

## Combatting the shortage of physicians to alleviate work-related strain

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More and more often, physicians and healthcare workers worldwide are experiencing depression, burnout syndrome, and alcohol and substance abuse, as well as a higher risk of suicide than the general population [1-4]. All these mental health outcomes have a negative impact on work performance and lead to poor patient care, which the National Institute for Occupational Safety and Health (NIOSH) has quantified in terms of a 'mismatch between the assistance required by the patient and that available from the care worker' [5]. Research has suggested that burnout syndrome can erode professionalism, increase the risk of medical errors and malpractice litigation, and promote early retirement [6]. In healthcare sector, psychosocial risks associated with mental health disorders include shift work and work-life imbalance; violence and threat of violence; bullying and harassment; emotional demands;

professional responsibilities; and increasingly heavy workload and time pressure [7]. Among the available models for predicting work-related strain and burnout, the job strain model developed by Karasek is probably the most important; according to Karasek's model, high demands on workers are the psychosocial risk factor that scientific research has most importantly associated with all types of mental strain [8]. A Japanese study stated that causes of physicians' unhappiness include budget constraints, the shortage of physicians, excessive demands, inefficient physician distribution, long working hours, hostile media, increasing numbers of lawsuits, and violence by patients [9]. However, the most common reason for overwork in a healthcare setting—which in Japan was recently associated with a new syndrome called 'karoshi' (death from overwork)—is probably the shortage of staff both in hospital and in home care. In the Eu-

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European Union, national experts have included the lack of qualified nurses and physicians—‘the most common reason for high workloads’—among the new and emerging psychosocial risks to healthcare professionals [7]. The World Health Organization (WHO) estimates that there is a global shortage of 4.3 million physicians, nurses, and other health professionals. In developing nations, due to the limited number and capacity of medical schools, the number of health professionals is insufficient to deliver essential health interventions, such as skilled attendance at births and immunization programmes [10]. However, both developed and developing countries are facing complicated challenges caused by the imbalance between rapidly increasing demand and supply for healthcare [11]. Indeed, the shortage of physicians is a problem in many developed nations, where it is likely related to a scenario of socioeconomic crisis; more specifically, economic expansion, as reflected by a country’s gross domestic product (GDP), may have a strong relationship to an increase in physician supply [12]. Nowadays, the falling supply of healthcare workers is insufficient to address the growth and ageing of the patient population in developed countries, which in combination negatively impact the efficiency and sustainability of healthcare systems [7]. In addition, an excess of bureaucratic responsibility, the ageing of the workforce, and a negative social image conveyed by media coverage of allegations of medical malpractice are all adding to the burden weighing on physicians’ psychological well-being. This is a likely driver of a social phenomenon consisting in loss of career motivation, leading to a crisis for the medical vocation. In Italy, the 2011–2013 National Health Plan predicted a lack of 22,000 physicians in 2018, based on a continuous decrease in medical university applications, and it was anticipated that the total number of general practitioners could be halved within 10 years [11]. Furthermore, the Italian healthcare system is threatened by public budget constraints caused by the financial crisis, and Italy runs the risk of slowly exporting its better health pro-

professionals [13, 14]. In the United States, a new study commissioned by the Association of American Medical Colleges estimated a shortage of between 40,800 and 104,900 physicians by 2030 [15]. As a further complication, the healthcare workforce in developed countries is getting older and consequently suffering from more severe injuries and work-related illnesses than younger workers. Moreover, the lack of new, experienced, and qualified personnel is causing concern due to the greater burden of work for those who remain employed [7]. Recruiting personnel from less developed countries has been viewed as a solution [7], as healthcare worker migration has been increasing worldwide over recent decades [16]. However, migration introduces many cultural and linguistic differences, which can contribute to miscommunication, especially between healthcare workers and patients. Innovations in the healthcare sector, such as new medications or types of surgery and new communication technology, are additional major challenges for healthcare systems and require more investment into education and training [7]. Possible consequences of the physician shortage are a low quality of care due to stricter time constraints on doctor-patient interactions and an increased workload for healthcare practitioners, which can lead to more overwork and stress. Stressed healthcare workers are more likely to be involved in legal disputes that will in turn nourish the ‘burnout’ phenomenon—and, in a vicious cycle, physicians affected by burnout syndrome will be more prone to treat their patients as objects, having less empathy for them and feeling a lower sense of accomplishment. Since ancient times, trust, confidentiality, and communication have provided the foundation of the physician-patient relationship [17]. Effective doctor-patient communication is pivotal in building a good therapeutic relationship, which is the heart and art of medicine, but unfortunately, doctors affected by mental illness risk breaking this pact [18]. Having healthcare workers affected by mental illness can be considered a dangerous and specific psychosocial risk for the health and

safety of third parties—patients included—in the workplace. According to the WHO, healthcare workers are therefore ‘the most valuable resource for health’. Unfortunately, in the European Union, globalization and the economic crisis have resulted in cost-saving actions by governments and greater pressure on companies, as demand for care is still growing. As a consequence, many hospitals have closed down and healthcare staffs are shrinking, and increasing job insecurity is an emerging psychosocial risk factor in the healthcare sector [19, 20]. Additional effects of this precarious work environment are a heavier workload and greater time pressure on those healthcare workers who remain employed. In response to this issue, in 2003, the European Parliament declared the European Work Time Directive to establish a maximum workweek of 48 h for all occupations across the European Union, restricting excessive night work and imposing rest periods. However, many European countries circumvented this Directive by recourse to an ‘opt-out’ option [21]. Indeed, in fields such as healthcare, it is very difficult to adhere to scheduled times because of the delicate tasks

carried out by physicians and healthcare workers, who, furthermore, are fewer than before. For all these reasons, the shortage of healthcare workers should be considered as the most important new and emerging psychosocial risk to the health and safety of professionals in the healthcare field. Confronting this phenomenon is imperative to alleviate healthcare professionals’ work-related strain and, at the same time, to increase their mental well-being and improve both the patient-doctor relationship and all the outcomes of a good work organization. Achieving this will require a multi-pronged approach, including innovation in delivery of care, greater use of technology, and improved and efficient use of all health professionals on the care team. There is no single solution to resolve this issue [22], but economic investments are surely needed to address this emerging psychosocial risk factor, which is a great challenge for politicians and policy makers around the world.

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