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Agent Competition Double-Auction Mechanism.

The objective of this study was to investigate, under circumstances of routine care, the impact of paediatric delirium (PD) on length of stay in the paediatric intensive care unit (PICU) as well as on direct financial costs. A five-year prospective observational study (2002–2007) was carried out in a tertiary eight-bed PICU in the Netherlands. Critically ill children aged 1 to 18 years who were acutely, non-electively and consecutively admitted to the PICU and detected as having PD in routine care were compared to critically ill children aged 1 to 18 years without signs of PD. PD, population characteristics and severity of illness at admission were used as predictors for length of PICU stay. Differences in length of stay yielded short-term, direct medical costs associated with PD. Forty-nine children with and 98 children without PD were included. PD prolonged length of PICU stay with 2.39 days, independent of severity of illness, age, gender, mechanical ventilation and medical indication for admission ($B = 0.38$, $P < 0.001$). PD increased direct medical costs with 1.5%. The results suggest a negative prognostic influence of PD on duration of PICU stay in routine care, resulting in an increase of direct medical costs.