

## THE BURDEN OF BURNOUT AND EFFECT ON CARDIOVASCULAR DISEASES AND RISK PREDISPOSITION: A CALL FOR ACTION

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**B**urnout is a psychological disease pattern evolving as a prolonged response to chronic interpersonal stressors on the job. Burnout consists of three domains which include emotional exhaustion, depersonalization, and diminished feelings of personal accomplishment.<sup>1</sup> To further emphasize the importance of burnout specifically as workplace mental health issue, the World Health Organization (WHO) in the recent 11th version of the International Classification of Diseases classified it as an occupational phenomenon which necessitates contact with health services and affects health status.<sup>2</sup>

While burnout may affect many occupational groups, it appears that physicians are particularly more susceptible than other categories of workers. Among the physicians, there are gender and inter-specialty variations in burden of burnout with females and Emergency medicine, general internal medicine, neurology, & family medicine having the highest rates of burnout, whereas pathology, general pediatrics, dermatology, and preventive medicine (including occupational health and environmental medicine) having the lowest rates in a survey recently conducted in the United States of America (USA).<sup>3</sup> The higher burden among medical practitioners is not unconnected with the heavy workload, challenging practice environment, and the psychological strain of having to deal with human suffering, among others.<sup>4</sup>

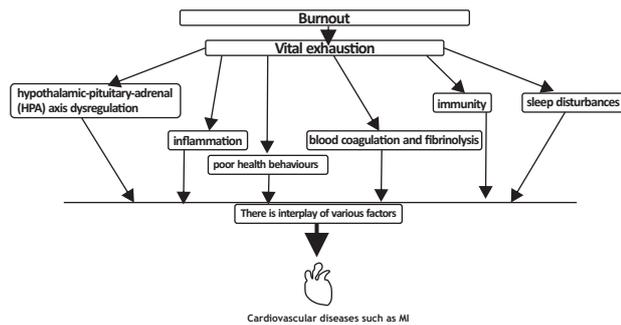
Globally, the level of burnout among physician appears unacceptably very high. National surveys conducted in the USA in 2011 suggest

prevalence rates as high as 44%.<sup>2,4,5</sup> There is a dearth of data on physician burnout in Nigeria, though, from a recent review article, the burden of burnout, as reported among physicians in the country, may range from 25% to 75%.<sup>6</sup> Notwithstanding, the dearth of data, additional finding from this earlier systematic review showed that a key independent predictor of burnout among physicians is young age which by implication implies a significant proportion of early-career doctors (ECDs) may be affected.<sup>6</sup> This common determinant is consistent with findings from other parts of the world.<sup>7</sup>

While it is a crucial factor that attenuates efficacy, performance, and motivation at work in addition to its adverse effect on mental health, there is evidence that burnout increases cardiovascular risk and disease development.<sup>5,8</sup> Burnout is thought to be a more potent risk factor for adverse cardiovascular outcomes, particularly myocardial infarction (MI), than traditional risk factors such as body mass index (BMI), serum lipid level, smoking habit, and blood pressure.<sup>5</sup> Burnout is also associated with metabolic syndrome.<sup>5</sup> Quite concerning is the observation that the cardiovascular risks associated with burnout can develop over a short period, sometimes as fast as three years, in the case of dyslipidemia.<sup>5</sup>

The links between burnout and cardiovascular risk have been identified to be multipronged, including hypothalamic-pituitary-adrenal (HPA) axis dysregulation, sleep disturbances, immunity, inflammation, blood coagulation and fibrinolysis, and poor health behaviors.<sup>5</sup> (Figure 1)

**Figure 1: Hypothetical pathway of the influence of burnout on cardiovascular disease outcome.**



Interestingly many researchers suggest that some risk factors for burnout include factors such as job environment, chronic job stress of workload, and poor life-work balance. Therefore, in a country like Nigeria with high patient: doctor ratio, the social determinants of burnout need to be understood and mitigated, especially among early career doctors. Failure to do so may result in further brain drain among young doctors, which will further worsen the shortage of physicians. Shortage of physicians will place a higher burden on the remaining ones, with a higher risk of burnout, thus, setting up a vicious cycle. It is, therefore, imperative that the social determinants of burnout among early-career physicians in Nigeria are fully understood.

However, there is no nationwide survey result addressing this theme among various subgroups of doctors in Nigeria. CHARTING (Challenges of residency training and early career doctors in Nigeria) study appears promising to provide a national prevalence and characteristics for ECDs in Nigeria.<sup>9,10</sup> The potential opportunity provided by the ongoing CHARTING study could be used to explore the social determinants of burnout among ECDs as well as the relationships between burnout and cardiovascular risk among young doctors in Nigeria. Such data will provide insight into the nexus between burnout and the predisposition to cardiovascular diseases and cardiovascular-related adverse events. It will also shed light on the action that needed to be taken in clinical settings to reduce burnout among ECDs.

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