



## Raising awareness for a low health-related quality of life in intoxicated ICU patients

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LETTER TO THE EDITOR

**Raising awareness for a low health-related quality of life in intoxicated ICU patients**

To the Editor:

One of the most important indicators of quality of Intensive Care Unit (ICU) treatment is “outcome.” Outcome is defined as “changes in the state of a patient’s health that can be attributed to an intervention or to the absence of an intervention.” Traditionally, physicians have looked at “in-hospital mortality” as their most important (and best available) outcome measure. Nowadays, most clinicians realize that long-term survival and health-related quality of life (HRQoL) are equally important or even superior outcome measures.<sup>1</sup>

In a previous publication we showed that intoxicated ICU patients have a disproportionately high mortality one year after their admission.<sup>2</sup> Despite its importance, up to now very little attention is paid to the HRQoL of patients who survive an ICU admission due to intoxication. In this letter, we report the distressing outcome of self-reported HRQoL of such survivors.

Our analysis includes all intoxicated ICU patients from the University Medical Center in Utrecht (the Netherlands), admitted between July 1st, 2009 and July 1st, 2013. One year after discharge, all patients received a survey including the EuroQoL questionnaire (EQ-5D-3L), which consisted of 5 domains (mobility, self-care, daily activities, pain, and anxiety/depression). For each domain, patients reported if they have no/minor/severe problems. These answers were used to calculate the HRQoL. A HRQoL index figure of “1.0” means perfect health and an index of “0” denotes the worst HRQoL or death. A HRQoL of 0.4 was considered to be a low QoL since it is found to be similar to severe amyotrophic lateral sclerosis or severe depression.<sup>3,4</sup> In case of no response, patients were reminded by sending another survey and if necessary also by telephone. More details on the study design were reported previously.<sup>5</sup>

In total, 115 patients were admitted because of an intoxication (1.5% of all ICU admissions). The in-hospital mortality was 3.5%, and the mortality one year after ICU admission was 9.6%. The response rate for the completed questionnaires was 26.5% ( $n = 26$ ).

The responders reported a median HRQoL 1 year after discharge of 0.71 (inter-quartile range (IQR): 0.37–0.84), while the general ICU population ( $n = 4,042$ ), excluding

intoxicated patients, scored 0.86 (IQR: 0.77–1.0) in the same study period ( $p = 0.02$ , calculated using a Wilcoxon–Mann–Whitney test).

A larger proportion of the intoxicated ICU patients reported a poor HRQoL ( $\leq 0.4$ ) in comparison to the general ICU population (25.9% vs. 9.0%,  $p = 0.003$ , calculated using a chi-square test). Most problems were reported in the domains of anxiety/depression and pain.

We conclude that a minority of the surviving patients had returned their questionnaire, and this creates the potential for bias. Therefore, the  $p$  value should be interpreted with caution. However, the patients who did respond reported an alarmingly low median HRQoL, and a large proportion had extremely low HRQoL ( $\leq 0.4$ ). Clearly, this population is in need of more attention. With this letter, we hope to raise more awareness for the poor outcomes of these patients after discharge from the hospital. The next step should be to confirm our preliminary findings in a prospective, larger cohort of intoxicated ICU patients, prioritizing the risk factors for low HRQoL.

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**Declaration of interest**

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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