Appendix A: Summary of evidence

Summary of new evidence from 8-year surveillance	Summary of new intelligence from 8-year surveillance (from topic experts or initial internal intelligence gathering)	Impact
PH22– 01 **Recommendation 1 Strategic and coordinated approach to promoting employees' mental wellbeing** Review 1 (evidence statements 5 and 6), Review 2, Expert report 1, 2 and 3		
Thirty two studies (11 SRs, 16 RCTs and 5 cluster RCTs) were identified that assessed the effectiveness of workplace interventions on mental wellbeing. These included organisational level interventions, educational/training interventions and responding to organisational change. **Organisational level** A systematic review that included 25 studies of interventions focusing on preventing burnout in employees, which included interventions focusing on employees as individuals (17 studies), organisation-wide (2 studies) and those that included both (6 studies) found that individual interventions provided short term relief (<6 months) from burnout, whilst organisational or combination interventions provided longer term relief (12 months+). All intervention effects diminished over time. (1) A systematic review that included 27 studies (representing 1,894 mental health workers) of "burnout" interventions, found that overall interventions significantly reduced burnout. Within organisation wide approaches "job training/education" interventions were found to be the most effective subtype. (2) A systematic review that included 20 studies with interventions focusing on promoting coping and	Initial intelligence gathering identified the following: Physical activity in the workplace (2008) NICE guideline PH13 provides guidance on encouraging employees to be physically active. It includes physical interventions as well as encouraging organisational wide approaches and flexible working policies/incentives. This guideline is due for a surveillance review in 2018. Workplace health: management practices (2016) NICE guideline NG13 provides guidance on how to improve the health and wellbeing of employees, with a focus on organisational culture and the role of line managers. Recommendation 1.11.1 recommends employers, senior leadership and managers, human resource teams, and all those with a remit for workplace health to regularly monitor and evaluate the effect of new activities, policies, organisational change or recommendations on employee health and wellbeing and identify and address any gaps. Ongoing trials: A cluster randomised controlled trial of an intervention to improve the mental health support and training available to secondary school	**New evidence was identified that may change the recommendation.** **Organisational interventions** There is a large body of evidence relating to the effectiveness of wellbeing interventions at an organisational level (1-32). Overall, the evidence suggests that organisational interventions may be effective in improving a variety of mental health and wellbeing outcomes in employees. The evidence indicates that organisational interventions or combined approaches may provide longer term relief from burnout than individual level interventions alone (1,4). A range of interventions were identified which may improve employee mental well-being including: those targeting work flow, work quality improvement and interventions in resilience and resource-building (12–14); targeting work conditions and schedules, improving communication and workplace support (8,9); employee participation at the organisational level and organisational level job training/education interventions (2,7), participatory interventions (6,7). Two SR's found that certain characteristics of organisational interventions were more likely to provide favourable outcomes. These included interventions aiming at building team relationships, stress management/recovery training and helping in

resilience for oncology/palliative care nurses working with cancer patients. The findings included a total of 10 studies which included interventions focusing on the emotional impact of work, work burnout, compassion fatigue, "challenges in self-care" and stress management strategies. A further six studies compared interventions at the organisational level aimed at promoting coping and resilience, and three studies focused on the effectiveness of interventions. Studies which included interventions aimed at building team relationships, provision of stress management/recovery training and helping in "processing emotion and learning from experiences" were of value. The review noted that support at an organisational level is required to help with promoting coping and resilience with daily work encounters. (3) A systematic review of 16 studies focusing on interventions targeting burnout in nursing staff providing long term elderly care found a mixture of interventions aimed at the individual or organisational level, or including a combination of both. Seven studies reported a reduction in nurse burnout levels, with those aimed at the individual level reducing burnout levels for a shorter period of time compared to organisational level and combined interventions. (4) A systematic review of 23 systematic reviews (11 meta-analyses and 12 narrative reviews involving 499 studies) of interventions focusing on outcomes relating to employee mental health and levels of absenteeism at an individual, organisational level or combination of both, found that cognitive-behavioural programmes produced the largest effects on mental health at the individual level and reported that organisation-wide interventions relating to physical activity led to lower levels of absenteeism. (5)	teachers the WISE (Wellbeing in Secondary Education) project One topic expert noted that there would be a secondary analysis report of data from MIND's Workplace Wellbeing Index published by The Institute of Employment Studies http://www.employment-studies.co.uk/publications. A topic expert also highlighted references relevant to the recommendation including one which focused on the results of applying a "Workplace of well-being" framework to a UK based healthcare setting to explore enablers & barriers to behavior change: Brand et al. (2015) Tailoring Healthy Workplace Interventions to Local Healthcare Settings: A Complexity Theory-Informed Workplace of Well-Being Framework. Scientific World Journal. 1-8. New Economics Foundation (2014) Well-being at work: a review of the literature Hillage et al. (2014) Workplace policy and management practices to improve the health of employees, Evidence Review 2. *Psychological Medicine*. **Policies and guidance** The CIPD (July 2016) Employee Outlook: Focus on mental health in the workplace guidance outlines key findings from a 2016 employee survey conducted by YouGov for CIPD, including that several adjustments for those employers experiencing mental health issues were favourable amongst employees including "phased return to work, access to flexible working, access to occupational services, access to counselling services and an employee assistance programme"; that training is of high importance to ensure that managers can communicate and deal with employee mental health issues effectively,	"processing emotion and learning from experiences"(3). Such interventions also included those which focused on improving "employees' lives" (not just cost focused), encouraging staff to support wellness interventions and "to improve their health in general, encouraging "a participation-friendly corporate policy and physical environment", adapting to reflect "changing needs of the employees", utilising support/resources from community health organisations as well as technology to facilitate health risk assessments and wellness education (11). It is important to note that several SRs found limited, low quality evidence or mixed benefit of organisational interventions in reducing stress, burnout and anxiety in a variety of employees (8–10). The recommendation should be updated with details concerning which specific organisational interventions are associated (or not) with improvements in mental health and wellbeing. **Educational/training interventions** While there is mixed evidence concerning the effectiveness of educational interventions in improving mental health and well-being in different groups of employees, overall the evidence supports these types of interventions. The findings are in line with the current recommendation but provide additional detail of potential interventions. The evidence included wellbeing and health education/promotion/prevention, work ability promotion, coaching, psychoeducational interventions which led to improvements in several wellbeing outcomes (16,18–21,24,27–29), with the exception of one RCT focusing on the effectiveness of an occupational stress e-learning program (25).

A systematic review that included 24 studies on interventions (8 primary, 14 secondary and 2 combination of both) focusing on mental health concerns in the workplace reported that the majority of studies focused on "skills training" interventions, and a third of all studies focused on interventions collectively at the level of the "individual, group and organisation". Studies in this latter group often also involved "psychosocial interventions or participatory research" and were significantly associated with improvements in employee work and mental health outcomes. (6) A systematic review that included 18 studies with interventions focusing on the "demand-control-support" model of workplace health and encouraging employee participation at the "organisational level", found that some studies were associated with some improvements in terms of mental health (anxiety and depression levels) when either "employee control improved", employees felt more supported or demands reduced. Studies which involved employees receiving "participatory interventions" were associated with poorer health outcomes. (7) A Cochrane systematic review with 58 studies focusing on workplace and "person-directed" interventions to determine effectiveness in preventing work-related stress in healthcare workers included 20 studies aimed at an organisational level which included "changes in working conditions, organising support, changing care, increasing communication skills and changing work schedules". All organisation interventions, with the exception of changing of work schedules, showed no significant difference in terms of reducing stress levels compared to no or alternative intervention. The review states that the evidence of such interventions in reducing stress to a greater extent compared to no intervention “but no more than alternative interventions” is of "low-quality". (8)	“spot the early warning signs of possible issues”, “implement policies sensitively and fairly” and to be able to signpost to other resources/services. The report recommends that “an open culture around mental health” is required to encourage employees to be more inclined to disclose issues; and it states that employees with positive mental wellbeing at work will “feel more motivated, engaged and productive”. The CIPD (January 2016) Growing the health and well-being agenda: From first steps to full potential report outlines the CIPD wellbeing model which includes “five domains of well-being)”: 1. Health – encompasses physical health, physical safety and mental health. 2. Work – encompasses “working environment, good line management, work demands, autonomy, change management, pay and reward”. 3. Values/Principles- encompasses leadership, ethical standards and diversity. 4. Collective/social- encompasses “employee voice” and “positive relationships”. 5. Personal growth – encompasses career development, emotional, lifelong learning and creativity. The policy recommends employers to focus on this model to aid in promoting the wellbeing of employees. The report also outlines certain recommendations for employers: 1. HR professionals can help to promote an organisation-wide approach to workplace wellbeing by engaging with senior managers incorporating “wellbeing-practices” in “day to day operations”. 2. Line Managers have an important role in looking after the wellbeing of their employees and ensuring policies are followed. Training is required to make sure that managers are able to understand and effectively deal with employee mental health issues.	The evidence base includes different groups of employees. For example, RCTs of educational interventions with employees with depression, all reported significant improvements in depressive symptoms (19,24,30). Two RCT’s reported improvements in outcomes in employees with at-work limitations/problems receiving educational interventions including one which involved a group training intervention consisting of “exploration of work-related problems, communication at the workplace, and the development and implementation of solutions” (30,31) Studies with construction workers however recorded no improvements in work/wellbeing outcomes from educational interventions (15,22,23). Skills training interventions were identified in several studies which led to improvements for a range of work and wellbeing outcomes for a variety of employees, including police employees addressing trauma resilience (17) and psychiatrists (26). The current recommendation includes creating an awareness and understanding of mental wellbeing to reduce the potential for discrimination and stigma related to mental health problems. This could be updated with reference to the evidence on providing educational interventions to employees. **Support throughout organisational change interventions** There is inconclusive evidence of effectiveness of support throughout organisational change interventions on mental wellbeing at work (32). **Physical activity workplace interventions** Physical activity interventions will not be addressed in this surveillance review, but will be considered in the 2018 surveillance review of NICE guideline Physical activity in the workplace (2008) PH13. **Policy**

A systematic review with 19 studies (14 RCTs, 3 cluster RCTs and 2 crossover trials) focusing on interventions aimed at workplace stress prevention in healthcare workers. The review included a wide variety of interventions: person directed interventions which involved "cognitive-behavioural, relaxation, music-making, therapeutic massage and multicomponent or those work directed interventions" which included "attitude change and communication, support from colleagues and participatory problem solving and decision-making, and changes in work organisation". The review found some degree of evidence for both person directed and work directed interventions in reducing stress, burnout and anxiety in healthcare workers, overall the review concluded such effectiveness evidence to be "limited". (9) A Cochrane systematic review with 4 studies which focused on organisational interventions and determining the effectiveness of such interventions in reducing stress levels and improving the mental wellbeing of teachers. There was mixed evidence of effectiveness and the authors of the review stated that evidence for effectiveness of interventions were "low quality" in improving stress and wellbeing outcomes in teachers. (10) A systematic review that included 20 studies focusing on employer wellness interventions ("health assessments, lifestyle management and behavioural interventions) and associated health related quality of life and economic outcomes. A narrative synthesis indicated that interventions with positive outcomes were those that focused on improving "employees' lives" and not solely cost focused, those whereby all staff were encouraged to support wellness interventions and "to improve their health in general". In addition, those interventions which included organisations encouraging "a participation-friendly corporate policy and physical environment", and those which were adapted to reflect "changing	3. Create a “healthy culture” in the work environment with “commitment from senior leaders” which is supportive of promoting mental wellbeing. 4. Ongoing assessment of employee mental wellbeing, “employee satisfaction” and “organisational measures” by HR staff to provide evidence for the need of continual investment to promoting mental wellbeing at work. The report outlines certain recommendations for the government and stakeholders. The Business in the Community (October 2017) Mental Health at Work Report 2017 report highlights the key survey findings for 2017 (second year of a three year project) on mental health at work. The report notes that a large proportion of employees are affected by mental health issues. The report highlights that mental health is at the forefront of the current political agenda. There is an improvement in manager’s attitudes towards mental health along with employees’ belief in workplace mental health support compared to last year. However, the report states that “a disconnect persists between the vision for workplace mental health and the reality” and in some instances during disclosure of a mental health issue to a line manager has led to negative consequences for the employee including “disciplinary procedures, dismissal or demotion”. Future recommendations involve a need for a collaborative partnership between employees and employers to work on mental health issues at work, with a key focus on the responsibility of employers to have the necessary training to support staff and protect their wellbeing. The ACAS (October 2017) Promoting positive mental health in the workplace report involves five steps aimed at employers and managers to	It is recommended that the recommendation is updated to take into account current policy recommendations. This may include consideration of the use of workplace “mental health champions” as an additional source of employee support. Workplace health: management practices (2016) NICE guideline NG13 recommends all those with a remit for workplace health to regularly monitor and evaluate the effect of new activities, policies, organisational change or recommendations on employee health and wellbeing. An update should consider cross-referencing to NG13.

needs of the employees" and finally those interventions which utilised support/resources from "community health organizations" and "technology to facilitate health risk assessments and wellness education" were more likely to provide favourable outcomes. (11) A cluster RCT with primary care clinicians (n=166) randomised at a clinic level to receive either of 3 quality improvement interventions (aimed at improving work conditions through 1. "Improved communication", 2. "Changes in workflow" and 3. " Targeted quality improvement projects") or control reported that after 12-18 months the intervention group had significant improvements in burnout and satisfaction compared to baseline. Interventions which focused on workflow and quality improvement resulted in greater significant improvements in burnout symptoms. Those interventions focusing on improved communication or changes in workflow resulted in significant improvements in clinician satisfaction, but had no significant improvement on intention to leave. (12) A cluster RCT with restaurant workers (n=947) randomised at restaurant level to receive either a "Team Resilience" interactive intervention or control reported that the intervention group showed significant decreases in personal stress levels and "exposure to problem co-workers" outcomes compared with control restaurants. (13) An RCT with individuals (n=718) randomised to receive an organisational level intervention (resource-building group intervention aiming to enhance career management, mental health, and job retention) or control found significant improvements in depression symptoms, desire for early retirement and increased "mental resources" in the intervention group compared with control group at 7 month follow period. Younger employees or individuals with "elevated levels of depression or	provide guidance to improve mental wellbeing at work: 1. Understanding what mental health is, tackling "the stigma associated with poor mental health" and the importance of "complying with legal obligations" when working with employees with poor mental health and making "reasonable adjustments" to allow them to continue working. 2. Identifying ways to remain dedicated to promoting mental wellbeing in the workplace. This includes "developing an action plan to change attitudes", "creating a mental health policy to set out its value" and "ensuring senior managers champion awareness of mental health and fight to remove the stigma around mental health in the workplace". 3. Employers should collate information on areas which may be associated with poor mental health for employees and then focus on "tackling work-related causes of mental ill health". This includes recommendations to help resolve common causes of poor mental health at work; employee access to sources of support in addition to from their line manager, such as designated "mental health champions" or external services; and suggests to "work with trade union and other employee representatives" to provide extra support to staff as well as general workplace wellbeing promotion. 4. Training/educating staff on mental wellbeing at work and "training managers to deal with mental ill health". 5. Ensure effective signposting for both employees and managers to other resources or organisations if they require further information or support. Thriving at Work: the Stevenson/Farmer review of mental health and employers (October 2017)	

exhaustion" were subgroups that yielded the most benefit from the intervention. (14) **Educational/training** A cluster RCT with construction workers (n=293) randomised by department to receive either a prevention program intervention aimed at "health and work ability" promotion or control found that at 12 month follow up, the intervention group demonstrated significantly reduced costs associated with employee absenteeism compared to the control group. The intervention group compared with control demonstrated no significant improvements for primary outcome measures "work ability, mental and physical health status" and so the intervention was deemed not cost effective. (15) An RCT with employees (n=180) randomised to either Health risk appraisals (HRA) plus health promotion and education activities (Group A), HRA only (Group B) or a no intervention control (Group C) reported that after 12 months, both Group A and B showed "non-significant improvements" in scores on "lifestyle, mental health and work ability indices" compared with the control group. Participation in the HRA was associated with a higher likelihood of perceived lifestyle behaviour change, which was greatest when health promotion was also added (statistics =NR). (16) An RCT with police employees (n=18) randomised to either "imagery and skills training program" to address police trauma resilience or usual training to measure changes in stress and "work performance" during a "live critical incident simulation" for 10 weeks found that employees randomised to the intervention demonstrated significant reductions in low mood as well as increased work performance, in comparison to the usual training group. (17) An RCT with female carers (n=56) randomised to receive either "psychoeducational" intervention or	This independent review outlines recommendations for the government on how employers can better support staff including those with poor mental health in the workplace “to remain in and thrive through work”, leading to cost savings for the government and the economy as well as a positive impact on individual mental health and society. The report provides recommendations with a ten year view to: - Increase employer transparency. - Ensure that all employees have “good work” - Ensure that all employees and organisations “have the awareness and tools to not only address but prevent mental ill-health”, support those with poor mental health throughout all stages of recruitment and employment and provide timely referral to services to reduce sickness levels. - Significantly lower numbers of individuals with a “long term mental health condition who leave employment each year” with those who are able to work are able to “benefit from the positive impacts of good work”. - Aim for the UK to “prioritise mental health at work” and become “global leaders in reducing stigma”.	

"education" control found that emotional exhaustion significantly improved in the intervention group compared to control, but stress and job satisfaction did not improve. (18) An RCT with employees (n=164) randomised to either receive screening and intervention ("telephonic assessment instruments followed by tailored information, education, and referral") or control group which received screening only to measure changes in functional impairment, emotional distress and social support found that the intervention group in comparison to control group demonstrated a significant improvement in depression symptoms at 3 and 6 month time points.(19) An RCT with fire service line managers (n=176) randomised to receive either of two training conditions; "Looking after Wellbeing at Work" course, "Mental Health First Aid" course or "an hour-long leaflet session" as control found that the "Looking after Wellbeing at Work" and "Mental Health First Aid" provided significant improvements in "attitudes to mental health and knowledge/self-efficacy around mental health", between baseline and post training scores and in comparison to post training scores with control group. Thirty individuals were interviewed at random on their feedback of the course, the findings indicated that subjects had greater awareness in recognising and responding to mental health issues and "changing attitudes towards mental health". (20) An RCT with cancer care workers (n=70) randomised to receive either educational one day workshop intervention or a control (consisted of "written educational material") to measure effectiveness on "recovery experiences" (including "psychological detachment from work, relaxation, mastery experiences and control over leisure"), "satisfaction with self-care practices" in relation to		

recovery and also perceived sleep quality. The intervention group reported significant improvements at six weeks follow up for all outcomes, whereas for the control group all outcomes worsened. The intervention group when compared with control reported significant improvements in mean scores with a "significant main effect" at the six week follow up. (21) An RCT with construction workers (n=314) randomised to receive either workplace "health promotion" intervention (consisting of one to one coaching and tailored information) or control to measure changes in "work ability, work-related vitality, work performance and sickness absence" found that the intervention did not significantly improve work-related outcomes when compared with control at either 6 or 12 month follow up. (22) A cluster RCT with construction workers (n=297) randomised by department to receive either intervention (two "individual training sessions with a physical therapist" and "empowerment training sessions") or control, found that the intervention group reported no difference in work ability, physical or mental health status outcomes when compared to control group. Long term sick leave was reduced, but not significantly in the intervention group when compared with control. (23) An RCT with employees (n=119) randomised to receive either "Coping With Strain" course intervention or control (which received intervention after six months), to measure both short and long term effectiveness in reducing workplace depression reported that levels of depression significantly decreased during the intervention, with effects maintained at follow up points over four years for both groups, except a small increase nearing completion of four year follow up. (24)		

A cluster pilot RCT with mental health service employees (n=424) randomised at a service level to receive either intervention (occupational stress e-learning program for managers "to improve employees' well-being and reduce sickness absence") or control reported that there was no effect of the intervention on Warwick Edinburgh Mental Wellbeing Scale or on sickness absence in employees at follow-up. (25) An RCT with psychiatrists (n=72) randomised to receive either intervention (self-care skills training with solution-focused counselling) or control, found that those in the intervention group reported superiority in all outcomes compared to the control group between baseline and at 3 and 6 month follow up points. (26) An RCT with employees with chronic illness (n=59) randomised to receive either telephone coaching intervention or control for 12 weeks found that those in the intervention group showed significant superiority in the outcomes "work ability perceptions, exhaustion burnout, core self-evaluations and resilience" compared to control, which such positive improvements maintained 12 weeks post coaching. The intervention group was not associated with significant improvements in job satisfaction, work related self-efficacy and disengagement burnout. (27) An RCT with university employees (n=479) randomised to receive "Fun For Wellness" intervention (internet based intervention focusing on "multiple dimension" subjective well-being promotion) or control with a 30 and 60 day follow up, found that the intervention group reported significant improvements in subjective well-being compared to control across multiple dimensions including community and economic dimensions at both follow up points and interpersonal and psychological dimensions at 60 day follow up. (28)		

An RCT with employees (n=303) randomised to receive either a new online "positive intervention programme" intervention known as PERMA or an established "positive intervention programme" or control, found that those randomised to receive either intervention demonstrated significant improvements in wellbeing ("small effect sizes for general subjective wellbeing and medium effect sizes for work-related subjective well-being") compared to the control group taking into account baseline wellbeing. Both programmes provided a similar level of improvement in terms of staff wellbeing, with the intervention not demonstrating superiority over established program. (29) An RCT with government employees (n=79) with depression and "at-work limitations" randomised to receive either brief telephonic program intervention or control, to measure changes in depression levels, work limitation and self-reported time missed from work found that the intervention was superior in all outcomes compared to the control at follow up, and the "estimated productivity cost savings is $6041.70 per participant" every year. (30) An RCT with individuals with chronic physical disease (n=122) experiencing "work-related problems") randomised to receive either intervention (group-training program- incorporates "exploration of work-related problems, communication at the workplace, and the development and implementation of solutions") found those in the intervention group reported significant improvements in self-efficacy and fatigue compared to control group at 24 months. Job satisfaction was higher in the intervention group, whereas job maintenance was lower in the experimental group, however differences were not significant when compared to control group. (31) **Support through organisational change**		

An RCT with further education college employees recruited during "organisation downsizing" (n=66) and randomised to receive either "work-related self-affirming implementation intention" intervention or control, found that the intervention group reported significant improvements in work related self-efficacy and anxiety compared to control, with effects maintained at assessment three weeks later for work related anxiety. For those receiving the intervention, there were no significant differences in depression, job satisfaction and self-esteem outcomes. (32) **Physical activity** Four studies were identified that were organisational interventions involving physical activity and measuring their impact on employee wellbeing outcomes. (5,33–35)		
PH22– 02 **Recommendation 2 Assessing opportunities for promoting employees' mental wellbeing and managing risks** Review 2, Expert Report 1, 2		
Sixty nine studies (8 SRs, 57 RCTs and 4 cluster RCTs) were identified focusing on various workplace wellbeing interventions: **Mindfulness single intervention** A pilot RCT with public sector employees (n=120) assigned to receive either mindfulness intervention or "information-only control" over 5 weeks reported that the intervention group showed significant improvements in outcomes: mindfulness, perceived stress, psychological distress, health related quality of life and social functioning. (36) An RCT with employees (n=89) assigned to either "online mindfulness intervention" or "wait-list control" at baseline, post intervention and 6 month follow up, found that the mindfulness intervention group experienced significantly lower stress and improved resiliency, mindfulness and wellbeing (37)	Initial intelligence gathering identified the following: A refresh in terminology in recommendation 2, was recommended from a previous surveillance review decision to reflect changes in relevant policy since the guidance was produced but this was not undertaken. Physical activity in the workplace (2008) NICE guideline PH13 Workplace health: management practices (2016) NICE guideline NG13. Recommendation 1.3 centres on mental wellbeing at work focusing on the principles of the Health and Safety Executive's Management standards for work related stress.	**New evidence was identified that may change the recommendation.** **Mindfulness interventions** A large amount of evidence has been identified regarding workplace mindfulness interventions that suggests they are effective in improving work-related outcomes, work-life balance, mental wellbeing, and other outcomes (36–44). This was found for different groups of employees, including those with poor mental health and generalised anxiety disorder (39,40). Studies which focused on combination mindfulness interventions with either meditation/yoga, music and yoga, ACHIEVER resilience curriculum/acceptance & commitment therapy, physical and cognitive group training also demonstrated improved wellbeing (46–54) and pain intensity outcomes (55), with the exception of one study focusing on mindfulness and coaching intervention which demonstrated no effect (45). One

An RCT with governmental research institute employees (n=257) randomised to either "eight-week mindfulness training, e-coaching, and supporting elements" intervention or usual practice as control to determine cost-effectiveness analysis reported no significant differences for general vitality, job satisfaction, work ability and total costs, however a significant but “not clinically relevant adverse effect” for work engagement after 12 months between intervention and control. In relation to cost-effectiveness, the intervention was not found to be cost effective or cost saving. (38) An RCT with employees with generalised anxiety disorder (n=57) randomised to receive "mindfulness-based stress reduction" or an "attention control class" lasting 8 weeks, found that compared to control, the intervention group reported significant reductions in partial work days missed. At the 6 month follow up, those individuals who had received the intervention and had greater participation in home mindfulness meditation practice experienced reduced work loss and visits to mental health professionals. (39) An RCT with employees with poor mental health (n=144) randomised to receive either mindfulness-based intervention or control over a period of eight weeks, found that following completion of treatment the intervention group reported significantly lower levels of psychological distress, prolonged fatigue and perceived stress in comparison to the control group. The intervention did not result in any significant improvements in relation to job strain one demographic variables were controlled for; and there were no clear improvements to job control and job demands. (40) An RCT with employees (n=64) randomised to receive either "self-training mindfulness" intervention or control group found that the intervention group reported significant improvement in relation to job	One topic expert highlighted references relevant to the recommendation: Peterson et al, (2008) Reflecting peer-support groups in the prevention of stress and burnout: randomized controlled trial Joyce et al. (2015). Workplace interventions for common mental disorders: a systematic meta-review. *Psychological Medicine*. 46, 683–697. **Policies and guidance** Department of Health (2014) Wellbeing and health policy includes a section relevant to NICE guideline PH22: working well which provides background information that is already part of the guideline. No interventions are mentioned. RAND Europe for DWP and DH (January 2014) Psychological wellbeing and work: improving service provision and outcomes report outlined the “four policy options” of service delivery for government consideration with the aim to “provide earlier access to specialist services, address both employment and mental health needs” and “introduce more integration between current services or propose new or innovative applications of existing evidence-based models”. The four options included: 1. “Embed vocational support based on the Individual Placement and Support (IPS) model in primary care settings”. This intervention would be made available by GP practices or existing services offering therapies for mental health conditions. 2. Help individuals claiming benefits to overcome challenges faced when job seeking by supporting to “build self-efficacy and resilience” in team based work with their employment assistance group. 3. Facilitate the availability of “online mental health and work assessment and support”, based on tested therapies (“online mental	study conducted a cost-effectiveness analysis alongside an RCT focusing on a “mindfulness training, e-coaching, and supporting elements” intervention, which was not found to be cost effective (38). **Other workplace interventions** There is a reasonable body of evidence relating to acceptance & commitment therapy (56–58), biofeedback (59–61) and meditation, relaxation and music interventions (62–64) that indicates these may be effective techniques in reducing work-related stress and improving psychological outcomes for employees. Several studies provided evidence of other effective workplace interventions including counselling (65,66), gratitude/hassle diary (67), happiness training (68–70), parenting training (71,72), peer support (73), resilience training (13,17,74), resource building (75), self-directed tasks (76), self-efficacy (77,78), qigong (79) and yoga (80,81). Screening of mental health issues followed by physician referral interventions for those positively screened was the focus of three studies which led to improvements in work functioning in two studies (82,83). Two studies also conducted an economic evaluation alongside RCT and found the preventative intervention (with referral to physician) to be cost-effective, although this should be interpreted carefully given the limited number of studies identified (83,84). Evidence was found for studies focusing on cognitive training/cognitive behavioural therapy (5,85–88), stress management (89–96) and combined therapy interventions (97–100). The evidence is generally supportive of such interventions leading to improvements in mental health, well-being and work outcomes in employees, often to a greater extent in in those with elevated symptoms of perceived stress as noted in several

satisfaction and reduction in emotional exhaustion compared to the control group. (41)

An RCT with working adults (n=NR) randomised to either receive a short course of mindfulness-based stress reduction intervention or control, over six weeks found that those individuals randomised to receive intervention reported a significant decrease in perceived stress and increased levels of mindfulness. Both intervention and control groups reported significant improvements in sleep quality. (42)

An RCT with employees (n=246) randomised to receive either internet based self-training intervention (consisting of mindfulness) or control to promote work-life balance, found that those in the intervention group reported significant reductions in "strain-based work-family conflict" and improvements in psychological detachment and work-life balance compared with control group. (43)

An RCT with call centre employees (n=161) assigned to either "mindfulness stress management program" intervention alone, intervention with "group support", intervention with "group and expert clinical support" or control group reported that "perceived stress" was significantly lowered along with significant improvements in "emotional and psychological well-being" in all intervention groups compared with control group, with group support improving participation, engagement and outcomes. (44)

Mindfulness and coaching
An RCT with research employees (n=257) randomised to receive intervention (mindfulness-related training followed by coaching) or control to measure changes in work engagement, mental health, need for recovery and mindfulness found no significant differences between intervention and

health assessment and Cognitive Behavioural Therapy") available to the public with a potential "vocational element".

4. Provision of "telephone based services" available through Jobcentre Plus consisting of "psychological and employment-related support" in a similar way to "support provided by Employee Assistance Programmes and models designed for the Work Programme".

The report recommends government investment in such policy choices which would result in "different estimated costs per participant" but likely to produce benefits which outweigh costs and that "each option should be tested to build an evidence base in this area".

The Department for Work and Pensions (January 2015) Fit for Work guidance for employees outlines details of how to access free support on employment related health matters. It also details how a free referral for an occupational health assessment can be made with an occupational therapist either by using the free service (online or by telephone) or via an individual's GP (until March 2018). This referral is made if an individual is deemed likely to be off sick for four weeks or longer and "are likely to be able to return to work". Once an individual's health assessment has been completed with an occupational therapist, a "return to work plan" is agreed to provide tailored "supportive actions" which aim to help an individual's return to work. The plan is then shared with their GP and employer, providing employee consent, with a collective approach on whether/how best to implement these "suggestive actions".

The guidance outlines how the free support on employment related health matters can "help with absence prevention" and therefore potentially reduce sickness absence costs. The guidance recommends employers implement Fit for Work into sickness absence policies in order to inform

studies focusing on stress management interventions (91,95,96).

One Cochrane review was identified relating to civility, respect and engagement interventions preventing workplace bullying and focusing on wellbeing and job satisfaction outcomes, which found low quality evidence for the effectiveness of such interventions (101)

Physical activity workplace interventions
Physical activity interventions will not be addressed in this surveillance review, but will be considered in the 2018 surveillance review of NICE guideline Physical activity in the workplace (2008) PH13

Policy
It is recommended that an update considers current policy guidance. This includes ensuring employers and employee representatives are effectively signposting the services available for employees that support work related health issues such as Fit for Work guidance which includes the option of referral for occupational health assessment (until March 2018) and aims to minimise sickness absence. The recommendation could also provide greater emphasis on counselling services such as Employee Assistance Programs provided by different means including telephone, face to face and online mental health assessment and support.

Workplace health: management practices (2016) NICE guideline NG13 focuses on the principles of the Health and Safety Executive's Management standards for work related stress in recommendation 1.3 and is directly relevant to recommendation 1 of NICE guideline PH22. Recommendation 1.3 within NICE guideline NG13 may therefore be better placed within any update of NICE guideline PH22 rather than remaining within NICE guideline NG13. The close relationship and potential overlaps

control groups for any outcomes at both 6 and 12 months follow up. (45) **Mindfulness and meditation/yoga** A systematic review with 10 studies which focused on interventions in the workplace found that particular interventions involving meditation and mindfulness provided most benefit in terms of improving wellbeing and performance levels at work with some evidence of effects being maintained for up to 3 months later in this latter outcome. Evidence relating to relaxation interventions was unclear. (46) An RCT with nurse leaders (n=33) randomised to receive either brief "mindfulness meditation course" or control found that the intervention group reported significant improvements in self-reported stress from baseline to one week after receiving intervention, when compared with control group. (47) A pilot RCT with employees (n=239) randomised to receive either one of three interventions (yoga stress reduction program or one of two mindfulness interventions with one being delivered in person and the other online) or control, found that intervention groups reported significant reductions in perceived stress levels, sleep quality compared with the control group, reductions were of equal measure for both mindfulness intervention groups. (48) **Mindfulness, Music and Yoga** An RCT with surgical personnel (n=NR) randomised to receive either an 8 week stress reduction intervention ("mindfulness, gentle yoga, and music") or waitlist control that measured "biological markers" of stress 1 week pre and post intervention, found that in the intervention group salivary alpha-amylase (a biological marker for stress) was significantly reduced post intervention compared to pre-intervention, and that this was positively correlated with burnout scores; no change was reported in the control group. (49)	employers/employees of the services freely available to them, although employee eligibility depends on fitting select criteria requirements. The guidance also highlights that “it is not mandatory for employers to refer employees to Fit for Work or progress the recommendations made by Fit to Work”. Work Foundation for Department for Work and Pensions (August 2015) Health and wellbeing at work: a survey of employees, 2014 report highlights the key findings from a 2014 telephone survey with employees experiencing more than one sickness absence period lasting greater than a fortnight. The survey focused on the health and wellbeing of employees over the course of the previous year as well as sickness absence and “nature of support to return to work”. The report recommends that more work is required to understand “the barriers to the provision” of mental health services by employers, such as information on the costs and investments associated with and the “efficacy” of services. The report suggests that employers must “provide evidence based support for the prevention and management of mental health conditions” in the workplace particularly if there are also physical co-morbidities. The Work Foundation (December 2016) Employee Assistance Programmes (EAPs) Supporting good work for UK employers policy focuses on the use of EAPs in the UK and reports findings from a survey of HR managers, EAP providers and “in depth interviews” with EAP contract/HR managers. 1. EAPs were considered to be “an important investment for organisational health and wellbeing plans” and those services which included “online and face-to face counselling” in addition to EAPs provided by telephone were most favoured, although sole telephone	between NICE guidelines PH22 and NG13 should be considered during update.

An RCT with bank employees (n=57) randomised to either receive "Mindfulness in Motion" intervention consisting of "mindfulness, music and yoga" or control over eight weeks, found that the intervention group showed no significant changes in relation to work engagement but significant changes in stress levels, sleep quality, global sleep, daytime dysfunction and work absorption in favour of the intervention, lasting for at least eight weeks post study completion. (50) **ACHIEVER Resilience Curriculum** An RCT with teachers (n=NR) randomised to receive either the "ACHIEVER Resilience Curriculum" (ARC) intervention (combines mindfulness, values clarification, gratitude practices, sleep hygiene) or an active control reported that teachers receiving the intervention experienced significant reductions in "job-related stress" and significant increases in "teaching self-efficacy". (51) **Acceptance/Acceptance and Commitment Therapy and Mindfulness** An RCT with hospital nurses (n=50) randomised to either receive intervention (Acceptance and Commitment Therapy and Mindfulness) or control to measure changes in "psychological flexibility, mindfulness and well-being", found that the intervention significantly increased vitality (including at follow up) and purpose of life compared to control. The intervention was also associated with significant improvements in relation to nurse's "psychological flexibility" and "negative affect". (52) An RCT with local authority employees (n=311) randomised to either receive a stress management intervention based on "acceptance and commitment therapy" including mindfulness and "value-based action skills" or control, found that after 6 months, those employees assigned to intervention	services were the most frequently available service. 2. Line managers and providers of EAP could help in developing service promotion to improve EAP utilisation. Provides recommendations for improvements to the service from several stakeholders such as UK EAPA, EAP providers, organisations/HR managers. In terms of the latter, recommendations involve “reducing stigma” around the use of EAP, developing more effective promotion strategies approaches and also to address employee confidentiality concerns regarding any disclosed information reaching their employer. The HSE (March 2017) Tackling work-related stress using the Management Standards approach report is an update from the outlining the “Management Standards approach” which provides guidance on “implementing an organisational procedure for managing work-related stress”. This Management Standards toolkit encompasses six components linked with “poor health and wellbeing, lower productivity and increased sickness absence” if they are not dealt with effectively. The six “Standards cover the primary sources of stress at work”:1) Demands, 2) Control, 3) Support, 4) Relationships, 5) Role and 6) Change. The report recommends that these are “aspirational” standards and set out the ideal working environment which employers/organisations should be aiming for. The guidance is split into four key parts: 1. Details how to “prepare your organisation” in terms of ensuring senior management commitment and employees’ involvement in the process. 2. The report then focuses on how to “identify the risk factors” which address the entire workforce and various methods which could	

demonstrated significant reduction in distress in those who had experienced distress at baseline. (53) An RCT with support staff "working with individuals with intellectual disability and challenging behaviour" (n=120) randomised to receive either "acceptance and mindfulness- based stress management workshop" intervention or control, found those in the intervention group reported a significant decrease in distress levels compared to control which mainly was sustained at six week follow up, particularly in those subjects with higher initial levels of distress at baseline. Thought suppression also significantly reduced in the intervention group in the post treatment to six week follow up period. Particular outcomes well-being and emotional avoidance/psychological flexibility yielded no significant results. (54) **Physical, Cognitive and Mindfulness group training** An RCT with laboratory technicians with chronic musculoskeletal pain (n=112) randomised to receive either "physical, cognitive and mindfulness group-based training" intervention or control over a period of 10 weeks, found that the intervention group at 4 months follow up showed significant reductions in pain intensity but not for stress when compared to the control group. Effects in pain reduction were found to be dose related with greater reduction for higher doses of physical-cognitive training but increases in pain with higher doses of mindfulness. (55) **Acceptance and Commitment Therapy** An RCT with social workers (n=106) randomised to receive either a "stress management" intervention (based on Acceptance and Commitment Therapy) or control groups to measure changes found that the intervention significantly reduced stress levels, burnout and improved mental wellbeing compared to control. Two thirds of employees had “high stress	be used to obtain information on identifying those individuals at risk of “work related stress” if this is likely to occur. 3. Provides guidance on how to “deal with individual concerns” of the employee rather than the workforce as a whole. Other recommendations include the use of mentoring or co-worker support and employee assistance services. 4. Focuses on any particular “risk factors” which may have been identified and to review the organisation’s policies and procedures in order to make the changes/updates necessary to align with present-day working practices.	

levels at baseline" with no significant effects occurring in those employees with low baseline stress levels. (56) An RCT with government employees (n=100) randomised to receive "worksite group-based CBT intervention called Acceptance and Commitment Therapy" or control to measure changes in psychological flexibility at baseline, second and third workshop time points and six months follow up found that those in the intervention group reported significant increase in psychological flexibility from second to third workshop and decrease in emotional exhaustion from the second workshop to follow-up compared to control, whereby depersonalisation significantly increased from the third workshop time point to six months follow up for those in the control group. (57) An RCT with middle managers (n=73) randomised to either receive Acceptance and Commitment therapy (ACT) delivered by smartphone intervention or control over six weeks found that the intervention was associated with a reduction in stress levels (small to moderate group effect sizes for both within treatment group and between groups). (58) **Biofeedback** An RCT with "high-level work" managers (n=31) randomised to receive either "respiratory sinus arrhythmia biofeedback" intervention or control found that both groups demonstrated reductions in resting heart rate and improvements in levels of anxiety and health related quality of life. Those subjects receiving the intervention when compared to control demonstrated "increased vagal control", "decreased sympathetic arousal" and "lower emotional interferences" (statistics=NR). (59) An RCT with physicians (n=40) in a hospital setting randomised to receive either biofeedback-based stress management intervention ("consisting of		

rhythmic breathing, actively self-generated positive emotions and a portable biofeedback device") or control with both groups receiving "support visits from the research team". Primary outcome measure of the trial was stress, which significantly reduced with the intervention group compared to control. An extension phase of the trial which was open label followed after four weeks, whereby both groups received either intervention or control however no team support for a further four weeks. The results from the extension phase found that the reduced stress levels reported in the intervention group were maintained until the last day of the extension phase, and stress levels for the control group also significantly reduced during this phase, although to a lesser extent. (60) An RCT with female manufacturing factory operators (n=36) randomised to receive either once weekly intervention (breathing biofeedback training) over 5 weeks or control to measure changes in perceived stress, anxiety and depression levels, found that all outcomes significantly improved in the intervention group when compared from baseline and post treatment. (61) **Meditation, relaxation and music** An RCT with teachers (n=40) randomised to either receive a Transcendental Meditation program intervention or control to measure changes in perceived stress, depression and burnout, found that after four months compared to baseline all outcomes significantly improved for those teachers receiving the intervention compared with control group. (62) An RCT with customer service call centre employees (n=80) randomised to receive a single session of music relaxation intervention or control (consisted of a "verbal discussion") to measure immediate impact on anxiety levels at shift completion (measured by State Trait Anxiety Inventory) found that those in the		

intervention group reported significant reductions in anxiety symptoms compared with control group. (63) A crossover RCT with nurses (n=54) randomised to receive either "music/chair rest sequence" or "chair rest/music sequence" intervention. The music condition consisted of listening to "self-selected soothing music using headphones" whilst the chair rest condition consisted of sitting quietly with both conditions lasting for 30 minutes. The music condition was associated with significantly lower levels of stress, cortisol, heart rate and mean arterial pressure and increased finger temperature compared to the chair condition whilst participants were listening to music, whereby all outcomes with the exception of stress level were also significantly different between conditions post-test. (64) **Counselling** An RCT with older employees aged 45 years or older (n=167) with dysthymia randomised to either "work-focused intervention" (WFI: consisting of telephone counselling comprising "work coaching and modification, care coordination and cognitive behavioural therapy") or usual care (UC) as control, found that WFI significantly improved work productivity loss and significantly reduced symptoms of depression compared to UC after 4 months; absence days also improved with the intervention but this was not significant. (65) An RCT with middle aged or older adults (n=431) with depression (measured by Patient Health Questionnaire-9) and "at-work limitations" ("indicated by a productivity loss score >=5% on the Work Limitations Questionnaire") randomised to receive either a work-focused intervention (consisting of telephone-based counselling) or usual care, to measure changes in at-work productivity loss, work performance, self-reported absences and depression found that the intervention was superior		

for all outcomes compared to control at 4 months follow up. (66) **Gratitude/Hassle diary** An RCT with hospital practitioners (n=102) randomised to one of 3 conditions: "gratitude", "hassle" or "nil-treatment" over four weeks with a 3 month follow up. Those randomised to gratitude or hassle groups wrote twice weekly entries in diary regarding either work-related gratitude (taking note of "thankful events in work") or hassle, whereas the "nil-treatment" made no diary entries. The "gratitude" intervention group found significantly lower levels of depression (medium effect size) and perceived stress (large effect size) compared to control and hassle group over time ('not specified'). The "hassle" group showed little difference to control. (67) **Happiness training** An RCT with employees (n=147) randomised to either receive a seven week online "happiness training on psychological and physiological parameters" or control group to measure happiness, satisfaction, quality of life, perceived stress, mindfulness, flourishing, recovery experience which all significantly improved in the intervention group. The results also found that differences in Attention Network Tests and changes in biological markers of stress (with the exception of one saliva result) were not significant for the intervention when compared with control group. (68) There were 2 study publications reporting on an RCT with employees (n=231) experiencing depression randomised to receive either an online "self-help intervention" known as "Happy@Work" (consisted of "problem solving treatment" and cognitive therapy) or care as usual as control to measure changes in symptoms of depression (primary outcome) and secondary outcomes including burnout, work performance, anxiety (69,70)		

and length of absenteeism (69). The studies reported that depressive symptoms and overall secondary outcomes did not significantly improve in the intervention group when compared to control, although both groups showed a prolonged improvement in depression symptoms. (69,70) Anxiety and exhaustion symptoms did however significantly improve in the intervention group compared to control, although these were only small improvements. (70) **Parenting training** An RCT with employed parents (n=97) randomised to receive either parenting training intervention (focuses on reducing "stress at the work-parenting interface by targeting family risk and protective factors and assisting parents to manage competing work and family demands") with control, found that those individual's assigned to the intervention showed a significant reduction in personal and work-related stress and increased work self-efficacy when compared with control group, whereby such effects were maintained at follow periods at 3 and 6 months. (71) An RCT with working parents (n=121) randomised to receive either "Workplace Triple P" intervention (focusing on both parenting and work components and on how to efficiently cope with transitions between home and work) or control, to measure effects on personal distress, levels of work commitment and satisfaction and self-efficacy. The intervention group reported significant improvements in all outcomes. (72) **Peer Support** An RCT with “exhausted” health care workers (n=151) participated and were randomised to receive either peer-support group intervention or control, found that the intervention provided significant improvements at 12 months post intervention for "general health, perceived quantitative demands at		

work, participation and development opportunities at work and in support at work" outcome measures. These effects were linked to participant experiences including "talking to others in a similar situation, knowledge, sense of belonging, self-confidence, structure, relief of symptoms and behavioural change". (73) **Resilience training** An RCT with police employees (n=18) randomised to either "imagery and skills training program" to address police trauma resilience or usual training to measure changes in stress and "work performance" during a "live critical incident simulation" for 10 weeks found that employees randomised to the intervention demonstrated significant reductions in low mood as well as increased work performance, in comparison to the usual training group. (17) An RCT with junior physicians (n=82) randomised to receive either "psychosocial resilience program" intervention or control for three months, found those receiving the intervention reported superiority for resilience, self-efficacy, optimism and perceived stress outcomes compared with control, with the exception of job satisfaction which showed no significant improvement from baseline to follow up. (74) A cluster RCT with restaurant workers (n=947) randomised at restaurant level to receive either "Team Resilience" interactive intervention or control, found that the intervention group reported significant decreases in personal stress levels and exposure to problem co-workers outcomes compared with control restaurants. (13) **Resource-building** An RCT with employees (n=566) assigned to either "structured resource-enhancing group" intervention or "comparison" in the workplace, found that the odds of depression in employees who had received		

the intervention were significantly lower than the comparison group at 7 months follow-up. The structured resource-enhancing group did not have a significant effect in those employees with symptoms of depression at baseline. The odds of depression in employees with "job strain" at baseline were significantly reduced after the intervention. (75) **Self-directed Tasks** An RCT with physicians (n=290) randomised to receive either an individualised online intervention (once weekly self-directed micro tasks) compared to control over a ten week period, found that quality of life and fatigue significantly improved in those participants receiving the intervention. However overall wellbeing and "professional satisfaction" did not significantly improve when compared to control. (76) **Self-efficacy** An RCT with employees (n=168) indirectly subjected to trauma through work practices randomised to either an "internet-based self efficacy " intervention or active control involving education (information on coping resources and coping with stressors) reported that those randomised to the intervention reporting significantly reduced secondary traumatic stress (STS) and increased self efficacy at 1 month follow-up, while those in the active control reported higher secondary posttraumatic growth (SPTG). At 2 months follow-up workers who experienced increases in self-efficacy in the intervention group at 1 month follow up were more likely to report lower STS and higher SPTG (stats=NR). (77) An RCT with trucking company managers (n=68) randomised to receive an intervention that aimed at increasing personal control and self-efficacy in relation to work or control found that at 4 months follow-up, those in the invention group reported significant increases in "perceptions of maintenance control and impact" in those individuals with		

managerial support. The intervention was also associated with improved work performance and "affected work attitudes" determined by the "level of perceived supervisory support" (statistics= NR). (78) **Qigong** An RCT with hospital staff (n=37) randomised to receive either qigong training program intervention for six weeks or control found that perceived stress significantly reduced in the intervention group compared to control. (79) **Yoga** An RCT with university staff (n=48) randomly assigned to receive either a yoga based intervention (offered once weekly for six weeks) or control, found that the intervention led to significant improvements in both measures of mood and wellbeing in participants compared to the control group. The intervention group also demonstrated moderate improvements in "clear-mindedness, composure, elation, energy, confidence, life purpose and satisfaction and feelings of greater self-confidence during stressful situations". (80) An RCT with local authority employees (n=74) randomised to receive either yoga based intervention or control, found that the intervention group demonstrated significant reductions in perceived stress, back pain, sadness and hostility" and improvements in self assurance, attentiveness and serenity (psychological wellbeing measures) compared to control from baseline to eight week period. (81) **Screening & physician referral** A cluster RCT with nurses and allied health professionals (n=NR) randomised at a ward level to either receive a "screening for work functioning impairments and mental health complaints" intervention (with those positively screened offered the opportunity to see an "occupational physician")		

or control, found that the intervention group showed significant improvements in help-seeking behaviour and significant reductions in functioning impairments when compared to the control group. (82) An economic evaluation alongside a cluster RCT with nurses randomised (n=617) to receive either an "occupational physician condition" (screening, feedback of results and referral to occupational physician for those positively screened for mental health issues) an e-mental health condition (involved "screening, feedback and referral to e-mental health") or control (screening alone of mental health issues), found that at 6 months follow-up all groups reported significant increases in work functioning, however this was greatest in the occupational physician condition compared to both the control and e-mental health condition (which provided improvements in a smaller percentage of nurses than control). The ICER value for the "occupational physician condition" intervention compared with control was reported as "dominant" with estimated "cost savings of 5049 per treatment responder", whereas for the e-mental health group compared with control the ICER value was estimated to be "4054 (added costs) per treatment responder". (83) A cost-benefit analysis alongside a cluster RCT with nurses (n=413) randomised to receive either a "preventative intervention" (included mental health screening, feedback and referral to occupational physician to those positively screened) or control (included screening and unlimited access to usual care) to determine potential cost-savings found that the intervention yielded cost-savings per nurse for absenteeism (244 euros) and greater savings when presenteeism was included (651 euros). Overall this resulted in the intervention providing a return-on-investment of 5-11 euros per 1 euro invested. (84) **Cognitive training/cognitive behavioural therapy**		

A systematic review of 23 systematic reviews (11 meta-analyses and 12 narrative reviews involving 499 studies) of interventions focusing on outcomes relating to employee mental health and levels of absenteeism at an individual, organisational level or combination of both, found that cognitive-behavioural programmes produced the largest effects on mental health at the individual level and reported that organisation-wide interventions relating to physical activity led to lower levels of absenteeism. (5) An RCT with public sector employees (n=135) randomised to either a 16 week online cognitive training intervention or active control group (viewing short nature documentaries) found that the intervention did not significantly improve quality of life, stress levels or overall "psychological wellbeing" compared to the control group; whereas significant improvements were seen in all outcome measures in the control group at six months follow up. (85) An RCT with individuals experiencing burnout (n=39) randomised to either receive "therapist-guided internet" intervention (consisted of "solution-focused and cognitive-behavioural therapy") or a control found significant changes in levels of depression, cynicism and personal accomplishment favouring the intervention group compared to control group. (86) An RCT with employees (n=342) randomised to either receive an email "cognitive behavioural treatment" intervention or control, to measure effectiveness on work-related stress over a period of 7 weeks with a 3 year follow up, found that those in the intervention group reported greater significant improvements in relation to stress and anxiety outcomes compared with control, although both groups reported significant improvements. The effect sizes for the intervention group were "large to moderate" for stress and anxiety respectively; the		

between group effect sizes were moderate for stress but minimal for anxiety; at the 3 year follow up the effects were reported as "more pronounced" but the authors stated that the "result requires replication in view of high attrition at follow-up". (87) An RCT with employees (n=102) randomised to receive either stress management intervention (based on cognitive behavioural therapy) or control, found the intervention group reported greater improvements in perceived stress levels and "positive reframing" in relation to coping compared with control group, with effects maintained at 3 month follow up. (Statistics=NR) (88) **Stress management** A Cochrane systematic review reported on 2 studies focusing on the efficacy of either computer based (n=67) or in person interventions (n=92) aiming to promote mental wellbeing and stress reduction in palliative care employees. The studies included mainly middle aged employees randomised to receive stress management training/education and relaxation or mindfulness based interventions either computer based or delivered by small group sessions. The results from one study found that standardised mean differences in stress levels in those receiving computer based interventions was higher than those in person interventions, whereas in the other study this was found to be lower in the computer based intervention group. The review states the evidence is of "low-quality" and provided "conflicting results". (89) A systematic review with 10 studies which focused on studying the effectiveness of "preventative staff-support" workplace interventions in healthcare workers. Included studies evaluating the effectiveness of such interventions on levels of stress, job satisfaction and absenteeism outcomes, whereby 3 studies reported benefits from stress management training interventions in terms of work-		

related stress, with one study maintaining effects over a moderate length of time. The review found that one study which focused on a high intensity stress management intervention provided some reduction in burnout symptoms, unlike those studies using low and medium intensity interventions. Overall the review states that there is “insufficient evidence for the effectiveness” of such interventions (90) An RCT with employees experiencing high stress levels (n=264) randomised to receive either mobile or online stress management training intervention (consisting of "problem solving and more recently developed emotion regulation strategies") or control, found that perceived stress was significantly reduced to a large extent in the intervention group compared to the control at post-test, 6 month follow up and was sustained at 12 month follow up. (91) An RCT with lower/middle management employees (n=174) randomised to receive either stress management intervention based on the "effort-reward imbalance (ERI) model" and involving 24 x 45 min sessions or control, reported a significant time x group effect, with a larger reduction in stress reactivity and larger effect size at 1 year follow-up for those in the intervention. The intervention group in comparison to control showed superiority for all other outcomes (alpha-amylase, anxiety, depression and ERI) but not at a significant level, and no differences were observed in cortisol levels. (92) An RCT with government employees (n=153) randomised to receive either a worksite stress management training intervention or control, to measure changes in "work-related self-efficacy" reported that those in the intervention group compared to control, demonstrated significant decreases in levels of psychological strain, emotional exhaustion and depersonalisation. (93)		

An RCT with employees (n=102) randomised to receive either a stress management intervention or a wait-list control, found that at 16 week follow up self-reported levels of absenteeism were significantly reduced in the intervention group compared with control at 4 months follow up. The study also included data from the Danish public transfer payments database (DREAM) containing information on long-term sickness absence compensation from “baseline to 48 weeks onwards”. Focusing on register based data (“cumulated weeks in DREAM, weeks 1-16”), the intervention group when compared with control reported a lower group median at 6 weeks compared to 12 weeks, although this reduction was not significant. (94) Two studies reported on an RCT with employees (n=264) with "elevated symptoms of perceived stress" randomised to receive either an online stress management intervention (consisting of "problem solving and emotion regulation techniques") or control. The intervention group had a significantly greater reduction in perceived stress levels in comparison to control group at both post intervention and follow up period (7 weeks, 6 months). Further significant changes were seen in secondary outcome measures relating to mental wellbeing (depression, anxiety, emotional exhaustion, sleeping problems, worrying, mental health quality of life), "psychological detachment and emotion regulation skills" for both studies (95,96), as well as presenteeism for one of the studies (96). No significant changes were noted in the intervention arm compared to control for work engagement, physical quality of life and absenteeism. (95,96) **Combined therapy interventions** A systematic review with 9 studies focusing on interventions aiming to promote mental wellbeing in palliative care employees found that interventions which involved a combination of "relaxation, education, support and cognitive training and		

targeted stress, fatigue, burnout, depression and satisfaction" used in RCT study designs demonstrated no significant differences in mental wellbeing of care staff, whereas two quasi experimental studies demonstrated possible improvement of staff mental wellbeing, although the review reports methodological issues with these latter studies. (97) A systematic review with 17 studies focusing on interventions aiming to minimise and prevent sickness absence in the work environment reported that 5 interventions from 4 studies demonstrated significantly improved rates of sickness absence, in particular "graded activity" and cognitive behavioural therapy or a multidisciplinary intervention (known as Sheerbrooke model) were associated with reducing sickness absence based from moderate and limited evidence respectively. Interventions including physical exercise and workplace education did not provide improvements in sickness absence (moderate evidence). (98) A systematic review with 14 studies found a reasonable evidence base in relation to workplace mental health interventions in improving work-related outcomes. Particular interventions reported most evidence of effectiveness including "both mental and physical health interventions, multicomponent mental health and/or psychosocial interventions" and "interventions for particular anxiety disorders". (99) An RCT with nurse employees (n=40) randomised to receive either intervention twice weekly (consisting of an Integrated Health Programme involving "physical exercise, stress management training, health information and an examination of the participants' workplace") or control, found that the intervention group reported no significant differences in sick leave, subjective health complaints or health-related quality of life. The intervention group reported significant improvements in "health,		

physical fitness, muscle pain, stress management, maintenance of health and work situation". (100) **Civility, respect and engagement** A Cochrane systematic review included 5 studies on interventions focusing on the prevention of bullying at work in relation to improving job satisfaction and other work and wellbeing outcomes. The results included 2 studies focusing on an organisational intervention which found small increases in levels of civility between baseline and follow up and a decrease in supervisor incivility victimisation and absent days in previous month (at six month follow up) but no reductions in "co-worker incivility victimisation" or "self-reported incivility perpetration. In one study with interventions aimed at the "individual/job interface level", the intervention group reported significant reductions in incivility perpetration, but no significant differences in incivility victimisation at follow up. Another study involving a cognitive-behavioural intervention compared with control, found no significant differences between both groups including at follow up for "bullying victimisation" or "bullying perpetration". One cluster RCT with an intervention comparing combinations of policy communication, stress management training, and negative behaviours awareness training in employees, found no differences in bullying victimisation outcomes between baseline and post intervention. Overall the review states the evidence included to be of "low quality" in terms of interventions to prevent bullying in the work environment, with short follow up periods. (101) **Physical activity** Thirteen studies were identified focusing on the impact of physical activity interventions on employee wellbeing outcomes. (55,102–113)		
PH22– 03 **Recommendation 3 Flexible Working** Review 2, Expert Report 2		

One study (SR) was identified focusing on the impact of flexible working interventions on employee mental wellbeing. A Cochrane systematic review that included 10 studies with interventions focusing on the possible benefits and harms of flexible working on the health and mental wellbeing of workers. The main findings included 4 studies which looked at "self scheduling of shifts" and another on "gradual/partial retirement" interventions which found significant improvements in various outcomes including systolic blood pressure, heart rate, sleep outcomes and mental health as well as social support from colleagues and "sense of community" with no harms reported. Flexible working interventions such as flexitime and working overtime resulted in no significant improvements in health and wellbeing outcomes in comparison to controls. Studies which looked at contractual flexibility, except for gradual/partial retirement, found either unclear or negative effects on self-reported health outcomes. The review found overall that those interventions increasing "worker control and choice" are associated with improvements in health outcomes, whereas employer driven interventions resulted in "equivocal or negative health effects" (included fixed-term and unchosen part-time employment). (114)	Initial intelligence gathering identified the following: Workplace health: management practices (2016) NICE guideline NG13. Recommendation 1.10. encourages employees to have a degree of control, appropriate to their role, over when and how work is completed. Recommendation 1.10 recommends within the needs of the organisation, for employers to be flexible about work scheduling, giving employees control and flexibility over their own time.	**New evidence was identified that may have an impact on the recommendation.** There is limited evidence of the effectiveness of flexible working interventions in improving employee mental health and wellbeing. One Cochrane review reported on the impact of flexible working interventions whereby “self-scheduling of shifts” and “gradual/partial retirement” interventions provided significant improvements for health/wellbeing outcomes. (114) In particular interventions increasing worker control and choice were associated with improvement in health outcomes, which is line with the current recommendation. (114) Given the limited body of evidence on flexible working interventions on employee wellbeing, and that it is addressed in Workplace health: management practices (2016) NICE guideline NG13, it is recommended that an update considers, during scoping whether this recommendation should be stood down and reference made to NICE guideline NG13 instead.
PH22– 04 **Recommendation 4 The role of line managers** Review 2, Expert Report 1, 2		
Two studies (1 SR, 1 cluster RCT) were identified which included interventions aimed at line managers to aid in improving employee wellbeing: A systematic review with 10 studies which focused on studying the effectiveness of "preventative staff-support" workplace interventions in healthcare workers. Included studies evaluating the effectiveness of such interventions on levels of	Initial intelligence gathering identified the following: A refresh in terminology in recommendation 4 was recommended from a previous surveillance review decision to reflect changes in relevant policy since the guidance was produced but this was not undertaken.	**New evidence was identified that may have an impact on the recommendation.** There is inconclusive evidence of effectiveness of management interventions in improving employee mental health and wellbeing. Only 2 studies (25,90) reported on such interventions, with 1 systematic review stating that studies reported may be subject to risk of bias (90). The RCT which focused on an e-

stress, job satisfaction and absenteeism outcomes. Those interventions which focused on "management interventions for supporting staff" (2 studies) improved employee job satisfaction, however they had no impact on absenteeism. The review found no studies focusing on "support groups for staff" and overall the review states that there is “insufficient evidence on the benefit” of such interventions and methodological issues with the studies included poses risk of bias in results. (90) A cluster pilot RCT with mental health service employees (n=424) randomised at a service level to receive either intervention (occupational stress e-learning program for managers "to improve employees' well-being and reduce sickness absence") or control reported that there was no effect of the intervention on Warwick Edinburgh Mental Wellbeing Scale or on sickness absence in employees at follow-up. (25)	Workplace health: management practices (2016) NICE guideline NG13. Recommendation 1.3 centres on mental wellbeing at work focusing on the principles of the Health and Safety Executive's Management standards for work related stress. Recommendation 1.7 provides advice on the role of line managers and recommendation 1.9 lists training recommendations for line managers that address health and mental wellbeing. One topic expert highlighted two references relevant to the recommendation: New Economics Foundation (2014) Well-being at work: a review of the literature Hillage et al. (2014). Workplace policy and management practices to improve the health of employees, Evidence Review 2. Psychological Medicine. **Policies and guidance** Mental Health First Aid (2016) MHFA Line Managers Resource is an update from the 2007 MHFA Line Managers Resource and provides a step by step guide for “creating healthier workplaces”, focussing more on prevention compared to the earlier edition. The guide is aimed at line managers to look after their own wellbeing as well as that of their employees. The report includes a focus on NICE guideline PH22 and provides recommendations based on this guidance as well as general management advice on how employers can help to improve the mental wellbeing of employees through "productive and healthy working conditions”. The recommendations focus on flexible working, the role of line managers, the use of frameworks and organisational wide processes and policies to protect, promote and cope with employee mental wellbeing. There are also sections on how managers can support their employees’ mental	learning intervention to improve employee mental wellbeing and sickness absence outcomes found no benefit of the intervention (25). While there is only a limited body of evidence on interventions aimed at line managers to improve employee wellbeing, there is relevant updated policy that should be considered as an area for update, this emphasises that line managers are aware of mental wellbeing issues, can identify concerns early on, have the skills to deal with mental health and support staff wellbeing. This could also include effective workplace wellbeing promotion and signposting to other resources/services for further support. Recommendation 1.9 within Workplace health: management practices (2016) Guideline NG13 lists training recommendations for line managers that address health and mental wellbeing and therefore an update should consider cross-referencing to NG13. Recommendation 1.3 within Workplace health: management practices (2016) NICE guideline NG13 is directly relevant to recommendation 4 in NICE guideline PH22, and it has been noted that it may be better placed within any update of NICE guideline PH22 rather than remaining within NICE guideline NG13. The close relationship and potential overlaps between NICE guidelines PH22 and NG13 should be considered during update. An editorial amendment will be made to footnote 8 to address the broken hyperlink: Chartered Institute of Personnel and Development, Health and Safety Executive, Investors in People (2009) Line management behaviour and stress at work

	wellbeing, legislation, recruitment and promotion for individuals currently affected or have a history of poor mental health, “early warning signs” of mental ill health, “keeping in touch” during sickness absence, advice on managing different aspects of returning to work and reasonable adjustments and signposting to other resources providing further information and support which may be useful tools for line managers. The ACAS (October 2017) Promoting positive mental health in the workplace report involves five steps aimed at employers and managers to provide guidance to improve mental wellbeing at work: 1: Understanding what mental health is, tackling “the stigma associated with poor mental health” and the importance of “complying with legal obligations” when working with employees with poor mental health and making “reasonable adjustments” to allow them to continue working. 2: Identifying ways to remain dedicated to promoting mental wellbeing in the workplace. This includes “developing an action plan to change attitudes”, “creating a mental health policy to set out its value” and “ensuring senior managers champion awareness of mental health and fight to remove the stigma around mental health in the workplace”. 3: Employers should collate information on areas which may be associated with poor mental health for employees and then focus on “tackling work-related causes of mental ill health”. This includes recommendations to help resolve common causes of poor mental health at work; employee access to sources of support in addition to from their line manager, such as designated “mental health champions” or external services; and suggests to “work with trade union and other employee representatives” to provide extra	

	support to staff as well as general workplace wellbeing promotion. 4: Training/educating staff on mental wellbeing at work and “training managers to deal with mental ill health”. 5: Ensure effective signposting for both employees and managers to other resources or organisations if they require further information or support. The HSE (March 2017) Tackling work-related stress using the Management Standards approach report is an update from the outlining the “Management Standards approach” which provides guidance on “implementing an organisational procedure for managing work-related stress”. This Management Standards toolkit encompasses six components linked with “poor health and wellbeing, lower productivity and increased sickness absence” if they are not dealt with effectively. The six “Standards cover the primary sources of stress at work”:1) Demands, 2) Control, 3) Support, 4) Relationships, 5) Role and 6) Change. The report recommends that these are “aspirational” standards and set out the ideal working environment which employers/organisations should be aiming for. The guidance is split into four key parts: 5. Details how to “prepare your organisation” in terms of ensuring senior management commitment and employees’ involvement in the process. 6. The report then focuses on how to “identify the risk factors” which address the entire workforce and various methods which could be used to obtain information on identifying those individuals at risk of “work related stress” if this is likely to occur. 7. Provides guidance on how to “deal with individual concerns” of the employee rather than the workforce as a whole. Other	

	recommendations include the use of mentoring or co-worker support and employee assistance services. Focuses on any particular "risk factors" which may have been identified and to review the organisation's policies and procedures in order to make the changes/updates necessary to align with present-day working practices. **Additional information** The hyperlink in footnote 8 to the Chartered Institute of Personnel and Development, Health and Safety Executive, Investors in People (2009) Line management behaviour and stress at work no longer works.	
PH22– 05 **Recommendation 5 Supporting micro, small and medium-sized businesses** Inference derived from the evidence (IDE)		
No studies were identified as this was not the focus of the surveillance review literature search.	Initial intelligence gathering identified the following: A refresh in terminology in recommendation 5 was recommended from a previous surveillance review decision to reflect changes in relevant policy since the guidance was produced but this was not undertaken.	**No new evidence was identified, possible refresh of terminology.** No new evidence was identified that may have an impact on this recommendation. A refresh is required to ensure terminology is up-to-date. Consideration should be made during re-scoping of the update guideline as to whether a recommendation supporting micro, small and medium-sized businesses should remain an area of focus as this was not an explicit area for inclusion within the original scope and there does not appear to be evidence to support recommendations within this area.
Research recommendations		
RR – 01 What is the relative effectiveness and cost effectiveness of the different components of organisation-wide approaches for promoting the mental wellbeing of employees (including policies, human resource management, involvement of employees, and management style and practices)?		
No studies were identified.	No evidence.	**No new evidence was identified, no changes**

RR – 02 What definitions and validated instruments should be used to measure both the positive and negative aspects of mental health at work and the relationship of mental wellbeing to organisation performance? Presenteeism as well as absenteeism and other measures of performance and productivity should be considered.		
No studies were identified.	No evidence.	**No new evidence was identified, no changes**
RR – 03 What are the costs and benefits of organisation-wide approaches in different types of organisational settings? What models for promoting mental wellbeing are particularly effective and cost effective in micro, small and medium-sized businesses? What factors can help or hinder the development and implementation of organisation-wide approaches?		
No studies were identified.	No evidence.	**No new evidence was identified, no changes**
RR – 04 What approaches are effective and cost effective for particular groups of employees (for example, employees of different gender, age, race/ethnicity, socioeconomic status, disability, sexual orientation, religion/belief or other characteristic)? What approaches are effective and cost effective for part-time, shift workers and migrant workers?		
Thirteen studies (1 SR and 12 RCTs) were identified which looked at effective approaches in particular groups of employees: A Cochrane systematic review reported on 2 studies focusing on the efficacy of either computer based (n=67) or in person interventions (n=92) aiming to promote mental wellbeing and stress reduction in palliative care employees. The studies included mainly middle aged employees randomised to receive stress management training/education and relaxation or mindfulness based interventions either computer based or delivered by small group sessions. The results from one study found that standardised mean differences in stress levels in those receiving computer based interventions was higher than those in person interventions, whereas in the other study this was found to be lower in the computer based intervention group. The review states the evidence is of "low quality" and provided "conflicting results". (89) An RCT with individuals (n=718) randomised to receive an organisational level intervention (resource-building group intervention aiming to enhance career management, mental health, and job retention) or control found significant improvements in depression symptoms, desire for	Initial intelligence gathering identified the following: Workplace health: management practices (2016) NICE guideline NG13. Recommendation 1.10 of the guideline recommends to address the needs of older employees as part of a broad diversity policy to support retention of older employees. This should include recognising key life stages and life events and taking into account that caring responsibilities may change as people age. Recommendation 1.9.1 also states that line managers should receive equality and diversity training on employee health and wellbeing. One topic expert noted that the guidance does not mention the need for wellbeing policies to be sensitive to different groups. Sexuality, gender, culture, ethnic background, age, religion and disability can all impact on people's experiences at work. The topic expert thought that the guidance should reference all the above factors and encourage employers to take steps to ensure that a person's specific needs are properly catered for. Work by MIND was highlighted and the following references were provided: New Economics Foundation (2014) Wellbeing at work: a review of the literature	**New evidence was identified that may have an impact on the recommendation for research:** There remains limited evidence in this area (14,18,27,30,31,55,58,59,61,65,66,89,92), in particular studies focusing on effective approaches in differing groups of employees and inequalities. Recommendation 1 recommends to ensure processes for job design, selection, recruitment, training, development and appraisal promote mental wellbeing and reduce the potential for stigma and discrimination. Recommendation 1 also recommends to promote a culture of participation, equality and fairness that is based on open communication and inclusion, to create an awareness and understanding of mental wellbeing and reduce the potential for discrimination and stigma related to mental health problems. This could potentially be refreshed to ensure it addresses all protected characteristics in the Equality Act 2010, including where the current evidence base draws upon older workers as mentioned in Workplace health: management practices guideline. Recommendation 4 could also be updated to include a recommendation on managers having skills related to understanding equality and diversity which

early retirement and increased "mental resources" in the intervention group compared with control group at 7 month follow period. Younger employees or individuals with "elevated levels of depression or exhaustion" were subgroups that yielded the most benefit from the intervention. (14) An RCT with female carers (n=56) randomised to receive either "psychoeducational" intervention or "education" control found that emotional exhaustion significantly improved in the intervention group compared to control, but stress and job satisfaction did not improve. (18) An RCT with employees with chronic illness (n=59) randomised to receive either telephone coaching intervention or control for 12 weeks found that those in the intervention group showed significant superiority in the outcomes "work ability perceptions, exhaustion burnout, core self-evaluations and resilience" compared to control, which such positive improvements maintained 12 weeks post coaching. The intervention group was not associated with significant improvements in job satisfaction, work related self-efficacy and disengagement burnout. (27) An RCT with government employees (n=79) with depression and "at-work limitations" randomised to receive either brief telephonic program intervention or control, to measure changes in depression levels, work limitation and self-reported time missed from work found that the intervention was superior in all outcomes compared to the control at follow up, and the "estimated productivity cost savings is $6041.70 per participant" every year. (30) An RCT with individuals with chronic physical disease (n=122) experiencing "work-related problems") randomised to receive either intervention (group-training program- incorporates "exploration of work-related problems, communication at the	Peterson et al, (2008) Reflecting peer-support groups in the prevention of stress and burnout: randomized controlled trial Brand et al. (2015). Tailoring Healthy Workplace Interventions to Local Healthcare Settings: A Complexity Theory-Informed Workplace of Well-Being Framework. Scientific World Journal. 1-8. Joyce et al. (2015). Workplace interventions for common mental disorders: a systematic meta-review. *Psychological Medicine*. 46, 683–697. Hillage et al. (2014). Workplace policy and management practices to improve the health of employees, Evidence Review 2. Psychological Medicine. **Policies and guidance** The CIPD (July 2016) Employee Outlook: Focus on mental health in the workplace guidance outlines key findings from a 2016 employee survey conducted by YouGov for CIPD: 1. Particular groups were more likely to report poorer mental health such as males, those aged under 55 and those whilst working in the voluntary sector (46%) and public sector (36%). 2. Several adjustments for those employers experiencing mental health issues were favourable amongst employees including “phased return to work, access to flexible working, access to occupational services, access to counselling services and an employee assistance programme”. 3. The report states that training is of high importance. This is to ensure that managers can communicate and deal with employee mental health issues effectively, “spot the early warning signs of possible issues”, “implement policies sensitively and fairly” and to be able to signpost to other resources/services.	may reduce any potential discrimination in relation to health inequalities and aid employee wellbeing.

workplace, and the development and implementation of solutions") found those in the intervention group reported significant improvements in self-efficacy and fatigue compared to control group at 24 months. Job satisfaction was higher in the intervention group, whereas job maintenance was lower in the experimental group, however differences were not significant when compared to control group. (31) An RCT with laboratory technicians with chronic musculoskeletal pain (n=112) randomised to receive either "physical, cognitive and mindfulness group-based training" intervention or control over a period of 10 weeks, found that the intervention group at 4 months follow up showed significant reductions in pain intensity but not for stress when compared to the control group. Effects in pain reduction were found to be dose related with greater reduction for higher doses of physical-cognitive training but increases in pain with higher doses of mindfulness. (55) An RCT with middle managers (n=73) randomised to either receive Acceptance and Commitment therapy (ACT) delivered by smartphone intervention or control over six weeks found that the intervention was associated with a reduction in stress levels (small to moderate group effect sizes for both within treatment group and between groups). (58) An RCT with "high-level work" managers (n=31) randomised to receive either "respiratory sinus arrhythmia biofeedback" intervention or control found that both groups demonstrated reductions in resting heart rate and improvements in levels of anxiety and health related quality of life. Those subjects receiving the intervention when compared to control demonstrated "increased vagal control", "decreased sympathetic arousal" and "lower emotional interferences" (statistics=NR). (59)	4. The report recommends that “an open culture around mental health” is required to encourage employees to be more inclined to disclose issues. The report states that employees with positive mental wellbeing at work will “feel more motivated, engaged and productive”.	

An RCT with female manufacturing factory operators (n=36) randomised to receive either once weekly intervention (breathing biofeedback training) over 5 weeks or control to measure changes in perceived stress, anxiety and depression levels, found that all outcomes significantly improved in the intervention group when compared from baseline and post treatment. (61) An RCT with older employees aged 45 years or older (n=167) with dysthymia randomised to either "work-focused intervention" (WFI: consisting of telephone counselling comprising "work coaching and modification, care coordination and cognitive behavioural therapy") or usual care (UC) as control, found that WFI significantly improved work productivity loss and significantly reduced symptoms of depression compared to UC after 4 months; absence days also improved with the intervention but this was not significant. (65) An RCT with middle aged or older adults (n=431) with depression (measured by Patient Health Questionnaire-9) and "at-work limitations" ("indicated by a productivity loss score >=5% on the Work Limitations Questionnaire") randomised to receive either a work-focused intervention (consisting of telephone-based counselling) or usual care, to measure changes in at-work productivity loss, work performance, self-reported absences and depression found that the intervention was superior for all outcomes compared to control at 4 months follow up. (66) An RCT with lower/middle management employees (n=174) randomised to receive either stress management intervention based on the "effort-reward imbalance (ERI) model" and involving 24 x 45 min sessions or control, reported a significant time x group effect, with a larger reduction in stress reactivity and larger effect size at 1 year follow-up for those in the intervention. The intervention group in		

comparison to control showed superiority for all other outcomes (alpha-amylase, anxiety, depression and ERI) but not at a significant level, and no differences were observed in cortisol levels. (92)		
Gaps in the evidence		
Gap – 01 **There was very limited UK-based evidence that met the inclusion criteria for this guidance on organisation-wide approaches that aim to improve the mental wellbeing of employees within different sectors, different occupations and organisations of different sizes.**		
Two RCTs were identified which looked at UK based evidence on organisation-wide approaches: An RCT with further education college employees recruited during "organisation downsizing" (n=66) and randomised to receive either "work-related self-affirming implementation intention" intervention or control, found that the intervention group reported significant improvements in work related self-efficacy and anxiety compared to control, with effects maintained at assessment three weeks later for work related anxiety. For those receiving the intervention, there were no significant differences in depression, job satisfaction and self-esteem outcomes. (32) An RCT with employees (n=180) randomised to either Health risk appraisals (HRA) plus health promotion and education activities (Group A), HRA only (Group B) or a no intervention control (Group C) reported that after 12 months, both Group A and B showed "non-significant improvements" in scores on "lifestyle, mental health and work ability indices" compared with the control group. Participation in the HRA was associated with a higher likelihood of perceived lifestyle behaviour change, which was greatest when health promotion was also added (statistics =NR). (16)	Initial intelligence gathering identified the following: A topic expert noted that a survey undertaken by MIND “of over 15,000 employees in 30 organisations … found that only a third of the participating organisations provided data on how much of their annual operating budget was set aside for workplace wellbeing. Large organisations reported allocating an average of 11% whilst small and medium organisations set aside less than 0.5%.Stress and other mental health problems are the second biggest cause of sickness absence, accounting for 70 million lost working days every year. Taking both this and the fact that staff turnover as a result of employees leaving their jobs due to mental health problems costs £2.4 billion each year, it makes good business sense to set budget aside for supporting employee wellbeing.” No reference was provided.	**New evidence was identified that does not have an impact.** A large amount of evidence was identified within recommendation 1, which may have included UK-based interventions, but this information was not identified within the abstracts. On the basis of abstracts alone, there appears to remain limited evidence in this area.
Gap – 02 **There was a lack of common definitions of terms for measurement of both positive and negative aspects of mental wellbeing at work, with associated validated instruments.**		

No studies were identified.	No evidence.	**No new evidence was identified, no changes**
Gap – 03 There was a lack of evidence on the factors that help or hinder the development and implementation of organisation-wide approaches to promoting the mental wellbeing of employees in micro, small and medium-sized businesses.		
No studies were identified.	No evidence.	**No new evidence was identified, no changes**
Gap – 04 There was a lack of evidence of the costs and benefits of organisation-wide approaches to promoting the mental wellbeing of employees (including the costs associated with presenteeism as well as absenteeism) in different sectors and organisational settings.		
One study (RCT) was identified focusing on the costs and benefits of organisation-wide approaches to promoting employee wellbeing: A cluster RCT with construction workers (n=293) randomised by department to receive either a prevention program intervention aimed at "health and work ability" promotion or control found that at 12 month follow up, the intervention group demonstrated significantly reduced costs associated with employee absenteeism compared to the control group. The intervention group compared with control demonstrated no significant improvements for primary outcome measures "work ability, mental and physical health status" and so the intervention was deemed not cost effective. (15)	Initial intelligence gathering identified the following: **Policies and guidance** Thriving at Work: the Stevenson/Farmer review of mental health and employers (October 2017) independent review outlines recommendations for the government on how employers can better support staff including those with poor mental health in the workplace “to remain in and thrive through work”, which in return would lead to cost savings for the government and the economy as well as a positive impact on individual mental health and society. The report provides recommendations with a ten year view to: - Increase employer transparency. - Ensure that all employees have “good work” - Ensure that all employees and organisations “have the awareness and tools to not only address but prevent mental ill-health”, support those with poor mental health throughout all stages of recruitment and employment and provide timely referral to services to reduce sickness levels. - Significantly lower numbers of individuals with a “long term mental health condition who leave employment each year” with those who are able to work are able to “benefit from the positive impacts of good work”.	**New evidence was identified that does not have an impact.** There remains limited evidence in this area.

	- Aim for the UK to “prioritise mental health at work” and become “global leaders in reducing stigma”.	

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