

2015 Research Annual Report

Cardiothoracic Surgery

RESEARCH AND TRAINING DETAILS

Faculty	4
Research Fellows	2
Support Personnel	6
Direct Annual Industry Support	\$9,622
Peer Reviewed Publications	19

CLINICAL ACTIVITIES AND TRAINING

Clinical Staff	15
Staff Physicians	1
Clinical Fellows	1
Inpatient Encounters	468
Outpatient Encounters	377

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Significant Publications

Moore RA, Madueme PC, Lorts A, **Morales DL**, Taylor MD. [Virtual implantation evaluation of the total artificial heart and compatibility: Beyond standard fit criteria.](#) *J Heart Lung Transplant.* 2014 Nov;33(11):1180-3.

Children on waiting lists for heart transplantation have one of the highest waiting list mortalities in the United States. Ventricular assist devices (VADs) have significantly reduced the waiting list mortalities in adult patients, but there was no established evidence of its impact on pediatric patients. In 2005, pediatric specific VADs were introduced with the aim of improving survival of children on heart transplant waiting lists. This study demonstrates a considerable improvement in waiting list survival for children in the VAD era. Irrespective of other factors, children supported with a VAD were four times more likely to survive to transplant.

Morales DLS, Zafar F, Jacobs JP. [Use of National Death Registries to Empower Databases in Reporting Longitudinal Follow-Up.](#) In: Barach PR, Jacobs JP, Lipshultz SE, Laussen PC, editors. *Pediatric and Congenital Cardiac Care: Outcome Analysis.* Volume 1. London, UK: Springer; 2014. 403-12.

National databases are beginning to play a key role in the care of patients by predicting prognoses of particular treatments, defining risk factors, aiding with the selection of patients for particular treatments and helping to establish

standards of care. This manuscript demonstrates the advantages of how a national death registry can empower a national database with over two million records. The information gathered, the comparisons outlined, and the processes used to determine the best combination of indices of death is generally scalable and may prove useful for other societies and registries who wish to empower their databases with long-term national data about mortality.

Division Publications

1. Adachi I, Khan MS, Guzman-Pruneda FA, Fraser CD, 3rd, Mery CM, Denfield SW, Dreyer WJ, Morales DL, McKenzie ED, Heinle JS, Fraser CD, Jr.. **Evolution and impact of ventricular assist device program on children awaiting heart transplantation.** *Ann Thorac Surg.* 2015; 99:635-40.
2. Adachi I, Morales DS. **Implantation of total artificial heart in congenital heart disease.** *J Vis Exp.* 2014; .
3. Conway J, St Louis J, Morales DL, Law S, Tjossem C, Humpl T. **Delineating survival outcomes in children <10 kg bridged to transplant or recovery with the Berlin Heart EXCOR Ventricular Assist Device.** *JACC Heart Fail.* 2015; 3:70-7.
4. Cooper DS, Morales DLS, del Corral M, Paden ML, Thiagarajan RR. **Databases for Extracorporeal Membrane Oxygenation and Ventricular Assist Devices.** In: PR Barach, JP Jacobs, SE Lipshultz, PC Laussen, eds. *Pediatric and Congenital Cardiac Care: Outcome Analysis.* London, UK: Springer; 2014:211-218.
5. Frank DB, Crystal MA, Morales DL, Gerald K, Hanna BD, Mallory GB, Jr., Rossano JW. **Trends in pediatric pulmonary hypertension-related hospitalizations in the United States from 2000-2009.** *Pulm Circ.* 2015; 5:339-48.
6. Hede SV, Morales DL, Parekh DR. **At the heart of the old silk road.** *J Gen Intern Med.* 2014; 29:1421-2.
7. Karani KB, Zafar F, Morales DL, Goldstein BH. **Hybrid stage I palliation in a 1.1 kg, 28-week preterm neonate with posterior malalignment ventricular septal defect, left ventricular outflow tract obstruction, and coarctation of the aorta.** *World J Pediatr Congenit Heart Surg.* 2014; 5:603-7.
8. Khan MS, Bryant R, 3rd, Kim SH, Hill KD, Jacobs JP, Jacobs ML, Pasquali SK, Morales DL. **Contemporary Outcomes of Surgical Repair of Total Anomalous Pulmonary Venous Connection in Patients With Heterotaxy Syndrome.** *Ann Thorac Surg.* 2015; 99:2134-40.
9. Kirk R, Dipchand AI, Rosenthal DN, Addonizio L, Burch M, Chrisant M, Dubin A, Everitt M, Gajarski R, Mertens L, Miyamoto S, Morales D, Pahl E, Shaddy R, Towbin J, Weintraub R. **The International Society for Heart and Lung Transplantation Guidelines for the management of pediatric heart failure: Executive summary. [Corrected].** *J Heart Lung Transplant.* 2014; 33:888-909.
10. Kwiatkowski DM, Menon S, Krawczeski CD, Goldstein SL, Morales DL, Phillips A, Manning PB, Eghtesady P, Wang Y, Nelson DP, Cooper DS. **Improved outcomes with peritoneal dialysis catheter placement after cardiopulmonary bypass in infants.** *J Thorac Cardiovasc Surg.* 2015; 149:230-6.
11. Kyle WB, Decker J, Macicek SL, Valdes SO, Morales D, Hong B, Price JF, Dreyer WJ, Denfield SW, Kim JJ. **Arrhythmias in children with ventricular assist devices.** *Cardiol Young.* 2015; 25:255-60.
12. Moore RA, Madueme PC, Lorts A, Morales DL, Taylor MD. **Virtual implantation evaluation of the total artificial heart and compatibility: Beyond standard fit criteria.** *J Heart Lung Transplant.* 2014; 33:1180-3.
13. Morales DL, Khan MS. **Invited commentary.** *Ann Thorac Surg.* 2015; 99:146-7.

14. Morales DLS, Zafar F, Jacobs JP. **Use of National Death Registries to Empower Databases in Reporting Longitudinal Follow-Up.** In: PR Barach, JP Jacobs, SE Lipshultz, PC Laussen, eds. *Pediatric and Congenital Cardiac Care: Outcome Analysis*. London, UK: Springer; 2014:403-412.
 15. Nathan M, Sleeper LA, Ohye RG, Frommelt PC, Caldarone CA, Tweddell JS, Lu M, Pearson GD, Gaynor JW, Pizarro C, Williams IA, Colan SD, Dunbar-Masterson C, Gruber PJ, Hill K, Hirsch-Romano J, Jacobs JP, Kaltman JR, Kumar SR, Morales D, Bradley SM, Kanter K, Newburger JW, Pediatric Heart Network I. **Technical performance score is associated with outcomes after the Norwood procedure.** *J Thorac Cardiovasc Surg*. 2014; 148:2208-13, 2214 e1-6.
 16. Ryan TD, Jefferies JL, Zafar F, Lorts A, Morales DL. **The evolving role of the total artificial heart in the management of end-stage congenital heart disease and adolescents.** *ASAIO J*. 2015; 61:8-14.
 17. Thomas TO, Chandrakasan S, O'Brien M, Jefferies JL, Ryan TD, Wilmot I, Baker ML, Madueme PC, Morales D, Lorts A. **The use of a Berlin Heart EXCOR LVAD in a child receiving chemotherapy for Castleman's disease.** *Pediatr Transplant*. 2015; 19:E15-8.
 18. Zafar F, Castleberry C, Khan MS, Mehta V, Bryant R, 3rd, Lorts A, Wilmot I, Jefferies JL, Chin C, Morales DL. **Pediatric heart transplant waiting list mortality in the era of ventricular assist devices.** *J Heart Lung Transplant*. 2015; 34:82-8.
 19. Zafar F, Jefferies JL, Tjossem CJ, Bryant R, 3rd, Jaquiss RD, Wearden PD, Rosenthal DN, Cabrera AG, Rossano JW, Humpl T, Morales DL. **Biventricular Berlin Heart EXCOR pediatric use across the united states.** *Ann Thorac Surg*. 2015; 99:1328-34.
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Faculty, Staff, and Trainees

Faculty Members

James S. Tweddell, MD, Professor

Leadership Executive Co-Director, Heart Institute; Director of Surgery, Heart Institute

David L. S. Morales, MD, Professor

Leadership Chief, Division of Cardiothoracic Surgery

Roosevelt Bryant III, MD, Assistant Professor

Leadership Surgical Director, Pediatric Heart Transplant Program

Farhan Zafar, MD, Instructor

Research Interests Tissue engineering; outcomes research in heart failure; transplant.

Clinical Staff Members

- **Traci Ashcraft, PA-C**
- **Lindsay Pilgrim Galchick, PA-C**
- **Lauara Jansen, PA-C**
- **Naritaka Kimura, MD, PhD**, Staff Physician
- **John P. Lombardi, CCP**, Associate Director, Cardiovascular Perfusion

- **James A. Reagor, BS, CCP**, Director, Cardiovascular Perfusion
- **Alicia Wilmoth, PA-C**

Trainees

- **Muhammad Shoaib Khan, MD**, Texas Children's Hospital/Baylor College of Medicine
- **Naritaka Kimura, MD, PhD**, University of Michigan
- **Farhan Zafar, MD**, Baylor College of Medicine

Grants, Contracts, and Industry Agreements

Industry Contracts

Morales, D

On-X Life Technologies, Inc	\$9,622
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Current Year Direct Receipts	\$9,622
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Total	\$9,622
