

Quality of Life, Costs, Economic Evaluation in ECMO



Extracorporeal membrane oxygenation (ECMO) refers to mechanical support in patients for heart or lung function during cardiopulmonary failure. ECMO is used when conventional treatments have failed. As per the international guideline of the Extracorporeal Life Support Organization (ELSO), ECMO should be considered when the estimated mortality risk is about 50% and is mostly indicated when the mortality risk approaches 80%. In recent years, the use of ECMO has increased exponentially, with improved hospital survival reported in patients with a pulmonary indication, cardiac indication, and extracorporeal cardiopulmonary resuscitation (ECPR).

It is already well-established that psychiatric and cognitive symptoms and Quality of Life (QOL) are affected among ECMO survivors. More than a year after discharge, ECMO patients display cognitive and psychiatric symptoms and significant physical deficits that impact their QOL. Therefore, a long-term assessment of health-related QOL (HRQOL) after ECMO treatment is essential to determine whether patients benefit from ECMO treatment and whether the costs associated with this treatment are worth it.

A new study reports on survival and health-related quality of life (HRQOL) after ECMO and evaluates the costs associated with treatment in the first year.

The study included 428 patients receiving ECMO in the ICU. Study researchers analysed all healthcare costs in the first year after admission. HRQOL analysis was then performed at six and 12 months. The median age of the study patients was 57 years. 64% of the study population was male. The primary indication for ECMO support was respiratory failure, cardiac failure and ECPR. The median hospital length of stay was 16 days. 46% of the patients died in the hospital.

One-year mortality was 50%. ECMO survivors reported a favourable mean HRQOL of 0.77 at 12 months. The overall health status at 12 months (on a scale of 0-100) was reported as 73.6. The mean total costs during the first year were \$204,513 ± 211,590. Hospital costs were the major factor contributing to the total costs. Follow-up costs were \$53,752 ± 65,051, and absenteeism costs were \$7317 ± 17,036.

Overall, study findings show the health-related quality of life among patients requiring ECMO one year after hospital admission was favourable but with substantial costs. However, considering the survival, the high costs might be acceptable.

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