

The original publication is available at www.springerlink.com at:
<http://www.springerlink.com/content/100428/>

Editorial for Intensive Care Medicine:

BURNOUT IN THE ICU: POTENTIAL CONSEQUENCES FOR STAFF AND PATIENT WELL-BEING

Tom Reader*, Brian H Cuthbertson**, Johan Decruyenaere***,

* School of Psychology, University of Aberdeen, Kings College, Aberdeen, Scotland, UK, AB24 2UB

** Health Services Research Unit, University of Aberdeen, Foresterhill, Aberdeen, Scotland, UK, AB25 2ZD

*** Department of Intensive Care Medicine, Ghent University Hospital, Ghent, Belgium

In this issue of *Intensive Care Medicine*, Verdon and colleagues ¹ investigated staff *burnout* within the intensive care unit (ICU). They found that a substantial proportion of ICU caregivers report symptoms of burnout and that organisational factors predict levels of stress. Staff burnout appears a particularly important issue for critical care, as along with having serious consequences for individual caregiver well-being, burnout may also have serious implications for the quality of care and patient safety within the ICU.

Burnout is a colloquial term commonly used to describe a state of mental exhaustion. In the workplace, burnout results from high levels of occupation stress, and is associated with negative attitudes, emotions and behaviours towards one's work ^{2 3}. Burnout research has identified various antecedents to staff burnout within organisations ⁴. Factors producing burnout include the demands of a work setting (e.g. workload, time pressure) and the resources for meeting those demands (social support, job control). Additionally, aspects of personality (e.g. neuroticism, coping styles, poor self-esteem) have been found as correlates of burnout, and burnout can result in depression, physical illness, and poor work performance. Burnout is a major issue within healthcare as it has been shown that levels of burnout are high ⁴, and that the consequences of burnout amongst doctors and nurses are substantial for both caregivers and patients. Associations have been made between levels of burnout and staff turnover, absenteeism, poor organisational commitment, low job satisfaction and coronary heart disease ^{5, 6}. Burnout amongst healthcare professionals has also been found to affect the quality of care provided to patients. In tertiary hospital care it has been shown that the patients of staff reporting high levels of burnout tend to report lower levels of satisfaction with care ⁷. Within medical specialities such as general surgery and cardiology, it has been shown that physician perceptions of perceived overload (e.g. hours worked, number of patients cared for) predict self-ratings on the quality of care they provide to patients ⁸. Additionally, burnout is often suffered by healthcare teams as a whole, with levels of team burnout predicting patient satisfaction on various aspects of care (e.g. treatments and carers) ⁹, and burnout being worse for caregivers who have close proximity to patients ¹⁰.

Taking into account the levels of patient care, workload, stress and task complexity associated with intensive care medicine, it is of little surprise that ICU staff are found to report symptoms of burnout. A recent multicenter study by Poncet¹¹ questioning over 2000 ICU nurses showed that one-third of nurses had severe symptoms of burnout syndrome. Conflicts with patients or between nurses and doctors contributed to symptoms of burnout, whereas participation in ICU research groups was protective. Another recent publication by Embriaco¹² also showed high levels of burnout in the ICU. One-half of the intensivists surveyed reported high level of burnout, and organisational factors were associated with these symptoms. A smaller study conducted by Raggio¹³ showed men and women in the ICU to suffer burnout differently, indicating the need to tailor burnout strategies to different groups of ICU caregivers.

Additional to the effects of burnout upon ICU staff well-being, the human factors literature indicates that it may also have significant implications for patient safety. It is well documented that burnout results in symptoms of physical and emotional fatigue, depression and inability to concentrate. Such factors are detrimental to performance in settings where high-levels of attention and motivation are required for extended periods of time. Within high-risk industries such as aviation, the antecedents and symptoms of burnout are recognised as contributing factors to human error and accidents, and workloads are structured to take into account human cognitive and physical limitations¹⁴¹⁵. In the ICU, staff typically works long hours, and frequently experience high-workloads, emotional stress, sleep loss, and physical fatigue. The degree to which the consequences of burnout (i.e. fatigue, inattention) affect patient safety is unclear, however it has long been documented that such factors contribute to human error in anaesthesia¹⁶. Within critical care medicine no explicit link has been made between burnout and patient safety, however it has been shown that job demands related to burnout (e.g. long working hours) heighten the chance of junior doctors making serious medical errors¹⁷. Furthermore, ICU staff tends to deny personal vulnerability to factors such as stress. Sexton and colleagues¹⁸ have shown that compared to airline pilots, intensive care doctors are far more likely to report that they can perform effectively

during critical phases of operations / patient care when fatigued, and are less likely to acknowledge the effect of personal problems upon performance at work.

Whilst restructuring aspects of a work domain are undoubtedly important for reducing the likelihood of burnout, a variety of interventions (e.g. stress management, relaxation training, time management skills, participation of nurses in research, dieting and assertiveness training) have also been developed to reduce burnout ¹⁹. However, a longitudinal approach needs to be taken with respect to reducing burnout in the ICU, with more research being required to investigate the causes of burnout, to develop interventions that might reduce burnout, and to measure the effect of burnout on patient safety and quality of care. Future research might wish to use measures of burnout in order to assess the impact of changes to work structure, or interventions to reduce stress in the ICU. It might also wish to identify the individual skills and coping strategies that are successful in helping ICU nurses and doctors to cope with stress and potential burnout on a day-to-day basis. Furthermore, there requires to be a wider acceptance on both the susceptibility of ICU staff to burnout, and the potential consequences it may have for caregiver well-being and patient care. The study by Verdon and colleagues ¹ in the issue of *intensive care medicine* confirms other recent studies by emphasizing the significance of the burnout problem in ICU teams, with hopefully higher clinical recognition being given to the potential effects and consequences of burnout.

References

1. Verdon M, Merlani, P, Perneger T, Ricou, B (2007) Burnout in an ICU nursing team. *Intensive Care Med.*
2. Maslach C, Schaufeli W (1993) Historical and conceptual development of burnout. In: Schaufeli W, Maslach C, Marek T (ed) *Professional burnout: Recent developments in theory and research.* Taylor & Francis, Washington DC, pp 1-16.
3. Maslach C, Jackson S (1986) *The Maslach Burnout Inventory manual.* Consulting Psychologists Press, Palo Alto, CA.
4. Schaufeli W (2007) Burnout in health care. In: Carayon P (ed) *Handbook of human factors and ergonomics in health care and patient safety.* LEA, Mahwah, NJ, pp.217-32.
5. Schaufeli W, Enzmann D (1998) *The burnout companion to study and practice: A critical analysis.* Taylor & Francis, London.
6. Landsbergis P (1998) Occupational stress among health care workers. A test of the job demands-control model. *J Org Beh* 9:217-39.
7. Leiter M, Harvie P (1996) Burnout among mental health workers: A review of and a research agenda. *Int J Soc Psychiatry* 42:90-101.
8. Shirom A, Nirel N, Vinokur AD (2006) Overload, Autonomy, and Burnout as Predictors of Physicians' Quality of Care. *J Occup Health Psychol* 11:328-42.
9. Garman AN, Corrigan PW, Morris S. (2002) Staff burnout and patient satisfaction: Evidence of relationships at the care unit level. *J Occup Health Psychol* 7:235-341.
10. Ito H, Kurita H, Shiiya J (1995) Burnout among direct care staff members of facilities for persons with mental retardation in Japan. *Ment Retard* 37:447-81.

11. Poncet M, Toullic P, Papazian L, Kentish-Barnes N, Timsit JF et al (2007) Burnout Syndrome in Critical Care Nursing Staff. *Am J Respir Crit Care Med* 175: 698-704
12. Embriaco N, Azoulay E, Barrau K, Kentish N, Pochard F et al (2007) High Level of Burnout in Intensivists. *Am J Respir Crit Care Med* 175: 686-692
13. Raggio B Malacarne P (2007) Burnout in Intensive Care Unit. *Miverva Anestesiol* 73: 195-200
14. Reason J (1990) *Human error*. Cambridge University Press, New York.
15. Civil Aviation Authority (2006) *Crew resource management (CRM) training. Guidance for flight crew, CRM instructors and CRM instructor-examiners*. CAA, London.
16. Cooper J, Newbower R, Long C, McPeck B (1978) Preventable anesthesia mishaps: a study of human factors. *Anaesth* 49:399-406.
17. Landrigan CP, Rothschild JM, Cronin JW, Kaushal R, Burdick E, Katz JT, et al. (2004) Effect of reducing interns' work hours on serious medical errors in intensive care units. *N Engl J Med* 351:1838-48.
18. Sexton JB, Thomas EJ, Helmreich RL (2000) Error, stress and teamwork in medicine and aviation: cross sectional surveys. *Br Med J* 320:745-9.
19. Van der Klink J, Blonk R, Schene A, Van Dijk F (2001) The benefits of interventions for work related stress. *Am J Public Health* 91:270-6.