



**CORE COMPETENCIES IN
PEDIATRIC AND ADULT CONGENITAL
MECHANICAL CIRCULATORY SUPPORT**

Tuesday, April 4, 2017

7:45 AM – 5:15 PM

Manchester Grand Hyatt Hotel, San Diego, California, USA

GRAND HALL A

**CORE COMPETENCIES IN
PEDIATRIC AND ADULT CONGENITAL
MECHANICAL CIRCULATORY SUPPORT**

Tuesday, April 4, 2017

Scientific Program Committee

Chair: Angela Lorts, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA

Co-Chair: Holger Buchholz, MD, University of Alberta, Stollery Children's Hospital, Edmonton, AB, Canada

Members: Jenna Murray, MSN, RN, CPNP-AC, Stanford University, Stanford, California, USA
Leonardo Salazar, MD, Fundacion Cardiovascular de Columbia, Bucaramanga, Columbia
Martin Schweiger, MD, PhD, FEBS Children's Hospital Zurich, Zurich Switzerland
Asif Hasan, MB, FRCS, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

Course Summary

The pediatric mechanical circulatory support field continues to grow and has enough unique challenges to justify an entire session dedicated to learning about pediatric support strategies. The basic principles of MCS, including patient/device selection, peri-operative management, and basics of transition to home will be discussed. The goal will be to learn from didactics but also allow for discussion in order to share experiences and learn from each other.

In addition to the core academy that will be conducted at the 2017 ISHLT annual meeting, an extensive Core Competency Curriculum Document has been written by a diverse international committee and can be found on the ISHLT education website. This document is in outline form with current references and includes all topics that are important to the management of this unique patient population.

Educational Goals

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate best practice of surgical and medical aspects involved in the care of pediatric patients and adult congenital heart disease patients that require ventricular assist device support.

Target Audience

While all members are invited to enroll, this course is primarily designed to be of benefit for clinicians and allied professionals who are in the early stages of their careers or who are in training, are part of a new program or desire an update on the current state of the field. The information presented is intended to provide a strong foundation of the overarching principles of ventricular assist support in children, rather than as a detailed update for those who are already proficient in the field.

Learning Objectives

At the conclusion of this meeting, participants will have improved competence and professional performance in their ability to:

1. Evaluate a patient for VAD implantation including preoperative assessment, preparation of patient prior to VAD implantation, and optimal timing of placement.

2. Understand device selection, strategies for VAD implantation, intraoperative assessment techniques and postoperative management.
3. Define device-specific anticoagulation management as well as the recognition and care of adverse events related to both temporary and chronic device therapy.

Accreditation Statement

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation Statement

ISHLT designates this live activity for a maximum of 8.00 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANCC Credit

AMEDCO is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This course is co-provided by AMEDCO and ISHLT. Maximum of 8.00 contact hours.

Disclosure

Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation if a product they are discussing is not labeled for the use under discussion or is still investigational.

SCIENTIFIC PROGRAM SCHEDULE

7:00 AM – 7:45 AM

REGISTRATION & MORNING COFFEE

7:45 AM – 8:00 AM

WELCOME AND OVERVIEW

Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

Holger Buchholz, MD, University of Alberta Hospital, Edmonton, AB, Canada

8:00 AM – 9:05 AM

SESSION 1: REVIEW OF THE CURRENT STATE OF MCS IN PEDIATRIC AND ADULT CONGENITAL HEART DISEASE

Chair: Richard Kirk, FRCP, FRCPC

8:00 AM *Current State: Durable Device Options, Indications and Outcomes (Pulsatile)*

David Morales, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

A review of current technologies available, update on future developments.

8:15 AM *Current State: Durable Device Options, Indications and Outcomes (Continuous)*

Martin Schweiger, MD, PhD, Children's Hospital, Zurich, Switzerland

Overview of MCS in ACHD patients.

8:30 AM *Current State: Temporary Device Options, Indications and Outcomes*

Jennifer Conway, MD, Stollery Children's Hospital, Edmonton, AB, Canada

Overview of temporary support in variety of scenarios as bridge to other forms of support, transplantation or recovery.

8:45 AM *Case Presentation with Discussion: Child Presenting with Probable Myocarditis – Device Selection for Size and Indication*

Leonardo Salazar, MD, Fundacion Cardiovascular de Colombia, Bucaramanga, Colombia

9:05 AM – 10:10 AM

SESSION 2: PATIENT SELECTION

Chair: Angela Lorts, MD

9:05 AM *An Art, Not Always a Science - When is the Right Time for Referral?*

Aamir Jeewa, MD, Hospital for Sick Children, Toronto, ON, Canada

Evaluating timing for implantation.

9:20 AM *Pre-VAD Work Up Prior to Implantation; Including Psychosocial Considerations*

Oliver Miera, MD, Deutsches Herzzentrum Berlin, Berlin, Germany

Pre-VAD evaluation to be done prior to decision to implant.

9:35 AM *Medical Co-Morbidities and That May VAD Success and Potential Strategies for Optimization*

Janet Scheel, MD, Children's National Health System, Washington, DC, USA

End-organ dysfunction and the effect on VAD patient outcome.

9:50 AM Case Presentation with Discussion: Infant with End-Organ Dysfunction- Patient Selection and Optimization Prior to VAD Implantation

Richard Kirk, FRCP, FRCPC, UT Southwestern Medical Center, Dallas, TX, USA

10:10 AM – 10:30 AM

COFFEE BREAK

10:30 AM – 11:20 AM

SESSION 3: SURGICAL CONSIDERATIONS FOR BOTH PEDIATRICS AND ADULT CONGENITAL

Chair: Martin Schweiger, MD, PhD

10:30 AM VAD Implantation (Extracorporeal Berlin Heart, Temporary Continuous Flow Devices): Key Surgical Aspects

Jake Jaquiss, MD, Duke Children's Heart Center, Durham, NC, USA

Key surgical techniques to implanting pulsatile devices in children.

10:45 AM VAD Implantation (Intracorporeal HVAD, HeartMate II): Key Surgical Aspects

Antonio Amodeo, MD, Bambino Gesù Pediatric Hospital, Rome, Italy

Key surgical techniques to implanting continuous flow devices in children

11:00 AM Case Presentation with Discussion: Assessment of Optimal Inflow Placement with Hemodynamics and Echocardiography in the Immediate Peri-Operative Setting

Lucas Eastaugh, MBBS, Royal Children's Hospital, Melbourne, Australia

11:20 AM – 12:00 PM

SESSION 4: "UNIQUE PATIENT POPULATION"

Chair: Jennifer Conway, MD

11:20 AM Case Presentation with Discussion: Adult Congenital VAD Case

Robert Jaquiss, MD, Duke Children's Heart Center, Durham, NC, USA

11:40 AM Case Presentation with Discussion: Adolescent Risky Behavior

Jenna Murray, MSN, RN, CPNP-AC, Lucile Packard Children's Hospital, Palo Alto, CA, USA

12:00 PM - 1:00 PM

LUNCH BREAK (a box lunch is included in the registration fee)

1:00 PM - 2:05 PM

SESSION 5: PERI-OPERATIVE CARE OF THE VAD PATIENT

Chair: Leonardo Salazar, MD

1:00 PM Managing the RV after LVAD Placement

Richard Kirk, FRCP, FRCPC, UT Southwestern Medical Center, Dallas, TX, USA

How to detect RV failure and to support the RV to prevent a Bi-VAD.

1:15 PM Is There a "Standard" for Post-Operative Care?

Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

Routine post-operative care of the VAD patient in both the ICU and step down unit.

1:30 PM *Pump Speed Optimization: Tailoring Post-Operative Management to Clinical and Echocardiographic Assessment*

Lucas Eastaugh, MBBS, Royal Children's Hospital, Melbourne, Australia
Using hemodynamic monitoring to optimize the pump function.

1:45 PM *Case Presentation with Discussion: Driveline Infection*

Holger Buchholz, MD, University of Alberta Hospital, Edmonton, AB, Canada

2:05 PM – 3:10 PM

SESSION 6: HEMATOLOGIC MANAGEMENT OF THE PEDIATRIC VAD PATIENT

Chair: Holger Buchholz, MD

2:05 PM *Overview of Anticoagulation of the Various Pump Types*

Christina Vanderpluym, MD, Boston Children's Hospital, Boston, MA, USA
Brief overview of anticoagulation goals for various pump types and how the goals differ between adults and children.

2:20 PM *Pump Thrombosis: Detection and Management*

Jennifer Conway, MD, Stollery Children's Hospital, Edmonton, AB, Canada
How to determine if a pump is thrombosed and treatment options.

2:35 PM *Stroke in Pediatric VAD Patients: What are Our Options?*

Oliver Miera, MD, Deutsches Herzzentrum Berlin, Berlin, Germany
Characterizing pediatric strokes and discussing changes in therapy after they occur.

2:50 PM *Case Presentation with Discussion: Tamponade Post HVAD Implantation*

David Morales, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

3:10 PM -3:30 PM COFFEE BREAK

3:30 PM – 5:00 PM

SESSION 7: NOW WE ARE GOING TO SEND THEM HOME?

Chair: Antonio Amodeo, MD

3:30 PM *The Beginning of a New Program: Necessary Team Components?*

Christina Vanderpluym, MD, Boston Children's Hospital, Boston, MA, USA
The building blocks to starting a pediatric VAD program, the challenges faced, and the key elements of success.

3:45 PM *Preparing the Patient, Family and Community for Discharge*

Jenna Murray, MSN, RN, CPNP-AC, Lucile Packard Children's Hospital, Palo Alto, CA, USA
Creative multidisciplinary approaches to patient/caregiver education and comprehensive preparation for the local community.

4:00 PM *The Outpatient Clinical Assessment: Blood Pressure, Laboratory Testing, Echo Monitoring and Rehabilitation*

Aamir Jeewa, MD, Hospital for Sick Children, Toronto, ON, Canada
Effective clinical assessment and monitoring strategies of the child outpatient on VAD support.

4:15 PM *Destination/Palliative Care Considerations*

Janet Scheel, MD, Children's National Health System, Washington, DC, USA

Challenges in offering destination therapy to a child and how to maneuver failed VAD support.

4:30 - 5:00 PM

QUESTIONS/DISCUSSION

Panel members will reflect on day and open up for discussion

5:00 PM – 5:15 PM

CLOSING ADDRESS

Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

Holger Buchholz, MD, University of Alberta Hospital, Edmonton, AB, Canada

5:15 PM ADJOURN