

“Total Worker Health” strategy to tackle the COVID-19 pandemic and future challenges in the workplace

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One of the lessons learnt from the current COVID-19 pandemic is that workplaces are critical to the success of public health interventions [1, 2]. Accordingly, consideration should be given to this fact when developing new preparedness strategies aimed at tackling future biohazards with global catastrophic or pandemic impacts. Since the beginning of the COVID-19 pandemic, the World Health Organization (WHO) has called for employers to implement “public health and social measures in the workplace”. Such plans were executed through regular updates of the risk assessment plan for work-related exposure to SARS-CoV-2, preferably with the support of occupational health services [3].

Since the start of the COVID-19 emergency, Italy has implemented various decrees for the President of the Council of Ministers. Moreover, several government decree laws have been issued to protect workers and workpla-

ces through mandatory restrictive measures. These include social distancing, use of facial masks and personal protective equipment, hygiene measures, good practices at work and working from home or ‘mobile work’ (in Italy, ‘smart working’ or ‘lavoro agile’). Regrettably, the laws and circulars released by the Ministry of Health (MoH) overlapped and sometimes conflicted with national occupational health and safety laws (Legislative Decree Law 81/2008). Thus, they garnered some criticism in their application [4, 5].

In Italy, government-specified occupational health measures have the dual objective of protecting workers’ and third-party health and safety and tackling the spread of SARS-CoV-2 within the community. To mention a few, ‘contact tracing activity’ is conducted by Local Health Units’ personnel in partnership with the company’s occupational physician, if needed [6-8]. Thus, cooperation between oc-

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occupational and public health stakeholders is valuable and may be decisive in the effective management of this global emergency [9].

In 2019, the Italian Association of Psychology and Occupational Health was founded with the goal of promoting cooperation between psychologists and occupational health practitioners. It also aimed at preventing occupational disorders and promoting workers' health, which is defined by the Italian health and safety regulation as a "complete state of physical, mental and social well-being and not merely the absence of disease or infirmity," thereby concurring with the WHO's health definition [10].

Guidance tools for occupational physicians and, in particular, guidelines released by scientific societies represent an indispensable contribution to professional practice. Moreover, they may safely guide occupational physicians towards an increasingly appropriate practice [11, 12]. Occupational medicine, like other medical disciplines, must be founded on sound scientific knowledge that guarantees evidence and appropriateness, thus preventing ethical infringements and legal disputes [13–15]. The need is ever greater during this pandemic due to ever-changing legislation in response to the coronavirus pandemic [16].

Consequently, to address certain ethical challenges and to reduce the potential risks of emergency regulation misinterpretation by occupational stakeholders, AIPMeL released a position paper on "the role of occupational physician in Italy during and after the COVID-19 pandemic" [17]. AIPMeL also released another position paper on "the role of occupational risk assessment and health surveillance in healthcare workers with medical exemption from the COVID-19 vaccine, during pregnancy or affected by 'Long COVID' syndrome" [18] and a review article on "occupational risk assessment and health surveillance for mobile workers during and after the COVID-19 pandemic" [19]. All three publications were produced by *Giornale Italiano di Psicologia e Medicina del Lavoro* (GIPMEL), AIPMeL's scientific outlet.

For instance, compulsory vaccination against

COVID-19, as imposed by the Italian government, is already established for certain categories of workers, including healthcare workers, police officers, military personnel, first aid providers, teachers and other cadres of workers [17]. Furthermore, the vaccination campaign is managed by the MoH with the cooperation of Italian regions. AIPMeL proposes that occupational physicians charged by the companies as "medico competente" are directly responsible for assessing the fitness for work (FFW) of healthcare workers and personnel with medical exemption from the COVID-19 vaccine. Notably, an emergency is required to protect third parties from unvaccinated workers "even through a job change". Nonetheless, this task is the responsibility of occupational health services, which should continuously update the SARS-CoV-2 biohazard biological risk assessment plan [7, 19].

Furthermore, accommodation decisions made by employers should be based on evidence-based practice and should involve the correct use of scientific information in the decision-making process [11–13]. Moreover, it should also balance safety and risk to workers themselves, to other workers and to the public. FFW is the final task of both risk assessment and health surveillance and is required to protect workers' health and working capacity. Accordingly, during the COVID-19 pandemic, FFW in both HCWs exempt from vaccines and 'fragile' workers should be evidence-based and justified by a specific risk assessment evaluation of SARS-CoV-2 in that precise workplace and for those workers [17, 20].

The COVID-19 pandemic has upset our lives, undermining work, workers and organisations. It has led to dramatic changes in employment patterns, with millions of jobs lost, the erosion of many economic sectors and widespread disparities. All these changes could challenge current occupational safety and health (OSH) systems. Emergent changes in work practices (e.g., working from home, mobile work, virtual teamwork), social distancing, high stress levels and unemploy-

ment, as well as certain moderating factors (demographic characteristics, individual differences and organisational norms), require a paradigm shift towards a more transdisciplinary approach to OSH research [21] and a holistic strategy according to the 'One Health' perspective.

New forms of work organisation require new strategies for the management of new psychosocial and ergonomic issues [22]. These new strategies would also manage new emerging risk factors due to climate change (e.g., further 'zoonotic spillover', extreme weather and subsequent occupational heat illnesses) [23], which require preventive measures and collaboration between public and occupational stakeholders [24].

Occupational physicians are required to cooperate with primary care providers and public health stakeholders. Therefore, the workplace will increasingly need to implement the Total Worker Health™ approach [25]. An approach that integrates protection from work-related safety and health hazards with workplace health promotion programmes to advance worker well-being. Furthermore, its application is necessary in the workplace to increase psychological skills, physical and

mental resilience and resources for an ageing and distressed workforce [26, 27]. A primary requirement born of the COVID-19 pandemic is the implementation of disability management programmes. Such programmes are crucial to reintegrating workers affected by long COVID syndrome, an umbrella term that includes a wide range of disabling symptoms. This innovative approach will not only address the health problems raised by a new generation of office workers distressed by working from home and healthcare workers affected by burnout and post-traumatic stress symptoms, but it will also support a new generation of adolescents traumatised by the pandemic who enter the world of work for the first time [28–30].

The COVID-19 lessons will not be easily forgotten by occupational health and safety stakeholders. Therefore, it is reasonable to assume that policymakers must identify new interdisciplinary approaches and cooperation strategies between OSH practitioners and public health stakeholders.

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References

1. Kniffin KM, Narayanan J, Anseel F, Antonakis J, Ashford SP, Bakker AB, et al. COVID-19 and the workplace: Implications, issues, and insights for future research and action. *Am Psychol.* 2021 Jan;76(1):63–77. doi: 10.1037/amp0000716. Epub 2020 Aug 10.
2. Baker MG. Occupational Health Surveillance as a Tool for COVID-19 Prevention. *Am J Public Health.* 2021 Jun;111(6):999–1001. doi: 10.2105/AJPH.2021.306269.
3. WHO. Coronavirus disease (COVID-19): Health and safety in the workplace. 26 June 2020 [cited 2021 December 21]. Available from: www.who.int/news-room/questions-and-answers/item/coronavirus-disease-covid-19-health-and-safety-in-the-workplace.
4. Chirico F, Nucera G, Szarpak L. COVID-19 mortality in Italy: The first wave was more severe and deadly, but only in Lombardy region. *J Infect.* 2021 Jul;83(1):e16. doi: 10.1016/j.jinf.2021.05.006. Epub 2021 May 14.
5. Chirico F, Sacco A, Nucera G, Magnavita N. Coronavirus disease 2019: the second wave in Italy. *J Health Res.* 2021;35(4): 359–363. doi: 10.1108/JHR-10-2020-0514.
6. Chirico F, Szarpak L. The role of occupational risk assessment and health surveillance in SARS-CoV-2 Antigen Testing of “Unexposed Asymptomatic Workers in Selected Workplaces”. *J Occup Environ Med.* 2021. doi: 10.1097/JOM.0000000000002392.
7. Chirico F. The role of Health Surveillance for the SARS-CoV-2 Risk Assessment in the Schools. *J Occup Environ Med.* February 2021 (ahead-of-print). 2021;63(4):e255–e266. doi: 10.1097/JOM.0000000000002170.
8. Chirico F, Taino G. Se necesita una evaluación adecuada del riesgo de SARS-CoV-2 para la evaluación médico-legal de la infección por COVID-19 [A proper SARS-CoV-2 risk assessment is needed for medico-legal assessment of the COVID-19 infection]. *Spanish J Legal Med.* 2021;47(3):130–131. doi: <https://doi.org/10.1016/j.reml.2021.01.004>.
9. Chirico F, Nucera G, Szarpak L, Zaffina S. The cooperation between occupational and public health stakeholders has a decisive role in the battle against the COVID-19 pandemic. *Disaster Med Public Health Preparedness.* 2021;1–4. doi: 10.1017/dmp.2021.375.
10. Chirico F. The Italian Journal of Psychology and Occupational Health (GIMPEL): A new, interdisciplinary, open access journal for innovative cooperation between psychologists and occupational physicians. *G Ital Psicol Med Lav.* 2021;1(1):7–10.
11. Cristaudo A. Scientific evidence and guidelines in occupational medicine. *Med Lav.* 2020 Apr 30;111(2):87–98. doi: 10.23749/mdl.v111i2.9348.
12. Chirico F, Magnavita N. Burnout Syndrome and Meta-Analyses: Need for Evidence-Based Research in

Occupational Health. Comments on Prevalence of Burnout in Medical and Surgical Residents: A Meta-Analysis. *Int J Environ Res Public Health*. 2019;16. doi:10.3390/ijerph16091479. *Int J Environ Res Public Health*. 2020;17(3):741. Published 2020 Jan 23. doi:10.3390/ijerph17030741.

13. Chirico F, Teixeira da Silva JA, Magnavita N. “Questionable” peer review in the publishing pandemic during the time of COVID-19: implications for policy makers and stakeholders. *Croatian Med J*. 2020;61(3):300–301. doi: 10.3325/cmj.2020.61.300.
14. Chirico F, da Silva JAT. Effective and Ethical Communication of COVID-19 Health Policies and Strategies Require Transparent Open Data Sharing Between Scientists, Governments and Policy Makers. *Oman Med J*. 2021 Dec. doi: 10.5001/omj.2022.63.
15. Chirico F, Bragazzi NL. Declaration of conflict of interest for reviewers in time of COVID-19 should be mandatory. *Perspect Clin Res*. 2021;12:60–61.
16. Magnavita N, Chirico F, Sacco A. COVID-19: from hospitals to courts. *Lancet*. 2021;397(10284):1542. doi: 10.1016/s0140-6736(21)00472-4.
17. Chirico F, Sacco A, AIPMEL. La legge sulla vaccinazione obbligatoria anti COVID-19 in Italia: raccomandazioni dell’Associazione Italiana di Psicologia e Medicina del Lavoro (AIPMEL) sul ruolo della valutazione del rischio e della sorveglianza sanitaria nei lavoratori della sanità esenti dal vaccino per motivi di salute, in stato di gravidanza o affetti dalla Sindrome “post Covid-19” [The Italian law on mandatory COVID-19 vaccine: Recommendations from the Italian Association of Psychology and Occupational Health (AIPMEL) on the role of occupational risk assessment and health surveillance on healthcare workers with medical exemption from the COVID-19 vaccine, during pregnancy or affected by “Long COVID” syndrome]. *G Ital Psicol Med Lav*. 2021;1(2). Forthcoming. Italian.
18. Chirico F, Sacco A, Ferrari G, AIPMEL. Il ruolo del medico competente nel periodo pandemico e post-pandemico da COVID-19 in Italia: il Position paper dell’Associazione Italiana di Psicologia e Medicina del Lavoro (AIPMEL) [The role of occupational physician in Italy during and after the COVID-19 pandemic: A Position paper by the Italian Association of Psychology and Occupational Health (AIPMEL)]. *G Ital Psicol Med Lav*. 2021;1(2). Forthcoming. Italian.
19. Chirico F, Ferrari G, Sacco A, AIPMEL. Raccomandazioni dell’Associazione Italiana di Psicologia e Medicina del Lavoro (AIPMEL) per la valutazione del rischio e la sorveglianza sanitaria nei lavoratori in smart working (“lavoro agile”) durante e dopo la pandemia da SARS-CoV-2 [Recommendations on occupational risk assessment and health surveillance for mobile workers during and after the COVID-19 pandemic by the Italian Association of Psychology and Occupational Health (AIPMEL)]. *G Ital Psicol Med Lav*. 2021;1(2). Forthcoming. Italian.
20. Chirico F, Magnavita N. The Crucial Role of Occupational Health Surveillance for Healthcare Workers During the COVID-19 Pandemic. *Workplace Health Saf*. 2021;69(1):5–6. doi:10.1177/2165079920950161.
21. Felknor SA, Streit JMK, McDaniel M, Schulte PA, Chosewood LC, Delclos GL, On Behalf Of The Workshop Presenters And Participants. How Will the Future of Work Shape OSH Research and Practice? A Workshop Summary. *Int J Environ Res Public Health*. 2021 May 26;18(11):5696. doi: 10.3390/ijerph18115696.
22. Magnavita N, Chirico F. New and emerging risk factors in Occupational Health. *Appl Sci*. 2020;10(4):8906. doi: 10.3390/app10248906.
23. Chirico F, Magnavita N. The significant role of health surveillance in the occupational heat stress assessment. *Int J Biometeorol*. 2019;63(2):193–194. <https://doi.org/10.1007/s00484-018-1651>.
24. Chirico F, Zaffina S, Ferrari G. Call for scholarly networking between occupational and public health stakeholders to address the COVID-19 pandemic and new global health challenges in the post-COVID-19 era: The case of scientific collaboration between SIPISS, AIPMEL and the Summer School on Total Worker Health. *J Health Soc Sci*. 2021;6(3):309–312. doi: 10.19204/2021/cllf1.
25. Schill AL. Advancing Well-Being Through Total Worker Health®. *Workplace Health Saf*. 2017 Apr;65(4):158–163. doi: 10.1177/2165079917701140.

26. Chirico F, Magnavita N. The Spiritual Dimension of Health for More Spirituality at Workplace. *Indian J Occup Environ Med.* 2019;23(2):99. doi:10.4103/ijoem.IJOEM_209_18
27. Chirico F, Ferrari G. Role of the workplace in implementing mental health interventions for high-risk groups among the working age population after the COVID-19 pandemic. *J Health Soc Sci.* 2021;6(2):145–150. doi: 10.19204/2021/rlft1.
28. Chirico F, Zaffina S, Di Prinzio RR, Giorgi G, Ferrari G, Capitanelli I et al. Working from home in the context of COVID-19: A systematic review of physical and mental health effects of teleworkers. *J Health Soc Sci.* 2021;6(3):319–332. doi: 10.19204/2021/wrkn8.
29. Magnavita N, Chirico F, Garbarino S, Bragazzi NL, Santacroce E, Zaffina S. SARS/MERS/SARS-CoV-2 Outbreaks and Burnout Syndrome among Healthcare Workers. An umbrella Systematic Review. *Int J Environ Res Public Health.* 2021;18(8):4361. doi: 10.3390/ijerph18084361.
30. Chirico F, Nucera G. An Italian Experience of Spirituality from the Coronavirus Pandemic. *J Relig Health.* 2020 Oct;59(5):2193–2195. <https://doi.org/10.1007/s10943-020-01036-1>.