

# ISHLT issues new guidelines for care of mechanical circulatory support device patients

10 January 2013

Mechanical circulatory support (MCS) is a rapidly growing technology used to treat advanced heart failure. Thousands of patients worldwide have now undergone implantation of long-term MCS devices (MCSDs) that can enable them to return home and resume a normal lifestyle. The International Society for Heart and Lung Transplantation (ISHLT) convened an international panel of experts in all aspects of MCS care, which has developed practice guidelines to provide a common framework for the care and treatment of MCS patients. The Executive Summary of these guidelines is published in the February issue of *The Journal of Heart and Lung Transplantation*.

Chaired by David Feldman, MD, PhD, Minneapolis Heart Institute, and the Georgia Institute of Technology and Morehouse School of Medicine; Salpy V Pamboukian, MD, MSPH, University of Alabama at Birmingham; and Jeffrey J. Teuteberg, MD, University of Pittsburgh, the guidelines were developed by consensus by a team of 38 writers and reviewers including cardiologists, cardiac surgeons, MCS coordinators, and other members of the global multidisciplinary team.

"Because MCS is an evolving field, device availability varies from center to center. We therefore aim to address general issues of long-term use and not to focus on nuances of individual devices," explain the co-chairs. "Short-term success with MCS therapy largely depends on patient selection, surgical technique, and post-operative management. Long-term success depends on physician and patient engagement in excellent care of their device and personal health," they say.

## **The document results from the work of five Task Forces:**

Task Force 1 addresses the important issue of patient selection and risk management prior to permanent pump implantation. It makes recommendations about how candidates for MCSD implantation should be evaluated and classified beforehand, including clinical assessment of [heart failure](#) etiology and anatomic considerations, as well as specific recommendations for candidates with existing disease such as diabetes, cancer, tobacco use, and obesity. Medical and psychosocial evaluation, assessment of operative risk, and ethical dilemmas are also discussed.

Task Force 2 discusses the mechanisms that are important for patient optimization before device implantation and makes recommendations for multidisciplinary care, education, and psychosocial support. This section covers the management of cardiac and non-cardiac risk factors, optimizing patients with relative contraindications, and informed consent and ethical issues as a continuum from Task Force 1. MCS patients once consented are members of their care team before implantation.

Task Force 3 discusses the intra-operative considerations and immediate post-operative care in the intensive care unit (ICU). This section provides recommendations for anesthesia, implantation techniques, explantation techniques, complex anatomic considerations, and early post-operative management in the ICU.

Task Force 4 addresses inpatient management during the post-operative phase, once the patient is out of the ICU and during readmission to the hospital. This section includes recommendations about psychosocial support and suitability for discharge to home and common reasons for hospital readmission and approaches to their management.

Task Force 5 discusses the long-term outpatient care of the MCS patient. The Task Force recommends that after returning home, patients should be managed by a multidisciplinary team that includes cardiovascular surgeons, advanced heart failure cardiologists, and specialized MCS coordinators. It highlights the importance of assessing the patient's social network and/or caregivers, recommending that the patient and their caregivers should be trained to recognize MCS alarms and troubleshoot emergencies using both written materials and visual demonstrations and that their emergency response skills should be tested before being discharged from hospital.

"We hope these guidelines provide an impetus for organized dissemination of best practices from various centers with excellent outcomes into the literature to further the field of MCS," conclude the co-chairs.

**More information:** "The 2013 International Society for Heart and Lung Transplantation Guidelines for Mechanical Circulatory Support: Executive Summary," *The Journal of Heart and Lung Transplantation*, Volume 32, Issue 2 (February 2013)  
[dx.doi.org/10.1016/j.healun.2012.09.01](https://doi.org/10.1016/j.healun.2012.09.01)

Provided by Elsevier

APA citation: ISHLT issues new guidelines for care of mechanical circulatory support device patients (2013, January 10) retrieved 30 April 2021 from <https://medicalxpress.com/news/2013-01-ishlt-issues-guidelines-mechanical-circulatory.html>

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