of lost work capacity, which is calibrated with the setting of the social insurance and divided into four categories (<25; 25–49, 50–75, >75%) taking into consideration the employee’s health status and work requirements. Yet, the timing of the assignment to PTSL was important: the effect was relatively small when PTSL was assigned in an early stage but relatively high, and statistically significant, when PTSL was assigned after 60 days of full-time sick leave.

Markussen and colleagues evaluated in **Norway** (2012) a **graded sickness-absence certificate** using a register-based cohort study and focusing on persons with chronic diseases or disability who were on long-term sick leave (at least 8 weeks). Large samples of persons with either graded sickness-absence certificate before the end of week 8 (n=77,655) and persons with non-graded absence certificate (n= 261,596) were compared for two years. Graded sickness-absence certificate absence led to lower sick leave durations, less subsequent social security dependency, and higher employment propensities. It is important to stress, that formal regulations encouraging employees, employers, and physicians to use the system are in place in Norway.

Studies reporting no change

Høgelund and colleagues (2012) have evaluated **PTSL** in **Denmark** using a register-based cohort study. Persons with mental disorders (N=226, 61% females) or other health problems (N=638, 45% females), who were employed and on part-time sick leave for more than eight weeks were compared to comparable persons on full-time sick leave for approximately one year and a half. PTSL did not reduce the time until employees with mental disorders return to regular working hours but significantly reduced the duration of sick leave for employees with other health conditions. Authors conclude that PTSL alone might be insufficient to promote the return to work of employees with mental disorders and additional workplace support or additional workplace intervention combined with a person-centred intervention might be necessary for this group.

5.2.4. SYSTEM strategies evaluated in Structured National Reports

BRIEF SUMMARY

- ✓ **System strategies have been evaluated in Greece, Poland, Slovenia, Austria, Norway and Germany.**
- ✓ **In 2011, Greece has evaluated a financial assistance project aiming the development, support and promotion of entrepreneurship of persons with disabilities**
- ✓ **Poland evaluated:**
 - **The “Human Capital Operational Programme”, which included professional activation, development of adaptation potential of enterprises and its employees, increasing the education level of society, limiting social exclusion areas and supporting mechanisms of efficient management in state administration.**
 - **In 2011 five different programs sheltered work programs and the National Fund for the Rehabilitation of Persons with Disabilities**
 - **In 2014 a nationwide project focused at developing skills of persons with physical disabilities, changing social attitudes towards them in their environment and at developing skills and knowledge among staff**

of the project on methods of re-integrating people into the labour market.

- In 2015 a project aiming to support socially excluded and marginalized persons with disabilities living in rural areas and small towns through improving competences and qualifications allowing them to be active on the labour market
- ✓ Slovenia assessed:
 - In 2011 whether the Ministry of Labour, Family and Social Affairs, the Fund of the Republic of Slovenia for Promotion of Employment of Persons with Disabilities and the Employment Services of Slovenia were effective in achieving objectives and measures defined in the Vocational Rehabilitation and Employment of Persons with Disabilities Act.
 - In 2014 and 2015 vocational rehabilitation services, a national programme aimed at promoting employment of persons with disabilities and following measures defined in the Vocational Rehabilitation and Employment of Persons with Disabilities Act
 - In 2015 supported employment and workplace adaptation
- ✓ Austria evaluated:
 - Two financial instruments in 2011: the "Integration Benefit, a temporary wage subsidy for employers and "combi wage", a financial benefit for persons who take a job with low payment under certain limits or preconditions
 - The "Health Road" tool in 2012, an assessment instrument and procedure on work ability to reduce or avoid multiple assessments and shorten the procedure
 - In 2015 the "Work Integration Social Enterprises" which offer transitional jobs to unemployed persons with placement difficulties
- ✓ Germany evaluated:
 - In 2011 the "Healthy Work" project aiming to establish a comprehensive and independent 'guidance proposal' for small- and middle-sized enterprises which also covers the entire spectrum of occupational Health.
 - In 2014 the programme Job4000 that focused on employment, professional training and support by specialized integration services to improve the stable professional integration of persons with severe disability and particular difficulties to find a job in the open labour market.
- ✓ Norway evaluated:
 - In 2012-2013, "Job Strategy", an initiative of the government aimed at incorporating young people with disabilities in employment through different measures such as work placement, mentoring, and financial incentives
 - In 2015, work placement
 - In 2016, wage subsidies to employers who hire persons on vocational rehabilitation benefit

Reports

Greece, Greek Organization of SMEs and Handicraft SA, 2011: The report targeted the mapping and statistical processing of the financial assistance project implemented in three cycles and concerning the program "Strengthening Entrepreneurship of Persons with Disabilities". In this program the potential participants were men and women with disabilities and/or chronic health conditions. The main aim of the program was the development, support and promotion of entrepreneurship of persons with disabilities through financial support, in order to create new and sustainable SMEs in manufacturing, trade, services and tourism. The address of SMEs (the SMEs Directorate) of the General Secretariat for Industry in the Ministry of Development, as Implementing Authority, commissioned EOMMEX (Greek Organization of SMEs and Handicraft SA) to implement the three cycles of the program. Among others, the entrepreneurs participating in the research expressed a positive opinion regarding the effects of the creation of their businesses, since the majority of them states that they have ensured their economic autonomy and were integrated in social environment, through the business founded. The contraction of the shrinking market and the economic crisis were recorded as the most important problems faced, followed by the difficulty of access to loans and funding programs, insufficient funds and the high rate of taxation, issues that concern anyway, all the country's enterprises.

Poland, The Supreme Control Chamber, 2011b: Report about results of the control of the programs supporting the increase in employment of persons with disabilities. The evaluation concentrated on five different programs (JUNIOR, PARTNER, PARTNER 2006, PARTNER III, JOB TRAINER) which were carried out in the entire country in the period of 2007-2010. In these sheltered work programs 135 000 people with mild, 116 000 with moderate and over 10 000 persons with severe disability are employed. The purpose of the evaluation was the control of the programs supporting the increase in employment of persons with disabilities. The control revealed that the National Found for the Rehabilitation of the Disabled, regardless of their long-lasting experience, haven't elaborated by now any tool allowing them for standardization and comparability of the effectiveness of projects. The control of 28 buildings occupied by the Labour Offices revealed that as much as 16 of them had serious architectural barriers inhibiting access for persons with disabilities.

Poland, Strategic Consulting Centre in Krakow, 2013: Evaluation of the support for persons with disabilities provided within the framework of the regional component of the Human Capital Operational Programme. The main objective of the programme for the period of 2007-2013 was increasing the employment level and social cohesion. The objective was implemented, inter alia, by professional activation, development of adaptation potential of enterprises and its employees, by increasing the education level of society, limiting the social exclusion areas and supporting mechanisms of efficient management in state administration. The main aim of the evaluation was to assess the effectiveness and usefulness of the projects targeted at persons with disabilities, implemented in Mazowieckie Voivodeship in 2007-2013 in the scope of the Human Capital Operational Programme. The detailed aims are: (1) diagnosis of the situation of persons with disabilities in Mazowieckie Voivodeship; (2) assessment of effectiveness of the project for improvement of the situation of persons with disabilities; (3) assessment of usefulness of the support offered including analysis of social needs; (4) indication of

changes that should be implemented in future projects. Results point out: 1) a lack of individualized approach to persons with disabilities in the projects, in the sense of not taking into account the specific needs of the persons with different types of impairments; 2) fear on the part of employers of employing persons with disabilities based on stereotypes about lack of productivity and work ability, lack of self-reliance, lack of qualifications and need for help; 3) institutional barriers as the result of complicated systemic solutions and justified fears on the side of persons with disabilities of losing disability pensions and privileges when they start to work or earn above established limit, which is in fact quite low.

Poland, Sęk, Hędrzak-Mącznik and Kmiec, 2014: Evaluation of the project entitled "Support for the persons with physical disabilities at the labour market III". The aim of the project was to prepare 3010 persons with physical impairments to re-integrate with the labour market or to start or continue education. This nationwide project had started in March 2012 and lasted two years. The project was focused on developing skills of persons with disabilities, changing social attitudes towards persons with disabilities in their environment and on developing skills and knowledge among staff of the project on methods of re-integrating person with disabilities into the labour market. Objectives of the evaluation were: (1) Summary and general assessment of the implementation of the project and results; (2) Evaluation of efficiency, efficacy, reliability and usefulness of the intervention; (3) Assessment of the degree of project aims realization; (4) Analysis of the positive and negative factors influencing the intervention and its effectiveness; (5) Identification of eventual unexpected results of the intervention. Authors conclude that the intervention meets the needs of the persons with physical disabilities. The project contributed to the increase of employment of persons with disabilities, increased trust between groups and increased self-esteem in the group of persons with disabilities. All forms of support that were offered within the project were positively assessed by the participants.

Poland, Kocejko, 2015: Evaluation of the implementation of the systemic project entitled "Support of the environment of persons with disabilities in rural areas and in small towns". The main aim of the project was to support socially excluded and marginalized persons with disabilities living in rural areas and small towns through improving their competences and qualifications allowing them to be active on the labour market. The project was carried out from 2013 to 2015 in 8 branches of the Foundation of Activation. Target population were persons with disabilities from small localities. The aim of the evaluation was to assess the project as a model of professional activation of persons with disabilities from small towns and rural areas in terms of specific criteria such as effectiveness, reliability, usefulness, accessibility and empowerment, efficiency, equality of chances. Main results are: lack of individualized approach to the participants; legal and psychological support was assessed as inadequate; social integration is equally important as professional re/integration; due to the project knowledge has increased in the population and their attitudes changed to more positive; infrastructure, especially transportation, are among factors determining low effectiveness of looking for a job. The project was less effective as regards to persons with intellectual disabilities.

Slovenia, Court of Audit of the Republic of Slovenia, 2011: Audit Report. The audit was carried out to assess whether the Ministry of Labour, Family and Social Affairs, the Fund of the Republic of Slovenia for Promotion of Employment of Persons with Disabilities and the Employment Services of Slovenia were effective in achieving their

set objectives and whether they contributed to the preservation or increase of employment of people with disabilities. Components of the strategy were the measures defined in the Vocational Rehabilitation and Employment of Persons with Disabilities Act. Target population were unemployed and employed persons with disabilities in Slovenia. The Court of Audit established that the Ministry in drawing up Vocational Rehabilitation and employment Act and Action Plan for persons with disabilities 2007-2013 failed to set measurable and binding objectives as well as specify measures for achieving these objectives. Moreover, it did not provide for adequate and appropriate cooperation and coordination of all state institutions involved in the employment of persons with disabilities.

Slovenia, Tabaj et al, 2014: Multi-annual evaluation of the employment outcomes of persons with disabilities. Vocational rehabilitation is a national programme aimed at promoting employment of persons with disabilities and is carried out as a public service. Components of the rehabilitation strategy are the measures defined in the Vocational Rehabilitation and Employment of Persons with Disabilities Act. The vocational rehabilitation services are described in the Standards for Vocational Rehabilitation Services that define professional principles, vocational rehabilitation process, its content, work methods and techniques, expected results, as well as the fundamental professional and organisational conditions within which the services are carried out. There are 14 providers of vocational rehabilitation in Slovenia, spread all over the country. The target population are unemployed persons with disabilities. For the years 2010 to 2014, 14% of all persons with disabilities who were registered as unemployed and 27% of persons with disabilities who were included in the process of vocational rehabilitation were successfully employed. Despite the economic crisis a relatively high percentage of persons with disabilities, who are included in vocational rehabilitation, have positive employment outcomes, which means that investments in vocational rehabilitation pay off. Multi-annual evaluation revealed that persons with disabilities have relatively low education (almost half have only elementary school). However, persons with disabilities who were included in the vocational rehabilitation process reach higher education level on average than those who are not included in the process. It was also found that one third of all persons with disabilities, who were included in the vocational rehabilitation, had none at all or just up to 1 year at most working experiences before inclusion in the vocational rehabilitation process.

Slovenia, Breclj, 2015a: Annual Evaluation of the Vocational Rehabilitation for 2014. Evaluation of vocational rehabilitation is carried out yearly with the aim to monitor implementation and development of (1) the supported employment in Slovenia and (2) workplace adaptation. The aim of the evaluation is systematic collection and analysis of the data concerning development and implementation of supported employment and workplace adaptations, with a focus on: 1) the number of persons with disabilities employed in supported employment; 2) which supported services were provided; 3) the number of workplace adjustments and adaptations; 4) which workplace adaptations and adjustments were made. The evaluation reveals that the network of Vocational Rehabilitation providers is stable – the majority of them are holding permanent employment, fluctuation is low. All providers are aware of importance of the permanent education, what is shown as a large participation in various educational programmes, especially non-formal such as seminars, workshops, conferences, and also as participation in the national and international projects. Their inclusion in local

community is growing what is reflected in their collaboration with different local stakeholders (associations, NGOs, public institutions etc.) and in their effort regarding informing persons with disabilities, employers and other stakeholders. In contrast, the burden of administrative work can be described as a negative factor. Cooperation with the referral institutions (Employment Service of Slovenia and Pension and Disability Insurance Institute of Slovenia) is assessed as very good. Service users' satisfaction is carried out by service users two times. The overall assessment of service user's satisfaction reveals that the majority of them are satisfied with all indicators and the highest satisfaction is reported with the relationship with the professionals. The lowest satisfaction refers to differences regarding the time of assessment.

Slovenia, Breclj, 2015b: Annual Evaluation of the Vocational Rehabilitation 2015. The evaluation reveals that the number of persons with disabilities employed in supported employment is increasing through the years. In 2006, when supported employment was introduced, 21 official decisions on employment – issued by Employment Service of Slovenia and entitling the person to get supported employment services – were given while in 2015, 59 decisions were issued and 60 persons with disabilities were employed in supported employment. Main reasons for not providing supported employment services are employers' lack of motivation and severe problems related to their disability, for example accessibility issues. Moreover, the number of workplace adaptations is remaining low through the observed years.

Austria, Eppel, Mahringer, Weber and Zulehner, 2011: Evaluation of "Integration Benefit", a temporary wage subsidy for employers. The wage subsidy is paid to employers to increase employment chances of unemployed persons, focusing on people >45 years-old and long-term unemployed persons. Part of employers wage and gross wage costs are covered by the benefit (up to 2/3rd, average 40%) and the benefit is temporary (max. 2 years to 3 years for persons with a disability; average: 1/2 year). Goal of the report was to evaluate if this wage subsidy show significant (causal) impact on the future careers of employees that have been (re)employed/(re)integrated under this benefit - and if so, for whom and in what way. Reintegration of persons employed under the benefit is measured regarding days of employment or unemployment and income within 5 years after intervention. The impact of the benefit for the age group 15 to 54 years old within the 4-years follow-up period was: 102 days (+13.9%) more in employment and 58 days (13.8%) less in unemployment, compared with persons in unemployment and not receiving any benefits, and an average increase of income of 11% as a result of benefit-induced increase in days in employment. The wage benefit had a significant positive impact on labour market integration, employment chances improve and a long-term effect on employment integration is found. Impact varies, however, among the different target groups: higher impact was observed on long-term unemployed, persons 45 to 54 years old and women. Reintegration results of the whole group of persons with disabilities are under average, and especially for persons with placement difficulties.

Austria, Löffler and Schmid, 2011: Evaluation of combi wage, a financial benefit for persons who take a job with a low payment under certain limits or preconditions. Combi wage is a financial benefit (a top-up payment) for persons who take a job with a low payment. The wage benefit is temporary and should stimulate labour market

reintegration. In the medium or long term it should increase chances for employees to increase their salary and their general employment perspective. In 2009/2010, combi wage referred to: a) Persons in part-time jobs (minimum 16 hours, with a minimum gross salary of 650 €) and persons in full-time jobs (minimum 35 hours, with gross salaries from 1500 € to 1700 €) receive 150 € support payment; b) Persons in full-time jobs with a gross salary under 1500 €, receive 300 €. Target groups were women after maternity leave, older persons and persons with disabilities. The purpose of the evaluation was to provide information on client structure, usage (dynamics), how well known the instrument is and data on efficiency. Analysis of different data shows that combi wage is efficient in reintegrating persons and reaching the target group. Experts considered the instrument adequate for the target group and for reintegration in the low wage sector and saw some sustainable effects. Employers stated that 75% of combi wage recipients will continue to be employed in the future and 80% of users found the benefit useful to take on a job again. On the other hand only 40 % are in employment about 6 month after benefit ends, so results also indicate that combi wage on its own does not result in mostly sustainable employment reintegration. Satisfaction with the instrument is quite high among users and employers.

Austria, Hausegger and Reidl, 2012: Alongside evaluation of the “Health Road”, an assessment instrument and procedure on work ability in order to reduce or avoid multiple assessments and shorten the procedure. “Health Road” has been established as a cooperation of Public Employment Service of Austria (PES) and Austrian Pension Fund Institution. It is a (binding) medical assessment and has been established along with other measures to decrease early retirement and increase participation. The target group are persons with impairments who feel they cannot work anymore or whose work ability has decreased substantially. 22% of all persons that completed Health Road were found to be (temporary) incapable of working. Only a small group of persons with confirmed work capacity were back to employment, or participated in retraining or qualification measures. “Health Road” users showed more interest in vocational support offers but only few “Health Road” users considered capable of working saw a realistic job perspective; about half of them expressed negative critic about Health Road, mainly regarding the procedure or result (e.g. transparency, costs for medical examination not covered by insurance) or the assessing physicians (not enough questions/superficial, medical results were not considered accordingly etc.). The evaluation shows that “Health Road” - without measures on rehabilitation and reintegration that are planned - has very limited possibilities. The assessment is an important first step in reaching the target group - but since participants mostly come from long periods of unemployment earlier intervention is necessary.

Austria, Eppel et al, 2014: Evaluation of Work Integration Social Enterprises in the Context of New Challenges. Different types of enterprises offer transitional jobs to unemployed persons with placement difficulties. The job opportunity is accompanied by training and socio-pedagogical support. Goal of the study was to evaluate the current project structures and examine whether employment, accompanying training and socio-pedagogical support are effective in facilitating a reintegration into the first labour market. The evaluation was a micro-econometric impact analysis on reintegration for different types of social enterprises focusing on the following questions: What is the current and future place and importance within labour market activation policies? What are success factors? How can the strategy be adapted to increase positive outcome and

respond to (future) needs and the different target groups? Results suggest that transitional work strengthens individuals' labour force participation on average and enhances their employment prospects, women and older workers benefiting more from participation than men and prime-age people after careers.

Germany, Kaiser, 2011: Feasibility and sustainability of the "Healthy Work" project were evaluated to determine which factors are promising and which are inhibiting factors in this implementation to make future efforts more successful. Goal of "Healthy Work" is to establish a comprehensive and independent 'guidance proposal' for SME which also covers the entire spectrum of Occupational Health. It was established in six centers in five regions of Germany and the regional centers worked with their cooperation partners and sponsors. There were 190 strategic partners (associations, municipalities, statutory insurance carriers, retirement pension carriers, accident insurance carriers) in the networks, and these networks included 450 service providers. Questions targeted in the evaluation were: 1. How comprehensive is the implementation in small and mid-sized enterprises in the project region and what is the need for consultation on occupational health management?; 2. How are the networks shaped and what role do they play for the work of the regional centers?; 3. Which approaches to SME are available and which function?; 4. Which effect did the work of the regional centers achieve for the customers of the SME? A public, institutional support or assistance which would ensure independence from the interests of both the social insurance institutions and the provider of services could not be sustainably realized in the project and seems, for the future, not promising. A sponsorship through partnership with social insurance carriers was not achieved. Partnerships between Healthy Work and larger statutory health insurances were not successful. One regional center showed that a sponsorship through a social insurance carrier is promising. There may be a solution to provide comprehensive coverage when service centers are formed together in the sense of the Social Security code. An enterprise association model, as a purchasing community for Federal Ministry of Health services, could work to meet the requirements of "Healthy Work".

Germany, FAF GmbH, BAG BBW, BAG UB, 2014: Evaluation of the Programme Job4000 that focused on the following areas: 1) employment, 2) professional training and 3) support by specialized integration services. Goal and target population: Improvement of the stable professional integration of persons with severe disability and particular difficulties to find a job in the open labour market. In addition, increase of the support offered to young persons with severe disability in the transition from school/education to the labour market. Provinces were responsible for the implementation of the program. The intervention and measures of the program consisted of 1) provision of financial aids, 2) support measures regarding the funding and approval procedures by the integration offices and the employment agency and 3) accompanying measures by the group supervising the project (documentation, analysis of information, dissemination). The evaluation of the program is one of the tasks of the scientific supervision implemented from the beginning of the project. Purpose was the analysis of the contribution of the implemented interventions to the achievement of project goals and analysis of factors facilitating and hindering the sustainability. The evaluation of the program shows that Job4000 could reach persons with severe disability with difficulties to be integrated in the open labour market, improved the transfer from special schools and sheltered work into paid employment in the general

market, achieved sustainability of the employment promoted, managed to involve firms that were not obliged to employ persons with severe disability and firms that had no previous experience with this group of workers. Facilitating factors for employers were apparently the conveying conditions and the simple application procedure. Additional programs and measures in the provinces supporting the goals of Job4000, and the coordination of the different agents collaborated to its success.

Norway, Zhang, 2015: Work placement is a common strategy used in particular for those with problems in finding work on their own, both ordinary job seekers and persons with reduced work capacity. The author evaluates the causal effect of work placement and vocational training for ordinary jobseekers. The study emphasises repeated and sequential participation for training and work placements, and examines more closely vulnerable groups in the labour market. The author finds that work placement has moderate if any positive effect on future job prospects while vocational training has a significant positive effect.

Norway, Dyrstad, Mandal and Ose, 2013: The report evaluate the 'Job strategy for persons with disabilities' that was budgeted by the central authorities, aiming to increase employment among young disabled under 30 years of age. The 'Job strategy' included a number of strategies such as work placement, mentoring, employment of assistants with the purpose of helping individuals with severe disabilities in their job situation, employment of staff at the local welfare institutions, and financial incentives to increase the recruitment of individuals with disabilities. The main purpose of the report was to evaluate the implementation of the strategy. The evaluation found large variation in the implementation of the strategy. The majority of the local Welfare Administration (NAV) offices had canalized work with the new strategy into their general work with young adults.

Norway, Spjelkavik and Terjesen, 2016: The study evaluated a pilot study that provide wage subsidies to employers who hire persons on vocational rehabilitation benefit (AAP). The programs will be active in the period 2013 – 2018, and is limited to five counties. The program also present employers the possibility to offer temporary employment, and access to extended coaching from the welfare administration. The study involves a process evaluation in order to investigate the start, organisation, and implementation of the pilot. Overall, the evaluation report positive subjective satisfaction from all of the involved. However, the authors find a lack of involvement from leaders at the local level, and a need for better coordination between the involved administrative levels.

5.2.5. SERVICE strategies evaluated in scientific studies

Services strategies encompass services and activities by private or public entities aimed at assisting jobseekers in finding employment as well as social services that directly or indirectly contribute to the employability of persons with chronic diseases.

Several strategies identified in the present report can be classified either as system or service, depending on the country of the study and on what was evaluated. System or service strategies are reported therefore below a single heading.

5.2.5.1. Individual Placement and Support (IPS)

Individual Placement and Support (IPS) strategies can be a system or service, depending in the country. IPS includes different approaches sharing the following principles:

- **the goal is competitive employment,**
- **eligibility for IPS programs are based on participant choice and zero exclusion (all persons willing to get a job will receive IPS, no exclusion criteria),**
- **rapid job search,**
- **service and job search are based on person's preferences,**
- **integration of employment service with the mental healthcare team,**
- **ongoing individualized support,**
- **personalized counselling on benefits including social insurance, and**
- **systematic recruitment of job opportunities and engagement with employers based on person's preferences.**

KEY FINDINGS

IPS strategies have been evaluated in the UK, Netherlands, Switzerland and Sweden and applied exclusively to persons with mental disorders. IPS was effective in all studies included in the present review. Four out of the five identified studies used randomised controlled trials as study design.

Positive change was achieved in all included studies carried out in the UK, Sweden, Netherlands and Switzerland, all including unemployed persons with serious mental disorders and having competitive work as the outcome of interest.

Studies reporting positive change

Heslin and colleagues (2011) evaluated IPS in the **UK** using a RCT with a two years follow up comparing unemployed persons with serious mental disorders either receiving IPS (N=109, 31% females) or care as usual (N=110, 33% females). After 2 years IPS was more effective in helping persons with serious mental disorders to obtain competitive employment, but the proportion of persons who obtained employment was low in both groups. Time to achieve employment was six weeks shorter in persons receiving IPS but there was a long delay of more than one and a half years to find competitive work after the begin of the study. IPS had no significant effect on the duration of jobs. In this study competitive employment was defined as having a job paying at least the minimum wage, located in a mainstream socially integrated setting. It is important to stress that the study was conducted in deprived areas of London, with a higher rate of unemployment compared to the national average, and that the study population was more disabled than populations recruited in other studies.

In another study carried out in the **UK**, **van Veggel et al (2015)** evaluated a large-scale implementation of IPS in Sussex, UK, using a cohort study with a 12 months follow-up and including persons with serious mental disorders who were unemployed and seeking a job or vocational experience (n=446, 44% females). The comparison group were persons receiving conventional vocational rehabilitation (n=140, 46% females). Significantly more people receiving IPS commenced competitive employment. On average, time to first job from program commencement was reduced by about 5 months and mean hours worked per week increased 9 hours in the IPS group, but it is not

reported, whether these differences were statistically significant. It is important to emphasize that participants of the comparison group were admitted with vocational goals other than competitive employment; that the “new” service, namely IPS, was offered at 17 locations and was compared to the previous employment service at three locations; and that on average most sites achieved only fair fidelity to IPS principles. Additionally, attrition rates were very high: 71.4% in the comparison and 52.2% in the IPS group.

Bejerholm and colleagues (2015) evaluated IPS in **Sweden** using a RCT with a 12 months follow-up and including unemployed persons with serious mental disorders (n=60, 53% females). The comparison group received traditional vocational rehabilitation (n=60, 35% females). At 6 months, there was no difference between groups but at 18 months, the rate of competitive employment – defined as work for at least 1 week in employment that paid at least minimum wage, available to any citizen and located in mainstream settings – number of weeks and hours worked, and work tenure were all greater in the IPS group. Besides reaching competitive employment the IPS group became more involved in activities integrated in mainstream community settings.

Michon et al (2014) evaluated IPS in the **Netherlands** using a RCT with a 30 months follow-up and including unemployed persons with serious mental disorders. The intervention group received IPS (N=71, 27% females) and the comparison group received traditional vocational rehabilitation (N=80, 25% females). The proportion of participants who found competitive jobs – defined as paid job in a company or organization in the regular labour market, against prevailing wages, not set aside for persons with a disability, that is in an integrated work setting – before 18 and before 30 months, was significantly higher in the IPS group as were the mean hours worked in competitive jobs. Mean days competitively employed and was higher in the IPS group but not significantly different from the comparison group.

Hoffmann and colleagues (2012, 2014) evaluated IPS in **Switzerland** using an RCT with five years follow-up and including unemployed persons with serious mental disorders. The intervention group received IPS (N=46, 35% females) while the comparison group received traditional vocational rehabilitation (pre-vocational training in sheltered workshops) (N=54, 35% females). At the five years follow-up, IPS was more successful regarding competitive employment rates, length of employment, total and annual weeks in competitive work, job tenure in longest competitive work and mean hours worked. Competitive employment was defined as holding a job paying at least minimum wage (set at about US\$10 for the study) for at least 2 weeks on the open labour market (i.e. excluding jobs protected for people with a disability, such as transitional employment). It is important to emphasize that due to the requirements of the Swiss social insurance system participants of this study were less impaired and more motivated than in other studies.

5.2.5.2. *Work-focused strategies*

These strategies have a main focus on factors directly related to the workplace and the work activity, for instance addressing workplace barriers and physical activity.

KEY FINDINGS

Work-focused strategies have been evaluated in Denmark, Norway and Finland and applied exclusively to persons with musculoskeletal disorders.

Positive change was achieved in Finland through an early ergonomic intervention for employed persons, mostly women, with upper-extremity back pain.

No change was observed in Denmark for a strategy addressing workplace barriers and physical activity of employed persons with low back pain and concerned about the ability to maintain the current job.

No increase on effectiveness by adding a work-focused intervention to usual multidisciplinary intervention was observed in Norway for persons with neck and back pain, who were employed but on sick leave.

Studies reporting positive change

Shiri et al (2011) evaluated in **Finland** an early ergonomic intervention for employed persons, mostly women (87.3%) with upper-extremity back pain. Within the intervention, the physician contacts the employer after the clinical examination, and a visit by the occupational physiotherapist is scheduled. The workplace is assessed and possible changes to achieve an ergonomic improvement discussed with the employee and supervisor. Using a RCT with a 12 months follow-up, authors compared 91 persons receiving this intervention with a group of 86 persons receiving standard medical care. Results suggest that the early ergonomic intervention reduces sickness absence due to any musculoskeletal disorders in the long term (4-12-month period). The number of days in sick absence due to any musculoskeletal disorder certified by a single nurse was significantly lower in the intervention group but not the number of sickness absences certified by physicians and nurses. Subgroup analyses showed that subjects exposed to work-related physical load factors especially benefitted from the intervention.

Studies reporting no change

Jensen et al (2012) has evaluated in **Denmark** a strategy addressing workplace barriers and physical activity, as part of an outpatient treatment for persons with low back pain. This strategy included counselling by an occupational physician, aiming at removing experienced workplace barriers as well as at enhancing physical activity of moderate intensity, pain, function and sick leave after 3 months. Two counselling sessions were integrated in low back pain secondary care. In their RCT with a 3 months follow-up, colleagues compared 150 (ca. 51% females) receiving this intervention with 150 persons (ca. 59% females) receiving usual care. Usual care typically consisted of a brief instruction in exercises, or readmission to a general practitioner for further contact with a physiotherapist or chiropractic treatment. All participants of the study had low back pain and were employed but expressed concerns about the ability to maintain their current job. The intervention had a significant effect for self-reports of both sick leave longer than 8 weeks and cumulated sick leave days due to low back pain. However,

when researchers looked at register data on sick leave longer than 2 weeks due to all causes, there was no significant difference between the groups.

In **Norway, Myhre and colleagues** (2014) evaluated the effectiveness of additional work-focused intervention to multidisciplinary intervention. In the work-focused intervention a case manager analyses together with the patient work and return to work difficulties, develops with the person a return to work schedule, discuss relevant issues for a meeting with the employer and if sick-leave compensation is an issue, contacts municipal social services. Participants were persons with neck and back pain, who were employed but on sick leave for at least 4 and at most 12 weeks. Persons receiving multidisciplinary intervention (brief or comprehensive) (N=202, 49% females) were compared to persons receiving multidisciplinary intervention and the additional work-focused intervention (N=203, 44% females) in an RCT with 12 months follow-up. Adding a work-focused intervention didn't increase the effect of multidisciplinary care in decreasing time to return to work, except for subjects older than 41 years old. The additional intervention had no effect on the total number of subjects returning to work but was not inferior to interventions that focus on physical activity and pain. Marchand et al (2015) carried out a secondary analysis of Myhre's RCT to explore secondary clinical outcomes and the influence of some factors on primary and secondary outcomes. In their analyses, younger age, low anxiety scores and improvement in fear avoidance beliefs associated to work were predictors of return to work in the group receiving additional work-focused intervention. Authors conclude that the addition of a work-focused intervention may be a better option than standard multidisciplinary intervention for some patients.

5.2.5.3. Psychological or Behavioural Strategies

Psychological or behavioural analysis and training are strategies offered exclusively to persons with mental disorders and mostly including or following the principles of Cognitive Behavioral Therapy (CBT).

KEY FINDINGS

Psychological or behavioural strategies have been evaluated in Norway, Netherlands and Germany and mostly on employed persons with common mental disorders, such as depression and anxiety, either on sick leave or at risk of going on sick leave. Studies used either RCTs or controlled trials.

Positive change was reported with:

- CBT and, where needed, IPS in Norway;
- Work-focused CBT in the Netherlands and Germany;
- A five-step problem-solving process in the Netherlands and;
- A Web-Based Intervention in the Netherlands (partial change).

No change was reported for adding the exposure-based return to work program to care as usual in the Netherlands.

Studies reporting positive change

Reme and colleagues (2015) have evaluated a systematic and integrated approach including CBT and, if needed, Individual Placement and Support (IPS) in **Norway**. In a **RCT** with 18 months follow-up employed persons with common mental disorders, such as depression and anxiety, expressing a motivation to return to or stay at work and

either on sick leave, at risk of going on sick leave or on long-term benefits were invited to participate. Altogether, 437 persons (69.4% females) receiving CBT focused on managing mental health problems (as they relate to work situations) and, if needed, IPS, were compared to 365 persons (65% females) receiving care as usual. Care as usual included the standard treatment from their general practitioner, national insurance office and other health professionals. These persons received a letter with information and encouragement to use available services and self-help resources, and employment and health care services for the comparison group were not restricted: they could be followed up by other psychologists or participate in other employment schemes. The proportion of persons with increased or maintained work participation – including maintained work participation, new employment or a full or partial return to work – at 12 and 18 months was higher for the ones receiving CBT but the effect was larger for individuals on long-term benefits at the start of the study. It is important to state that full or partial return to work included working and no reception of health-related or work-related benefits, or reduced benefit coverage and increased work participation compared with status at the start of the study.

Lagerveld and colleagues (2012) evaluated work-focused CBT in the **Netherlands**, which included regular treatment plus a module focusing on work and return to work, in a controlled trial. Participants were employed persons with common mental disorders, such as depression and anxiety, who were in sick leave. Two groups were compared in a one year follow-up: 79 persons (67% females) receiving CBT as usual and 89 persons receiving work-related CBT (54% females). Over 90% of participants of both groups resumed work within one year, but work-focused CBT achieved this result about 2 months earlier. Partial return to work occurred earlier and more often in the group receiving work-focused CBT, who used more (and consequently smaller) steps to reach full return to work. Temporal relapses in the return to work process occurred more often in work-focused CBT, but this difference was not statistically significant. In this study full return to work was defined as working the number of hours specified in the labour contract, except if this was still on a “therapeutic” basis with adjusted tasks and/or reduced responsibilities. Partial return to work was defined as a first partial increase in working hours.

Kröger and colleagues (2014) evaluated work-related CBT in a controlled trial including persons with mental disorders who were employed and on sick leave within the last 21 working days in **Germany**. Two small groups were compared in a one year follow-up: 13 persons receiving CBT as usual (54% women) and 13 persons receiving work-related CBT (38% women). Work-related CBT incorporated 1) objective assessment of the workplace and the patient's perspective and 2) work-related interventions, such as redefining the workplace, facing problems in the frame of problem-solving training, identifying useful skills and transferring them to other situations, developing and implementing a plan for reintegration, receiving support to solve the problems faced when implementing the plan, and trying to integrate occupational physician and employees' supervisors. Both CBT as usual and work-related CBT reduced significantly days of incapacity to work, defined as number of days on sick leave per 100 calendar days within one year, but the reduction was larger in work-related CBT.

Arends et al (2014) evaluated a problem-solving intervention focusing on work in the **Netherlands** in a RCT with 12 months follow-up. The intervention consisted of a five-step problem-solving process to find and implement solutions for problems experienced

when back at work. Participants were employed persons with common mental disorders, such as depression and anxiety, who had sickness absence due to common mental disorders in the past. Persons receiving the problem-solving intervention focusing on work (N=80, 34% females) were compared to persons receiving usual care (N=78, 49% females). The problem-solving intervention was effective in significantly increasing the time until recurrent sickness absence, as compared to usual care, and in decreasing recurrent sickness episodes.

Volker et al (2015) evaluated a Web-Based Intervention in the **Netherlands** in a RCT with 12 months follow-up including employed persons with common mental disorders, such as depression and anxiety, who had been sick listed between 4 and 26 weeks. The Web-Based Intervention included: an eHealth return to work module tailor-made to the individual employee (aspects that may be focused: psychoeducation, cognitive behavioural therapy and coping skills, pain and fatigue management and reactivation, relapse prevention) and an E-mail Decision Aid for the Occupational Physician. The 131 persons (59% females) receiving the Web-Based Intervention were compared to 89 persons (89% females) receiving usual care. There was a significant effect of the Web-Based Intervention for duration until first return to work only and no significant effect for time to full return to work and number of days of sickness absence.

Studies reporting no change

Noordik and colleagues (2013) evaluated in the **Netherlands** an exposure-based return to work program, added to care as usual in an RCT with 12 months follow-up including employed persons with common mental disorders, such as depression and anxiety, who had been on sick leave for 2 to 8 weeks. The program included care as usual and gradually in vivo exposure to more demanding work situations, encompassing active problem solving behaviour instead of avoidance behaviour when dealing with stressing work situations during return to work and homework assignments aimed at preparing, executing and evaluating an exposure-based return to work plan. The 28 persons (78% females) receiving the additional exposure-based return to work program were compared to 28 persons (67% females) receiving care as usual. Workers in the exposure-based return to work program showed a statistically not significant prolonged time to full return to work compared to the other group. There was no difference between groups in time to partial return to work, nor number of recurrences of sick leave. Full return to work was defined as the total number of contracted working hours per week lasting ≥ 28 calendar days without a recurrence of sick leave.

5.2.5.4. Multidisciplinary interventions

Multidisciplinary interventions are characterized by teams including several professionals with different backgrounds, who evaluate and intervene in different areas involved in the participation in working life. Multidisciplinary interventions have been evaluated for persons with chronic disease and disability in general, mental disorders, musculoskeletal disorders and cancer.

KEY FINDINGS

Nine studies, carried out in Sweden, Denmark, Netherlands and Switzerland evaluated different multidisciplinary interventions for persons with chronic disease and disability in general, mental disorders, musculoskeletal disorders

and cancer.

Positive change was reported:

- Partially by a multidisciplinary, coordinated and tailored return to work intervention in Denmark for persons with chronic disease and disability in general and for persons with low back pain. A further evaluation of the same intervention in Denmark brought, however, **no change** for persons with common mental disorders.
- Occupational therapy adjuvant to treatment as usual in the Netherlands was effective for persons with mental disorders.
- A multidisciplinary intervention promoting involvement of stakeholders in the Netherlands for persons with musculoskeletal disorders.

No change was reported:

- In Sweden for a multidisciplinary collaboration program focusing on an early and holistic evaluation of the need for rehabilitation by the Social Insurance Agency and the primary health care
- In Switzerland for a multidisciplinary functional rehabilitation program for persons with musculoskeletal disorders
- In the Netherlands for a collaborative care treatment for persons with major depressive disorder.

Studies reporting positive change

Poulsen and colleagues (2014) evaluated in **Denmark** a multidisciplinary, coordinated and tailored return to work intervention in a RCT with 12 months follow-up and including 3 municipalities. Municipalities are obliged by law to conduct an assessment of every sick-listed beneficiary by the end of the 8th week of sickness absence. At this assessment, beneficiaries are assigned to one of three categories: (1) likely to return to work within three months; (2) unlikely to return to work within three months, but able to participate in return to work activities like gradually returning to work; and (3) unlikely to return to work within three months and unable to participate in return to work activities. Participants of the study were employed and unemployment adults with chronic disease and disability in general assigned to category 2. Persons receiving the multidisciplinary intervention in the three municipalities (N=747, N=809, N=392) were compared to persons receiving ordinary sickness benefit management (N=489, N=539, N=129). The effect of the multidisciplinary strategy was different in the 3 municipalities and across time frames within each site. In the municipality with the most complex cases, the intervention was effective regarding recovery from sickness absence, defined as the first week where no sickness absence benefit was given. It is important to stress that the Danish return to work program was performed during a period of global economic crises (data collection 2010 to 2011) with increasing rates of unemployment throughout Europe and that contextual factors, such as sociodemographic characteristics of participants in the different municipalities and different interpretation and management of legislation, seem to explain the results.

Jensen and colleagues (2011) evaluated in **Denmark** the same multidisciplinary, coordinated and tailored intervention for employed persons with low back pain and on sick leave for 3 to 16 weeks. The multidisciplinary intervention consisted of: clinical examination and advice by a rehabilitation doctor and a physiotherapist; assignment of a case manager, who develops a rehabilitation plan in collaboration with the patient and

a multidisciplinary team; contacting the workplace and the social service center to discuss and coordinate relevant initiatives; arranging meetings between the participant and each of the other specialists, meetings at the work place and meetings with the social service center, if relevant. In a **RCT** with 12 months follow-up, 176 persons (54% females) receiving multidisciplinary tailored coordinated intervention were compared to 175 persons (50% females) receiving a brief intervention consisting of clinical examination and advice. There were no differences between groups in number of subjects who returned to work within one year or time needed to return to work. Return to work was defined as the first 4-week period within the first year after inclusion, during which the participant received no social transfer payments. **Stapelfeldt and colleagues** (2011) carried out secondary analyses of this study to identify subgroups that would benefit more from the multidisciplinary intervention considering the 12 months follow-up and used data from 120 persons. When claimants, i.e. persons applying for pension, were excluded from the analyses, the multidisciplinary intervention was more effective for participants with low job satisfaction and in subgroups characterised by no influence on work planning and at risk of losing their job. Participants with high job satisfaction and those who were able to influence the planning of their work and had no risk of losing their job benefited more from the brief intervention. Using a longer follow-up of 24 months, **Jensen** analysed in a **further secondary analyses** (2012) the impact of the interventions on sick leave weeks and on different subgroups explored. In the general sample, at the one-year follow-up the number of weeks on sick leave was statistically significant lower in the brief intervention group than in the multidisciplinary group which indicated that this intervention was the more effective. When authors focused on different subgroups of patients, the brief intervention worked better for about two thirds of the patients, namely those with influence on the planning of their own work and no perceived risk of losing job and/or being a work injury claimant, and the multidisciplinary intervention was more effective for the remaining one-third of the patients.

Hees et al (2012) evaluated in the **Netherlands** occupational therapy adjuvant to treatment as usual in a RCT with 18 months follow up including persons with mental disorders. The occupational therapy adjuvant to treatment as usual was offered in an outpatient clinical treatment and focused on: 1) early return to the work situation according to the 'place-then-train' principle, 2) work-related coping and self-efficacy, and 3) enhanced communication among the various stakeholders involved. Persons receiving occupational therapy adjuvant to treatment as usual (N=39, 47% females) were compared to persons receiving care as usual (N=78, 59% females). Over time, the probability of return to work while being remitted from depression increased more for participants receiving the additional occupational therapy. Hours of absenteeism were significantly decreased in both groups with no difference between them. There was also no difference between groups for full or partial return to work. In this study, partial return to work was defined as working an increment of at least 5 hours compared with the situation at the beginning of the study for at least 4 weeks without partial or full recurrence while full return to work was defined as working full contract hours in own or other work for at least 4 weeks, without partial or full recurrence. A limitation of this study is the small sample size.

Vermaulen et al. (2011) evaluated in the Netherlands a multidisciplinary intervention promoting involvement of stakeholders (N=84, 43% females) compared to usual care (N=79, 37% females) in a RCT with 12 months follow up. Participants were persons with

musculoskeletal disorders, unemployed and temporary registered on sick leave for 2 to 8 weeks. In the intervention a return to work coordinator encourages a high degree of involvement of both the sick-listed worker and labour experts representing the Social Security Agency to reach consensus about a return to work plan. A vocational rehabilitation agency is contracted to find a suitable (therapeutic) workplace matching with the formulated return to work plan. Results indicated a non-significant trend towards delayed return to work in persons receiving the intervention in the first 90 days, followed by a significant advantage in sustainable return to work rate after 90 days. Sustainable return to work was defined as days from randomisation to work in any type of paid work or work resumption with ongoing benefits for at least 28 consecutive days.

Studies reporting no change

Johansson and colleagues (2012) evaluated in **Sweden** Resursteam, a multidisciplinary collaboration program focusing on an early and holistic evaluation of the need for rehabilitation as a collaboration between the Social Insurance Agency and the primary health care. Goal of Resursteam was to speed up the rehabilitation and reduce work absence costs. Resursteam was evaluated for persons with chronic disease and disability in general, mostly with musculoskeletal or mental disorders, in a mixed methods study including a one year follow up RCT and a register-based cohort study with an approximately 3 years follow up. Participants were employed and unemployed persons on sick leave and at risk of becoming long-term sick. In the cohort study and in the RCT, 1076 and 21 persons received Resursteam, respectively. In the comparison group, 37938 persons in the cohort study and 24 in the RCT received the rehabilitation plan suggested by the medical doctor and/or the case worker. The results from the RCT and the cohort study suggest a negative effect of the intervention: the duration of sickness absence of persons receiving Resursteam was about 3 months longer. Despite control of possible confounders, groups are initially very different in the cohort study because Resursteam is prescribed to people with risk of long sick absence but results from the RCT were consistent with results of the cohort study albeit not significant.

Steiner and colleagues (2013) evaluated in **Switzerland** a multidisciplinary functional rehabilitation program (MFRP) aimed to restore the individual's musculoskeletal function and including significant cognitive behavioural components and work-related goals and outcomes (integrating physical rehabilitation, psychological evaluation, cognitive behavioural methods and occupational therapy with a socio-professional component). The intervention was evaluated in a controlled trial with a 9 months follow up and including persons with non-specific low back pain: 24 persons (42% females) received MFRP and were compared to 21 persons (52% females) receiving a muscle reconditioning program. After excluding subjects not employed or not searching for a job, for instance housewives or persons in early retirements, more people who received MFRP were working at the follow-up (78% vs 47%) but this difference was statistically not significant. It is important to stress that this study has a small sample size and did not define what was considered return to work.

Vlasveld and colleagues (2013) evaluated in the **Netherlands** a collaborative care treatment applied by the occupational physician care manager with psychiatry consultation to employed persons with major depressive disorder and on sick leave between 4 and 12 weeks. Collaborative care included: 6 to 12 sessions of problem-solving treatment; manual-guided self-help; a workplace intervention and, depending on

patient preference, antidepressant medication; web-based tracking system to support the occupational physician–care manager in monitoring and in adhering to the protocol; psychiatrist available for consultation; active participation and commitment of the worker and employer. In this RCT with 12 months follow-up, persons receiving collaborative care (N=61, 57% females) were compared to a control group (N=61, 54% females) not further specified. Persons receiving collaborative care had a shorter time to return to work and fewer days on sick leave than the comparison group but these differences were not statistically significant. Duration until lasting, full return to work was defined as: duration of sickness absence due to mental disorder in calendar days, from the day of randomisation until full return to work for at least 4 weeks without partial or full recurrence; in accordance with the Dutch Health Law, two sickness absence episodes with less than 4 weeks of full return to work in between were counted as a single, continuous absence episode.

Martin and colleagues (2013) evaluated in **Denmark** a multidisciplinary, coordinated and tailored return-to-work intervention for employed and unemployed persons with common mental disorders, such as depression or anxiety, in sick leave for 4 to 12 weeks. The multidisciplinary return-to-work intervention included: (1) work disability screening, conducted by a multidisciplinary team, to assess disability and functioning and barriers and resources for return to work in accordance with the International Classification of Functioning, Disability and Health (ICF), (2) an action plan for return to work, including proposed activities to overcome barriers and strengthen resources (e.g. stress management training, physical exercise, contact with the workplace), and (3) implementation of the action plan and regular updates according to the individual's current situation. In a controlled trial with 52 weeks follow up, 88 persons (78% females) receiving the multidisciplinary intervention were compared to 80 persons (83% females) receiving care as usual (conventional case management). The multidisciplinary intervention had a rather negative effect and delayed return to work compared to conventional case management, after accounting for confounders. After 1 year, more recipients of the multidisciplinary intervention than of conventional case management were receiving sickness absence benefits.

5.2.5.5. Educational strategies

Educational interventions focus usually on information and advice, education about nature and course of the disease and about physical and psychological factors involved.

KEY FINDINGS

A single study evaluating an educational strategy in Belgium was identified.

Positive change was achieved by a disability evaluation followed by information and advice in Belgium persons with low back pain. This was the single evaluation identified regarding educational strategies.

Studies reporting positive change

The single study identified that evaluated an educational strategy was carried out in **Belgium** by **Du Bois et al** (2012). The effectiveness of a disability evaluation followed by information and advice was evaluated in a RCT with 12 months follow-up for employed persons with low back pain and in sick leave. The disability evaluation

followed by information and advice included education about nature and course of the disease and about physical and psychological factors involved as well as encouragement of participants to adopt an active role. Persons receiving the disability evaluation followed by information and advice (N=252, 46% females) were compared to persons receiving usual care including the brief disability evaluation but no medical advice (N=257, 40% females). The educational intervention was more effective in the long term: less people receiving disability evaluation followed by information and advice were off work or had episodes of sick leave after 12 months. Time until recurrent sick leave was as well lower for this group.

Studies reporting no change

No study identified.

5.2.5.6. Early return to work strategies

Interventions carried out at early stages of disease treatment were classified as early return to work strategies.

KEY FINDINGS

A single study evaluating an early strategy in the Netherlands was identified.

No change was achieved by the single study evaluating the effectiveness of a hospital-based work support intervention for women with cancer in the Netherlands.

Studies reporting positive change

No study identified.

Studies reporting no change

The single study identified was carried out by **Tamminga and colleagues** (2013) in the **Netherlands**. This study evaluated, in a RCT with 12 months follow up, the effectiveness of a hospital-based work support intervention targeting 1) patient education and support, as part of usual psycho-oncology care; 2) improvement of the communication between the treating physician and the occupational physician; and 3) the drawing up a return to work plan collaboratively by the cancer patient, the occupational physician, and the employer. Participants were women with breast and gynaecological cancer, who were employed, on sick leave and being treated with curative intent. Women receiving the hospital-based work support intervention (N=65) were compared to women receiving care as usual (N=68). The hospital-based work support intervention was not effective for increasing rates of return to work at one year of follow-up or improving time until return to work. Return to work was defined as the first day at work, part-time or full-time, sustained for at least 4 weeks. An important limitation of the study was the inability to include sufficient patients in both groups.

5.2.6. SERVICE strategies evaluated in structured national reports

BRIEF SUMMARY

- ✓ Service strategies have been evaluated in Austria.
- ✓ Austria evaluated:
 - in 2013 and 2015 “fit2work”, a counselling service for persons with impairments including initial consultation and later on (if needed) case management

Reports

Austria, Egger-Subotitsch and Stark, 2013: Implementation evaluation of “fit2work”, a counselling service for persons with impairments including initial consultation and later on (if needed) case management. Besides individualised support the service informs clients about services and systems and refers them to what is best in every case. Target population are employed and unemployed persons with impairments that have an impact on their work ability, their current employment or labour market participation in general. The service is open to anybody who feels he or she needs this support but persons with a certain amount of sick days a year (40 days) receive an invitation from the health insurance institution. The use of the service is always on voluntary basis. As part of a long-term evaluation strategy this evaluation was conducted during the implementation phase from 2011 to 2013 in 3 regions: Vienna, Lower Austria and Styria. The evaluation showed that the service reaches the target group but not as much as expected: 4047 persons attended an initial consultation (out of potential 6580 clients), 881 case management clients were enrolled out of potential 3290 clients. Persons who attended the initial consultation reported high satisfaction - if expectations were met and if their expectations corresponded to fit2work objectives. Satisfaction was especially high with process quality and information. If satisfaction was low this was mostly due to: 1) two weeks waiting time for initial counselling; 2) other non-intervention related factors. 42% didn't participate in Case Management because solutions could be already found during the initial consultation or because of personal factors. Regarding individuals participating in Case Management, 90% were very or quite satisfied. More than 40% saw an immediate impact on job and/or personal situation, 75% found it useful on a personal level. Reported changes for participants regarding health status, personal or professional life was in accordance with “fit2work” objectives. Clients with better health status, younger, more educated and employed reported a more positive impact on work ability. For persons of higher age and higher health impairments the clients themselves as well as counsellors saw few perspectives.

Austria, Klotz et al, 2015: Evaluation of “fit2work” (see Austria, 2013). Goal of this report was to evaluate if the actual worked days (employed days minus sick days) increased for persons who completed “fit2work” case management. The sample was compared with a group of persons who received invitations but never used the “fit2work” service. “Fit2work” operated already nation-wide at time of this evaluation, available data (fit2work, health insurance, data from Statistic Austria on employment) was used to carry out an evaluation of employment related results for a 90, 180 and 360 days after intervention period possible. Results show that “fit2work” Case Management had positive effects on employment participation but high variations in effects on employment were observed: for 25% of clients substantial improvements, for 25% substantial decrease in working days, but for 55 % no change at all. Authors conclude

that the individualised approach might need to be improved and that decreased working days must not mean ineffectiveness: e.g. if client undergoes longer vocational or medical rehabilitation. No effects regarding 3 different disease groups (musculoskeletal, mental health, other) were found.

5.3. WHICH FACTORS INFLUENCE STRATEGIES AIMING TO IMPROVE PROFESSIONAL INTEGRATION AND RE-INTEGRATION INTO WORK STRATEGIES IN EUROPE?

Data on factors influencing strategies aiming to improve professional (re)integration was obtained from 46 qualitative studies included in this review (list of references in appendix 3). Information is presented using two different perspectives: the perspective of the **affected person**, i.e. persons with chronic conditions, and the perspective of other **stakeholders**, such as health care professionals, employment services professionals, employers or social insurance representatives. General factors informed by all kind of subjects are added in the end of this section.

5.3.1. *Perspective of affected persons*

Following factors were identified regarding the **reintegration process** itself, in relation to the received strategy:

- **Content of the process**, for instance the fact that some roles or tasks might be perceived as not needed or redundant. For instance:
 - A psychologist in a multidisciplinary team may be perceived as redundant if the person receives already psychological treatment. Other persons might see an additional psychologist focusing on work problems as a good opportunity of dealing with this specific life area.
 - A comprehensive evaluation can be perceived negatively for raising fears that all problems will come up again or for not having a clear value or need for the affected person, or positively if the person feels understood by so many persons.
 - Unclear goals of strategies and corresponding interventions can raise the thought *"I just want to work, I don't need a comprehensive psychological assessment"*.
- **Structure of the process** and its organization: waiting lists, waiting for feedback or further steps, accessibility and communication issues. For instance:
 - Waiting lists or waiting for the implementation of a return to work plan elaborated during the intervention can have a negative impact on motivation.
 - Accessibility issues such a very distant service centres can have a negative impact on motivation.
 - Communication, to what extent affected persons are informed about what is done, the goals of different tasks, etc.
- **Quality of interaction** with professionals or systems (physician, physiotherapist, psychologist, nurse, insurances or social insurance systems, employment services and other professional services). For instance:

- Feeling accepted, valued as a person and understood has a positive impact on affective states and motivation to actively participate.
- Negative impact if contact gives the impression that there is no hope regarding changing the current work situation.
- **Financial conflicts.** For instance:
 - Fear of losing benefits when participating in strategies.
- **Lack of recognition** of holistic interventions as holistic. For instance:
 - Affected persons don't realize that professionals are working together, what might point out to poor communication of professionals involved.

Following **personal factors** regarding the affected person were identified:

- **History of job experience.** For instance:
 - It is usually more difficult to obtain positive results with persons with few or no work experience and those who were unemployed for a long time.
- **History of past experiences** with sick leave or rehabilitation. For instance:
 - It is usually more difficult to obtain positive results with persons with a sick leave history (person might be less healthy or might have already identified with the sick role).
- **Health issues and problems.** For instance:
 - Severity of the disease and comorbidities influence the work outcomes.
- **Planning of the future work life** as well as personal intentions and motivation. For instance:
 - Some persons really want to work, others are forced to participate in strategies but don't want to work anymore.
- **Psychological factors** such as self-esteem, confidence, strategies for coping with the illness, identification with different roles, locus of control, identification with the sick role or life satisfaction. For instance:
 - Identification with the sick role influences willingness to participate.
- **Personal sense of life balance** and perceived and experienced social isolation. For instance:
 - Cannot be that good return to work strategies bring persons back to work at the price of structuring the complete life around work.

Following factors regarding the **work environment** were identified:

- **Disclosure of the illness.** For instance:
 - Some persons don't want to talk about the disease because they consider it as a private sphere theme as problems with marriage or children. Disclosing disease is, however, a pre-condition to create accommodations and to match tasks to the work capacity of the person.
- **Stigma and discrimination.** For instance:
 - Sometimes persons are afraid of stigma and discrimination or rejection, but these are not the reality, and sometimes they face indeed discrimination or rejection at work.
- **Physical aspects of the workplace** and physical environment. For instance:
 - Accessible entrances or ergonomic furniture.
- **Features of job such as job duties**, schedules, independence or autonomy. For instance:
 - Persons with more control over their work respond usually better to the interventions.

- **Social support**, for instance from colleagues or supervisors. For instance:
 - Previous experiences with co-workers and a corresponding positive expectance regarding support in the future.
 - Perception whether co-workers will expect too less from the person.

5.3.2. *Perspective of stakeholders: health care professionals, employers, social insurance representatives and others*

Following factors regarding the **contact with professionals or institutions** were identified:

- **Appreciation of the role or tasks carried out by colleagues.** For instance:
 - Work of professionals is perceived as relevant (or not relevant) by other professionals.
- **Structure and organization of interaction**, communication or flow of information. For instance:
 - Communication with professionals in specific institutions might be challenging due to different perspectives.
 - Poor communication of reasons behind delays or long waiting periods might lead to misinterpretations.
- **Quality of the interaction with professionals** or systems, especially the impact on affective and motivational aspects. For instance:
 - If one professional felt his or her comments, problems were heard or ignored.
- **Outcomes used to measure performance** like improved employment participation. For instance:
 - If through the contact and collaboration with other professionals, the work supposed to be done within the intervention or the final goal improved: *“Collaboration increases efficiency by reducing juggling between different agencies”*; *“Collaboration increases efficiency by speeding up work”*.

Following factors regarding the **work or management of own work role** were identified:

- **Own ability**, e.g. education, expertise or lack of expertise, or knowledge, e.g. of procedures, of the target population. For instance:
 - Social insurance officers who have to make an assessment of persons with mental disorders in order to decide what benefits they can obtain, may have problems when assessing type and severity of the problem, particularly in severe cases, due to lack of specific training and experience.
 - Target population is usually challenging and professional must be aware and prepared to meet the challenge.
- **Clarity of tasks** and procedures. For instance:
 - If work content not clear enough or poorly defined, professionals have problems executing tasks.
- **Conflict or limits of one’s role.** For instance:
 - Physician perceives himself as advocate of the affected person but is at the same time the decision maker, the gatekeeper of the reintegration process and must follow pre-defined system rules.
- **Structure and organization aspects.** For instance:
 - Appropriate time resources (part versus full time positions) to complete the tasks must be there.

- **Affective or motivational** aspects, especially:
 - Fear(s) or concerns on whether requesting an active role from patients could worsen their health.
 - Emotional understanding of what the patient needs or wants, or identification with the patient.
 - Feelings about what one “should” do in practice, not based only on medical expertise but also what is good for the relationship with the patient or what will lead to fewer negative consequences for the patient.
 - Preference for certain kinds of work, for instance personal preferences, pre-established inclinations (“*I don’t like this task*”).
 - Dogma-thinking or believing there is only one appropriate method of completing a task, whether or not evidence supports the method.

Following factors regarding the **process or organizational features of reintegration tasks** were identified:

- **Content of the process.** For instance:
 - Need of another role or task or job or position within the process or the fact that the role or task is perceived not needed or redundant.
- **Structure and organisation** of tasks. For instance:
 - Infrastructure regarding medical records systems, guidelines, dissemination of tools and guidelines
 - Awareness of what is available and when and how to use it
- **Provision of training in reintegration tasks.** For instance:
 - Appropriate training of professionals as an essential factor influencing the effectiveness of interventions.

5.3.3. *General factors*

Following factors regarding the **legal, economic or political context** were identified:

- **Legislation and regulations** in place in a country or region
- **Availability of financial supports** or benefits or incentives
- **General aspects of the labour market** in a country or region
- **Stigma and discrimination** in the general population

5.3.4. *General recommendations regarding positive aspects*

Based on this review of qualitative studies it can be supported that positive aspects of interventions include:

- ✚ **Use a holistic view of the person and the problem**, as this leads to a comprehensive evaluation and planning of strategies.
- ✚ **Include sound alongside evaluations.** This ensures that all aspects, such as outcomes or target population, are clearly defined, can be measured and the implementation of the strategy (or the strategy itself) can be timely improved.
- ✚ **Allocate appropriate time, personnel and financial resources** to meet the complex challenge posed by reintegration.
- ✚ **Focus on capacity or ability** of the person and not on disability.
- ✚ **Be an early intervention**, implemented to avoid stagnation of the problem, development of “sick” and “excluded” identity by affected persons and decrease or loss of abilities due to inactivity.

- ✦ **Be individualized and have flexible structures** regarding to what extend they can be accommodated to the needs of each affected person over time.
- ✦ **Offer users services of good quality** in terms of level of expertise of personnel implementing the strategy.
- ✦ **Have modules integrated into other services**, for example employment counselling is integrated within mental health care.
- ✦ **Offer training of good quality** to professionals implementing the strategy appropriate.
- ✦ **Have an effective coordination and communication among agencies**, for example employment services, health care and social insurance services, is one of the main goals.
- ✦ **Have good coordination and organization** of services to avoid or reduce unnecessary and demotivating waiting times for users.
- ✦ **Integrate and be open to creative solutions** such as peer counselling. For instance, engaging affected persons with paid employed to support affected persons in the reintegration process.
- ✦ **Have simple procedures.** Regulations, contracts and laws formulated in accessible and easy language; formularies easy to fill out, etc.
- ✦ **Provide a long-term perspective** in terms of understanding that there are no simple solutions for work reintegration and that it can be a long, often not straightforward process that requires follow-ups.
- ✦ **Provide alternative further and timely strategies for affected persons** that could not be reintegrated to work after specific strategies to avoid “falling out of the system”, losing resources acquired through previous interventions and becoming identified with failure (“losers”).
- ✦ **Raise awareness in the general population through public dissemination strategies** which i) inform about disease, impact on work, available support programs and benefits; ii) reduce stigma and associated stereotypes and fears; iii) inform employers about long-term benefits for the company.
- ✦ **Take into account the perspective, including fears and real risks, of employers**, who usually need different kinds of support. Financial incentives are important but information about consequences of chronic disease, help with formal procedures, support when communicating with the affected person or implementing adaptations are also important.

5.4. WHAT CAN WE LEARN FROM THE NON-EUROPEAN SCIENTIFIC LITERATURE?

The ultimate goal of the PATHWAYS project is the development of recommendations about innovative approaches to promote professional integration and reintegration of people with chronic diseases and improve their employability. In this scope, three questions regarding non-European scientific literature, more specifically literature coming from countries with a comparable western lifestyle (Canada, USA and Australia) are relevant in the present review and reported here:

- Has the non-European scientific literature evaluated further strategies not identified in the present review?
- What are and for whom are these strategies?
- Were they effective?

Five interventions of interest have been identified and are presented in detail as follows.

Health and employment wrap-around services and benefits

The **Demonstration to Maintain Independence and Employment (DMIE) program** was part of a broad federal effort in the US to promote employment for adults with disabilities under the Ticket to Work and Work Incentives Improvement Act (“Ticket Act”) of 1999, and implemented in four states: Kansas, Minnesota, Texas, and Hawaii. DMIE encompassed a set of “wrap around services” that supplemented services already covered under public or private insurances. Common DMIE elements across states were: DMIE-funded health benefits that went beyond existing medical coverage and might have included dental, mental health and vision care as well as home assistance with activities of daily living; benefits facilitating access to services, such as reduced monthly premiums and co-payments; employment supports, including counselling and individualized employment plans; and personal navigators who individually supported participants in identifying needs, establishing goals, accessing health and employment services.

Gimm and colleagues (Ref, 2014) evaluated DMIE in the US in an RCT with 12 months follow up in workers with mental disorders working at least 40 hours per month in any sector, ages 18 to 64, with potentially disabling conditions but who are not receiving or applying for federal disability benefits. In the RCT 1472 persons (715 in Minnesota, 757 in Texas, ca. 70% women) receiving supplemental insurance benefits, employment supports, and case management services through the DMIE program were compared with 807 persons (211 in Minnesota, 596 in Texas, ca. 70% females) not receiving any DMIE services regarding changes in health status and the receipt of disability benefits. Overall the DMIE intervention significantly reduced the percent of participants who received disability benefits as compared to the control group but the effect was significant only in Texas. Authors conclude that *“Early intervention programs with a personal navigator can reduce dependence on federal disability benefits for adult workers with mental health conditions”*.

Health promotion programs

The **Working Well program** was adapted from the **Living Well With a Disability health-promotion program** (Ravesloot et al. ,1998), which proved to be effective for health-related outcomes in a national trial in the US. The adapted Working Well program included 10 chapters focusing on: life values, goal setting, problem solving, pathway planning, healthy reactions, advocacy, stress management, physical activity, nutrition, and maintenance. At the beginning of the program, participants should explore personal values in physical, social, intellectual, spiritual, and emotional domains, consider how employment and other activities contribute to these domains and define goals to improve life balance. For 10 weeks, participants attended 2-hr weekly meetings, learned about overall health and adopted behaviour changes consistent with their values.

Ipsen and colleagues (Ref, 2012) evaluated in the US in an RCT with 12 months follow up the “*Working Well*” program. Workers (N=166, ca. 50% women) with physical disabilities approved to receive Vocational Rehabilitation (VR) services received the “*Working Well*” program and were compared to 131 workers not receiving it regarding employment status, and if employed regarding length of employment and health-related absences in the previous month. The “*Working Well*” program had no significant effect on employment rates, which were comparably low for the entire sample, even after adjusting for different program attendance rates. It is important to stress, however, that the sample size needed to detect an effect, namely 300 persons, was not achieved in this study.

Goal Attainment Program via telephone

The **Progressive Goal Attainment Program** (PGAP) is a targeted intervention for persons at risk of pain catastrophizing behaviour, fear of symptom exacerbation, and self-reported disability. In the initial weeks of PGAP, disclosure and validation techniques are used to establish a strong working relationship with the team. Then the focus changes to the development of a structured weekly activity schedule. Activity goals aim promoting the resumption of family, social, and occupational roles. Additionally, techniques targeting specific obstacles to rehabilitation, such as fear of symptom exacerbation and catastrophic thinking). In the last part of the program, PGAP focuses on activities that facilitate re-integration into the workplace.

Sullivan et al. (Ref, 2012) evaluated in Canada in a controlled intervention study the telephonic version of PGAP-Tel. In this study workers with chronic musculoskeletal pain receiving disability benefits from a long-term disability insurer, and with extended time away from work, were compared: 23 (82.6% females) received PGAP by phone while 23 (86.6% females) received PGAP in person. Participants in these groups were matched by sex, age, education, pain severity, and duration of work absence. Participants in the in-person intervention were significantly more likely than those in the telephone intervention to work at the end of the treatment (after 10 sessions or fewer, whenever the worker was ready for return to work) and similar numbers of participants in PGAP-Tel and PGAP returned to full-time or part-time work after the interventions. PGAP-Tel was less effective than the in-person version in reducing catastrophizing behaviour, which is linked to successful rehabilitation outcomes. However, authors interpret findings as supportive of the use of PGAP-Tel in remote areas.



Mental Health Awareness Training for leaders

The **Mental Health Awareness Training (MHAT)** was developed to increase organizational leaders' mental health literacy. Authors followed in the development recommendations of the National Institute for Occupational Safety and Health (NIOSH) for intervention research and of the Mental Health Commission of Canada. Since MHAT should be feasible for organizations, a single 3-hr training program structure focusing on education and skill-building was selected. MHAT focused on stress, burnout, depression, anxiety, and substance addiction. A first lecture-based module focused on knowledge-building emphasising stress-related risk factors and warning signs of serious mental health problems and mental disorders. The second lecture-based module aimed at improving self-efficacy and promotion intentions regarding employee mental health. Two case studies completed MHAT, each describing a scenario in which an employee was demonstrating warning signs of stress and other mental health problems.

Dimoff et al (Ref, 2016) evaluated in Canada – using a controlled trial with historical cohort and eight weeks follow up – MHAT for managers and supervisors and 350 managers in a large company in the Atlantic provinces of Canada were invited to participate. A group receiving MHAT (N=114, 58% females) was compared to 69 wait-list controls (48% females). The average number of short-term disability claims for mental health reasons after the intervention in the provinces using MHAT increased. However, the duration of claims significantly decreased in these provinces. When compared to provinces that did not implement MHAT, the frequency of short term disability claims in provinces using MHAT was significantly lower. The duration of claims was also significantly shorter.

Work focused intervention via telephone

The **work-focused intervention (WFI) via telephone** developed for persons with depression has three modules, each addressing a specific barrier to functional improvement and stressing the need of developing self-care strategies through “homework.” Counsellors provide psychoeducation including knowledge of depression and treatment as well as the impact in work and motivational enhancement. The intervention includes care coordination, cognitive-behavioural therapy, strategy development, and work coaching and work modification.

Lerner et al. (Ref, 2015) used a RCT with 4 months follow up to evaluate in the US a WFI via telephone. Workers, aged 45 or older, meeting criteria for having depression and with work limitations received either the telephone WFI (N=217, 69% females) or usual care, consisting of advisory to contact a health care professional (N=214, 75% females). At work productivity loss, measured as ratio of hours missed due to health problems or medical care divided by number of hours usually spent working, decreased more in the telephone WFI group than in the group receiving usual care. All measures of presenteeism and health-related absenteeism improved more in the telephone WFI group.



Disease management program

Disease management (DM) programs include a broad and diverse array of disease-specific interventions designed to improve the management of chronic conditions through better coordination and continuation of care.

Jutkowitz and colleagues (Ref, 2015) evaluated in the US a DM program at University of Minnesota using a cohort study and data obtained for years 2004 through 2009. The DM program was provided for 11 specific chronic diseases (diabetes, asthma, cardiovascular problems, congestive heart failure, arthritis, depression, osteoporosis, musculoskeletal problems, low back pain, migraines, or gastrointestinal problems) and included telephonic coaching that was specific to their disease. University employees, spouses, and dependents who participated in DM program (N=3746, 60% females) were compared to people invited who did not participate in the DM program (N=7585, 52.2% females) regarding absenteeism – defined as hours absent from work due to illness, obtained from the University’s Employee Benefits office for employees who used time cards – 12 months after the intervention. Participation in DM did not have an effect on the work-related outcome, absenteeism, for any of the chronic diseases investigated, although effects on health-related outcomes, in specific on expenditures and hospitalizations, were observed.

6. PATHWAYS RECOMMENDATIONS FROM SCIENTIFIC LITERATURE REVIEW

Following recommendations can be made based on the findings of the present report:

- ✦ **Improve the evaluation of the effectiveness of strategies targeting integration and re-integration into work strategies for persons with chronic conditions.** The present report disclosed several shortcomings of scientific studies, such as a large variability on how the core outcome of interest, such as return to work, is defined and measured, large variability in the length of follow ups, and lack of clarity on what exactly specific interventions are supposed to change and how this change is expected to happen. Additionally, based on these shortcomings, it is recommended that evaluations alongside implementations of policies, systems and services are planned in detail using research protocols. A clear definition of primary and secondary outcomes, information about how these will be measured, a clear hypotheses of what interventions are supposed to change and what changes are meaningful for participants, definition of assessment time points, planning of follow ups with sufficient length to capture change and a clear strategy for reporting findings are needed. The inclusion of control groups or measures to guarantee comparability with usual care, alternative interventions or “natural” trajectories of work problems should be mandatory, so that results can be attributed to the interventions.
- ✦ **Coordinate the evaluation of the effectiveness of services targeting integration and re-integration into work strategies for persons with chronic conditions within countries.** Evaluations of several services have been included in the present review. However, many evaluations seem to be single efforts of specific researchers or research institutes. As a consequence, evidence is fragmented. Based on this, a coordination of research efforts evaluating services in a country by governing bodies is highly recommended.
- ✦ **Improve the accessibility of structured national reports to different stakeholders.** Structured national reports are of core importance in the field since they report on official efforts to evaluate mostly systems and policies. However, several barriers hinder the use of reports by a broader audience. Besides the language barrier, reports include very detailed description of results in technical language and fail to provide a transparent and accountable reporting of the evaluation process including definition of clear outcomes, description of the methodology used to measure them and corresponding results. A brief and straightforward summary of key results was generally missing and consequently, a summary of findings of reports could not be achieved. Based on these shortcomings, it is recommended that structured national reports include a structured executive summary in English and plain language, accessible to patients, health professionals, employers representatives, policy makers and further stakeholders. It is recommended that this summary includes the following information: objectives, definition of the intervention, definition of the outcomes of interest and how these were measured, length of follow up, brief description of the target population and core findings.
- ✦ **Broaden the evaluation of the effectiveness of the combination of passive and active strategies for integration and re-integration into work for persons with chronic conditions.** This review points out that combining active strategies, such as

supported employment or active labour market policies, with passive strategies, such as disability benefits, is a promising way of effectively keeping persons with chronic conditions at work. However, how passive and active strategies can be combined, and how much of each bring the best results are still open questions. Such combinations, also called Flexicurity, are a core topic of European debates about social security reforms, having being integrated in the European Employment Strategy. Sound research in this area is therefore highly recommended.

- ✦ **Broaden the target population of strategies.** This review makes clear that return or maintenance of work is a complex process where many actors play a relevant role, not only the affected persons. Efforts on the part of families, employers, work reintegration and health professionals as well as the broaden community have a major impact on the outcomes. All these actors need therefore information and guidance about what a health condition is, the impact on work, available disease management strategies, available support strategies, ranging from simple strategies, such as a hotline for employers, to complex strategies, such as individual placement and support (IPS). Strategies that take into account needs and problems of people with chronic diseases, families, employers, work reintegration and health professionals as well as strategies that encompass awareness interventions for the general population to lower stigma should be therefore prioritized and fostered.

7. LIMITATIONS

The present work has some limitations that should be considering when interpreting and using the presented findings, as follows.

The classification of identified strategies as policy, system or services was challenging and many times unclear. For instance, some service strategies are considered to be the main approach to manage vocational rehabilitation in some geographical areas. These strategies might become financial, legislative or structural support from governmental institutions and be implemented as the preferred strategy in a broad area (municipality, city, region). Therefore, they might be seen as a system. This could be the case for the strategy called “Individual Placement and Support (IPS)”. In UK, IPS is considered to be the standard strategy to help people with mental disorders to find a job.

The scoping review covers a broad range of the population with chronic conditions but not the complete population. The scoping review informs about interventions targeted at 1) persons with chronic diseases (CD) and disability in general, without further specification in papers and reports, at 2) persons with mental disorders, musculoskeletal disorders, cancer, neurological, metabolic, respiratory and cardiovascular diseases, without further specification in papers and reports, and 3) persons with specific diseases, namely depression, back pain, migraine, diabetes mellitus, chronic obstructive pulmonary disease and ischemic heart disease. An intriguing finding is that we did not identify any studies targeting persons with neurological, metabolic, respiratory and cardiovascular diseases. However, it must be taken into account that studies focusing on a single disease of a given pre-defined disease group defined in 2, have been excluded if they did not target one of the concrete pre-defined diseases in 3. For example, publications focusing on multiple sclerosis have been excluded (concrete neurological disease not specified in criteria 3).

Identified scientific papers were very heterogeneous. Identified scientific papers differed meaningfully regarding target population, working status of participants and how return to work outcomes were defined and measured. A planned meta-analysis was therefore not possible and global conclusions about the effectiveness of integration and re-integration into work strategies for persons with chronic conditions in Europe not feasible.

Identified structured national reports were as well very heterogeneous and comprehensive. National reports were generally very comprehensive, used complex language, focused on descriptive information and were structured according to the information required by the instances they should inform, for instance health and social affairs ministries. Because of their heterogeneity and the detailed description of results, this review provides only a brief summary of the strategies evaluated in the light of findings in the scientific literature. A table containing detailed overview of all information extracted from national reports is available in www.path-ways.eu.

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Included non-European scientific publications evaluating effectiveness (section 5.4)

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9. APPENDIX

SEARCH STRATEGIES

Database: Medline.

Interface: Ovid

Search date: April 2016

1	exp Disabled Persons/
2	(disabled or disabilit*).mp.
3	Chronic Disease/
4	(chronic ill* or chronic sick* or chronic absence* or chronic disease* or chronic condition*).mp.
5	(long standing sick* or long standing absence* or long standing disease* or long standing ill*).mp.
6	(longstanding sick* or longstanding absence* or longstanding disease* or longstanding ill*).mp.
7	llsi.ti,ab.
8	(long term sick* or long term absence* or long term disease* or long term ill*).mp.
9	(longterm sick* or longterm absence* or longterm disease* or longterm ill*).mp.
10	(permanent ill* or permanent absence* or permanent disease* or permanent sick*).mp.
11	Mental Disorders/
12	(mental illness* or mental disorder* or mental health issue* or mental diagnosis or mental diagnoses or mental health problem* or mental health disorder* or psychological illness* or psychiatric illness* or psychological disorder* or psychiatric disorder* or psych* condition* or psych* diagnoses or psych* diagnosis or psych* problem*).ti,ab,kf.
13	depression.ti.
14	Depressive Disorder/ or Depressive Disorder, Major/ or Depression, Postpartum/ or Dysthymic Disorder/
15	Nervous System Diseases/
16	(Neurologic* disorder* or neurologic* disease* or nervous system disorder* or nervous system disease*).ti,ab,kf.
17	Headache Disorders/ or exp Headache Disorders, Primary/
18	(Migraine* or headache*).ti,ab,kf.
19	Metabolic Disorders/ or Endocrine System Diseases/
20	(metabolic disorder* or metabolic disease* or endocrine disorder* or endocrine disease*).ti,ab,kf.
21	Diabetes Mellitus/ or Diabetes Mellitus, Type 1/ or Diabetes Mellitus, Type 2/
22	(diabetes or diabetic*).ab,kf,ti.
23	Musculoskeletal Diseases/
24	(musculoskeletal disorder* or musculoskeletal disease* or musculoskeletal complaint* or musculoskeletal condition* or musculoskeletal problem* or musculoskeletal diagnosis or musculoskeletal diagnoses).ab,kf,ti.
25	exp Back Pain/ or Neck Pain/
26	((neck or cervical) and (pain or ache)).ab,kf,ti.
27	((back or "spinal column") and (pain or ache)).ab,kf,ti.
28	(neckache or backache).ab,kf,ti.
29	Respiratory Tract Diseases/
30	(respiratory illness* or respiratory disease* or respiratory disorder* or respiratory condition* or respiratory tract illness* or respiratory tract disease* or respiratory tract disorder* or respiratory tract indication* or respiratory tract condition* or respiratory

	tract diagnosis or respiratory tract diagnoses).ab,kf,ti.
31	exp Pulmonary Disease, Chronic Obstructive/
32	(Chronic obstructive pulmonary disease or COPD or (bronch* and (disease* or disorder*) and chronic*) or pulmonary emphysema).ab,kf,ti.
33	Cardiovascular Diseases/
34	(cardiovascular disorder* or cardiovascular disease*).ab,kf,ti.
35	Myocardial Ischemia/ or Myocardial Infarction/
36	(ischemic heart disease or ischaemic heart disease or cardiac infarction or coronary infarction or heart attack or heart infarction). ab,kf,ti.
37	Neoplasms/
38	(cancer* or carcinoma* or neoplasm* or sarcoma* or tumor*).ab,kf,ti.
39	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38
40	Employment/
41	exp Occupations/
42	Work/
43	Unemployment/
44	Occupation or occupations.mp.
45	work*.mp.
46	vocation*.mp.
47	(unemploy* or employ*).mp. or (labour or labor).ti,ab.
48	(job or jobs).mp.
49	(earn* or paid or paying or payment*).mp.
50	jobseek*.mp.
51	Income/ or "Salaries and Fringe Benefits"/
52	(salary or salari* or income or wages or waged or wage).mp.
53	40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52
54	rehabilitation/ or rehabilitation, vocational/
55	Education, Professional, Retraining/
56	welfare to work or welfare at work.mp.
57	(back to work or back into work).mp.
58	return to work.mp.
59	Training Support/
60	training.mp.
61	retraining.mp.
62	re-training.mp.
63	(skill or skills).mp.
64	advice.mp.
65	Counseling/
66	(counselling or counseling).mp.
67	Insurance, Disability/
68	disability benefit*.mp.
69	Social Security/
70	social security.mp.
71	Sick Leave/
72	sick leave.mp.
73	Retirement/
74	(mobility allowance* or mobility pension*).mp.
75	(disabilit* allowance* or disability* benefit*).mp.
76	sickness* benefit*.mp.

77	sickness* pension*or disability pension*.mp.
78	premature* retire*.mp.
79	early retire*.mp.
80	(quota or quotas).mp.
81	invalidity pension*.mp.
82	(invalidity allowance* or support allowance*).mp.
83	(invalidity benefit* or social benefit* or invalidity pension*).mp.
84	almp.ti.ab. or active labour market program*.mp. or active labor market program*.mp.
85	(employ* subsidy or employ* subsidies or wage subsidy or wage subsidies).mp.
86	(wage subsidy or wage subsidies).mp.
87	disability living allowance*.mp.
88	attendance allowance*.mp.
89	incapacity benefit*.mp.
90	incapacity allowance*.mp.
91	incapacity pension*.mp.
92	Employment, Supported/
93	supported work.mp.
94	supported employ*.mp.
95	(tax incentive* or tax allowance* or tax credit*).mp.
96	work preparation*.mp.
97	Case Management/
98	(Employment service* or case management).mp.
99	work focused interview*.mp.
100	(work trial or work trials).mp.
101	(employment trial or employment trials).mp.
102	(work placement* or job placement).mp.
103	(sheltered work* or sheltered employ*).mp.
104	(work preparation or job preparation).mp.
105	(workstep or work-step).mp.
106	(job match or workfare or work fare).mp.
107	access to work.mp.
108	jobmatch.mp.
109	(Worksite accommodation* or workplace accommodation* or work-place accommodation* or work accommodation* or job accommodation* or employment accommodation* or reasonable accommodation*).mp.
110	54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 86 or 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or 103 or 104 or 105 or 106 or 107 or 108 or 109
111	39 and 53 and 110
112	limit 111 to (abstracts and english language and yr="2011 - 2016")



Database: PSYCinfo
Interface: Ovid
Search date: April 2016

1	DE "Multiple Disabilities" OR DE "Disabilities"
2	DE "Chronic Illness" OR DE "Chronicity (Disorders)"
3	DE "Physical Disorders" AND (TI chronic or KW chronic)
4	TI (disabled or disabilit* or "chronic sick*" or "chronic ill*" or "chronic absence*" or "chronic disease*" or "chronic condition*") OR AB (disabled or disability* or "chronic sick*" or "chronic ill*" or "chronic absence*" or "chronic disease*" or "chronic condition*") OR DE (disabled or disability* or "chronic sick*" or "chronic ill*" or "chronic absence*" or "chronic disease*" or "chronic condition*") OR KW (disabled or disability* or "chronic sick*" or "chronic ill*" or "chronic absence*" or "chronic disease*" or "chronic condition*")
5	TI ("long standing sick*" or "long standing absence*" or "long standing disease*" or "long standing ill*") OR AB ("long standing sick*" or "long standing absence*" or "long standing disease*" or "long standing ill*") OR DE ("long standing sick*" or "long standing absence*" or "long standing disease*" or "long standing ill*") OR KW ("long standing sick*" or "long standing absence*" or "long standing disease*" or "long standing ill*")
6	TI ("longstanding sick*" or "longstanding absence*" or "longstanding disease*" or "longstanding ill*") OR AB ("longstanding sick*" or "longstanding absence*" or "longstanding disease*" or "longstanding ill*") OR DE ("longstanding sick*" or "longstanding absence*" or "longstanding disease*" or "longstanding ill*") OR KW ("longstanding sick*" or "longstanding absence*" or "longstanding disease*" or "longstanding ill*")
7	TI ("long term sick*" or "long term absence*" or "long term disease*" or "long term ill*") OR AB ("long term sick*" or "long term absence*" or "long term disease*" or "long term ill*") OR DE ("long term sick*" or "long term absence*" or "long term disease*" or "long term ill*") OR KW ("long term sick*" or "long term absence*" or "long term disease*" or "long term ill*")
8	TI ("permanent absence*" or "permanent disease*" or "permanent sick*" or "permanent ill*") OR AB ("permanent absence*" or "permanent disease*" or "permanent sick*" or "permanent ill*") OR DE ("permanent absence*" or "permanent disease*" or "permanent sick*" or "permanent ill*") OR KW ("permanent absence*" or "permanent disease*" or "permanent sick*" or "permanent ill*")
9	TI lsi OR AB lsi
10	DE "Chronic Mental Illness"
11	DE "Mental Disorders"
12	TI ("mental illness*" or "mental disorder*" or "mental health issue*" or "mental diagnosis" or "mental diagnoses" or "mental health problem*" or "mental health disorder*" or "psychological illness*" or "psychiatric illness*" or "psychological disorder*" or "psychiatric disorder*" or "psych* condition*" or "psych* diagnoses" or "psych* diagnosis" or "psych* problem*") OR AB ("mental illness*" or "mental disorder*" or "mental health issue*" or "mental diagnosis" or "mental diagnoses" or "mental health problem*" or "mental health disorder*" or "psychological illness*" or "psychiatric illness*" or "psychological disorder*" or "psychiatric disorder*" or "psych* condition*" or "psych* diagnoses" or "psych* diagnosis" or "psych* problem*") OR KW ("mental illness*" or "mental disorder*" or "mental health issue*" or "mental diagnosis" or "mental diagnoses" or "mental health problem*" or "mental health disorder*" or "psychological illness*" or "psychiatric illness*" or "psychological disorder*" or "psychiatric disorder*" or "psych* condition*" or "psych* diagnoses" or "psych* diagnosis" or "psych* problem*")

13	DE "Major Depression" OR DE "Dysthymic Disorder" OR DE "Endogenous Depression" OR DE "Postpartum Depression" OR DE "Reactive Depression" OR DE "Recurrent Depression" OR TI depression
14	DE "Nervous System Disorders"
15	TI ("Neurologic* disorder*" or "neurologic* disease*" or "nervous system disorder*" or "nervous system disease*") OR AB ("Neurologic* disorder*" or "neurologic* disease*" or "nervous system disorder*" or "nervous system disease*") OR KW ("Neurologic* disorder*" or "neurologic* disease*" or "nervous system disorder*" or "nervous system disease*")
16	DE "Headache" OR DE "Migraine Headache" OR DE "Muscle Contraction Headache"
17	TI (migraine or headache) OR AB (migraine or headache) OR KW (migraine or headache)
18	DE "Metabolism Disorders" OR DE "Endocrine Disorders"
19	TI ("metabolic disorder*" or "metabolic disease*" or "endocrine disorder*" or "endocrine disease*") OR AB ("metabolic disorder*" or "metabolic disease*" or "endocrine disorder*" or "endocrine disease*") OR KW ("metabolic disorder*" or "metabolic disease*" or "endocrine disorder*" or "endocrine disease*")
20	DE "Diabetes" OR DE "Diabetes Mellitus" OR DE "Type 2 Diabetes"
21	TI (diabetes or diabetic*) OR AB (diabetes or diabetic*) OR KW (diabetes or diabetic*)
22	DE "Musculoskeletal Disorders"
23	TI ("musculoskeletal disorder*" or "musculoskeletal disease*" or "musculoskeletal complaint*" or "musculoskeletal condition*" or "musculoskeletal problem*" or "musculoskeletal diagnosis" or "musculoskeletal diagnoses") OR AB ("musculoskeletal disorder*" or "musculoskeletal disease*" or "musculoskeletal complaint*" or "musculoskeletal condition*" or "musculoskeletal problem*" or "musculoskeletal diagnosis" or "musculoskeletal diagnoses") OR KW ("musculoskeletal disorder*" or "musculoskeletal disease*" or "musculoskeletal complaint*" or "musculoskeletal condition*" or "musculoskeletal problem*" or "musculoskeletal diagnosis" or "musculoskeletal diagnoses")
24	DE "Back Pain"
25	TI ((neck or cervical) and (pain or ache)) OR AB ((neck or cervical) and (pain or ache)) OR KW ((neck or cervical) and (pain or ache))
26	TI ((back or "spinal column") and (pain or ache))
27	TI (neckache or backache)
28	DE "Respiratory Tract Disorders"
29	TI ("respiratory illness*" or "respiratory disease*" or "respiratory disorder*" or "respiratory condition*" or "respiratory tract illness*" or "respiratory tract disease*" or "respiratory tract disorder*" or "respiratory tract indication*" or "respiratory tract condition*" or "respiratory tract diagnosis" or "respiratory tract diagnoses") OR AB ("respiratory illness*" or "respiratory disease*" or "respiratory disorder*" or "respiratory condition*" or "respiratory tract illness*" or "respiratory tract disease*" or "respiratory tract disorder*" or "respiratory tract indication*" or "respiratory tract condition*" or "respiratory tract diagnosis" or "respiratory tract diagnoses") OR KW ("respiratory illness*" or "respiratory disease*" or "respiratory disorder*" or "respiratory condition*" or "respiratory tract illness*" or "respiratory tract disease*" or "respiratory tract disorder*" or "respiratory tract indication*" or "respiratory tract condition*" or "respiratory tract diagnosis" or "respiratory tract diagnoses")
30	DE "Chronic Obstructive Pulmonary Disease" OR DE "Bronchial Disorders" OR DE "Pulmonary Emphysema"
31	TI ("Chronic obstructive pulmonary disease" or COPD or (bronch* and (disease* or disorder*) and chronic*) or "pulmonary emphysema") OR AB ("Chronic obstructive pulmonary disease" or COPD or (bronch* and (disease* or disorder*) and chronic*) or

	"pulmonary emphysema") OR KW ("Chronic obstructive pulmonary disease" or COPD or (bronch* and (disease* or disorder*) and chronic*) or "pulmonary emphysema")
32	DE "Cardiovascular disorders"
33	TI ("cardiovascular disorder*" or "cardiovascular disease*") or AB ("cardiovascular disorder*" or "cardiovascular disease*") OR KW ("cardiovascular disorder*" or "cardiovascular disease*")
34	DE "Myocardial Infarctions"
35	TI ("ischemic heart disease" or "ischaemic heart disease" or "cardiac infarction" or "coronary infarction" or "heart attack" or "heart infarction") OR AB ("ischemic heart disease" or "ischaemic heart disease" or "cardiac infarction" or "coronary infarction" or "heart attack" or "heart infarction") OR KW ("ischemic heart disease" or "ischaemic heart disease" or "cardiac infarction" or "coronary infarction" or "heart attack" or "heart infarction")
36	DE "Neoplasms"
37	TI (cancer* or carcinoma* or neoplasm* or sarcoma* or tumor*) OR AB (cancer* or carcinoma* or neoplasm* or sarcoma* or tumor*) OR DE (cancer* or carcinoma* or neoplasm* or sarcoma* or tumor*) OR KW (cancer* or carcinoma* or neoplasm* or sarcoma* or tumor*)
38	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37
39	DE "Employment Status" OR DE "Self-Employment" OR DE "Unemployment" OR DE "Employability"
40	DE "Occupations" OR DE "Nontraditional Careers" OR DE "Occupational Status"
41	DE "Income Level" OR DE "Lower Income Level" OR DE "Middle Income Level" OR DE "Upper Income Level"
42	DE "Salaries"
43	TI (occupation or occupations or work* or vocation* or job or jobs or jobseek* or earn* or paid or paying or payment*) OR AB (occupation or occupations or work* or vocation* or job or jobs or jobseek* or earn* or paid or paying or payment*) OR KW (occupation or occupations or work* or vocation* or job or jobs or jobseek* or earn* or paid or paying or payment*)
44	TI (salary or salaries or income or wages or waged or wage or unemploy* or employ*) OR AB (salary or salaries or income or wages or waged or wage or unemploy* or employ*) OR KW (salary or salaries or income or wages or waged or wage or unemploy* or employ*)
45	TI (labour or labor) or AB (labour or labor) OR KW (labour or labor)
46	S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45
47	DE "Rehabilitation" OR DE "Cognitive Rehabilitation" OR DE "Criminal Rehabilitation" OR DE "Drug Rehabilitation" OR DE "Neuropsychological Rehabilitation" OR DE "Neurorehabilitation" OR DE "Occupational Therapy" OR DE "Physical Therapy" OR DE "Psychosocial Rehabilitation"
48	DE "Vocational rehabilitation" OR DE "Supported employment" OR "Vocational evaluation" OR DE "Work adjustment training" OR DE "Disability management" OR DE "Rehabilitation counseling"
49	DE "On the Job Training"
50	DE "Disability Laws"
51	DE "Vocational Education" OR DE "Cooperative Education"
52	DE "Retirement" OR DE "Reemployment"
53	DE "Counseling"
54	DE "Social Security" OR DE "Disability Evaluation"

55	DE "Employee Leave Benefits"
56	TI ("welfare to work" or "welfare at work") OR AB ("welfare to work" or "welfare at work") OR DE ("welfare to work" or "welfare at work") OR KW ("welfare to work" or "welfare at work")
57	TI ("back to work" or "back into work") OR AB ("back to work" or "back into work") OR DE ("back to work" or "back into work") OR KW ("back to work" or "back into work")
58	TI ("sick leave" or "disability benefit*" or "disability pension*" or training or retraining or re-training or skill or skills or advice or counselling or counseling) OR AB ("sick leave" or "disability benefit*" or "disability pension*" or training or retraining or re-training or skill or skills or advice or counselling or counseling) OR DE ("sick leave" or disability benefit* or disability pension* or training or retraining or re-training or skill or skills or advice or counselling or counseling) OR KW ("sick leave" or "disability benefit*" or "disability pension*" or training or retraining or re-training or skill or skills or advice or counselling or counseling)
59	TI (quota or quotas or "mobility pension*" or "invalidity pension*" or "invalidity allowance*" or "invalidity benefit*" or "social benefit*" or "support allowance*") OR AB (quota or quotas or "mobility pension*" or "invalidity pension*" or "invalidity allowance*" or "invalidity benefit*" or "social benefit*" or "support allowance*") OR DE (quota or quotas or "mobility pension*" or "invalidity pension*" or "invalidity allowance*" or "invalidity benefit*" or "social benefit*" or "support allowance*") OR KW (quota or quotas or "mobility pension*" or "invalidity pension*" or "invalidity allowance*" or "invalidity benefit*" or "social benefit*" or "support allowance*")
60	TI ("disability living allowance*" or "attendance allowance*" or "incapacity benefit*" or "incapacity allowance*" or "incapacity pension*") OR AB ("disability living allowance*" or "attendance allowance*" or "incapacity benefit*" or "incapacity allowance*" or "incapacity pension*") OR DE ("disability living allowance*" or "attendance allowance*" or "incapacity benefit*" or "incapacity allowance*" or "incapacity pension*") OR KW ("disability living allowance*" or "attendance allowance*" or "incapacity benefit*" or "incapacity allowance*" or "incapacity pension*")
61	TI ("employ* subsidy" or "employ* subsidies" or "wage subsidy" or "wage subsidies" or "tax incentive*" or "tax allowance*" or "tax credit*" or "social security") OR AB ("employ* subsidy" or "employ* subsidies" or "wage subsidy" or "wage subsidies" or "tax incentive*" or "tax allowance*" or "tax credit*" or "social security") OR DE ("employ* subsidy" or "employ* subsidies" or "wage subsidy" or "wage subsidies" or "tax incentive*" or "tax allowance*" or "tax credit*" or "social security") OR KW ("employ* subsidy" or "employ* subsidies" or "wage subsidy" or "wage subsidies" or "tax incentive*" or "tax allowance*" or "tax credit*" or "social security")
62	TI (almp) OR AB (almp) OR TI ("active labour market program*" or "active labor market program*") OR AB ("active labour market program*" or "active labor market program*") OR DE ("active labour market program*" or "active labor market program*") OR KW ("active labour market program*" or "active labor market program*")
63	TI ("supported work or supported employ*") OR AB ("supported work or supported employ*") OR DE ("supported work or supported employ*") OR KW ("supported work or supported employ*")
64	TI ("work placement*" or "job placement*" or "employment service*" or "case management" or "work focused interview*") OR AB ("work placement*" or "job placement*" or "employment service*" or "case management" or "work focused interview*") OR DE ("work placement*" or "job placement*" or "employment service*" or "case management" or "work focused interview*") OR KW ("work

	placement*" or "job placement*" or "employment service*" or "case management" or "work focused interview*")
65	TI ("work preparation*" or "job preparation*" or "employment trial" or "employment trials" or "work trial" or "work trials" or workstep or work-step) OR AB ("work preparation*" or "job preparation*" or "employment trial" or "employment trials" or "work trial" or "work trials" or workstep or work-step) OR DE ("work preparation*" or "job preparation*" or "employment trial" or "employment trials" or "work trial" or "work trials" or workstep or work-step) OR KW ("work preparation*" or "job preparation*" or "employment trial" or "employment trials" or "work trial" or "work trials" or workstep or work-step)
66	TI ("job match" or workfare or "work fare" or "access to work") OR AB ("job match" or workfare or "work fare" or "access to work") OR DE ("job match" or workfare or "work fare" or "access to work") OR KW ("job match" or workfare or "work fare" or "access to work")
67	TI ("sheltered work*" or "sheltered employ*") OR AB ("sheltered work*" or "sheltered employ*") OR DE ("sheltered work*" or "sheltered employ*") OR KW ("sheltered work*" or "sheltered employ*")
68	TI ("worksite accommodation*" or "workplace accommodation*" or "work-place accommodation*" or "work accommodation*" or "job accommodation*" or "employment accommodation*" or "reasonable accommodation*") OR AB ("worksite accommodation*" or "workplace accommodation*" or "work-place accommodation*" or "work accommodation*" or "job accommodation*" or "employment accommodation*" or "reasonable accommodation*") OR DE ("worksite accommodation*" or "workplace accommodation*" or "work-place accommodation*" or "work accommodation*" or "job accommodation*" or "employment accommodation*" or "reasonable accommodation*") OR KW ("worksite accommodation*" or "workplace accommodation*" or "work-place accommodation*" or "work accommodation*" or "job accommodation*" or "employment accommodation*" or "reasonable accommodation*")
69	DE "Accommodation (Disabilities)"
70	TI (Strategy or strategies or intervention* or program or programs or programme or programmes)
71	S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR 70
72	S38 AND S46 AND S71 (Limits: English, peer-reviewed, 2011-2016)

**Databases: Cochrane Reviews, Other Reviews and Health Technology Assessment Interface: Ovid
Search date: April 2016**

1	MeSH descriptor: [Disabled Persons] explode all trees
2	MeSH descriptor: [Chronic Disease] this term only
3	disabled or disabilit* or (chronic next sick*) or (chronic next ill*) or (chronic next absence*) or (chronic next disease*):ti,ab,kw (Word variations have been searched)
4	(long next standing next ill*) or (long next standing next sick*) or (long next standing next absence*) or (long next standing next disease*):ti,ab,kw (Word variations have been searched)
5	(longstanding next sick*) or (longstanding next ill*) or (longstanding next absence*) or (longstanding next disease*) or llsi:ti,ab,kw (Word variations have been searched)
6	(long next term next sick*) or (long next term next absence*) or (long next term next disease*):ti,ab,kw (Word variations have been searched)
7	(long next term next ill*) or (longterm next ill*) or (longterm next sick*) or (longterm

	next absence*) or (longterm next disease*):ti,ab,kw (Word variations have been searched)
8	(permanent next sick*) or (permanent next ill*) or (permanent next absence*) or (permanent next disease*):ti,ab,kw (Word variations have been searched)
9	(#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8)
10	MeSH descriptor: [Employment] this term only
11	MeSH descriptor: [Occupations] explode all trees
12	MeSH descriptor: [Work] this term only
13	MeSH descriptor: [Unemployment] explode all trees
14	MeSH descriptor: [Income] this term only
15	MeSH descriptor: [Salaries and Fringe Benefits] this term only
16	(Occupation or occupations or work* or vocation* or job or jobs or earn* or paid or paying or payment*):ti,ab,kw (Word variations have been searched)
17	(salary or salari* or income or wages or waged or wage or unemploy* or employ* or labour or labor):ti,ab,kw (Word variations have been searched)
18	(#10 or #11 or #12 or #13 or #14 or #15 or #16 or #17)
19	MeSH descriptor: [Rehabilitation] this term only
20	MeSH descriptor: [Rehabilitation, Vocational] this term only
21	MeSH descriptor: [Education, Professional, Retraining] this term only
22	MeSH descriptor: [Training Support] this term only
23	MeSH descriptor: [Counseling] this term only
24	MeSH descriptor: [Insurance, Disability] this term only
25	MeSH descriptor: [Insurance, Liability] this term only
26	MeSH descriptor: [Social Security] explode all trees
27	MeSH descriptor: [Sick Leave] this term only
28	MeSH descriptor: [Retirement] this term only
29	MeSH descriptor: [Employment, Supported] this term only
30	"welfare to work" or "welfare at work" or "back to work" or "back into work":ti,ab,kw (Word variations have been searched)
31	(sick next leave) or (disability next benefit*) or (disability next pension*) or training or retraining or (re next training) or skill or skills or advice or counselling or counseling:ti,ab,kw (Word variations have been searched)
32	(mobility next allowance*) or (disabilit* next allowance*) or (sickness* next benefit*) or (sickness* next pension*) or (premature* next retire*) or (early next retire*):ti,ab,kw (Word variations have been searched)
33	(quota or (mobility next pension*) or (invalidity next pension*) or (invalidity next allowance*) or (invalidity next benefit*) or quotas or (employ* next subsidy) or (employ* next subsidies)):ti,ab,kw (Word variations have been searched)
34	(disability next living next allowance*) or (attendance next allowance*) or (incapacity next benefit*) or (incapacity next allowance*) or (incapacity next pension*) or (severe next disablement next allowance*):ti,ab,kw (Word variations have been searched)
35	(supported next work) or (supported next employ*) or (disabled next persons next tax next allowance*) or (access next to next work next program*):ti,ab,kw (Word variations have been searched)
36	((work next preparation*) or (work next focussed next interview*) or (work next focused next interview*) or workstep or (work next step)):ti,ab,kw (Word variations have been searched)
37	(disability next working next allowance*) or (condition next management next program*) or "work trial" or "work trials":ti,ab,kw (Word variations have been searched)
38	"employment trial" or "employment trials" or (work next placement*) or (disability

	next discrimination next act) or (work next preparation):ti,ab,kw (Word variations have been searched)
39	(job next preparation) or (work next preparation) or (job next placement) or (work next placement) or (job next match) or (employment next service*) or (case next management) or workfare or (work next fare):ti,ab,kw (Word variations have been searched)
40	"access to work" or jobmatch or (active next labour next market next program*) or (active next labor next market next program*) or almp or (worksite next accommodation*) or (workplace next accommodation*) or (work-place next accommodation*) or (work next accommodation*) or (job next accommodation*) or (employment next accommodation*) or (reasonable next accommodation*):ti,ab,kw (Word variations have been searched)
41	(#19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40)
42	(#9 and #18 and #41)
43	MeSH descriptor: [Mental Disorders] this term only
44	(mental illness*) or (mental disorder*) or (mental health issue*) or (mental diagnosis) or (mental diagnoses) or (mental health problem*) or (mental health disorder*) or (psychological illness*) or (psychiatric illness*) or (psychological disorder*) or (psychiatric disorder*) or (psych* condition*) or (psych* diagnoses) or (psych* diagnosis) or (psych* problem*):ti,ab,kw (Word variations have been searched)
45	depression:ti (Word variations have been searched)
46	MeSH descriptor: [Depressive Disorder] this term only
47	MeSH descriptor: [Depressive Disorder, Major] this term only
48	MeSH descriptor: [Nervous System Diseases] this term only
49	(Neurologic* disorder*) or (neurologic* disease*) or (nervous system disorder*) or (nervous system disease*):ti,ab,kw (Word variations have been searched)
50	MeSH descriptor: [Headache Disorders] this term only
51	MeSH descriptor: [Headache Disorders, Primary] explode all trees
52	(Migraine*) or (headache*):ti,ab,kw (Word variations have been searched)
53	MeSH descriptor: [Metabolic Diseases] this term only
54	MeSH descriptor: [Endocrine System Diseases] this term only
55	(metabolic disorder) * or (metabolic disease*) or (endocrine disorder*) or (endocrine disease*):ti,ab,kw (Word variations have been searched)
56	MeSH descriptor: [Diabetes Mellitus] this term only
57	MeSH descriptor: [Diabetes Mellitus, Type 1] this term only
58	MeSH descriptor: [Diabetes Mellitus, Type 2] this term only
59	(diabetes) or (diabetic*):ti,ab,kw (Word variations have been searched)
60	MeSH descriptor: [Musculoskeletal Diseases] this term only
61	(musculoskeletal disorder*) or (musculoskeletal disease*) or (musculoskeletal complaint*) or (musculoskeletal condition*) or (musculoskeletal problem*) or (musculoskeletal diagnosis) or (musculoskeletal diagnoses):ti,ab,kw (Word variations have been searched)
62	MeSH descriptor: [Neck Pain] this term only
63	MeSH descriptor: [Back Pain] explode all trees
64	(neck or cervical) and (pain or ache):ti,ab,kw (Word variations have been searched)
65	(back or "spinal column") and (pain or ache):ti,ab,kw (Word variations have been searched)
66	(neckache) or (backache):ti,ab,kw (Word variations have been searched)
67	MeSH descriptor: [Respiratory Tract Diseases] this term only
68	(respiratory illness*) or (respiratory disease*) or (respiratory disorder*) or

	(respiratory condition*) or (respiratory tract illness*) or (respiratory tract disease*) or (respiratory tract disorder*) or (respiratory tract indication*) or (respiratory tract condition*) or (respiratory tract diagnosis) or (respiratory tract diagnoses):ti,ab,kw (Word variations have been searched)
69	MeSH descriptor: [Pulmonary Disease, Chronic Obstructive] explode all trees
70	(Chronic obstructive pulmonary disease) or COPD or (bronch* next (disease* or disorder*) next chronic*) or (pulmonary emphysema):ti,ab,kw (Word variations have been searched)
71	MeSH descriptor: [Cardiovascular Diseases] this term only
72	(cardiovascular disorder*) or (cardiovascular disease*):ti,ab,kw (Word variations have been searched)
73	MeSH descriptor: [Myocardial Ischemia] explode all trees
74	(ischemic heart disease) or (ischaemic heart disease) or (cardiac infarction) or (coronary infarction) or (heart attack) or (heart infarction):ti,ab,kw (Word variations have been searched)
75	MeSH descriptor: [Neoplasms] this term only
76	(cancer*) or (carcinoma*) or (neoplasm*) or (sarcoma*) or (tumor*):ti,ab,kw (Word variations have been searched)
77	(#43 or #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or #57 or #58 or #59 or #60 or #61 or #62 or #63 or #64 or #65 or #66 or #67 or #68 or #69 or #70 or #71 or #72 or #73 or #74 or #75 or #76)
78	(#9 or #77)
79	(#78 and #18 and #41) Online Publication Date from Jan 2011 to Apr 2016, in Cochrane Reviews (Reviews only)
81	(#78 and #18 and #41) Publication Year from 2011 to 2016, in Other Reviews
82	(#78 and #18 and #41) Publication Year from 2011 to 2016, in Health Technology Assessment

INCLUSION AND EXCLUSION CRITERIA

The following criteria have been applied to select relevant documents from the pool of references retrieved from the electronic databases.

Included if	Excluded if
Country of target population: European countries and western lifestyle countries (Canada, USA, Australia, New Zealand)	Countries other than European countries, Canada, USA, Australia, New Zealand Studies in Canada, USA, Australia and New Zealand referring to a population not representative of a western lifestyle (e.g. Australian aboriginals or American Indians)
Population: people with chronic diseases or disabilities aged 16-65 years (the study refers to the population of interest; data can come from employees/patients, employers or other people involved in the implementation of a measure)	Population without chronic diseases or disabilities Population aged <16 or >65 years
Type of strategy: policies, systems, and services pertinent to the professional (re)integration of people with chronic diseases	Studies which are not dealing with professional (re)integration and maintaining a job (for example, studies exploring strategies

or disabilities or helping them to maintain a job	which are not relevant for professional (re)integration; or studies investigating strategies that exclusively aim at improving body structures and functions, not implementing the strategy with the aim to improve employment outcomes). Studies related to professional (re)integration but not focusing on a concrete strategy or defined group of strategies
Type of study: - intervention studies: randomized trials, non-randomized controlled trials, non-controlled pre-post intervention studies - observational: cohort studies, case-control studies - descriptive cross-sectional studies, descriptive longitudinal studies -qualitative studies: focus groups, interviews, other	Case report/case series, psychometric studies, letters, comments, editorials, overviews without empirical primary or secondary data Reviews (systematic and non-systematic reviews, health technology assessments) and meta-analyses Protocols, studies reporting exclusively on design or baseline data
Outcomes regarding effectiveness: employment status, return to work and absenteeism Variables regarding process: contextual factors and characteristics of a strategy that might influence effectiveness (e.g. use or dissemination of a strategy, views of the persons involved)	Studies that neither consider effectiveness outcomes (for example, studies reporting only on costs resulting from the implementation of strategies) nor process variables affecting the impact of a strategy
Language: English	Other language than English
Time frame: Studies published between 2011 and 04/2016	Published before 2011
Abstract available	No abstract available
	Duplicate

SCREENING PROCESS

Each partner involved in the screening of references received an Endnote file from LMU with a set of records and checked them for inclusion and exclusion. If it is possible, two reviewers independently screened and agreed on their selections. If some partners couldn't organize a complete double-selection a double check of at least 20% was carried out.

In a first step, all references were screened for fulfilment of the inclusion criteria by title and abstract. It was noted, if the reference was 1) included, 2) excluded or 3) unclear (i.e. the reviewer cannot make a decision with the information available in title and abstract).

References screened by two reviewers - The results were compared. By discrepancy, agreement was achieved based on the information available in title and abstract. For still unclear references and for references where disagreement remained, the full-text was retrieved and examined by both reviewers.

References screened by only one reviewer - Unclear references were screened by a second reviewer by title and abstract. If the reference remained unclear for one of the reviewers, the full-text was examined by both reviewers.



In case of discrepancies not resolved by the two reviewers, a third team member was asked to help to reach consensus.

PILOT TEST

Before partners started with the screening of their references, they were requested to screen ca. 50 references (same records for all partners) and send LMU the results. This allowed LMU to pilot test the inclusion/exclusion criteria to: 1) examine how the inclusion agreement is and understand differences, 2) determine whether the inclusion/exclusion criteria can be already used or need to be refined or extended.

CHARACTERISTICS OF INCLUDED SCIENTIFIC PUBLICATIONS BY DISEASE AND KIND OF STRATEGY

Abbreviations: CG: comparison group; IG: intervention group; FU: follow-up; n.a.: not applicable; n.r.: not reported; PwD: persons with disability; SL: sick leave; MSD: musculoskeletal disorders; MD: mental disorders; RTW: return to work; SMD: severe mental disorders; CMD: common mental disorders; CBT: cognitive-behavioral therapy; CW: competitive work; PTSL: part-time sick leave; IPS: Individual Placement and Support; LBP: low-back pain

CHRONIC DISEASE OR DISABILITY			
POLICY STRATEGIES			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Horwitz A 2014 Denmark [1]	<p>Strategy: reform of the public pension system</p> <p>Design: interrupted time series, register-based</p> <p>Subjects: employed bank clerks</p> <p>CG: employees before the reform; n=n.r.</p> <p>IG: employees after the reform; n=n.r.</p> <p>FU: 6 y.</p>	<p>NO</p> <p>Not able to detect any effects of the reform in a member owned pension fund. Differences in incidence of disability pension seem to be more related to labour market and financial situation of the country than to the reform.</p> <p>JOB STATUS</p> <p>(1) getting an invalidity pension (as indicator of leaving the labour market)</p>	<p>Women: 65%</p> <p>Recruitment: applications for invalidity pension in the period from January 1, 1997 to May 1, 2009 were registered continuously.</p> <p>Strategy: Reform of the public pension system introduced in 2003. Main aspects: focus on abilities of PwD instead of limitations and introduction of flexjobs</p>
Agovino M 2015	<p>Strategy: co-existence of active labor market policies and passive</p>	<p>YES</p> <p>The combination of active labour market policies</p>	<p>Women: n.r.</p> <p>Yearly data for the period 2006-2011</p>

CHRONIC DISEASE OR DISABILITY			
POLICY STRATEGIES			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Italy [2]	<p>measures to support PwD</p> <p>Design: cross-sectional, register-based</p> <p>Subjects: people with a disability</p> <p>CG: n.a.</p> <p>IG: n.a.</p> <p>FU: n.a.</p>	<p>to promote the employment of PwD and passive measures to support PwD increases the probability of finding a job.</p> <p>JOB STATUS</p> <p>(1) employment status</p>	<p>Strategy: co-existence of</p> <p>a) active labor market policies to promote the employment of PwD and</p> <p>b) passive measures to support PwD.</p> <p>The combination of active and passive measures is at the core of the concept of “flexicurity”, a strategy to promote, both flexibility and security in the labour market. The authors calculated three flexicurity indexes that give different weight to passive and active measures and explored their correlation with the probability of finding a job for PwD in the different Italian regions.</p>

CHRONIC DISEASE OR DISABILITY			
DISABILITY BENEFIT			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
López Frutos EM 2014 Spain	<p>Strategy: disability support benefit</p> <p>Design: cross-sectional, register-based</p>	<p>PARTLY NEGATIVE</p> <p>Receiving a benefit has a significant negative direct effect on the probability of working only for individuals on the disability threshold (disability</p>	<p>Women 45,6%</p> <p>The sample includes all individuals that held a certificate of disability in 2008, 2009 or 2010.</p>

CHRONIC DISEASE OR DISABILITY			
DISABILITY BENEFIT			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
[3]	Subjects: PwD CG: Certificate of disability without disability support benefit; n=19,976 IG: Certificate of disability and disability support benefit; n=27,660 FU: n.a.	level of 33–44 %; 19.3% lower probability of working). For individuals with a higher degree of disability (disability degree of more than 45 %) there is no statistically significant difference in the probability of working for those receiving a benefit. JOB STATUS (1) employment status	

CHRONIC DISEASE OR DISABILITY			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Johansson P 2012 Sweden [4]	Strategy: early and holistic evaluation of the need for rehabilitation Design: mixed methods (a-RCT; b-cohort study,	NO The results from the RCT and the retrospective observational study suggest a negative effect of the intervention: the sick-spells of the IG lasted about 3 months longer.	Women: RCT 45-47%; Cohort study 61-65% RCT: year 2006; Cohort study: 2004-2007; within-subjects analyses 2001-2003 and 2004-2007 Intervention: Multidisciplinary

CHRONIC DISEASE OR DISABILITY			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	<p>register-based) Subjects: individuals on SL and at risk of becoming long-term sick, employed and unemployed</p> <p>CG: the medical doctor and/or the case worker should suggest a rehabilitation plan; cohort study, n= 37,938; RCT, n=24</p> <p>IG: Early and holistic evaluation of the need for rehabilitation; cohort study, n=1,076; RCT, n=21</p> <p>FU: RCT approx. 1y; cohort study approx. 3 y</p>	<p>SICKNESS ABSENCE: (1) duration of sickness absence (leaving a sick spell)</p>	<p>collaboration program (“Resursteam”). Early and holistic evaluation of the need for rehabilitation. Collaboration between the Social Insurance Agency and the primary health care. Goal: to speed up the rehabilitation and reduce absence costs.</p> <p>Comparator: the medical doctor and/or the case worker should suggest a rehabilitation plan</p> <p>Most subjects had MSD or MD.</p>
<p>Poulsen OM 2014</p>	<p>Strategy: multidisciplinary, coordinated and tailored RTW</p>	<p>YES</p> <p>The effect was different in the 3 municipalities and across time frames within each site. In the municipality with the most complex cases, the</p>	<p>Women: 49.5-62.8%</p> <p>Data collection 2010-2011</p> <p>The municipalities are obliged by law to conduct an assessment of every sick-</p>

CHRONIC DISEASE OR DISABILITY			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Denmark [5]	<p>intervention</p> <p>Design: RCT (3 municipalities)</p> <p>Subjects: adults receiving long-term (≥8 weeks) benefits, employed and unemployment, unlikely to RTW within three months, but able to participate in RTW activities like gradually returning to work</p> <p>CG: ordinary sickness benefit management; n=489, 539, 129</p> <p>IG: Multidisciplinary, coordinated and tailored RTW intervention; n=747, 809, 392</p> <p>FU: 12 mo.</p>	<p>intervention was effective.</p> <p>SICK ABSENCE</p> <p>(1) Recovery from sickness absence</p> <p>Recovery from sickness absence: first week where no sickness absence benefit was given</p>	<p>listed beneficiary by the end of the 8th week of sickness absence. At this assessment, beneficiaries are assigned to one of three categories:</p> <ul style="list-style-type: none"> • category 1=likely to return to work within three months; • category 2=unlikely to return to work within three months, but able to participate in RTW activities like gradually returning to work; and • category 3=unlikely to return to work within three months and unable to participate in RTW activities. All category 2 beneficiaries were included in the trial.

CHRONIC DISEASE OR DISABILITY			
PART-TIME SICK LEAVE (PTSL) / PART-TIME SICK BENEFITS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Høgelund J 2012 Denmark [6]	<p>Strategy: part-time sick leave</p> <p>Design: cohort, register-based</p> <p>Subjects: people with MHP or other health problems, employed and on SL >8 we.</p> <p>CG: full-time sick leave; n=n.r.</p> <p>IG: part-time sick leave; n=n.r.</p> <p>Total sample: 226 with MHD and 638 with other disorders</p> <p>FU: up to 79 we.</p>	<p>YES – DIFFERENT RESULTS PER DISEASE GROUP</p> <p>PTSL does not reduce the time until employees with mental disorders return to RWH. In contrast, PTSL significantly reduces the duration of SL for employees with other disorders.</p> <p>RTW</p> <p>(1) time until first return to regular working hours (RWH)</p> <p>RWH: duration of sickness absence (or the time until the employee ends the sick leave by reporting ready for return to pre-sick leave hours)</p>	<p>Women: employees with mental disorders 61% in PTSL and 81% in FTSL; employees with non-mental disorders 45% in PTSL and 44% in FTSL.</p> <p>The benefit cases were closed from 1 January through 31 July 2006. These individuals were interviewed by telephone from March through May 2007, on average ten months after their benefit case ended (and the payment of sickness benefit ceased) and 19 months after the sick leave spell started</p>
Markussen S 2012 Norway [7]	<p>Strategy: graded sickness-absence certificate</p> <p>Design: cohort, register-based</p> <p>Subjects: people on long-</p>	<p>YES</p> <p>By grading long-term absence certificates, physicians contribute to shorter absence durations, less subsequent social security dependency, and higher employment propensities. The effects are large from an economic – as well as from a clinical –</p>	<p>Women: CG 53.0%; IG 67.8%</p> <p>Data collection: 2001-2006</p>

CHRONIC DISEASE OR DISABILITY			
PART-TIME SICK LEAVE (PTSL) / PART-TIME SICK BENEFITS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	term SL (at least 8 we.) CG: non-graded absence certificate; n= 261,596 IG: graded sickness-absence certificate before the end of week 8; n=77,655 FU: 2y	viewpoint. SICKNESS ABSENCE: (1) duration of the sickness spell (including holidays and days off), (2) number of lost full time equivalent working days, (3) number of full equivalent days in social security during the 24 months following the end of the spell (4) employment in the 2nd year after starting the spell.	
Kausto J 2012 Finland [8]	Strategy: partial sick leave Design: cohort study, register-based Subjects: people with MHP, MSD, cancer and trauma; employed and on SL at least for 60 days, who were working full time before their leave period	YES PTSL was associated with increased subsequent use of partial disability pension and decreased use of full disability pension in the main diagnostic groups explored, MSD and MHP. The effect was stronger for men. Overall results suggest enhanced work retention after partial sick leave. MAINTAINING A JOB: (1) maintaining work	Women Analysis performed with all subjects: CG: 53%, IG: 72% Analysis performed with matched sample CG: 72% IG: 72% Recipients of partial or full sickness benefit whose sick leave period had ended between 1 May and 31 December 2007 were included

CHRONIC DISEASE OR DISABILITY			
PART-TIME SICK LEAVE (PTSL) / PART-TIME SICK BENEFITS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	CG: Full sick leave; n=28,380 IG: Partial sick leave; n=1,047 FU: approx. 12-19 mo.	Full disability pension as an indicator of leaving of the labour market and partial disability pension as indicator of retaining the job despite impaired work ability	

MENTAL DISORDERS			
INDIVIDUAL PLACEMENT AND SUPPORT (IPS)			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Heslin M 2011 UK [9]	Strategy: Individual Placement and Support (IPS) Design: RCT Subjects: SMD, unemployed CG: care as usual; n=110 IG: IPS; n=109 FU: 24 mo.	YES At 2 years IPS was more effective in helping patients with SMD to obtain competitive employment, but the proportion of patients in IG and CG who obtained employment was low. Time to achieve employment was six weeks shorter in patients in the IG (but this was still a long delay of more than one and a half years from study begin). No significant effect on the duration of jobs.	Women: CG 33%, IG 31% Recruitment: November 2004-September 2006

MENTAL DISORDERS

INDIVIDUAL PLACEMENT AND SUPPORT (IPS)

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
		<p>OBTAINING A JOB: (1) competitive employment at 12 mo. (2) competitive employment at 24 mo.</p> <p>Competitive employment: having a job paying at least the minimum wage located in a mainstream socially integrated setting not set aside for persons with disabilities held independently with the participant in continuous employment for at least 30 days</p>	
Bejerholm U 2015 Sweden [10]	<p>Strategy: Individual Placement and Support (IPS)</p> <p>Design: RCT Subjects: SMD, unemployed CG: traditional vocational rehabilitation (first train, then place); n=60</p>	<p>YES</p> <p>At 6 months, there was no difference between groups.</p> <p>At 18 months, the rate of employment, number of weeks and hours worked, and work tenure were all greater in the IG.</p> <p>OBTAINING A JOB: (1) to get a job at six mo. (2) to get a job at 18 mo.</p>	<p>Women: CG 35%, IG 53% Data collection: 2008-2011</p>

MENTAL DISORDERS

INDIVIDUAL PLACEMENT AND SUPPORT (IPS)

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	IG: IPS; n=60 FU: 12 mo.	(3) hours worked at 6 mo. (4) hours worked at 18 mo. (5) weeks worked at 6 mo. (6) weeks worked at 18 mo. (7) job tenure at 6 mo. (8) job tenure at 18 mo. (9) income at 6 months and income at 18 mo. (10) time to first employment at 6 mo. (11) time to first employment at 18 mo. Competitive employment: work for at least 1 week in employment that paid at least minimum wage, available to any citizen and located in mainstream settings	
Michon H 2014 Netherlands [11]	Strategy: Individual Placement and Support (IPS) Design: RCT Subjects: SMD, unemployed;	PARTLY Number who found competitive jobs before 18 and before 30 months was significantly higher in IG. Not significant at 6 months. Mean days competitively employed was higher but not significantly different.	Women: CG 25%, IG 27% Recruitment: November 2005-November 2007 IG not better in non-vocational outcomes (mental health, quality of life or self-esteem). Instead, employed persons (in IG or CG) showed an improvement in these

MENTAL DISORDERS

INDIVIDUAL PLACEMENT AND SUPPORT (IPS)

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	<p>CG: traditional vocational rehabilitation; n=80 IG: IPS; n=71 FU: 30 mo.</p>	<p>Mean hours worked in competitive jobs were significantly greater in IG.</p> <p>Mean days to first job in subsample of people competitively employed were less in IG but not significantly different.</p> <p>Between the two subgroups of employed participants no differences were detected in average <u>weekly hours</u> or the total amount of <u>hours worked</u></p> <p>OBTAINING A JOB</p> <p>(1) Gain a competitive job (at 6, 18 and 30 mo.) (2) days in competitive employment (3) hours in competitive employment (4) days to first job</p> <p>Competitive job: paid job in a company or organization in the regular labour market, against prevailing wages, not set aside for persons with a disability, that is, in an integrated work setting</p>	<p>variables.</p>

MENTAL DISORDERS

INDIVIDUAL PLACEMENT AND SUPPORT (IPS)

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
van Veggel R 2015 UK [12]	<p>Strategy: Individual Placement and Support (IPS)</p> <p>Design: cohort study</p> <p>Subjects: SMD, unemployed and seeking a job or vocational experience</p> <p>CG: conventional vocational rehabilitation; n=140</p> <p>IG: IPS; n=446</p> <p>FU: 12 mo.</p>	<p>YES</p> <p>Significantly more people in the IG commenced competitive employment. On average, time to first job from program commencement was reduced by about 5 months and mean hours worked per week increased 9 hours in the IG, but it is not reported, whether these differences were significant.</p> <p>OBTAINING A JOB</p> <p>(1) Competitive employment</p> <p>(2) days to first job</p> <p>(3) mean hours worked per week in employment.</p> <p>Data only available for IG:</p> <p>(4) individuals accumulating 13 weeks or more employment</p> <p>(5) individuals accumulating 26 weeks or more employment</p> <p>Competitive employment: one day or more of competitive employment</p>	<p>Women: CG 46%, IG 44%</p> <p>Recruitment: CG April 2008 - March 2009; IG May 2010 – August 2011</p> <p>CG: participants with vocational goals other than competitive employment were admitted; the new service at 17 locations was compared to the previous employment service at three locations.</p>

MENTAL DISORDERS			
INDIVIDUAL PLACEMENT AND SUPPORT (IPS)			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
		Note: one vocational goal was "maintaining employment" but results are not reported separately for this variable	
Hoffmann H 2012, 2014 Switzerland [13, 14]	Strategy: Individual Placement and Support (IPS) Design: RCT Subjects: SMD, unemployed CG: traditional vocational rehabilitation (prevocational training in sheltered workshops); n=54 IG: IPS; n=46 FU: 5y	YES At 5y follow-up, SE intervention was more successful than the comparison treatment for competitive employment rate, length of employment, total weeks in competitive work (CW), annual weeks CW, job tenure in longest CW, mean hours worked. OBTAINING A JOB (1) competitive employment rate; (2) length of employment at least 50% in CW (3) total weeks in CW, (4) annual weeks CW, (5) job tenure in longest CW held, (6) mean hours worked per year in CW, (7) cumulative duration of CW, (8) yearly income from CW and	Women: CG 35%, IG 35% Recruitment period (year): not found Less impaired and more motivated participants than in other studies (due to the requirements of the Swiss social insurance system)

MENTAL DISORDERS			
INDIVIDUAL PLACEMENT AND SUPPORT (IPS)			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
		<p>(9) hourly competitive job wage in last 3 years.</p> <p>Competitive employment: holding a job paying at least minimum wage (set at CHF10.00 [about US\$10] for this study) for at least 2 weeks on the open labour market (i.e., excluding jobs protected for people with a disability, such as transitional employment).</p>	

MENTAL DISORDERS			
PART-TIME SICK LEAVE (PTSL) / PART-TIME SICK BENEFITS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
<p>Andrén D 2014 Sweden [15]</p>	<p>Strategy: part-time sick leave</p> <p>Design: cohort study, register-based</p> <p>Subjects: MD, employed and on SL at least 15</p>	<p>PARTLY</p> <p>PTSL is associated with a low <u>likelihood of full recovery</u>, yet the <u>timing</u> of the assignment is important. PTSL's effect is relatively low when it is assigned in the beginning of the spell but relatively high, and statistically significant, when assigned</p>	<p>Women</p> <ul style="list-style-type: none"> • sample1: CG 68%, IG 78% • sample2: CG 66% IG 73% • sample3: CG 69% IG 74% <p>Recruitment: 1 and 16 February 2001</p> <p>Intervention: strategy for people who</p>

MENTAL DISORDERS

PART-TIME SICK LEAVE (PTSL) / PART-TIME SICK BENEFITS

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	<p>days (The CG and IG were constructed in 3 different ways using different definitions of PTSL, resulting in 3 samples) CG: full-time sick leave; n1=79; n2=181; n3=155 IG: part-time sick leave; n1=548; n2=367; n3=172 FU: 12 mo.</p>	<p>after 60 days of full-time sick leave. PTSL seems not to alter <u>duration of sick leave</u> when assigned at the beginning or after 60 days of sick leave. For people who start their sick period in FTSL, finishing the sick leave in FTSL is associated with a significantly shorter sickness absence.</p> <p>RTW (1) fully recovering lost work capacity (2) duration of sick leave</p> <p>The definition of full recovery of lost work capacity is calibrated with the setting of the social insurance, which, taking into consideration the employee's health status and work requirements, divides lost work capacity in four categories (<25; 25-49, 50-75,>75 %)</p>	<p>have not lost more than 75 % of their work capacity to be on PTSL and work part-time (for the remaining work capacity). The right to compensation of income loss related to sickness or disability is based on the medical evaluation of the person's loss of work capacity due to the disease, sickness, or injury. Following the physician's medical evaluation, the SIO decides whether an individual is entitled to compensation and, if so, how much (i.e., 25, 50, 75, or 100 %).</p>
<p>Høgelund J 2012 Denmark</p>	<p>Strategy: part-time sick leave Design: Cohort, register-</p>	<p>NO (DIFFERENT RESULTS PER DISEASE GROUP) PTSL does not reduce the time until employees</p>	<p>Women: employees with MD 61% in PTSL and 81% in FTSL; employees with non-mental disorders 45% in PTSL and 44%</p>

MENTAL DISORDERS			
PART-TIME SICK LEAVE (PTSL) / PART-TIME SICK BENEFITS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
[6]	<p>based</p> <p>Subjects: people with MHP or other health problems, employed and on SL >8 we.</p> <p>CG: full-time sick leave; n=n.r.</p> <p>IG: part-time sick leave; n=n.r.</p> <p>Total sample: 226 with MHD and 638 with other disorders</p> <p>FU: up to 79 we. (approx. 1.5y)</p>	<p>with mental disorders return to RWH. In contrast, PTSL significantly reduces the duration of SL for employees with other disorders.</p> <p>RTW</p> <p>(1) time until first return to regular working hours (RWH)</p> <p>RWH: duration of sickness absence (or the time until the employee ends the sick leave by reporting ready for return to pre-sick leave hours)</p>	<p>in FTSL.</p> <p>The benefit cases were closed from 1 January through 31 July 2006. These individuals were interviewed by telephone from March through May 2007, on average ten months after their benefit case ended (and the payment of sickness benefit ceased) and 19 months after the sick leave spell started</p>

MENTAL DISORDERS			
PSYCHOLOGICAL / BEHAVIOURAL TREATMENT			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>

MENTAL DISORDERS

PSYCHOLOGICAL / BEHAVIOURAL TREATMENT

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
Reme SE 2015 Norway [16]	<p>Strategy: CBT combined with IPS</p> <p>Design: RCT</p> <p>Subjects: CMD, employed on SL, at risk of going on SL or on long-term benefits</p> <p>CG: care as usual; n=365</p> <p>IG: CBT and, where needed, IPS (systematic and integrated approach); n=437</p> <p>FU: 18 mo.</p>	<p>YES</p> <p>The proportion with increased or maintained work participation at 12 and 18 mo. was higher in the IG. The effect was larger for individuals on long-term benefits at baseline. More people in this group showed a full or partial RTW after 18 mo.</p> <p>JOB STATUS/ Maintain or increase active work-life</p> <p>(1) increased or maintained work participation at 12 and 18 months</p> <p>(2) full or partial RTW</p> <p>Increased or maintained work participation: maintained work participation, new employment or a full or partial RTW</p> <p>Full or partial RTW: working and no reception of health-related or work-related benefits, or reduced benefit coverage and increased work participation compared with baseline status</p>	<p>Women: CG 65%, IG 69.4%</p> <p>Recruitment period: June 2010-February 2012</p> <p>CG: standard treatment (treatment from the general practitioner, national insurance office, and other health professionals)</p> <p>IG: systematic and integrated approach. Systematic and integrated approach. CBT focused on managing mental health problems as they relate to work situations.</p> <p>Participants had to express a motivation to RTW or stay at work</p>
Lagerveld SE	<p>Strategy: work-focused CBT</p>	<p>YES</p> <p>Most subjects (over 90%) from both groups had</p>	<p>Women: CG 67%, IG:54%</p> <p>Recruitment: not found</p>

MENTAL DISORDERS

PSYCHOLOGICAL / BEHAVIOURAL TREATMENT

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
2012 Netherlands [17]	Design: controlled trial Subjects: CMD, employed and in SL CG: CBT; n=79 IG: Work-Focused CBT (regular treatment plus a module focusing on work and RTW); n=89 FU: 12 mo.	resumed work within 1 year, but work-focused CBT achieved this result about 2 months earlier. Partial RTW occurred earlier and was implemented more often in the IG. The work-focused CBT group used more (and consequently smaller) steps to reach full RTW. Temporal relapses in the RTW process occurred more often in the IG, but this difference was not statistically significant. RTW: (1) proportion of full RTW (2) duration of full RTW (3) duration of partial RTW Process of RTW: (4) number of steps until full RTW, (5) RTW relapses. Full RTW: working the number of hours specified in the labour contract, except if this was still on a “therapeutic” basis (with adjusted tasks and/or reduced responsibilities) Partial RTW: first partial increase in working hours	

MENTAL DISORDERS

PSYCHOLOGICAL / BEHAVIOURAL TREATMENT

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
Noordik 2013 Netherlands [18]	Strategy: exposure-based RTW program, added to care as usual Design: RCT Subjects: CMD, employed on SL for 2-8 we. CG: care as usual; n=28 IG: Exposure-based RTW program, added to care as usual; n=28 FU: 12 mo.	NO Difference between groups significant, but effect different as expected. Workers in the exposure-based RTW program showed a prolonged time-to-full RTW compared to those in CG. There was no difference between IG and CG in time to partial RTW, nor number of recurrences of SL. RTW: (1) time to full RTW (2) time to partial RTW (3) number of recurrences of sick leave Full RTW: total number of contracted working hours per week lasting ≥28 calendar days without a recurrence of SL	Women: CG 67%, IG 78% Recruitment: November 2006 – December 2007 Intervention: care-as-usual plus gradually in vivo exposure to more demanding work situations. Active problem solving behaviour instead of avoidance behaviour when dealing with stressing work situations during RTW. Homework assignments aimed at preparing, executing and evaluating an exposure-based RTW plan.
Kröger 2014 Germany [19]	Strategy: work-related CBT Design: controlled trial Subjects: MD, employed and on SL within the last	YES Both treatment types reduced significantly days of incapacity to work, but this reduction was larger in the IG.	Women: CG 54%, IG 38% Recruitment: January 2008-June 2009 Intervention: work-related CBT incorporating 1) objective assessment of the workplace and patient's perspective

MENTAL DISORDERS

PSYCHOLOGICAL / BEHAVIOURAL TREATMENT

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
	21 working days CG: CBT as usual; n=13 IG: Work-related CBT; n=13 FU: 1y	SICKNESS ABSENCE (1) days of incapacity to work Days of incapacity to work: number of days on SL per 100 calendar days within one year	and 2) work-related interventions, such as redefining the workplace, facing problems in the frame of problem-solving training, identifying useful skills and transferring them to other situations, developing and implementing a plan for reintegration, support to solve the problems faced when implementing the plan, and trying to integrate OP and employees' supervisors.
Arends 2014 Netherlands [20]	Strategy: Problem-solving intervention focusing on work Design: RCT Subjects: CMD, employed, who had a sickness absence due to CMD in the past; CG: usual care; n=78 IG: problem-solving intervention focusing on	YES The intervention was effective in significantly increasing the time until recurrent sickness absence, as compared to usual care. The IG also showed less recurrent sickness episodes. SICKNESS ABSENCE (1) recurrent sickness absence episodes, (2) time until recurrent sick absence	Women: CG 49%, IG 34% Recruitment: January 2010-June2011 Intervention: five-step problem-solving process to find and implement solutions for problems experienced when back at work

MENTAL DISORDERS

PSYCHOLOGICAL / BEHAVIOURAL TREATMENT

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
	work; n=80 FU: 12 mo.		
Volker D 2015 Netherlands [21]	Strategy: web-based intervention Design: RCT Subjects: people with CMD, sick listed between 4 and 26 we., employed CG: usual care; n=89 IG: web-based intervention; n=131 FU: 12 mo.	PARTLY There was a significant effect for duration until first RTW only. No significant effect for time to full RTW and number of days of sickness absence RTW: (1) time to first RTW (2) time to full RTW (3) total number of days of SL Time to first RTW: duration of SL in calendar days from the day of randomization until the moment of first partial or full RTW Note: sick absence within 4 weeks of full RTW counted as part of first absence	Women: CG 89%, IG 59% Recruitment: July 2011-January 2013 Intervention: web-based intervention. 1) eHealth RTW module tailor-made to the individual employee (aspects that may be focused: psychoeducation, cognitive behavioural therapy and coping skills, pain and fatigue management and reactivation, relapse prevention) and 2) Email Decision Aid for the Occupational Physician

MENTAL DISORDERS			
MULTIDISCIPLINARY INTERVENTIONS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Vlasveld MC 2013 Netherlands [22]	Strategy: collaborative care treatment applied by the occupational physician care manager with psychiatry consult Design: RCT Subjects: major depressive disorder, employed and on SL between 4 and 12 weeks CG: n=61 IG: collaborative care treatment; n=65 FU: 12 mo	NO SIGNIFICANT The IG showed a shorter time to RTW and fewer days on SL than the CG. But these differences were not significant. RTW (1) duration until lasting, full RTW (2) total number of sickness absence days Duration until lasting, full RTW: duration of sickness absence due to MDD in calendar days, from the day of randomisation until full RTW for at least 4 weeks without partial or full recurrence; in accordance with the Dutch Health Law, two sickness absence episodes with less than 4 weeks of full RTW in between, were counted as a single, continuous absence episode	Women: CG 54%, IG 57% Recruitment: not found Intervention: Collaborative care treatment applied by the occupational physician care manager with psychiatry consult (6–12 sessions of problem-solving treatment, manual-guided self-help, a workplace intervention and, depending on patient preference, antidepressant medication); web-based tracking system to support the occupational physician-care manager in monitoring and in adhering to the protocol; psychiatrist available for consultation; active participation and commitment of the worker and employer essential power calculations based on depressive symptoms (small size for RTW outcome)
Martin MHT 2013 Denmark [23]	Strategy: multidisciplinary, coordinated and tailored return-to-work intervention	NO The intervention delayed RTW compared to conventional case management, after accounting for measured confounding. Longer time to RTW among recipients of the intervention, although the	Women: CG 83%, IG 78% Recruitment: May 2008 – January 2009 Intervention: Multidisciplinary, coordinated and tailored return-to-work intervention: (1) work disability

MENTAL DISORDERS			
MULTIDISCIPLINARY INTERVENTIONS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
	<p>Design: CT Subjects: CMD, employed and unemployed in SL for 4–12 we. CG: care as usual; n=80 IG: Multidisciplinary, coordinated and tailored RTW intervention; n=88 FU: 52 we.</p>	<p>estimate provided by the IV-analysis was non-significant. After 1 year, more recipients of the intervention than of conventional case management were receiving sickness absence benefits.</p> <p>RTW 1) time to RTW 2) labour market status (self-supported, receiving sickness benefits, receiving unemployment, receiving disability, other) RTW: not receiving any sickness or unemployment benefits</p>	<p>screening, conducted by a multidisciplinary team, to assess disability and functioning and barriers and resources for RTW in accordance with the International Classification of Functioning, Disability and Health (ICF), (2) action plan for RTW, including proposed activities to overcome barriers and strengthen resources (e.g. stress management training, physical exercise, contact with the workplace), and (3) implementation of the action plan and regular updates according to the individual's current situation.</p> <p>Control group: conventional case management. All sickness absence beneficiaries are interviewed within the first 8 weeks of absence by municipal social insurance officer (SIOs) and their RTW prognosis is evaluated. Frequency of follow-up assessments depends on the prognosis. The SIOs are responsible for the initiation of efforts to improve or retain the employability of the beneficiaries</p>

MENTAL DISORDERS			
MULTIDISCIPLINARY INTERVENTIONS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Hees HL 2012 Netherlands [24]	<p>Strategy: occupational therapy adjuvant to treatment as usual</p> <p>Design: RCT CG: care as usual; n=78 IG: Occupational therapy adjuvant to treatment as usual; n=39 FU: 18 mo.</p>	<p>PARTLY</p> <p>Over time, the probability of RTW in good health increased more for participants in IG. Hours of absenteeism were significantly decreased in both conditions, but with no difference between groups. There was also no difference between groups for full RTW or partial RTW.</p> <p>RTW</p> <p>(1) time until partial RTW at 6 months, (2) at 12 months, (3) at 18 months, (4) full RTW at 6 months, (5) full RTW at 12 months, (6) full RTW at 18 months, (7) average number of hours of absenteeism over each 6-month period at 6 months, (8) absenteeism at 12 months, (9) absenteeism at 18 months, (10) RTW with good health at 6 months, (11) RTW with good health at 12 months, (12) RTW with good health at 18 months.</p>	<p>Women: CG 59%, IG 47%</p> <p>Recruitment: December 2007 – October 2009</p> <p>Intervention: Occupational therapy adjuvant to treatment as usual (outpatient clinical treatment). 1) Focus on early return to the work situation according to the ‘place-then-train’ principle, 2) increased focus on work-related coping and self-efficacy, and 3) enhanced communication among the various stakeholders involved.</p> <p>Comparator: treatment as usual, highly specialised, at an academic department for mood disorders</p>

MENTAL DISORDERS			
MULTIDISCIPLINARY INTERVENTIONS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
		<p>Partial RTW: working an increment of at least 5 hours compared with baseline for at least 4 weeks without partial or full recurrence</p> <p>Full RTW: working full contract hours in own or other work for at least 4 weeks, without partial or full recurrence</p> <p>RTW with good health: a full RTW while being remitted from depression</p>	

MUSCULOSKELETAL DISORDERS			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
Steiner AS 2013 Switzerland [25]	<p>Strategy: multidisciplinary functional rehabilitation program (MFRP)</p> <p>Design: controlled trial</p> <p>Subjects: non-specific LBP</p> <p>CG: muscle reconditioning</p>	<p>UNCLEAR</p> <p>After excluding subjects not employed or not searching for a job (e.g. housewives or early retirements), more people in the IG were working at follow-up (78% vs 47%) but the difference was not significant.</p>	<p>Women: CG 52%, IG 42%T</p> <p>Data collection: CG mid-2006-mid 2007, IG end of 2007 to 2008</p> <p>Intervention: It integrated physical rehabilitation, psychological evaluation, cognitive behavioural methods and occupational therapy with a socio-</p>

MUSCULOSKELETAL DISORDERS			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
	program; n=21 IG: Multidisciplinary functional rehabilitation program; n=24 FU: 9 mo.	RTW (1) RTW (not further described)	professional component
Jensen C 2011 Denmark [26]	Strategy: multidisciplinary tailored coordinated intervention Design: RCT Subjects: LBP, employed and on SL for 3-16 we.; IG1: Brief intervention (clinical examination and advise); n= 175 IG2: multidisciplinary tailored coordinated intervention; n=176 FU:12 mo.	NO There were no differences in number of subjects who achieved RTW within one year and time to RTW between the brief intervention and the more comprehensive multidisciplinary intervention. RTW (1) RTW (2) Median time until RTW RTW: first 4-week period within the first year after inclusion, during which the participant received no social transfer payments; unemployed participants were classified as "RTW," if they had lost their job during follow-up, but were healthy enough to work, which was a prerequisite to receive unemployment benefits.	Women: CG 50%, IG 54% Recruitment: November 2004 -June 2007 Multidisciplinary Intervention: Clinical examination and advice by a rehabilitation doctor and a physiotherapist; assignment of a case manager, who develops a rehabilitation plan in collaboration with the patient and a multidisciplinary team; the workplace and the social service center are contacted to discuss and coordinate relevant initiatives; the case manager arranges meetings between the participant and each of the other specialists, meetings at the work place and meetings with the social service center, if relevant Sample: Specific and non-specific LBP; 56% unskilled worker; >80% wished to

MUSCULOSKELETAL DISORDERS			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
			get back to same work
Jensen C 2012 Denmark [27] Same study as Jensen 2011	Strategy: multidisciplinary tailored coordinated intervention Impact of the interventions on sick leave weeks and on different subgroups explored; longer FU than Jensen 2011 FU: 24 mo.	YES - SUBGROUP DIFFERENCES Results for the general sample. At the one-year follow-up, the number of weeks on sick leave was statistically lower in the brief intervention group than in the multidisciplinary group which indicated that this intervention was the more effective. The other two outcome measures showed the same tendency, but the differences were not statistically significantly different. Similar effects at two-year FU than to the one-year FU. Results for subgroups of patients. It seems that the brief intervention worked better for about two thirds of the patients (those with influence on the planning of their own work and no perceived risk of losing job and/or being a work injury claimant), and the multidisciplinary intervention was more effective for the remaining one-third of the patients. RTW	

MUSCULOSKELETAL DISORDERS			
MULTIDISCIPLINARY INTERVENTION			
<i>First author</i> <i>Year</i> <i>Country</i>	<i>Study design</i>	<i>Effectiveness</i> <i>Work-related outcomes, with definition</i>	<i>Further information</i>
		<p>(1) time to RTW at 1 year (2) time to RTW at 2 years (3) RTW at 1 year (4) RTW at 2 years (5) SICK LEAVE weeks (partial or full) at 1 year (6) SICK LEAVE weeks (partial or full) at 2 years Other categories of work status in addition to RTW were: sick leave, modified job or training in labor market and labor market exclusion.</p> <p>RTW: 4-week period when patient does not get sick or other health-related social benefits, except unemployment benefits Sick leave spells of ≥ 2 weeks</p>	
Stapelfeldt CM 2011 Denmark [28] Same study	Strategy: multidisciplinary tailored coordinated intervention Secondary analyses to identify subgroups that would benefit more from	YES - SUBGROUP DIFFERENCES When claimants were excluded from the analyses, the multidisciplinary intervention was more effective in the subgroup of participants with low job satisfaction and in subgroups characterised by no influence on work planning and groups at risk of losing their job.	

MUSCULOSKELETAL DISORDERS			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
as Jensen 2011	the multidisciplinary intervention; FU considered: 12 mo. It also analyses data from further 120 subjects (IG1 n=60; IG2 n=60)	Participants with high job satisfaction and those who were able to influence the planning of their work and who had no risk of losing their job benefited more from the brief intervention. RTW (1) RTW RTW: no sick leave compensation for a period of 4 consecutive weeks	
Vermeulen S 2011 Netherlands [29]	Strategy: multidisciplinary intervention promoting involvement of stakeholders Design: RCT Subjects: MSD, unemployed and temporary agency workers on SL 2 to 8 we. CG: usual care; n=84 IG: multidisciplinary	YES The results indicate a non-significant trend towards delayed RTW in the IG in the first 90 days, followed by a <u>significant advantage in RTW rate after 90 days</u> . The intervention had a negative impact on sickness benefit duration, although not statistically significant. This is due to the fact that in most cases the therapeutic workplaces were offered with ongoing sickness benefit.	Women: CG 37%, IG 43% Recruitment: March 2007 – September 2008 Comparison: assessment and management of vocational rehabilitation carried out by an insurance physician, a labour expert and a case-manager Intervention: a RTW coordinator work to stimulate a high degree of involvement of both the sick-listed worker and the labor expert (representing the Social Security Agency), and to reach consensus about a

MUSCULOSKELETAL DISORDERS			
MULTIDISCIPLINARY INTERVENTION			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes, with definition</i>	<i>Further information</i>
	intervention; n=79 FU: 12 mo.	<p>RTW</p> <p>(1) time to sustainable first RTW at 3 mo.</p> <p>(2) time to first sustainable ending of sickness benefit</p> <p>(3) total number of days of sickness benefit</p> <p>Sustainable first RTW: days from randomisation to work in any type of paid work or work resumption with (<i>without?</i>) ongoing benefits for at least 28 consecutive days at</p> <p>First sustainable ending of sickness benefit: duration in calendar days from the day of randomization until ending of sickness benefit for at least 28 days. Recurrence of sickness absence with an accepted sickness benefit claim within 28 days after ending of the previous sickness benefit was considered as belonging to the preceding sickness benefit period, on condition that it was due to the same (or related) MSD.</p>	<p>RTW plan. A vocational rehabilitation agency was contracted to find a suitable (therapeutic) workplace matching with the formulated RTW plan.</p> <p>Sample: Volunteers (/interested in participation)</p>

MUSCULOSKELETAL DISORDERS

EDUCATIONAL STRATEGIES

<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Du Bois M 2012 Belgium [30]	<p>Strategy: Disability evaluation followed by information and advice</p> <p>Design: RCT Subjects: LBP, employed and in SL CG: usual care; n=257 IG: disability evaluation followed by information and advice; n=252 FU: 12 mo.</p>	<p>YES</p> <p>This intervention was more effective in the long term. Less people in the IG were off work or had episodes of SL after 12 mo. Time until recurrent SL was lower in the IG.</p> <p>RTW (1) RTW rate at 3 mo. (2) RTW rate at 12 mo. SICKNESS ABSENCE (3) episodes of SL for LBP at 3 mo. (4) episodes of SL for LBP at 12 mo. (5) sick leave duration (mean number of days off work) (6) time until recurrent sick absence</p>	<p>Women: CG 40%, IG 46%</p> <p>Recruitment: March 2008 – September 2008</p> <p>Comparison: brief disability evaluation without medical advice</p> <p>Intervention: disability evaluation followed by information and advice; Education about nature and course of the disease and about physical and psychological factors involved. Encouragement of participants to adopt an active role.</p>

MUSCULOSKELETAL DISORDERS			
WORK-FOCUSED INTERVENTIONS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
Jensen LD 2012 Denmark [31]	<p>Strategy: addressing workplace barriers and physical activity, as part of an outpatient treatment</p> <p>Design: RCT</p> <p>Subjects: LBP, employed and, expressing concerns about the ability to maintain their current job</p> <p>CG: usual care; n=150</p> <p>IG: addressing workplace barriers and physical activity, as part of an outpatient treatment; n=150</p> <p>FU: 3 mo.</p>	<p>PARTLY</p> <p>The intervention had a significant effect for self-reports of SL due to LBP for more than 8 weeks and for cumulated SL days due to LPB (without considering the approx. 25% loss to FU). However, per register data on SL of more than 2 weeks due to all causes (outcomes available for all participants), there was no significant difference between the CG and the IG (with and without considering patients lost to FU).</p> <p>SICKNESS ABSENCE</p> <p>1) proportion of patients accumulating 8 we. of sick leave</p> <p>2) duration of sick leave</p>	<p>Women (based on individuals who completed baseline and follow up): CG (n=114) 59%, IG (n=110) 51%</p> <p>Recruitment: November 2006 – April 2009</p> <p>Intervention: counselling by an occupational physician (OP), aiming at removing experienced workplace barriers as well as at enhancing physical activity of moderate intensity, on pain, function and sick leave after 3 months. Two counselling sessions integrated in LBP secondary care</p> <p>Usual care: Usual care would typically consist of a brief instruction in exercises, or readmission to a general practitioner for further contact with a physiotherapist or chiropractic treatment.</p>
Myhre K 2014 Norway [32]	<p>Strategy: work-focused intervention additional to multidisciplinary intervention</p>	<p>NO ADDED VALUE TO A PHYSICAL ACTIVITY AND PAIN INTERVENTION</p> <p>Adding work-focus in specialist care does not result in better effect of multidisciplinary interventions.</p>	<p>Women: CG 49%, IG 44%</p> <p>Recruitment: August 2009 – August 2011</p> <p>Intervention: work-focused intervention (focus on the RTW process). A case</p>

MUSCULOSKELETAL DISORDERS			
WORK-FOCUSED INTERVENTIONS			
<i>First author</i> <i>Year</i> <i>Country</i>	<i>Study design</i>	<i>Effectiveness</i> <i>Work-related outcomes</i>	<i>Further information</i>
	<p>Design: RCT</p> <p>Subjects: neck and back pain, employed, on sick leave between 4 and 12 we.</p> <p>CG: multidisciplinary intervention (brief or comprehensive); n=202</p> <p>IG: additional work-focused intervention; n=203</p> <p>FU: 12 mo</p>	<p>The intervention was not significantly more successful in decreasing time to RTW (except for subjects ≥ 41 y). The intervention had no effect on the total number of subjects achieving RTW. But the work-focused intervention is <u>not inferior</u> to interventions that focus on physical activity and pain.</p> <p>RTW</p> <p>(1) number of days until sustainable RTW</p> <p>(2) RTW</p> <p>Sustainable RTW: first 5-week period after random assignment that the patient did not receive sickness benefits, a work assessment allowance pension, or a disability pension from the Norwegian Labour and Welfare Administration. RTW was designated when patients receiving a partial disability pension prior to inclusion returned to their partial disability status (12 mo.)</p>	<p>worker analyses together with the patient work and RTW difficulties; they develop a RTW schedule; they discuss relevant issues for a meeting with the employer; if sick-leave compensation is an issue, the caseworkers contact municipal social services</p>
Marchand GH	Secondary analysis to explore secondary clinical	SUPPORT FOR DIFFERENTIAL SUBGROUP EFFECTS	The number of neck pain patients was too low to do subgroup analyses based on

MUSCULOSKELETAL DISORDERS			
WORK-FOCUSED INTERVENTIONS			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
2015 Norway [33] (Same study as Myhre 2014)	outcomes and the influence of some factors on primary and secondary outcomes.	In multivariate regression analyses, younger age, low anxiety score and improvement in fear avoidance beliefs of work were positive predictors of RTW in the IG.	this variable. Therefore, the results in this study are primarily valid for back pain patients. The work-focused intervention may be a better option than standard multidisciplinary intervention for some patients.
Shiri R 2011 Finland [34]	Strategy: Early ergonomic intervention Design: RCT Subjects: upper-extremity pain (different diagnoses), employed CG: Standard medical care; n=86 IG: early ergonomic intervention; n=91 FU: 12 mo.	YES The results suggest that an early ergonomic intervention reduces sickness absence due to any MSD. There were no significant differences in SL between the IG and CG in the first 3 mo. But during the 4-12-month period, the number of people with sickness absence due to any MSD was significantly higher in the CG. The number of days in sick absence due to any MSD diagnosed by a nurse was significantly higher in the CG, but not the number of sickness absences certified by physician or nurse SICKNESS ABSENCE (1) employees with sick absence in first 3 months, (2) employees with sick absence in 4-12 months;	Women: 87,3% Study period: February 2006 – December 2007 Intervention: After the clinical examination, the physician contacts the employer, and a visit by the occupational physiotherapist is scheduled. The workplace is assessed and possible changes to achieve an ergonomic improvement discussed with the employee and supervisor.

MUSCULOSKELETAL DISORDERS			
WORK-FOCUSED INTERVENTIONS			
<i>First author</i> <i>Year</i> <i>Country</i>	<i>Study design</i>	<i>Effectiveness</i> <i>Work-related outcomes</i>	<i>Further information</i>
		(3) sickness absence days in first 3 months, (4) sickness absence days in 4-12 months	

MUSCULOSKELETAL DISORDERS			
PART-TIME SICK LEAVE (PTSL)			
<i>First author</i> <i>Year</i> <i>Country</i>	<i>Study design</i>	<i>Effectiveness</i> <i>Work-related outcomes</i>	<i>Further information</i>
Andrén 2011 Sweden [35]	Strategy: part-time sick leave Design: cohort study, register-based Subjects: MSD, employed and in SL CG: full-time sick leave; n=1037 IG: PTSL; n=133 FU: 330 days	YES Workers had a higher likelihood of full recovery if assigned to PTSL (e.g., 52% higher within 30 days, 25% higher within 330 days) RTW (1) RTW with full recovery of lost work capacity	Women: 60% Selection of subjects: February 2001 PTSL: individuals are covered by the sickness insurance with 25, 50, or 75% sick leave
Viikari-Juntura	Strategy: Part-time sick leave	PARTLY Results suggest better work participation outcomes	Women: CG 97%, IG 97% Recruitment: November 2006-December

MUSCULOSKELETAL DISORDERS			
PART-TIME SICK LEAVE (PTSL)			
<i>First author Year Country</i>	<i>Study design</i>	<i>Effectiveness Work-related outcomes</i>	<i>Further information</i>
2012 Finland [36]	Design: RCT Subjects: persons with MSD (neck, shoulders, back and extremities), seeking advice for pain CG: FTSL; n=31 IG: PTSL; n=31 FU: 12 mo.	after PTSL compared with FTSL. Workers on PTSL achieved sooner RTW that sustained at least 4 weeks, showed lower sickness absence. RTW (1) time to sustained RTW for ≥ 2 we. (2) time to sustained RTW for ≥ 4 we. SICK LEAVE: (3) number of PT sick absence days (at 6 time points during 12 month follow-up), (4) number of FT sick absence days, (5) proportion of potential work time of the sick days, (6) number of recurrent SL spells per person year, (7) Time after end of initial SL to the first recurrent SL Sustained RTW: the worker continued to work without recurrent sick leave ≥ 2 weeks or ≥ 4 weeks after the end of part- or full-time sickness absence	2009 Partial sickness allowance was introduced in Finland in 2007

CANCER			
EARLY INTERVENTION			
<i>First author Year Country</i>	<i>Selected aspects design</i>	<i>(Outcomes, with definition) Effective?</i>	<i>Further information, comments</i>
Tamminga SJ 2013 Netherlands [37]	Strategy: hospital-based work support intervention Design: RCT Subjects: Breast and gynaecological cancer, employed and on SL CG: care as usual; n=68 IG: hospital-based work support intervention; n=65 FU: 12 mo.	NO This intervention was not effective for increasing rates of RTW or improving time until RTW. RTW (1) rate of RTW at one year of follow-up (2) time to RTW RTW: first day at work, either part-time or full-time, sustained for at least 4 weeks.	Women: CG 100%, IG 99% Recruitment: May 2009 - December 2010 Intervention: 1) patient education and support, as part of usual psycho-oncology care; 2) improving communication between the treating physician and the occupational physician; and 3) drawing up a RTW plan in collaboration with the cancer patient, the occupational physician, and the employer Sample: patients being treated with curative intent

CG: comparison group; IG: intervention group; FU: follow-up; n.a.: not applicable; n.r.: not reported; PwD: persons with disability; SL: sick leave; MSD: musculoskeletal disorders; MD: mental disorders; RTW: return to work; SMD: severe mental disorders; CMD: common mental disorders; CBT: cognitive-behavioral therapy; CW: competitive work; PTSL: part-time sick leave; IPS: Individual Placement and Support; LBP: low-back pain

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