

# Intravenous Sedation

## Impact on mechanically ventilated critically ill patients

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### Background and Importance



Selecting an appropriate sedative regimen is essential to optimise ventilation and reduce complications.

Evidence on which intravenous sedative regimen (ISR) minimises adverse events and improves extubation success remains limited.

### Aim and Objectives



Evaluate ISR effect on recovery of critically ill patients

**Primary objective:** Association between ISR and invasive mechanical ventilation (IMV) duration

**Secondary objectives:** Association between ISR use and extubation success and the incidence of ISR related complications

### Materials and Methods



- Retrospective, observational and descriptive
- Adult patients admitted to ICU who required IMV and received continuous ISR
- January-March 2025



- Treatment with one of the ISR
- ICU stay longer than 48 hours
- Require IVM
- Ability to discontinue sedation and extubation



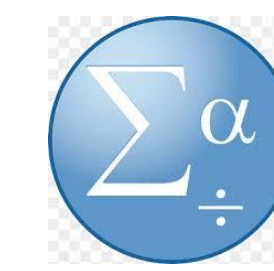
- ISR used
- Age
- SAPS-III at admission
- Target sedation level
- IMV duration
- Successful extubation
- (non reintubation within 48h)
- Complications during ICU stay



**Midazolam regimens:**  
with propofol, dexmedetomidine or monotherapy



**Non-Midazolam regimens:**  
Propofol alone or with dexmedetomidine



SPSS v.27 for statistical analysis (p<0,05)

### Results



51 ICU patients  
Mean age (years) = 66.6 [SD=15]  
SAPS-III at admission = 48.8 [SD=12.1]

55% (28)

#### Midazolam SR

IVM duration

8.5 days



Median IVM duration was higher in Midazolam SR (p=0.001)

Extubation success

63%



Complications



Delirium: 25%



Hypotension: 54%



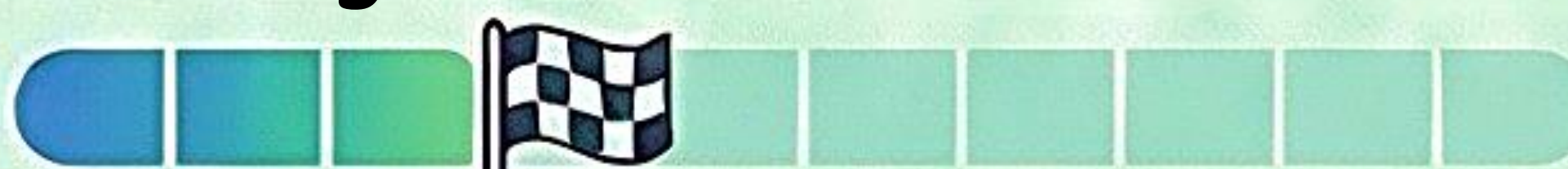
Bradycardia: 36%

45% (23)

#### Non - Midazolam SR

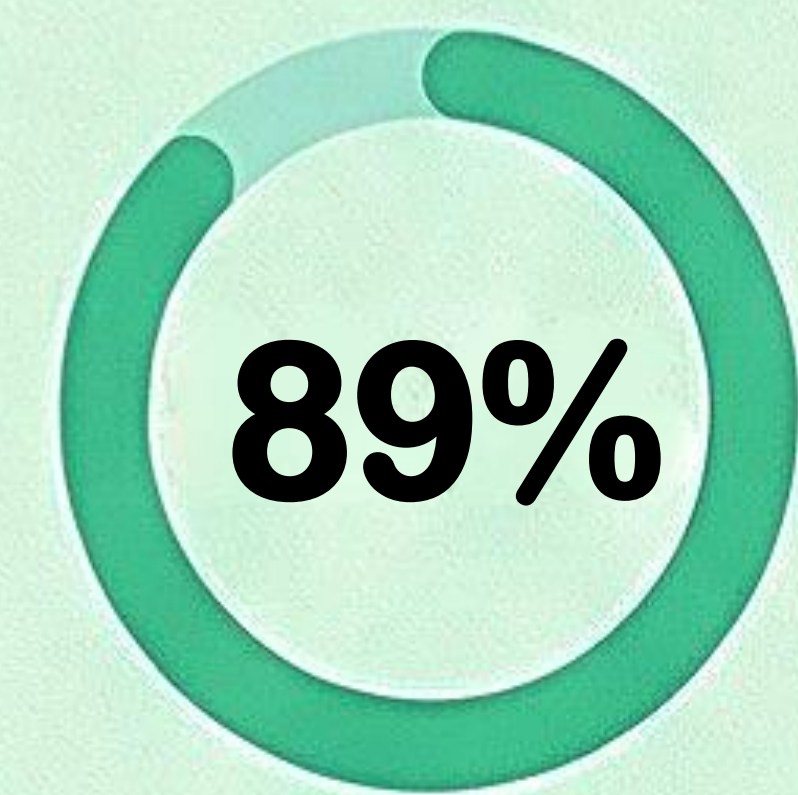
IVM duration

2 days



Extubation success

89%



Extubation success rate was higher in non-midazolam SR



Delirium: 4%



Hypotension: 22%



Bradycardia: 26%

### Conclusion and Relevance



**AVOID BENZODIAZEPINES** in ICU patient's sedation. Current evidence supports minimizing use to optimize ventilation and reduce adverse events.



**ADOPT ALTERNATIVE SEDATION MODALITIES**

Consider inhaled sedation or non-benzodiazepine intravenous strategies.

