



DRAFT 1 June 2021

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41

**EXPERT PANEL ON EFFECTIVE WAYS OF INVESTING IN HEALTH**

**(EXPH)**

Opinion on

**Supporting mental health of health workforce and other essential workers**

The EXPH adopted this opinion at the .. plenary on .... 2021  
after public hearing on 8 June 2021

**About the Expert Panel on effective ways of investing in Health (EXPH)**

Sound and timely scientific advice is an essential requirement for the Commission to pursue modern, responsive and sustainable health systems. To this end, the Commission has set up a multidisciplinary and independent Expert Panel which provides advice on effective ways of investing in health ([Commission Decision 2012/C 198/06](#)).

The core element of the Expert Panel's mission is to provide the Commission with sound and independent advice in the form of opinions in response to questions (mandates) submitted by the Commission on matters related to health care modernisation, responsiveness, and sustainability. The advice does not bind the Commission.

The areas of competence of the Expert Panel include, and are not limited to, primary care, hospital care, pharmaceuticals, research and development, prevention and promotion, links with the social protection sector, cross-border issues, system financing, information systems and patient registers, health inequalities, etc.

**Expert Panel members**

De Maeseneer Jan (Chair), De Oliveira Martins Pita Barros Pedro, Garcia-Altes Anna (Vice-Chair), Gruson Damien, Kringos-Pereira Martins Dionne, Lehtonen Lasse, Lionis Christos, McKee Martin, Murauskiene Liubove, Nuti Sabina, Rogers Heather-Lynn, Siciliani Luigi, Wieczorowska-Tobis Katarzyna, Zacharov Sergej, Zaletel Jelka

**Contact**

European Commission  
DG Health & Food Safety  
Directorate B: Health Systems, medical products and innovation  
Unit B1 – Performance of national health systems  
Office: B232 B-1049 Brussels

[SANTE-EXPERT-PANEL@ec.europa.eu](mailto:SANTE-EXPERT-PANEL@ec.europa.eu)

The opinions of the Expert Panel present the views of the independent scientists who are members of the Expert Panel. They do not necessarily reflect the views of the European Commission nor its services. The opinions are published by the European Union in their original language only.

84 **ACKNOWLEDGMENTS**

85  
86 Members of the Drafting Group are acknowledged for their valuable contribution to this  
87 opinion.

88  
89 The members of the Drafting Group are:

90  
91 **Expert Panel members**

92  
93 Professor Pedro Pita Barros                      Chair  
94 Dr Heather-Lynn Rogers                      Rapporteur  
95 Dr Jelka Zaletel                                      Rapporteur  
96 Professor Jan De Maeseneer  
97 Dr Anna Garcia-Altes  
98 Dr Dionne Kringos  
99 Professor Christos Lionis  
100 Professor Martin McKee  
101 Dr Liubove Murauskiene  
102 Professor Luigi Siciliani  
103 Professor Katarzyna Wieczorowska-Tobis  
104 Dr Sergej Zacharov

105  
106  
107 The declarations of the Drafting Group members are available at:  
108 <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=2847>  
109

110  
111 We are grateful to  
112 Dr Jenny Blythe, NIHR ARC North Thames Doctoral Fellow  
113 Dr Victoria Kirkby, London School of Hygiene and Tropical Medicine  
114 Mr Diogo Marques, Nova University of Lisbon  
115 Professor Céu Mateus, Lancaster University  
116 Dr Elena Petelos, University of Crete and Maastricht University, who provided valuable  
117 contributions to this Opinion.

118  
119 We are grateful to Professor Sir Simon Wessely for his insights on the mandate response  
120 made in very initial stages of the writing of this Opinion.

121

**ABSTRACT**

122  
123

124 Essential workers, including health workforce, were under increased stress and mental  
125 health risks in addition to infection risk during COVID-19 pandemic. Aggravated levels of  
126 psychological distress ought to be recognised as a public health priority, and solutions  
127 are needed to address the consequences so that the potential current mental health  
128 conditions do not become disabilities. Therefore, the Expert Panel on effective ways of  
129 investing in health (EXPH) was requested to provide an opinion on supporting the mental  
130 health of the health workforce and of other essential workers.

131  
132  
133  
134  
135  
136  
137  
138  
139  
140  
141  
142  
143  
144

The Opinion identifies the specific factors influencing the mental health of the health workforce and of other essential workers. It describes the evidence on effective and/or promising interventions, and provides evidence on cost-effectiveness, where available; due consideration was given to providing for the needs of those with pre-existing mental health issues. The characteristics of those interventions are described, elaborating on the necessary preconditions to ensure the efficient delivery of these interventions in an effective, cost-effective, affordable and inclusive manner, across settings and jurisdictions. On the basis of this evidence, recommendations and action points were developed, emphasising the importance of involving both of EU and national policy makers alike, as well as raising awareness and engaging senior managers in sectors with a high share of essential workers, and, last, but not least as well as mental health and occupational health practitioners.

145  
146  
147  
148  
149  
150  
151  
152  
153  
154  
155  
156  
157  
158  
159  
160  
161  
162  
163  
164  
165  
166  
167

Mental health, defined as lack of mental illness and high levels of mental wellbeing, is influenced by a complex interplay of determinants. At work, occupation-specific determinants of mental health interact with non-occupational-specific characteristics. A conceptual framework has been developed to represent mental health state, determinants / factors, and possible mental health trajectories over time in the face of a given stressor. The framework illustrates the potential impact of primary, secondary and tertiary prevention interventions occurring at various levels: the health and social/community care sectors, workplace-level interventions (such as occupational health programs and managerial-level changes), and economic/social policy measures. Mental health of essential workers can therefore be supported by interventions enacted within and outside of the health sector at primary, secondary, and tertiary prevention levels. Interventions in multiple settings at various levels can work synergistically to address a wide range of risk factors and potentiate a wide range of protective factors. The Swiss cheese model of accident causation is a helpful heuristic to illustrate this synergy. This model demonstrates the need for multiple interventions targeting multiple risk and protective factors occurring at multiple levels to ensure that all individuals benefit from them and no one individual is left behind. It suggests the priorities of different levels of interventions, from large scale interventions supporting the largest share of essential workers, to the interventions targeting organisational and team characteristics, job characteristics and lastly targeting modifiable individual characteristics. Specifically, post-traumatic stress disorder, burnout and moral injury are associated with working in stressful conditions, and could be anticipated and prevented in the workplace, or addressed when present.

168  
169  
170  
171  
172  
173  
174  
175  
176

Based on available evidence and identified limitations, gaps and challenges, eight recommendations with several action points are developed: focus on mental wellbeing; treat mental wellbeing as an inherent part of the workplace and its organisation; create a supportive institutional framework at EU-level; create an appropriate cost-effectiveness framework; build and share knowledge on interventions; define a common vision for mental health care; prepare organisations and their leaders; and provide timely and adequate access to care when preventive efforts are not effective.

177 **Keywords:** Expert Panel on effective ways of investing in Health, mental health,  
178 wellbeing, healthcare workers, essential workers, risk factors, interventions,  
179 implementation, delivery conditions  
180

181

182 **Opinion to be cited as:**

183

184 Expert Panel on effective ways of investing in Health (EXPH), Supporting mental health of  
185 health workforce and other essential workers, 2021  
186

187

© European Union, 201x

188

189 ISSN 2315-1404

ISBN

190 doi:xxxx

ND-xxx

191

192 [http://ec.europa.eu/health/expert\\_panel/index\\_en.htm](http://ec.europa.eu/health/expert_panel/index_en.htm)

193

DRAFT

194	TABLE OF CONTENTS	
195	ACKNOWLEDGMENTS.....	3
196	ABSTRACT .....	4
197	EXECUTIVE SUMMARY .....	7
198	BACKGROUND (mandate) .....	10
199	QUESTIONS FOR THE EXPERT PANEL .....	11
200	1. OPINION .....	12
201	1.1. What are the specific factors influencing mental health of the health	
202	workforce and of “other essential workers”? .....	12
203	1.2. Specific factors influencing mental health of the health workforce and other	
204	essential workers .....	18
205	1.3. What interventions could be effective in addressing mental health support	
206	needs of health workers and other essential workers, including those with pre-existing	
207	mental health conditions?.....	31
208	1.4. Cost of mental health problems in the health workforce and the cost-	
209	effectiveness of mental health interventions .....	48
210	1.5. What are the conditions for the delivery of these interventions in a cost-	
211	effective, affordable and inclusive manner? .....	51
212	1.6. Recommendations .....	61
213	REFERENCES .....	71
214	ANNEX TABLE OF RELEVANT BEST PRACTICES FROM THE EU BEST PRACTICE PORTAL .	81
215		
216		
217		
218		

219 **EXECUTIVE SUMMARY**

220 During the COVID-19 pandemic, the health workforce and other essential workers faced  
221 a high risk of becoming infected whilst experiencing high levels of stress and being at risk  
222 from other threats to their mental health. Multiple contributing factors such as anxiety  
223 (including, because of the lack of personal protective equipment (PPP)) and exceptionally  
224 high workload, often led to burnout. This increased burden of psychological distress  
225 ought to be recognised as a public health priority. Interventions to immediately support  
226 the mental health and alleviate the consequences of stress, fear, and moral injury are  
227 urgently required. These actions are needed to adequately address the major threat to  
228 the long-term mental health of large numbers of essential workers and to the  
229 sustainability of the health workforce and of health systems. Enhanced emotional and  
230 social support is critical to protect from long-term disability, particularly given the  
231 sustained effect of system pressure on people and health systems due to COVID-19.

232 In this Opinion, we identify those factors influencing the mental health of the health  
233 workforce and of other essential workers; evidence on promising interventions is  
234 examined regarding effectiveness and, where available, cost-effectiveness. We set out  
235 the characteristics of interventions that could be effective, including for people who have  
236 pre-existing mental health conditions and we discuss their cost-effectiveness,  
237 affordability, and inclusive delivery.

238 The World Health Organisation (WHO) defines mental health as "*a state of mental*  
239 *wellbeing in which people cope well with the many stresses of life, can realize their own*  
240 *potential, can function productively and fruitfully, and are able to contribute to their*  
241 *communities*". Optimal mental health involves the absence of mental illness and a high  
242 level of mental wellbeing. However, existing research has focused more on the mental  
243 illness rather than on the mental wellbeing. Our understanding on mental illness and  
244 mental health lags far behind our understanding of physical health, particularly given the  
245 lack of definitive biological markers and diagnostic challenges. Mental illness is often  
246 associated with stigma, a critical barrier in itself determining health-seeking behaviour  
247 and, ultimately, access to care. Mental health is influenced by risk and protective factors  
248 both within and around the individual. Furthermore, the complex interplay of  
249 determinants, both occupation-specific and generic, necessitates a comprehensive  
250 framework with an array of interventions, across sectors, settings and levels. These  
251 should act synergistically to tackle the wide and diverse range of risk factors whilst  
252 enhancing the effect of protective factors, ensuring no one is left behind.

253 We propose a conceptual framework to represent this complexity, including possible  
254 mental health trajectories in response to stress over time. The framework includes  
255 primary, secondary and tertiary prevention across levels: the role of health and

256 social/community care sectors, workplace interventions (such as occupational health  
257 programs and management policies), and economic/social policy measures. We note that  
258 there are still many evidence gaps to inform comprehensive policies. Surveys often lack  
259 methodological robustness, i.e., inadequate sample size, limited representativeness and  
260 generalisability. Currently, most available research on mental health, both before  
261 pandemic and during the pandemic, does not adequately address functional aspects of  
262 mental health or of mental wellbeing. Post-traumatic stress disorder (PTSD), burnout  
263 and moral injury can be anticipated. Prevention must be the first priority, and  
264 appropriate treatment used should preventive measures fail.

265 We describe factors that increase or decrease the risk of adverse mental health outcomes  
266 in the healthcare workers at individual, service and societal levels. People with mental  
267 health conditions have a lower life expectancy and generally poorer health outcomes due  
268 to the complex interplay of socioeconomic and behavioural risk factors, often accentuated  
269 by barriers to accessing care. Therefore, safeguarding access to mental health services  
270 during the pandemic is an urgent need. The need for further research should also be  
271 recognised and prioritised to help understand longer-term mental health impacts.  
272 Effective interventions to protect mental health of essential workers are likely to be  
273 complex and multi-faceted, addressing modifiable risk factors to be implemented across  
274 multiple levels.

275 In the context of the Opinion development, evidence from multiple sources,  
276 encompassing best practices, guidelines, toolkits, among others, was reviewed. This  
277 allowed for the identification of coordinated integrated approaches to support mental  
278 health of essential workers. Despite the lack robust evidence on the effectiveness of  
279 interventions designed to address the mental health needs of workers with or without  
280 pre-existing mental health conditions, training healthcare workers in resilience may be  
281 particularly effective for those with a history of mental ill-health. A wide range of mental  
282 health support services that can meet the diverse needs of groups with different  
283 vulnerabilities and risks should also be made available. Due to potential stigma and  
284 discrimination, efforts in the workplace to support mental health should be accompanied  
285 by due consideration of legal and ethical responsibilities. The excess burden of mental  
286 health issues in the health workforce is well-described, however assessing cost-  
287 effectiveness of interventions to address them remains complex given the challenges in  
288 quantifying the impacts to assess (economic, societal, ethical, etc.).

289 Service delivery conditions are conceptualized in this Opinion using an implementation  
290 science framework, which posits that the success of implementation depends on how its  
291 delivery is organised and is context-dependent. Contextual factors such culture and  
292 leadership can largely influence implementation outcomes, whereas resource constraints  
293 and barriers, as well as facilitators are also examined. Specifically, we identified several



294 core conditions for the delivery of mental health services. With respect to the  
295 intervention, meeting and adapting to evolving user needs was important, as well as  
296 assessing the role of stigma, whilst ensuring those with a history of mental health and/or  
297 pre-disposing factors are not targeted. Many delivery conditions focused on the  
298 workplace and included ensuring safe space and processes (e.g., for help-seeking) and  
299 fostering an environment of trust; training in mental health assessment and key delivery  
300 conditions for occupational health practitioners and managers while emphasising that  
301 there should be no adverse consequences for help-seeking behaviour; and driving  
302 transformation in organisational culture towards one of acceptance of the continuum of  
303 mental health issues. To support workplace interventions, a clear and comprehensive  
304 regulatory and financial structure and mechanisms of support are required. Attention to  
305 public and private sector organisations, including multinational corporations (MCNs) and  
306 small- and medium-sized enterprises (SMEs) is needed. These enabling structures should  
307 encompass sustainable support for long-term prevention and treatment programs, and  
308 research and development of innovative approaches, such as de-stigmatization, care re-  
309 organization, regulatory frameworks, and data collection and harmonization initiatives.

310 The EU Occupational Safety and Health Administration (OSHA) stipulates that general  
311 occupational safety and health risk assessment in the workplace is a legal obligation of all  
312 employers in the EU. Through its guidelines, EU-OSHA reaffirms that these stipulations  
313 are equally applicable with regards to the mental health of workers. EU-OSHA  
314 recommends participatory psychosocial risk assessment be included as part of the  
315 occupational safety and health requirement, and used to identify risks and to inform  
316 intervention design. Further, EU-OSHA recognizes that some mental health problems  
317 may be caused or aggravated by poor psychosocial work environment, including,  
318 excessive time pressure, conflict, violence, harassment, lack of support, and/or lack of  
319 appreciation. Those factors should be identified and addressed in both preventive and  
320 remedial means, and in a complementary manner. Protection of workers' mental health is  
321 an integral part of occupational safety and health.

322 The Opinion concludes with eight evidence-based recommendations, complemented by  
323 action points with EU-wide and Member-State relevance. The recommendations are  
324 addressed to policy makers and managers in sectors with a high share of essential  
325 workers, as well as with mental health and occupational health practitioners. The focus of  
326 these recommendations to support the mental health of essential workers is on fostering  
327 their mental wellbeing and the need to treat mental wellbeing as an organisational  
328 responsibility within the workplace. The recommendations address the roles of  
329 stakeholders at several levels (organisations, national authorities and EU). The action  
330 points detail the general principle described in each recommendation. Specifically, there  
331 is the need for appropriate guidance frameworks to be established, in some cases

332 deserving legal status, to clearly establish mental wellbeing as an important workplace  
333 responsibility within organisations. This requires awareness and competencies by the  
334 leadership of organisations, which can be facilitated via education and training. To  
335 support promotion of mental wellbeing in SMEs, the use of common digital tools (to be  
336 developed) can be advantageous. In addition, workplaces must develop adequate  
337 mechanisms for early identification of factors influencing mental wellbeing and for  
338 referral to professional help when preventive efforts are not effective. The organisation,  
339 as opposed to the individual worker, is to be held accountable for worker wellbeing.  
340 Building and sharing knowledge on interventions that work via the creation of learning  
341 communities is recommended. The identification of best practices that are cost-effective  
342 require further evidence, which should be developed by overcoming methodological  
343 challenges. Lastly, a common vision for mental health care and its re-organisation is  
344 needed with emphasis on prevention and support of mental wellbeing in not only  
345 essential workers, but the general population as a whole.

### **BACKGROUND (mandate)**

347 Essential workers, whether in the health or other sectors, have been hit hard by the  
348 consequences of the COVID-19 pandemic. This is not just due to the risk of infection  
349 arising from close contact with patients, the general public, and potentially infectious co-  
350 workers. Although less well recognised, they have also faced risks to their mental  
351 health.<sup>1</sup>

352 The list of those at risk is long. They include healthcare personnel, long term care  
353 workers, teachers, cleaners, cooks, emergency personnel (police, fire department, civil  
354 protection), people working in transport, agriculture and food production, critical retail  
355 facilities (grocery stores, hardware stores), critical trades (construction workers,  
356 electricians, plumbers etc.), water and wastewater workers, energy and distribution,  
357 those delivering social services, and others that manage critical infrastructure and  
358 services.

359 When the Covid-19 pandemic hit, many essential workers had no choice but to continue  
360 working physically at their workplace to provide services for others at great risk to their  
361 own health and that of their families. We now know that many were exposed to a high  
362 risk of COVID-19.<sup>2</sup> If infected, some were also at greater risk of becoming ill or  
363 transmitting the infection to others. They included elderly workers, people from low-  
364 income households, workers with underlying health conditions (e.g. chronic illness),  
365 those with existing mental health issues, workers in temporary or informal employment,  
366 and refugees and some migrants.

367 A Health at a Glance: Europe 2020 report points to several factors that adversely  
368 affected the mental health of health workers: lack of personal protective equipment, their  
369 exceptionally high workload, and the psychological pressure faced by health  
370 professionals.<sup>3</sup> An Italian survey of health care, in March 2020, reported frequent  
371 symptoms of stress, anxiety, depression and insomnia, especially amongst frontline  
372 workers and young women.<sup>4</sup> In April 2020 a Spanish survey reported that 57% of health  
373 workers had with symptoms of post-traumatic stress disorder.<sup>5</sup>

374 In response to this evidence, support services for health workers in many countries were  
375 expanded to help them deal with the high level of stress, fatigue and psychological  
376 distress during these extremely challenging times, for example through peer support  
377 groups or dedicated phone support lines. Yet despite the growing number of studies on  
378 the mental health consequences of the pandemic on health care workers, there is much  
379 less on the situation faced by essential workers in other sectors, although the European  
380 Commission did set up a virtual network of (not-for-profit) stakeholder organizations on  
381 its Health Policy Platform to discuss and share knowledge and practices on COVID19-  
382 related mental health issues. This includes guidance to help address the mental health  
383 aspects of the COVID19-pandemic. There have also been initiatives to provide  
384 psychological support to the general population, for example through online advice or  
385 phone hotlines. However less is known about what employers have been doing to support  
386 their employees, especially those with pre-existing mental health conditions and how, if  
387 at all, these link to health services, and especially primary care.

388 The Expert Panel on Effective ways of Investing in Health (EXPH) highlighted in a  
389 previous opinion that measures to tackle psychological distress should be recognised as a  
390 public health priority.<sup>6</sup> Comprehensive strategies, rapidly implemented, with clear lines of  
391 accountability were needed to reduce the adverse mental health consequences of the  
392 pandemic but were largely lacking. Now, as there is beginning to be some reason for  
393 optimism, it will be essential to put in place measures that can minimise the threats to  
394 the mental health of essential workers going forward and ensure that those already  
395 affected can recover without long term disability.

396 This means that we need innovative solutions, combining societal, organisational, team  
397 and individual responses, with engagement by all those who can provide the necessary  
398 psychosocial support.

399 **The primary target audience of this opinion** comprises those responsible for policy  
400 and health, employment, and recovery from the pandemic at national and EU level, as  
401 well as senior managers in sectors with high shares of essential workers. It should also  
402 be of interest to mental health and occupational health practitioners.

403 **QUESTIONS FOR THE EXPERT PANEL**

- 404 1.) What are the specific factors influencing mental health of the health workforce and  
405 essential workers?
- 406 2.) What interventions could be effective in addressing mental health support needs  
407 of health workers and essential workers, including those with preexisting mental  
408 health conditions? Using existing data, assess the cost of mental health problems  
409 in the health workforce and the cost-effectiveness of mental health interventions.  
410 What are the conditions for the delivery of these interventions in a cost-effective,  
411 affordable and inclusive manner?
- 412 3.) How can the EU address these concerns?

413 **1. OPINION**

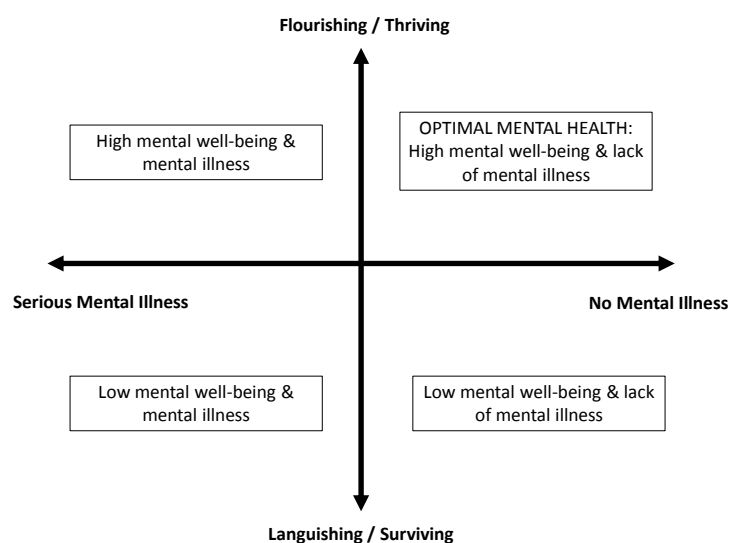
414 **1.1. What are the specific factors influencing mental health of the health**  
415 **workforce and of “other essential workers”?**

416 **General overview of mental health**

417 Mental health can be envisaged as a two-dimensional concept (Figure 1). On one  
418 dimension lies a continuum, that could be described as pathogenic or illness focused,  
419 from no mental illness to serious mental illness. On another, and arguably a more  
420 important dimension is salutogenic,<sup>7</sup> or health focused, comprising a spectrum of ability  
421 to function. This salutogenic approach is aligned with The World Health Organization’s  
422 definition of mental health as “*a state of mental wellbeing in which people cope well with*  
423 *the many stresses of life, can realize their own potential, can function productively and*  
424 *fruitfully, and are able to contribute to their communities.*”<sup>8</sup> Wellbeing is typically  
425 assessed via endorsement of items like: feeling cheerful and in good spirits, feeling calm  
426 and relaxed, feeling active and vigorous, waking up fresh and relaxed, and feeling like  
427 daily life is filled with things that interest me [e.g., the World Health Organization – Five  
428 Wellbeing Index (WHO-5)<sup>9</sup>].

429 Some authors refer to this as the continuum between flourishing/thriving and  
430 languishing/surviving.<sup>10,11</sup> In Figure 1, optimal mental health is present at the  
431 intersection between high mental wellbeing and lack of mental illness. The “whole health  
432 approach” to supporting the mental health of essential workers requires all addressing  
433 both mental illness services and mental health promotion and protection.

434 Figure 1. The two dimensions of mental health



435

436 Less than optimal mental health occurs when a person shows signs or symptoms of  
437 mental illness and/or mental wellbeing affecting their everyday function. If this is well  
438 managed, he/she may be able to restore his/her mental health to optimal levels.  
439 However, if not effectively managed, they may lead to sub-optimal mental health leaving  
440 the individual concerned unable to function day-to-day.

441 The signs and symptoms of mental health are many and complex. Common mental  
442 illnesses include depression (sadness and loss of interest in previously enjoyable  
443 activities, possible suicidal ideation), anxiety disorders (excessive, debilitating worrying),  
444 and post-traumatic stress disorder (long-term symptoms in response to a traumatic  
445 event, including re-experiencing the event via nightmares and/or intrusive memories). At  
446 the risk of generalisation, research tends to focus on the mental illness dimension of  
447 mental health than the mental wellbeing one. Yet mental wellbeing has received  
448 considerable attention in the media, which has been especially concerned about the  
449 psychological and emotional impacts of the COVID-19 pandemic.<sup>12-14</sup>

450 Our understanding of mental illness and health often lags far behind our understanding of  
451 physical health. Identifying and treating mental health disorders is more complex than  
452 treating bodily illness or injury. Many mental illnesses lack definitive biological markers  
453 and signs/symptoms can be interpreted in different ways. Mental illness symptoms may  
454 manifest as cognitive, emotional, behavioural, and/or physical (or bodily/somatic)  
455 phenomena, making it challenging to rule out alternative diagnoses although there are  
456 now many assessment tools, typically based on questionnaires, designed to use with  
457 mental wellbeing and mental health/illness.

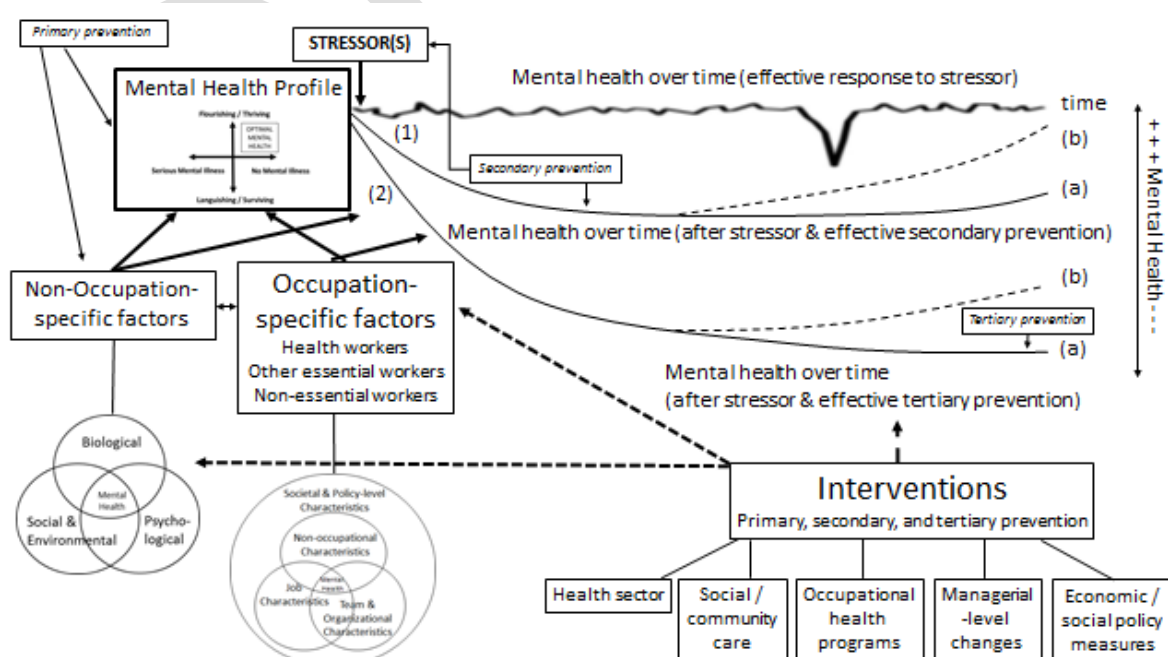
458 As with a physical illness, diagnosis depends on someone seeking help, overcoming the  
459 many barriers that exist to doing so. However, there are additional problems when  
460 someone has mental health problems because they may not recognise them or they may  
461 fear the stigma that is often associated with them.<sup>15</sup>

462 **Conceptual Framework**

463 The mandate asks how the EU can support the mental health of the health workforce and  
 464 other essential workers. To do so, it is first necessary to have a framework to understand  
 465 mental health and its causes. These causes involve a complex interplay of biological,  
 466 environmental, cultural, economic, health system, social, occupational, familial,  
 467 psychological, and individual factors. Risk factors increase vulnerability to experiencing  
 468 adverse mental health, whereas protective factors do the opposite. They can assist  
 469 recovery after exposure to stress (harm-reduction approach), protect against adverse  
 470 mental health prior to stress (protection approach), and/or promote positive aspects of  
 471 mental health (promotion approach).<sup>16</sup>

472 A life-course approach highlights the importance of prior and current experiences.<sup>17</sup> Thus,  
 473 the mental health of a person at a given point is influenced by a combination of prior and  
 474 current experiences, risk factors, and protective factors. In the present context,  
 475 occupation-specific factors influencing mental health that have become especially  
 476 apparent during the COVID-19 pandemic are of particular importance. This calls for an  
 477 emphasis on the workplace. To help us, we have developed a conceptual framework that  
 478 provides a visual representation of the factors that we must consider to effectively and  
 479 efficiently support the mental health of essential workers. The framework includes  
 480 interventions to provide primary, secondary and tertiary prevention across sectors,  
 481 settings and levels, the most relevant being: the health and social/community care  
 482 sectors; the workplace (such as occupational health programs and managerial-level  
 483 changes), and within the wider economic and social policy arena (Figure 2).

484 Figure 2. Conceptual framework for supporting the mental health of the health workforce  
 485 and other essential workers



486

487 Source: The authors

488

489 The focus of Figure 2 is the individual's mental health profile at a given point in time,  
490 represented by the two-dimensional grid of mental illness and mental wellbeing  
491 presented earlier. Risk and protective factors interact to influence this profile. Given the  
492 focus of this Opinion, we consider non-occupation-specific (e.g., biological, social-  
493 environmental, and psychological), which then interact with occupation-specific factors  
494 such as characteristics of jobs, teams, and organizations, all within a broader policy  
495 context. These individually and collectively influence the mental health trajectory of the  
496 individual concerned.

497 We can illustrate this by looking at a theoretical chain of events. We begin at the box  
498 labelled "Mental Health Profile". One or more stressors occurs (for instance related to the  
499 COVID-19 pandemic). Whether this leads to a deterioration in the individuals mental  
500 health depends on how the individual responds. If they are able to cope with the  
501 stressor(s), then he/she is likely to maintain his/her current level of mental health. This  
502 is the top trajectory in Figure 2. However, the ability to cope can change over time. We  
503 can expect a worsening of mental health if (i) the stressor is very traumatic and/or  
504 prolonged over time and/or there is an accumulation of multiple stressors and (ii) the  
505 person is especially susceptible to the stressor(s) at that time due to the complex  
506 interplay of factors that determine mental health and individual thresholds. The extent of  
507 deterioration will depend on the initial mental health profile and the interaction of  
508 occupation-and non-occupation-specific risk and protective factors.

509 This is represented by trajectories 1 and 2, with trajectory 1 involving less severe  
510 deterioration than trajectory 2. In each case recovery may occur spontaneously,  
511 depending on the initial mental health profile and the combination of risk and protective  
512 factors. There may be a variety of interventions that can influence modifiable  
513 risk/protective factors and/or mitigate the effects of the stressor (primary prevention),  
514 while others might mitigate impact of the stressor on mental health and/or promote rapid  
515 recovery from the stressor (secondary prevention), and/or decrease the rate of  
516 deteriorating mental health (tertiary prevention). In each of these trajectories, there are  
517 two further pathways, a and b. In scenario 2a, the mental health of the individual  
518 continuously deteriorates over time without effective secondary prevention but remain  
519 stable at a low level with effective tertiary prevention. Scenario 1a, compared to scenario  
520 2a, illustrates how secondary prevention reduces the extent of mental health  
521 deterioration caused by the stressor. In both b scenarios, mental health eventually  
522 recovers, returning to baseline in scenario 1b but not in scenario 2b. Thus, besides  
523 influencing the initial level of deterioration caused by the stressor, secondary prevention

524 can prompt a faster recovery, an earlier recovery, and/or a more complete recovery and  
525 return to baseline mental health.

526 Figure 2 illustrates the important aspects of mental health covered thus far and sets the  
527 stage for the other chapters in this Opinion. First, an individual's mental health at a given  
528 point falls on a two-dimensional continuum of mental illness and mental wellbeing.  
529 Second, mental health is influenced by a complex interplay of determinants. The figure  
530 includes a simplified Venn diagram to show three non-occupation-specific factor  
531 groupings – biological factors, social and environmental factors, and psychological  
532 factors. Vulnerabilities might include genetic predisposition to mental illness, lack of  
533 social or familial support, economic difficulties, and/or psychological traits such as  
534 strategies to cope with stress or cognitive tendencies like optimism vs. pessimism.

535 Third, given the mandate's focus on essential workers during the COVID-19 pandemic,  
536 occupation-specific determinants of mental health interact with these non-occupational-  
537 specific characteristics. Three different occupational groups are likely to respond  
538 differently to a stressor such as those arising in the COVID-19 pandemic. Health workers  
539 may be under severe pressure from increased workload, in addition to being concerned  
540 about contracting the virus and suffering from moral injury. Other essential workers,  
541 such as those in the food or transport industry, may also be concerned about the  
542 possibility of contracting the virus, but may be less exposed, but may instead experience  
543 increased pressure from working long hours. Non-essential workers may also experience  
544 their own pressures working from home for a prolonged time, managing simultaneous  
545 stressors such as isolation and lack of social contact, and/or financial consequences of  
546 being furloughed. Evidence on risk and protective factors for essential workers will be  
547 examined in detail in Chapter 2.

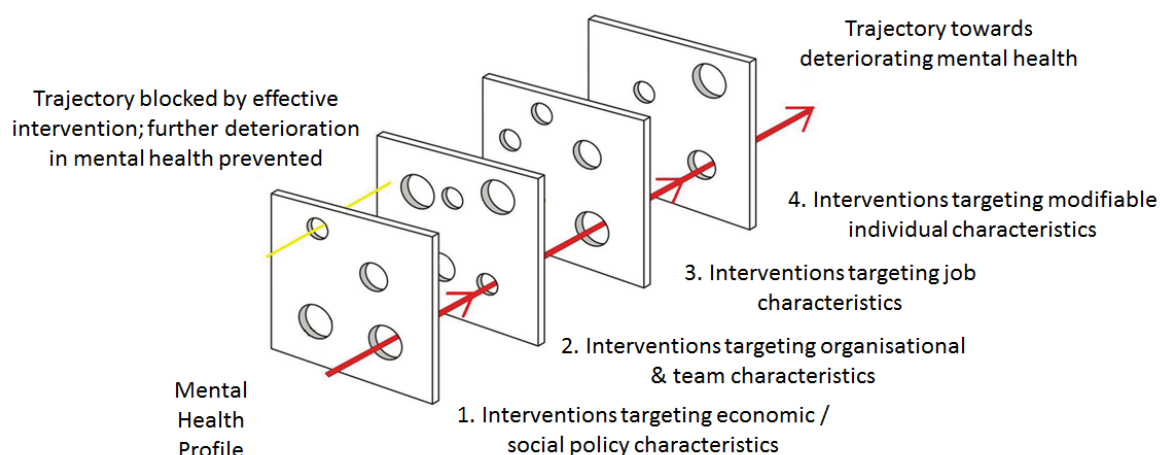
548 Fourth, mental health can be supported by interventions enacted within and outside of  
549 the health sector at primary, secondary, and tertiary prevention levels. This is especially  
550 relevant for essential workers. For example, an employer can design and implement  
551 internal policies to increase support employees under stress, or help to organise care  
552 outside the organisation if needed and wanted. There is also scope for primary  
553 preventative interventions, e.g. by employers who allow employees a certain degree of  
554 control over their workload or work tasks, or government interventions to ensure a  
555 minimum income level or to develop healthy lifestyles. Available evidence regarding  
556 promising and effective interventions to support the mental health of essential workers  
557 will be explored in Chapter 3, and cost-effective interventions will be described in the  
558 Chapter 4. Delivery conditions for the implementation of interventions to support the  
559 mental health of essential workers is covered in Chapter 5.

560 Interventions in multiple settings at various levels can work synergistically to address a  
561 wide range of risk factors and potentiate a wide range of protective factors. Although the



562 relationship between exposure and outcome in mental health is complex and often far  
563 from straightforward, the Swiss cheese model<sup>18</sup> of accident causation used in risk  
564 analysis and risk management is a helpful heuristic to illustrate this synergy. See Figure  
565 3.

566 Figure 3. The Swiss Cheese model for supporting mental health in essential workers



567  
568 Source: Reason's Swiss cheese model combining person and systems approaches to  
569 human fallibility,<sup>19</sup> adapted by the authors

570  
571 The Swiss Cheese model assumes optimal levels of mental health at the start and  
572 provides a visual representation of how to prevent further mental health deterioration. It  
573 does not provide a complete roadmap to achieving optimal mental health, but it is a  
574 particularly valuable heuristic for supporting the mental health of essential workers for  
575 four main reasons. First, its use in safety and occupational health means that there is  
576 already some familiarity with the model by those who need to use it. Second, it places  
577 responsibility for mental health on both the individual and the system. The person  
578 approach focuses on individual-level interventions, whereas a systems approach  
579 concentrates on the interactions among the individual, his/her employment conditions,  
580 and the regulatory/policy environment. Each slice of the cheese represents interventions  
581 at different levels that contribute to mental health of employees. For instance, it  
582 illustrates attempts by workplace leadership to build safeguards, barriers, and defences  
583 to prevent deterioration in mental health. Third, it recognizes that any safeguard or  
584 intervention will have inherent flaws or "holes". The "holes" in this example are  
585 unaddressed risk and/or protective factors. Mental health deterioration will occur when  
586 multiple "holes" line up leaving workers exposed. This demonstrates the need for  
587 multiple interventions targeting multiple risk and protective factors occurring across  
588 levels to ensure that all individuals benefit equally from them, incl. the most vulnerable,  
589 and no one individual is left behind. Lastly, the Swiss Cheese model illustrates the  
590 priority given to different levels of interventions. The first slices of the cheese are large-

591 scale, broad economic and social policy interventions designed to support the largest  
592 numbers of essential workers. For those individuals who need additional support, the  
593 next level targets the workplace organizational and team characteristics. For those who  
594 need additional support, there are interventions to address specific job characteristics.  
595 The last level introduces individual-level interventions, which can be expected to be  
596 effective as long as interventions on other levels are in place.

597 **1.2. Specific factors influencing mental health of the health workforce**  
598 **and other essential workers**

599 **Exposure of essential workers to SARS-CoV-2**

600 Supporting the mental health of the workers has been an important priority of the World  
601 Health Organization (WHO) for many years.<sup>20</sup> This has become especially salient as a  
602 result of the COVID-19 pandemic. Particular emphasis has been placed on the “essential”  
603 worker, who was required to continue working on-site during the most severe periods,  
604 while, in order to contain the virus, millions of “non-essential” workers were confined to  
605 their homes, either unable to work or tele-working as possible. Each Member State  
606 determined their own lists of “essential workers”, encompassing individuals who perform  
607 a range of services and operations in industries that are necessary to ensure the  
608 continuity of critical functions of a country and maintain critical infrastructure. As defined  
609 in the mandate, essential workers include the health and care workforce, teachers,  
610 cleaners, cooks, emergency personnel (police, fire department, civil protection), people  
611 working in transport, agriculture and food production, critical retail (grocery stores,  
612 hardware stores), critical trades (construction workers, electricians, plumbers, etc.),  
613 water and wastewater management, energy production and distribution, social service  
614 organisation and other sectors that manage critical infrastructure and services. These  
615 essential workers continued their jobs on the frontline throughout the COVID-19  
616 pandemic, facing potential risks to their own health and the health of their loved ones as  
617 a result of higher exposure risk to SARS-CoV-2.

618 Compared to non-essential workers, essential workers did experience a higher risk of of  
619 getting infected by SARS-CoV-2 and of experiencing severe COVID-19, with a higher risk  
620 of severe COVID-19 defined as being hospitalized or deceased, compared to non-  
621 essential workers.<sup>21</sup> In March 2020, the United States Occupational Safety and Health  
622 Administration (US-OSHA) classified essential worker types based on risk of occupational  
623 exposure to SARS-CoV-2. The level of risk depended on (i) the industry type, (ii) the  
624 need for contact within 6 feet of people known to be, or suspected of being, infected with  
625 SARS-CoV-2, and (iii) the requirement for repeated or extended contact with (a)  
626 person(s) known to be, or suspected of being, infected with SARS-CoV-2.<sup>22</sup> See Table 1.

627 Table 1 Classification of essential workers by risk of exposure

<b>Level of Risk</b>	<b>Definition</b>	<b>Types of Essential Workers</b>
Very high or high exposure risk	Those with high potential for exposure to known or suspected sources of COVID-19 during specific medical, post-mortem, or laboratory procedures.	<b>Healthcare workers</b> (e.g., doctors, nurses, dentists, paramedics, emergency medical technicians) performing aerosol-generating procedures <b>Healthcare or laboratory personnel</b> collecting or handling specimens <b>Morgue workers</b> performing autopsies
High exposure risk	Those with high potential for exposure to known or suspected sources of COVID-19.	<b>Healthcare delivery and support staff</b> (e.g., doctors, nurses, and other hospital staff who must enter patients' rooms) exposed to known or suspected COVID-19 patients. <b>Medical transport workers</b> (e.g., ambulance vehicle operators) moving known or suspected COVID-19 patients in enclosed vehicles. <b>Mortuary workers</b> involved in preparing (e.g., for burial or cremation) the bodies
Medium exposure risk	Those that require frequent and/or close contact with (i.e., within 6 feet of) people who may be infected with SARS-CoV-2, but who are not known or suspected COVID-19 patients.	Essential workers in contact be with the general public (e.g., in schools, high-population-density work environments, and some high-volume retail settings). Essential workers in frequent contact with travellers who may return from international locations with widespread COVID-19 transmission.
Lower Exposure Risk	Those that do not require contact with people known to be, or suspected of being, infected with SARS-CoV-2 nor frequent close contact with (i.e., within 6 feet of) the general public	Essential workers in minimal occupational contact with the public and other co-workers.

628 Source: US-OSHA<sup>22</sup>

629 In this Opinion, essential workers have been divided into large groups based on their  
630 involvement or lack of involvement in healthcare-related activities. Essential healthcare  
631 workers have been defined as *"all paid and unpaid persons serving in healthcare settings  
632 who have the potential for direct or indirect exposure to patients or infectious materials.  
633 This includes persons not directly involved in patient care, but potentially exposed to  
634 infectious agents while working in a healthcare setting."*<sup>23</sup> Informal carers fall into this  
635 group. All these individuals are referred to as the health workforce and include workers of  
636 varying levels of exposure risk.

637 It is important to note that women are over-represented in many of the sectors defined  
638 as essential workers. In the EU, women make up 76% of healthcare workers, 76% of  
639 those working in the care sector, and 82% of supermarket cashiers.<sup>24</sup> The European  
640 Institute for Gender Equality advocates for gender mainstreaming in crisis situations to  
641 ensure that increased challenges to occupational health and wellbeing of women essential

642 workers are recognised and addressed. Similarly, essential workers are  
643 disproportionately from minorities groups and also face increased challenges.<sup>25</sup>

### 644 **Essential workers and mental health**

645 As described in the mandate, cross-sectional survey data collected early in the COVID-19  
646 pandemic from healthcare workers indicates that approximately half of them reported  
647 symptoms of PTSD<sup>5</sup>, 25% reported symptoms of depression, 22% reported symptoms of  
648 stress, 20% reported anxiety symptoms, and 8% reported insomnia, with women more  
649 likely than men to experience symptoms of PTS and depression.<sup>4</sup> A systematic review of  
650 6 studies (1 from India and 5 from China), published in April 2020,<sup>26</sup> support these  
651 findings. Regarding mental wellbeing in healthcare workers, 33% reported flourishing,  
652 58% reported moderate wellbeing, and 9% reported languishing mental health.<sup>27</sup>  
653 Regarding mental health in other essential workers, an online survey of various types of  
654 essential workers conducted during the last four weeks of lockdown for COVID-19 in the  
655 Hubei Province of China indicates that 25% reported moderate-to-severe anxiety  
656 symptoms. Approximately 20% of farmers and economy staff reported moderate-to-  
657 severe depressive symptoms, while only 15% of teachers/government staff did.  
658 Approximately 12% of farmers and teachers/government staff reported moderate-to-  
659 severe stress, while 17% of economy staff did.<sup>28</sup>

660 Before examining factors that influence the mental health of essential workers in Chapter  
661 3 and interventions (often times addressing these factors) in Chapter 4, there are several  
662 important caveats to note regarding the mental health outcomes available. Professor Sir  
663 Simon Wessely and his colleagues note a number of areas of concern about the research  
664 on mental health during the COVID-19 pandemic.<sup>29</sup> Given data collection challenges  
665 during the pandemic, our current knowledge of mental health in essential workers is  
666 primarily limited to self-reported responses to surveys. As a result, there is a high  
667 potential for lack of representativeness, either due to low response rates, convenience  
668 sampling, and/or because of potential response bias with respect to who completes a  
669 survey (e.g., depending on the setting, it may be those most unwell, or least unwell if  
670 stigma, social desirability, and/or lack of confidentiality are potential issues). The  
671 descriptive cross-sectional nature of the surveys means that little knowledge concerning  
672 predictive factors of mental health issues is available, which implies a lack of targets for  
673 interventions. Because these surveys on mental health are not longitudinal, evidence for  
674 specific changes in mental health of essential workers compared to pre-pandemic levels  
675 is lacking. Moreover, examining groups of essential workers in isolation inhibits our  
676 understanding of whether the effect of the pandemic is different in essential workers  
677 from the general population. Increases in symptom reporting could be confounded by  
678 demographic differences such as gender and ethnicity. Although evidence from some  
679 countries suggests a decrease in mental health for the general population compared to

680 pre-pandemic levels (e.g., in the UK<sup>30</sup>), various longitudinal population cohort studies in  
681 the UK have found no increase in mental distress among healthcare workers.<sup>29</sup> According  
682 to early reports, Finnish workers' mental health has not decreased dramatically due to  
683 the COVID-19 pandemic.<sup>31</sup>

684 A final limitation to take into account as research on supporting mental health in  
685 essential workers is examined relates to the mental health outcomes available. As  
686 discussed in the previous chapter, both mental illness and mental wellbeing are  
687 independent dimensions of mental health. High levels of both symptoms of mental illness  
688 and wellbeing may co-exist, but most available research on mental health (both pre-  
689 pandemic and during the pandemic) neglects the mental wellbeing and functioning  
690 dimension. Because mental health research, in general, tends to emphasize the mental  
691 illness dimension, available survey tools do not sufficiently distinguish between mental  
692 illness symptoms and impact on function. This distinction is important because distress  
693 can be considered a normal reaction to the COVID-19 pandemic, and certain responses  
694 to stress can even be considered beneficial for effectively dealing with a threat (see  
695 Walter Cannon's description the acute stress response, or fight-or-flight response<sup>32</sup>). In  
696 other words, knowing the percent of individuals with anxiety or depressive symptoms or  
697 how they change as a result of an intervention may not reflect how well these individuals  
698 function. And it is the degree of functional impairment that ultimately signals a need for  
699 intervention. Little is known about the challenges that lead to functional impairment so  
700 that they can be targeted for earlier intervention (primary and secondary prevention in  
701 the framework), before care and treatment for those with ill mental health is required. In  
702 order to prepare for future crises, there is a need to develop survey tools that better  
703 distinguish mental illness from distress and measure the types of difficulties that need  
704 intervention.

#### 705 **SARS-CoV-2 exposure and exposure-related concerns**

706 The association between SARS-CoV-2 and mental health problems in healthcare workers  
707 is well-established. An observational study from China reported that, compared to those  
708 working in non-prevention and control positions, those working in isolation wards or fever  
709 clinics and/or involved in pre-check triages reported worse depression symptoms, more  
710 loneliness, and less social support.<sup>33</sup> A systematic review supports these findings with  
711 workers in areas with higher infection rates reporting more severe levels of mental health  
712 symptoms.<sup>34</sup> Three rapid systematic reviews extend these findings. Exposure to patients  
713 with COVID-19 was the most commonly reported correlate of depression, anxiety, and  
714 stress in healthcare workers, with specific concerns about exposure associated with  
715 mental health issues were worry about infection or about infecting others.<sup>35</sup> <sup>36</sup> A third  
716 rapid review summarized exposure-related concerns associated with mental health as  
717 involving close contact with COVID-19, lack of adequate personal protective equipment

718 (PPE) to prevent transmission of SARS-CoV-2, fear of infection, and concern about  
719 family.<sup>37</sup>

720 SARS-CoV-2 exposure and exposure-related concerns also affect other essential workers,  
721 although less is known about the risk/protective factors for mental health with respect to  
722 other essential groups. Our review of the literature only identified data in this area  
723 specific to transit workers. One poll indicates that one in four transit workers in New York  
724 City suffered COVID-19.<sup>38</sup> Results of an anonymous online survey of New York City  
725 unionized transit workers conducted in August 2020<sup>39</sup> indicated that 60% felt “nervous,  
726 anxious, on-edge, and cannot control worrying”, 15% felt “isolated, down, depressed or  
727 hopeless”, and 10% had sleep problems. Over 90% knew someone at work who had  
728 COVID-19 and three fourths personally knew someone at work who had died. While 90%  
729 of transit workers reported being concerned about getting sick at work, over 70% were  
730 fearful for their safety at work due to: riders not wearing masks, riders getting angry  
731 when asked to wear a mask, riders attacking them if asked to wear a mask, and/or riders  
732 attacking them if they don’t enforce mask use on other riders.

733 **Burnout and Moral Injury: Risk factors for poor mental health in the health**  
734 **workforce**

735 The concept of post-traumatic stress disorder (PTSD) has been widely discussed in the  
736 literature in regards to healthcare workers and the current Covid-19 pandemic.<sup>40-42</sup>  
737 However, there are two other distinct but related conditions and deserve attention, those  
738 of burnout and moral injury. All three conditions are associated with working in stressful  
739 situations and have been recognized in multiple occupations. Studies that have sought to  
740 measure the frequency of these conditions, using standardized instruments, and have  
741 described varying associations.<sup>43-45</sup> For example, in a study among Greek firefighters,  
742 20% of fire fighters reported burnout and 13% of those reported symptoms consistent  
743 with PTSD.<sup>46</sup> A study of health workers in New York found that those who had  
744 experienced burnout in the previous year were twice as likely to experience PTSD during  
745 the pandemic.<sup>47</sup>

746 Here we consider both burnout and moral injury, and their overlaps with PTSD in cause  
747 and presentation. Management strategies for burnout and moral injury, along with other  
748 risk and protective factors, will be addressed in Chapter 3.

749 **Burnout**

750 In a major health crisis, such as a pandemic, the workload of health workers inevitably  
751 increases dramatically, potentially outstripping the resources available, a problem that  
752 may be compounded by illness and, in some cases, deaths, among those involved in the  
753 response. In conditions such as these, there is an ever present risk of what is termed  
754 burnout, a condition characterised by “feelings of energy depletion or exhaustion;  
755 increased mental distance from one’s job, or feelings of negativism or cynicism related to

756 one's job; and reduced professional efficacy".<sup>48</sup> Burnout is also associated with a range of  
757 subsequent adverse mental health outcomes, including Major Depressive Disorder.<sup>49</sup>  
758 First described by Freudenberger in 1974, in a study of volunteers at a clinic for drug  
759 addicts,<sup>50</sup> burnout is not considered a medical condition, although it has been included in  
760 the 11<sup>th</sup> revision of the International Classification of Diseases (code QD85) within the  
761 section on "factors influencing health status or contact with health services", as a reason  
762 why individuals might seek medical advice, but one that is primarily a consequence of  
763 their occupational circumstances. While the early work focused on teachers and social  
764 care workers,<sup>51</sup> this soon extended to healthcare workers and, subsequently, more  
765 generally.

766 Psychologists have developed a series of instruments that can be used to identify those  
767 experiencing burnout. While having many features in common, some are based on  
768 slightly different conceptions of the condition. The most widely used, the Maslach  
769 Burnout Inventory (MBI),<sup>52</sup> considers burnout to have three main elements, emotional  
770 exhaustion, depersonalisation, whereby the affected individual distances themselves from  
771 those they are interacting with and regards them with cynicism, and a sense of reduced  
772 personal accomplishment in their work. The Shirom-Melamed Burnout Measure<sup>53</sup> also  
773 emphasises exhaustion, both physical and emotional, but adds cognitive weariness or  
774 fatigue, characterised by problems with memory and information processing. The  
775 Oldenburg Burnout Inventory also includes exhaustion, but adds disengagement.<sup>54</sup> There  
776 is some evidence that burnout can give rise to different symptoms in men and woman,  
777 with higher levels of depersonalisation among the former and of emotional exhaustion  
778 among the latter.<sup>55</sup>

779 There are also different responses to the conditions giving rise to burnout. Farber has  
780 described three.<sup>56</sup> The first, which he termed "wear-out" or brown-out", describes the  
781 situation where someone simply gives up in the face of excessive stress with inadequate  
782 reward. The second, which he termed classic or frenetic burnout, was seen in individuals  
783 who were working ever harder to resolve their stressful situation or achieve a suitable  
784 reward. Finally, there was under challenged burnout, where the stress level was low but  
785 the work was especially unrewarding.

### 786 **Burnout during the COVID-19 pandemic**

787 Even at the best of times, healthcare workers are susceptible to burnout. Their work is  
788 often intensive and emotionally challenging, dealing with patients and families facing  
789 emotional trauma, with many struggling to respond with empathy in the face of  
790 inadequate resources and other demands on their time. During the pandemic, they have  
791 faced additional stressors. The pressure of markedly increased workload has been  
792 accentuated by prolonged wearing of personal protective equipment, and with it the risks

793 of overheating and dehydration, as well as the effects of placing a physical barrier  
794 between themselves and their patients.<sup>57</sup>

795 There have been many studies that have measured the prevalence of burnout during the  
796 pandemic, mostly using the MBI. While most have found elevated rates of burnout, many  
797 lack appropriate controls to assess how these figures relate to the pre-pandemic period.  
798 Furthermore, comparisons of health workers on the frontline of the COVID-19 response  
799 and others have been conflicting. For example, a study of Italian healthcare professionals  
800 found that those who were directly involved in the management of patients with COVID-  
801 19 had higher levels of burnout than those who were not.<sup>58</sup> A study of health workers in  
802 emergency departments, ambulances, and intensive-care units in Turkey, reached the  
803 same conclusion.<sup>59</sup> In contrast, a study from Wuhan, China, reported a lower prevalence  
804 of burnout among frontline health workers, an observation attributed to the higher value  
805 placed on their work by the authorities.<sup>60</sup> These findings were consistent with another  
806 undertaken among Romanian medical students.<sup>61</sup> The limited available evidence suggests  
807 that some individuals may be at particular risk of burnout because of their personal  
808 circumstances. In the aforementioned Turkish study, those who had children or family  
809 members over the age of 65 with a chronic illness were at increased risk.<sup>59</sup> Several  
810 studies have found that women are especially at risk of burnout, in some cases linking  
811 this to concerns about their families.<sup>62</sup> Another study, which recruited health workers  
812 globally via a variety of online platforms, found that perceived adequacy of PPE was  
813 associated with a lower risk of burnout.<sup>63</sup> A Japanese study found a higher risk of burnout  
814 among health professionals who were not physicians compared with those who were<sup>64</sup>  
815 but an Italian study found higher rates of burnout in nurses than in doctors.<sup>65</sup> A study  
816 from Singapore found a higher frequency of burnout, measured by the OBI, among those  
817 working longer hours and who had been redeployed away from their usual work setting.<sup>66</sup>

### 818 **The implications of burnout**

819 Research from prior to the pandemic emphasizes the consequences of burnout for  
820 healthcare workers. A systematic review of longitudinal studies found that burnout was a  
821 predictor of adverse outcomes in three areas:<sup>67</sup> (i) physical outcomes included type 2  
822 diabetes, coronary heart disease, hospitalization due to cardiovascular disorder,  
823 musculoskeletal pain, prolonged fatigue, headaches, severe injuries and mortality at age  
824 under 45; (ii) psychological consequences include insomnia, depressive symptoms, use  
825 of psychotropic and antidepressant medications, and other mental disorders. (iii)  
826 occupational consequences include absenteeism, new disability pension, and  
827 presenteeism. However, it also has implications for patients. There is an extensive body  
828 of research, much based on studies on Magnet® hospitals<sup>68</sup>, which are hospitals that are  
829 recognized for having created cultures that attract and retain nursing staff. These studies  
830 have shown that lower levels of burnout among nurses are associated with better patient



831 outcomes, often mediated by a reduced level of what is termed “failure to rescue”, where  
832 deterioration in a patient’s condition is not detected or acted on.<sup>69,70</sup> In the current  
833 pandemic, it has been shown that mortality is almost 20% higher in intensive care units  
834 operating at the highest level of intensity.<sup>71</sup>

### 835 **Moral injury**

836 Although there is no consensus definition of the term moral injury, Shay conceptualises  
837 moral injury as “*a character wound that stems from a betrayal of justice by a person of*  
838 *authority in a high-stakes situation*”.<sup>72</sup> Litz and colleagues (2009) define a potentially  
839 morally injurious event (PMIE) as one that entails “*perpetrating, failing to prevent,*  
840 *bearing witness to, or learning about acts that transgress deeply held moral beliefs and*  
841 *expectations*.”<sup>73</sup> Although much of the initial research focused upon moral injury in  
842 military personnel and veterans, a recent narrative review recognised many disciplines  
843 that have researched moral injury, including psychiatry, social work, philosophy and  
844 religious/spiritual<sup>74</sup>, as well as health care.

845 Moral injury is not a mental illness in itself, but those who develop moral injuries are  
846 likely to experience negative thoughts about themselves and others.<sup>75</sup> A systematic  
847 review of occupational moral injury and mental health in 2018 recognised that these  
848 symptoms can contribute to developing mental health issues such as depression, PTSD,  
849 anxiety and even suicidal ideation.<sup>76</sup> The impact of moral injury has been recognised  
850 across a range of professions, including teachers, military service members, journalists,  
851 and healthcare workers across a variety of countries.<sup>76</sup> Moral injury has also been  
852 recognised in medical students placed in pre-hospital and emergency settings when they  
853 were exposed to unanticipated trauma.<sup>77</sup>

854 An overlap between moral injury and PTSD has been acknowledged, for example, if the  
855 index event that the individual was exposed to is both potentially life-threatening and  
856 morally injurious.<sup>78</sup> Litz and colleagues<sup>73</sup> also indicate that PTSD and moral injury share  
857 similar consequences with regards to re-experiencing the traumatic event and avoidance  
858 or numbing. The individual’s role in the event can be victim or witness in both PTSD and  
859 moral injury, and the role of perpetrator is a characteristic of moral injury only. PTSD and  
860 moral injury are different with respect to the triggering event. In PTSD it is actual or  
861 threatened death or serious injury, while in moral injury it is acts that violate deeply held  
862 moral values. The necessity that is lost is different. In PTSD it is safety and in moral  
863 injury it is trust. This leads to differences in the predominant painful emotion. PTSD  
864 causes fear, horror, and/or helplessness, while moral injury causes guilt, shame, and  
865 anger. Lastly, PTSD involves psychological arousal, while as moral injury does not.

866 The importance of following up junior staff after major incidents for PTSD has been  
867 explored;<sup>79</sup> however major incidents (such as terrorist attacks, explosions or accidents

868 with high numbers of casualties over a short period) differ from pandemics in both  
869 context and length of exposure to the potentially morally injurious event.

### 870 **Moral Injury during the COVID-19 pandemic**

871 Prior to the COVID-19 pandemic, there was evidence of “an existing baseline of  
872 psychological pathology” and low morale in healthcare workers,<sup>80</sup> even before moral  
873 injury is considered. A 2017 systematic review of UK healthcare workers identified high  
874 rates of psychiatric morbidity and burnout (a syndrome traditionally conceptualised as  
875 resulting from chronic workplace stress that has not been successfully managed,  
876 characterised by feelings of energy depletion or exhaustion; increased mental distance  
877 from one’s job, or feelings of negativism or cynicism related to one's job; and reduced  
878 professional efficacy)<sup>81,82</sup>, raising concerns about the negative impact on healthcare  
879 provision discussed in the prior section.<sup>81</sup> The difference between burnout and moral  
880 injury is important because using different terminology reframes the problems.<sup>83</sup>  
881 Burnout traditionally suggests that the problem resides within the individual, who is in  
882 some way deficient and lacks the resources or resilience to withstand the work  
883 environment.<sup>83</sup> Although the pandemic can be viewed as a natural disaster, the reactions  
884 of those ‘in legitimate authority’ will be perceived by many, including healthcare workers,  
885 as ‘a betrayal of what is right’.<sup>80</sup>

886 Furthermore, a lack of resources, inadequate clear guidance, or insufficient training may  
887 also mean staff perceive that their own health is not being considered by their  
888 employers.<sup>84</sup> “Anticipatory guilt”, seeing healthcare colleagues in other countries already  
889 experiencing the adverse effects of the pandemic, has also been recognised.<sup>85</sup> For those  
890 healthcare workers that needed to quarantine, research identified feelings of guilt, plus  
891 fear they [healthcare workers] can contaminate their own families and conflict about  
892 their roles.<sup>86,87</sup> It remains unclear which staff will become very distressed during  
893 quarantine, but the conditions of quarantine can make healthcare workers anxious to  
894 return to work.<sup>80</sup> The challenges described here, within the context of scarce specific  
895 resources,<sup>84</sup> and treatment decisions that may differ from when a disease is less  
896 virulent<sup>80</sup> can be argued as being analogous to the PMIEs initially proposed by Litz and  
897 colleagues.<sup>73</sup>

898 In the current Covid-19 pandemic, potential risk factors for moral injury identified  
899 include:

- 900 • If there is loss of life to a vulnerable person
- 901 • If leaders are perceived not to take responsibility for events/are unsupportive of staff
- 902 • If staff feel unaware or unprepared for the emotional/psychological consequences of
- 903 decisions

- 904 • If the PMIE occurs concurrently to exposure to other traumatic events (e.g., death of  
905 loved one)
- 906 • If there is a lack of social support following the PMIE.<sup>84</sup>

907 It should be noted that not all PMIEs lead onto individual healthcare staff experiencing  
908 moral injury. Four different reactions to “disaster” have been identified<sup>88</sup> that range from  
909 “not upset at all” to “mentally disordered”. Moreover, the concept of ‘post-traumatic  
910 growth’, with a bolstering of resilience, esteem, outlook and values, has also been  
911 recognised.<sup>89</sup> It is also important to note that many profound reactions of staff will be still  
912 within what is considered a ‘normal’ reaction and will not constitute mental health  
913 pathology.<sup>80</sup>

### **914 Implications of the identification of moral injury in the health workforce**

915 However, for healthcare workers in the current pandemic, which is comparable with war  
916 due to global death toll,<sup>80</sup> and with some now exposed to PMIEs for over a year without  
917 pause, supporting the mental health of those who individuals who need it is a critical part  
918 of the public health response.<sup>80</sup> Although resources have traditionally been put towards  
919 supporting staff once they have developed mental health pathology, it has been  
920 suggested that a shift in focus is required from individual to organisation,<sup>80</sup> and  
921 prevention and mitigation is more important than cure.<sup>90</sup>

### **922 Other risk and protective factors for mental health during the COVID-19 923 pandemic**

924 Beyond fear of becoming infected, a rapid systematic review on the psychological impact  
925 of COVID-19 and other viral epidemics on frontline healthcare workers emphasized risk  
926 factors related to fear of the unknown, threats to their own mortality, stigma by society  
927 and/or family members, and working long hours.<sup>91</sup> Various systematic reviews identify  
928 social support as a commonly reported protective factor for mental health in the health  
929 workforce.<sup>36 91</sup> Risk and protective factors associated with mental health in other  
930 essential worker groups during the COVID-19 pandemic has not been sufficiently studied  
931 to draw conclusions.

### **932 Risk and protective factors for mental health of essential workers in crisis 933 situations**

934 For non-healthcare and non-uniformed responders, parallels have been drawn between  
935 the mental health response of essential workers to 9/11 and the mental health impact of  
936 the COVID-19 pandemic.<sup>92</sup> In particular, an 8-year follow-up study found that non-  
937 traditional 9/11 responders (e.g., construction, clean-up, and asbestos workers; city  
938 employees; and volunteers) had consistently higher rates of PTSD than uniformed  
939 responders (e.g., police).<sup>93</sup> Importantly, this group mostly lacked disaster response  
940 experience and found themselves taking on tasks well outside the scope of their jobs,

941 often not by choice but due to economic necessity.<sup>92</sup> It is possible to infer similar  
 942 consequences on mental health to other groups of non-healthcare essential workers who  
 943 were unprepared to cope with the consequences of the COVID-19 pandemic.  
 944 Impacts of pandemics on healthcare workers have already been discussed in literature  
 945 prior to the current Covid-19 pandemic, within the context of previous infectious disease  
 946 outbreaks such as SARS.<sup>86,94</sup> Increased workload, fears of contagion, working with new  
 947 and frequently changing protocols, barriers to usual communication and care with the  
 948 use of PPE, and caring for patients who quickly deteriorate were all recognised as  
 949 challenges. Furthermore, constant news coverage blurs the lines between home and  
 950 work.<sup>94</sup> Kisely and colleagues conducted a rapid review and meta-analysis of the  
 951 psychological effects of emerging virus outbreaks on healthcare workers.<sup>95</sup> Risk factors  
 952 for psychological distress included being younger, being more junior, being the parents of  
 953 dependent children, or having an infected family member. Longer quarantine, lack of  
 954 practical support, and stigma also contributed to psychological distress. Protective factors  
 955 for mental health included clear communication, access to adequate PPE, adequate rest,  
 956 and both practical and psychological support were associated. Table 2 provides a  
 957 summary of these risk and protective factors.

958 Table 2 Factors that increased or decreased risk of adverse psychological outcomes in  
 959 healthcare workers in emerging virus outbreaks prior to COVID-19

Factor Level	Risk Factors	Protective Factors
Individual, clinical	<ul style="list-style-type: none"> <li>- Increased contact with infected patients</li> <li>- Precautionary measures creating perceived impediment to doing job</li> <li>- Forced re-deployment to look after affected patients</li> <li>- Higher risk among nurses</li> </ul>	<ul style="list-style-type: none"> <li>+ Frequent short breaks from clinical duties</li> <li>+ Adequate time off work</li> <li>+ Faith in precautionary measures</li> <li>+ Self-perception of being adequately trained and supported</li> <li>+ Working in an administrative or managerial role</li> </ul>
Individual, training and experience	<ul style="list-style-type: none"> <li>- Inadequate training</li> <li>- Lower levels of education</li> <li>- Part-time employee</li> <li>- Less clinical experience</li> </ul>	<ul style="list-style-type: none"> <li>+ Greater experience through years worked</li> </ul>
Individual, personal	<ul style="list-style-type: none"> <li>- Increased time in quarantine</li> <li>- Staff with children at home</li> <li>- Personal lifestyle impact by epidemic/pandemic</li> <li>- Infected family member</li> <li>- Single or social isolation</li> <li>- Female sex</li> <li>- Lower household income</li> <li>- Comorbid physical health conditions</li> <li>- Younger age</li> </ul>	
Individual, psychological	<ul style="list-style-type: none"> <li>- Lower perceived personal self-efficacy</li> <li>- History of psychological</li> </ul>	<ul style="list-style-type: none"> <li>+ Supportive peers</li> <li>+ Family support</li> </ul>

	distress, mental health disorders, or substance misuse	
Service	<ul style="list-style-type: none"> <li>- Perceived lack of organisational support</li> <li>- Perceived lack of adequacy of training</li> <li>- Lack of confidence in infection control</li> <li>- No compensation by staff by organisation</li> </ul>	<ul style="list-style-type: none"> <li>+ Positive feedback to staff</li> <li>+ Staff faith in service's infection control procedures</li> <li>+ Provision of protective gear</li> <li>+ Effective staff training in preparation for outbreaks</li> <li>+ Staff support protocols</li> <li>+ Clear communication with staff</li> <li>+ No infection among staff after start of strict protective measures</li> <li>+ Infected colleagues getting better</li> <li>+ Access to tailored psychological interventions based on needs of individual staff</li> </ul>
Societal	- Social stigma against hospital workers	+ A general drop in disease transmission

960 Source: Kisley, et al. (2020)<sup>95</sup>

961 **Additional occupational health and economic risk factors influencing the mental**  
 962 **health of essential workers in general**

963 An umbrella review on work-related stress risk and preventive measures<sup>96</sup> identified the  
 964 following groups of occupational risk factors that influence mental health and deserve  
 965 attention when considering actions to support the mental health of essential workers:

- 966 - **Role:** Conflicts, violence, responsibility, role ambiguity, sense of powerlessness
- 967 - **Relationships:** Colleagues' support, senior's support, subordinates (e.g. nurses),  
 968 communication, bullying
- 969 - **Control:** Limited control over the practice, dissatisfaction, lack of autonomy
- 970 - **Factors intrinsic to the job:** Workloads, shift work (night shifts in particular),  
 971 work time, medical errors, medico-legal concerns
- 972 - **Organizational environment:** Participation in decision making, inadequate  
 973 leisure time, excessive bureaucracy, absenteeism, reward system
- 974 - **Career:** Job security, career opportunities, promotion prospects/salary, unpaid  
 975 overtime

976 **Recessions**

977 There is evidence suggesting that recessions are generally bad for mental health. A  
 978 systematic review on the effect of economic recessions on mental health outcomes  
 979 provides consistent evidence that economic recessions and mediators such as  
 980 unemployment, income decline, and unmanageable debts are significantly associated  
 981 with poor mental wellbeing, increased rates of common mental disorders, substance-  
 982 related disorders, and suicidal behaviours.<sup>97</sup> The authors warn however that the research  
 983 is based on cross-sectional studies, which limits causality inferences. The Great  
 984 Recession in Europe and North America was associated with at least 10,000 additional  
 985 economic suicides between 2008 and 2010.<sup>98</sup> A literature review on the health

986 consequences of recessions in the US provides consistent evidence that recessions, and  
987 unemployment in particular, can be significantly damaging to mental health, increasing  
988 the risk of substance abuse and suicide particularly for young men.<sup>99</sup> The October 2008  
989 stock market crash in the US increased feelings of depression and use of antidepressant  
990 drugs, but did not lead to increases in clinically validated measures of depressive  
991 symptoms or indicators of depression.<sup>100</sup> A systematic review suggested that periods of  
992 economic crisis might be linked to an increase of general help sought for mental health  
993 problems, with conflicting results regarding the changes in the use of specialised  
994 psychiatric care. It also suggests that economic crises might be associated with a higher  
995 use of prescription drugs and an increase in hospital admissions for mental disorders.<sup>101</sup>  
996 However, not all individuals are equally affected by economic crises or recessions,  
997 illustrating the interplay between different types of factors occupational and non-  
998 occupational factors. For example, the prevalence of mental health problems in England  
999 increased markedly since 2008, and such increases were greatest in people with less  
1000 education and people out of work.<sup>102</sup> Gender differences have also been identified; for  
1001 instance, the 2008 recession in Spain was associated with an increase in prevalence of  
1002 people at risk of poor mental health in men, but with a reduction in women.<sup>103</sup>

### **1003 The role of pre-existing mental health conditions**

1004 Mental health conditions are common. Prior to the pandemic, the global lifetime  
1005 prevalence for common psychological disorders was estimated to be 29.2%.<sup>104</sup> Moreover,  
1006 common mental health conditions — such as mood, anxiety and substance use  
1007 disorders<sup>105</sup> — have been found to be common among the working population,<sup>106</sup>  
1008 particularly amongst healthcare workers.<sup>37</sup>

1009 People with mental health conditions have a lower life expectancy and generally poorer  
1010 health outcomes than those with no psychological conditions, due to a complex  
1011 combination of socioeconomic and behavioural risk factors, often accentuated by barriers  
1012 to accessing care.<sup>107</sup> In many countries, the COVID-19 pandemic has led to a significant  
1013 disruption of mental health services,<sup>108</sup> while non-pharmaceutical interventions to control  
1014 the pandemic, such as quarantine and physical distancing, while necessary to interrupt  
1015 transmission of infection, pose risks to both physical and mental health.<sup>109,110</sup> Taken  
1016 together, these considerations have given rise to concerns that the current pandemic  
1017 could cause relapse or exacerbation of existing psychiatric conditions.<sup>111</sup> However, the  
1018 full impact of the COVID-19 pandemic on the mental health of those with a history of  
1019 mental ill-health is still not fully understood, including amongst essential workers.

### **1020 Impact of the COVID-19 pandemic on those with pre-existing mental health 1021 disorders**

1022 People with pre-existing mental health problems were recognised early on in the  
1023 pandemic as a group likely to be disproportionately affected by the it and the control  
1024 measures associated with it.<sup>111</sup> Therefore, they were considered to be particularly  
1025 vulnerable to adverse mental health outcomes.<sup>112</sup> Evidence from previous novel viral  
1026 outbreaks found that pre-existing psychological ill-health was associated with worse  
1027 psychological outcomes.<sup>95</sup> However, research on the impact of the current COVID-19  
1028 pandemic on this group has produced mixed results.

1029 Certain mental health conditions — such as anxiety-related disorders — may be  
1030 especially at risk of being aggravated by the pandemic.<sup>113</sup> A recent systematic review and  
1031 meta-analysis showed that people with pre-existing mental health conditions experienced  
1032 clinically and statistically significantly higher rates of psychiatric symptoms (including  
1033 anxiety, depression, stress and insomnia) during pandemics compared to those in control  
1034 groups.<sup>114</sup> However, noting inadequacies in the designs of many of the studies included in  
1035 the review, the authors urge caution in attributing these outcomes to the pandemic (as  
1036 opposed to selection bias due to the nature of sampling, often involving those in contact  
1037 with health services). The authors recommend improved research methodologies —  
1038 particularly the need for longitudinal studies where data were available on pre-pandemic  
1039 psychiatric morbidity and symptom severity — in order to allow for causal associations to  
1040 be made. The review findings support the urgent need for accessible mental health  
1041 services to address the high levels of psychiatric symptoms experienced by people with  
1042 pre-existing mental illnesses during this — and likely future — pandemics.

1043 A recently published longitudinal study of three existing Dutch cohorts (not included in  
1044 the aforementioned systematic review) confirmed that the symptom severity of people  
1045 with depressive, anxiety or obsessive-compulsive disorder was systematically higher than  
1046 in individuals without mental health disorders, but found that pre-existing mental ill-  
1047 health did not necessarily predispose to a greater level of emotional reactivity to the  
1048 pandemic.<sup>115</sup> The authors acknowledge, however, that data were only collected during  
1049 the first month of the national lockdown in the Netherlands and, therefore, may not  
1050 necessarily capture the longer-term effect of the pandemic on those with pre-existing  
1051 mental health conditions. Based on these results, the authors highlight the importance of  
1052 maintaining access to mental health services during the pandemic and the pressing need  
1053 for further research to understand the longer-term impact of the pandemic on mental  
1054 health.

**1.3. What interventions could be effective in addressing mental health support needs of health workers and other essential workers, including those with pre-existing mental health conditions?**

For the purposes of addressing this mandate question, we conducted a search in PUBMED and Cochrane Library for systematic reviews, reviews of reviews, meta-analysis, effectiveness, or cost-effectiveness publications considering interventions for mental health in health workforce and/or other essential workers as defined in the mandate. Specific interventions targeting burnout and moral injury were included in the search. The focus of this chapter is on interventions that have demonstrated effectiveness in the context of the COVID-19 pandemic or past outbreaks. When necessary in order to fill gaps in the available research, literature from pre-pandemic studies is described.

Limitations and challenges associated with the research concerning the effectiveness of interventions to support the mental health of essential workers include the following issues:

1. Our understanding of mental health (based on the two-dimensional model of mental illness and mental wellbeing) and its aetiology is poor. The use of a biomedical model of health can be unhelpful for mental health research.
2. Mental health is very broad on its scope. The problems studied are very different, ranging from (symptoms of) depression, anxiety or insomnia to OCD, suicide ideation, PTSD, addictions, or chronic conditions such as schizophrenia or bipolar disorder. Interventions to support the mental wellbeing dimension are understudied.
3. Measuring mental health outcomes is extremely challenging. They are often poorly defined and subjective. Mental illness often has a chronic course and individuals frequently meet the diagnostic criteria for more than one mental health problem so it is difficult to separate out one problem from another.
4. Interventions to address mental health do not always lead themselves to well to being studied using traditional randomized controlled trial designs. Talking therapies and similar interventions are complex and context-dependent. They are often tailored to the individual and have components, such as the relationship with the therapist, which can be difficult to standardise.
5. Our understanding of mechanisms by which intervention work is rudimentary. Interventions to influence mental health are often complex and multi-component, which means it can be challenging to separate out effects of particular components or determine the “active ingredient” of a given intervention. Furthermore, components often interact with other factors.
6. Many interventions to support mental health show promising results in the short run, while the intervention is on-going, but impact may disappear in the long run.



1093 7. When examining systematic reviews of interventions to support mental health, the  
1094 definitions of effectiveness can be vague and vary from study to study. Moreover,  
1095 similar mental health concepts can be assessed using many different scales, which  
1096 can make comparison of effectiveness of interventions across studies difficult.

1097 8. Many of the few economic evaluations on worksite mental health interventions  
1098 lack methodological quality or lack evidence to support evidence-based decision  
1099 making.

1100 9. It is important to keep in mind that achieving the best outcomes depends upon  
1101 providing the right type of intervention to the correct population at the right time.  
1102 One size might not fit all and direct programmes to the ones most at risk might  
1103 increase the cost-effectiveness of promising interventions.

1104 The result of these caveats is that research on effectiveness of mental health  
1105 interventions is generally poor. However, results are promising.

1106 In order to support the mental health of essential workers, the workplace itself becomes  
1107 an important context for the implementation of appropriate interventions. Referring to  
1108 the conceptual framework for the Opinion and the Swiss Cheese model for supporting  
1109 mental health in essential workers, these interventions can occur on various levels –  
1110 there are policy-level (e.g., economic and social), organisational, task-job, and individual  
1111 orientations. Interventions are also classified as primary, secondary, or tertiary  
1112 prevention. As shown in the conceptual framework, primary interventions are proactive  
1113 by nature. Primary prevention prevents exposure to a known risk factor and keeps  
1114 harmful effects from emerging. Primary prevention may also enhance an individual's  
1115 tolerance or resilience in order to manage or cope more effectively with a stressor.  
1116 Secondary prevention efforts happen before mental health causes a detrimental impact  
1117 on function. Secondary interventions reverse, reduce or slow the progression of ill-health  
1118 and preclinical conditions or to increase individual resources. Such secondary approaches  
1119 may include both early detection and early treatment, with the aim of reducing the  
1120 severity or duration of symptoms and/or to halt or slow the further development of more  
1121 serious and potentially disabling conditions. Lastly, tertiary interventions are  
1122 rehabilitative by nature. They reduce negative impacts and heal existing damages.  
1123 Tertiary prevention efforts aim to treat and manage a diagnosed condition and minimize  
1124 its impact on daily functioning. Examples of tertiary interventions include rehabilitation,  
1125 relapse prevention, providing access to resources and support, and promoting  
1126 reintegration in the workforce.

1127 The EU-Compass for Action on Mental Health and Wellbeing<sup>116</sup> has identified some  
1128 additional limitations concerning interventions in the workplace to support mental health.  
1129 First, intervention studies primarily address individual outcomes. However, multi-modal  
1130 approaches, and especially measures implemented at organisational level, are important.

1131 These types of studies must be promoted and evaluated. Evaluation should include both  
1132 process and outcome aspects, in order to capture effects that might otherwise go  
1133 unnoticed. Emphasis on primary prevention is warranted that addresses risk factors in  
1134 the work environment and integrates individuals affected by mental ill health in the  
1135 workforce by providing appropriate support. Second, there is a lack of studies in small  
1136 and medium-sized enterprises (SMEs). This is concerning because SMEs are widely  
1137 acknowledged to be in need of appropriate support in terms of awareness and action  
1138 implementation when it comes to mental health in the workplace. EU-level efforts should  
1139 assist them in risk assessment and implementation of good practices where available.  
1140 Third, much current knowledge focuses on mental ill health and negative impacts, with  
1141 comparatively less evidence on the impact of positive psychological wellbeing in a healthy  
1142 work environment. Further research is needed that expands the range of factors and  
1143 outcomes examined to include wellbeing, flourishing, vitality and sustainability.  
1144 Potentially effective interventions to protect mental health of essential workers should  
1145 therefore be complex and multi-faceted, addressing modifiable risk factors identified in  
1146 the prior chapter of this Opinion, and be implemented on multiple levels.

1147 **Interventions in mental health of essential workers**

1148 Our literature search resulted in effectiveness research of interventions to support the  
1149 mental health of the health workforce during the COVID-19 pandemic or in the context of  
1150 previous emerging disease outbreaks (e.g., SARS, Ebola, MERS). Most of these studies  
1151 are pre-dominantly concerned with hospital settings, with a lack of evidence related to  
1152 social care staff or primary care staff. This is concerning because of the large proportion  
1153 of deaths occurring in the community and specifically in residential care homes.  
1154 Moreover, there is an important gap in research regarding interventions to support the  
1155 mental health of other groups of non-healthcare essential workers during emerging  
1156 disease outbreaks. These gaps must be rectified in the future as well.

1157 **Mental health interventions in essential, primary healthcare, workers**

1158 A rapid systematic review examining the mental health impact of the COVID-19  
1159 pandemic on healthcare workers and interventions to support psychological wellbeing  
1160 highlights the poor study design of most studies, reflecting the urgency of the pandemic,  
1161 and therefore a need to incorporate high-quality research in pandemic preparedness  
1162 planning.<sup>37</sup> Similarly, a Cochrane mixed methods systematic review evaluating  
1163 interventions to support the resilience and mental health of frontline health and social  
1164 care professionals during and after a disease outbreak, epidemic or pandemics that  
1165 included COVID-19 identified 16 studies. These studies mainly looked at workplace  
1166 interventions that involved either psychological support or work-based interventions. No  
1167 evidence regarding how well different strategies worked to support the resilience and  
1168 mental wellbeing of frontline workers was found.<sup>117</sup> However, other reviews do suggest

1169 that some interventions are effective in supporting the mental health of the health force  
1170 and other essential workers. Furthermore, it may be possible to transfer interventions  
1171 with proven effectiveness in different populations or in different contexts to essential  
1172 workers in the COVID-19 pandemic.

1173 **Effectiveness of individual-level interventions**

1174 A rapid review of stress reduction techniques in health care providers dealing with severe  
1175 coronavirus infections (SARS, MERS, and COVID-19)<sup>118</sup> provides preliminary support for  
1176 the value of Cognitive-Behavioral Therapy (CBT) interventions for crisis intervention.<sup>95</sup>  
1177 Specifically, basic CBT skills may be effective in treating the anxiety and depression in  
1178 the health workforce when paired with Psychological First Aid (PFA) principles.<sup>119 95</sup>  
1179 Psychological First Aid (PFA) is recommended for use in serious crisis events by the  
1180 WHO<sup>120</sup> and includes the management of basic safety needs (for example, food and  
1181 water, information); practical care and support; empathic listening; increasing social  
1182 support; providing mental health support and referrals as needed; and protection from  
1183 further harm.<sup>121</sup> Focusing on values clarification may help essential workers feel a  
1184 renewed sense of purpose and meaning in their careers and with their families during a  
1185 crisis like COVID-19.<sup>119</sup> Therefore, evidence suggests that workplaces should first focus  
1186 on meeting the client's basic needs, including safety, eating, and sleeping modifications  
1187 where possible, while incorporating warmth, empathic listening, and validation.

1188 Of note, systematic reviews published prior to the COVID-19 pandemic provide some  
1189 additional evidence for the effectiveness of individual-level intervention to support the  
1190 mental health of the health workforce. A 2015 Cochrane review<sup>122</sup> examining the  
1191 prevention of occupational stress in healthcare workers concluded that CBT training, as  
1192 well as mental and physical relaxation, all reduce stress moderately. In another  
1193 systematic review of interventions to improve the psychological wellbeing of general  
1194 practitioners, four studies reported statistically significant improvement in self-reported  
1195 mental ill-health. Two interventions used CBT, one was mindfulness-based, and one fed-  
1196 back General Health Questionnaire scores and self-help information.<sup>123</sup> Lastly, arts-based  
1197 intervention may be a promising individual-level intervention to support the mental  
1198 health of essential workers. Arts-based intervention includes music, movement, creative  
1199 arts classes, participatory arts classes, arts activities, visual arts, art appreciation  
1200 classes, collages and drawing classes, poetry therapy, and stories and diary writing work.  
1201 A number of individual studies demonstrate the effectiveness of arts-based interventions  
1202 to support the mental health of healthcare workers and its effectiveness in health and  
1203 social care settings.<sup>124</sup>

1204 Regarding the general population of workers, a systematic review on interventions for  
1205 common mental disorders in the occupational health service prior to the COVID-19  
1206 pandemic suggests that only a few studies provide evidence for effective prevention

1207 among employees at risk.<sup>125</sup> Yet, a systematic review and meta-analysis of web-based  
1208 psychological interventions delivered in the workplace indicates that occupational digital  
1209 mental health interventions can improve workers' psychological wellbeing and increase  
1210 work effectiveness.<sup>126</sup> Greater engagement and adherence was associated with  
1211 interventions that are delivered over a shorter time frame (6 to 7 weeks), utilize  
1212 secondary modalities for delivering the interventions and engaging users [i.e., emails and  
1213 text messages (short message service, SMS), and use elements of persuasive technology  
1214 (i.e., self-monitoring and tailoring).

1215 One promising individual-level digital intervention is Text4Hope, a daily supportive SMS  
1216 text messaging program. Text4Hope was launched in Canada to mitigate the negative  
1217 mental health impacts of the pandemic among the general population. It is a free service  
1218 providing three months of daily CBT-based text messages written by mental health  
1219 therapists. Through a set of daily messages, people receive advice and encouragement  
1220 helpful in developing healthy personal coping skills and resiliency. Text4Hope was  
1221 determined to be a convenient, cost-effective, and accessible means of implementing a  
1222 population-level psychological intervention. This service demonstrated significant  
1223 reductions in anxiety and stress levels during the COVID-19 pandemic and could  
1224 potentially be transferred to targeted use for workplace mental health.<sup>127</sup>

### 1225 **Effectiveness of workplace- and societal-level interventions**

1226 In broad terms, effective interventions involve increasing social and societal support and  
1227 numerous workplace interventions, from communication and training to infection control,  
1228 to workload management, and offering personal support.<sup>95</sup>

1229 Indeed, according to the data collected by the COVID-19 Health Systems Response  
1230 Monitor<sup>128</sup>, during COVID-19 pandemic (even as early as April 2020 in some countries)  
1231 most European countries took action to enable mental health and wellbeing of healthcare  
1232 workers that included particular workplace provisions, e.g. supplying PPE, as well as  
1233 assuring rest and limiting working time periods. Recent analysis by EuroHealthNet<sup>129</sup>  
1234 confirms that the predominant initiatives involved direct mental health interventions and  
1235 financial support, sometimes taking the form of free transportation, accommodation  
1236 and/or childcare. Countries in which healthcare workers earn relatively low wages paid  
1237 particular attention to financial compensation for work performed. Direct mental health  
1238 interventions mostly comprised of newly established helplines and remote consultations  
1239 from trained professionals. Although the effectiveness of these particular interventions to  
1240 support the mental health of essential workers is unknown, the use of helplines and  
1241 remote consultations is in line with an exploratory study of Chinese healthcare workers in  
1242 which 30% indicated they wanted to receive one-on-one psychological counselling and  
1243 24% wanted crisis management intervention.<sup>33</sup>

1244 Based on experiences from emerging virus outbreaks prior to COVID-19, one rapid  
 1245 review and meta-analysis clearly indicates that most effective interventions to support  
 1246 the mental health of the health workforce are workplace-level interventions. Specifically,  
 1247 these interventions occur within the organisation by senior management and managerial  
 1248 staff addressing team and organisational factors such as communication and training,  
 1249 infection control, employee workload, psychological support for employees, and personal  
 1250 support for employees.<sup>95</sup> Table 3 lists specific recommendations to support the mental  
 1251 health of healthcare workers. A 2015 Cochrane review <sup>122</sup> examining the prevention of  
 1252 occupational stress in healthcare workers also concluded that changing work schedules  
 1253 was effective to reduce stress.

1254 Table 3 Recommendations to deal with psychological problems in healthcare workers in  
 1255 emerging virus outbreaks prior to COVID-19

Level	Recommendations to deal with psychological problems
Individual	<ul style="list-style-type: none"> <li>* Staff "buddy" system to support personal precautionary measures</li> <li>* Encouragement among peers</li> <li>* Sufficient rest and time off</li> <li>* Opportunities for reflection on the effects of stress</li> <li>* Increased support from family and friends</li> </ul>
Service, communication and training	<ul style="list-style-type: none"> <li>* Clear communication with staff</li> <li>* Training and education around infectious diseases</li> </ul>
Service, infection control	<ul style="list-style-type: none"> <li>* Clear direction and enforcement of infection control procedures</li> <li>* Screening stations to direct patients to relevant infection treatment clinics</li> <li>* Sufficient supplies of adequate PPE</li> <li>* Re-designing nursing care procedures that pose high risks for spread of infections</li> <li>* Improving safety, such as better ventilation systems or constructing or negative pressure rooms to isolate patients</li> <li>* Reducing the density of patients on wards</li> </ul>
Service, workload	<ul style="list-style-type: none"> <li>* Appropriate work shifts and regular breaks</li> <li>* Avoidance of compulsory assignment to caring for patients with COVID-19</li> <li>* Re-arranging hospital infrastructure, such as re-deployment of wards and human resources</li> <li>* Available of hospital security to help deal with uncooperative patients</li> </ul>
Service, personal support	<ul style="list-style-type: none"> <li>* Guaranteed food and daily living supplies</li> <li>* Alternate accommodation for staff who are concerned about infecting their families</li> <li>* Video facilities for staff to keep in contact with families and alleviate their concerns</li> </ul>
Service, psychological	<ul style="list-style-type: none"> <li>* Recognition of staff efforts</li> <li>* Training to detail with identification of and responses to psychological problems</li> <li>* Minimising time in quarantine</li> <li>* Access to psychological interventions</li> </ul>
Societal	<ul style="list-style-type: none"> <li>* Minimisation of stigma and discrimination</li> <li>* Attention to media portrayal of healthcare workers</li> </ul>

1256 Source: Kisely, et al. (2020)<sup>95</sup>

1257 According to the UK National Institute for Health and Care Excellence (NICE) 2009 public  
1258 health guideline on Mental Wellbeing at Work<sup>130</sup> (currently under revision as of 2018),  
1259 the following recommendations were made: 1) Employers should take a strategic and  
1260 coordinated approach to promoting employees' mental wellbeing; 2) Employers should  
1261 assess opportunities for promoting employees' mental wellbeing and managing risks; 3)  
1262 Employers should provide opportunities for flexible working; 4) Employers should  
1263 strengthen the role of line managers in promoting the mental wellbeing of employees  
1264 through supportive leadership style and management practices; 5) National policies  
1265 should support micro, small and medium-sized businesses in helping them implement  
1266 organisation-wide approaches to promoting mental wellbeing.

1267 In terms of operationalizing the NICE guidelines on Mental Wellbeing at Work, the EU  
1268 Joint Action CHRODIS (2014-2016) and CHRODIS+ (2017-2020) was funded to carry out  
1269 17 policy dialogues and implement 21 projects to improve actions for combatting chronic  
1270 diseases. The outcomes of the CHRODIS+ area "Employment and Chronic Diseases" are  
1271 particularly relevant to supporting the mental health of essential workers. Specifically, a  
1272 Toolkit for Workplaces created as part of Work Package 8 synthesizes best practices  
1273 related to Fostering Employees' Wellbeing, Health, and Work Participation.<sup>131</sup> The Toolkit  
1274 facilitates identifying workplace strengths. The appendix contains a checklist to assess  
1275 what approaches and means are currently in use in an organization and map-analyse-  
1276 plan guide to tailor a program intervention. Within each domain, the toolkit describes  
1277 ideas for concrete actions to (1) strengthen knowledge and skills, (2) create supporting  
1278 working environment (physical, social, and digital environments are addressed), (3)  
1279 adopt wellbeing-fostering policies, and (4) incentivize. Of the seven domains covered in  
1280 the Toolkit, implementation of practices related to (i) Mental health and wellbeing, (ii)  
1281 Recovery from work, and (iii) Community spirit and atmosphere are acknowledged as  
1282 useful to help support the mental health of essential workers.

### 1283 **Effectiveness of coordinated and/or integrated approaches**

1284 Integrated protective approaches provided by senior management, for instance, are  
1285 recommended to safeguard the mental health of healthcare workers over the use of  
1286 separate mental health intervention strategies. Niels de Brier and colleagues (2020)<sup>132</sup>  
1287 conducted a rapid systematic review and recommend:

- 1288 • Giving a sense of support by the organization;
- 1289 • Providing opportunities to talk, listen to concerns and offer empathic support;
- 1290 • Protecting physical safety;
- 1291 • Reducing the impact of changing job demands;
- 1292 • Maximizing healthcare workers' sense of control;
- 1293 • Receiving continuous support from supervisors and colleagues in case of  
1294 quarantine;

- 1295       • Providing additional attention to those in especially high-risk occupations;  
1296       • Ensuring formal training and training in supportive and resilience skill  
1297       development.

1298 Magill and colleagues (2020)<sup>133</sup> also conducted a rapid review of the literature that  
1299 supports systems-level interventions like those described above because that are likely to  
1300 alleviate distress for most healthcare workers as primary or secondary prevention  
1301 measures, and thereby avoiding use of tertiary prevention activities such as specialized  
1302 psychotherapeutic support and/or referral to specialty care. These systems-level  
1303 interventions should be made readily available to healthcare workers, and extended to  
1304 other essential workers and non-essential workers, during and beyond the COVID-19  
1305 pandemic.

1306 Major and Hlubocky (2021)<sup>134</sup> conducted a rapid review and argued for a comprehensive  
1307 psychosocial support model with individual- and organization-level interventions to  
1308 mitigate adverse mental health outcomes among healthcare workers. They reference a  
1309 number of evidence-based frameworks in the recently published literature, including  
1310 Psychological First Aid (PFA), Stress Continuum Model and Stress First Aid, Personal  
1311 Resilience Training, Organizational Resilience and Organizational Justice, Cognitive  
1312 Behavioural Therapy, and Mindfulness. The authors encourage integration of strategies  
1313 and frameworks in into larger organizational mental health frameworks. A national-level  
1314 comprehensive approach to mental health of healthcare workers may offer a possible  
1315 solution. The draft of Australian framework "Every Doctor, Every Setting"<sup>135</sup> is an  
1316 example of a national-level effort aiming to coordinated action to prevent mental ill-  
1317 health and suicidal behaviour and support good mental health for all doctors and medical  
1318 students through 5 action pillars: primary, secondary, and tertiary prevention, mental  
1319 health promotion and leadership.

### 1320 **Coordinated and/or integrated approaches to manage burnout**

1321 Effectiveness of coordinated and/or integrated approaches is particularly evidenced in the  
1322 management of burnout. There is widespread agreement that burnout should be viewed  
1323 primarily as an organisational problem rather than an individual one. Although there is a  
1324 temptation to medicalise the problems faced by affected individuals, the evidence in  
1325 favour of individualised interventions is limited, even though there is some evidence of  
1326 overlap between the symptoms of workers experiencing burnout and other patients with  
1327 clinical depression,<sup>136,137</sup> especially so for those with marked symptoms of exhaustion.  
1328 However, while the manifestations may be similar, burnout has a specific aetiology  
1329 arising from the work environment. In other words, an appropriate response should focus  
1330 of working conditions rather than on the individual affected.

1331 Given these considerations, there is broad consensus that the most appropriate  
1332 measures to prevent burnout from arising combine organisational change with support

1333 for the individual affected. Maslach and Leiter have argued that burnout is most likely  
1334 where there is a disconnection between the organisation and the individual in six areas of  
1335 their working life, workload, control, reward, community, fairness, and values.<sup>138</sup>  
1336 Consequently, an effective response will involve a comprehensive approach to all of  
1337 these, involving changes in the individual and the organisation. A systematic review and  
1338 meta-analysis, which examined 20 independent comparisons from 19 studies, found that  
1339 while there was evidence that both organisational and individual interventions were  
1340 effective, the effect size was significantly greater for the former.<sup>139</sup>

1341 A first step is to ensure that the individual concerned has adequate resources to meet the  
1342 demands placed upon them. It is also important for the individual to be able to see that  
1343 the organisation has values that recognise their contribution to it, for example by  
1344 emphasising the importance of supportive leadership and relationships with colleagues.<sup>138</sup>  
1345 It is particularly important to address perceived unfairness, with one study finding  
1346 decreased exhaustion, although not improvements in depersonalisation, following the  
1347 implementation of weekly meetings to examine and resolve perceived inequities in the  
1348 working environment.<sup>140</sup>

1349 The evidence on the effectiveness of interventions targeted at the individual are less  
1350 encouraging, at least when adopted without corresponding changes in the working  
1351 environment, although in part this is because the studies that have been conducted are  
1352 often small or evaluate outcomes over a short time frame. For example, a trial of an  
1353 intervention to teach physicians about the psychology of burnout, stress, coping with  
1354 patient death, and managing distress did find a reduction in symptoms of burnout but  
1355 this was only measured at seven days post-intervention.<sup>141</sup> Other studies have focused  
1356 on general stress relieving measures, such as yoga,<sup>142</sup> exercise, and training in stress  
1357 management. Others have involved cognitive behavioural therapy and relaxation  
1358 techniques, although a Cochrane review found only low quality evidence supporting the  
1359 use of cognitive behavioural therapy, mental or physical relaxation, or changing work  
1360 schedules.<sup>143</sup>

1361 In reality, changes to the organisation of the workplace that would be desirable in normal  
1362 circumstances will be extremely difficult during a pandemic. Consequently, it is necessary  
1363 to look for other measures that might be able to mitigate the consequences of the  
1364 conditions that give rise to burnout. Although evidence of effectiveness is limited, one  
1365 group of authors has advocated what they term "micro-practices", activities that require  
1366 minimal time to learn and implement. Examples include taking a minute to reflect on  
1367 one's wellbeing, including hunger and hydration, while using hand sanitiser.<sup>144</sup> Another  
1368 has suggested a series of practical measures that encapsulate established best practice  
1369 in creating a work environment conducive to supporting the mental health of the health  
1370 workforce,<sup>145</sup> and can be extended to other essential and non-essential workers.



1371 Box 1 Best practice in creating a work environment conducive to supporting the mental  
1372 health of the health workforce

- 1373  
1374
- Provide clear messages that clinicians are valued and that managing the pandemic together is the goal.
  - Provide work schedules that promote physical resilience, enabling adequate sleep with access to rooms for those working long or multiple shifts, easy access to water, healthy snacks, chargers for phones and other devices, and toiletries, and designated times for clinicians to take breaks, eat, and take medications.
  - Reduce noncritical work activities, such as eliminating non-essential administrative tasks.
  - Provide a central source for updated information and clear communication of well-defined protocols, expectations, and such resources as childcare via e-mails, tweets, and automated calls.
  - Encourage clinicians to openly discuss vulnerability and the importance of protecting one's emotional strength.
  - Foster spiritual resilience through distribution of positive messaging that emphasizes appreciation for clinicians' dedication and altruism, including sharing stories of success, rather than focusing on failures and stresses.
  - Develop an evidence-based menu of interventions tailored to diverse workplace settings, including wellness committees and employee assistance programs, informed by surveys to assess stress points, fears, and concerns.
- 1375  
1376  
1377  
1378  
1379  
1380  
1381  
1382  
1383  
1384  
1385  
1386  
1387  
1388  
1389  
1390  
1391

1392 Source: Dewey et al, 2020<sup>145</sup>

1393 **Coordinated and/or integrated approaches to support mental health**

1394 Numerous of coordinated and/or integrated strategies were initially developed to address  
1395 moral injury and derived from research within the military and with veterans. However,  
1396 the findings can potentially be applied to both healthcare and allied settings, and  
1397 extended to other essential workers and non-essential workers as well. It has been  
1398 proposed that strategies to address moral injury can be divided into before, during, and  
1399 after the crisis.<sup>75</sup>

1400 Before

1401 Military research has recognised that preparing staff for the job and associated  
1402 challenges reduces the risk of mental health problems.<sup>146</sup> In the healthcare setting,  
1403 workers "*should not be given false reassurances, but a full and frank assessment of what*  
1404 *they will face.*"<sup>75</sup> It has also been suggested that organisations should "*immediately*  
1405 *reflect on the challenges the staff faced at baseline*", such as shift-working and workload,  
1406 that can all impact on wellbeing.<sup>80</sup>

1407 During

1408 Individuals benefit from tangible and practical support.<sup>94</sup> During a crisis, organisations  
1409 can support staff in a range of practical ways, as summarised in Box 2. Psychological  
1410 support should be offered to all staff in quarantine,<sup>80</sup> and drop-in psychological support,  
1411 an effective intervention recognised in previous outbreaks,<sup>147</sup> provided for those working.  
1412 However, the availability of support will vary and is likely to be scarce.<sup>80</sup> Remote

1413 psychological support mechanisms need to be considered in the context of pandemics,  
1414 via digital platforms available.<sup>80</sup> While peer support has its place, off-loading to a relative  
1415 stranger can also be useful to staff.<sup>80</sup> Routine support available to staff should include a  
1416 briefing on moral injuries, as well as an awareness of other causes of mental ill health  
1417 and what to look out for.<sup>75</sup>

1418 Table 4 Proposed ways that organisations can support the mental health of workers  
1419 during a pandemic

- Providing food, drink and rest facilities
- Ensuring staff do not exceed safe hours by encouraging reporting and monitoring of hours, and preparing reinforcements so staff can take annual leave and breaks
- Focusing on dynamic workload management and clear role expectations
- Proactively addressing resource inequities across the organisation
- Proactively resolving housing or transport issues for staff to reduce anxiety of infecting family members and safely travelling to and from work
- Regular situational updates for all staff, including realistic and frank information about risk and adverse events, e.g. report of death among colleagues or advising staff to write a will
- Regular praise for staff and acknowledgement of the unprecedented and exceptional circumstances
- Being visible on the ground throughout the pandemic (managers, senior staff)
- Clear messaging, rationale and guidance for changing standards of practice
- Encouraging a two-way dialogue and being open to suggestions and ideas from staff
- Facilitating debriefs and morale building communal time
- Designing rotas so that teams can stay together (despite migrating through changing shift times) throughout the pandemic
- Being clear that staff safety is the number one priority
- Providing adequate PPE and identifying/removing high-risk staff from frontline work to reduce anxiety for becoming infected Providing education on the normal responses to extreme stress to reassure staff
- Educating team leaders on debriefing practices and the needs of individuals
- Providing formal and informal psychological support
- Ensuring staff in quarantine are regularly supported and communicated with during and after their isolation
- Planning specifically for supporting teams if colleagues are critically ill or deceased

- Ensuring there is appropriate support for different staff grades and disciplines, e.g. doctors and nurses, as well as porters and cleaning staff
- Keeping up to date with evolving guidance on supporting staff and recommendations

1420 Source: Walton et al., 2020<sup>80</sup>

1421 The role of leadership, in its visibility, humanity and flexibility during a crisis, is crucial -  
1422 maintaining honesty in communication whilst remaining calm, and empowering  
1423 individuals within teams to become their own leaders.<sup>80</sup> It is also important to recognise  
1424 that the prolonged nature of the pandemic, and the likelihood of ongoing high levels of  
1425 absenteeism for both physical and psychological reasons, means the “baton of leadership  
1426 will need to be passed between people during the marathon.”<sup>80</sup> More senior managers  
1427 should keep an active eye on more junior ones and check how they are doing.<sup>75</sup>  
1428 Colleagues can support each other spotting early signs of concerns in themselves and  
1429 others, offering colleagues the opportunity to talk, signposting to psychological services,  
1430 being kind to each other and encouraging self-care; those co-ordinating psychological  
1431 support in departments should offer debrief/supervision sessions for peer supporters.<sup>80</sup>

1432 After

1433 Formal psychological support for those in front-line roles affected by Covid-19 should be  
1434 prioritised and readily accessible, as lengthy waits for treatment are recognised as a  
1435 reason why people to do seek it.<sup>84</sup> Of note, individuals with moral injury related mental  
1436 health disorders are often reticent to speak about guilt or shame, and may focus on  
1437 classically traumatic elements;<sup>84</sup> any psychological screening needs to be mindful of this  
1438 presentation. ‘Active monitoring’, as defined in guidance for PTSD, is also advised<sup>148</sup>.  
1439 Specific ongoing psychological interventions proposed in the context of moral injury  
1440 include Cognitive Processing Therapy (CPT) to reduce trauma related guilt, Acceptance  
1441 and Commitment Therapy (ACT), aimed to promote non-judgemental acceptance of  
1442 internal experiences, and Adaptive Disclosure (AD), targeting recognised mechanisms of  
1443 moral repair.<sup>74</sup> One-off psychological debriefs are felt to be unhelpful in moral injury, as  
1444 are some standardised treatment for PTSD such as Prolonged Exposure.<sup>84,149</sup>  
1445 Safe multidisciplinary spaces to discuss clinical cases and reflect upon their impact, such  
1446 as Schwarz rounds, are also cited as another mechanism to for healthcare workers to  
1447 discuss difficult emotional and social issues arising from patient care.<sup>150,151</sup>  
1448 Shay reminds us that “trust is on the table”, with the question “why should I trust *you*?”  
1449 asked verbally and behaviourally a thousand times with every morally injured veteran.<sup>72</sup>  
1450 Questions asked by the veteran aim to establish whether the clinician is another  
1451 *perpetrator*, a *victim*, a self-serving *bystander* or a *rescuer*-once the veteran recognises  
1452 the clinician as a freely co-operating *partner*, then the recovery is well advanced.<sup>72</sup>

1453 **Interventions to address the mental health needs of essential workers with pre-**  
1454 **existing mental health conditions**

1455 Consistent with the gaps in knowledge of the impact of the pandemic on those with pre-  
1456 existing mental health conditions in the essential worker population, there is a lack of  
1457 robust evidence for the effectiveness of interventions designed to address the mental  
1458 health needs of this group who may be at particular risk.

1459 A rapid review of the evidence for mental health interventions during COVID-19 and  
1460 other pandemics found that whilst research on effectiveness of interventions was  
1461 growing, few studies distinguished between *new* mental health problems triggered by  
1462 medical pandemics and those that were *pre-existing*.<sup>152</sup> The review highlighted two  
1463 studies related to the 2003 SARS outbreak, which suggested that training healthcare  
1464 workers in resilience may be particularly effective for those with a history of mental ill-  
1465 health. Whilst not specific to groups of essential workers or those with pre-existing  
1466 mental health conditions, the paper recommends timely interventions for those  
1467 experiencing mental ill-health that can be sustained (an opinion shared by other studies  
1468 exploring mental health in biological disasters<sup>153</sup>). Moreover, the authors advocate for the  
1469 provision of a wide range of mental health support services that can meet the diverse  
1470 needs of groups with different vulnerabilities and risks (a recommendation common to  
1471 other papers on this subject <sup>111,113</sup>).

1472 An article on early interventions to support hospital staff during COVID-19 raises a  
1473 particularly important issue, pertinent to those with pre-existing mental health  
1474 conditions, which requires attention.<sup>154</sup> The authors suggest that employers should  
1475 consider how best to monitor staff with pre-existing mental ill-health and ensure the  
1476 adequate provision of additional support for this vulnerable group. Whilst an important  
1477 recommendation, employers should be conscious that those experiencing psychological  
1478 ill-health may be subject to stigma and discrimination, particularly in the workplace.<sup>155</sup> As  
1479 a result, efforts in the workplace to support those with pre-existing mental health  
1480 conditions should be accompanied by due consideration of legal and ethical  
1481 responsibilities — such as protecting employee confidentiality and preventing workplace  
1482 discrimination <sup>156</sup> — so as to avoid the potentially adverse consequences of singling out a  
1483 particular group. In healthcare settings, peer support programmes — which enable  
1484 healthcare teams to support and monitor each other — have been proposed, as has  
1485 training of team leaders to identify more serious mental health issues.<sup>157</sup>

1486 A number of other relevant recommendations — particularly with regards to future  
1487 research priorities and design of interventions — to support the mental health needs of  
1488 those with pre-existing mental health conditions can be found within the academic  
1489 literature.

1490 Even at the start of the pandemic, the requirement for coordinated, multi-disciplinary  
1491 research to understand and reduce mental health issues in vulnerable groups — such as  
1492 healthcare workers and those with pre-existing mental health conditions — was  
1493 recognised as a priority for further study.<sup>158</sup> In particular, experts have called for high-  
1494 quality data to understand the causal mechanisms associated with poor mental health in  
1495 order to optimise the effectiveness of psychological interventions for different groups,  
1496 thereby enabling the development of evidence-informed interventions which can address  
1497 causes that are thought to be modifiable. Moreover, exploring the coping strategies that  
1498 have been successfully employed by those with pre-existing mental health conditions  
1499 during the pandemic has been recommended, in the hope that these can be reinforced  
1500 and expanded to improve future resilience.<sup>158,159</sup>

1501 Within the literature, there is a consensus that service users and people with lived  
1502 experience of mental ill-health should be involved centrally in co-developing ethical  
1503 research and designing inclusive mental health services, as well as in monitoring the  
1504 quality of these services.<sup>111,158</sup> Moreover, building in user-centred monitoring and  
1505 evaluation techniques for mental health services should enable interventions to be  
1506 amended or terminated if they prove to be ineffective. Regarding service provision, there  
1507 is a need to facilitate diverse and flexible access to mental health care, with a recognition  
1508 that community support services or remote therapies may not be appropriate for  
1509 everyone and, therefore, should be considered as an adjunct to mainstream mental  
1510 health services, but not a replacement. The authors of a position paper on how mental  
1511 health care should change as a consequence of the COVID-19 pandemic, also stress the  
1512 risks associated with promoting cheap — but ultimately ineffective — interventions, as  
1513 this is likely to exacerbate existing inequalities and worsen mental health outcomes  
1514 globally.<sup>111</sup>

### 1515 **European Commission Initiatives related to supporting the mental health of** 1516 **essential workers**

1517 The European Commission has invested over €895 million on mental health. This includes  
1518 better ways of promoting mental health as well as preventing, diagnosing and treating  
1519 mental illness in different settings and across the lifespan, including research on effective  
1520 new e-tools and care models. The results of a number of currently funded projects may  
1521 help to support the mental health of the health workforce and other essential workers. A  
1522 few of these projects are described below.

1523 In summer of 2020 the European Commission issued a second call for innovative and  
1524 rapid health-related approaches to respond to COVID-19 and to deliver quick results for  
1525 the society addressing behavioural, social and economic impacts of the outbreak  
1526 response. On December 1, 2020, it began to fund the RESPOND EU project

1527 ([www.respond-project.eu](http://www.respond-project.eu)), which "aims to accurately identify vulnerable groups –  
1528 including healthcare workers – affected by the pandemic and to evaluate the impact on  
1529 mental health and well-being. Additionally, the project will address the mental health  
1530 needs of vulnerable groups by implementing low-intensity scalable psychological  
1531 programmes and will provide policy recommendations to inform future containment  
1532 measures, improving quality of life on all levels during the health crisis."  
1533 (<https://cordis.europa.eu/project/id/101016127>). The project plans to implement two  
1534 WHO interventions in a stepped-care approach. The first intervention involves an online,  
1535 self-directed stress management course supported by trained non-specialist. The second  
1536 intervention is a 5-session program delivered by trained non-specialists addressing  
1537 problem solving, stress management, behavioural activation, and accessing social  
1538 support. The review of evidence undertaken in this Opinion suggests that addressing  
1539 individual-level factors to support the mental health of the health workforce is not likely  
1540 to be sufficient without organisational-level measures to complement the individual-level  
1541 intervention. It is not yet clear how RESPOND EU might tailor the proposed intervention  
1542 for healthcare workers to address the occupational-level risk factors identified in this  
1543 Opinion.

1544 One particular call (SC1-BHC-2019) focused on mental health in the workplace. These  
1545 projects aim to develop and implement interventions that an employer organisation can  
1546 take to promote good mental health and prevent mental illness in the workplace. A  
1547 number of projects funded in January 2020 may provide new evidence and insights into  
1548 effective means to support the mental health of the health workforce and other essential  
1549 workers.

1550 Magnet4Europe (<https://www.magnet4europe.eu/>) "will develop an evidence-based  
1551 model for the organisational redesign of clinical work environments in order to enhance  
1552 workers' wellbeing, retention, productivity and patient outcomes. Specifically, it will use a  
1553 mixed-method design to determine direct and indirect individual and collective health  
1554 outcomes and cost effectiveness. The aim is to improve mental health, reduce sickness  
1555 absence and positively impact productivity and economic results through redesigned  
1556 clinical work environments that promote mental health."  
1557 (<https://cordis.europa.eu/project/id/848031>) The project approach involves twinning  
1558 European hospitals with Magnet® recognized hospitals and developing an interactive  
1559 online learning community.

1560 H-WORK (<https://h-work.eu/>) aims "to create, apply and test a multi-level estimation  
1561 and intervention instrument aiming to promote mental health in public organisations and  
1562 SMEs. It will evaluate the outcomes of applied methods and offer proposals to employers,  
1563 health professionals and policymakers. The project will create, prove and develop the H-  
1564 WORK Innovation Platform, a system that will include advanced digital services, and

1565 *facilitate the dissemination of H-WORK solutions across the EU.”*  
1566 (<https://cordis.europa.eu/project/id/847386>). The project approach includes principles  
1567 from positive psychology and incorporates a multi-level perspective using the IGLO  
1568 model.<sup>160</sup> Specifically, four different levels of analysis and subsequent interventions will  
1569 be targeted: the individual employee (I), the group or work team (G), the leader (L) and  
1570 the organisation (O) levels.<sup>161</sup> Relevant to the conceptual framework in the current  
1571 Opinion, this model has been expanded to IGLOO, which includes one more contextual  
1572 level – the overarching context (O) that encompasses environmental factors like national  
1573 context, culture, and welfare systems.<sup>162</sup>

1574 As a final example, EMPOWER (<https://empower-project.eu/>) aims to “*investigate and*  
1575 *test the impact and cost-effectiveness of a compatible eHealth intervention platform*  
1576 *aiming to prevent common mental health complications and reduce psychological distress*  
1577 *in the workplace. The platform will be created in collaboration with stakeholders and*  
1578 *direct employees and employers of SMEs and public institutions....apply both qualitative*  
1579 *and quantitative methods to assess personal effects, cost-effectiveness and potential*  
1580 *obstacles to detect the major challenges on both an individual and organisational level.”*  
1581 (<https://cordis.europa.eu/project/id/848180>). Policy recommendations can be expected  
1582 as a project outcome.

1583 Projects funded by the European Commission may result in good or best practices that  
1584 could be transferred to different settings or countries. As a tool for sharing best practices,  
1585 The Public Health Best Practice Portal is a European Commission Directorate-General for  
1586 Health and Food Safety (DG SANTE) platform dedicated to providing reliable and practical  
1587 information on the best implemented practices in health promotion, disease prevention,  
1588 and the management of non-communicable diseases. It includes practices collected,  
1589 developed and examined in actions co-funded under the Health Programmes.  
1590 Stakeholders from Member States can submit a potential practice for evaluation.  
1591 Practices are evaluated for inclusion in the platform using criteria adopted by the  
1592 Steering Group on Health Promotion, Disease Prevention and Management of Non-  
1593 Communicable Diseases (Steering Group) according to the “Criteria to Select Best  
1594 Practices in Health Promotion and Disease Prevention and Management in Europe”<sup>163</sup>  
1595 issued by the DG SANTE. A working definition for the concept of best practice is provided  
1596 in this guideline, best practice being “*a relevant policy or intervention implemented in a*  
1597 *real life setting and which has been favourable assessed in terms of adequacy (ethics and*  
1598 *evidence) and equity as well as effectiveness and efficiency related to process and*  
1599 *outcomes. Other criteria are important for a successful transferability of the practice such*  
1600 *as a clear definition of the context, sustainability, intersectorality and participation of*  
1601 *stakeholders.”* When a practice is deemed to meet these criteria, it is accepted for

1602 publication in the Best Practice Portal and becomes available for Member States for  
1603 transfer and/or broader implementation.

1604 Since 2016, more than 200 best practices have been published. Practices are searchable  
1605 by general health topic, project/joint action, type of practice, country, and year. In April  
1606 2021, the drafting group examined the sub-set of best practices related to the mandate.  
1607 All practices in the following areas/topics of interest between 2016 and 2019 (all  
1608 available years) were reviewed.

- 1609 • Integrated approaches for mental health governance;
- 1610 • Mental health in schools;
- 1611 • Mental health in the workplace;
- 1612 • Prevention of depression and promotion of resilience.

1613 This resulted in 29 best practices. One practice targeting children aged 5-7 was removed,  
1614 leaving 28. The titles of the remaining practices classified under other areas/topics of  
1615 interest in the database were screened for relevance to the mandate. Four additional best  
1616 practices were added, for a total of 32 practices to review. In addition to the information  
1617 available in the portal (origin of the practice, country, type of practice, area/topic of  
1618 interest, year entered in database), data were extracted for each practice regarding  
1619 geographical area (local, regional, national, EU), recommendations for future adopters,  
1620 and demonstrated outcomes reported. Each practice was then rated on a 5-point Likert  
1621 scale to assess the potential impact on mental health outcomes while taking into account  
1622 the methodological rigour of the evidence. A rating of 5 was assigned to practices  
1623 reporting effectiveness data from a randomized controlled trial with cost-effectiveness  
1624 findings, a 4 for effectiveness data from a pre-post trial measuring objective outcomes  
1625 (e.g., suicides, hospitalizations, evictions), a 3 for lesser quality studies of objective  
1626 outcomes (hospitalizations, employment), a 2 for positive changes in self-reported  
1627 symptoms (distress, wellbeing), and a 1 for vague self-reported improvements as a  
1628 result of the program. The table of Best Practices and assessment can be found in the  
1629 Annex.

1630 Of the 32 best practices to related to supporting the mental health of the health  
1631 workforce and other essential workers, almost half (n=14) of them did not detail direct  
1632 impact on mental health as a result of their implementation. Of the best practices  
1633 reporting results (n=18), only approximately one-fourth (n=5) reported favourable  
1634 "hard" evidence for impact on objective outcomes (employment, hospitalizations,  
1635 suicides).

1636 Only one practice, GET.ON - Online Health Trainings for improving mental health  
1637 (Germany; <https://webgate.ec.europa.eu/dyna/bp-portal/practice.cfm?id=182>) reported  
1638 cost-benefit results. Specifically, they state that online training GET.ON Mood Enhancer is  
1639 the first online training worldwide for which the prevention of depression has been



1640 confirmed in a randomised controlled trial. The cost-benefit analyses of GET.ON Stress  
1641 and GET.ON Mood Enhancer indicated high net-savings on average per participant. Two  
1642 practices, including Psychologically Informed Environments (UK;  
1643 <https://webgate.ec.europa.eu/dyna/bp-portal/practice.cfm?id=168>) and various aspects  
1644 of the European Alliance Against Depression (Germany;  
1645 <https://webgate.ec.europa.eu/dyna/bp-portal/practice.cfm?id=275>), show reductions in  
1646 suicides, among other favourable results in objective outcomes. Two additional practices,  
1647 Education: a key tool for recovery and fight against stigma (Spain;  
1648 <https://webgate.ec.europa.eu/dyna/bp-portal/practice.cfm?id=167>) and Individual  
1649 Placement and Support for Employment (Italy; <https://webgate.ec.europa.eu/dyna/bp-portal/practice.cfm?id=183>),  
1650 showed reductions in hospitalizations and doubling rates of  
1651 individuals with mental illness in paid employment.

### **1.4. Cost of mental health problems in the health workforce and the cost-effectiveness of mental health interventions**

1654 Before examining the body of evidence available on the cost-effectiveness of mental  
1655 health interventions in the workforce, it is important to caveat this work with the  
1656 following limitations. First, compared to other areas of research, there is a considerable  
1657 scarcity of research regarding economic evaluation of mental health interventions.  
1658 Second, indirect (or societal) costs play an important role, as much of the cost burden is  
1659 attributable to inability to work rather than costs associated with treatment.<sup>164</sup>  
1660 Furthermore, promoting and protecting mental health is typically intersectoral (involving  
1661 actions undertaken by sectors outside the health sector), and this direct non-medical  
1662 costs play an important role.<sup>165</sup> Third, there are challenges with respect to defining and  
1663 measuring outcome measures. Oftentimes only intermediate endpoints can be assessed  
1664 and may not express the final outcome of symptom/disorder exacerbations, relapses,  
1665 and recurrences. Because mental health affects many functions and produces many  
1666 symptoms, it is difficult for the outcome to encompass all of these impacts. Patient-  
1667 reported outcome measures (PROMs) are especially relevant, as the objective of  
1668 interventions to support mental health is primarily to improve individual's physical,  
1669 mental, and social functioning. Quality-Adjusted Life Year (QALY) can be a valuable  
1670 outcome measure, as it summaries the overall effect on quality of life over a given period  
1671 of time and combines the quantity and quality of life gained from the intervention. Lastly,  
1672 it is difficult to define a mental health "intervention" because a single intervention tends  
1673 to have multiple elements that contribute to its effectiveness. This is even more  
1674 challenging for complex interventions developed at individual, family, group,  
1675 organisational, community, and societal levels. In conclusion, determining cost-  
1676 effectiveness of interventions or programmes to support mental health is challenging

1677 because the evaluation must go beyond the economic costs and benefits to include  
1678 social, organisational, and ethical impacts.<sup>166</sup>

### 1679 **Costs of mental health problems in the workforce**

1680 Even prior to the COVID-19 pandemic, mental health problems caused significant  
1681 financial impact. In 2013, the total cost of work-related depression alone in the EU-27  
1682 was estimated to be €620 billion per year. The major impact is suffered by employers  
1683 due to absenteeism and presenteeism (€270 billion), followed by the economy in terms  
1684 of lost output (€240 billion), the health care systems due to treatment costs (€60 billion),  
1685 and the social welfare systems due to disability benefit payments (€40 billion).<sup>167</sup>

1686 In 2014, European Agency for Safety and Health at Work (EU-OSHA) provided a detailed  
1687 assessment of costs of work-related stress by country for the overall population of  
1688 workers and examined costs at societal and organisational levels.<sup>168</sup> Reduced  
1689 performance due to psychosocial problems are estimated to cost twice that of absence.  
1690 In 2000, EU-OSHA reported that between 50% and 60% of all lost working days had  
1691 some link with work-related stress, which led to significant financial costs to companies  
1692 as well as society in terms of both human distress and impaired economic performance.  
1693 This impact amounted to a yearly cost of about 3-4% of gross national product.<sup>169</sup> In the  
1694 UK, losses due to work-related stress, depression or anxiety amounted to the equivalent  
1695 of 9.9 million days, representing forty-three per cent of all working days lost due to ill-  
1696 health during the period 2014-2015.<sup>168</sup>

1697 The cost of mental health problems in the health workforce specifically has been  
1698 assessed using a number of measures, from number of sick leave days to turnover and  
1699 recruitment costs to discounted future values of health service loss as a result of early  
1700 retirement. In the UK in 2009, the annual direct cost of stress-related absenteeism was  
1701 £425 million per year.<sup>170</sup> In the US, a 2019 cost-consequence analysis focused on lost  
1702 income allowed estimation of burnout-associated costs related to physician turnover and  
1703 physicians reducing their clinical hours. The national annual economic costs ranged from  
1704 \$2.6 to \$6.3 billion and, at the organizational level, \$7600 per employed physician.<sup>171</sup> A  
1705 case study at two Stanford University hospitals in the US found that physicians who  
1706 experienced burnout in 2013 had 168% higher odds of leaving the institution in the  
1707 following two years, thus the estimated 2-year recruitment cost incurred due to  
1708 departure attributable to burnout was between \$15.5 and \$55.5 million.<sup>172</sup> A systematic  
1709 literature review was conducted to examine how burnout affects physician productivity.  
1710 Number of sick leave days, work ability, intent to either continue practicing or change  
1711 jobs was taken into account and estimated the cost of burnout on early retirement and  
1712 reduction in clinical hours of practicing physicians in Canada. Discounted future values of  
1713 the health service loss due to early retirement were \$185.2 million and \$27.9 million for  
1714 reduced clinical load.<sup>173</sup>

1715 **Cost-effectiveness of workplace mental health programmes in general**

1716 A 2013 economic analysis estimated the potential contribution of workplace mental  
1717 health programmes on reducing pressures on healthcare systems, social welfare  
1718 systems, employers, and the economy as a whole in the EU.<sup>167</sup> A simulation exercise was  
1719 carried out to estimate the economic benefits across the EU of universal, targeted, and  
1720 treatment workplace mental health programmes that generated a reduction in depression  
1721 rates. The net economic benefits over a one-year period ranged between €0.81 and  
1722 €13.62 for every €1 of expenditure on the programme. However, in absolute terms, the  
1723 net benefit (the difference between the total benefits and the cost of delivering the  
1724 programme) ranged from -€3 billion to €135 billion. This range illustrates that, for some  
1725 programmes (Electronic CBT in this analysis in particular), the costs of the programme  
1726 exceeded their benefits. The other 5 programs ranked ordered from highest to lowest net  
1727 benefits were: highest for an Exercise programme (135€ billion), Acceptance and  
1728 commitment-based therapy (ACT) (103€ billion), Problem solving-based therapy (70€  
1729 billion), Workplace improvement programs (28€ billion), and stress management (6€  
1730 billion). These findings highlight the importance of ensuring that the implementation of  
1731 workplace mental health programmes represents a good use of resources.

1732 A 2019 Deloitte report analysed data from seven Canadian companies and concluded that  
1733 investment in workplace mental health programs can mitigate the rising costs of doing  
1734 nothing, and that investing in high-impact areas to better support employees can boost  
1735 return on investment.<sup>174</sup> The median yearly return-on-investment (ROI) on mental health  
1736 programs was CA\$1.62, while companies whose programs had been in place for three or  
1737 more years had a median yearly ROI of CA\$2.18. These findings suggest that workplace  
1738 mental health programmes are more likely to deliver greater returns as they mature,  
1739 rather than yielding immediate financial benefits. In fact, achieving positive ROI can take  
1740 three or more years. Furthermore, the analysis indicated that mental health programmes  
1741 are more likely to achieve positive ROI when they support employees along the entire  
1742 spectrum of mental health, from promotion of wellbeing to intervention and care, as well  
1743 as the elimination or reduction of workplace hazards that could psychologically harm an  
1744 employee.

1745 In the UK in 2006, the National Institute for Health and Clinical Excellence (NICE) used  
1746 economic modelling techniques to generate cost-effectiveness evidence for three  
1747 effective workplace stress management programmes. The findings indicated that the net-  
1748 benefit to employers ranged from £130 to £5,020 per affected employee participating in  
1749 the programme when including both absenteeism and presentism intervention-induced  
1750 reductions. The net social benefit ranged from £115 to £420 per participating employee.  
1751 These estimates were considered to be conservative values.<sup>175</sup>

1752 The German Initiative for Health and Work (“Initiative Gesundheit & Arbeit / IGA)  
1753 reviewed hundreds of studies and concluded that properly constructed and implemented  
1754 health promotion initiatives can decrease absenteeism and associated costs between  
1755 12% and 36%. The ROI ranged from approximately 1-to-5 to 1-to-10 for absenteeism  
1756 costs of absenteeism and 1-to-2 and 1-to-6 for illness-related costs.<sup>176</sup>

1757 **Cost-effectiveness of programmes to support the health workforce and other**  
1758 **essential workers**

1759 No specific cost-effectiveness data for interventions or programmes to support the  
1760 mental health of the health workforce and other essential workers during the COVID-19  
1761 pandemic was identified in the evidence review for this Opinion.

1762 Regarding the cost-effectiveness of interventions following crisis situations, such as  
1763 major incidents of terrorism, a “screen-and-treat” approach for Post-Traumatic Stress  
1764 Disorder in the general population has been examined in England. The approach involves  
1765 a combination of proactive outreach, screening using validated brief questionnaires, and  
1766 evidence-based interventions. According 2020 pre-print results, the incremental cost per  
1767 Quality-Adjusted Life Year (QALY) gained was £8,297. Although this finding was in the  
1768 general population in the context of terrorism, it offers some indication of the expected  
1769 benefits today of such a programme in implemented in organizations employing essential  
1770 workers suffering the mental health consequences of the on-going COVID-19  
1771 pandemic.<sup>177</sup>

1772 **1.5. What are the conditions for the delivery of these interventions in a**  
1773 **cost-effective, affordable and inclusive manner?**

1774 Delivery conditions are conceptualized in this opinion using an implementation science  
1775 framework.<sup>178</sup> Implementation science is a field of study that examines the “research-to-  
1776 practice gap” regarding the sustainable uptake of evidence-based practices or  
1777 innovations. In implementation science research, the study of intervention effectiveness  
1778 separated from implementation effectiveness, which typically refers to the strategies  
1779 developed to disseminate the intervention and address contextual barriers to intervention  
1780 uptake. Implementation science is a growing field and, in the field of mental health  
1781 specifically, research on these delivery conditions is lacking.<sup>179</sup> Implementation science  
1782 frameworks are available to help to structure the systematic capture of information  
1783 regarding appropriate delivery conditions.<sup>180</sup>

1784 What is known in the implementation science literature is that the success of  
1785 implementation is context-dependent. Specifically, a review of contextual factors  
1786 reported to be associated with implementation of healthcare initiatives found that culture  
1787 and leadership were identified as strong influencing factors for successful  
1788 implementation.<sup>181</sup> Key components were varied and described at individual-, team- or

1789 organisational-based contextual factors, external environment and multilevel contextual  
1790 factors (resources, leadership, management support, culture, evaluation, social capital,  
1791 learning climate, compatibility, implementation setting), with team characteristics being  
1792 the least reported, although teams were deemed central to effective care organisation.  
1793 Leadership was emphasized as quite important, yet examined at the organisational level  
1794 in only a few studies reviewed.<sup>182</sup> The quality, cost, and equity outcomes of delivery of  
1795 health-related interventions may be influenced by the organization's capacity (e.g., size  
1796 and capital assets), formal and informal organisational structure (e.g., leadership,  
1797 hierarchical structure, governance), finances to pay for the intervention, characteristics  
1798 of the users (wants, needs, preferences), and culture (shared values, beliefs,  
1799 assumptions).<sup>183</sup>

1800 **Delivery conditions for the successful implementation of workplace mental**  
1801 **health programmes in general**

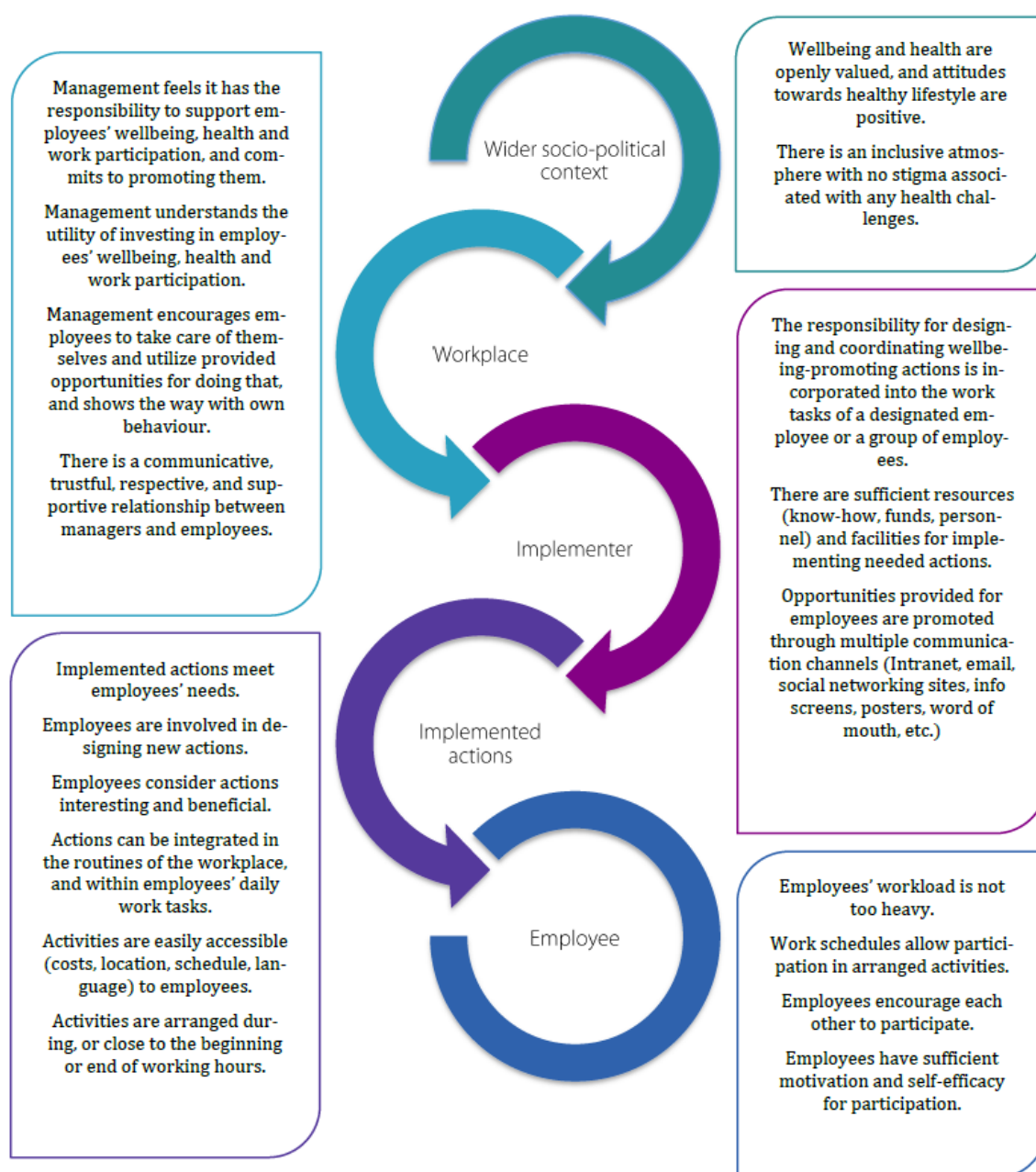
1802 The implication of the research in implementation science is that the effectiveness of  
1803 interventions to address psychosocial hazards in the workplace does not depend only on  
1804 the programme or intervention itself, but also on the ways it is organised and the context  
1805 in which it takes place. Guidance for promoting mental health in the workplace<sup>184</sup> offers a  
1806 number of recommendations in this regard. Employee participation in the design,  
1807 implementation and evaluation of programmes will improve their effectiveness and  
1808 efficiency. Tailoring the programmes to the circumstances of a particular workplace  
1809 context directly influences the likelihood of effectiveness. Programmes must be evaluated  
1810 in real-time, as they happen, and re-assessed and re-oriented as required. Ethics  
1811 require special attention in mental health programmes. Confidentiality of information will  
1812 need to be ensured. Programmes need to be targeted to benefit both employees and  
1813 employers, and it should be made clear to employees that no harm can come from  
1814 participation.

1815 The UK Standard on risk management<sup>185</sup> describes additional principles to be applied  
1816 when managing psychosocial risks: focus on working conditions, not individuals; address  
1817 big issues; provide evidence of the effects of working conditions on health; use valid and  
1818 reliable measures; and target risk removal or reduction. Policies at the workplace to  
1819 promote health and wellbeing must include: Health and safety, Health promotion,  
1820 Rehabilitation and return to work, and Equality and non-discrimination. Good practices in  
1821 promoting mental health at the workplace all show that it requires strong workplace  
1822 policy and infrastructure. This entails: a clear policy that is well communicated to all  
1823 employees, available budget, having trained staff with clear responsibilities and  
1824 accountability for its implementation, leadership and high levels of employee support.  
1825 Overall, initiatives for supporting mental health need to be supported by all layers of the  
1826 organisation.

1827 Specifically with respect to inclusivity, CHRODIS+ Work Package 8 created A Training  
1828 Tool for Managers to promote inclusiveness and work ability for people with chronic  
1829 health conditions.<sup>186</sup> This Training Tool includes a self-assessment for managers and  
1830 employees to measure the inclusiveness of an organization with respect to four areas: (i)  
1831 Work Environment, (ii) Reasonable accommodations, (iii) Management and leadership,  
1832 and (iv) Teamwork and leadership. The Training Tool also recommends measuring the  
1833 work ability of employees using the self-report questionnaire the Work Ability Index  
1834 (WAI) developed by the Finnish Institute of Occupational Health (FIOH).<sup>187</sup> The Training  
1835 Tool offers tips to help the manager with developing an action plan for employee  
1836 inclusion, stay at work, and return to work and related training packages. The Appendix  
1837 examines frequent chronic diseases in the work place with factsheets containing quick  
1838 frameworks and suggestions for appropriate management. Mental health issues, like  
1839 depression, is one of the chronic conditions detailed. The documents references in this  
1840 section are available in online format in a CHRODIS+ Workbox here:  
1841 <https://workbox.chrodis.eu/>

1842  
1843 Appendix 2 of the CHRODIS+ Toolkit<sup>131</sup> provides an illustration of the delivery conditions  
1844 at multiple levels within an organization to facilitate successful implementation of  
1845 workplace programs to support the mental health of essential workers. See Figure 4.

1846 Figure 4 Factors at multiple levels that facilitate successful implementation of wellbeing,  
1847 health, and work participation promoting actions at the workplace, and encourage  
1848 employees to make use of these actions;



1849

1850 Source: CHRODIS+ Toolkit for Workplaces<sup>131</sup>

1851 **Conditions for delivery of programmes to support the health workforce and**  
 1852 **other essential workers**

1853 Regarding essential workers, and frontline health and social care professionals  
 1854 specifically, one review identified some barriers and facilitators to effective delivery of  
 1855 workplace interventions to support mental health during and after a disease outbreak,  
 1856 epidemic or pandemics (SARS, Ebola, MERS and COVID-19).<sup>117</sup> Two important barriers to  
 1857 effective implementation were: (1) lack of awareness about the needs and resources of  
 1858 frontline workers, either because they were not aware of their own needs, or because the  
 1859 organizations were not aware of them; and (2) resource constraints, including lack of  
 1860 equipment, staff time and skills. Three important facilitators of effective implementation

1861 were: (1) flexible interventions that were culturally appropriate, adaptable and/or able to  
1862 be tailored to meet local needs; (2) effective communication and cohesion through  
1863 horizontal and vertical networks that strengthen social capital and improved team  
1864 resilience; and (3) a positive learning climate for everyone involved in implementation of  
1865 an intervention. Frontline workers' knowledge and beliefs about the intervention acted as  
1866 either a barrier or facilitator to implementation depending on the study.

1867 **Delivery conditions associated with mental health interventions to support the**  
1868 **mental health of the health workforce and other essential workers**

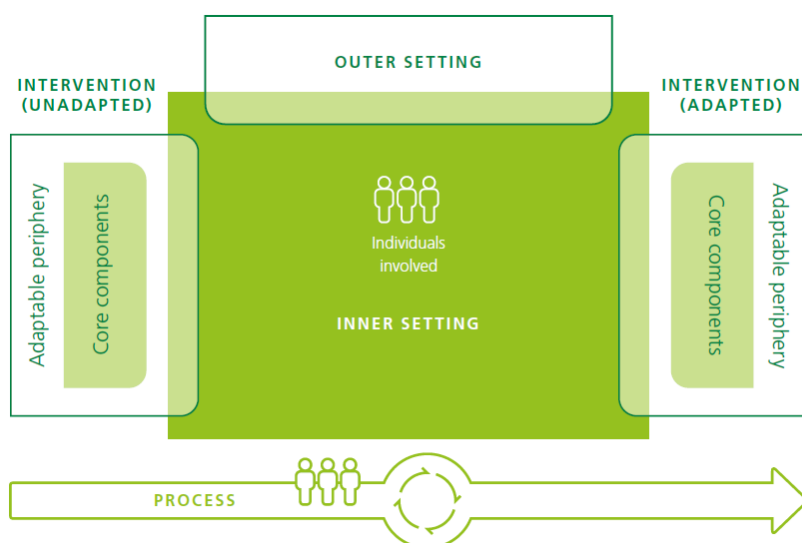
1869 To complement the evidence reviewed with respect to delivery conditions influencing the  
1870 effectiveness of intervention to support mental health in the health workforce and other  
1871 essential workers, additional data collection was carried out. In March 2021, two online  
1872 focus groups were conducted with EXPH Mental Health Mandate drafting group members  
1873 to address the question from the mandate: What are the conditions for the delivery of  
1874 interventions to support the mental health of the health workforce and other essential  
1875 workers in a cost-effective, affordable and inclusive manner. The discussion was  
1876 structured into an examination of delivery conditions to be enacted by level according to:  
1877 mental health practitioners, occupational health practitioners, senior management in  
1878 sectors with high shares of essential workers, national policy makers, EU policy makers.  
1879 Detailed notes were taken by two observers, and the focus groups were recorded. In the  
1880 first phase of synthesis, bulleted information from the focus groups was grouped by level,  
1881 including re-categorization of comments expressed in the context of discussions at other  
1882 levels. Any information provided outside of the context of these levels of actors was  
1883 grouped using thematic analysis. Notes were compiled and contrasted, and then  
1884 reviewed by the facilitator of both groups. Any discrepancies and clarifications needed  
1885 were resolved by consulting the recording to determine the exact expression and context  
1886 of the information provided.

1887 In the second phase of information synthesis, in order to more clearly define the delivery  
1888 conditions associated with mental health interventions to support the mental health of  
1889 the health workforce and other essential workers, the bulleted points were re-categorized  
1890 according to the five high-level domains from the Consolidated Framework for  
1891 Implementation Research (CFIR; <https://cfirguide.org/>). The CFIR provides lists of  
1892 categories associated with effective implementation of evidence-based practices or  
1893 interventions. It was developed in 2009<sup>188</sup> and is widely used in implementation science  
1894 to assess potential barriers and facilitators of intervention implementation. The five  
1895 overarching domains for the categories are: (1) Intervention characteristics, (2)  
1896 Implementation Process (such as intervention champions), (3) Characteristics of the  
1897 individuals involved (such as knowledge and beliefs about the intervention), (4) Inner



1898 setting (such as the organizational level characteristics, work culture), and (5) Outer  
1899 setting (such as external policies and incentives).<sup>189</sup> See Figure 5.

1900 Figure 5 The 5 Consolidated Framework for Implementation Research (CFIR) domains;



1901  
1902 Source: Implementation Science Research Development (ImpRes) Tool Guide<sup>189</sup> adapted  
1903 from Damschoder et al., 2009<sup>188</sup>

1904 Each focus group bullet was categorized into one of five domains based on its content  
1905 taking into account the full list of categories corresponding to each domain. Related  
1906 bullets were combined by theme and any duplicate information was eliminated. A  
1907 summary document was prepared with findings related to delivery conditions grouped by  
1908 domain.

1909 External stakeholders from the European Agency for Safety & Health at Work (EU OSHA)  
1910 were tasked with responding to the information collected. They indicated: (1) If they  
1911 were aware of any evidence that contradicted the opinions expressed; (2) If they were  
1912 aware of any evidence that supported the opinions expressed; (3) If they believed there  
1913 was evidence that was missed. Responses were received in three of the five domains and  
1914 were incorporated into the relevant sections of findings as described below.

### 1915 **1. Intervention Characteristics**

1916 The list of categories under this domain include the source of the intervention (internal  
1917 vs. external), the strength and quality of the evidence supporting it, the relative  
1918 advantage of using it, its adaptability, its trialability, its design and packaging, and its  
1919 cost.

1920 The EXPH drafting group members placed particular emphasis on adaptability. The  
1921 intervention must meet user needs and adapt to their evolving needs over time. The  
1922 intervention must be adaptable to personal factors such as age, family, and socio-  
1923 economic status, and occupational factors such as whether the individual is a healthcare

1924 worker or other essential worker, nurse vs. doctor, stress level, workload,  
1925 control/demand job characteristics, and the potential for role switching, for example, with  
1926 due consideration for the setting and mode of delivery. The interaction between personal  
1927 and occupational risk factors requires consideration. To ensure adaptability and related to  
1928 the internal source of the intervention, co-design and co-production of intervention was  
1929 proposed. This would necessitate sound understanding of the needs of targeted,  
1930 representative, and inclusive groups of potential intervention users.

1931 Furthermore, the drafting group members endorsed statements corresponding to  
1932 intervention evidence strength and quality and cost, citing the need for more high-quality  
1933 longitudinal research on the cost-effectiveness of mental health interventions. This  
1934 requires good monitoring and management systems, constant evaluation of  
1935 interventions, and a focus on examination of mechanisms as to why an intervention is  
1936 working.

1937 Finally, design and packaging is important. Specifically, emphasis on prevention was  
1938 preferred over treatment because primary prevention was viewed as more cost-effective  
1939 in the long-term. The preference for continuous care and intervention was endorsed such  
1940 that it occurs prior to, during, and after a crisis. Appropriate referral systems must be in  
1941 place, but peer support groups were highly supported by the EXPH drafting group  
1942 members (over programs led by a mental health professional). Building and developing  
1943 trust among co-workers was viewed as essential. These programs could be packaged as  
1944 "mandatory de-briefs" or "preparedness sessions" to help deal with change. Training  
1945 should include identification of early working signals of potential mental health  
1946 deterioration or burnout. Widespread screening systems for mental health issues ought  
1947 to be instituted and vouchers for follow-on care could be offered. Interventions should be  
1948 integrated and multi-disciplinary and may include community-based intervention (e.g.,  
1949 exercise, meditation, and arts-based activities). Practicing self-compassion was  
1950 considered an important intervention component.

1951 EU OSHA indicated that general occupational safety and health risk assessment in the  
1952 workplace is a legal obligation of all employers in the EU. They state that participatory  
1953 psychosocial risk assessment should be part of this requirement and used to identify  
1954 risks to mental health and inform design of an intervention.

### 1955 **2. Implementation Process**

1956 In the CFIR, categories related to the implementation process of the intervention are  
1957 separated from the intervention itself. These Process categories include planning,  
1958 executing, reflecting and evaluating, and engaging different stakeholders, from opinion  
1959 leaders to formally appointed implementation leaders, to "champions" of the intervention  
1960 on-site, to external change agents, to the innovation participants themselves.

1961 The EXPH drafting group members addressed the categories of planning and executing  
1962 the intervention by describing the importance of building competencies in mental health  
1963 assessment for occupational health practitioners and managers. They also valued train-  
1964 the-trainer programs to ensure sustainability of the intervention. Reflecting and  
1965 evaluation of the intervention and implementation process was seen as an ongoing need,  
1966 with constant evaluation and collection of feedback from intervention users. This quality  
1967 assurance / quality control information should then be used to evolve the intervention  
1968 and its implementation accordingly. A wide range of interventions should be offered to  
1969 meet the needs of all potential users, which supports the Swiss Cheese Model of  
1970 Intervention. The value of “champions” of the intervention was raised, in that peers who  
1971 had participated in the program and found it beneficial could help promote it among their  
1972 colleagues.

### 1973 **3. Characteristics of the Individuals Involved**

1974 The list of categories under this domain include the knowledge and beliefs about the  
1975 intervention, self-efficacy, individual stages of change, individual identification with their  
1976 organization/workplace, and other personal attributes.

1977 The EXPH drafting members emphasized the importance of understanding the  
1978 intervention users potential lack of interest in the intervention (related to stage of  
1979 change) because of the stigma related to having or admitting mental health issues,  
1980 especially for the health workforce. Furthermore, their knowledge and beliefs about the  
1981 intervention regarding mental health as the target and the confidentiality of the data  
1982 collected during the sessions was also viewed to influence use. The suggestion was made  
1983 to NOT target those with a history of mental health and/or pre-disposing factors, as that  
1984 may further alienate the individual from seeking help.

1985 Other personal attributes that were identified to influence intervention uptake and/or  
1986 effectiveness were related to the diversity and heterogeneity of the workforce in terms of  
1987 profession, culture, language, and ethnicity. Understanding the characteristics of early  
1988 adopters of an intervention could be leveraged to expand reach, while, at the same time,  
1989 seeking to understand those who do not want to use existing interventions or resources  
1990 and why is also important. Cost was considered to be a possible barrier to be considered  
1991 when planning format, content, and channel of implementation. In addition, to facilitate  
1992 access to all interested individuals, the timing of the sessions (e.g., time of day, weekday  
1993 vs. weekend) should be appropriate to the individuals given their commitments outside of  
1994 work and availability.

1995 Lastly, given the importance of the inner setting of the workplace that will be detailed in  
1996 the next section, the individual’s identification with their organization/workplace was  
1997 viewed as a critical condition for success delivery of the intervention. Specifically, the  
1998 individual must feel psychologically safe, trust his/her co-workers, and feel that the

1999 organization they work for and its members care about them and value they work they  
2000 do.

2001 EU OSHA acknowledges that some mental health problems may be caused or aggravated  
2002 by poor psychosocial work environment that includes excessive time pressure, conflicts,  
2003 violence, harassment, lack of support, and/or lack of appreciation. Those factors should  
2004 be identified and addressed, either to prevent their occurrence or to remedy them once  
2005 present, or both strategies can be worked in parallel. Insufficient intervention in this area  
2006 may cause workers to be or become resistant and/or have feelings of resentment  
2007 because they believe they need to 'change', while the problems in the work environment  
2008 remain unchanged.

2009 **4. Inner Setting**

2010 This domain refers to the workplace and its organizational culture. It contains categories  
2011 such as structural characteristics, networks and communications, culture, implementation  
2012 climate (including tension for change, compatibility, relative priority, organizational  
2013 incentives and rewards, goals and feedback, and learning climate) and readiness for  
2014 implementation (including leadership engagement, available resources, and access to  
2015 knowledge and information).

2016 A large amount of time was spent during the focus groups discussing delivery conditions  
2017 related to this domain and the EXPH drafting group members felt that, in order to  
2018 support the mental health of the health workforce and other essential workers, the most  
2019 important delivery conditions occurred at this level of management or senior  
2020 management. Some of the ideas presented previously relate to categories in this domain.  
2021 For instance, the support shown for peer group support interventions for the health  
2022 workforce is related closely to networks and communication and issues surrounding  
2023 stigma about admitting a mental health issue associated with organizational  
2024 (dis)incentives and rewards. In particular, EXPH drafting group members advocated that  
2025 there should be no adverse consequences for help-seeking behaviour. Incentives could  
2026 be offered for assuming extra work during the pandemic, and might include extra pay,  
2027 few night shifts, shorter shift hours, and/or less administrative burden. In addition,  
2028 performance assessment for managers should include indicators on the wellbeing of their  
2029 employees. In this way, mental health would be placed on equal footing with other  
2030 indicators, emphasizing the moral and ethical responsibility they hold with respect to  
2031 their employees' wellbeing.

2032 Most of the interventions proposed by the EXPH drafting group in this domain related to  
2033 effecting changes in organizational culture. For instance, there is a need to shift the  
2034 mentality from blame on the individual for mental health issues to viewing them as the  
2035 result of contextual or environmental challenges. The workplace culture must be one of  
2036 acceptance of the continuum of mental health issues. They suggested that mental health

2037 professionals be involved in occupational health activities in the workplace. Drafting  
2038 group members advocated for the creation of “flat hierarchies”, such as those in UK  
2039 magnet hospitals designed to attract and maintain staff. Furthermore, they emphasized  
2040 the need for fostering a psychologically safe workplace, where staff are comfortable  
2041 expressing their thoughts and feelings. They extended this concept to the creation of a  
2042 learning climate, where successes and failures can be openly shared and accepted.  
2043 Factors related to readiness for implementation were widely discussed. Leadership  
2044 engagement, in the form of top-down intervention from the “big boss” was seen to be  
2045 one way for the organization to show they care. Leadership engagement in participatory  
2046 processes with staff and involvement in team cohesion exercises was also valued.  
2047 Training for managers was one form of access to knowledge and information and  
2048 considered to be an important available resource. Specific training topics included  
2049 general leadership, how to conduct risk/needs assessments related to mental health, how  
2050 to select appropriate interventions to meet those needs, how to value employees, and  
2051 how to empower employees to create meaning in their work.

2052 **5. Outer setting**

2053 The domain refers to the context in which the inner setting operates. It includes  
2054 categories such as user needs and resources, cosmopolitanism, peer pressure, and  
2055 external policy and incentives. The majority of the focus group discussion was focused on  
2056 recommendations for national and EU-level policy to support the mental health and of the  
2057 health workforce and other essential workers and to support the workplaces and  
2058 organizations to intervene within their inner settings to foster cultural changes in line  
2059 with this goal. This discourse aligns well with the external policy and incentives category.  
2060 Many themes were well-supported among members of the EXPH drafting group. They  
2061 advocated for policies that prioritize mental health and wellbeing, to the same extent of  
2062 cancer, for instance. Guidance for national level mental health plans that focus on the  
2063 mental health continuum and address diversity and inclusiveness are needed. At the  
2064 same time, acknowledgement that implementation of plans occurs on local and regional  
2065 levels means that support to lower level implementation groups is critical. They wanted  
2066 to see an increase in mental health care and support in the community and an improved  
2067 integration of mental health and mental health professionals in to primary care settings.  
2068 The number of mental health professionals in the public sector should be increased, and  
2069 professionals in the private sectors utilized in times of crisis. Mental health should also be  
2070 integrated into occupational health and even safety to ensure adequate support for the  
2071 health workforce and other essential workers. This action was believed to enhance  
2072 compliance to standards. At the same time, the differences in the role of occupational  
2073 health and the extent of mental health capacity across Member States must be  
2074 acknowledged and addressed so that no one state is left behind. Regulatory frameworks

2075 are needed to ensure clear accountability for staff mental health and wellbeing. Minimum  
2076 standards entitling each citizen to some basic level of mental health support could be  
2077 developed. Competencies for mental health practitioners should be developed and then  
2078 regularly assessed and certified. Mental health trainings for senior management should  
2079 be mandatory, and training in mental health should be part of health professional  
2080 curriculums and continuing education programs.

2081 Inter-sectoral collaboration for mental health at the EU-level is warranted. For instance,  
2082 support from DG Trade and DG Employment, Social Affairs, and Inclusion can extend EU  
2083 influence over health. Health can be incorporated into EU economic policies that are part  
2084 of joint recovery from the pandemic. Sharing of cross-border and inter-regional  
2085 resources to address surge capacity is also important. Furthermore, mental health data  
2086 collection should be standardized across Member States. Regulation is needed ensure  
2087 data collection on diversity-related characteristics such as ethnicity and sexual  
2088 orientation. Mental health data trends of citizens should be tracked and aggregated at an  
2089 EU-level. Enhanced protections, beyond the GDPR, may be required to address issues of  
2090 confidentiality and privacy in data collection, transfer and storage, especially for digital  
2091 mental health interventions.

2092 In summary, the outer setting must provide the regulatory and financial structure to  
2093 support inner setting interventions in the public sectors, companies, SMEs, and  
2094 workplaces. Financing mechanisms are required, including sustainable support for long-  
2095 term mental health prevention and treatment programs, research and development of  
2096 innovative new programs, de-stigmatization interventions, care re-organization,  
2097 regulatory frameworks, and data collection and harmonization initiatives.

2098 EU OSHA cites EU legislation on occupational safety and health (OSH) and the European  
2099 Agency for Safety and Health at Work (EU-OSHA) indicating that protection of workers  
2100 mental health is an integral part of OSH.<sup>190,191</sup>

2101

### **2102 1.6. Recommendations**

2103 Supporting the mental health and the health workforce and other essential workers  
2104 should be guided by the principles established in the Recommendations below. Each  
2105 recommendation is further elaborated by Action points that clarify recommended  
2106 instruments to be used by specific actors to carry out these principles. The level at which  
2107 those instruments are defined is left open in most cases, as they may take place at local,  
2108 regional, national or European level.

2109 A distinction is to be made between interventions with aim to restore a person's day-to-  
2110 day functioning (it will involve mainly the health care sector and the individual) and  
2111 interventions to avoid negative shocks on a person's day-to-day functioning (it will

2112 involve mainly the organisation, the health sector and the wider institutional framework  
2113 and legal/policy environment).

2114 Although our opinion is about essential workers, we believe these are good employment  
2115 practices and should be implemented by all employers.

2116 Focusing on the positive aspects of mental wellbeing (physical and mental integrity),  
2117 which is neglected in current evidence dedicated primarily to mental health issues or  
2118 disorders, is a critical re-conceptualization that must be advanced to support the mental  
2119 health of essential workers in a cost-effective manner. The discussion should not  
2120 emphasise the negative effects of mental health illnesses, but rather promote the  
2121 positive aspects of mental wellbeing and address mental health illnesses when they  
2122 cannot be prevented. We will use the terms mental wellbeing and mental health  
2123 interchangeably as first step on the proposed paradigm change.

2124

2125 **Recommendation 1: Focus on mental wellbeing.**

2126 Action point 1.1.: Re-conceptualize the discussion from mental health into mental  
2127 wellbeing, which focuses on promoting the positive aspects of mental health and how to  
2128 promote, maintain, or restore them. This action point is directed at all decision-makers at  
2129 all levels and sectors.

2130 Policy makers should create this paradigm shift to re-frame/re-direct mental health  
2131 discussion and foster national policy development and research efforts to align with it.

2132

2133 **Recommendation 2: Treat mental wellbeing as an inherent part of the**  
2134 **organisation.**

2135 Organisations (health care providers, providers of essential services) should treat  
2136 provision of adequate environment for promotion of mental wellbeing of workers as  
2137 major occupational safety dimension, including psychologically safe environment.

2138 Organisations should be able to detect “warning signals” for loss of mental wellbeing in  
2139 workers and, eventually, emergence of mental health issues and disease that need help  
2140 from a health professional.

2141 The term “organisations” covers here health care providers and providers of essential  
2142 services. It includes government bodies and units, private for-profit companies, non-  
2143 profit companies, charities, etc.

2144 Mental illness symptoms may manifest in cognitive, emotional, behavioural, and/or  
2145 physical (or bodily/somatic) ways. Symptoms are subjective in nature. Understanding of  
2146 mental health and mental illness lags far behind our understanding of physical health.  
2147 Assessment of positive mental health is even more challenging, requiring explicit efforts  
2148 at this moment.

2149

2150 **Action point 2.1: Have a mental wellbeing plan.**

2151 Organisations should have a plan to address mental wellbeing of workers. This plan  
2152 needs to support the entire spectrum of mental health (from promotion of protecting  
2153 factors to sensitivity and timely action to “warning signals” at individual level as well as  
2154 changing workplace hazards that may cause psychological harm to workers). This action  
2155 point is directed at senior managers of all organisations with high shares of essential  
2156 workers.

2157 There is a need for “warning signals” that lead to a more in-depth mental health  
2158 assessment and eventually diagnosis and treatment of mental illness. Warning signals  
2159 are to be produced at the organisation level, while mental health assessment is  
2160 performed at individual. Requires that some assessment tool is in place, preferably  
2161 keeping the individual process confidential. On this, the use of digital tools, by  
2162 introducing distance between who is assessed and the organisation, can be helpful to  
2163 reduce the stigma and visibility to others of the assessment.

2164 Organisations should establish monitoring and reporting of indicators reflecting on  
2165 wellbeing (positive mental health) as well as suggestive of problems in organisational  
2166 culture/ workload etc, and act on them. These indicators should be selected from a set of  
2167 indicators to be made available at EU-level to ensure the same principles are applied  
2168 uniformly, allowing for comparability and relative evolution.

2169

2170 **Action point 2.2: Report on mental wellbeing.**

2171 Organisations are to report, in a transparent way, on the internal mental wellbeing  
2172 environment, using common indicators (see Recommendation 3). Organisations are to  
2173 keep the detailed results of these indicators confidential but providing mechanisms to  
2174 ensure an outside inspectorate that the system is being used. This action point  
2175 complements action point 1.1. It is directed to senior managers of organisations with  
2176 high shares of essential workers (on the reporting duty) and to Government officials in  
2177 the health sector (on the monitoring of this report by each organisation, which can be  
2178 just ensuring it is publicly available. Penalties may apply if organisations do not report,  
2179 though as first step positive acknowledgement of these reports is preferred as incentive  
2180 mechanism for adherence).

2181

2182 **Action point 2.3: Identify workplace hazards to mental wellbeing.**

2183 Develop and improve protocols and standards for organisations to identify workplace  
2184 hazards to mental wellbeing. This can build on the experience of the European Agency for  
2185 Safety and Health at Work. This action point is directed for those responsible for health  
2186 policies, both at national and EU level. Coordination at EU-level is desirable to ensure  
2187 consistent practice. National implementation will adjust better to local culture.



2188 Organisations should be made aware of the relevance of changing internal culture and  
2189 have the corresponding tools/approaches/instruments for effective handling of mental  
2190 wellbeing of workers in place. Organizations could evaluate the risk for negative work-  
2191 related mental health consequences. Organizations should provide psychologically safe  
2192 environment and provide positive support to individuals with pre-existing mental health  
2193 conditions and in collaboration with the individual and a multidisciplinary occupational  
2194 medicine team develop a specific plan to mitigate stressors at individual level.

2195 Small and Medium organisations may not have the scale to set up independently the  
2196 tools required for an effective handling of mental wellbeing of workers (from promotion  
2197 to treatment, if necessary). Thus, if the requirements and needs of workers' mental  
2198 health are to be employed to all organisations, from small to large, some instrument,  
2199 such as digital, needs to be made available to those that do not have a scale to have own  
2200 systems for this.

2201

2202 **Action point 2.4: Ensure that organisations of all sizes participate.**

2203 This may require providing tools to the organisations that are too small to develop own  
2204 solutions. The use of digital tools is promising. This action point is mainly directed at EU-  
2205 level decision makers in a first step. There are obvious gains from avoiding duplication of  
2206 work. National language implementation should be taken by national decision makers.  
2207 This cross-cuts health, employment and digital areas of public policy.

2208 At the country or regional level, the appropriate public entity should provide digital tools  
2209 or other appropriate widely deployable solutions for SMEs and organisations to have a  
2210 minimum level wellbeing plan of workers in place. These tools are at level of the  
2211 organisation and they are not individual intervention tools.

2212 It may be helpful to design a digital tool at EU-level to help small and medium  
2213 organisations to adhere to the framework with minimum cost. Large organisations need  
2214 to ensure interoperability of their own tools and information systems with this EU-level  
2215 digital tool.

2216

2217 **Action point 2.5: Charter of Rights to Wellbeing at the Workplace.**

2218 Create an EU-level norm, Charter of Rights to Wellbeing at the Workplace (or some other  
2219 name) to set a norm, with observable elements for public opinion, that organisations will  
2220 treat employees well. This action point is directed at EU-level decision makers.

2221 This Charter of Rights would provide transparency and include accountability to care for  
2222 employees' health as part of its effects. The elaboration of the Charter of Rights to  
2223 Wellbeing at the Workplace should make explicit reference to the EU Charter of  
2224 Fundamental Rights, to the European Pillar of Social Rights and to the Universal  
2225 Declaration of Human Rights.

2226

2227 **Recommendation 3: Create a supportive institutional framework at EU-level.**

2228

2229 **Action point 3.1: Protect mental wellbeing in labour market legislation.**

2230 Include mental wellbeing and mental health protection as part of legislation changes  
2231 addressing employment conditions and social protection. This action point is directed at  
2232 national decision makers responsible for public policy regarding employment and  
2233 workplace conditions.

2234 The mental wellbeing and mental health of the health workforce and essential workers  
2235 needs to be addressed by workplace general conditions, and as such supportive  
2236 interventions outside the health care sector, and related to labour market conditions, are  
2237 required.

2238

2239 **Action point 3.2: Set an EU-level framework to measure wellbeing of workers.**

2240 An EU-level entity should publish a set of indicators on mental wellbeing, defined at the  
2241 organisation level. The information should include definition of wellbeing, each indicator  
2242 and how to compute them with the least possible cost to organisations, small and large.  
2243 This action point is directed at EU-level decision makers.

2244 The definitions need to ensure that data collection and indicator computation cover the  
2245 same dimensions and have the same meaning everywhere. These indicators should  
2246 include Mental Health Person Reported Outcome Measures with a clear definition, to  
2247 make information comparable over time and (eventually) over organisations.

2248 The possibility to set research funding at EU level for explicit work on the development of  
2249 the measures to be adopted is to be considered. There is currently a wealth of  
2250 information in some countries that can be translated to other languages. Some new  
2251 measures may have to be created. Providing a common set of concepts and ensuring  
2252 they are understood in the same way everywhere is a necessary step. A review of  
2253 existing indicators, their breadth of scope, common understanding and their usefulness  
2254 should be done.

2255

2256 **Action point 3.3: Develop reliable screening tools.**

2257 These should be tools that the people may use for themselves to assess their personal  
2258 mental wellbeing status and would include clear messages on how to strengthen positive  
2259 mental health and identify when and where to seek the help. This action point is directed  
2260 at those responsible for health policies at national level, though a coordination role to  
2261 ensure consistency and comparability across geographies is desirable.

2262

2263 **Action point 3.4: Ensure accountability.**

2264 Define at national level which public entity has the responsibility to monitor the actions of  
2265 organisations. It can be either a new entity or an entity that already oversees workplace  
2266 conditions and employment contracts resolution (for example). This action point is  
2267 directed at national decision makers in area of health and employment policies. Different  
2268 countries may decide for different solutions that ensure similar final outcomes regarding  
2269 accountability.

2270

2271 **Action point 3.5: Provide guidance on “mentally protective” workplaces.**

2272 Build an EU-level handbook on how to prepare a “mentally protective” workplace, and  
2273 update it regularly (every two years, at least) based on the latest evidence. Under a  
2274 common EU-level framework, national and regional specific elements may be recognised,  
2275 added by national entities of Member States. This action point is directed at EU-level  
2276 decision makers.

2277 This handbook should help organisations to have a good internal process without being  
2278 too normative (or trying to micromanage every single organisation, which would certainly  
2279 fail). It should cover from definition to communication and to implementation).

2280 This handbook should help organisations to strengthen and/or develop processes to  
2281 support positive mental health, and avoid internal stigma and discrimination associated  
2282 with mental issues. It should help in building a supportive environment and building on  
2283 eliminating harassment (and gender-based harassment) in the workplace. Gender  
2284 harassment in the workplace should be treated as one organisational dimension of  
2285 promotion of mental wellbeing.

2286 As a complementary effort on the building of a general EU view, a useful tool can be a EU  
2287 seal of excellence for mental wellbeing protection.

2288 Cost-effectiveness of interventions in mental health are mostly inconclusive and most  
2289 have methodological limitations to the generalisation of results. Cost-effectiveness needs  
2290 only to be explicitly considered for interventions involving public funding or public  
2291 decisions over use of resources. If outcomes to be met are defined, organisations will do  
2292 their internal assessment on the best way to reach them (they will do their own internal  
2293 cost-effectiveness analysis, even if not formally being named that way).

2294 Cost-effectiveness analysis of interventions in mental health are particularly difficult to  
2295 perform due to the time horizon of those interventions (outcomes may take years to  
2296 materialise) and due to the difficulty in establishing a precise causal link from  
2297 intervention to mental health outcome (interventions are often tailor made to each  
2298 individual, based on unobservable factors, such as organisation culture, peer support,  
2299 empathy with health care provider and trust in the relationship by the patient). Also, the  
2300 perspective adopted in cost- effectiveness analysis has to recognise the existence of  
2301 spillover effects from mental health interventions outside the health sector. Thus, the

2302 societal perspective is enlarged and the payer perspective (public sector – national health  
2303 service – in some countries) is too narrow to account for all relevant benefits. In  
2304 particular, considering the impact on the labour market of a mental-health related  
2305 intervention, the common use of measures such as Quality-Adjusted Life Years may not  
2306 be adequate.

2307 The general presumption obtained from existing studies and meta-analysis is that  
2308 prevention interventions are generally cost-effective compared to non-prevention.

2309

2310 **Recommendation 4: Create an appropriate cost-effectiveness framework.**

2311 Set a research programme to develop a specific methodology of cost-effectiveness (cost-  
2312 benefit) analysis of mental health interventions at all levels, having in mind all the  
2313 specifics of the interventions, and that accounts for person-specific treatment plan  
2314 (recognise that every treatment is different versus the standardised nature of other  
2315 health interventions) and the long-time horizon of interventions (time to benefits  
2316 manifestation). This action point is directed at EU-level decision makers in both areas of  
2317 health and scientific research.

2318 Economic evaluation should be promoted in the field of mental health. Literature is very  
2319 scarce on this issue, probably for good reasons of data availability and the challenges  
2320 outlined above.

2321 It is necessary to recognise that many interventions that may not be cost effective for  
2322 the organisation may be for society, so some public decisions may require a cost-  
2323 effectiveness analysis to back them even if there is little or no public funding involved.

2324

2325 **Recommendation 5: Build and share knowledge on interventions, further**  
2326 **developing current initiatives.**

2327 Build a robust evidence-based knowledge on interventions and mental wellbeing  
2328 programs to take place at organisations. The knowledge base must result from a careful  
2329 critical assessment and emphasis should be placed on patient values being included in  
2330 the assessment.

2331 Those responsible for developing intervention programs should utilize a “swiss cheese”  
2332 approach in which complex evidence-based interventions are used to address a complex  
2333 issue. A combination of interventions addressing different protective and risk factors and  
2334 targeting different vulnerable and non-vulnerable groups at different levels (individual,  
2335 organizational, community, societal) can help ensure comprehensive coverage so that  
2336 “no-one is left behind” or “falls through the cracks” (holes).

2337

2338 **Action point 5.1: Promote research.**

2339 Provide research funding to help build a high quality knowledge base, filling the gaps in  
2340 current research results. This action point is directed to both EU-level and national  
2341 decision makers in health and employment (workplace safety) policies.

2342 The effort to build a knowledge base must focus research on protective factors that may  
2343 help ensure quick and effective recovery after exposure to stress (harm-reduction  
2344 approach), protect against adverse mental health outcomes prior to stress (protection  
2345 approach), and/or promote positive aspects of mental wellbeing. They may be highly  
2346 context/culturally dependent and may change over time. Potentially identify them not at  
2347 individual level but for specific group of people, such as specific group of (essential)  
2348 workers. Research to produce evidence needs to be able to provide an understanding of  
2349 what matters, how it matters and how much it matters. Develop evidence on  
2350 interventions on how people work in teams, to mutually support positive mental  
2351 wellbeing (peer-support).

2352 It needs to ensure that the evidence-based body of knowledge includes a) outcomes at  
2353 individual, organisation and population levels, b) detailed analysis of vulnerable groups;  
2354 c) information on actual use of tools made available by interventions.

2355 The activation of this recommendation must develop and promote use of mixed  
2356 approaches (qualitative and quantitative) in both implementation and evaluation of  
2357 mental health programs and interventions, having clear targets at the organization level.

2358 It is also appropriate to predict adequate funding for pilot innovative mental wellbeing  
2359 programs and interventions, with well-prepared evaluations, in order to build an  
2360 evidence-based body of knowledge regarding effective interventions and prevention  
2361 strategies. This can be done at national and/or at EU-level.

2362

2363 **Action point 5.2: Build conditions**

2364 Create and foster the conditions for innovative and effective interventions and mental  
2365 wellbeing programs to take place at organisations. Promote comprehensive interventions  
2366 with the involvement of management structure, primary healthcare and community  
2367 stakeholders. This action point is directed at national decision-makers responsible for  
2368 health and employment.

2369

2370 **Recommendation 6: A common vision for mental health care.**

2371 Build a harmonised view, across Member States, of mental wellbeing promotion and of  
2372 basic mental health care for individuals with mental illnesses.

2373 There is need to ensure that all member states share a vision that supports mental  
2374 wellbeing promotion and adequate and timely access to health professionals when  
2375 needed by the health workforce and essential workers. This also means a more general

2376 support to the change to community mental health services (more advanced in some  
2377 countries than in others).

2378 EU-level action should help MS and regions to learn from each other on best practices.  
2379 Support and develop further a EU-level "learning community" for exchange of 'best  
2380 practices' on increasing mental health resilience on healthcare workers and other  
2381 essential workers. Promote learning in action, involving learning through engagement.  
2382 This effort should involve regional authorities (governance bodies), local administrative  
2383 bodies (municipalities) and other local authorities in order to explore joint actions and  
2384 strengthen community coalitions and supportive synergies. It should also promote  
2385 actions for a better exchange of proposal and ideas between European scientific societies  
2386 and those that represent occupational medicine, mental health practitioners, public  
2387 health, general practice and primary care, and other clinical and non-clinical disciplines  
2388 (including psychology, social work, anthropology, among others).

2389

2390 **Action point 6.1: Move quickly**

2391 At EU-level, identify low-cost but effective interventions that can be implemented quickly  
2392 by member states that find themselves with limited capacity to provide mental health  
2393 services. This action point is directed at EU-level decision makers in health and  
2394 employment.

2395

2396 **Recommendation 7: Prepare organisations and their leaders.**

2397

2398 **Action point 7.1: Improve leadership.**

2399 Train leaders of health care organisations on fostering positive mental wellbeing in their  
2400 organisations and long-term thinking (instead of short-term emergency reactions). This  
2401 action point is directed to national decision makers, covering health, employment and  
2402 education (higher education in particular) policies.

2403

2404 **Action point 7.2: Prepare for the job.**

2405 Provide guidance and training on how healthcare organisations can actively "prepare staff  
2406 for the job". Guidance should be provided on identification of the moment to do it, and  
2407 on what should be said and how. Address explicitly how organisations anticipate and  
2408 prepare on burnout, moral injury, post-traumatic stress disorder and depression. This  
2409 action point is directed at national decision makers.

2410

2411 **Action point 7.3: Provide support in emergency situations.**

2412 Prepare mechanisms to activate support in emergency situations to the health workforce  
2413 and essential workers. This action point is directed at national decision makers and senior

2414 managers of organisations with high shares of essential workers, to collaborate on the  
2415 identification and definition of best practices.

2416 Define mechanisms by which psychological support can be given during a crisis, and is  
2417 known in advance that will be available. Those mechanisms need to account for different  
2418 needs and capacities to cope of small and large organisations. Those mechanisms need  
2419 to account for the specific risks that frontline workers face. Also, define mechanisms by  
2420 which professional support can be given during a crisis, and is known in advance that will  
2421 be available. Those mechanisms should include, according to evidence, helplines and  
2422 consultation from trained professionals. Finally, define mechanisms by which support to  
2423 family life of essential workers can be given during a crisis and is known in advance that  
2424 will be available. The support can include free transportation, accommodation and  
2425 childcare. Provide stress management training to essential workers.

2426 This recommendation can be associated with a certification. Other possible ways to give  
2427 content to this recommendation point are: promote the development and use of  
2428 occupational (digital) mental health interventions, redirecting to health care services  
2429 when appropriate; activate leadership to be aware of early warnings (indicators and use  
2430 of occupational (digital) mental health interventions), to ensure that timely and adequate  
2431 action takes place: (i) organisation changes, to eliminate workplace hazards detrimental  
2432 to mental health, (ii) at the individual level, an appropriate and timely channelling to  
2433 healthcare/diagnosis takes place if needed; review and build on existing toolkits. As an  
2434 example, the CHRODIS toolkit has helpful recommendations, easy to implement, and low  
2435 cost actions.

2436

2437 **Action point 7.4: Train for the long term**

2438 Human resources management training and curricula should develop explicit mention and  
2439 work with mental wellbeing of workers. Continuous professional development should  
2440 incorporate mental wellbeing concerns. This action point is directed at national decisions  
2441 makers in the education sector. Collaboration from policy makers from health sector is  
2442 necessary.

2443 Responding to mental illness requires a structure different than the one addressing  
2444 conditions for safe mental wellbeing.

2445

2446 **Recommendation 8: Provide timely and adequate access to care**

2447 Mental illness needs to have a response from the health system, after proper diagnosis is  
2448 made.

2449

2450 **Action point 8.1: Communicate properly within the health system**

2451 Ensure that adequate communication from organisations to health care services exist, so  
2452 that diagnosis and (eventually) treatment takes place. Communication should be done in  
2453 a way that avoids stigma and it is compliant with data protection (as detailed in the  
2454 GDPR). This action point is directed at senior managers of organisations with high shares  
2455 of essential workers.

2456

2457 **Action point 8.2: Develop new solutions**

2458 Develop the profile/role of 'primary care community psychologist', that works at societal,  
2459 organisational and individual level. This action point is directed at national decision  
2460 makers in health policies. International coordination is necessary to ensure consistency of  
2461 solutions across the EU.

2462

DRAFT



**REFERENCES**

- 2463
- 2464 1. United Nations. COVID-19 and the Need for Action on Mental Health. 2020.
- 2465 [https://www.un.org/sites/un2.un.org/files/un\\_policy\\_brief-covid\\_and\\_mental\\_health\\_final.pdf](https://www.un.org/sites/un2.un.org/files/un_policy_brief-covid_and_mental_health_final.pdf)
- 2466 (accessed 10th March 2021).
- 2467 2. European Parliament. Mental health during the COVID-19 pandemic. 2020.
- 2468 [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/658213/IPOL\\_BRI\(2020\)658213\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/658213/IPOL_BRI(2020)658213_EN.pdf)
- 2469 [f](#) (accessed 10th March 2020).
- 2470 3. European Commission. Health at a Glance: Europe. 2020.
- 2471 [https://ec.europa.eu/health/state/glance\\_en](https://ec.europa.eu/health/state/glance_en) (accessed 10th March 2021).
- 2472 4. Rossi R, Socci V, Pacitti F, et al. Mental Health Outcomes Among Frontline and Second-Line
- 2473 Health Care Workers During the Coronavirus Disease 2019 (COVID-19) Pandemic in Italy. *JAMA Netw*
- 2474 *Open* 2020; **3**(5): e2010185.
- 2475 5. Luceño-Moreno L, Talavera-Velasco B, García-Albuérne Y, Martín-García J. Symptoms of
- 2476 Posttraumatic Stress, Anxiety, Depression, Levels of Resilience and Burnout in Spanish Health
- 2477 Personnel during the COVID-19 Pandemic. *International Journal of Environmental Research and*
- 2478 *Public Health* 2020; **17**(15): 5514.
- 2479 6. Expert Panel on Effective Ways of Investing in Health. The organisation of resilient health and
- 2480 social care following the COVID-19 pandemic. Brussels: European Commission; 2020.
- 2481 7. Antonovsky A. Health, stress, and coping : new perspectives on mental and physical well
- 2482 being. 1st ed. San Francisco: Jossey-Bass Publishers; 1980.
- 2483 8. World Health Organization. Mental health: strengthening our response. 2018.
- 2484 <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- 2485 (accessed 10th March 2021).
- 2486 9. ZEALAND PCN. Region Mental Health Service: The WHO-5 Website. [https://www.psykiatri-](https://www.psykiatri-regionh.dk/who-5/Pages/default.aspx)
- 2487 [regionh.dk/who-5/Pages/default.aspx](https://www.psykiatri-regionh.dk/who-5/Pages/default.aspx) (accessed May 31, 2021).
- 2488 10. Keyes CL. The mental health continuum: from languishing to flourishing in life. *J Health Soc*
- 2489 *Behav* 2002; **43**(2): 207-22.
- 2490 11. Keyes CLM, Dhingra SS, Simoes EJ. Change in Level of Positive Mental Health as a Predictor of
- 2491 Future Risk of Mental Illness. *American Journal of Public Health* 2010; **100**(12): 2366-71.
- 2492 12. Abrams A. Languishing in the Time of Covid. 2021.
- 2493 [https://www.psychologytoday.com/us/blog/nurturing-self-compassion/202105/languishing-in-the-](https://www.psychologytoday.com/us/blog/nurturing-self-compassion/202105/languishing-in-the-time-covid)
- 2494 [time-covid](https://www.psychologytoday.com/us/blog/nurturing-self-compassion/202105/languishing-in-the-time-covid) (accessed 28th May 2021).
- 2495 13. There's a Name for the Blah You're Feeling: It's Called Languishing. 2021.
- 2496 <https://www.nytimes.com/2021/04/19/well/mind/covid-mental-health-languishing.html> (accessed
- 2497 May 31 2021).
- 2498 14. Blum D. The Other Side of Languishing Is Flourishing. Here's How to Get There.
- 2499 Research shows that the pandemic took a toll on our overall well-being and left many of us drained.
- 2500 Here are seven simple steps to get you thriving again. 2021.
- 2501 <https://www.nytimes.com/2021/05/04/well/mind/flourishing-languishing.html> (accessed May 31
- 2502 2021).
- 2503 15. Health FoP. Measurement of mental health, outcomes and key sources of data. 2012.
- 2504 [https://www.fph.org.uk/policy-campaigns/special-interest-groups/special-interest-groups-list/public-](https://www.fph.org.uk/policy-campaigns/special-interest-groups/special-interest-groups-list/public-mental-health-special-interest-group/better-mental-health-for-all/measurements-of-mental-health-outcomes-and-key-sources-of-data/)
- 2505 [mental-health-special-interest-group/better-mental-health-for-all/measurements-of-mental-health-](https://www.fph.org.uk/policy-campaigns/special-interest-groups/special-interest-groups-list/public-mental-health-special-interest-group/better-mental-health-for-all/measurements-of-mental-health-outcomes-and-key-sources-of-data/)
- 2506 [outcomes-and-key-sources-of-data/](https://www.fph.org.uk/policy-campaigns/special-interest-groups/special-interest-groups-list/public-mental-health-special-interest-group/better-mental-health-for-all/measurements-of-mental-health-outcomes-and-key-sources-of-data/) (accessed 28th May 2021).
- 2507 16. Davydov DM, Stewart R, Ritchie K, Chaudieu I. Resilience and mental health. *Clin Psychol Rev*
- 2508 2010; **30**(5): 479-95.
- 2509 17. World Health Organization. Risks to mental health: An overview of vulnerabilities and risk
- 2510 factors background paper by who secretariat for the development of a comprehensive mental health
- 2511 action plan. 2012.
- 2512 [https://www.who.int/mental\\_health/mhgap/risks\\_to\\_mental\\_health\\_EN\\_27\\_08\\_12.pdf](https://www.who.int/mental_health/mhgap/risks_to_mental_health_EN_27_08_12.pdf) (accessed
- 2513 28th May 2021).

- 2514 18. Perneger TV. The Swiss cheese model of safety incidents: are there holes in the metaphor?  
2515 *BMC Health Services Research* 2005; **5**(1).
- 2516 19. Reason J. Human error: models and management. *West J Med* 2000; **172**(6): 393-6.
- 2517 20. Organisation WH. Mental Health and Substance Use. 2021.  
2518 <https://www.who.int/teams/mental-health-and-substance-use/mental-health-in-the-workplace>  
2519 (accessed May 31 2021).
- 2520 21. Mutambudzi M, Niedzwiedz C, Macdonald EB, et al. Occupation and risk of severe COVID-19:  
2521 prospective cohort study of 120 075 UK Biobank participants. *Occupational and Environmental*  
2522 *Medicine* 2021; **78**(5): 307-14.
- 2523 22. Act OHaS. Guidance on Preparing Workplaces for COVID-19. U.S. Department of Labor; 2020.
- 2524 23. Centers for Disease Control and Prevention. Interim List of Categories of Essential Workers  
2525 Mapped to Standardized Industry Codes and Titles. 2020. [https://www.cdc.gov/vaccines/covid-](https://www.cdc.gov/vaccines/covid-19/categories-essential-workers.html)  
2526 [19/categories-essential-workers.html](https://www.cdc.gov/vaccines/covid-19/categories-essential-workers.html) (accessed 10th March 2021).
- 2527 24. Equality ElfG. COVID-19 and Gender Equality: Essential Workers. 2021.  
2528 <https://eige.europa.eu/covid-19-and-gender-equality/essential-workers> (accessed May 31 2021).
- 2529 25. Cox-Ganser JM, Henneberger PK. Occupations by Proximity and Indoor/Outdoor Work:  
2530 Relevance to COVID-19 in All Workers and Black/Hispanic Workers. *American Journal of Preventive*  
2531 *Medicine* 2021; **60**(5): 621-8.
- 2532 26. Young KP, Kolcz DL, O'Sullivan DM, Ferrand J, Fried J, Robinson K. Health Care Workers'  
2533 Mental Health and Quality of Life During COVID-19: Results From a Mid-Pandemic, National Survey.  
2534 *Psychiatric Services* 2021; **72**(2): 122-8.
- 2535 27. Bassi M, Negri L, Delle Fave A, Accardi R. The relationship between post-traumatic stress and  
2536 positive mental health symptoms among health workers during COVID-19 pandemic in Lombardy,  
2537 Italy. *Journal of Affective Disorders* 2021; **280**: 1-6.
- 2538 28. Du J, Mayer G, Hummel S, et al. Mental Health Burden in Different Professions During the  
2539 Final Stage of the COVID-19 Lockdown in China: Cross-sectional Survey Study. *J Med Internet Res*  
2540 2020; **22**(12): e24240.
- 2541 29. Lamb D, Greenberg N, Stevelink SAM, Wessely S. Mixed signals about the mental health of  
2542 the NHS workforce. *The Lancet Psychiatry* 2020; **7**(12): 1009-11.
- 2543 30. Daly M, Sutin AR, Robinson E. Longitudinal changes in mental health and the COVID-19  
2544 pandemic: evidence from the UK Household Longitudinal Study. *Psychological Medicine* 2020: 1-10.
- 2545 31. Kestilä L. HV, Rissanen V. . The Implications of COVID-19 to Wellbeing, Service Systems and Economy.  
2546 COVID-19-epidemiaan vaikutukset hyvinvointiin, palvelujärjestelmään ja kansantalouteen. Helsinki, Finland:  
2547 Finnish Institute of Health and Welfare; 2020.
- 2548 32. Cannon WB. The Wisdom of the Body. London: Kegan Paul; 1933.
- 2549 33. Fang XH, Wu L, Lu LS, et al. Mental health problems and social supports in the COVID-19  
2550 healthcare workers: a Chinese explanatory study. *BMC Psychiatry* 2021; **21**(1): 34.
- 2551 34. Vizheh M, Qorbani M, Arzaghi SM, Muhidin S, Javanmard Z, Esmaeili M. The mental health of  
2552 healthcare workers in the COVID-19 pandemic: A systematic review. *Journal of Diabetes & Metabolic*  
2553 *Disorders* 2020; **19**(2): 1967-78.
- 2554 35. Gross JV, Mohren J, Erren TC. COVID-19 and healthcare workers: a rapid systematic review  
2555 into risks and preventive measures. *BMJ Open* 2021; **11**(1): e042270.
- 2556 36. Muller AE, Hafstad EV, Himmels JPW, et al. The mental health impact of the covid-19  
2557 pandemic on healthcare workers, and interventions to help them: A rapid systematic review.  
2558 *Psychiatry Research* 2020; **293**: 113441.
- 2559 37. De Kock JH, Latham HA, Leslie SJ, et al. A rapid review of the impact of COVID-19 on the  
2560 mental health of healthcare workers: implications for supporting psychological well-being. *BMC*  
2561 *Public Health* 2021; **21**(1): 104.
- 2562 38. Jewers C. One in four NYC transit workers has caught Covid-19 according to a union survey  
2563 but the MTA hits back calling the findings 'a poll not a study'. 2020.  
2564 [https://www.dailymail.co.uk/news/article-8864125/One-four-NYC-transit-workers-caught-Covid-19-](https://www.dailymail.co.uk/news/article-8864125/One-four-NYC-transit-workers-caught-Covid-19-according-union-survey.html)  
2565 [according-union-survey.html](https://www.dailymail.co.uk/news/article-8864125/One-four-NYC-transit-workers-caught-Covid-19-according-union-survey.html) (accessed 10th March 2021).

- 2566 39. Gershon R. Impact of Covid-19 pandemic in NYC transit workers: pilot study findings. 2020.  
2567 <https://www.nyu.edu/content/dam/nyu/publicAffairs/documents/PDF/GershonTransitWorkerPilotStudy>  
2568 [udy](#) (accessed 10th March 2021).
- 2569 40. Carmassi C, Foghi C, Dell'Oste V, et al. PTSD symptoms in healthcare workers facing the three  
2570 coronavirus outbreaks: What can we expect after the COVID-19 pandemic. *Psychiatry Res* 2020; **292**:  
2571 113312.
- 2572 41. Benfante A, Di Tella M, Romeo A, Castelli L. Traumatic Stress in Healthcare Workers During  
2573 COVID-19 Pandemic: A Review of the Immediate Impact. *Front Psychol* 2020; **11**: 569935.
- 2574 42. Greenberg N, Weston D, Hall C, Caulfield T, Williamson V, Fong K. Mental health of staff  
2575 working in intensive care during COVID-19. *Occup Med (Lond)* 2021.
- 2576 43. Mitani S, Fujita M, Nakata K, Shirakawa T. Impact of post-traumatic stress disorder and job-  
2577 related stress on burnout: a study of fire service workers. *J Emerg Med* 2006; **31**(1): 7-11.
- 2578 44. Carmassi C, Malacarne P, Dell'Oste V, et al. Post-traumatic stress disorder, burnout and their  
2579 impact on global functioning in Italian emergency healthcare workers. *Minerva Anesthesiol* 2021.
- 2580 45. Miguel-Puga JA, Cooper-Bribiesca D, Avelar-Garnica FJ, et al. Burnout, depersonalization, and  
2581 anxiety contribute to post-traumatic stress in frontline health workers at COVID-19 patient care, a  
2582 follow-up study. *Brain Behav* 2020: e02007.
- 2583 46. Katsavouni F, Bebetos E, Malliou P, Beneka A. The relationship between burnout, PTSD  
2584 symptoms and injuries in firefighters. *Occup Med (Lond)* 2016; **66**(1): 32-7.
- 2585 47. Feingold JH, Peccoralo L, Chan CC, et al. Psychological Impact of the COVID-19 Pandemic on  
2586 Frontline Health Care Workers During the Pandemic Surge in New York City. *Chronic Stress (Thousand*  
2587 *Oaks)* 2021; **5**: 2470547020977891.
- 2588 48. World Health Organisation. Burn-out an "occupational phenomenon": International  
2589 Classification of Diseases. 2019. <https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>  
2590 (accessed 22nd February 2021).
- 2591 49. Stelnicki AM, Jamshidi L, Angehrn A, Hadjistavropoulos HD, Carleton RN. Associations  
2592 Between Burnout and Mental Disorder Symptoms Among Nurses in Canada. *Can J Nurs Res* 2020:  
2593 844562120974194.
- 2594 50. Freudenberger HJ. Staff burn-out. *Journal of social issues* 1974; **30**(1): 159-65.
- 2595 51. Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of Organizational*  
2596 *Behavior* 1981; **2**(2): 99-113.
- 2597 52. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout Inventory  
2598 Manual. Palo Alto, CA: Consulting Psychologists Press 1986.
- 2599 53. Shirom A, Melamed S. A comparison of the construct validity of two burnout measures in  
2600 two groups of professionals. *International journal of stress management* 2006; **13**(2): 176.
- 2601 54. Demerouti E, Bakker AB, Vardakou I, Kantas A. The convergent validity of two burnout  
2602 instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment* 2003;  
2603 **19**(1): 12.
- 2604 55. Houkes I, Winants Y, Twellaar M, Verdonk P. Development of burnout over time and the  
2605 causal order of the three dimensions of burnout among male and female GPs. A three-wave panel  
2606 study. *BMC Public Health* 2011; **11**: 240-.
- 2607 56. Farber BA. Crisis in education: Stress and burnout in the American teacher: Jossey-Bass;  
2608 1991.
- 2609 57. Sharifi M, Asadi-Pooya AA, Mousavi-Roknabadi RS. Burnout among Healthcare Providers of  
2610 COVID-19; a Systematic Review of Epidemiology and Recommendations. *Arch Acad Emerg Med* 2020;  
2611 **9**(1): e7-e.
- 2612 58. Barello S, Palamenghi L, Graffigna G. Burnout and somatic symptoms among frontline  
2613 healthcare professionals at the peak of the Italian COVID-19 pandemic. *Psychiatry Res* 2020; **290**:  
2614 113129.
- 2615 59. Sahin T, Aslaner H, Eker OO, Gokcek MB, Dogan M. Effect of COVID-19 pandemic on anxiety  
2616 and burnout levels in emergency healthcare workers: a questionnaire study. 2020.

- 2617 60. Wu Y, Wang J, Luo C, et al. A Comparison of Burnout Frequency Among Oncology Physicians  
2618 and Nurses Working on the Frontline and Usual Wards During the COVID-19 Epidemic in Wuhan,  
2619 China. *J Pain Symptom Manage* 2020; **60**(1): e60-e5.
- 2620 61. Dimitriu MCT, Pantea-Stoian A, Smaranda AC, et al. Burnout syndrome in Romanian medical  
2621 residents in time of the COVID-19 pandemic. *Med Hypotheses* 2020; **144**: 109972-.
- 2622 62. Luceño-Moreno L, Talavera-Velasco B, García-Albuerny Y, Martín-García J. Symptoms of  
2623 Posttraumatic Stress, Anxiety, Depression, Levels of Resilience and Burnout in Spanish Health  
2624 Personnel during the COVID-19 Pandemic. *Int J Environ Res Public Health* 2020; **17**(15).
- 2625 63. Morgantini LA, Naha U, Wang H, et al. Factors contributing to healthcare professional  
2626 burnout during the COVID-19 pandemic: A rapid turnaround global survey. *PLoS One* 2020; **15**(9):  
2627 e0238217.
- 2628 64. Matsuo T, Kobayashi D, Taki F, et al. Prevalence of Health Care Worker Burnout During the  
2629 Coronavirus Disease 2019 (COVID-19) Pandemic in Japan. *JAMA Netw Open* 2020; **3**(8): e2017271-e.
- 2630 65. Ruiz-Fernández MD, Ramos-Pichardo JD, Ibáñez-Masero O, Cabrera-Troya J, Carmona-Rega  
2631 MI, Ortega-Galán Á M. Compassion fatigue, burnout, compassion satisfaction and perceived stress in  
2632 healthcare professionals during the COVID-19 health crisis in Spain. *J Clin Nurs* 2020; **29**(21-22): 4321-  
2633 30.
- 2634 66. Tan BYQ, Kanneganti A, Lim LKH, et al. Burnout and Associated Factors Among Health Care  
2635 Workers in Singapore During the COVID-19 Pandemic. *J Am Med Dir Assoc* 2020; **21**(12): 1751-8.e5.
- 2636 67. Salvagioni DAJ, Melanda FN, Mesas AE, González AD, Gabani FL, Andrade SMD. Physical,  
2637 psychological and occupational consequences of job burnout: A systematic review of prospective  
2638 studies. *PloS one* 2017; **12**(10): e0185781-e.
- 2639 68. Center ANC. ANCC Magnet Recognition Program. 2021.  
2640 <https://www.nursingworld.org/organizational-programs/magnet/> (accessed May 31 2021).
- 2641 69. Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH. Hospital nurse staffing and patient  
2642 mortality, nurse burnout, and job dissatisfaction. *Jama* 2002; **288**(16): 1987-93.
- 2643 70. Aiken LH, Sermeus W, Van den Heede K, et al. Patient safety, satisfaction, and quality of  
2644 hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United  
2645 States. *Bmj* 2012; **344**: e1717.
- 2646 71. Wilde HA, Mellan TA, Hawryluk I, et al. A national retrospective cohort study of mechanical  
2647 ventilator availability and its association with mortality risk in intensive care patients with COVID-19.  
2648 *medRxiv* 2021.
- 2649 72. Shay J. Moral Injury *Psychoanalytic Psychology* 2014; **31**: 182-91.
- 2650 73. Litz BT, Stein N, Delaney E, et al. Moral injury and moral repair in war veterans: a preliminary  
2651 model and intervention strategy. *Clin Psychol Rev* 2009; **29**(8): 695-706.
- 2652 74. Griffin BJ, Purcell N, Burkman K, et al. Moral Injury: An Integrative Review. *J Trauma Stress*  
2653 2019; **32**(3): 350-62.
- 2654 75. Greenberg N. Managing mental health challenges faced by healthcare workers during covid-  
2655 19 pandemic *British Medical Journal* 2020; **368**: 1211.
- 2656 76. Williamson V, Stevelink SAM, Greenberg N. Occupational moral injury and mental health:  
2657 systematic review and meta-analysis. *Br J Psychiatry* 2018; **212**(6): 339-46.
- 2658 77. Murray E, Krahe C, Goodsmann D. Are medical students in prehospital care at risk of moral  
2659 injury? *Emerg Med J* 2018; **35**(10): 590-4.
- 2660 78. Stein NR, Mills MA, Arditte K, et al. A scheme for categorizing traumatic military events.  
2661 *Behav Modif* 2012; **36**(6): 787-807.
- 2662 79. Blythe J, Whitwell K. Monitoring junior doctors after a major incident. *Emerg Med J* 2005;  
2663 **22**(12): 922.
- 2664 80. Walton M, Murray E, Christian MD. Mental health care for medical staff and affiliated  
2665 healthcare workers during the COVID-19 pandemic. *Eur Heart J Acute Cardiovasc Care* 2020; **9**(3):  
2666 241-7.
- 2667 81. Imo UO. Burnout and psychiatric morbidity among doctors in the UK: a systematic literature  
2668 review of prevalence and associated factors. *BJPsych Bull* 2017; **41**(4): 197-204.

- 2669 82. World Health Organization. International statistical classification of diseases and related  
2670 health problems (11th ed.). 2019.
- 2671 83. Dean W, Talbot S, Dean A. Reframing Clinician Distress: Moral Injury Not Burnout. *Fed Pract*  
2672 2019; **36**(9): 400-2.
- 2673 84. Williamson V, Murphy D, Greenberg N. COVID-19 and experiences of moral injury in front-  
2674 line key workers. *Occup Med (Lond)* 2020; **70**(5): 317-9.
- 2675 85. Senior J. Opinion/The Psychological Trauma That Awaits Our Doctors and Nurses. . 2020.  
2676 [https://www.nytimes.com/2020/03/29/  
2677 opinion/coronavirus-ventilators-rationing-triage.html?](https://www.nytimes.com/2020/03/29/opinion/coronavirus-ventilators-rationing-triage.html?referringSource=articleShare)  
2678 referringSource=articleShare.
- 2679 86. Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to  
2680 reduce it: rapid review of the evidence. *Lancet* 2020; **395**(10227): 912-20.
- 2681 87. Tomlinson T. Caring for risky patients: duty or virtue? *J Med Ethics* 2008; **34**(6): 458-62.
- 2682 88. Williams R, Bisson J, Kemp V. Principles for responding to people’s psychosocial and mental  
2683 health needs after disasters. . 2014.
- 2684 89. Brooks S, Amlôt R, Rubin GJ, Greenberg N. Psychological resilience and post-traumatic  
2685 growth in disaster-exposed organisations: overview of the literature. *BMJ Mil Health* 2020; **166**(1):  
2686 52-6.
- 2687 90. Kinman GT, K. What can make a difference to the mental health of UK doctors? A review of  
2688 the research evidence. . London: Society of Occupational Medicine 2018.
- 2689 91. Cabarkapa S, Nadjidai SE, Murgier J, Ng CH. The psychological impact of COVID-19 and other  
2690 viral epidemics on frontline healthcare workers and ways to address it: A rapid systematic review.  
2691 *Brain, Behavior, & Immunity - Health* 2020; **8**: 100144.
- 2692 92. DePierro J, Lowe S, Katz C. Lessons learned from 9/11: Mental health perspectives on the  
2693 COVID-19 pandemic. *Psychiatry Research* 2020; **288**: 113024.
- 2694 93. Pietrzak RH, Feder A, Singh R, et al. Trajectories of PTSD risk and resilience in World Trade  
2695 Center responders: an 8-year prospective cohort study. *Psychological Medicine* 2014; **44**(1): 205-19.
- 2696 94. Maunder R, Hunter J, Vincent L, et al. The immediate psychological and occupational impact  
2697 of the 2003 SARS outbreak in a teaching hospital. *Cmaj* 2003; **168**(10): 1245-51.
- 2698 95. Kisely S, Warren N, McMahon L, Dalais C, Henry I, Siskind D. Occurrence, prevention, and  
2699 management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid  
2700 review and meta-analysis. *BMJ* 2020; **369**: m1642.
- 2701 96. De Sio S, Buomprisco G, Perri R, et al. Work-related stress risk and preventive measures of  
2702 mental disorders in the medical environment: an umbrella review. *Eur Rev Med Pharmacol Sci* 2020;  
2703 **24**(2): 821-30.
- 2704 97. Frاسquilho D, Matos MG, Salonna F, et al. Mental health outcomes in times of economic  
2705 recession: a systematic literature review. *BMC Public Health* 2015; **16**(1).
- 2706 98. Reeves A, Mckee M, Basu S, Stuckler D. The political economy of austerity and healthcare:  
2707 Cross-national analysis of expenditure changes in 27 European nations 1995–2011. *Health Policy*  
2708 2014; **115**(1): 1-8.
- 2709 99. Modrek S, Cullen MR. Health consequences of the ‘Great Recession’ on the employed:  
2710 Evidence from an industrial cohort in aluminum manufacturing. *Social Science & Medicine* 2013; **92**:  
2711 105-13.
- 2712 100. Mcinerney M, Mellor JM, Nicholas LH. Recession depression: Mental health effects of the  
2713 2008 stock market crash. *Journal of Health Economics* 2013; **32**(6): 1090-104.
- 2714 101. Silva M, Resurrección DM, Antunes A, Frاسquilho D, Cardoso G. Impact of economic crises on  
2715 mental health care: a systematic review. *Epidemiology and Psychiatric Sciences* 2020; **29**: 1-13.
- 2716 102. Barr B, Kinderman P, Whitehead M. Trends in mental health inequalities in England during a  
2717 period of recession, austerity and welfare reform 2004 to 2013. *Soc Sci Med* 2015; **147**: 324-31.

- 2718 103. Moncho J, Pereyra-Zamora P, Tamayo-Fonseca N, Giron M, Gómez-Beneyto M, Nolasco A. Is  
2719 recession bad for your mental health? The answer could be complex: evidence from the 2008 crisis in  
2720 Spain. *BMC Medical Research Methodology* 2018; **18**(1).
- 2721 104. Steel Z, Marnane C, Iranpour C, et al. The global prevalence of common mental disorders: a  
2722 systematic review and meta-analysis 1980-2013. *Int J Epidemiol* 2014; **43**(2): 476-93.
- 2723 105. Nicholson PJ. Common mental disorders and work. *British Medical Bulletin* 2018; **126**(1): 113-  
2724 21.
- 2725 106. OECD. Sick on the Job?; 2012.
- 2726 107. Rodgers M, Dalton J, Harden M, Street A, Parker G, Eastwood A. Integrated Care to Address  
2727 the Physical Health Needs of People with Severe Mental Illness: A Mapping Review of the Recent  
2728 Evidence on Barriers, Facilitators and Evaluations. *Int J Integr Care* 2018; **18**(1): 9.
- 2729 108. World Health Organization. The impact of COVID-19 on mental, neurological and substance  
2730 use services: results of a rapid assessment. Geneva: World Health Organization; 2020.
- 2731 109. Meyer J, McDowell C, Lansing J, et al. Changes in physical activity and sedentary behavior in  
2732 response to COVID-19 and their associations with mental health in 3052 US adults. *International  
2733 journal of environmental research and public health* 2020; **17**(18).
- 2734 110. Henssler J, Stock F, van Bohemen J, Walter H, Heinz A, Brandt L. Mental health effects of  
2735 infection containment strategies: quarantine and isolation—a systematic review and meta-analysis.  
2736 *European Archives of Psychiatry and Clinical Neuroscience* 2020.
- 2737 111. Moreno C, Wykes T, Galderisi S, et al. How mental health care should change as a  
2738 consequence of the COVID-19 pandemic. *The Lancet Psychiatry* 2020; **7**(9): 813-24.
- 2739 112. Kaufman KR, Petkova E, Bhui KS, Schulze TG. A global needs assessment in times of a global  
2740 crisis: world psychiatry response to the COVID-19 pandemic. *BJPsych Open* 2020; **6**(3): e48-e.
- 2741 113. Asmundson GJG, Paluszek MM, Landry CA, Rachor GS, McKay D, Taylor S. Do pre-existing  
2742 anxiety-related and mood disorders differentially impact COVID-19 stress responses and coping?  
2743 *Journal of Anxiety Disorders* 2020; **74**: 102271.
- 2744 114. Neelam K, Duddu V, Anyim N, Neelam J, Lewis S. Pandemics and pre-existing mental illness: A  
2745 systematic review and meta-analysis. *Brain, behavior, & immunity - health* 2021; **10**: 100177-.
- 2746 115. Pan K-Y, Kok AAL, Eikelenboom M, et al. The mental health impact of the COVID-19 pandemic  
2747 on people with and without depressive, anxiety, or obsessive-compulsive disorders: a longitudinal  
2748 study of three Dutch case-control cohorts. *The Lancet Psychiatry* 2021; **8**(2): 121-9.
- 2749 116. Leka S, Jain, A. EU Compass for Action on Mental Health and Well-being: Mental Health in  
2750 the Workplace in Europe. 2017.  
2751 [https://ec.europa.eu/health/sites/default/files/mental\\_health/docs/compass\\_2017workplace\\_en.pdf](https://ec.europa.eu/health/sites/default/files/mental_health/docs/compass_2017workplace_en.pdf)  
2752 f (accessed May 31 2021).
- 2753 117. Pollock A, Campbell P, Cheyne J, et al. Interventions to support the resilience and mental  
2754 health of frontline health and social care professionals during and after a disease outbreak, epidemic  
2755 or pandemic: a mixed methods systematic review. *Cochrane Database Syst Rev* 2020; **11**: Cd013779.
- 2756 118. Callus E, Bassola B, Fiolo V, Bertoldo EG, Pagliuca S, Lusignani M. Stress Reduction  
2757 Techniques for Health Care Providers Dealing With Severe Coronavirus Infections (SARS, MERS, and  
2758 COVID-19): A Rapid Review. *Front Psychol* 2020; **11**: 589698.
- 2759 119. Benhamou K, Piedra A. CBT-Informed Interventions for Essential Workers During the COVID-  
2760 19 Pandemic. *J Contemp Psychother* 2020: 1-9.
- 2761 120. Organisation WH. Psychological first aid during Ebola virus disease outbreaks. 2014.  
2762 <https://www.who.int/publications/i/item/9789241548847> (accessed May 31 2021).
- 2763 121. Organisation WH. Psychological first aid: Guide for field workers. 2011.  
2764 <https://www.who.int/publications/i/item/9789241548205> (accessed May 31 2021).
- 2765 122. Ruotsalainen JH, Verbeek JH, Mariné A, Serra C. Preventing occupational stress in healthcare  
2766 workers. *Cochrane Database of Systematic Reviews* 2015; (4).
- 2767 123. Murray M, Murray L, Donnelly M. Systematic review of interventions to improve the  
2768 psychological well-being of general practitioners. *BMC Fam Pract* 2016; **17**: 36.

- 2769 124. Jensen A, Bonde LO. The use of arts interventions for mental health and wellbeing in health  
2770 settings. *Perspect Public Health* 2018; **138**(4): 209-14.
- 2771 125. Axén I, Björk Brämberg E, Vaez M, Lundin A, Bergström G. Interventions for common mental  
2772 disorders in the occupational health service: a systematic review with a narrative synthesis. *Int Arch*  
2773 *Occup Environ Health* 2020; **93**(7): 823-38.
- 2774 126. Carolan S, Harris PR, Cavanagh K. Improving Employee Well-Being and Effectiveness:  
2775 Systematic Review and Meta-Analysis of Web-Based Psychological Interventions Delivered in the  
2776 Workplace. *J Med Internet Res* 2017; **19**(7): e271.
- 2777 127. Agyapong VIO, Hrabok M, Vuong W, et al. Changes in Stress, Anxiety, and Depression Levels  
2778 of Subscribers to a Daily Supportive Text Message Program (Text4Hope) During the COVID-19  
2779 Pandemic: Cross-Sectional Survey Study. *JMIR Ment Health* 2020; **7**(12): e22423.
- 2780 128. Policies EOoHSa. COVID-19 Health System Response Monitor. 2021.  
2781 <https://www.covid19healthsystem.org/mainpage.aspx> (accessed May 31 2021).
- 2782 129. Gemma A, Williams GS, Alexia Bezzina, Karen Vincenti, Kenneth Grech, Iwona Kowalska-  
2783 Bobko, Christoph Sowada, Maciej Furman, Małgorzata Gałązka-Sobotka and Claudia B. Maier. How  
2784 are countries supporting their health workers during covid-19?: EuroHealthNet, 2020.
- 2785 130. Excellence NifHaC. Mentläh Wellbeing at Work: Public Health Guideline PH22. National  
2786 Institute for Health and Care Excellence; 2009.
- 2787 131. Fostering employees' wellbeing, health, and work participation: Toolkit for Workplaces: Joint  
2788 Action CHRODIS PLUS, 2020.
- 2789 132. De Brier N, Stroobants S, Vandekerckhove P, De Buck E. Factors affecting mental health of  
2790 health care workers during coronavirus disease outbreaks (SARS, MERS & COVID-19): A rapid  
2791 systematic review. *PLoS One* 2020; **15**(12): e0244052.
- 2792 133. Magill E, Siegel Z, Pike KM. The Mental Health of Frontline Health Care Providers During  
2793 Pandemics: A Rapid Review of the Literature. *Psychiatr Serv* 2020; **71**(12): 1260-9.
- 2794 134. Major A, Hlubocky FJ. Mental health of health care workers during the COVID-19 pandemic  
2795 and evidence-based frameworks for mitigation: A rapid review. *medRxiv* 2021: 2021.01.03.21249166.
- 2796 135. Australia LIM. Everymind. Every Doctor, Every Setting: A national framework to guide  
2797 coordinated action on the mental health of doctors and medical students, 2019.
- 2798 136. Verkuilen J, Bianchi R, Schonfeld IS, Laurent E. Burnout-Depression Overlap: Exploratory  
2799 Structural Equation Modeling Bifactor Analysis and Network Analysis. *Assessment* 2020:  
2800 1073191120911095.
- 2801 137. Bianchi R, Schonfeld IS, Laurent E. Is burnout a depressive disorder? A reexamination with  
2802 special focus on atypical depression. *International Journal of Stress Management* 2014; **21**(4): 307.
- 2803 138. Maslach C, Schaufeli WB, Leiter MP. Job Burnout. *Annual Review of Psychology* 2001; **52**(1):  
2804 397-422.
- 2805 139. Panagioti M, Panagopoulou E, Bower P, et al. Controlled Interventions to Reduce Burnout in  
2806 Physicians: A Systematic Review and Meta-analysis. *JAMA Intern Med* 2017; **177**(2): 195-205.
- 2807 140. Van Dierendonck D, Schaufeli WB, Buunk BP. The evaluation of an individual burnout  
2808 intervention program: The role of inequity and social support. *Journal of applied psychology* 1998;  
2809 **83**(3): 392.
- 2810 141. Medisaukaite A, Kamau C. Reducing burnout and anxiety among doctors: Randomized  
2811 controlled trial. *Psychiatry Res* 2019; **274**: 383-90.
- 2812 142. Grensman A, Acharya BD, Wändell P, et al. Effect of traditional yoga, mindfulness-based  
2813 cognitive therapy, and cognitive behavioral therapy, on health related quality of life: a randomized  
2814 controlled trial on patients on sick leave because of burnout. *BMC Complement Altern Med* 2018;  
2815 **18**(1): 80-.
- 2816 143. Ruotsalainen JH, Verbeek JH, Mariné A, Serra C. Preventing occupational stress in healthcare  
2817 workers. *Cochrane Database Syst Rev* 2015; **2015**(4): CD002892-CD.
- 2818 144. Fessell D, Cherniss C. Coronavirus Disease 2019 (COVID-19) and Beyond: Micropractices for  
2819 Burnout Prevention and Emotional Wellness. *J Am Coll Radiol* 2020; **17**(6): 746-8.

- 2820 145. Dewey C, Hingle S, Goelz E, Linzer M. Supporting Clinicians During the COVID-19 Pandemic.  
2821 *Ann Intern Med* 2020; **172**(11): 752-3.
- 2822 146. Iversen C, A., Fear T, N., Ehlers A, et al. Risk factors for post-traumatic stress disorder among  
2823 UK Armed Forces personnel. *Psychological Medicine* 2008; **38**(4): 511-22.
- 2824 147. Einav S, Hick JL, Hanfling D, et al. Surge capacity logistics: care of the critically ill and injured  
2825 during pandemics and disasters: CHEST consensus statement. *Chest* 2014; **146**(4 Suppl): e17S-43S.
- 2826 148. Excellence NIOHaC. Post-traumatic stress disorder [NG116]. 2018.
- 2827 149. Brooks SK, Rubin GJ, Greenberg N. Traumatic stress within disaster-exposed occupations:  
2828 overview of the literature and suggestions for the management of traumatic stress in the workplace.  
2829 *Br Med Bull* 2019; **129**(1): 25-34.
- 2830 150. Kings Fund. Schwartz Center Rounds
- 2831 151. The Schwartz Centre. Schwartz Rounds/The Schwartz  
2832 Center. . 2019.
- 2833 152. Soklaridis S, Lin E, Lalani Y, Rodak T, Sockalingam S. Mental health interventions and supports  
2834 during COVID- 19 and other medical pandemics: A rapid systematic review of the evidence. *General  
2835 Hospital Psychiatry* 2020; **66**: 133-46.
- 2836 153. Hsieh KY, Kao WT, Li DJ, et al. Mental health in biological disasters: From SARS to COVID-19.  
2837 *Int J Soc Psychiatry* 2020; **0**(0): 20764020944200.
- 2838 154. Billings J, Greene T, Kember T, et al. Supporting Hospital Staff During COVID-19: Early  
2839 Interventions. *Occupational Medicine* 2020; **70**(5): 327-9.
- 2840 155. Hanisch SE, Twomey CD, Szeto ACH, Birner UW, Nowak D, Sabariego C. The effectiveness of  
2841 interventions targeting the stigma of mental illness at the workplace: a systematic review. *BMC  
2842 Psychiatry* 2016; **16**(1): 1.
- 2843 156. LaMontagne AD, Martin A, Page KM, et al. Workplace mental health: developing an  
2844 integrated intervention approach. *BMC Psychiatry* 2014; **14**(1): 131.
- 2845 157. Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges  
2846 faced by healthcare workers during covid-19 pandemic. *BMJ* 2020; **368**: m1211.
- 2847 158. Holmes EA, O'Connor RC, Perry VH, et al. Multidisciplinary research priorities for the COVID-  
2848 19 pandemic: a call for action for mental health science. *The Lancet Psychiatry* 2020; **7**(6): 547-60.
- 2849 159. Ivbijaro G, Brooks C, Kolkiewicz L, Sunkel C, Long A. Psychological impact and psychosocial  
2850 consequences of the COVID 19 pandemic Resilience, mental well-being, and the coronavirus  
2851 pandemic. *Indian J Psychiatry* 2020; **62**(Suppl 3): S395-S403.
- 2852 160. De Angelis M, Giusino D, Nielsen K, et al. H-WORK Project: Multilevel Interventions to  
2853 Promote Mental Health in SMEs and Public Workplaces. *International Journal of Environmental  
2854 Research and Public Health* 2020; **17**(21): 8035.
- 2855 161. Nielsen K, Nielsen MB, Ogbonnaya C, Känslä M, Saari E, Isaksson K. Workplace resources to  
2856 improve both employee well-being and performance: A systematic review and meta-analysis. *Work  
2857 & Stress* 2017; **31**(2): 101-20.
- 2858 162. Nielsen K, Yarker J, Munir F, Bültmann U. IGLOO: An integrated framework for sustainable  
2859 return to work in workers with common mental disorders. *Work & Stress* 2018; **32**(4): 400-17.
- 2860 163. Commission E. Criteria to select best practices in health promotion and disease prevention  
2861 and management in Europe - Updated version.
- 2862 164. Knapp M. Hidden costs of mental illness. *British Journal of Psychiatry* 2003; **183**(6): 477-8.
- 2863 165. Mcdaid D, Park A-L, Wahlbeck K. The Economic Case for the Prevention of Mental Illness.  
2864 *Annual Review of Public Health* 2019; **40**(1): 373-89.
- 2865 166. Fraser MW, Galinsky MJ. Steps in intervention research: Designing and developing social  
2866 programs. *Research on social work practice* 2010; **20**(5): 459-66.
- 2867 167. insight Mso. Economic analysis of workplace mental health promotion and mental disorder  
2868 prevention programmes and of their potential contribution to EU health, social and economic policy  
2869 objectives European Union, 2013.



- 2870 168. Work EAfSaHa. Calculating the cost of work-related stress and psychosocial risks: European  
2871 Risk Observatory, 2014.
- 2872 169. Work E-OEAfSaHa. Research on work-related stress. Luxembourg: Office for Official  
2873 Publications of the European Communities, 2000.
- 2874 170. Boormans S. NHS health and wellbeing review: interim report. Leeds, United Kingdom:  
2875 Department of Health, 2009.
- 2876 171. Han S, Shanafelt TD, Sinsky CA, et al. Estimating the Attributable Cost of Physician Burnout in  
2877 the United States. *Ann Intern Med* 2019; **170**(11): 784-90.
- 2878 172. Hamidi MS, Bohman B, Sandborg C, et al. Estimating institutional physician turnover  
2879 attributable to self-reported burnout and associated financial burden: a case study. *BMC Health Serv  
2880 Res* 2018; **18**(1): 851.
- 2881 173. Dewa CS, Loong D, Bonato S, Thanh NX, Jacobs P. How does burnout affect physician  
2882 productivity? A systematic literature review. *BMC Health Serv Res* 2014; **14**: 325.
- 2883 174. Insights D. The ROI in workplace mental health programs: Good for people, good for  
2884 business.
- 2885 175. Boyd R. HA, Ortiz R. An economic analysis of workplace interventions that promote mental  
2886 wellbeing in the workplace: Institute of Occupational Medicine, 2006.
- 2887 176. C. K. A guide for managers. Taking the stress out of stress. Essen: BKK Bundersverband, 2013.
- 2888 177. Hogan N, Knapp M, McDaid D, Davies M, Brewin CR. Cost effectiveness of interventions for  
2889 Post-Traumatic Stress Disorders following major incidents including terrorism and pandemics.  
2890 *medRxiv* 2020: 2020.06.26.20141051.
- 2891 178. Bauer MS, Damschroder L, Hagedorn H, Smith J, Kilbourne AM. An introduction to  
2892 implementation science for the non-specialist. *BMC Psychology* 2015; **3**(1).
- 2893 179. Hooley C, Amano T, Markovitz L, Yaeger L, Proctor E. Assessing Implementation Strategy  
2894 Reporting in the Mental Health Literature: A Narrative Review. *Adm Policy Ment Health* 2020; **47**(1):  
2895 19-35.
- 2896 180. Nilsen P. Making sense of implementation theories, models and frameworks. *Implementation  
2897 Science* 2015; **10**(1).
- 2898 181. Rogers L, De Brún A, Mcauliffe E. Defining and assessing context in healthcare  
2899 implementation studies: a systematic review. *BMC Health Services Research* 2020; **20**(1).
- 2900 182. Gifford WA, Squires JE, Angus DE, et al. Managerial leadership for research use in nursing and  
2901 allied health care professions: a systematic review. *Implementation Science* 2018; **13**(1).
- 2902 183. Piña IL, Cohen PD, Larson DB, et al. A framework for describing health care delivery  
2903 organizations and systems. *Am J Public Health* 2015; **105**(4): 670-9.
- 2904 184. Wynne R DBV, Vandenbroek K, Leka S, Jain A, Houtman I, McDaid D, Park A. . Promoting  
2905 mental health in the workplace. Guidance to implementing a comprehensive approach: European  
2906 Commission, 2014.
- 2907 185. Institute BS. Guidance on the Management of Psychosocial Risks at the Workplace (United  
2908 Kingdom), 2011.
- 2909 186. Promoting inclusiveness and work ability for people with chronic health conditions: A  
2910 training tool for managers: CHRODIS+, 2020.
- 2911 187. Tuomi K. IJ, Jankola A., Katajarinne L., Tulkki A. Work Ability Index: Finnish Institute of  
2912 Occupational Health, 1998.
- 2913 188. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering  
2914 implementation of health services research findings into practice: a consolidated framework for  
2915 advancing implementation science. *Implementation Science* 2009; **4**(1): 50.
- 2916 189. Implementation science research development (ImpRes) tool: University of North Carolina at  
2917 Chapel Hill, 2018.
- 2918 190. Work EAfSaHa. Interpretative Document of the Implementation of Council Directive  
2919 89/391/EEC in relation to Mental Health in the Workplace. 2017.  
2920 [https://osha.europa.eu/en/legislation/guidelines/interpretative-document-implementation-council-](https://osha.europa.eu/en/legislation/guidelines/interpretative-document-implementation-council-directive-89391eec-relation)  
2921 [directive-89391eec-relation](https://osha.europa.eu/en/legislation/guidelines/interpretative-document-implementation-council-directive-89391eec-relation) (accessed May 31 2021).

2922 191. Work EAfSaHa. Psychosocial risks and stress at work. 2021.  
2923 <https://osha.europa.eu/en/themes/psychosocial-risks-and-stress> (accessed May 31 2021).

2924

DRAFT

2925 ANNEX TABLE OF RELEVANT BEST PRACTICES FROM THE EU BEST PRACTICE PORTAL

#	Origin	Geographical area	Country	Title (EN)	Target group	Type of practice	Health area/topic	Year of selection	Website	File	Recommendations for future adopters of this practice	Outcomes	Strength of evidence reported
1	MHCompass	National	DK	Fighting Stigma at Work: ONE OF US - the national campaign for antistigma in Denmark	Persons with physical, mental and learning disabilities or poor mental health	Information/Awareness Raising Campaign	Mental health in the workplace	2017	www.en-af-os.dk; www.one-of-us.nu	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=201	<ul style="list-style-type: none"> <li>Realistic preparation</li> <li>Clarification of expectations</li> <li>Recruitment and training of ambassadors</li> <li>PR-agency</li> <li>Materials and tool kits</li> </ul>	Fighting Stigma at Work: One of Us has been evaluated or assessed. Evidence shows that programme ambassadors experience a significant improvement in personal recovery and empowerment.	**
2	MHCompass	National	FI	The Well-being Guild of Entrepreneurs	education staff healthy adults Persons with physical, mental and learning disabilities or poor mental health;	Action Programme Tool/Instrument/Guideline Training	Mental health in the workplace Other Prevention of depression and promotion of resilience Suicide prevention	2016	NA	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=107		Over 600 entrepreneurs have taken part. Two thirds were women and over 90% recommend activities to their colleagues. Program has helped entrepreneurs understand their own coping and identify risks related to mental well-being.	-
3	SCIROCCO	-	UK	cCBT in Scotland	Persons with physical, mental and learning disabilities or poor mental health	E-health & mHealth	Provision of more accessible health services	2017	NA	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=55	<ul style="list-style-type: none"> <li>Set-up local clinical governance and management structures</li> <li>Train local staff</li> <li>Adapt service model to local needs</li> <li>Engagement with referrer groups and market services within local areas</li> </ul>	Still in development and currently available in 6 of its 14 Health Boards covering 44% of the population. At this point, the program provides access to evidence based psychological treatment to over 7,100 patients per year at a cost that would be equal to employing approximate 4 clinical psychologists with a maximum potential caseload of 400 patients per year.	*
4	MHCompass	National	CZ	Mindset: Destigmatization workshop for nursing high schools	youth-adolescents	Information/Awareness Raising Campaign	Mental health in schools	2017	http://www.mujminds.et.cz	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=203	<ul style="list-style-type: none"> <li>Address the most stigmatizing attitudes</li> <li>Be aware of the context of the system of psychiatric care</li> </ul>	Evaluation of the practice showed that the practice positively impacted attitudes about people with mental illness.	*
5	MHCompass	European	NL	Mental Health First Aid (MHFA)	families general population health professionals Persons with physical, mental and learning disabilities or poor mental health;	Health care service delivery Tool/Instrument/Guideline Training	Mental health in schools Mental health in the workplace	2018	https://www.mhfa.nl	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=129	<ul style="list-style-type: none"> <li>Ensuring funding to start, adopt, and adapt</li> <li>Collaborate with a substantive expert (where MHFA Australia may be useful)</li> <li>Identify an ambassador to get the message across</li> </ul>	First aid course designed to improve mental health literacy in the general population and provide skills to act appropriately and help people with mental health issues, whether in a crisis or with on-going problems. Content based on guidelines generated by panels of clinicians, mental health consumers and their families.	-
6	MHCompass	National	BE	Mental health care delivery system reform in Belgium	families Persons with physical, mental and learning disabilities or poor mental health; policy makers policy makers	Health care service delivery Training	Integrated approaches for mental health governance Mental health in the workplace Provision of community-	2018	http://www.psy107.be	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=123	<ul style="list-style-type: none"> <li>Include all relevant authorities, all stakeholders, professionals, users, and relatives in a bottom-up movement</li> </ul>	Belgian mental healthcare has undergone profound changes in an ongoing transformation process towards a community-based mental health care, which will be broaden and deepened	-

## Supporting the mental health of health workforce and other essential workers

							based health services Provision of more accessible health services					• Have a strategic plan	in the coming years. Interorganisational networks and a recovery-oriented practice can be considered key aspects.	
7	MHCompass	Regional	IT	Joint Experiences and Local Mental Health Systems, third edition 2014-2017	general population health professionals Persons with physical, mental and learning disabilities or poor mental health; policy makers	Action Programme Research project/programme	Integrated approaches for mental health governance Provision of community-based health services	2016	NA	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=112">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=112</a>	-		Concrete results (outputs and outcomes) include the direct involvement of user and carer organizations in the field of action research and the development of local knowledge beyond the biomedical knowledge.	*
8	CHRODIS	Regional	IT	Workplace Health Promotion - Lombardy WHP Network	healthy adults	Workplace intervention	Health promotion	2017	NA	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=17">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=17</a>	-		One year impact in Bergamo province was evaluated (Med Lav 2015; 106, 3: 159-171) with a 103% increase in companies participating and 132% increase in employees participating.	-
9	MHCompass	European	DE	European Alliance Against Depression	health professionals	Intervention	Prevention of depression and promotion of resilience	2017	<a href="http://www.eaad.net/">http://www.eaad.net/</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=200">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=200</a>	• Address financial restrictions		The community-based intervention programme was effective in reducing suicides and in improving the care of depressed patients	****
10	Vulnerable	National	PT	Healthy Employment (mental health)	In-work poor	Action Programme	Provision of more accessible health services	2016	<a href="http://empregosaudavel.org/pt/">http://empregosaudavel.org/pt/</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=62">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=62</a>	• Hold workshops in accessible centres with good public transport • Keep workshop size small • Engage strategic politicians, policy makers and managers early on • Raise awareness among senior managers around the cost benefits		Program has great potential to impact positively on the mental wellbeing of professionals. The project most effectively engaged professionals working directly with unemployed individuals, although professionals at different working levels were approached. Stakeholders stated that the HE Project improved the capacity of professionals to confidently recognise emotional or mental health distress in both themselves or others.	-
11	MHCompass	Regional	ES	Regional Mental Health Plan of Andalusia	children (school age) Persons with physical, mental and learning disabilities or poor mental health; women youth-adolescents	Action Programme Health care service delivery Health in All Policies Policy	Integrated approaches for mental health governance Mental health in schools Provision of community-based health services Provision of more accessible health services	2016	<a href="http://www.juntadeandalucia.es/servicioandaluzdesalud/saludmental">http://www.juntadeandalucia.es/servicioandaluzdesalud/saludmental</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=119">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=119</a>	-		not applicable	-
12	MHCompass	National	FI	Mental Health First Aid in Finland	general population health professionals Persons with physical, mental and learning disabilities or poor mental health; youth-adolescents	E- health & mHealth	Mental health in schools Mental health in the workplace Prevention of depression and promotion of resilience Suicide prevention	2016	<a href="https://www.mielenterveysseura.fi/en">https://www.mielenterveysseura.fi/en</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=103">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=103</a>	-		350 instructors educated who train citizens in groups of eight to twenty people. Several videos, e-materials, and 3 books in both Finnish and Swedish were produced	-
13	MHCompass	European	DE	GET.ON - Online Health Trainings for improving mental health	general population Persons with physical, mental and learning disabilities	E- health & mHealth Tool/Instrument/Guid	Mental health in the workplace Prevention of	2018	<a href="https://geton-institut.de">https://geton-institut.de</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=103">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=103</a>	• Careful effectiveness evaluation is needed		The best-evaluated stress management training world-wide and the only one in Germany. First	*****

## Supporting the mental health of health workforce and other essential workers

					or poor mental health; policy makers	eline Training	depression and promotion of resilience Provision of community-based health services Provision of more accessible health services			m?fileid=124	Establish collaborations with stakeholders, such as health insurance companies early on	online training worldwide for which the prevention of depression has been confirmed in a randomised controlled trial. The cost-benefit analyses of GET.ON Stress and GET.ON Mood Enhancer indicated high net-savings on average per participant.	
14	MHCompass	Local	DK	Recovery: a person-centered approach in health and social services	health professionals Persons with physical, mental and learning disabilities or poor mental health;	Health care service delivery	Provision of community-based health services Provision of more accessible health services	2016	http://www.aarhus.dk/sitecore/content/Subsites/recovery.dk/Home	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=102	<ul style="list-style-type: none"> <li>Attempt to improve knowledge of mental health problems</li> <li>Attempt to change perceptions by making mental health a political priority</li> </ul>	Redesigning services to focus on recovery has produced positive results in Aarhus relating to the improvement of users' quality of life and satisfaction with services. Following this evaluation, recovery was embedded more widely across the directorate of social services.	*
15	MHCompass	European	DE	iFightDepression	Persons with physical, mental and learning disabilities or poor mental health;	E-health & mHealth	Prevention of depression and promotion of resilience	2017	https://ifightdepression.com/en/	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=202	<ul style="list-style-type: none"> <li>Incorporate e-mental health and self-management, as well as program, into educational initiatives</li> <li>Encourage policy makers to establish a legal framework for use of the tool</li> </ul>	The evaluation of the acceptability of the tool and the feasibility of its use demonstrated the multifaceted and complementary value as an additional resource for depression treatment.	
16	MHCompass	Regional	ES	Education: a key tool for recovery and fight against stigma	children (school age) education staff Persons with physical, mental and learning disabilities or poor mental health; youth-adolescents	Action Programme Research project/programme Training	Mental health in schools Other Prevention of depression and promotion of resilience Suicide prevention	2016	https://megan.z/#/vd4FkLZYlvj5VwwoMvNAYC DG6p7KZLM31tpvCpVgVvGMC5it	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=117	<ul style="list-style-type: none"> <li>Obtain financial resources</li> </ul>	An increasing number of experts by experience can be seen in Spain, some of which become teachers. Other results are a reduction in crisis situations and hospitalizations.	***
17	MHCompass	National	UK	Psychologically Informed Environments	health professionals People with unstable housing situations (homeless); Persons with physical, mental and learning disabilities or poor mental health;	Action Programme Health care service delivery Tool/Instrument/ guideline Training	Other Prevention of depression and promotion of resilience	2016	http://www.psychologicallyinformedenvironments.uk	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=122	<ul style="list-style-type: none"> <li>Achieve high levels of management support and buy-in</li> </ul>	Results include a reduction in abandonments and evictions and an increase in positive move-ons from homelessness institutions. There is a reduction in incidents, including violence, self-harm and suicide, and emergency hospitalization. Finally, a reduction in re-hospitalization of people with severe and enduring mental illness has been shown.	****
18	MHCompass	National	FR	Technical Assistance to Relevant French Speaking Countries in Implementing their Mental Health Local Councils in Coordination with WHO	health professionals Persons with physical, mental and learning disabilities or poor mental health; policy makers	Health in All Policies Policy	Integrated approaches for mental health governance Provision of community-based health services Provision of more accessible health services Suicide prevention	2016	http://www.comssantementalelillefrance.org/?q=technical-assistance	https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=109	-	The main activities include organizing consistent levels of support and integration of care, enabling the understanding of mental disorders, and facilitating users' navigation of the system by organizing access to health care for all and fighting against stigma surrounding mental disorders. A concrete result of the program is the creation	-

## Supporting the mental health of health workforce and other essential workers

19	MHCompass	Local	IT	Reflections of Health	health professionals Persons with physical, mental and learning disabilities or poor mental health; women	Action Programme Research project/programme	Prevention of depression and promotion of resilience	2016	<a href="http://www.saluteallie.it">http://www.saluteallie.it</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=114">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=114</a>	<ul style="list-style-type: none"> <li>• Help to get it considered as an integral part of patients' treatment</li> </ul>	of 200 local councils. The program helps to reduce anxiety and depressive signs and symptoms, and to improve self-esteem, self-image and quality of life. Women using the program reported positive evaluations, such as a reduction in isolation and the feeling of being "really taken care of".	**
20	MHCompass	European	EL	1st European Art Festival for Mental Health	general population Persons with physical, mental and learning disabilities or poor mental health;	Information /Awareness Raising Campaign	Prevention of depression and promotion of resilience Provision of community-based health services Provision of more accessible health services Suicide prevention	2018	<a href="http://www.nefeleproject.eu/nefele-festival/">http://www.nefeleproject.eu/nefele-festival/</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=125">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=125</a>	<ul style="list-style-type: none"> <li>• Map potential groups</li> <li>• Utilize media to communicate your message</li> <li>• Create partnerships</li> <li>• Develop a campaign plan</li> <li>• Join the NEFELE Network for support, advice, and tips..</li> <li>• Documenting your project is with photo and videos to help secure future funding</li> </ul>	A festival is an excellent form of combining art and mental health. Organising a European festival had much to offer in the fields of reinforcing existing initiatives, encouraging development, transferring expertise and good practices to reduce costs, widening the war against stigma, and contributing to the development of powerful and united European policies for connecting the fields of art and mental health.	-
21	MHCompass	National	FI	The Professionally Guided Peer Support Groups for Bereaved by Suicide	health professionals Persons with physical, mental and learning disabilities or poor mental health;	Health care service delivery Tool/Instrument/Guideline Training	Prevention of depression and promotion of resilience Suicide prevention	2016	<a href="http://www.milenterveysseura.fi/tukeaja-apua/vertaistukiryhm%C3%A4t">http://www.milenterveysseura.fi/tukeaja-apua/vertaistukiryhm%C3%A4t</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=106">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=106</a>	<ul style="list-style-type: none"> <li>• Have a plan if the demand for the support groups exceeds what has been anticipated</li> </ul>	During the last group session and at three-months follow-up, participants evaluated the content and functionality of the support group and the professional leaders with a mean Likert-scale score of more than 4 out of 5. Participants indicate that most positive changes during their process were due to peer support in the group.	*
22	MHCompass	National	SI	This is Me prevention programme	youth-adolescents	E- health & mHealth	Mental health in schools	2017	<a href="http://www.tosemjaz.net/">http://www.tosemjaz.net/</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=205">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=205</a>	<ul style="list-style-type: none"> <li>• Network with experts to establish web counselling network.</li> <li>• Plan the web portal and content</li> <li>• Establish an editorial board</li> </ul>	There has been a trend towards better classroom atmosphere and interpersonal relations.	*
23	MHCompass	Regional	IT	Individual Placement and Support in Italy	education staff health professionals Persons with physical, mental and learning disabilities or poor mental health;	Health care service delivery Research project/programme Training	Mental health in the workplace Provision of community-based health services	2018	<a href="https://ipsworks.org/index.php/what-is-ips/">https://ipsworks.org/index.php/what-is-ips/</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=126">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=126</a>	<ul style="list-style-type: none"> <li>• Plan enough time for advocacy and information activities.</li> </ul>	Currently 32 out of 41 clinical mental health counsellors in the Emilia-Romagna Region have started offering IPS to their users. 768 users received IPS and 468 of them reached competitive employment in 2016. About 50% of all clients were working at any point in time.	-
24	MHCompass	Regional	FI	Mobile Crisis Work: help at home in difficult life situations	health professionals healthy older adults (65+) older adults with one chronic disease Persons with physical, mental and	Health care service delivery Training	Other Prevention of depression and promotion of resilience Provision of more accessible	2016	NA	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=104">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=104</a>	<ul style="list-style-type: none"> <li>• Work in teams or in pairs instead of alone</li> <li>• People in different age groups might have different</li> </ul>	The activities of the pilot project include 1 to 5 aid visits to each client and group activities for older adults. In difficult life situations, the program has resulted in	*

## Supporting the mental health of health workforce and other essential workers

					learning disabilities or poor mental health;		health services Suicide prevention				needs	promoting the feeling of well-being and supporting peripartetic assistance work activities.	
25	SCIROCCO	-	SE	Care process schizophrenia and schizophrenia-like state	Persons with physical, mental and learning disabilities or poor mental health;	Intervention	Integrated approaches for mental health governance	2017	NA	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=38">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=38</a>	<ul style="list-style-type: none"> <li>All staff time to train healthcare neighbours</li> <li>Create joint educational efforts for patients and relatives.</li> </ul>	Collaboration with health care "neighbours", inpatient care, local authorities and primary care is getting better and the patient's needs are more in focus. Equal costs, improved outcomes. Evidence is based on qualitative success stories.	*
26	MHCompass	National	EL	Action Platform for the Rights in Mental Health	Persons with physical, mental and learning disabilities or poor mental health;	Action Programme	Integrated approaches for mental health governance	2017	<a href="http://psy-dikaio.mata.gr/en/wh-at-we-do-2/">http://psy-dikaio.mata.gr/en/wh-at-we-do-2/</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=198">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=198</a>	<ul style="list-style-type: none"> <li>Include the evaluation users of services and families; give them leadership roles.</li> <li>Be very active in lobbying efforts.</li> </ul>	Evidence from the case study evaluation shows that over half of those who used the services provided by the practice found them helpful.	*
27	RARHA	-	DE	Trampoline	children (school age) families	Action Programme Intervention	Prevention of depression and promotion of resilience	2016	<a href="http://www.projekt-trampolin.de">www.projekt-trampolin.de</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=218">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=218</a>	-	Both interventions showed significant effects over time from pre-to-post-to-follow-up. Substance-related avoidant coping, mental distress, cognitive capabilities, self-worth developed in the desired direction. Significant group differences were found in the areas of knowledge, mental distress, and social isolation. Intervention group participants showed significantly increased knowledge, significantly reduced mental distress and significant less social isolation compared to control group.	**
28	MHCompass	Regional	IT	Eating Disorders Centre, Mental Health Department Ferrara, University of Ferrara	families health professionals Persons with physical, mental and learning disabilities or poor mental health;	Action Programme Health in All Policies	Mental health in schools Mental health in the workplace Provision of community-based health services	2016	<a href="http://www.unife.it/it/area-ricerca/centro-di-studi-epidemiologici-e-diagnostici-sulle-dipendenze-dal-tabacco-e-dal-comportamento alimentare-dic">http://www.unife.it/it/area-ricerca/centro-di-studi-epidemiologici-e-diagnostici-sulle-dipendenze-dal-tabacco-e-dal-comportamento alimentare-dic</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=111">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=111</a>	-	Treatment of 100 outpatients per year and the treatment of 50 new cases per year	-
29	MHCompass	National	IE	The LGBTIreland Report: national study of the mental health and well-being of lesbian, gay, bisexual, transgender and intersex people in Ireland	general population healthy young adults Persons with physical, mental and learning disabilities or poor mental health; youth-adolescents	Research project/programme	Mental health in schools Other Suicide prevention	2016	<a href="http://www.glen.ie/at-tachments/The_LGBTIreland_Report.pdf">http://www.glen.ie/at-tachments/The_LGBTIreland_Report.pdf</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=110">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=110</a>	-	Concrete results can be found in up-to-date national data on LGBTI mental health, and rates and incidences of mental distress, mental disorder and self-harm/suicidality.	-
30	MHCompass	National	IT	Observatory of Perinatal Clinical Psychology	health professionals men Persons with physical, mental and learning disabilities or poor mental health; pregnant women	Action Programme Research project/programme Tool/Instrument/Guideline Training	Prevention of depression and promotion of resilience	2016	<a href="http://www.unife.it/dipa/risorse/serie-epidemiologiche-sperimentali/osservatorio-laboratori/osservatorio-psicologica-clinica-perinatale-professora-cora">http://www.unife.it/dipa/risorse/serie-epidemiologiche-sperimentali/osservatorio-laboratori/osservatorio-psicologica-clinica-perinatale-professora-cora</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=113">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=113</a>	-	not available	-

## Supporting the mental health of health workforce and other essential workers

31	MHCompass	Regional	UK	Lifeworks	health professionals multi-morbid adults People with unstable housing situations (homeless); Persons with physical, mental and learning disabilities or poor mental health;	Health care service delivery	Prevention of depression and promotion of resilience Provision of community-based health services Provision of more accessible health services Suicide prevention	2016	<a href="https://www.dropbox.com/s/9tkuoaim4t7my8/HCS142240.pdf?dl=0">https://www.dropbox.com/s/9tkuoaim4t7my8/HCS142240.pdf?dl=0</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=121">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=121</a>	<ul style="list-style-type: none"> <li>• Address management lack of understanding</li> <li>• Prevent actions by staff / management that undermined therapeutic relationships</li> </ul>	<ul style="list-style-type: none"> <li>• 70% engagement from rough sleepers and homeless people and &gt;75% attendance;</li> <li>• &gt;75% positive outcomes, as measured by the South London and Maudsley evidence-based Well-being Measure</li> <li>• An increase in social functioning across all measures of Outcomes Star (for example 44% of people were in training or work placement after six months, compared to 20% of those who were not in the service)</li> </ul>	**
32	MHCompass	National	UK	Individual Placement and Support for Employment	health professionals Long-term unemployed and inactive; Persons with physical, mental and learning disabilities or poor mental health;	Action Programme Health care service delivery Information /Awareness Raising Campaign Research project/programme	Mental health in the workplace Other Provision of community-based health services Provision of more accessible health services	2016	<a href="https://www.centreformentalhealth.org.uk/individual-placement-and-support">https://www.centreformentalhealth.org.uk/individual-placement-and-support</a>	<a href="https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=120">https://webgate.ec.europa.eu/dyna/bp-portal/getfile.cfm?fileid=120</a>	<ul style="list-style-type: none"> <li>• Avoid implementing the key principles selectively</li> <li>• Focus on the most challenging principles: integration of employment specialists into clinical teams and establishing relationships with employers</li> </ul>	More than twice the number of people joined paid employment than with any other methodology, as has been confirmed by numerous randomized control trials.	***

2926