

# Adequacy of stress ulcer prophylaxis prescription in the intensive care unit: an observational study.

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## Abstract

**Purpose:** Stress ulcer prophylaxis prescriptions might not be sufficiently challenged throughout a patient's stay in an intensive care unit (ICU) and might be erroneously maintained after ICU discharge. This study aimed to determine (1) stress ulcer prophylaxis adequacy in ICU and (2) the proportion of patients receiving inappropriate stress ulcer prophylaxis after ICU discharge.

**Material and methods:** This was an observational, single centre study (University Hospital Lausanne, Switzerland). All patients without a previous indication for acid-suppressive therapy and admitted to our ICU for >24 hrs during a two-month period were included. The adequacy of stress ulcer prophylaxis prescriptions according to our guidelines was assessed. We then assessed stress ulcer prophylaxis prescriptions and their adequacy on ICU and hospital discharge, as well as the costs associated with inadequate prescription.

**Results:** Of the 372 patients admitted during the study period, 140 (855 patient-days) fulfilled the inclusion criteria. Of these, 130 (92.9%) received stress ulcer prophylaxis in the ICU (796 [93.1%] patient-days). Stress ulcer prophylaxis consisted of esomeprazole in 686 (86.2%) patient-days. Overall, stress ulcer prophylaxis was inadequate in 558 (65.3%) patient-days, mostly because it was prescribed while not indicated (543 patient-days [63.5%]). On ICU discharge, stress ulcer prophylaxis prescription was inadequately maintained in 55 patients (51.9% of survivors). Similarly, stress ulcer prophylaxis was inadequately maintained on hospital discharge in 30 (28% of survivors) patients. We estimated the in-hospital cost of inadequate stress ulcer prophylaxis prescription as approximately CHF 2870 per year. Outpatient therapy maintenance would be associated with additional costs ranging from CHF 33,912 to 92,692 (EUR 31,832 to 87,012) for each additional year they receive the therapy, depending on the medication used.

**Conclusions:** The adequacy of stress ulcer prophylaxis in the ICU is low. In addition, the prescription is frequently continued after ICU and many patients are even discharged home with inadequate acid-suppressive therapy.

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