Implementation of a Regional Alert Network for Adult ECMO: First-Year Experience of a Brazilian Referral System

Authors and Affiliations

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Background: Timely identification and referral of patients with potential extracorporeal membrane oxygenation (ECMO) indication remain major challenges in Latin America. Regional ECMO networks may facilitate early expert evaluation, optimize patient selection, and support decision-making even when cannulation is ultimately not required.

Objective: To describe the implementation and first-year experience of a regional ECMO alert network connecting referring hospitals to specialized ECMO centers in Brazil.

Methods: We performed a retrospective descriptive analysis of all ECMO alerts discussed through the Rede D'Or ECMO Alert Program between May 2025 and May 2026. Alerts involving adult and pediatric patients with potential indications for VV-ECMO or VA-ECMO were included. Final outcomes were categorized as ECMO cannulation, clinical improvement without ECMO under expert follow-up at ECMO Center, transfer without ECMO, eligibility without cannulation, not candidates for ECMO support, or death.

Results: A total of 111 ECMO alerts were discussed during the study period. Fifty-nine patients (53.2%) underwent ECMO support. Among the remaining cases (46.8%), 23 patients (20.7%) showed clinical improvement without ECMO under specialist follow-up, 8 (7.2%) were transferred without cannulation to ECMO Center, 9 (8.1%) were considered eligible but did not progress to ECMO, and 10 (9.0%) were considered contraindicated for invasive support. Two patients (1.8%) died before definitive intervention, potentially related to delayed referral. Overall, 46.8% of discussed cases did not require ECMO support despite expert evaluation, highlighting the role of the network beyond cannulation decisions.

Conclusions: The implementation of a regional ECMO alert network was feasible and enabled centralized expert assessment of critically ill patients across multiple hospitals. In addition to facilitating ECMO

References:

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2. Kumar V. Prolonged VV ECMO: navigating the unchartered sea. Indian J Crit Care Med. 2023;27(11):779-781. doi:10.5005/jp-journals-10071-24579.

3. Hoffman KR, Diehl A, Nixon P, et al. The six phases of prolonged veno-venous extracorporeal membrane oxygenator support: a conceptual framework. Crit Care. 2026;30:314. doi:10.1186/s13054-026-06065-y. access, the network supported patient selection, avoided potentially unnecessary cannulations, and provided specialized guidance for complex cases. These findings suggest that regional ECMO networks may represent an important strategy for optimizing extracorporeal support programs in Latin America.