

## Propofol superior sedative choice in mechanical ventilation

Use of continuous propofol for sedation of critically ill patients undergoing mechanical ventilation provides a greater number of mechanical ventilator-free days at lower cost, compared with intermittent lorazepam, suggest researchers from the US.

They used a decision analysis model based on data obtained from the literature and trial results to compare the costs and outcomes of using continuous propofol or intermittent lorazepam for sedation, combined with daily trials of awakening from sedation. The model had a time horizon of 28 days from the initiation of mechanical ventilation.

In the base-case analysis, use of propofol was associated with three additional mechanical ventilator-free days, compared with lorazepam (15.917 vs 12.183 days), at lower overall cost (\$US45 631 vs \$US52 009).<sup>\*</sup> In the base-case scenario, crossover to lorazepam was assumed for propofol intolerance and vice versa. Secondary analyses allowing propofol crossover to midazolam instead of lorazepam and to propofol for lorazepam intolerance produced results similar to the base case. No meaningful differences in costs or effectiveness were found between propofol and midazolam.

"The routine use of lorazepam as the primary sedative choice should be discouraged based on its comparatively poor value in this particular critical care setting," conclude the researchers.

<sup>\*</sup> Costs (2007 values) were considered from the perspective of the hospital and included those associated with the sedatives, treatment of sedative-associated adverse events, intensive care services including mechanical ventilation, hospitalisation and physician services.

Cox CE, et al. Economic evaluation of propofol and lorazepam for critically ill patients undergoing mechanical ventilation. *Critical Care Medicine* 36: 706-714, No. 3, Mar 2008 801105208