The aim of this study is to describe the effect of pharmacist-led interventions on drug therapy and clinical strategies on ICU patient outcome and hospital costs” Leguelinel-Blache et al (2017).

Abstract:

OBJECTIVES: Surgical and medical ICU patients are at high risk of mortality and provide a significant cost to the healthcare system. The aim of this study is to describe the effect of pharmacist-led interventions on drug therapy and clinical strategies on ICU patient outcome and hospital costs.

DESIGN: Before and after study in two French ICUs (16 and 10 beds).

PATIENTS: ICU patients.

INTERVENTION: From January 1, 2013, to June 30, 2015, a pharmacist observation period was compared with an intervention period in which a critical care pharmacist provided recommendations to clinicians regarding sedative drugs and doses, choice of mechanical ventilation mode and related settings, antimicrobial de-escalation, and central venous and urinary catheters removal. Differences in ICU and hospital length of stay, duration of mechanical ventilation, mortality rate, and hospital costs per patient were quantified between groups with patients matched for severity of illness (Simplified Acute Physiology Score II) at admission.

MEASUREMENTS AND MAIN RESULTS: From the 1,519 and 1,268 admitted patients during the observation and intervention periods, respectively, 1,164 patients were evaluable in both groups after matching for Simplified Acute Physiology Score II score. The intervention period was associated with mean (95% CI) reductions in patient hospital length of stay (3.7 d [5.2-2.3 d]; p < 0.001), ICU length of stay (1.4 d [2.3-0.5 d]; p < 0.005), duration of mechanical ventilation (1.2 d [2.1-0.3 d]; p < 0.01), and hospital costs per stay (2,560 euros [3,728-1,392 euros]; p < 0.001). The overall cost savings were 10,840 euros (10,727-10,952 euros) per month, mostly due to reduced consumption of sedatives and antimicrobials. No impact on mortality rate was identified.
CONCLUSIONS: Critical care pharmacist-led interventions were associated with decreases in ICU and hospital length of stays and ICU drug costs.

Reference:


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