National Institute for Health and Care Excellence

Final

Workplace health: long-term sickness absence and capability to work

[B] Evidence review for reducing movement from short-term to long-term sickness absence

NICE guideline NG146

Evidence reviews

November 2019

Final

This evidence review was developed by the Public Health Internal Guideline Development team

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ISBN: 978-1-4731-3597-0

Contents

Reducing movement from short- to long-term sickness absence among employees

Review question

2a. What interventions, programmes, policies or strategies are effective and cost effective in reducing the number of employees who move from short- to long-term sickness absence?

2b. Are the interventions, programmes, policies or strategies acceptable to employees, employers and other key stakeholders, and what are the barriers and facilitators to their successful delivery?

Introduction

There is substantial evidence that work is beneficial for physical and mental health, whereas unemployment and long-term sickness absence often have a harmful impact (Marmot and Bell 2012). Data have shown that those who had been unemployed for more than six months had lower wellbeing than those who had been unemployed for less time (DH 2008). Reducing the extent of sickness absence in the UK, and in particular long-term sickness absence (defined as a period of four weeks or more) is an established UK policy priority.

PICO table

The following table summarises the protocol for this review.

Table 1: PICO inclusion criteria for interventions to reduce movement from short- to long-term sickness absence

Population	Individual level • Adult employees (≥16 years; full- or part-time; paid or unpaid) who are currently absent from work for less than 4 consecutive weeks due to sickness. • Organisation level • All employers in the public, private and 'not-for-profit' sectors
Interventions	Any intervention that aims to reduce the risk of employees progressing from short-term to long-term absence (that is, lasting ≥4 consecutive weeks).
Comparator	• No work-related intervention (includes 'usual care' or usual sickness absence practice / guidance) • Any other active comparator for managing sickness absence or return to work • Other active workplace comparator (intervention, programme, policy or strategy) • Time (before and after studies)
Outcomes	Effectiveness studies (review question 2a) *Primary outcome* • Return to work. Measured as any of: - Proportion returning to work within 4 weeks of start of absence

	- Time taken to return to work *or* • Sickness absence, as reported by the authors, including: - Proportion with any long-term sickness absence (≥4 consecutive weeks duration) - Total number of sickness absence days *Secondary outcomes* • Health-related quality of life - using validated patient-report measures, for example EQ-5D • Psychological and/or social functioning - using any patient-report measure • Adverse / unintended effects: - Self-reported 'presenteeism' or work performance (individual-level studies) - Job satisfaction (individual or organisational-level) - Rate of staff turnover (organisational-level studies) - Number of grievances (organisational-level studies) Qualitative studies (review question 2b) Participant views on: • Sickness absence recurrence following RTW (individual-level studies) • Intervention acceptability (including preferences for content, frequency, location, etc.) • Barriers and facilitators to successful intervention delivery

Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual. Methods specific to this review question are described in the review protocol in appendix A.

Declarations of interest were recorded according to NICE's 2018 conflicts of interest policy.

Identification of public health evidence

Included studies

See PRISMA diagram in review question A, appendix C (insert link)

RCTs, non-randomised controlled, observational studies were identified for inclusion.

No systematic reviews directly matched the review criteria but those identified as relevant to the topic area (based on title and abstract) were retrieved and cross-checked to ensure inclusion of all relevant primary studies.

No qualitative studies were identified that met the population inclusion criteria for this review.

See appendix D for full evidence tables of included studies.

Excluded studies

See appendix G for a full list of excluded studies and reasons for their exclusion from the overall search for this guideline update.

Table 2: Summary of public health studies included in the evidence review

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s) assessed
Randomised controlled trials					
Carlsson (2013) [Sweden]	One primary health care centre Follow-up 12months	GP patients, full/partially sick-listed <28 days with a musculoskeletal or mental health diagnosis. N=33	Early multidisciplinary assessment delivered by physiotherapist, psychotherapist and occupational therapist in primary care setting	Usual GP care	• Return to work: - by 3 months - by 12 months • Sickness absence: - over 3 months - over 12 months
van Oostrom (2010) [Netherlands]	Three workplace organisations (university administration, healthcare, manufacturing) Follow-up 12months	Employees sick-listed between 2-8 weeks and screening positive for emotional distress, regardless of reason for sickness absence N=145	Participatory workplace intervention guided by a RTW coordinator (a company social worker or a labour expert) involving coordination between employee and supervisor to develop consensus on RTW barriers and implement solutions.	Usual occupational physician care in accordance with Dutch guidelines	• RTW by 12 months • Sickness absence - over 12 months • Recurrence: - no. with recurrence of sickness absence within 12 months • Self-report psychological symptoms
Viikari-Juntura (2012) [Finland]	Six workplace organisations Follow-up 12months	Employees unable to perform regular work duties due to a musculoskeletal disorder and sick-listed ≤ 2 weeks during the preceding month N=62	Part-time sick leave with work modifications, as prescribed by occupational health (OH) physician	Full-time sick leave prescribed by OH physician.	• RTW - by 4 weeks - by 3 months • Time to RTW (sustained for ≥4 weeks) • Sickness absence: - Mean sickness absence • Recurrence: - time to first recurrent sickness absence • Health-related QoL

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s) assessed
					• Clinical signs and symptoms (pain)
Observational studies					
Lander (2009) [Denmark] Non-randomised observational study with matched controls	Department of Occupational Medicine (hospital outpatient facility) serving one municipal authority Follow-up 68weeks	Adults on sickness absence <4 weeks with stress / emotional distress N=161	Problem-solving psychoeducation delivered by psychologist, plus RTW case management/advice delivered by social worker	Usual care delivered within Danish sickness benefit system	• Return to labour market - by 4 weeks - by 3 months - by 12 months
Larson (2011) [USA] Before-and-after (retrospective case series)	One workplace organisation (hospital) Follow-up 8weeks	Hospital employees sustaining work-related injury events resulting in lost work days N=190 injury events	Early access workplace-based treatment/RTW programme delivered by certified athletic trainers	Pre-intervention usual organisational practice in occupational care for work-related injuries	• Return to work: - by 4 weeks • Sickness absence - total number of lost work days
Viikari-Juntura (2017) [Finland] Controlled trial with modified stepped-wedge design	Five workplace organisations Follow-up 12months	Employees with musculoskeletal pain and / or depressive symptoms, unable to perform current work tasks and with previous sickness absence ≤6 weeks during preceding 3 months N=34	Educational intervention delivered to OH physicians to increase their planning and implementation of temporary work modifications for employees at an early stage of work disability.	Pre-intervention usual OH physician care.	• RTW - by 4 weeks - by 3 months - by 12 months • Time to RTW • Sickness absence: - total over 12 months • Clinical signs and symptoms (pain, depression)

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Synthesis and appraisal of evidence

Data synthesis

There were six studies included for these review questions. Three RCT studies, two non-randomised control studies and one observational study with no control group. It was not considered reasonable to pool the studies by outcome into a meta-analysis. The studies included very different interventions and had reported outcomes in different ways. Evidence statements have been presented on an individual study-by-study basis.

See appendix E and appendix F for forest plots of analyses and GRADE tables by outcome.

Economic evidence

See separate review of economic studies and modelling report by York Health Economics Consortium (YHEC) [*links to both the cost effectiveness review and modelling to be inserted when available*]

Evidence statements

ER 2.1 Early multidisciplinary assessment:

There is low quality evidence from 1 RCT (Carlsson 2013), conducted in Sweden, in a total of 33 patients with musculoskeletal or mental health disorders. The intervention consisted of early multidisciplinary assessment in the primary care centre compared with usual GP care. No difference was found in the proportion returning to work within 3 months (61% vs. 80%; RR 0.76; 95%CI 0.49 to 1.49), the proportion returning to work within 12 months (78% vs. 93%; RR 0.83; 95%CI 0.63 to 1.10), or in the total number of sickness absence (full) days over 12 months (MD: 40.0; 95%CI -19.33 to 99.33).

ER 2.2 Stress counselling and case management:

There is very low quality evidence from 1 non-randomised controlled study (Lander 2009), conducted in Denmark with a total of 161 patients with emotional distress. The intervention consisted of an outpatient stress counselling and case management intervention compared to usual care. This found a reduction in the proportion of patients returning to the labour market within 4 weeks (7% vs. 19%; RR 0.36; 95%CI 0.14 to 0.94). No difference was found in the proportion returning to the labour market by 3 months (28% vs. 43%; RR 0.65; 95%CI 0.42 to 1.01), or by 12 months (75% vs. 76%; RR 0.98; 95%CI 0.82 to 1.17). Nor was there any difference in those not resuming labour market activity in over 68 weeks (unadjusted HR 0.84; 95%CI 0.60 to 1.18).

ER2.3 Occupational health programme:

There is very low quality evidence from 1 case series (Larson 2011) conducted in the USA with a total of 190 people with work-related injury events. The intervention consisted of before and after implementation of an internal occupational health programme with early access to treatment or workplace rehabilitation, compared with usual care. This found an increase post-intervention, in the proportion returning to work within 4 weeks (55% vs. 36%; RR 1.54; 95%CI 1.06 to 2.23) and a reduction in the total number of lost work days per injury event (44.6 lost work days from 128 injuries) compared with before the intervention (100.3 lost work days from 62 injuries; MD -55.7; 95%CI -87.8 to -23.8).

ER2.4 Participatory workplace intervention:

There is low quality evidence from 1 RCT (van Oostrom 2010), conducted in the Netherlands, with a total of 145 employees with emotional distress. The intervention consisted of early access to treatment or workplace rehabilitation, compared with usual care and usual occupational physician care. No difference was found in the proportion returning to work by 12 months (90% vs. 92%; RR 0.99; 95%CI: 0.89 to 1.09), or time to return to work over 12 months (unadjusted HR: 0.99; 95%CI: 0.70 to 1.40). Nor was any difference found in total sickness absence over 12 months (MD -0.1; 95%CI -36.24 to 36.04), or in the proportion of those with one or more recurrence episodes of sickness (8% vs. 8%; RR 0.99; 95%CI 0.33 to 2.92).

ER2.5 Early part time sick leave:

There is moderate quality evidence from 1 RCT (Viikari-Juntura 2012), conducted in Finland, with a total of 62 employees with musculoskeletal disorders. The intervention consisted of early part time sick leave compared to usual full-time sick leave. This found a difference in self-reported health-related quality of life over 12 weeks (MD: -0.60; 95%CI -0.91 to -0.29). No difference was found in the proportion returning to work by 4 weeks (12% vs. 64%; RR 1.10; 95%CI 0.78 to 1.55), or by 3 months (100% vs. 87%; RR 1.15; 95%CI 0.99 to 1.33). Nor was any difference found in the time to return to the labour market over 12 months (HR adjusted for age:1.60; 95%CI 0.98 to 2.61), or in number of recurrent sick leave episodes per person-year (MD: -2.1; 95%CI -4.54 to 0.44).

ER2.6 Educational intervention delivered to occupational health physicians:

There is very low quality evidence from 1 non-randomised controlled study (Viikari-Juntura 2017), conducted in Finland, with a total of 30 employees with musculoskeletal pain or depressive symptoms. The intervention consisted of an educational intervention delivered to occupational health physicians and a case management intervention, compared to usual care. No difference was found in the proportion returning to regular work by 4 weeks (42% vs. 72%; RR 0.58; 95%CI 0.28 to 1.19), or by 3 months (84% vs. 83%; RR 1.00; 95%CI 0.72 to 1.39), or by 12 months (92% vs. 100%; RR 0.91; 95%CI 0.74 to 1.12).

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee agreed that a return to work within four weeks of the start of sickness absence, subsequently sustained for four or more consecutive weeks, is the most important outcome for decision-making in relation to this review question. The committee considered that it was important for return to work to show some evidence of sustainability to consider that there had been an impact on reducing movement from short to long-term absence.

The quality of the evidence

The committee agreed the inclusion of evidence from both RCTs and observational studies and acknowledged the difficulties with recruitment for studies in this population (it may be difficult to identify those who are likely to move form short-term to longer term absences). Only four of the six studies identified as meeting the inclusion criteria for this review reported data in a way that enabled proportions returning to work within four weeks to be compared between intervention and comparison groups. Three studies included in the review did not directly meet the population inclusion criteria, nonetheless the committee agreed that these studies

could be included in their discussion of the evidence, they were downgraded for indirectness. It is unclear if all subjects were employed at baseline in one study (Lander et al. 2009), at least 25% of employees had sickness absence of at least 4 weeks at baseline in another study (van Oostrom et al. 2010) and in a third study (Vilkari-Juntura et al. 2017), 35% of participants were not on current partial or full sickness absence at baseline. The committee agreed the presentation of these interventions across settings, with individual employee focused (Carlsson et al., 2013, Larson et al., 2011), and workplace focused interventions (van Oostrom et al.,2010, Viikari-Juntura et a., 2012, 2017).

Given the varying population types and different interventions used in the included studies, pooled analyses was agreed not to be a reasonable approach to the evidence as there was substantial heterogeneity between the studies that were included. The committee discussed the GRADE assessments of the quality of the evidence and agreed that quality of the included evidence was moderate, low, very low. Reasons for downgrading the evidence included imprecision, risk of bias (such as for incomplete reporting and self-reported outcome data), as presented in the GRADE tables. The committee further discussed in the quality of the evidence presented that they had concerns about the direct applicability of the evidence to the review question.

As noted in the consideration of the importance of outcomes, the committee noted that sustained return to work was an important outcome which was not reported in most of the included studies. Without this data the committee were not able to evaluate if people who returned to work within 4 weeks went on to have recurrence of sickness absence. The outcomes reported, including time to return to work, overall sickness absence and return to work rates at 3 and 12 months were not considered to be directly applicable for answering this review question.

The committee discussed the substantive recruitment issues evident in studies that were included in this review. They further noted that this can be a particular area of complexity as there are difficulties both with identifying those who may move into long-term absence and also in the feasibility of achieving recruitment within the initial short-term absence period. Recruitment issues may be compounded in the UK by lack of any centralised registers of employees on sickness absence, registers that are available in non-UK countries where much of the included workplace health research is based. Furthermore, as usual care practices may differ between countries, this is likely to also affect the generalisability of the included evidence to the UK.

Those providing expert testimony were invited to provide their expertise in this area due to the overall lack of evidence and the questionable applicability of the included evidence for this review question. Experts in occupational health and employment research discussed with the committee that whatever the absence period, be it movement from short-term to long-term absences that the components of the workplace culture, and support of management at all levels, are important and employees feeling supported in their return is critical. The committee discussed, with contributing expert testimony, that it may be appropriate to support the development of line managers and to ensure a supportive culture from senior management within organisations. The committee noted that there is current NICE guidance on workplace health: management practices that includes sections on organisational commitment that includes making health and wellbeing a core priority, ensuring commitment of managers, and the importance of policies and communication. The committee agreed that linking to this guidance in a recommendation on the importance of health and wellbeing as a core priority. This can help to enable

appropriate early referral to additional support services that may help to prevent the extension of short-term absences into long-term absences.

Benefits and harms

The committee noted the outputs from the studies were equivocal and did not show clear benefit of the interventions. There was some benefit found in return to work at 4 weeks for stress counselling and case management, and for an occupational health programme. However, as the committee discussed there was not evidence for sustained return to work. Only one study included in the review reported that there were no adverse events in either the intervention or comparison group (van Oostrom et al. 2010). The committee discussed whether recurrent sickness absence could be considered as a potential adverse event of interventions to facilitate an early return to work, as a recurrence may indicate pressure to return to work too early in the employee's recovery trajectory. However data on recurrent absence was reported by only two of the included studies using different measures. Neither of these studies found any difference between the intervention and control groups in recurrence sick leave episodes (van Oostrom 2010 compared early access to treatment or workplace rehabilitation with usual care, low quality; Viikari-Juntura 2012 compared early part time sick leave with usual full time sick leave, moderate quality). The committee considered that it was unclear that the reason for recurrence in both studies was related to the index sickness absence. It was also noted that other factors such as management practices and workplace culture are important when considering sickness episode recurrence: employees may be unable to sustain a return to work if the workplace they are returning to does not have an underlying supportive culture.

The committee discussed the diverse study populations and interventions and lack of evidence of reported adverse or unintended events. The committee agreed that the evidence was insufficient to provide any clear indication of harms of these interventions, but that does not say that these may not occur.

Cost effectiveness and resource use

The cost effectiveness review identified one study which found that a workplace intervention consisting of a stepwise communication process to identify and solve obstacles to return to work for people absent with distress did not improve outcomes and had a higher cost compared to usual care. Although the intervention for all people was unlikely to be more or less cost-effective than usual care the committee were mindful that it was more likely to be cost-effective than usual care in people with an intention to return to work. However, given the limitations of the study and the lack of evidence from effectiveness studies the committee did not consider there to be sufficient evidence to determine the value for money of these types of interventions.

Other factors the committee took into account

Following the completion of the evidence reviews for review question A and C it was discussed and agreed by the committee that in practice the interventions that may be effective in supporting return to work after long-term absence may also help with recurrent short-term absences and to prevent the movement from short- to long-term absence. Recommendations were therefore not made that distinguished between the types of absence.

The committee discussed the possibility of developing research recommendations relating to the aim of reducing the movement of those who are on short-term sickness absence to becoming absent long-term.

However, the committee considered the challenges in conducting meaningful research in this area. Study design and any form of prospective recruitment is implausible as it is difficult to identify those who are on short-term absence who are likely to move to longer-term absence. For this group, as for others on recurrent short-term absence and those on longer-term sickness absence, the priority for research recommendations is to provide a UK based, more substantive evidence base on interventions that can facilitate return to work for those with any type of sickness absence. In consideration of this, alongside the difficulties in recruitment of those moving from short to longer-term sickness absence, the committee chose not to make research recommendations specifically for this population.

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Appendices

Appendix A – Review protocols

Review protocol for reducing movement from short- to long-term sickness absence (review questions 2a and 2b)

Field (based on PRISMA-P)	Content
Review question	2a. What interventions, programmes, policies or strategies are effective and cost effective in reducing the number of employees who move from short- to long-term sickness absence? 2b. Are the interventions, programmes, policies or strategies acceptable to employees, employers and other key stakeholders, and what are the barriers and facilitators to their successful delivery?
Type of review question	Mixed methods (intervention and qualitative)
Objective of the review	To identify which are effective and cost-effective interventions, programmes, policies or strategies for reducing the risk of employees moving from short- to long-term sickness absence from the workplace. The review question will also examine whether effectiveness (and cost effectiveness and acceptability, where appropriate) varies according to a range of factors, including how the intervention is delivered and by whom, the population receiving the intervention and any particular subgroups in whom the effects of an intervention might be expected to differ (e.g. gender, age, presence of a long-term health condition or disability).
Eligibility criteria – population	Individual level Adults over the age of 16 in full- or part-time employment, both paid and unpaid, who are currently absent from work for less than 4 consecutive weeks due to sickness Organisational level All employers in the public, private and 'not-for-profit' sectors
Eligibility criteria – intervention(s)	Any interventions, programmes, policies or strategies that aim to reduce the risk of employees progressing from short-term (less than 4 consecutive weeks) to long-term sickness absence (4 or more consecutive weeks). Examples may include: ○ risk assessments, modifications and reasonable adjustments to the physical and organisational work environment

Field (based on PRISMA-P)	Content
	○ training for line managers in handling and monitoring sickness absence ○ training for general practitioners in handling sickness absence ○ rehabilitation and retention programmes ○ coordinated return to work programmes (this may include occupational therapy, workplace ergonomics, physical and psychological therapy) ○ information (including mental health support) and training for employers ○ information and support networks (including mental health support) for employees ○ physical conditioning and exercise programmes (that simulate work or functional activities in a safe and supervised environment). ○ flexible working and work-life balance policies for employees (including carer's and special leave when families have problems) ○ therapy (such as cognitive behavioural therapy) or stress counselling. Setting ○ any workplace, primary care or community setting where interventions can be delivered (including employees' own homes) ○ any setting to which an employer, workplace occupational health service or primary care practitioner could refer an employee who is experiencing sickness absence (for example, a physiotherapy service or a counselling service) ○ any other setting where an employer or primary care is involved in planning, commissioning, delivering, managing or funding an intervention to enable someone to return to or remain in work. Delivered by: ○ any workplace, primary care or other voluntary, private or statutory sector provider(s) ○ any mode, duration and frequency of contact, including face-to-face (individual or group-based), telephone, DVD or other digital media (e.g. online programs or mobile apps), and/or use of written materials.
Eligibility criteria – comparator(s)	Any of: • other active workplace comparator (intervention, programme, policy or strategy) • no work-related intervention, programme, policy or strategy • usual workplace sickness guidance (usual care)[1] • time (before and after studies) [1] where the study comparator is 'usual workplace sickness guidance (usual care)', specific details will be extracted into evidence tables, where reported, to enable the committee to determine generalisability of the comparison to the UK context

Field (based on PRISMA-P)	Content
Outcomes and prioritisation	**Quantitative outcomes (2a)** Effectiveness and cost effectiveness outcomes will be examined cumulatively (over the duration of the study), and separately for three different time periods: short-term (up to 3 months), medium-term (between 3 months to 1 year) and long-term (more than 1 year), where evidence allows. Return to work (RTW) / absenteeism due to sickness are key outcomes for this review. Studies will be excluded where neither of these primary outcomes is reported. <u>Primary outcomes</u> • Return to work (paid or unpaid)[1]. Measured as any of: ○ Proportion returning to work within 4 weeks of start of absence ○ Time taken to return to work or • Sickness absence, as reported by the authors, including: ○ Proportion with any long-term sickness absence (≥4 consecutive weeks duration) ○ Total number of sickness absence days [1] Where available, return to work data will be categorised as follows: - original role with same hours - original role with reduced hours - alternative role with same hours - alternative role with different hours <u>Secondary outcomes</u> • Health-related quality of life (using validated patient-report measures, for example EQ-5D) • Clinical signs and symptoms (using objective measures and/or validated patient-report measures) • Psychological and/or social functioning (using any patient-report measure of, for example, depression / anxiety; job stress; self-efficacy; self-esteem) • Adverse or unintended (positive or negative) effects: *Individual level studies* ○ self-reported 'presenteeism' or work performance; ○ job satisfaction *Organisational level studies* ○ job satisfaction ○ rate of staff turnover ○ number of grievances **Qualitative outcomes (2b)** For types of intervention where there is published, quantitative evidence relating to RTW or sickness absence outcomes,

Field (based on PRISMA-P)	Content
	qualitative evidence relating to the following will be examined where available: Participant views on: • The acceptability of the intervention / policy / programme / strategy (including preferences for content, frequency, location, etc.) • Barriers to and facilitators of successful delivery of the intervention / policy / programme / strategy **Cost/resource use associated with the intervention / programme / strategy / policy** The following outcomes will be extracted in reviews of the health economic evidence where available: • cost per quality-adjusted life year • cost per unit of effect • net benefit. • net present value • cost/resource impact or use associated with the intervention or its components
Eligibility criteria – study design	**Included studies** In the event of more evidence being identified than is feasible to consider in the time available, priority will be given to: ○ study design (SRs, RCTs, nRCTs) ○ evidence from a UK context (effectiveness evidence and qualitative evidence) <u>Effectiveness studies</u> Comparative studies, including: • Systematic reviews of effectiveness studies • Randomised controlled trials (RCTs), including cluster RCTs • Non-randomised controlled trials Non-comparative studies: • Longitudinal cohort and 'before-and-after' intervention studies (ie where there is at least one follow up measure after baseline) <u>Qualitative studies</u> • Focus groups or interview-based studies of any type of intervention that has been evaluated quantitatively for effects on employee sickness absence outcomes <u>Economic studies</u> • Economic evaluations • Cost-utility (cost per QALY) • Cost benefit (i.e. Net benefit) • Cost-effectiveness (Cost per unit of effect) • Cost minimization

Field (based on PRISMA-P)	Content

	• Cost-consequence
	
	Excluded studies
	• Cross-sectional surveys
	• Epidemiological studies
	• Correlation studies
	• Qualitative studies of:
	  ○ interventions where there are no published studies of their effects on sickness absence
	  ○ attitudes, barriers and facilitators to workplace sickness absence / return to work and its management more generally (that is, unrelated to a specific type of intervention / programme / policy / strategy)

Other inclusion / exclusion criteria	**Exclusion criteria** Population • self-employed individuals • pregnant women who have taken sickness absence related to their pregnancy • individuals who are not in employment • mixed populations (for example, study samples that include non-employees, with insufficient disaggregation to enable data relevant to this review to be extracted). Interventions / programmes / policies / strategies that: • aim to promote workforce general health and wellbeing or prevent the first occurrence of sickness absence or injury (primary prevention) • target pregnant women exclusively or focus on illnesses associated with pregnancy, during the course of a pregnancy • tackle workplace absences that are not reported or recorded as sickness absence (for example, carers' leave or maternity leave) • involve the clinical diagnosis, treatment (including pharmacological treatment) or clinical management of conditions where the primary focus is not on helping the employed person to stay in or return to the workplace • look at the effectiveness of private health insurance schemes, the benefit system or the claiming of statutory sick pay • could not feasibly be implemented by the primary audience for whom this guideline is intended (that is, UK-based employers and their representatives, GPs and occupational health professionals) Studies As this is an update of existing guidance (PH19), studies included in the original evidence reviews which support the recommendations that are being updated will be assessed against the updated inclusion / exclusion criteria specified in

Field (based on PRISMA-P)	Content
	this protocol. Studies will be excluded if they do not meet the updated inclusion criteria. Systematic reviews (SRs) identified from database searches will be included as a primary source of data only if they meet the following three criteria: • the SR is directly applicable to the review question; • the SR meets the inclusion criteria for this review; • the SR is of high quality (that is, it is unlikely that additional relevant and important data would be identified from the primary studies compared to what is reported in the SR, and it is unlikely that any relevant and important studies have been missed by the SR). In addition to any SRs meeting the above criteria, other primary studies will be included if they were published after the publication date of the SR and meet the protocol inclusion criteria. Where SRs identified from database searches do not meet the above criteria, they will be citation searched to identify any primary studies not already included in the database that meet the inclusion criteria for this review. Full economic analyses and costing studies identified from searches will be included. Costing data will not be used for the purpose of the effectiveness review. However, any studies identified for inclusion in the effectiveness review that also report economic analyses or costing information will be flagged to colleagues undertaking the health economic reviews and economic modelling. Only papers published in the English language will be included. Only studies carried out in OECD countries will be included.
Proposed sensitivity/sub-group analysis, or meta-regression	Where sufficient data are available, subgroup analyses or meta-regression will be conducted to address the following review questions: 2.1 What is the frequency, content, length and duration of an effective or cost-effective intervention, programme, policy or strategy? 2.2 Does the effectiveness and cost effectiveness of interventions, programmes, policies or strategies vary for different groups? (For example groups may include: men and women, people of different ages, those with a disability or long-term physical or mental health condition, people with differing levels of socio-economic deprivation or from different ethnic groups) 2.3 Does the effectiveness of an intervention, programme, policy or strategy depend on the person leading it? (What skills, competencies and characteristics are needed?)

Field (based on PRISMA-P)	Content
	The following population subgroups are of interest: • gender • age: <50 yrs vs. ≥50 yrs • long-term physical or mental health condition, comorbidity or disability • ethnic group • socio-economic deprivation • occupational group (e.g. manual vs. non-manual) • full-time vs. part-time employed • full- vs. partial sickness absence at baseline • size of employer organisation: small (<50 employees) vs. medium (50-250 employees) vs. large (≥250 employees) The following process and structural factors will be of interest in any meta-regression analyses: • intervention delivery: ○ by [whom]? (skills / competencies / characteristics) ○ [in what] setting? ○ frequency, length and duration ○ timing of start of intervention • intervention content: ○ use of policies and procedures to monitor / address sickness absence ○ use of risk assessments, modifications and reasonable adjustment to the physical and organisation work environment ○ provision of training for line managers in handling and monitoring sickness absence ○ use of return-to-work interviews
Selection process – duplicate screening/selection/analysis	The review will use the priority screening function within the EPPI-reviewer systematic reviewing software (see Appendix B for more details). 10% of the abstracts will be blind-screened for inclusion by a second reviewer, with any disagreements resolved by discussion or, if necessary, escalation to a third independent reviewer. If the initial level of agreement is below 90%, a second round of blind-screening will be considered. Only 10% of the search results will be checked as this is an intervention review and there is confidence that RCTs or controlled studies are unlikely to be missed at the sifting stage. The study inclusion and exclusion lists will be checked with members of the PHAC to ensure no studies are excluded inappropriately.

Field (based on PRISMA-P)	Content
	10% of data extraction and critical appraisal will be checked by a second reviewer, with any disagreements resolved by discussion or, if necessary, escalation to a third independent reviewer if agreement cannot be reached.
Data management (software)	EPPI Reviewer will be used: • to store lists of citations • to sift studies based on title and abstract • to record decisions about full text papers • to order freely available papers via retrieval function • to request papers via NICE guideline Information Services • to store extracted data If meta-analysis is undertaken, Cochrane Review Manager 5 / Eppi Reviewer (TBC) will be used to perform the analyses. Any meta-regression analyses will be undertaken using the RStudio software package. Qualitative data will be analysed using the EPPI Reviewer qualitative functionality and summarised using an appropriate qualitative synthesis approach, such as secondary thematic analysis.
Information sources – databases and dates	**Database searches** A search for evidence will be carried out in the following databases: • Medline (including in-process records and epubs ahead-of-print) • Embase • PsycINFO • PEDro (Physiotherapy Evidence Database) • Cochrane Database of Systematic Reviews • CENTRAL • Epistemonikos • AMED (Allied and Complementary Medicine Database) • HMIC (Health Management Information Consortium) In addition the following databases will be used to find economic evaluations: • HTA database • NHS EED • Econlit The Medline search strategy is given in appendix B. This will be adapted for use in other databases. The search strategy will not be used for the PEDro database. Instead all systematic reviews and primary studies tagged with *"reduced work tolerance"* in the *problem* field will be retrieved.

Field (based on PRISMA-P)	Content
	In the Cochrane Database of Systematic Reviews all published reviews filed under the topic *Health and Safety at Work* or produced by the Cochrane Work group will be browsed for potential inclusion, in addition to using the normal strategy. **Citation searching** Backwards-and-forwards citation searching will be carried out on all included studies; relevant systematic reviews and key studies highlighted in the previous NICE surveillance report. Items which are relevant to the topic but which don't meet the exact review criteria (such as policy documents that cite research evidence) may also be used as a basis for additional citation searching at the reviewer's discretion. Results from citation searching will not be considered if they were published prior to 2007. Forwards citation searching will be carried out on all included studies for review questions 1-3 from the previous NICE guideline (PH19). Searches will be date limited to June 2007 as the previous NICE guideline searches were conducted between June and July 2007. **Websites** The following websites will be searched for relevant UK reports or publications: • Department for Work and Pensions Research Reports • NIHR Journals library • General search of the gov.uk portal • Work Foundation • Institute for Employment Studies • Centre for Musculoskeletal Health and Work • Health and Safety Executive research publications • Fit for Work **Limits** The following publication types will be removed at source where possible: • non-English language papers • editorials, letters and commentaries • conference abstracts and posters • books and book chapters • theses and dissertations • duplicates • case reports • historical articles • withdrawn studies **Recording the searches**

Field (based on PRISMA-P)	Content
	Results will be saved to an EndNote database and de-duplicated. A RIS file suitable for use in EPPI reviewer will be generated from the deduplicated results. Search dates; the number of records found; the number of duplicate records found and the search strategy used for each source will be reported. **Other notes** The same search approach will be used for review questions 1, 2 and 3.
Identify if an update	The review is an update of PH19: Workplace health - managing long-term sickness absence and incapacity to work [Published March 2009]
Author contacts	Please see the guideline development page.
Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual
Search strategy – for one database	For details please see appendix B
Data collection process – forms/duplicate	A standardised evidence table format will be used, and published as appendix D (effectiveness evidence tables) or H (economic evidence tables).
Data items – define all variables to be collected	For details please see evidence tables in appendix D (effectiveness evidence tables) or H (economic evidence tables).
Methods for assessing bias at outcome/study level	Standard study checklists will be used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual Where appropriate, the risk of bias across all available evidence will be evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group When applying GRADE, where RCTs are considered the best available evidence for the question and outcome in question, they will start as high quality evidence. Where RCTs are not the most appropriate study design for a particular question or outcome, GRADE will be modified to allow for the study design considered most appropriate to start as high quality. GRADE-CERQual will be used to assess confidence in the findings from qualitative evidence syntheses.

Field (based on PRISMA-P)	Content
Criteria for quantitative synthesis	Studies will be grouped according to the type of intervention as appropriate. For details please see section 6.4 of Developing NICE guidelines: the manual Where primary outcomes of interest are reported as continuous data in studies, the committee will discuss and decide how the data should be reported to enable them to make recommendations.
Methods for quantitative analysis – combining studies and exploring (in)consistency	It is anticipated that included studies will be heterogeneous with respect to participants and interventions. Data from different studies will be pooled and meta-analysed if the studies are similar enough in terms of population, interventions, comparators and outcomes. Methods for pooling cluster and individual randomised controlled trials will be considered where appropriate. Where meta-analysis is appropriate, a random effects model will be used to allow for the anticipated heterogeneity. This assumption will be tested with a fixed effects model. Heterogeneity in pooled analyses that cannot be explained through the subgroup analyses detailed above will be examined where appropriate with a sensitivity analysis to explore the impact of study risk of bias and level of intervention adherence (where reported). If the studies are found to be too heterogeneous to be pooled statistically, a narrative synthesis will be conducted.
Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual
Rationale/context – what is known	For details please see the introduction to the evidence review.
Describe contributions of authors and guarantor	A multidisciplinary committee developed the evidence review. The committee was convened by Public Health Internal Guidelines Development (PH-IGD) team and chaired by Paul Lincoln in line with section 3 of Developing NICE guidelines: the manual. Staff from the Public Health Internal Guidelines Development team undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the evidence review in collaboration with the committee. For details please see Developing NICE guidelines: the manual.

Field (based on PRISMA-P)	Content
Sources of funding/support	PH-IGD is funded and hosted by NICE
Name of sponsor	PH-IGD is funded and hosted by NICE
Roles of sponsor	NICE funds PH-IGD to develop guidelines for those working in the NHS, public health and social care in England.

Appendix B – Literature search strategies

Search summary

Guideline-wide search strategies were undertaken based on the review protocols provided for all review questions. Table 1 below details the sources searched and results retrieved for each database.

Table 1 Database searches and results (March 2018)

Database name	Date searched	Database Platform	Database segment or version	No. of results
Medline with daily update	13th March 2018	Ovid	1946 to date	10768
Medline in-process	14th March 2018	Ovid	13th March 2018	1835
Medline epubs ahead-of-print	14th March 2018	Ovid	13th March 2018	509
Cochrane CENTRAL	16th March 2018	Wiley	Issue 2 of 12, 2018	147 via searching + 10 via browsing
Cochrane Database of Systematic Reviews	16th March 2018	Wiley	Issue 3 of 12, 2018	1829
Embase	14th March 2018	Ovid	1996 to 2018 March 13	17599
PsychInfo	14th March 2018	Ovid	1987 to March Week 1 2018	5259
AMED	14th March 2018	Ovid	1985 to March 2018	1342
HMIC	14th March 2018	Ovid	1979 to January 2018	1578
Epistemonikos	16th March 2018	Native web platform	-	2051
PEDro	9th March 2018	Native web platform	-	311
Forward citation searching from PH19 included refs	5th March 2018	Web of Science	-	1896
Forward citation searching from NICE surveillance includes	5th March 2018	Web of Science	-	377
Backward citation searching from NICE surveillance includes	5th March 2018	Web of Science	-	1075
Website searches	26th March – 6th April 2018 (see below for specifics)	-	-	125
Total				46,711
Final (de-duplicated) results				24,610

Table 2 Database searches and results (November 2018)

Database name	Date searched	Database Platform	Database segment or version	No. of results
Medline with daily update	7th November 2018	Ovid	1946 to date	859
Medline in-process	7th November 2018	Ovid	13th March 2018	525
Medline epubs ahead-of-print	7th November 2018	Ovid	13th March 2018	267
Cochrane CENTRAL	8th November 2018	Wiley	Issue 2 of 12, 2018	6
Cochrane Database of Systematic Reviews	7th November 2018	Wiley	Issue 3 of 12, 2018	2 via searching + 3 via browsing
Embase	7th November 2018	Ovid	1996 to 2018 March 13	1532
PsychInfo	8th November 2018	Ovid	1987 to March Week 1 2018	192
AMED	8th November 2018	Ovid	1985 to March 2018	34
HMIC	8th November 2018	Ovid	1979 to January 2018	9
Epistemonikos	8th November 2018	Native web platform	-	21
PEDro	8th November 2018	Native web platform	-	11
Forward citation searching from PH19 included refs	12th November 2018	Web of Science	-	1849
Forward citation searching from NICE surveillance includes	12th November 2018	Web of Science	-	477
Backward citation searching from NICE surveillance includes	12th November 2018	Web of Science	-	-
Website searches	13th November 2018	-	-	19
Total				5,806
Final (de-duplicated) results				1,805

Websites searched:

- Department for Work and Pensions Research Reports
- NIHR Journals library
- General search of the gov.uk portal
- The Work Foundation
- Institute for Employment Studies

- Centre for Musculoskeletal Health and Work
- Health and Safety Executive research publications
- Fit for Work

The MEDLINE search strategy is presented below. This was translated for use in all of the other databases listed.

MEDLINE search strategy	
1	absenteeism.ti,ab.
2	absenteeism/
3	presenteeism.ti,ab.
4	presenteeism/
5	"sick leave".ti,ab.
6	"sick leave"/
7	"sick list*".ti,ab.
8	"sickness absence*".ti,ab.
9	(return* adj2 work*).ti,ab.
10	"return to work"/
11	(back adj2 work).ti,ab.
12	(fitness adj2 work).ti,ab.
13	"fit for work".ti,ab.
14	"fit note*".ti,ab.
15	"long term sick*".ti,ab.
16	"work readiness".ti,ab.
17	"vocational rehabilitation".ti,ab.
18	"Rehabilitation, Vocational"/
19	or/1-18
20	(200706* or 200707* or 200708* or 200709* or 20071* or 2008* or 2009* or 201*).ed.
21	19 and 20
22	limit 21 to english language
23	limit 22 to (comment or congresses or editorial or letter or case reports or historical article)
24	22 not 23
25	animals/ not (animals/ and humans/)
26	24 not 25
27	(exp child/ or exp infant/) not ((exp child/ or exp infant/) and (adolescent/ or exp adult/))
28	26 not 27

Appendix C – Public health evidence study selection

PRISMA flow chart for the search and inclusion/exclusion of studies across all the review questions in this guideline can be found in review A.

Appendix D – Evidence tables

D.1 Effectiveness evidence

D.1.1 Carlsson (2013)

Bibliographic reference	**Carlsson L, Englund L, Hallqvist J, Wallman T. (2013) Early multidisciplinary assessment was associated with longer periods of sick leave: A randomized controlled trial in a primary health care centre Scandinavian Journal of Primary Health Care, 31: 141–146**
Study type	RCT
Aim	To see if GPs, with support from an early multidisciplinary assessment carried out in a primary health care setting, can help patients achieve faster and more appropriate rehabilitation to lower the risk of long-term sick leave.
Location & setting	Sweden Single centre: One primary health care centre with a catchment area of 8500 inhabitants. Eight GPs recruited patients.
Study dates	Study inclusion: spring 2007 until winter 2008/2009
Length of follow-up	Follow-up at 3 months and 12 months
Participant characteristics	**Inclusion criteria:** - Employed adults - Full- or part-time sick-listed - ICD 10-diagnoses chapter V F00-F99 (psychiatric diseases) or Chapter XIII M00-M99 (musculoskeletal diseases) - On-going sick-leave period of maximum 28 days at randomization **Exclusion criteria:** None reported

<table>
<tr><td>Bibliographic reference</td><td>Carlsson L, Englund L, Hallqvist J, Wallman T. (2013) Early multidisciplinary assessment was associated with longer periods of sick leave: A randomized controlled trial in a primary health care centre Scandinavian Journal of Primary Health Care, 31: 141–146</td></tr>
<tr><td></td><td>Baseline characteristics of study participants:
<table>
<tr><th></th><th>Intervention
(n=18)</th><th>Control
(n=15)</th></tr>
<tr><td>Age (years) - mean</td><td>44</td><td>48</td></tr>
<tr><td>% male</td><td>39%</td><td>33%</td></tr>
<tr><td>Sickness absence (n, %):
- Full
- Partial
- Not in employment</td><td>
15 (83)
1 (6)
2 (11)</td><td>
14 (93)
0
1 (7)</td></tr>
<tr><td>Diagnostic category (n, %):
- MSK (pain)
- Psychiatric
- MSK + psychiatric</td><td>
13 (72)
3 (17)
2 (11)</td><td>
11 (73)
3 (20)
1 (7)</td></tr>
</table></td></tr>
<tr><td>Number of study subjects</td><td>N=33 (of 58 eligible for inclusion)
3 patients were initially randomised (2 to intervention) but withdrew before baseline assessment; 22/58 (28%) eligible patients declined to participate. No significant difference in age compared with the study participants.</td></tr>
<tr><td>Intervention details</td><td>GPs invited patients to participate after sickness certification was issued.
Patients randomized to intervention were given an appointment within a week for multidisciplinary assessment by 3 professionals:
○ A physiotherapist who performed a clinical examination of the musculoskeletal system.
○ A psychotherapist who made an assessment of the psychosocial situation at work and at home.
○ An occupational therapist who performed an assessment of the patient’s general working capacity.
All three therapists used methods and tools normally used in clinical work. For each patient, only methods judged relevant were used. Intervention did not include treatment, but if a patient was judged to have potential to benefit from treatment, they were referred by the GP to standard healthcare resources.</td></tr>
</table>

<table>
<tr><td>Bibliographic reference</td><td>Carlsson L, Englund L, Hallqvist J, Wallman T. (2013) Early multidisciplinary assessment was associated with longer periods of sick leave: A randomized controlled trial in a primary health care centre Scandinavian Journal of Primary Health Care, 31: 141–146</td></tr>
<tr><td></td><td>All information from assessments was documented in the electronic patient record and usually discussed with the doctor who had issued the medical certificate within a week.</td></tr>
<tr><td>Comparison details</td><td>Controls received ‘usual treatment’ by GP, which did not include the kind of early assessment that intervention group participants received.</td></tr>
<tr><td>Methods and analysis</td><td>Data on duration and extent of sick-listing periods were taken from electronic patient records and Social Insurance Agency records. Gross and net days of sick leave were calculated. All patients included after randomization who did not actively decline to attend were analysed (ITT, n=33). Analyses calculated using two-sided tests.

Power calculation: 64 subjects required, assuming 30% of patients sick-listed after 14 days would still be on sick leave at 3 months. The aim of this study was to halve the number of patients still sick-listed at three months.</td></tr>
<tr><td>Outcomes measures and effect sizes</td><td>Results

Outcome: sickness absence over follow-up
<table>
<tr><th></th><th>Intervention (n=18)</th><th>Control (n=15)</th></tr>
<tr><td>3-month follow-up:</td><td></td><td></td></tr>
<tr><td>- Still on sick leave (n, %)</td><td>7 (39)</td><td>3 (20)</td></tr>
<tr><td>- Total no. gross sick leave days (0-3 months) - Mean (SD)</td><td>58 (32)</td><td>36 (33)</td></tr>
<tr><td>- Total no. net sick leave days [a] (0-3 months) - Mean (SD)</td><td>48 (32)</td><td>32 (29)</td></tr>
<tr><td>12-month follow-up:</td><td></td><td></td></tr>
<tr><td>- Still on sick leave (n, %)</td><td>4 (22)</td><td>1 (7)</td></tr>
<tr><td>- Total no. gross sick leave days (3-12 months) - Mean (SD)</td><td>91 (123)</td><td>58 (95)</td></tr>
<tr><td>- Total no. net sick leave days [a] (3-12 months) - Mean (SD)</td><td>77 (109)</td><td>37 (62)</td></tr>
</table></td></tr>
</table>

Bibliographic reference	**Carlsson L, Englund L, Hallqvist J, Wallman T. (2013) Early multidisciplinary assessment was associated with longer periods of sick leave: A randomized controlled trial in a primary health care centre Scandinavian Journal of Primary Health Care, 31: 141–146**		
	[a] Net days = number of sick leave days in the period multiplied by percentage of sickness certification to take account of partial sick leave **Other outcomes reported:** None		
Source of funding	Funding from the sick-listing committee of Dalarna County Council. Funders had no responsibility for study content or writing of paper.		
Related publications	None identified		
Comments	**Limitations noted by authors:** o No data on sickness absence prior to inclusion (though randomisation may minimise differences) o Unable to randomise planned number of individuals and only one study centre was involved o Relatively large number of eligible patients declined – possibly had uncomplicated ailments with good prognosis so considered extensive assessment unnecessary *or* may have been concerned that an expanded assessment would question their need for sickness absence (in context of media debate about high sickness absence rates at the time of the study). **Limitations noted by reviewer:** o Potential for selection bias during patient randomisation (see quality assessment below) o Potential for control group contamination (see quality assessment below) o Generalisability to UK setting: High – GPs responsible for sickness certification in UK; early multidisciplinary assessment of sick-listed patients in primary care setting is potentially feasible.		
Quality assessment	**Criterion**	**Judgement**	**Comments**
	Random sequence generation	Unclear	No information on how randomisation sequence was developed.

Bibliographic reference	Carlsson L, Englund L, Hallqvist J, Wallman T. (2013) Early multidisciplinary assessment was associated with longer periods of sick leave: A randomized controlled trial in a primary health care centre Scandinavian Journal of Primary Health Care, 31: 141–146		
	Allocation concealment	Unclear	Used 'randomly mixed closed envelopes'; (no information on whether these were sequentially numbered and opaque).
	Blinding of participants and personnel	High	Not reported, however not possible to blind participants to group allocation.
	Blinding of outcome assessment	Unclear	Not reported, however primary outcome is objective and data were obtained from electronic patient and Social Insurance Agency records.
	Incomplete outcome data	Unclear	Three randomised patients subsequently declined to participate before baseline assessment and are not included in analyses.
	Selective outcome reporting	Low	Appropriate outcome specified and reported in analysis
	Other sources of bias	Unclear	Single centre study. Control group contamination may have occurred if treating GPs communicated with on-site intervention therapists about control group cases.
Overall RoB	High		

D.1.2 Lander (2009)

<table>
<tr><td>Bibliographic reference</td><td>Lander F, Friche C, Tornemand H, Andersen J, Kirkeskov L. (2009) Can we enhance the ability to return to work among workers with stress-related disorders? BMC Public Health 9: 372-377</td></tr>
<tr><td>Study type</td><td>Non-randomised intervention study with matched control group</td></tr>
<tr><td>Aim</td><td>To evaluate the effect of a psychosocial stress counselling and case management intervention programme compared to usual welfare benefit care on return to work or labour market.</td></tr>
<tr><td>Location & setting</td><td>Denmark
One regional hospital Department of Occupational Medicine serving a municipal authority (intervention group) and one other neighbouring municipality (control group).</td></tr>
<tr><td>Study dates</td><td>Participants recruited between Jan – Dec 2006</td></tr>
<tr><td>Length of follow-up</td><td>68 weeks from study index day
Index day for intervention group was date of receipt of referral to Department of Occupational Medicine; index day for controls was first day of sick leave logged on social benefit database.</td></tr>
<tr><td>Participant characteristics</td><td>Inclusion criteria:
- On sick leave for emotional distress / stress
- Consecutively referred to Department of Occupational Medicine between Jan-Dec 2006 (intervention), or
- Identified from neighbouring region’s municipal sickness benefit database (sick leave for emotional distress/stress) and randomly matched with intervention participants on age, sex and skilled / unskilled employment type (controls)

Exclusion criteria:
- A sick leave episode of >4 weeks in the 6 months preceding study index day

Baseline characteristics of study participants:
<table>
<tr><th></th><th>Intervention (n=72)</th><th>Control (n=89)</th></tr>
<tr><td>Age (years) – mean (SD)</td><td>42.9 (8.6)</td><td>43.1 (8.4)</td></tr>
<tr><td>% male</td><td>19.4</td><td>16.8</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>Bibliographic reference</td><td>Lander F, Friche C, Tornemand H, Andersen J, Kirkeskov L. (2009) Can we enhance the ability to return to work among workers with stress-related disorders? BMC Public Health 9: 372-377</td></tr>
<tr><td></td><td>
<table>
<tr><td>Educational level (%):
- Unskilled or skilled worker
- Middle or highly educated worker</td><td>
58.3
41.7</td><td>
52.8
47.2</td></tr>
<tr><td>Married / partnered (%)</td><td>59.7</td><td>66.3</td></tr>
<tr><td>Danish nationality (%)</td><td>97.2</td><td>94.4</td></tr>
</table>

<u>Note</u>: weekly prevalence of sickness absence in preceding 3 years was similar in both groups (3-7%).</td></tr>
<tr><td>Number of study subjects</td><td>N=161</td></tr>
<tr><td>Intervention details</td><td>Psychological stress counselling and case management intervention delivered within Department of Occupational Medicine (plus usual GP care). Intervention included:
- Psychoeducation delivered via individual consultations by one of 5 trained psychologists focused on activating and supporting patients' efforts to adopt a problem-solving approach to their problems.
- Department social worker provided advice and support e.g. on legal matters, and regarding various ways of resuming work, e.g. reduced work hours for an initial period. Also provided support to families, facilitated contacts with workplaces and participated in meetings with employers

Duration of treatment in days (mean, range): 156 (4 to 347)
Number of consultations (mean, range): 5.3 (1 to 11)</td></tr>
<tr><td>Comparison details</td><td>'Usual care' (i.e. usual Danish social sickness benefit system, plus usual GP care).</td></tr>
<tr><td>Methods and analysis</td><td>Used registry-based data (updated weekly) to calculate, in weeks, time to return to labour market from index day for both groups. Return to labour market = full RTW or transfer from sickness to unemployment benefit. For survival statistics Kaplan-Meier and Cox regression were used.</td></tr>
<tr><td>Outcomes measures and effect sizes</td><td>Results
Outcome: time to return to labour market</td></tr>
</table>

Bibliographic reference	**Lander F, Friche C, Tornemand H, Andersen J, Kirkeskov L. (2009) Can we enhance the ability to return to work among workers with stress-related disorders? BMC Public Health 9: 372-377**
	No difference observed between groups. Cox regression analysis yielded hazard ratio (HR) of 0.84 (95% CI: 0.60 to 1.19) for not resuming labour market activity within 68 weeks from index day **Outcome: proportion returned to labour market within 4 weeks** (data estimated from graph by reviewer): Intervention group: approximately 7% (n=5/72) Control group: approximately 19% (n=17/89) **Outcome: proportion returned to labour market by 3 months** (data estimated from graph by reviewer): Intervention group: approximately 28% (n=20/72) Control group: approximately 43% (n=38/89) **Outcome: RTW to labour market by 12 months** (data estimated from graph by reviewer): Intervention group: approximately 75% (n=54/72) Control group: approximately 76% (n=68/89) **Other outcomes reported:** None
Source of funding	Project received funding from the Ministry of Labour and the Municipality of Viborg for an initial period of 2 years.
Related publications	None identified
Comments	**Limitations noted by authors:** ○ Non-randomised study design ○ No baseline information on work-related and personal risk factors and details of mental health disorder for control group ○ Potential selection bias – referral to hospital department by GP may suggest intervention participants had worse symptoms than control group (although sick leave rates in preceding 3 years were similar in both groups) **Limitations noted by reviewer:**

Bibliographic reference	Lander F, Friche C, Tornemand H, Andersen J, Kirkeskov L. (2009) Can we enhance the ability to return to work among workers with stress-related disorders? BMC Public Health 9: 372-377		
	○ Lack of information on participants' duration of sickness absence at baseline ○ Unclear if all participants had a contract of employment at baseline as outcome ('time to return to labour market') includes transfer from sickness to unemployment benefit. ○ Generalisability to UK setting: Low. UK sickness benefit payment is employer-based; no obligatory benefit assessment at 8 weeks or case worker management of RTW process.		
Quality assessment	**Criterion**	**Judgement**	**Comments**
	Random sequence generation	n/a	Non-randomised observational study.
	Allocation concealment	n/a	Non-randomised observational study.
	Baseline outcome measurements similar	Unclear	No information on participants' duration of sickness absence or employment status at baseline.
	Baseline characteristics similar	Unclear	Control subjects matched with intervention participants only on reason for sickness absence, age, sex, and employment category (skilled / unskilled). Other characteristics are unknown.
	Incomplete outcome data	Low	Centralised registry-based sickness benefit data available for both groups.
	Knowledge of allocated interventions adequately prevented	Unclear	Not possible to blind intervention participants and study personnel although outcome is objective and data obtained from centralised records.
	Protection against contamination	Low	Matched control subjects unlikely to have received intervention.
	Selective outcome reporting	Low	Appropriate outcome specified and reported in analysis.
	Other sources of bias	Unclear	Potential selection bias (see 'Limitations noted by authors' above)

Bibliographic reference	**Lander F, Friche C, Tornemand H, Andersen J, Kirkeskov L. (2009) Can we enhance the ability to return to work among workers with stress-related disorders? BMC Public Health 9: 372-377**
Overall RoB	High

D.1.3 Larson (2011)

Bibliographic reference	**Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204**
Study type	Retrospective case series evaluation
Aim	To evaluate the effectiveness of a new internal employee health programme (IEHP), which utilises certified athletic trainers, in decreasing lost work time among hospital and clinic employees sustaining work-related injuries.
Location & setting	USA One 380-bed hospital facility. Employees drawn from a predominantly white urban population in northern Minnesota.
Study dates	Pre-intervention retrospective data collection: Jan 2004 – Nov 2005 (23 months) Post-implementation data collection: Jan 2006 – Nov 2007 (23 months)
Length of follow-up	RTW assessed over 8 weeks following injury event.
Participant characteristics	**Inclusion criteria:** - Any work-related injury event resulting in lost work days sustained by employees during the 23-month period preceding (PP) or 23-month period post-implementation of IEHP **Exclusion criteria:** - Injury events sustained during one-month transition period to IEHP (December 2005)

<table>
<tr><td>Bibliographic reference</td><td>Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204</td></tr>
<tr><td></td><td>Baseline characteristics:
<table>
<tr><th></th><th>Post-implementation of IEHP
Injury events involving lost work days
(n=128)[a]</th><th>Preceding period (PP)
Injury events involving lost work days
(n=62)[a]</th></tr>
<tr><td>Age (years) – mean (SD)</td><td>43.4 (12.0)</td><td>44.1 (10.8)</td></tr>
<tr><td>% male</td><td>29.7%</td><td>21.0%</td></tr>
<tr><td>Injury type (n, %)
- Bruise/contusion/laceration/cut/bite
- Sprain/strain/repetitive motion
- Burn/dermatitis
- Dislocation/fracture/torn cartilage or joint
- Swelling/inflammation/stiffness/pain
- Other disease or injury</td><td>
6 (4.7)
78 (61.4)
10 (7.9)
9 (7.1)
20 (15.7)
4 (3.1)</td><td>
1 (1.6)
44 (71.0)
1 (1.6)
2 (3.2)
5 (8.1)
9 (14.5)</td></tr>
</table>
[a] data were collected and analysed at the level of injury event, therefore an individual employee could be included more than once if they sustained more than one injury involving lost work time during the data collection periods.</td></tr>
<tr><td>Number of study subjects</td><td>Total injury events N=190 (data not analysed on individual employee basis)</td></tr>
<tr><td>Intervention details</td><td>Intervention = adoption of new health programme (IEHP) for hospital and clinic employees with work-related injuries.</td></tr>
</table>

Bibliographic reference	**Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204**
	Specifically designed to impact employees with injury events *resulting in lost work time*, facilitating re-integration into work through free-of-charge same-day access, daily rehabilitation if necessary, and transitional work via direct involvement at the worksite to improve communication, awareness of job functions and RTW options. Details Board of medicine-certified athletic trainers' evaluated, treated and monitored employees and, where necessary, accompanied them to ensure a safe, comfortable return to workplace. Trainers worked under physician directorship. Final decision whether to withdraw from and return injured employees to work remained with the OH physician (same as in pre-intervention 'control' phase).
Comparison details	Pre-intervention 'usual care' for work-related injured employees. Details: Injured employee reported incident to supervisor and was scheduled to see a physician (who was responsible for deciding whether the employee should be taken out of or return to work). Standard treatment options available included imaging, physical therapy, medication.
Methods and analysis	Data collection: Retrospective retrieval from electronic database of all workers' compensation claims data for injuries sustained by employees pre- and post-intervention. Analysis: Compared pre- and post-intervention RTW and total sickness absence (as lost work days) at the level of injury events rather than individual employees. Calculated unadjusted odds ratios of RTW within fixed weekly intervals (up to 8 weeks), and adjusted odds ratios, controlling for employee sex, age and type of injury (entered stepwise into analysis where statistically significant).
Outcomes measures and effect sizes	**Results**

Bibliographic reference	Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204

Outcome: RTW within 4 weeks for injuries dealt with within the IEHP compared with the preceding (pre-intervention) period (PP)

	IEHP (n=128 injury events with lost work days)	PP (n=62 injury events with lost work days)
RTW within 4 weeks – n (%)	70 (54.7)	22 (35.5)
- Unadjusted OR (95%CI) of RTW	2.19 (1.16 to 4.17)	
- Adjusted OR[a] (95% CI) of RTW	2.14 (1.10 to 4.16)	

[a] adjusted odds ratios = controlling for employee gender, age and type of injury (entered stepwise into logistic regression analysis where statistically significant).

Outcome: Sickness absence: lost work days (LWDs) for injury events sustained in the 23 months after IEHP started compared with the 23 month preceding (pre-intervention) period (PP)

	IEHP	PP
No. (%) of injury events incurring any LWDs	128/661 (19.4)	62/713 (8.7)
No. of LWDs per injury event - mean (SD), n (injury events)	44.6 (69.0), n=128	100.3 (119.7), n=62
Estimated total no. LWDs over data collection period [b]	5,709	6,219

[b] 23 months preceding and 23 months after implementation of IEHP - calculated by reviewer based on reported means

Bibliographic reference	**Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204**		
	Note: overall proportion of injury events resulting in any lost work days increased significantly, by over 10%, following implementation of IEHP compared with the preceding period, even though number of all recorded injury events decreased. However, mean number of LWDs decreased for IEHP compared with PP. **Other outcomes:** Cumulative RTW within 1/2/3 and 5/6/7/8 weeks – data not extracted.		
Source of funding	Grant from the Research Committee of St Mary's Medical Center in Duluth, Minnesota.		
Related publications	None identified.		
Comments	**Limitations noted by authors:** ○ No account of other factors influencing employee motivation to RTW, including job satisfaction and relationships with co-workers and supervisors ○ Quality of retrospective data collected cannot be verified ○ Study could not draw meaningful conclusions about injury events sustained by male employees resulting in lost work days due to insufficient subsample numbers (13 PP and 38 IEHP) ○ Mainly urban, white employee base – population may not be representative of healthcare workers as a whole. **Limitations noted by reviewer:** ○ Single-centre before and after observational study with no control ○ Secular trend towards increasing in proportion of injury events resulting in any lost working days ○ Applicability to UK setting: Moderate. Depends on UK employer having access to similar workplace provision via bought-in occupational health services.		
Quality assessment	**Criterion**	**Judgement**	**Comments**

Bibliographic reference	Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204		
	Clear criteria for inclusion in the case series	Low	Included all work-related injury events resulting in lost work days (LWD)
	Condition measured in a standard, reliable way for all participants in the case series	Unclear	Used retrospective data - standardisation and reliability cannot be verified.
	Valid methods used for identification of the condition for all participants included in the case series	Low	Data collected from computerised claims database for all participants
	Consecutive inclusion of participants	Low	"A retrospective case series evaluation of all health system workers' compensation claims data were conducted…" (p.1200)
	Complete inclusion of participants	Low	As above
	Clear reporting of the demographics of the participants in the study	Unclear	Limited participant data available (e.g. occupational group)
	Clear reporting of clinical information of the participants	Low	Reports type of injury and body part affected for all participants
	Outcomes or follow-up results of cases clearly reported	Low	All recorded cases taken into account in reporting of outcomes.
	Clear reporting of the presenting site(s)/clinic(s) demographic information	Unclear	No information given to determine how representative participant sample is of overall employee population
	Appropriate statistical analysis	Low	Controlled for baseline variables using regression analysis

Bibliographic reference	**Larson M, Renier C, Konowalchuk B. (2011) Reducing lost workdays after work-related injuries. Journal of Occupational and Environmental Medicine 53:1199-1204**
Overall RoB	Moderate

D.1.4 van Oostrom (2010)

Bibliographic reference	**van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602**
Study type	RCT
Aim	To evaluate the effectiveness of a participatory workplace intervention compared with usual care for sick-listed employees with distress, with regard to return to work (RTW) within the 12-month follow-up.
Location & setting	Netherlands Multicentre: 3 organisations: the VU University, the VU University Medical Centre, and Corus (a steel company) comprising a total employee base of approximately 20,000. Fourteen occupational physicians (OPs) were involved in the study: 7 from the Corus occupational health services and 7 from the VU and VU Medical Centre occupational health services.
Study dates	Participant recruitment: April 2006 to May 2008
Length of follow-up	Follow-up measurements performed 3, 6 and 12 months after baseline
Participant characteristics	**Inclusion criteria:** Employees sick-listed (full or partial sick leave) between 2-8 weeks and screening positive for emotional distress on the distress scale of the Four-Dimensional Symptom Questionnaire (4DSQ), regardless of primary reason for sickness absence. **Exclusion criteria:**

Bibliographic reference	van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602

- conflict between employee and employer with legal involvement;
- working less than 12h per week;
- pregnancy;
- any other episode of sick leave within 1 month prior to current episode.

Baseline characteristics:

	Intervention (n=73)	Control (n=72)
Age (years) – mean (SD)	48.6 (7.7)	49.2 (8.6)
% male	76.7	80.6
Education – n (%)		
- High	21 (28.8)	20 (28.6)
- Average	29 (39.7)	29 (41.4)
- Low	23 (31.5)	21 (30.0)
Sickness absence in the past year – n (%):		
- less than 10 days	31 (42.5)	37 (51.4)
- 11 to 30 days	23 (31.5)	21 (29.2)
- more than 31 days	19 (26.0)	14 (19.4)
RTW expectations – n (%):		
- Within a month	18 (25.4)	20 (27.8)
- More than a month	53 (74.6)	52 (72.2)

Note: No baseline differences between the intervention and control group on any characteristic or prognostic variable, including scores on self-report measures of 'burnout', stress-related symptoms, and work characteristics ('job demands' and 'decision latitude') - data not extracted

Bibliographic reference	**van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602**
Number of study subjects	N=145 randomised (all included in ITT analysis of primary outcome) Note: 20 employees did not receive the allocated workplace intervention: 7 returned to work before the planned appointment; 12 did not participate due to various other reasons; 1 started the intervention, but discontinued when neither employee nor supervisor could identify obstacles for RTW.
Intervention details	Participatory workplace intervention to improve contact between sick-listed employee and supervisor, guided by a RTW coordinator (a company social worker or a labour expert given 1 day of training prior to intervention start, plus 2 follow-up training and supervision sessions). Intervention protocol: • Employee consultation with OP (within 1 week of randomisation) – OP identifies stressors, advises about date of RTW, and engages with employee's supervisor and GP to inform of participation and minimise conflicting advice. • RTW coordinator arranges meetings with employee and their supervisor regarding work adjustments, responsibilities and procedures. • RTW coordinator visits workplace with employee to identify work components, environment, identify barriers to RTW from perspective of employee and supervisor, reach consensus, and draw up a plan for implementing solutions (sent to employee, supervisor and OP). • RTW coordinator arranges final workplace visit to advise employee on implementing any adjustments and supervisor on supporting the employee. • RTW coordinator has 4-week follow-up by phone with employee and supervisor to evaluate success and feeds back to OP with further guidance where necessary.
Comparison details	Usual Dutch guideline-based occupational physician care.

<table>
<tr><td>Bibliographic reference</td><td>van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602</td></tr>
<tr><td></td><td>Note: no significant differences between intervention and control groups over the course of the study in the proportion of subjects receiving care from different medical professionals (e.g. GP, mental health professional, physiotherapist, etc.)</td></tr>
<tr><td>Methods and analysis</td><td>Primary outcome = lasting RTW, defined as duration of sick leave with distress in calendar days from randomisation until full return to the employee’s previous or another position with equal earnings, for at least 4 weeks without recurrence.

Power calculation: 144 employees required, assuming a hazard ratio of 2.0 to be relevant clinically and societally; 2/3 of participants achieve full RTW in follow-up period; moderate clustering at level of OPs (IRR 0.05) and 10% loss to follow-up.

Sick leave data and diagnostic information extracted from computerised administrative records of participating employer and OH services. Health-related outcome data collected via participant questionnaire.
Statistical analyses at employee level according to ITT. Cumulative incidence function used to describe duration of sick leave to lasting RTW; Cox proportional hazard model applied to estimate HRs unadjusted and adjusted for baseline measures of potential confounders and effect modifiers (pre-defined).</td></tr>
<tr><td>Outcomes measures and effect sizes</td><td>Results
Outcome: lasting RTW at 12 months
<table>
<tr><th></th><th>Intervention (n=73)</th><th>Control (n=72)</th></tr>
<tr><td>Full RTW by 12-month follow-up – n (%)</td><td>66 (90.4)</td><td>66 (91.7)</td></tr>
<tr><td>Median time to full RTW (IQR)</td><td>96 days (52 - 193)</td><td>104 days (52 - 195)</td></tr>
<tr><td>Unadjusted [a] HR (95%CI)</td><td colspan="2">0.99 (0.70 to 1.39)</td></tr>
</table></td></tr>
</table>

Bibliographic reference	van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602

[a] Note: in exploratory multivariate analyses, baseline intention to return to work despite symptoms was a significant effect modifier after controlling for confounders. Median time until full and lasting RTW for employees who at baseline were certain in their intention to return to work despite symptoms was 55 days (IQR 27-89 days) for the workplace intervention group vs. 120 days (IQR 47-198 days) for the usual care control group; adjusted HR: 2.05 (95%CI 1.22 to 3.45). Kaplan-Meier graphs are presented only for this stratified analysis.

Outcome: Sickness absence over 12 months

	Intervention (n=73)	Control (n=72)
Total sick leave days – mean (SD) [b]	140.9 (110)	141 (112)
Recurrence of sick leave within 12 months – n (%)	6 (8.2)	6 (8.3)

[b] SD not reported in original paper by van Oostrom et al. (2010) but was extracted from study data supplied by authors as reported in Cochrane systematic review by van Vilsteren et al. (2015)

Outcome: Clinical signs / symptoms (self-report)

	Intervention	Control
Distress score (0-32) – mean (SD)		
- Baseline	20.7 (7.73), n=73	19.8 (7.69), n=72
- 3 months	11.9 (8.85), n=72	12.3 (8.47) n=68
- 12 months	9.00 (8.26), n=73	8.37 (8.07), n=70
- p-value for difference between groups	p=0.77	
Depression score (0-12) - mean (SD)		
- Baseline	3.32 (3.72), n=73	3.50 (3.56), n=72
- 3 months	1.81 (3.36), n=72	2.06 (2.96), n=68
- 12 months	1.30 (2.40), n=73	1.04 (1.97), n=70
- p-value for difference between groups	p=0.54	

Bibliographic reference	**van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602**

Anxiety score (0-24) - mean (SD)		
- Baseline	6.49 (6.02), n=73	5.19 (5.08), n=72
- 3 months	3.67 (5.60), n=72	2.76 (3.81), n=68
- 12 months	2.55 (4.44), n=73	1.50 (3.05), n=70
- p-value for difference between groups	p=0.73	
Somatisation score (0-32) - mean (SD)		
- Baseline	12.8 (6.76), n=73	12.9 (6.40), n=72
- 3 months	8.68 (6.78), n=72	9.20 (6.15), n=68
- 12 months	6.81 (6.21), n=73	7.10 (6.14), n=70
- p-value for difference between groups	p=0.85	

Outcome: Adverse events / side effects
No events

Other outcomes reported:
Distress, depression, anxiety and somatisation scores at 6-month follow-up (data not extracted)

Source of funding	Financially supported by Dutch Ministry of Social Affairs and Employment and participating occupational health services.
Related publications	**Study protocol** van Oostrom et al. (2008) **Economic evaluation** van Oostrom et al. (2010b)
Comments	**Limitations noted by authors:** ○ Validity of self-report behavioural measures not established within a RTW context

Bibliographic reference	**van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602**		
	○ Guideline-based OP treatment of workers with mental health problems was applied in both groups and recommends workplace accommodations. Also, legal obligation to make a RTW plan after 8 weeks absence may have reduced contrast between the intervention and control groups. **Limitations noted by reviewer:** ○ Generalisability to UK setting: Low. UK employees on sickness absence are not required to visit an occupational physician (OP) and there is no statutory obligation to make a RTW plan after 8 weeks of absence.		
Quality assessment	**Criterion**	**Judgement**	**Comments**
	Random sequence generation	Low	Prepared by independent statistician using computer-generated randomisation, pre-stratified by organisation and whether employee was on full or part time sick leave (6 strata). Block randomisation (with blocks of four) was applied to ensure equal group sizes within each stratum.
	Allocation concealment	Unclear	Reference to using 'sealed envelopes' but not whether these were sequentially numbered and opaque.
	Blinding of participants and personnel	High	"Participants and occupational health professionals were not blinded for group assignment" (p.597). However blinding not possible within context of study.
	Blinding of outcome assessment: ○ Primary outcome ○ Secondary (health-related) outcomes	Low High	"Blinded analysis of the data by the researcher" (p507). Sickness absence data (objective) were extracted from computerised records of occupational health services at 12 months – low risk of bias. Health-outcome data were obtained via self-report questionnaires – high risk of bias.
	Incomplete outcome data	Low	No loss to follow-up for sick leave data and minimal loss to follow-up for self-reported outcomes (2 employees in the usual care group withdrew, so no follow-up self-report data could be collected for them).

Bibliographic reference	**van Oostrom S, van Mechelen W, Terluin B, de Vet H, Knol D, Anema J (2010) A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial. Occupational and Environmental Medicine 67: 596-602**		
	Selective outcome reporting	Low	All outcomes pre-specified in study protocol (van Oostrom et al. 2008) are adequately reported.
	Other sources of bias	None	
Overall RoB	Low		

D.1.5 Viikari-Juntura (2012)

Bibliographic reference	**Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143**
Study type	RCT
Aim	To assess the effects of early part-time sick leave with work adjustments on return to work (RTW) and sickness absence among patients with musculoskeletal disorders.
Location & setting	Finland Multicentre: 6 occupational health units of medium- to large-size enterprises comprising a study base of approximately 30,000 employees.
Study dates	Participant recruitment: November 2006 to December 2009
Length of follow-up	12 months
Participant characteristics	**Inclusion criteria:** • employees aged 18–60yrs with a permanent or long-term contract and working ≥30 hours per week • unable to perform regular work duties due to a musculoskeletal disorder

Bibliographic reference	Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143

- ≤ 2 weeks sick leave due to musculoskeletal disorder during the preceding month and <30 days during the preceding 3 months
- no plans for surgical treatment requiring >1 week of sickness absence
- no plans for other longer absence (longer than annual paid vacation) during 12 months after enrolment
- supervisor agreement that work-related arrangements for part-time sick leave are feasible.

Exclusion criteria:

- any acute infection, symptoms due to a major accidental injury, suspected occupational injury or disease, active inflammatory arthritis, malignant tumour diagnosed or treated in preceding year, coexisting severe mental disorder, or pregnancy.
- subjects with very severe pain (>7 on a scale from 0–10) or pain interfering severely with sleep (>7 on a scale from 0–10)

Baseline characteristics:

	Intervention group (n=31)	Control group (n=31)
Age (years) – mean (SD)	44.2 (10.1)	44.4 (10.7)
% male	3	3
BMI – mean (SD)	25.4 (3.6)	27.2 (5.3)
Current smoker - %	32	23
Education - %		
- No vocational education	7	13
- Basic vocational school or courses	45	37
- Higher vocational school	48	50
- University level education	0	0

Bibliographic reference	Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143

Years in present job – mean, (SD)	12.1 (9.7)	15.8 (11.4)
Musculoskeletal VAS pain ratings – mean (SD) - Self-rated pain (0−10) - Pain interference with work (0−10) - Pain interference with sleep (0−10)	 6.1 (1.4) 7.5 (3.8) 4.8 (3.0)	 6.3 (1.5) 6.6 (1.4) 3.6 (2.7)
Onset of current problem - % - <6 weeks ago - 6−12 weeks ago - >12 weeks ago	 48 29 23	 46 17 37
Primary location of musculoskeletal pain - % - Back - Neck or shoulder - Upper limb - Lower limb	 19 52 29 0	 35 23 26 16
Musculoskeletal pain in ≥2 locations - %	52	61
Previous sickness absence ○ Mean no. days during previous 30 days (SD) - Median ○ Mean no. days during previous 90 days (SD) - Median	 2.6 (3.3) 1 7.9 (12.0) 4	 4.8 (7.2) 2 11.3 (13.0) 6

Note: Majority of participants working in healthcare or retail, with a minority from the meat-processing industry or call centres. The different industries were evenly distributed between study arms.

Intervention group employees reported more frequent heavy lifting at work (not extracted), included more current smokers, had higher interference of pain with sleep, and a higher proportion with neck or shoulder problems.

Bibliographic reference	**Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143**
	Control group employees had longer job tenure, higher BMI, more chronic symptoms, more sickness absence days during the preceding 30 and 90 days and a higher proportion of low-back and lower-limb problems.
Number of study subjects	N=63 randomised; N=62 (one intervention subject declined to participate after randomisation)
Intervention details	Intervention = part-time sick leave with work modifications All eligible employees had initial consultation with OH physician to determine appropriate length of sickness absence based on symptoms, clinical findings and background information (prior to randomisation). Intervention: - Reduction in daily working time by about a half (70% of subjects) or shorter hours worked 3-4 days/week (30%) If necessary, remaining work tasks modified to control activity-related symptoms, as advised by OH physician to employee and supervisor. One third of participants decreased physical workload (e.g. heavy lifting / manual handling). Five participants did tasks other than their regular work. - At the end of prescribed sick leave period, employees returned to regular work. - Those unable to resume full work were re-evaluated by OH physician, who could prescribe full-time sick leave or a continuance of part-time sick leave (up to a maximum of 2 months) based on medical assessment. - If full-time sick leave was needed, part-time sick leave could not be re-applied after full-time sick leave ended. - Return to part-time sick leave was permitted where health problem relapsed within 1 month of full RTW.
Comparison details	Full-time sick leave. Appropriate length of sickness absence was determined prior to randomisation by OH physician at initial consultation, as detailed above. <u>Note</u>: in both intervention and control groups, employees received their regular salary.

Bibliographic reference	**Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143**
Methods and analysis	Power calculation: 600 participants required - assumes drop-out rate of 10–15% and that a 10% difference in proportion of employees returning to regular work is an important difference (75% and 85% RTW rates). Data collection: Sickness absence duration, recurrences and diagnostic information obtained from registers of participating OH services at end of follow-up. Health-related outcomes assessed via patient questionnaire at weeks 1, 3, 8, and 12. Analyses: Kaplan-Meier analyses to compare time to sustained RTW and occurrence of recurrent sick leave in the two groups. Estimated hazard ratios (HR) for return to work using Cox proportional hazard model with a cluster option. Separate models were run to control for variables that differed between the intervention and control group at baseline. Variables that affected the HR estimate ≥10% were included in the final model. Health-related outcomes: used generalized estimating equation (GEE) to analyse differences between groups in the repeated measures data. In addition to group allocation and follow-up time, body mass index (BMI) and time since the beginning of symptoms (number of elapsed days) were included as covariates in the models due to imbalance at baseline between the control and intervention group. Also adjusted for baseline value of each outcome variable to control for difference in the outcome measured at baseline between the intervention and control group. EQ-5D: scored as 3-level rating (no problems=1, some problems=2, extreme problems=3) across five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression; used overall score as a continuous variable in analyses (range 5–15).
Outcomes measures and effect sizes	**Results** **Outcome: Time to RTW**

	Intervention group (n=31)	**Control group (n=31)**

Bibliographic reference	Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143

Time (days from recruitment) to sustained return to work for ≥2 weeks		
- Median	9	9
- 25th percentile	6	6
- 75th percentile	22	21
Time (days from recruitment) to sustained return to work for ≥4 weeks		
- Median	12	20
- 25th percentile	6	8
- 75th percentile	33	35

Hazard ratio of RTW adjusted for age was 1.60 (95%CI: 0.98 to 2.63) and 1.76 (95%CI: 1.21 to 2.56) after further adjustment for pain interference with sleep and previous sickness absence at baseline.

Outcome: Proportion with sustained RTW (for ≥4 weeks) by 4 weeks (estimated from Kaplan Meier curve by reviewer)**:**

Intervention group: approximately 72% (n=22/31)

Control group: approximately 64% (n=20/31)

Outcome: Proportion with sustained RTW (for ≥4 weeks) by 3 months (estimated from Kaplan Meier curve by reviewer)**:**

Intervention group: 100% (n=31/31)

Control group: approximately 87.5% (27/31)

Outcome: sickness absence days due to any cause during follow-up

Follow-up period		**Intervention group (n=31)**	**Control group (n=31)**

Bibliographic reference	Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143

52 weeks	Total number of sickness absence days % of 52-week follow-up time period	1605 16	2126 20

Proportion of sickness absence days decreased in both groups during first 3 months of follow-up and increased thereafter. Proportion of sickness absence days was lower in intervention than control group throughout follow-up.
Over entire follow-up period (1 year), total number of sickness absence days was about 20% lower in intervention than control group.

Outcome: sickness absence recurrence

	Intervention group (n=31)	Control group (n=31)
Time (days after end of initial sick leave) to first recurrent sick leave		
- Median	29	27
- 25th percentile	4	1
- 75th percentile	85	80
Mean no. of recurrent sick leave spells per person-year [a] (95%CI)	6.5 (5.1 to 7.9)	8.6 (6.4 to 10.9)

[a] Follow-up time calculated from end of initial sick leave spell until one year (or termination of employment).

Outcome: Health-related QoL (EQ-5D) – repeated measure; score range: 5-15 (lower = better self-perceived health) (data extracted from Shiri et al. 2013)

	Intervention	Control
Perceived health-related quality of life (≤12 months) – mean (SD), obs [a] (n)	6.6 (1.4); 177	7.2 (1.6), 175
- Unadjusted – regression coefficient (log scale) [b], (95%CI); p-value	-0.6 (-1.2 to -0.1); p= 0.03	

Bibliographic reference	Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143

- Adjusted [c] – regression coefficient (log scale), (95%CI); p-value	-0.5 (-0.9 to -0.1); p=0.02

[a] Obs = number of repeated observations

[b] Negative coefficients reflect an effect in favour of the intervention group

[c] Adjusted for body mass index, follow-up time, time since beginning of symptoms (number of elapsed days) and the baseline measure of the outcome.

Outcome: clinical signs and symptoms (data extracted from Shiri et al. 2013)

Effect of intervention on pain-related outcomes (VAS ratings 0-10, higher score = worse health; repeated measures)

	Intervention	Control
Pain intensity (≤ 3months) – mean (SD), obs [a] (n)	4.5 (2.8); 147	4.9 (2.5), 148
- Unadjusted – regression coefficient (log scale) [b], (95%CI); p-value	-0.3 (-1.2 to 0.6); p=0.51	
- Adjusted [c] – regression coefficient (log scale), (95%CI); p-value	-0.4 (-1.3 to 0.4); p=0.31	
Pain interference with work (≤ 3months) – mean (SD), obs (n)	4.2 (2.9); 123	4.7 (2.8); 99
- Unadjusted – regression coefficient (log scale), (95%CI); p-value	-0.6 (-1.6 to 0.4); p=0.23	
- Adjusted – regression coefficient (log scale), (95%CI); p-value	-0.7 (-1.6 to 0.3); p=0.15	
Pain interference with sleep (≤ 3months) – mean (SD), obs (n)	3.3 (3.0); 148	3.2 (2.8); 148
- Unadjusted – regression coefficient (log scale), (95%CI); p-value	0.1 (-1.0 to 1.1); p=0.91	
- Adjusted – regression coefficient (log scale), (95%CI); p-value	-0.12 (-0.9 to 0.7); p=0.77	
Pain at 1 year, standardised - mean (SD), obs (n)	-0.2 (0.9); 28	0.2 (1.0); 27
- Unadjusted – regression coefficient (log scale), (95%CI); p-value	-0.4 (-0.9 to 0.1); p=0.10	

Bibliographic reference	**Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143**
	- Adjusted – regression coefficient (log scale), (95%CI); p-value: -0.2 (-0.7 to 0.4); p=0.48 [a] Obs = number of repeated observations [b] Negative coefficients reflect an effect in favour of the intervention group [c] Adjusted for body mass index, follow-up time, time since beginning of symptoms (number of elapsed days) and the baseline measure of the outcome. **Other outcomes reported:** Standardised disability index at 12 months; self-rated general health at 12 months; self-rated productivity loss at 12 months (data not extracted).
Source of funding	Supported by the Finnish Work Environment Fund (grant number 106304), the Ministry of Social Affairs and Health, and the Social Insurance Institution of Finland. The authors were independent; funders had no role in the project.
Related publications	**Study protocol:** Martimo K, et al. (2008) **Secondary publication (health-related outcomes):** Shiri R, et al. (2013)
Comments	**Limitations noted by authors:** ○ Recruitment issues: low statistical power, especially for subgroup analyses. ○ Recruitment ended despite poor numbers due to government amendment of Finnish sickness benefit scheme at beginning of 2010 to introduce early part-time sick leave along similar lines to that used as the study intervention ○ Eligibility issues: 25/120 employees assessed (21%) had no need for any sickness absence; 18 (15%) were unable to perform any modified work at all ○ Possible selection bias – see quality assessment below ○ Restricted generalisability as only 2/62 participants (3%) were male ○ Feasibility of implementation issues: very few enterprises eventually agreed to participate due to anticipated problems e.g. with work schedules and staffing to accommodate part-time sick leave

Bibliographic reference	**Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143**		
	Limitations noted by reviewer: ○ Generalisability to UK setting: Low. Social insurance covers payment of sickness benefit in Finland after initial 10-day employer period whereas in UK, sickness benefit payment is employer-based.		
Quality assessment	**Criterion**	**Judgement**	**Comments**
	Random sequence generation	Low	Undertaken centrally by statistician using random number generator. Block randomization (block size 4) used in order to obtain equal size of intervention and control group for each participating physician.
	Allocation concealment	Low	Used “sequentially numbered sealed opaque envelopes” stored in a locked closet in each physician’s office.
	Blinding of participants and personnel	High	“It was not possible to blind either the employee or the treating physicians to group allocation” (p.137)
	Blinding of outcome assessment: ○ Primary outcome ○ Secondary (health-related) outcomes	Unclear High	Not reported, however primary outcome is objective and data were obtained from OH service registers after the end of follow-up. Health-related outcomes self-reported via participant questionnaire
	Incomplete outcome data:	Low	Minimal loss to follow-up (one intervention subject declined to participate post-randomisation). Subjects who discontinued allocated treatment were included in final analyses of primary outcome.
	Selective outcome reporting	Unclear	All outcomes pre-specified in study protocol (Martimo et al. 2008) are reported. No published evidence identified relating to extended follow-up of sickness absence outcomes over 2 years.

Bibliographic reference	**Viikari-Juntura E, Kausto J, Shiri R, Kaila-Kangas L, Takala E-P, Karppinen J, Miranda H, Luukkonen R, Martimo K-P (2012) Return to work after early part-time sick leave due to musculoskeletal disorders: a randomized controlled trial. Scand J Work Environ Health 38:134-143**		
	Other sources of bias	Unclear	Possible selection bias: OPs in 3/6 participating organisations referred potentially eligible employees externally for assessment to the Institute of Occupational Health rather than recruiting directly to the study. Proportionately fewer employees contacting the Institute subsequently declined to participate compared to in-house OH services, suggesting those unwilling to take part may not have contacted the Institute.
Overall RoB	Low		

D.1.6 Viikari-Juntura (2017)

Bibliographic reference	**Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017**
Study type	Non-randomised controlled intervention study
Aim	To examine the efficacy of an educational intervention to promote temporary work modifications (TWM, e.g. workplace adaptations, altered work hours, amended duties, phased RTW), initiated at an early stage of work disability, on RTW in workers seeking medical advice at the occupational health (OH) service due to musculoskeletal pain or depressive symptoms.
Location & setting	Finland 5 medium-sized and large companies (involving 8 occupational physicians)
Study dates	Not reported
Length of follow-up	12 months

<table>
<tr><td>Bibliographic reference</td><td>Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017</td></tr>
<tr><td>Participant characteristics</td><td>
Inclusion criteria:
• Employees aged 18-60yrs working ≥30 hours per week
• Employed in current job ≥4 months, with employment likely to continue for the following 12 months
• Musculoskeletal pain (rated ≥4/10) and / or depressive symptoms (positive response to any of the 2 screening questions on depression)
• Functional ability not sufficient to perform current work tasks
• Previous sickness absence of ≤6 weeks during preceding 3 months

Exclusion criteria:
• Anticipated long absence from work during the following 12 months due to other reasons, such as pregnancy, studies, military service, alternation leave, other illness or its treatment (eg. surgery, cytostatic therapy or radiation therapy)
• Serious or acute disease requiring full sickness absence (eg. febrile infection, active stage of inflammatory joint disease; serious mental disorder)
• Other factors having significant effect on disability (eg. serious conflict at the workplace, difficult personal life situation, current problem due to a work accident, current insurance or workmen’s compensation dispute, severe alcohol or drug dependency)

Baseline characteristics:
<table>
<tr><th></th><th>Intervention group (n=12)</th><th>Control group (n=19)[a]</th></tr>
<tr><td>Age (years) – mean (SD)</td><td>47.1 (9.3)</td><td>43.3 (12.1)</td></tr>
<tr><td>% male;</td><td>1 (8.3)</td><td>3 (15.7)</td></tr>
<tr><td>BMI – mean (SD)</td><td>26.2 (2.9)</td><td>25.5 (3.8)</td></tr>
<tr><td>Current smoker – n (%)</td><td>4 (33.3)</td><td>5 (26.3)</td></tr>
</table>
</td></tr>
</table>

Bibliographic reference	Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017

Education – n (%) - Basic - Higher (university level)	 6 (50) 1 (8.3)	 8 (42.1) 5 (26.3)
Years in present job – median, (range)	11 (3-33)	8 (1-42)
Musculoskeletal pain VAS ratings – mean (SD) - Self-rated pain (0−10) - Pain interference with work (0−10) - Pain interference with sleep (0−10)	 7.6 (1.0) 6.2 (2.2) 5.1 (3.3)	 7.4 (1.8) 5.1 (1.9) 5.5 (3.5)
Depression score (PHQ) – mean (SD)	5.5 (3.2)	6.4 (5.3)
Sickness absence (days) in 12 months before recruitment: All sickness absence - Median (25^{th} and 75^{th} percentile); range - Musculoskeletal - Median (25^{th} and 75^{th} percentile); range - Mental health - Median (25^{th} and 75^{th} percentile); range - Other - Median (25^{th} and 75^{th} percentile); range	 19 (13; 30) 2-32 11 (2; 18) 0-28 0 (0; 0) 0-30 (n=2) 4 (0; 6) 0-15	 15 (7; 32) 0-42 7 (0; 22) 0-41 0 (0; 0) 0-9 (n=2) 6 (1; 12) 0-21
Current sickness absence – n (%) - None - Part-time sick leave - Full-time sick leave	 3 (25.0) 2 (16.7) 7 (58.3)	 8 (42.1) 2 (10.5) 9 (47.4)

[a] Baseline data for some variables only available for 19 control participants (no explanation given)

No major between-group differences in work schedules and working time, but perceived mental strenuousness of work and work uncertainty were higher in control group than the intervention group. Control group reported higher frequency of physical activity, alcohol consumption, and had more cases with 'moderate' or 'severe' depression (measured on Patient Health Questionnaire). However, they assessed their current work ability with regard to mental work demands higher than the intervention group (data not extracted).

Bibliographic reference	**Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017**
	Musculoskeletal pain was reason for seeking medical advice in all but 1 intervention and 2 control group participants.
Number of study subjects	N=34 (N=30 in outcome analysis due to data unavailability – see study limitations)
Intervention details	Educational intervention delivered to OH physicians, consisting of: o e-learning course - to increase knowledge about possibilities for enhancing RTW in musculoskeletal diseases and mental disorders; o workshop – to deliver practical information about how to initiate and plan temporary work modifications; o individual interviews – to reflect on own practice and enhancing practice change. Following the educational intervention occupational physicians were expected to initiate work modifications more actively than before, for employees with musculoskeletal problems or depressive symptoms, tailoring the interventions individually. The most typical work modification in the intervention group was shortened work time, both as a shortened work week and work day. Other interventions, e.g., amended duties, were reported by 20% of patients in the intervention group.
Comparison details	Usual OH care. Groups of OH physicians first recruited patients to the control group and after the intervention workshop was delivered started recruiting to the intervention group (modified stepped wedge trial design). Note: other types of work modifications, such as work schedule changes or reduction / elimination of heavy tasks were reported by more than half of the control group at 3 months (see study limitations).
Methods and analysis	Data collection: Information on durations and diagnoses of sickness absences gathered from OH service medical records over 12 months before and after employee recruitment. Information on employment during the study and absence due to illness and other causes were retrieved from employer records. Health-related outcome data were collected via

<table>
<tr><td>Bibliographic reference</td><td>Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017</td></tr>
<tr><td></td><td>participant questionnaires at 3, 6, 9 and 12 month follow-up (response rate: 69.7%, 66.7%; 63.6%, and 48.5% respectively).

Analysis:
Intervention and control group employees were compared with regard to potential confounders (age, gender, occupational factors, localisation and intensity of musculoskeletal pain, intensity of depressive symptoms, health and work ability, sick-listed at the time of interview, urban/rural area, public/private sector, size of enterprise). Time to sustained RTW (defined as performing work duties for at least 4 weeks without a new sickness absence spell) compared between groups using lifetime tables.</td></tr>
<tr><td>Outcomes measures and effect sizes</td><td>Results

Outcome: Time to sustained RTW (≥4 weeks at work without a new sickness absence)
<table>
<tr><th></th><th>Intervention group
(n=12)</th><th>Control group
(n=18)</th></tr>
<tr><td>Median days (25th and 75th percentile), range</td><td>26 (2;61) 0-365</td><td>9 (5; 27) 0-242</td></tr>
</table>
Outcome: proportion with sustained RTW (for ≥4 weeks) within first 4 weeks (estimated from Kaplan Meier curve by reviewer)
Intervention = approx. 42% (5/12)
Control = approx. 73% (13/18)

Outcome: proportion with sustained RTW (for ≥4 weeks) by 3 months (estimated from Kaplan Meier curve by reviewer)
Intervention = approx. 84% (10/12)</td></tr>
</table>

Bibliographic reference	**Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017**

Control = approx. 83% (15/18)

Outcome: proportion with sustained RTW (for ≥4 weeks) by 12 months (estimated from Kaplan Meier curve by reviewer)

Intervention = approx. 92% (11/12)

Control = approx. 100% (18/18)

Outcome: Total number of sickness absence days over 12 month follow-up

	Intervention group (n=12)	**Control group** (n=18)
All sickness absence - Median (25th and 75th percentile); range	44 (12; 128) 3-357	28 (6; 115) 0-293
- Musculoskeletal - Median (25th and 75th percentile); range	28 (5; 124) 0-357	12 (1; 68) 0-242
- Mental health - Median (25th and 75th percentile); range	0 (0; 0) 0-47 (n=2)	0 (0; 0) 0-14 (n=3)
- Other - Median (25th and 75th percentile); range	0 (0; 4) 0-10	4 (0; 9) 0-286

Subgroup:

Note: Sensitivity analyses were carried out within the intervention and control group to compare time to sustained RTW and sickness absence in those who did (vs. did not) receive temporary work modification in first 3 months (to account for the fact that a proportion of control group employees received some modifications). Due to very small numbers, there were no statistically significant group differences (data not extracted)

<table>
<tr><td>Bibliographic reference</td><td>Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017</td></tr>
<tr><td></td><td>Clinical signs and symptoms
• At 3 month follow-up[a]
<table>
<tr><th></th><th>Intervention (n=10)</th><th>Control (n=13)</th></tr>
<tr><td>Musculoskeletal pain ratings – mean (SD)
- Self-rated pain (0−10)
- Pain interference with work (0−10)
- Pain interference with sleep (0−10)</td><td>
7.1 (1.9)
4.8 (1.8)
6.1 (3.0)</td><td>
6.8 (1.9)
3.9 (2.2)
4.5 (2.1)</td></tr>
<tr><td>Depression score (PHQ) – mean (SD)</td><td>5.4 (2.7)</td><td>5.9 (6.6)</td></tr>
</table>
• At 12 month follow-up[a]
<table>
<tr><th></th><th>Intervention (n=6)</th><th>Control (n=10)</th></tr>
<tr><td>Musculoskeletal pain ratings – mean (SD)
- Self-rated pain (0−10)
- Pain interference with work (0−10)
- Pain interference with sleep (0−10)</td><td>
6.5 (1.9)
3.0 (1.0)
4.7 (2.6)</td><td>
6.4 (2.0)
4.3 (3.1)
5.0 (2.8)</td></tr>
<tr><td>Depression score (PHQ) – mean (SD)</td><td>4.5 (2.9)</td><td>5.3 (7.0)</td></tr>
</table>
[a] No statistically significant differences between groups.

Other outcomes reported:
None</td></tr>
<tr><td>Source of funding</td><td>Financial support from the Academy of Finland and Finnish Work Environment Fund (project number 113077)</td></tr>
<tr><td>Related publications</td><td>Study protocol:</td></tr>
</table>

Bibliographic reference	**Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017**
	Haukka E, Martimo K-P, Kivekäs T et al. (2015) Efficacy of temporary work modifications on disability related to musculoskeletal pain or depressive symptoms—study protocol for a controlled trial. BMJ Open 5:e008300
Comments	**Limitations noted by authors:** ○ Recruitment issues: target number of participants (n=600) not attained. Main reason cited: lack of time for the OH physicians to introduce the study to employees and encourage participation. ○ Only a small minority of recruited subjects had MH issues ○ Intervention implementation issues: Some OH physicians who took part in the intervention did not subsequently recruit any patients while one OH physician who already used temporary work modifications actively recruited many patients prior to the intervention workshop. Therefore use of work modifications was already frequent in the control phase, leaving little space for increased use. ○ Incomplete follow-up (change in the OH service provider at one participating company prevented follow-up data being supplied on four employees). **Limitations noted by reviewer:** ○ Modified stepped wedge design: may be temporal differences in delivery of educational intervention to participating OH physicians ○ Analyses did not adjust for potential confounders or clustering of OPs.

Quality assessment	**Criterion**	**Judgement**	**Comments**
	Random sequence generation	n/a	Non-randomised observational study.
	Allocation concealment	n/a	Non-randomised observational study.
	Baseline outcome measurements similar	Unclear	Groups differed in proportion currently not on sick leave at baseline
	Baseline characteristics similar	Unclear	Some differences reported; significance testing not reported.

Bibliographic reference	Viikari-Juntura E, Haukka E, Horppu R, Takala EP, Shiri R, Solovieva S, Lallukka T, Pehkonen I, Halonen K, MacEachen E, Martimo KP. Efficacy of temporary work modifications on disability related to musculoskeletal pain and depressive symptoms: a controlled trial. Finish Institute of Occupational Health [Final report] 2017		
	Incomplete outcome data	High	Missing data for 4 subjects due to change in the OH service provider at one participating company
	Knowledge of allocated interventions adequately prevented	Low	All participating physicians were given the educational intervention. It is not reported but unlikely that employees recruited to pre- and post-intervention groups were aware of the treating physician's training status.
	Protection against contamination	High	Use of work modifications was already frequent in the control phase
	Selective outcome reporting	Unclear	All outcomes pre-specified in study protocol (Haukka et al. 2015) are reported, however does not report analyses testing for significant differences in RTW or controlling for potential confounders or clustering of OPs.
	Other sources of bias	-	
Overall RoB	High		

Appendix E – GRADE profiles

E.1 GRADE profile 1: Individual employee-focused interventions vs. control (usual care / no intervention)

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
Outcome: Proportion returning to work within 4 weeks											
- Populations with musculoskeletal disorders											
1[3]	Obs	Serious[a]	No serious	n/a	No serious	None	70/128 (54.7%)	22/62 (35.5%)	RR 1.54 (1.06 to 2.23)	192 more per 1000 (from 21 more to 436 more)	Very low
Outcome: Proportion returning to work by 3 months											
- Populations with musculoskeletal disorders											
1[1]	RCT	Serious[a]	No serious	n/a	Serious[b]	None	11/18 (61.1%)	12/15 (80%)	RR 0.76 (0.49 to 1.19)	192 fewer per 1000 (from 408 fewer to 152 more)	Low
Outcome: Proportion returning to work by 12 months											

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
- Populations with musculoskeletal disorders											
1[1]	RCT	Serious[a]	No serious	n/a	Serious[b]	None	14/18 (77.8%)	14/15 (93.3%)	RR 0.83 (0.63 to 1.1)	159 fewer per 1000 (from 345 fewer to 93 more)	Low
Outcome: Total sickness absence (days) over follow-up											
- Populations with musculoskeletal disorders											
1[1]	RCT	Serious[a]	No serious	n/a	Serious[b]	None	18	15	-	MD 40 higher (19.33 lower to 99.33 higher)	Low
Outcome: Number of lost work days per injury event											
- Populations with musculoskeletal disorders											
1[3]	Obs	Serious[a]	No serious	n/a	No serious	None	128	62	-	MD 55.7 lower (87.8 lower to 23.6 lower)	Very low

Studies
1 Carlsson 2013 - RCT *early multidisciplinary assessment in the primary care centre*
2 Lander 2009 - Non-randomised controlled trial *an outpatient stress counselling and case management intervention*
3 Larson 2011 - Retrospective case series (before-and-after study) *an internal occupational health programme with early access to treatment or workplace rehabilitation*
4 van Oostrom 2010 - RCT *early access to treatment or workplace rehabilitation*
5 Viikari-Juntura 2012 - RCT *early part time sick leave*
6 Viikari-Juntura 2017 – Non randomised controlled trial *an educational intervention delivered to occupational health physicians and a case management intervention*

a Risk of bias: lack of control group and use of retrospective data (Larson 2011)
b 95%CI crosses line of no effect

E.2 GRADE profile 2: Workplace-focused interventions vs. usual care / no intervention

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
Outcome: Proportion returning to work within 4 weeks											
- Populations with musculoskeletal disorders											
1[5]	RCT	No serious	No serious	n/a	Serious[a]	None	22/31 (71%)	20/31 (64.5%)	RR 1.1 (0.78 to 1.55)	65 more per 1000 (from 142 fewer to 355 more)	Moderate
1[6]	Obs	Serious[b]	Serious[c]	n/a	Serious[a]	None	5/12 (41.7%)	13/18 (72.2%)	RR 0.58 (0.28 to 1.19)	303 fewer per 1000 (from 520 fewer to 137 more)	Very low
Outcome: Proportion returning to work by 3 months											
- Populations with musculoskeletal disorders											
1[5]	RCT	No serious	No serious	n/a	Serious[a]	None	31/31 (100%)	27/31 (87.1%)	RR 1.15 (0.99	131 more per 1000 (from 9	Moderate

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
									to 1.33)	fewer to 287 more)	
1[6]	Obs	Serious[b]	Serious[c]	n/a	Serious[a]	None	10/12 (83.3%)	15/18 (83.3%)	RR 1 (0.72 to 1.39)	0 fewer per 1000 (from 233 fewer to 325 more)	Very low
Outcome: Proportion returning to work by 12 months											
- Populations with musculoskeletal conditions											
1[6]	Obs	Serious[b]	Serious[c]	n/a	Serious[a]	None	11/12 (91.7%)	18/18 (100%)	RR 0.91 (0.74 to 1.12)	90 fewer per 1000 (from 260 fewer to 120 more)	Very low
- Populations with mental health disorders											
1[4]	RCT	No serious	Serious[d]	n/a	Serious[a]	None	66/73 (90.4%)	66/72 (91.7%)	RR 0.99 (0.89 to 1.09)	9 fewer per 1000 (from 101 fewer to 83 more)	Low
Outcome: Time to return to work											
- Populations with musculoskeletal conditions											
1[5]	RCT	No serious	No serious	n/a	Serious[a]	None	N=31	N=31	HR 1.60 (0.98	-	Moderate

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
									to 2.61)		
- Populations with mental health disorders											
1[4]	RCT	No serious	Serious[d]	n/a	Serious[a]	None	N=73	N=72	HR 0.99 (0.70 to 1.40)	-	Low
Outcome: Total sickness absence (days) over follow-up											
- Populations with mental health disorders											
1[4]	RCT	No serious	Serious[d]	n/a	Serious[e]	None	N=73	N=72	-	MD 0.1 lower (36.24 lower to 36.04 higher)	Low
Outcome: Adverse event - recurrent sickness absence											
• Proportion with a recurrent absence within 12 months											
- Populations with mental health disorders											
1[4]	RCT	No serious	Serious[d]	n/a	Serious[a]	None	6/73 (8.2%)	6/72 (8.3%)	RR 0.99 (0.33 to 2.92)	1 fewer per 1000 (from 56 fewer to 160 more)	Low
• Number of recurrent sickness absences per person-year											
- Populations with musculoskeletal disorders											

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
1[5]	RCT	No serious	No serious	n/a	Serious[a]	None	N=31	N=31	-	MD 2.1 lower (4.64 lower to 0.44 higher)	Moderate
Outcome: Health-related Quality of Life											
- Populations with musculoskeletal disorders: EQ-5D score range: 5-15 (higher = worse quality of life) – repeated measures over 12 weeks											
1[5]	RCT	Serious[e]	No serious	n/a	No serious	None	N=31	N=31	-	0.60 lower (0.91 lower to 0.29 lower)	Moderate

Studies
1 Carlsson 2013 - RCT *early multidisciplinary assessment in the primary care centre*
2 Lander 2009 - Non-randomised controlled trial *an outpatient stress counselling and case management intervention*
3 Larson 2011 - Retrospective case series (before-and-after study) *an internal occupational health programme with early access to treatment or workplace rehabilitation*
4 van Oostrom 2010 - RCT *early access to treatment or workplace rehabilitation*
5 Viikari-Juntura 2012 - RCT *early part time sick leave*
6 Viikari-Juntura 2017 – Non randomised controlled trial *an educational intervention delivered to occupational health physicians and a case management intervention*

a 95% CI crosses line of no effect
b Incomplete outcome reporting and control group contamination (Viikari-Juntura 2017)
c Population does not directly match the review protocol inclusion criteria: 35% of employees were not on current partial / full sickness absence at baseline (Viikari-Juntura 2017)
d Population does not directly match the review protocol inclusion criteria: at least 25% of employees with sickness absence >4 weeks at baseline (van Oostrom 2010)
e High risk of bias as blinding not possible and health-related quality of life outcomes self-reported via participant questionnaire

E.3 GRADE profile 3: Combined intervention vs. usual care / no intervention

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
Outcome: Proportion returning to labour market within 4 weeks											
- Populations with mental health disorders											
1[2]	Obs	Serious[a]	Serious[b]	n/a	No serious	None	5/72 (6.9%)	17/89 (19.1%)	RR 0.36 (0.14 to 0.94)	122 fewer per 1000 (from 11 fewer to 164 fewer)	Very low
Outcome: Proportion returning to labour market by 3 months											
- Populations with mental health disorders											
1[2]	Obs	Serious[a]	Serious[b]	n/a	Serious[c]	None	20/72 (27.8%)	38/89 (42.7%)	RR 0.65 (0.42 to 1.01)	149 fewer per 1000 (from 248 fewer to 4 more)	Very low
Outcome: Proportion returning to labour market by 12 months											
- Populations with mental health disorders											
1[2]	Obs	Serious[a]	Serious[b]	n/a	Serious[c]	None	54/72 (75%)	68/89 (76.4%)	RR 0.98 (0.82	15 fewer per 1000 (from 138 fewer to	Very low

No. of studies	Study design	Risk of bias	Indirectness	Inconsistency	Imprecision	Other considerations	Intervention	Control	Effect size (95% CI)	Absolute effect	Quality
									to 1.17)	130 more)	
Outcome: Time to return to work over 68 week follow-up (not resuming labour market activity)											
- Populations with mental health disorders											
1[2]	Obs	Serious[a]	Serious[b]	n/a	Serious[c]	None	N=72	N=89	HR 0.84 (0.60 to 1.18)	-	Very low

Studies
1 Carlsson 2013 - RCT *early multidisciplinary assessment in the primary care centre*
2 Lander 2009 - Non-randomised controlled trial *an outpatient stress counselling and case management intervention*
3 Larson 2011 - Retrospective case series (before-and-after study) *an internal occupational health programme with early access to treatment or workplace rehabilitation*
4 van Oostrom 2010 - RCT *early access to treatment or workplace rehabilitation*
5 Viikari-Juntura 2012 - RCT *early part time sick leave*
6 Viikari-Juntura 2017 – Non randomised controlled trial *an educational intervention delivered to occupational health physicians and a case management intervention*

a Single observational study with high risk of bias: potential selection bias (Lander 2009)
b Population does not directly match the review protocol inclusion criteria: unclear whether all subjects were employed at baseline (Lander 2009)
c 95% CI crosses line of no effect

Appendix F – Excluded studies

See review question A, appendix G.

Appendix G – Expert testimony

G.1 The role of an occupational health and wellbeing service

Section A	
Name:	Giles Wright
Role:	Head of Service - Health & Wellbeing
Institution/Organisation (where applicable):	Occupational Health and Wellbeing
Guideline title:	Workplace health: long-term sickness absence and capability to work (Update)
Guideline Committee:	PHAC E
Subject of expert testimony:	The role of the Occupational Health and Wellbeing service in supporting the management of sickness absence and RTW at your NHS Trust
Evidence gaps or uncertainties:	1. How has the OH service contributed to achieving and maintaining the relatively low sickness absence rate in your Trust and what have been the key barriers and facilitators? Please include an outline of: • Mechanisms / pathways / triggers for referral; interventions offered, e.g. types of recommendations for self-care, workplace adjustments, breadth of signposting or referral to further specialist support/therapy services to assist employee's RTW • The proportion of referrals for frequent (i.e. recurrent) short-term sickness absence and for long-term absence. Is the reduction in absence rate attributable to a reduced frequency or duration of absence, or both? • Employee relations – ensuring the OH service is perceived as an impartial source of help and support • Any training / support provided for managers • Any support you provide outside the Trust - e.g. for SMEs that lack access to OH services. Does caseload / management differ from referrals within the Trust?

Section B

Summary testimony:

The occupational health and wellbeing service of Cambridge University Hospitals NHSFT provides its service both to the Trust's own workforce and to neighbouring NHS Trusts and other employers in the private, public and third sectors. The service benefits from having a multidisciplinary team including OH specialists, physiotherapy and psychiatry supported by experienced non-clinical leadership and administrative teams. It has developed a sustainable workforce model by 'growing its own' specialist OH staff and is the training centre for OH doctors in the East of England.

Workforce health has Board level engagement, interest and support. The CUH NHSFT sickness absence rates are consistently low compared to the NHS as a whole and compared against peers from the 'Shelford Group'. Anxiety, Stress and Depression is a growing reason for short-term absence, particularly evident following the removal of 'other' category in the absence reporting system. Long-term absence has been reducing gradually although psychological ill health is the biggest reason for LTA and growing. This is believed to be in part the result of reducing stigma, increasing awareness and a culture of care and support encouraging employees to report their ill health honestly and perhaps increased understanding of causation/symptoms they are experiencing. It is felt that 'true' and transparent reporting is a positive step in the journey to support the improvement of the workforce' mental wellbeing.

'Back problem' as a reason for absence has improved in recent years matched by improved NHS national staff survey scores for the Trust in respect of work related MSK issues. It is believed that this is in part due to increasing the provision of fast track physiotherapy, targeting areas with higher prevalence of cases and general increase in education and assessment.

Overall, the average 12 month absence duration has reduced from 7.45 days (October 2016) to 7.03 days (October 2018) over the last two years.

The Trust has strong values of together: safe, kind and excellent which its staff survey shows are consistently well known by the workforce. Policy and practice with regards to absence management is strongly focused on support. The approach is very much driven by all parties working together to achieve the goal of individuals being in work, healthy and productive. Since 2015-16 there has been a conscious effort to begin to educate and empower the workforce to be more aware of support services, tools and resources available which enable better health and wellbeing. The Trust has a range of self-referral routes including an Employee Assistance Programme, access to OH advice and fast track physiotherapy service for staff. Through OH there is also fast track access to psychiatry assessment.

For employees requiring formal occupational health support via management referral, this will typically occur after a period of absence or multiple short-term absences, however there is an increasing anecdotal trend in managers feeling able to refer based on their concerns and desire to support individuals earlier rather than waiting for particular policy triggers. This is considered to be a positive progressive step but it should be noted that this of course, does cause demand pressures. It could also

‘speak to’ the traditional model of refer for intervention rather than self-managing locally within the team/department. This could be in-part due to line-managers lacking knowledge and or confidence, something the Trust is keen to make improvements in. The Trust believes that the best outcomes will come from managers feeling equipped to make early informal interventions with the formal pathways existing for employees who require the additional support. The working hypothesis the OH team are striving for is: ‘If managers are empowered and equipped and prompt in nature then a given health issue may be prevented from having a greater impact on an individual and their work’. It is felt that a successful outcome of a management referral case comes from the needs of all parties being considered carefully and appropriate recommendations made. The OH function plays a key role in ‘brokering’ the relationship between employee, manager, HR, GP and other medical/health professionals, as required. Within the Trust the working relationship between the HR/Employee Relations Team and OH Team is seen as very positive and the reputation of OH felt by managers has improved in recent years and feedback surveys suggest that recommendations given in response to a manager’s referral are realistic and helpful. If relationships are strained or difficult, adjustments are complex or progress is not being achieved as hoped OH organise case conferences with all parties present to discuss the issues and find a way forward, in a facilitated and positive way. The employee is pivotal to this process and included throughout. The future direction will be further development of working in the prevention space, continuing to educate, sign-post and empower line managers in particular. The OH service hopes to continue to develop its resource to include a greater level of expertise in the mental health specialist area and how it continues to use data and insights to target ‘hot spot’ areas of the Trust and respond to emerging trends and health informatics.
References to other work or publications to support your testimony’ (if applicable):

G.2 Support for employees with a mental health condition to return to and stay in work

Section A	
Name:	Chris Kingsbury & Claire Hodgkins
Role:	Partnerships Manager & Head of Operations for the Access to Work Mental Health Support Service
Institution/Organisation (where applicable):	Remploy Ltd
Guideline title:	Workplace health: long-term sickness absence and capability to work (Update)
Guideline Committee:	PHAC E
Subject of expert testimony:	Support for employees with a mental health condition to return to and stay in work

Evidence gaps or uncertainties:	• How do employees or employers access this support? Can referral come from elsewhere (e.g. GP, IAPT)?
	• Who is it for? (individual eligibility criteria re: length of condition; degree of functioning / impairment; employer criteria: SMEs? larger organisations?)
	• How does this support fit in with:
	  ○ Access to Work and the legal obligations of employers under the Equality Act?
	  ○ NHS and OH sources of support?
	• What types of support are provided and by whom? (please give details of how people are supported to return to work and stay in work; the background / training of people delivering the support intervention; modes of delivery; frequency & duration)
	• Evidence re: effectiveness; barriers & facilitators to delivery; acceptability to stakeholders

Section B

Summary testimony:

The Access to Work Mental Health Support Service was launched in December 2011 and is funded by the Department for Work and Pensions. It provides confidential vocational support, delivered by Vocational Rehabilitation Consultants (VRC), for employees with mental illness to help them to retain or regain their ability to participate at work, and is delivered at no cost to the individual.

All VRC's are experts in supporting people with mental health conditions and have completed their Certified Disability Management Professional qualification and are Mental Health First Aid Trained, with a small number coming from clinical backgrounds such as Occupational Therapy.

Remploy has delivered the service, which is a component of Access To Work, through two separate contracts (2011-18 and 2018-). During the previous contract more than 8,000 individuals were supported through the service. The current contract is delivered by two providers across England, Scotland and Wales.

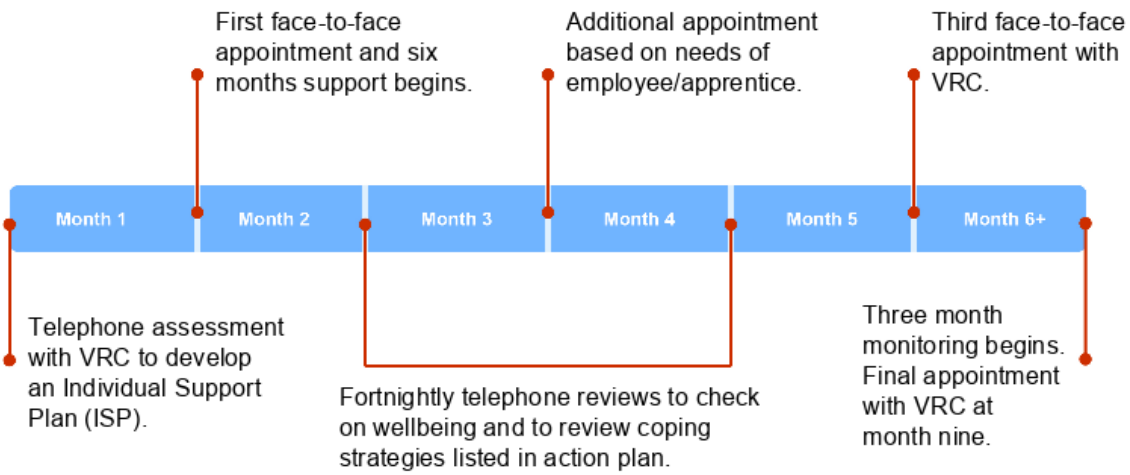
To access support, an individual must be in permanent or temporary employment and have a self-declared mental health condition (which can be either diagnosed or undiagnosed) that has resulted in workplace absence, or is causing difficulties for the individual to remain in work. Individuals who want to access the service must self-refer via a confidential helpline; email; the internet or by application to the DWP's Access to Work contact centre directly.

To promote the service, Remploy directly engages employers, including through use of free to access mental health webinars for HR professionals and line managers scheduled during lunchbreaks. More than 500 employers have joined these to date, and around 30% lead to referrals. We also directly engage HR and occupational health teams and provide materials for them to share with employees. The service typically compliments existing Occupational Health and Employee Assistance Programme support. In our experience, many of our referrals are made by employers making repeat use of the service after an initial positive experience.

Upon referral the individual will have an initial telephone interview with a VRC which establishes:

- The individual's job role, duties and responsibilities.
- The mental health condition and/or the symptoms the individual is experiencing.
- How the condition or symptoms are affecting the individual at work.
- Detail of the individual's responsibilities at work and targets that they may not be meeting.
- Whether the employer is aware of the difficulties the individual is experiencing
- What adjustments their employer may have already made for the individual
- Whether the individual have a clear idea of any help they require

After the initial telephone interview, eligible participants follow the client journey outlined in the below diagram:



Support and interventions available to individuals accessing the service include:

- Interventions such as:
  - Development of a Wellness Recovery Action Plan
  - Psychological wellbeing/self-esteem assessments
  - Mindfulness
  - Smartphone apps
  - Online CBT
  - Self-help
  - Resilience
  - Employer guidance for reasonable adjustments – Acting as a 3rd party can often help employers and employees reach agreements on adjustments or workplace accommodations
  - Application of interventions recommended by Occupational Health.
- Support through Access to Work funding including:
  - Holistic assessment
  - Job coaching
  - Support workers
  - Travel support
  - Training courses related to mental health.
- Signposting to external support, including:
  - Employee Assistance Programmes
  - GP support
  - Mental health charitable organisations

Under the previous contract (2011-18) Remploy successfully supported over 8,000 individuals through the service. Of these, 91% were still in employment after six months, the main measure of programme success. The service supports individuals with a diverse range of conditions, including stress, anxiety, depression, bipolar and personality disorder. Of the cohort supported through the service, more than 70% had a secondary mental

health condition. There was also 50% comorbidity with physical disability and health conditions.

This data is provided by the DWP and is based on the previous contract, which ended in August 2018. Public data for the current contract, which measures individuals still in work after 9 months, will not be available until a later date when official statistics are published.

References to other work or publications to support your testimony' (if applicable):

The report "Access to Work: Qualitative research with applicants, employers and delivery staff" commissioned by the DWP and written by IFF Research includes a section on applicant views on the effectiveness of the service, stating that "applicants felt that without AtW they would have been unable to remain in work. In some cases they had been on long-term sick leave, with conditions that often made communication and making the steps towards a return to work particularly challenging. The tailored support they received through Remploy enabled them to progress towards a return to work or a new job"

G.3 Reducing sickness absence in the workplace

Section A	
Name:	Michael Whitmore
Role:	Research leader
Institution/Organisation (where applicable):	RAND Europe
Guideline title:	Workplace health: long-term sickness absence and capability to work (Update)
Guideline Committee:	PHAC E
Subject of expert testimony:	Reducing sickness absence in the workplace
Evidence gaps or uncertainties:	Please provide information on the following areas, where possible: • What key factors are associated with frequent short-term sickness absence in the UK? • What common and more innovative measures do employer organisations use to reduce rates of sickness absenteeism? • Is there evidence (unpublished / case studies, etc) for the effectiveness, barriers and facilitators or employee acceptability/engagement with such measures? • What are the key problems for research in this area and how could these be addressed? • What available options are there for SMEs that lack the resources to buy in their own EAP / OH provision to help them reduce sickness absence & support employees' RTW?

Section B

Summary testimony:

- **What key factors are associated with frequent short-term sickness absence in the UK?**

Top Issues

- MSK
- Mental health
- Poor job quality and management practices

Secondary Issues

- Sleep – Fatigue
- Alcohol
- Age
- Financial Concern
- Income

Emerging areas to consider more

- Platform working
- Menopause

Systems Issues - Employer/Employee/Population Health split

- Organisations push the responsibility of making improved lifestyle behaviour modifications onto the employee. Some organisations find this easier than to instigate their own cultural change to support this too e.g. revising management structures, training and job variety.
- Cross-sector support, to support sector-wide workforces could be better developed so that sector-wide issues can be addressed more specifically.

- **What common and more innovative measures do employer organisations use to reduce rates of sickness absenteeism?**
  - Getting the basics right still might be the best thing to create strong impact in some organisations – it shouldn't be assumed a majority of organisations have got the basics in place well e.g. proactive OH, proactive communications of services and benefits to staff such as EAPs, proactive management support to staff.
  - Use of incentive programmes is developing
  - Digital enabled solutions are increasing – helps goal tracking
  - Seeing wellbeing as a valid board level measurement as part of productivity metrics
  - "Wellbeing is not about fruit": organisations are focussing on mental health and supporting employees to consider their whole selves and personal energy
  - Visible senior sponsorship supports success

- **Is there evidence (unpublished / case studies, etc) for the effectiveness, barriers and facilitators or employee acceptability/engagement with such measures?**

- Key factors that determine the success of a workplace health promotion programme are commitment from leadership and senior management and making the health and wellbeing of staff an organisational priority.
- Aligns with previous work conducted by RAND Europe, which found that organisations that understand health and wellbeing as an indicator of organisational success generally have lower levels of absenteeism and presenteeism among their employees. Stepanek et el 2017 - The return of investment for preventive healthcare programmes.
- Promising practices for health and wellbeing at work (Whitmore et al 2018)

Also see:

https://www.vitality.co.uk/business/healthiest-workplace/findings/

https://www.ft.com/reports/health-at-work

https://whatworkswellbeing.org

- **What are the key problems for research in this area and how could these be addressed?**
  - In general there is little evidence specifically discussing practices in commissioning of workplace health published in academic journals.
  - How to evaluate workplace wellbeing programmes is a little more forthcoming but still relatively scarce.
  - The recognition that productivity is driven by staff wellbeing is in early stages but funding, such as that by the ESRC, is beginning to bridge the productivity gap.
  - Research agendas are not commonly led by employers or employees or their representatives.
  - There is a lack of clearly tracked health outcomes in workplace wellbeing. There is a new national workplace health workforce across the country funded by business – who knows if they're supported and effective in achieving health outcomes?

- **What available options are there for SMEs that lack the resources to buy in their own EAP / OH provision to help them reduce sickness absence & support employees' RTW?**

Enablers

- Shorter communication pathways and horizontal hierarchies
- Facilitate open discussions
- Managers able to act as role models increases their impact on the staff as they're in closer organisational proximity

Challenges

- Lack of time, financial resources and personnel
- Lack of strategic workplace health system and lead
- Legal and bureaucratic hurdles

Overcoming barriers

- Engagement with external stakeholders

- Participation in sector or regional associations e.g. local PHE representatives, regional health and work awards, Federation of Small Business. This improves health and work knowledge and share ideas about implementation and best practice. Also it may improve access to external support to advise and establish in-house approaches and planning e.g. where public sector workers have an element of workplace health and wellbeing support in their remit.
- Consolidate efforts with other local employers to buy in OH provision. Some organisations target their offer to SME organisations - purchasing organisations could pool together their research of the market offerings, as well as agreeing a group-purchase approach with preferred providers.

References to other work or publications to support your testimony' (if applicable):

RAND Europe's partnership to provide VitalityHealth Britain's Healthiest Workplace, an annual health and wellbeing survey across the UK built up over a 6 year period.

G.4 Support available for return to work and workplace adjustment passports

Section A	
Name:	Angela Matthews
Role:	Head of Policy & Advice
Institution/Organisation (where applicable):	Business Disability Forum
Guideline title:	Workplace health: long-term sickness absence and capability to work (Update)
Guideline Committee:	PHAC E
Subject of expert testimony:	Support available from BDF for sickness absence / RTW management; use of workplace adjustment passports
Evidence gaps or uncertainties:	What forms of advice and support are offered by your organisation to businesses and how is this accessed? Please include an outline of: • Characteristics of businesses seeking advice/support – size, industry sectors, etc. • Most frequent types of advice/support sought • How is 'success' measured in relation to the support you offer • What are the key barriers and facilitators to ensuring successful outcomes from the support offered • What are workplace disability / adjustment passports; how can they support management of sickness absence and RTW in employees with a disability or health condition; information on uptake, promotion, acceptability, barriers and facilitators to implementation, etc.

Section B

Summary testimony:

A brief history of Workplace Adjustment Passports (WPA Passports)

WPA passports emerged in the 1990s when Business Disability Forum (then called Employers Forum on Disability) worked with the MS Society to produce a document for managers and employees to each have a record of agreed workplace adjustments support. This was designed particularly with fluctuating conditions (such as MS) in mind, where different support might be needed at times when an employee's symptoms are more pronounced than at other times. This document was then called a "Tailored Adjustments Agreement".

Very soon after this, BT quickly adopted its use and named it "Disability Passport". They also developed a similar document for employees with caring responsibilities (called a "Carer's Passport").

In 2013, many Civil Service Department's started using what they also called a "Disability Passport" and, in 2015, Cabinet Office published their Talent Action Plan which announced a move to one single and unified disability passport across all Civil Service Departments.

As adjustments management became a more embedded feature of workplace inclusion, organisations started to record details of adjustments in central management systems. As organisations became more sophisticated with their diversity practices and moved away from disability inclusion as 'legal duty' and instead towards wanting to engage and recruitment more diversely, the language of "agreement" became a term that felt 'at tension' with trying to adopt collaborative and supportive discussions. We then therefore changed the language, meaning the "Tailored Adjustments Agreement" became the "Tailored Adjustments Plan".[a]

The Tailored Adjustments Plan (or WPA passport) is now the document most requested by our Advice Service, alongside our resource to help employers decide what is 'reasonable'.

The purpose of WPA passports

There are three main purposes of the WPA passport:

1. To facilitate the portability of adjustments – i.e. when an employee moves teams or when line managers change, a passport would mean the employee does not have to go through discussing adjustments or how their disability impact them at work again. Employers find this increasingly unhelpful, though; as resources increasingly reduce, not every team can work in the same way, even within the same organisation, meaning we increasingly hear

[a] We are currently reviewing our TAA document (see Appendix 2 below) and are likely to change the name (to be confirmed).

adjustments are now less portable between teams. Many employers therefore tell us portability is increasingly less of an option to them.

2. To structure a conversation about adjustments and support between the employee and people manager.
3. To plan for when an employee is unwell or needs additional support because of their disability or condition. Sections of the passport are designed to inform the people manager what to do when the employee has (for example) becomes mentally unwell or has a seizure, and how to keep in touch in the employee needs to go off sick.

Use of WPA passports

WPA passports are used across many sectors, but the most prominent use across a whole sector is in the Civil Service. Although, as above, the passport is the resource our Advice Service send out to employers the most, we know employers do not always use it consistently or in its entirety. For example, we know employees sometimes extract some of its content into their own people management guidance and procedures, or they will use it only in cases where communication has broken down between the employee and people manager, or where the manager is 'new' to managing disabled employees.

The passport is often voluntary; as above, not all employees like passports or like having a specific document that focusses on their condition in addition to their HR record. For this reason, some employers operate a 'voluntary' passport practice, whereby employees can 'opt' to use a passport if they want to.[b] There are, however, management difficulties with this, and our research shows often that where passports are 'voluntary', there is usually an inconsistent experience of workplace support which disabled employees find unhelpful. Some employers also operate 'voluntary' passport option as part of a pilot period to trail the use of passports.

The passport was originally created to be a 'live' document, 'owned' by the employee. However, this does not always work in practice. Our Advice Service hear of many cases which indicate it is more common for managers to introduce the passport to employees, and where employees are often reluctant to participate in completing a passport. We also hear of cases where employees want to have a conversation with their manager which uses the passport structure, but they do not want their passport shared beyond them and their manager or being kept on their HR file.[c]

The WPA passport necessarily sits outside of the workplace adjustments *process*. There can be an assumption that the WPA passport is the basis of a workplace adjustments process, but this is inaccurate. Although passports can be a helpful *feature* of a fit for purpose, centralised WPA process, passports cannot fulfil the duty of employers to make adjustments alone. Some employees who have good retention rates and an effective WPA process do not use passports, and some organisations who use passports do not have an effective WPA process. **The difference between extended periods of sickness absence and good employee retention is the WPA *process*, not the passport.**

Return to work and conclusions

Return to work practices need much improvement across all sectors. This essentially affects the likeliness of the employee returning to work. Some of the most common adjustments-related 'sore spots' in return to work processes are:

- The WPA process is generally practiced as support for employees when they are 'at work'. WPA conversations and support needs significant improvement during periods of an employee's long-term sickness period. All too often, the WPA process 'wakes up' again on Day One of the employee coming back to work, or if a phased return is suggested (because then occupational health generally tend to get involved and the 'prompting' of adjustments is therefore introduced to the people manager or HR by them).
- Communication often breaks down when an employee is signed off sick. A huge number of calls to our Advice Service are from HR teams or people managers asking us how they should get *back* in touch with an employee who has been on long-term sick leave. We often see an employee declines to communicate with the employer during sickness absence (particularly when absence is due to work-related stress, which very many are) – even when arrangements for communicating during absence have been previously agreed in a WPA passport.
- Passports and the WPA process generally work for people who *already have* a condition or disability (and who have shared this information with their people manager). In many organisations, the WPA process and WPA passport work less well when an employee is off sick because they are 'newly' disabled or have recently acquired a condition (particularly as it is common or an employee not share information about a new condition until they have a confirmed diagnosis or prognosis). Often, employees are off work while waiting for a diagnostic assessment or waiting for a diagnosis from a NHS specialist; a phase which WPA processes do not always adequately address, and which is also often 'too soon' for a WPA passport to be agreed (because impact of the condition at work, or what would help, is not yet known).

[b] There are, however, management difficulties with this, and our research shows often that where passports are 'voluntary', there is usually an inconsistent experience of workplace support which disabled employees find unhelpful. Some employers also operate 'voluntary' passport option as part of a pilot period to trail the use of passports.

[c] This is, however, often the case when workplace support for a disabled employee has started 'too late' and by the time the passport is introduced, trust and communication between the employee and people manager or HR is already compromised.