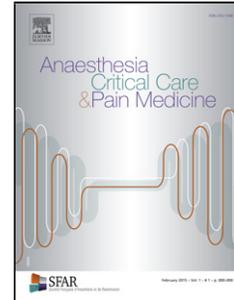


## Accepted Manuscript

Title: Burnout among French anaesthetists and intensivists:  
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PII: S2352-5568(16)30240-5

DOI: <http://dx.doi.org/doi:10.1016/j.accpm.2017.02.004>

Reference: ACCPM 237

To appear in:

Received date: 19-12-2016

Accepted date: 3-2-2017

Please cite this article as: Georges MionKani BoiguileAnnick BidouMarion Limare  
Burnout among French anaesthetists and intensivists: adequate progress is still lacking  
(2017), <http://dx.doi.org/10.1016/j.accpm.2017.02.004>

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## **Burnout among French anaesthetists and intensivists: adequate progress is still lacking**

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Acknowledgments: The authors are indebted to doctor Bernd Sebastian Kamps for his kind reviewing of the manuscript.

Conflicts of Interest: none

Keywords: burnout, anaesthesia, intensive care

We read with great interest the study by Malaquin et al. [1] about the evaluation of burnout syndrome in the three intensive care units at the Amiens University Hospital in France.

Although identified as early as 1959 by the French psychiatrist Claude Veil (1920-1999), burnout syndrome was formally described during the 70s by the psychoanalyst Herbert J. Freudenberger (1927-1999) and by the psychologist Christina Maslach at the University of California. The latter built the gold-standard measuring tool, the so-called Maslach Burnout Inventory (MBI).

The great strength of Malaquin's work is the 90 % participation rate, which makes her findings particularly relevant. Eight years ago, we explored a tenfold larger cohort, but our participation rate, although difficult to precisely define, was probably less than 40% [2]. It is therefore particularly alarming to detect a burnout rate as high as 51%, which mirrors the 62% rate we detected in 2009, and while using the same diagnostic criteria for defining burnout, among physicians and nurses involved in the anaesthetic field (our work was published in 2013).

Of note is the fact that Embriaco et al. (ref ??) who published the first French cohort used a misleading calculation method to define burnout rate: they added emotional exhaustion and depersonalization scores and subtracted personal accomplishment. Cronbach's alpha statistic test, which measures internal coherence and is very low within MBI dimensions, demonstrates that these three items cannot be either added or subtracted and clearly remain three distinct domains.

I was nevertheless intrigued by the rarity of severe cases of burnout (detected among all three dimensions), which were observed among Amiens paramedical teams only. In contrast, we found severe burnout in 6 % of individuals, with no difference between physicians and nurses. The fact that conflicts between the different actors were not significantly related to burnout is also intriguing. The two populations were, of course, different. Our cohort was constituted of 972 men (60 %) and 622 women (40 %), with 1091 anaesthetist physicians (68 %), 241 intensivists (15 %), and 204 anaesthetist nurses (13 %), and we did not observe the almost unbelievable 70 % burnout rate in residents. Of interest is the prominence of lack of personal accomplishment, which seems to be a spreading phenomenon. Indeed, we were able to compare the 2009 cohort of anaesthetic nurses ( $n = 203$ ) with a 2016 cohort ( $n = 259$ ): although burnout rates remained unchanged, exhaustion scores fell from  $19 \pm 11$  to  $13 \pm 10$ , depersonalization scores from  $8 \pm 6$  to  $5 \pm 5$ , and accomplishment scores from  $34 \pm 9$  to  $30 \pm 9$  ( $p < 0.001$ ) [3].

I observe that 100% of physicians had a rest day after night duty; they were less than 70 % in 2009. We must admit that security sometimes makes quantum leaps, at least in some places.

Malaquin et al. [4] (1?) confirm that burnout syndrome and depression are overlapping paradigms. We found an impressive correlation, too, between depression (39 % in the 2009 cohort, nearly the same as in Malaquin study) evaluated with *The Harvard National Depression Screening Day Scale* and burnout severity. Some teams have indeed questioned the artificial semantic separation between depression and burnout.

It would have been interesting to display the addiction results. We observed that 11 % of the 2009 cohort consumed psychoactive substances, although most were sleep aids or anxiolytics rather than illicit drugs (cannabis 2 %); 11 % seemed to be alcohol-dependent.

Moreover, burnout severity was significantly linked to psychoactive substances and alcohol consumption rates.

The demonstration that leisure activities are a protective item against burnout is new, logical and consistent with the fact that non clinical activities were protective in our study. Finally, I found it informative that physicians are asking for more frequent scientific meetings (more self-accomplishment, non-clinical activities) and nurses for improvement in work organization (less stress in daily work, which is a recurrent problem in paramedical teams). We indeed recently demonstrated that anaesthetist nurses practicing medical hypnosis in the operating theatre were protected from burnout [5], and that burnout rate was inversely correlated with the degree of confidence placed by head nurses in anaesthetist nurses [**Error! Bookmark not defined.**].

To conclude, this very interesting work about a cohort of French intensivists confirms that burnout concerns one in two individuals in our working environment. In 2016, more than 40 years after the seminal works of Freudenberger and Maslach, burnout remains a challenge for the future of our profession.

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