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## Physician burnout: Can we prevent or reduce it?

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West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. (Division of General Internal Medicine and Division of Biomedical Statistics and Informatics, Division of Primary Care Internal Medicine, Medical Library, and Division of Hematology, Mayo Clinic, Rochester, Minnesota, USA.) Interventions to prevent and reduce physician burnout: A systematic review and meta-analysis. *Lancet* 2016;**388**:2272–81.

### SUMMARY

This is a systematic review of interventions to reduce physician burnout (defined by the authors as ‘a work-related syndrome involving emotional exhaustion, depersonalization and a sense of reduced personal accomplishment’). From a systematic search of multiple databases (MEDLINE, Embase, PsycINFO, Scopus, Web of Science and Education Resources Information Centre [ERIC]) and cross-references, the authors identified 15 randomized controlled trials (RCTs) involving 716 subjects and 37 cohort studies involving 2914 subjects, which assessed the efficacy of interventions to prevent or reduce burnout among residents and practising physicians. Only those studies were included which collected comparative data at an individual level using standardized instruments. Meta-analysis was conducted to estimate the effect of intervention on the overall burnout score, emotional exhaustion and depersonalization. Interventions at the individual level or those that modified structural elements of the practice were analysed separately.

Structural interventions included shortened rotation lengths or shift lengths (3 RCTs; 17 cohort studies), while other interventions included educational, stress-management, self-care, communication skills training, ‘belongingness intervention’ or mindfulness-based approaches (12 RCTs; 20 cohort studies), which aimed at improving individual’s emotional states directly. Studies included residents or practising physicians, either in a single medical or surgical discipline, or in a mixed population. Apart from immediate post-intervention effectiveness, some studies also reported outcomes over a period varying between 19 weeks and 4 years (although these were not included in qualitative or quantitative analysis).

On meta-analysis, significant reductions were seen in the overall burnout score (54% to 44%; 5 RCTs and 9 cohort studies), emotional exhaustion (12 RCTs, 28 cohort studies) and depersonalization scores. For overall burnout scores and emotional exhaustion scores, structural institutional changes (including duty hour restrictions) were more effective than individual-level interventions. The specific

individual-level interventions that were studied (mindfulness-based approaches, stress-management and small group discussions) were effective, and the authors suggest that these might be considered for implementation. The potential benefits of such an intervention, as reported by the authors, could be a reduction in burnout levels of >30% at a national level for the USA.

### COMMENT

Workplace stress and its effects on the mental well-being and work performance of medical personnel have been discussed extensively.<sup>1–3</sup> In the current report, this issue is approached through a meta-analysis, comparing a variety of interventions that have been studied in the western world, for physicians from diverse backgrounds. The major finding of this report is that a number of interventions are effective, with a slight edge to those that aim to alter the working environment. The authors suggest that interventions could provide a 30% to 40% change in the current levels of burnout.

This finding is intuitively appealing. There is a huge variance in burnout rates of between 20% and 75% in studies from across the world. Such variability is unlikely to be explained fully by personal or interpersonal factors. Even in India, studies among private practitioners have shown much lower rates than those in the West,<sup>4</sup> whereas those conducted among interns and trainees at teaching hospitals showed rates that were equivalent.<sup>5–7</sup> Previous studies have suggested workplace factors as reasons for burnout, such as being unable to balance aspirations and workplace realities, the organization of care, working hour norms, responsibilities, fear of litigation, the nature of hierarchies and work culture.<sup>8</sup>

Considering these findings together, it appears that there is no single cause or mechanism for burnout. The best interventions are probably those that consider specific factors in a particular setting and population, and are based on a theory that connects individual, interpersonal and organizational factors. A failure to do so would lead to interventions that do not fit well with the existing organizational framework. As an example, reductions in rotation lengths or shift lengths may have unpredictable effects on the quality of care and the quality of training (in fact, some of the studies included in this review have referred to failure to achieve pre-defined competencies as an adverse effect of burnout intervention). Such effects would require consideration before more widespread implementation of workplace alteration programmes.

However, there can be little argument that interventions to tackle burnout must be actively considered. As discussed by

Epstein and Privitera in their accompanying commentary (in the same issue of the *Lancet*),<sup>9</sup> one essential component of any intervention is the recognition that this is a real problem for physicians. There is a need to move away from the notion that individual instances of burnout represent ‘weakness’ or personal mental ill-health. Such an exercise would itself demand a radical change in work culture, particularly in teaching hospitals (as these are organized into more rigid team formations with overt demands; they also have a larger number of young physicians, who are likely to be less mature in their coping with workplace stress). Even by itself, this act of reframing would be a welcome change to the way medicine is practised and taught.

Methodologically, this review has a number of advantages over previous work. A comprehensive set of databases has been searched (2617 articles were screened for quality); reporting adheres to the PRISMA guidelines that are the current standard in reporting reviews and meta-analysis; and the authors have a substantial record of publications in this area (and contributed two of the RCTs included in the meta-analysis). Some methodological constraints inherent to this kind of study must be mentioned. As a construct, burnout is one that is sensitive to biases in reporting, and a restricted reliance on self-report could lead to a distorted estimate of both the prevalence of burnout and the likely change with intervention. Other factors that might have introduced bias include special provisions for intervention participants to participate in the intervention during working hours, and the absence of an adequate control condition. These factors are likely to have influenced the results of the included studies.

As burnout is a topical concern in the field of healthcare, sensitization is required. Several approaches have been shown to

be effective in reducing burnout. Choosing among them would be the next step forward in improving the quality of care by service providers.

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