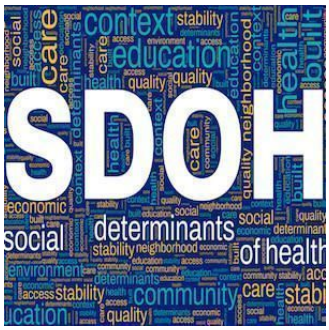
ICU MANAGEMENT & PRACTICE

Health Disparities in ECMO



A recent review explored the extent and quality of literature investigating the influence of social determinants of health (SDoH) on extracorporeal membrane oxygenation (ECMO) utilisation and outcomes among children and adults. The researchers examined the relationship between factors like socioeconomic status, education, and access to healthcare with the use and effectiveness of ECMO.

A total of 219 publications were identified. The primary focus of the analysis was on 148 studies that examined variables related to race, ethnicity, socioeconomic status (SES), and payer. One hundred fourteen studies investigated ECMO outcomes, and 43 studies explored ECMO utilisation.

SDoH were the primary predictor in only 15 studies. The overall quality and methodological rigour of the included studies were found to be poor, with only 7% employing advanced statistical methods.

The direction of associations between ECMO outcomes or utilisation and race, ethnicity, SES, or payer varied across studies. 38% of the studies reported adverse outcomes or lower utilisation in underrepresented, under-resourced, or diverse populations, while 7% observed improved outcomes or greater utilisation in these populations. The remaining 55% of studies did not find statistically significant results. Only 26 studies discussed the underlying causes of disparities, primarily focusing on individual- and hospital-level factors rather than systemic or structural factors.

The review also identified several shortcomings in the existing studies. These included poor quality and methodological rigour, inadequate scientific contextualisation of the findings, and insufficient consideration of systemic mediators that could influence the relationship between SDoH and ECMO utilisation or outcomes.

Overall, the findings suggest a limited understanding of the associations between social determinants of health and ECMO utilisation or outcomes. The studies included in the study had methodological limitations, and the direction of the associations varied, highlighting the need for further research in this area. Additionally, there is a need to explore systemic and structural factors that contribute to disparities in ECMO utilisation and outcomes. Such efforts will lead to better measurement and interpretation of SDoH in ECMO research and inform healthcare practices.

Source: Critical Care Medicine

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