

Perfusion and surgical management in patients with thoracic aortic disease

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Background

Clinical perfusionists manage extracorporeal circulation and maintain physiological and metabolic stability during cardiopulmonary bypass, extracorporeal membrane oxygenation, and related procedures, directly influencing patient safety and surgical outcomes. Across Europe, the profession remains inconsistently defined, regulated, and recognized, creating wide variation in education, training, and clinical responsibilities.

Methods

A multidisciplinary task force convened by the European Board of Cardiovascular Perfusion, the European Association for Cardio-Thoracic Surgery, and the European Association of Cardiothoracic Anaesthesiology and Intensive Care developed an expert consensus on minimal academic qualifications, supervised clinical training, and continuing professional development for independent practice in adult cardiac surgery.

Results

The document specifies core technical competencies, including safe operation of heart–lung machines and mechanical circulatory support systems, and emphasizes non-technical skills in clinical decision-making, communication, and teamwork. A tiered experience-based framework is introduced to classify perfusionists and align roles in clinical care, education, and leadership with certification and periodic recertification via the European Certificate in Cardiovascular Perfusion.

Conclusion

The statement underscores the importance of structured quality assurance programmes, simulation-based education, and robust incident-reporting systems, and proposes a harmonized European framework to standardize training, facilitate workforce mobility, and support formal recognition of clinical perfusion as a regulated healthcare profession.