

Division Details

Division Data Summary

Research and Training Details

Number of Faculty	4
Number of Support Personnel	11
Direct Annual Grant Support	\$53,042
Peer Reviewed Publications	26

Clinical Activities and Training

Number of Clinical Staff	3
Inpatient Encounters	371
Outpatient Encounters	375

Division Photo

No Photo information has been entered yet.

Significant Publications

Feinstein JA, Benson DW, Dubin AM, Cohen MS, Maxey DM, Mahle WT, Pahl E, Villafane J, Bhatt AB, Peng LF, Johnson BA, Marsden AL, Daniels CJ, Rudd NA, Caldarone CA, Mussatto KA, **Morales DL**, Ivy DD, Gaynor JW, Tweddell JS, Deal BJ, Furck AK, Rosenthal GL, Ohye RG, Ghanayem NS, Cheatham JP, Tworetzky W, Martin GR. **Hypoplastic left heart syndrome: current considerations and expectations.** *J Am Coll Cardiol.* 59(1 Suppl):S1-42. Jan 3 2012.

This manuscript summarizes all that the community of cardiologists and congenital heart surgeons know about the challenge of caring for children with hypoplastic left heart syndrome. It discusses every stage of their care; in particular, their last planned surgical palliation, the Fontan procedure.

Jacobs JP, **Morales DLS.** **Strategies for longitudinal follow-up of patients with pediatric and congenital cardiac disease.***Progress in Pediatric Cardiology.* 32(2):97-102. Dec 2011.

Here we have outlined how to empower national surgical databases with long-term outcomes. Surgical databases such as the Society of Thoracic Surgery are rich in number of cases captured (STS > 1 million patients), but their outcomes are usually limited to surgical hospitalization. We demonstrated how to empower these databases by pairing them with national databases from the Center of Medicaid/Medicare and the Social Security National Death Index.

Morales DL, Adachi I, Heinle JS, Fraser CD, Jr. **A new era: use of an intracorporeal systemic ventricular assist device to support a patient with a failing Fontan circulation.** *J Thorac Cardiovasc Surg.* 142(3):e138-40. Sep 2011.

The fastest growing group of adolescent patients presenting in heart failure is those with Fontan Circulations. This manuscript demonstrates the potential to mechanically support these patients in pediatric facilities, which is novel.

Thiagarajan RR, Almond CS, **Cooper DS**, **Morales DLS.** **Ventricular Assist Devices for Mechanical Circulatory Support in Children.***World Journal for Pediatric and Congenital Heart Surgery.* 3(1):104-9. Jan 2012.

This is an overview of the current state of mechanical circulatory support in North America. We describe how this field has expanded and that it is possible to have a robust independent pediatric VAD program that can support a child of any size with the best type of device for their particular type of heart failure.

Zafar F, Khan MS, Heinle JS, Adachi I, McKenzie ED, Schechter MG, Mallory GB, **Morales DL. Does donor arterial partial pressure of oxygen affect outcomes after lung transplantation? A review of more than 12,000 lung transplants.** *J Thorac Cardiovasc Surg.* 143(4):919-25. Apr 2012.

Many children die waiting for lung transplantation. The oxygen level in the donor lungs is the most common criteria used to determine whether lungs are acceptable or not for transplantation. By looking at all lung transplants done in the U.S. over the past two decades, this manuscript explores how this criteria was set and if in fact we should be using different thresholds than the ones commonly practiced. A change in this criteria could significantly increase the number of lung transplants performed.

Division Publications

1. Adachi I, Krishnamurthy R, Morales DL. **A double aortic arch mimicking a right aortic arch with an aberrant subclavian artery.** *J Vasc Surg.* 2011; 54:1151-3.
2. Bryant R, 3rd, Aboutaleb A, Kim JJ, Kertesz N, Morales DL. **Epicardial implantable cardioverter-defibrillator system placed in a 4.9-kg infant.** *Tex Heart Inst J.* 2011; 38:421-3.
3. Burnside J, Gomez D, Preston TJ, Olshove VF, Jr., Phillips A. **In-vitro quantification of gaseous microemboli in two extracorporeal life support circuits.** *The Journal of extra-corporeal technology.* 2011; 43:123-9.
4. Carlo WF, Carberry KE, Heinle JS, Morales DL, McKenzie ED, Fraser CD, Jr., Nelson DP. **Interstage attrition between bidirectional Glenn and Fontan palliation in children with hypoplastic left heart syndrome.** *The Journal of thoracic and cardiovascular surgery.* 2011; 142:511-6.
5. Cua CL, Phillips A, Ackley T, Ro PS, Kertesz N. **Optimization of biventricular pacing via strain dyssynchrony measurements in a paediatric patient.** *Acta Cardiol.* 2011; 66:527-30.
6. Echo A, Kelley BP, Bullocks JM, Morales DL. **The treatment of an unusual complication associated with a HeartMate II LVAD in an adolescent.** *Pediatr Transplant.* 2012; 16:E130-3.
7. Fan Y, Weng YG, Huebler M, Cowger J, Morales D, Franz N, Xiao YB, Potapov E, Hetzer R. **Predictors of in-hospital mortality in children after long-term ventricular assist device insertion.** *J Am Coll Cardiol.* 2011; 58:1183-90.
8. Feinstein JA, Benson DW, Dubin AM, Cohen MS, Maxey DM, Mahle WT, Pahl E, Villafane J, Bhatt AB, Peng LF, Johnson BA, Marsden AL, Daniels CJ, Rudd NA, Caldarone CA, Mussatto KA, Morales DL, Ivy DD, Gaynor JW, Tweddell JS, Deal BJ, Furck AK, Rosenthal GL, Ohye RG, Ghanayem NS, Cheatham JP, Tworetzky W, Martin GR. **Hypoplastic left heart syndrome: current considerations and expectations.** *J Am Coll Cardiol.* 2012; 59:S1-42.
9. Hershenson JA, Ro PS, Miao Y, Tobias JD, Olshove V, Naguib AN. **Changes in hemodynamic parameters and cerebral saturation during supraventricular tachycardia.** *Pediatric cardiology.* 2012; 33:286-9.
10. Jacobs JP, Edwards FH, Shahian DM, Prager RL, Wright CD, Puskas JD, Morales DL, Gammie JS, Sanchez JA, Haan CK, Badhwar V, George KM, O'Brien SM, Dokholyan RS, Sheng S, Peterson ED, Shewan CM, Feehan KM, Han JM, Jacobs ML, Williams WG, Mayer JE, Jr., Chitwood WR, Jr., Murray GF, Grover FL. **Successful linking of the Society of Thoracic Surgeons database to social security data to examine survival after cardiac operations.** *Ann Thorac Surg.* 2011; 92:32-7; discussion 38-9.
11. Jacobs JP, Jacobs ML, Austin EHI, Mavroudis C, Pasquali SK, Lacour-Gayet FG, Tchervenkov CI, Walters HI, Bacha EA, del Nido PJ, Fraser CD, Gaynor JW, Hirsch JC, Morales DLS, Pourmoghadam KK, Tweddell JS,

- Prager RL, Mayer JE. **Quality Measures for Congenital and Pediatric Cardiac Surgery.** *World Journal for Pediatric and Congenital Heart Surgery.* 2012; 3:32-47.
12. Jacobs JP, Morales DLS. **Strategies for longitudinal follow-up of patients with pediatric and congenital cardiac disease.** *Progress in Pediatric Cardiology.* 2011; 32:97-102.
 13. Jacobs ML, Daniel M, Mavroudis C, Morales DL, Jacobs JP, Fraser CD, Jr., Turek JW, Mayer JE, Tchervenkov C, Conte J. **Report of the 2010 society of thoracic surgeons congenital heart surgery practice and manpower survey.** *Ann Thorac Surg.* 2011; 92:762-8; discussion 768-9.
 14. Law SP, Kim JJ, Decker JA, Price JF, Cabrera AG, Graves DE, Morales DL, Heinle JS, Denfield SW, Dreyer WJ, Rossano JW. **Hospital charges for pediatric heart transplant hospitalizations in the United States from 1997 to 2006.** *J Heart Lung Transplant.* 2012; 31:485-91.
 15. Learn C, Phillips A, Chisolm J, Hill S, Cheatham J, Winch P, Galantowicz M, Holzer R. **Pulmonary atresia with ventricular septal defect and multifocal pulmonary blood supply: does an intensive interventional approach improve the outcome?** *Congenital heart disease.* 2012; 7:111-21.
 16. Morales DL, Adachi I, Heinle JS, Fraser CD, Jr.. **A new era: use of an intracorporeal systemic ventricular assist device to support a patient with a failing Fontan circulation.** *J Thorac Cardiovasc Surg.* 2011; 142:e138-40.
 17. Naguib A, McKee C, Phillips A, Tobias JD. **Dexmedetomidine as the primary anesthetic agent during cardiac surgery in an infant with a family history of malignant hyperthermia.** *Saudi journal of anaesthesia.* 2011; 5:426-9.
 18. Petrucci O, O'Brien SM, Jacobs ML, Jacobs JP, Manning PB, Eghtesady P. **Risk factors for mortality and morbidity after the neonatal Blalock-Taussig shunt procedure.** *The Annals of thoracic surgery.* 2011; 92:642-51; discussion 651-2.
 19. Preston TJ, Olshove VF, Jr., Chase M. **Bloodless extracorporeal membrane oxygenation in the Jehovah's Witness patient.** *J Extra Corpor Technol.* 2012; 44:39-42.
 20. Raake J, Johnson B, Seger B, Manning PB, Eghtesady P, Boesch P, Rutter M, Woodard A, Chima RS. **Extracorporeal membrane oxygenation, extubation, and lung-recruitment maneuvers as rescue therapy in a patient with tracheal dehiscence following slide tracheoplasty.** *Respiratory care.* 2011; 56:1198-202.
 21. Rodriguez FH, 3rd, Moodie DS, Parekh DR, Franklin WJ, Morales DL, Zafar F, Graves DE, Friedman RA, Rossano JW. **Outcomes of hospitalization in adults in the United States with atrial septal defect, ventricular septal defect, and atrioventricular septal defect.** *Am J Cardiol.* 2011; 108:290-3.
 22. Rossano JW, Kim JJ, Decker JA, Price JF, Zafar F, Graves DE, Morales DL, Heinle JS, Bozkurt B, Towbin JA, Denfield SW, Dreyer WJ, Jefferies JL. **Prevalence, morbidity, and mortality of heart failure-related hospitalizations in children in the United States: a population-based study.** *J Card Fail.* 2012; 18:459-70.
 23. Samayoa AX, Mallory GB, Jr., Morales DL. **Pneumonectomy acutely after pediatric bilateral lung transplantation: management of communicating thoracic spaces.** *J Heart Lung Transplant.* 2012; 31:438-9.
 24. Sawdy JM, Kempton TM, Olshove V, Gocha M, Chisolm JL, Hill SL, Kirk A, Cheatham JP, Holzer RJ. **Use of a dose-dependent follow-up protocol and mechanisms to reduce patients and staff radiation exposure in congenital and structural interventions.** *Catheter Cardiovasc Interv.* 2011; 78:136-42.
 25. Thiagarajan RR, Almond CS, Cooper DS, Morales DLS. **Ventricular Assist Devices for Mechanical Circulatory Support in Children.** *World Journal for Pediatric and Congenital Heart Surgery.* 2012; 3:104-109.
 26. Zafar F, Khan MS, Heinle JS, Adachi I, McKenzie ED, Schechter MG, Mallory GB, Morales DL. **Does donor arterial partial pressure of oxygen affect outcomes after lung transplantation? A review of more than 12,000 lung transplants.** *J Thorac Cardiovasc Surg.* 2012; 143:919-25.

Faculty, Staff, and Trainees

Faculty Members

David L. S. Morales, MD, Professor

Leadership Executive Co-Director, Heart Institute; Director and Chief, Division of Cardiothoracic Surgery

Peter B. Manning, MD, Professor

Vincent Olshove, CCP, FPP, Instructor

Leadership Director, Perfusion Services

Alistair Phillips, MD, Associate Professor

Leadership Surgical Director, Adult Congenital Heart Disease; Surgical Director, Transplantation

Clinical Staff Members

- **Traci Ashcraft, PA-C**
- **Megan Miller, PA-C**
- **Alicia Wilmoth, PA-C**

Grants, Contracts, and Industry Agreements

Grant and Contract Awards	Annual Direct
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COLE, C			
Myocardial Protection during Fetal Bypass: Role of Calcium Cycling			
National Institutes of Health			
F32 HL 103054	07/01/10-06/30/12		\$53,042
		Current Year Direct	\$53,042
Total			\$53,042