

# Mortality in self-intoxicated patients admitted to the ICU in a tertiary Belgian hospital

Ruben Derwael<sup>1</sup>, Ester Geerts<sup>1</sup>, Jeroen Herbots<sup>1</sup>, Ine Gruyters, Kristof Nijs<sup>1,2</sup>, Björn Stessel<sup>1,2</sup>, Jasperina Dubois<sup>1</sup>

<sup>1</sup> Department of Anesthesiology and Intensive Care Medicine, Jessa, Hasselt.

<sup>2</sup> UHasselt, Faculty of Medicine and Life Sciences.

## INTRODUCTION

With the increasing prevalence of mental health issues, Belgium's policymakers are allocating more resources for prevention and treatment. Since data on ICU admissions due to self-intoxication from mental health problems are scarce, we aimed to determine the proportion of such ICU admissions and assess resource allocation. Data on mortality may contribute to optimize care.

## METHODS

We conducted a retrospective study including all patients admitted to the ICU at Jessa, Hasselt, with an admission diagnosis of 'intoxication' from 01/01/2017 to 1/12/2022.

We collected data on baseline characteristics and comorbidities, type of intoxication, and outcome data.

## RESULTS

In total, 342 patients were included in the study, representing 2,42% of all ICU admissions during the study period. Treatment was required in 70,90% of patients, while 29,10% only needed vital parameter monitoring. The length of stay (LOS) was significantly shorter in the latter group: ICULOS 1.0 (1.0-2.0) vs. 2.0 (1.0-2.0) days and hospital-LOS 3.0 (2,0-6.0) vs. 4.0 (2.0-10.0) days.

Baseline characteristics with a significant difference between survivors and non-survivors are listed in Table 1. In univariate analysis, higher age, the presence of chronic liver disease, CVA and chronic cardiovascular disease associated with a higher mortality risk. In contrast, multivariate analyses did not demonstrate significant differences.

Mortality did not differ between the two groups. The overall ICU and hospital mortality rates were relatively low, with an ICU mortality of 1,75% and an in-hospital mortality of 2,60%. However, the 1-year mortality (5,26%) was significantly higher than in-hospital mortality (2,60%) ( $p < 0.001$ ).

## CONCLUSION

The in-hospital mortality of self-intoxicated patients admitted to our ICU is relatively low and difficult to predict. However, the significantly higher one-year mortality serves as a warning sign for future mortality. Long-term psychological follow-up is therefore advised.

	Survivors (N=317)	Non-survivors (N=25)	P value
Age (years)	38.00 (25.50, 52.00)	48.00 (34.50, 65.50)	<0.01
Chronic liver disease, n (%)	24 (7.60%)	6 (24.00%)	<0.01
Cardiovascular disease, n (%)	16 (5.00%)	4 (16.00%)	0.03
Cerebral vascular accident (CVA), n (%)	4 (1.30%)	2 (8.00%)	0.01

Table 1: Baseline characteristics with a significant difference between survivors and non-survivors.

Continuous data are expressed as mean  $\pm$  standard deviation if normally distributed or median (25%, 75% percentiles) if not. Categorical data are expressed as numbers and percentages.