

CURRICULUM VITAE

Robert Niebler MD

**Professor
Department of Pediatrics
Division of Critical Care**

OFFICE ADDRESS:

Children's Hospital
9000 W Wisconsin Ave
Milwaukee, WI 53226

EDUCATION:

08/1994 - 05/1997 B.S., Marquette University, Milwaukee, WI
08/1997 - 05/2001 M.D., Medical College of Wisconsin, Milwaukee, WI

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

07/2001 - 06/2004 Resident, Pediatrics, University of Arizona, Tucson, AZ
07/2004 - 06/2005 Chief Resident, Pediatrics, University of Arizona, Tucson, AZ
07/2005 - 06/2008 Fellow, Pediatric Critical Care, Medical College of Wisconsin, Milwaukee, WI
07/2008 - 06/2009 Fellow, Pediatric Cardiac Critical Care, Medical College of Wisconsin, Milwaukee, WI

FACULTY APPOINTMENTS:

07/2005 - 06/2009 Instructor, Pediatrics, Critical Care, Medical College of Wisconsin, Milwaukee, WI
07/2009 - 06/2016 Assistant Professor, Pediatrics, Critical Care, Medical College of Wisconsin, Milwaukee, WI
07/2016 - 06/2022 Associate Professor, Pediatrics, Critical Care, Medical College of Wisconsin, Milwaukee, WI
07/2022 - Present Professor, Pediatrics, Critical Care, Medical College of Wisconsin, Milwaukee, WI

HOSPITAL AND CLINICAL ADMINISTRATIVE APPOINTMENTS:

08/2013 - Present Epic Provider Builder, Children's Wisconsin, Milwaukee, WI
04/01/2019 - 03/31/2023 Critical Care Section Chief, Children's Wisconsin, Milwaukee, WI
07/01/2020 - 06/30/2021 Assistant Medical Director, Cardiac Intensive Care Unit, Children's Wisconsin, Milwaukee, WI
07/01/2021 - Present Assistant Chief Medical Information Officer, Inpatient, Children's Wisconsin
07/01/2021 - Present Medical Director, Cardiac Intensive Care Unit, Children's Wisconsin

HOSPITAL STAFF PRIVILEGES:

07/2004 - 06/2005 Northwest Medical Center, 6200 La Cholla Blvd., Tucson, AZ 85741
07/2005 - Present Children's Hospital of Wisconsin, 9000 W. Wisconsin Avenue, Wauwatosa, WI 53226
04/2014 - 06/2016 St. Joseph's/Marshfield Clinic-Security Health Plan, 1515 N Saint Joseph Avenue, PO Box 8000, Marshfield, WI 54449-8000
07/31/2018 - 07/14/2020 Pediatrics, Hospital Medicine, Wheaton Franciscan Healthcare-All Saints, 3801 Spring Street, Racine, WI 53405

SPECIALTY BOARDS AND CERTIFICATION:

<u>Board Certified</u>	<u>Issue Date</u>	<u>Expiration</u>
American Board of Pediatrics- General Pediatrics	12/2004	None

American Board of Pediatrics- 01/2009 None
Pediatric Critical Care

<u>Certificates</u>	<u>Issued By</u>	<u>Issue Date</u>	<u>Expiration</u>
Physician Builder	Epic	11/13/2013	None
Physician Builder-Reporting	Epic	07/22/2014	None
Physician Builder-Orders	Epic	09/19/2014	None
PALS	AAP/AHA	03/28/2018	03/2020
ACLS	ACS	10/2020	10/2022

<u>Licensure</u>	<u>Number</u>	<u>Issue Date</u>	<u>Expiration</u>
Arizona License	32678	04/07/2004	09/01/2005
Wisconsin License	47905-20	03/15/2005	10/31/2021

AWARDS AND HONORS:

04/2008 Honorable Mention Clinical Research Award, Medical College of Wisconsin-Department of Pediatrics Joint Fellowship Curriculum Pediatric Fellows Research Day
05/2011 William Williams, MD Young Investigator Award, 7th International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion Conference
01/2013 Top Rated Doctors, M Magazine
2013 - 2014 Outstanding Medical Student Teacher, Medical College of Wisconsin, Bench to Bedside Course
2014 - 2015 Outstanding Medical Student Teacher, Medical College of Wisconsin, Molecules to Cells Course
2017 - 2018 Outstanding Medical Student Teacher, Medical College of Wisconsin, Critical Care Pediatrics Course
2017 - 2018 Outstanding Medical Student Teacher, Medical College of Wisconsin, Bench to Bedside Course
11/2018 Top Doctors, Milwaukee Magazine
2018 - 2019 Outstanding Medical Student Teacher, Medical College of Wisconsin, Bench to Bedside Course
2019 - 2020 Outstanding Medical Student Teacher, Medical College of Wisconsin, Bench to Bedside Course
04/2020 Top Doctors, Milwaukee Magazine
05/2022 Top Doctors, Milwaukee Magazine

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

07/2001 - 06/2013 American Academy of Pediatrics
07/2005 - 06/2013 Society of Critical Care Medicine
02/2008 - Present Pediatric Cardiac Intensive Care Society

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Journal Review
12/2011 - Present Artificial Organs
01/2012 - Present Pediatric Cardiology
01/2013 - Present Journal of Pediatrics
11/2013 - Present Annals of Thoracic Surgery
01/2014 - Present Pediatric Critical Care Medicine
11/2014 - Present Clinical Medicine Insights: Cardiology
07/2016 - Present Journal of Pediatric Surgery
04/2018 - Present Cardiology in the Young

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

08/2013 - 12/2014 Member, Database Committee, PC4: Pediatric Cardiac Critical Care Consortium
08/2018 - Present Member, Leadership Committee, ACTION Learning Network
08/2018 - 09/2021 Co-Chair, Utilization and Value Committee, ACTION Learning Network
11/2021 - Present Physician Lead, Data Visualization and Usability, ACTION Learning Network

INTERNATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

09/2021 - Present Executive Board Member, International Society for Pediatric Mechanical Circulatory Systems and Pediatric Cardiopulmonary Perfusion

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title: ECmo hemoSTatic Transfusions In Children (ECSTATIC)
Source: NHLBI R34
Role: Site PI
PI: Oliver Karam and Marianne Nellis
Dates: 01/2023 - Present

Non-Peer Review

Title: Chilled Platelet Study
Source: Department of Defense
Role: Site PI
PI: Philip Spinella
Dates: 01/2023 - Present

Prior

Peer Review

Title: Pilot Innovative Research Award- Antithrombin III Supplementation Prior to Cardiopulmonary Bypass in Neonates with Single Ventricle Heart Disease and Aortic Arch Hypoplasia
Source: Children's Research Institute
Role: Principal Investigator
Dates: 07/2010 - 12/2012
Direct Funds: \$26,000

Title: Perioperative hemostasis in infants undergoing cardiopulmonary bypass
Source: Children's Hospital of Wisconsin/Medical College of Wisconsin
Role: Co-Investigator
PI: Dudley Benson, MD
Dates: 07/01/2013 - 06/30/2016
Direct Funds: \$3,000,000

Title: Total Cell-Free Deoxyribonucleic Acid (total cf-DNA) as a predictor of severity of illness and outcome following pediatric cardiac surgery
Source: Clinical and Translational Science Institute of Southeast Wisconsin
Role: Co-Investigator
PI: Michael Mitchell and Jake Scott
Dates: 04/01/2018 - 03/31/2020
Direct Funds: \$50,000

Title: Nitric oxide administration during pediatric cardiopulmonary bypass

Source: surgery to prevent platelet activation
Clinical and Translational Science
Institute of Southeast Wisconsin
Role: Principal Investigator
Dates: 04/01/2018 - 03/31/2019
Direct Funds: \$50,000

Non-Peer Review

Title: Berlin Heart EXCOR Pediatric
Ventricular Assist Device IDE Trial
Source: Berlin Heart Inc.
Role: Site Co-Investigator
PI: James S. Tweddell, MD
Dates: 11/23/2007 - 11/30/2010

Title: A Phase 1, Open-Label, Single-Dose,
Non-Randomized Study to Evaluate
Pharmacokinetics and
Pharmacodynamics of Edoxaban in
Pediatric Patients
Source: Daiichi-Sankyo
Role: Site-Principal Investigator
Dates: 02/2015 - 02/2020

Title: A Randomized, Open-Label, Active
Controlled, Safety and Extrapolated
Efficacy Study of Apixaban in Pediatric
Subjects Requiring Anticoagulation for
the Treatment of a Venous
Thromboembolic Event
Source: Pfizer
Role: Site Co-Investigator
PI: Rowena Punzalan
Dates: 04/2015 - 11/2022

Title: SynCardia 50cc Temporary Total
Artificial Heart (TAH-t) for Bridge To
Transplant (BTT)
Source: Syncardia Systems, Inc.
Role: Site Co-Investigator
PI: Ronald Woods, MD/PhD
Dates: 09/2015 - 02/2020

Title: Pediatric Cardiac-Hemostasis and
Thrombosis
Source: Children's Research Institute
Role: Principal Investigator
Dates: 07/01/2016 - 06/30/2017
Direct Funds: \$17,272

Title: Single-Dose Study to Evaluate the
Pharmacokinetics, Pharmacodynamics,
Safety, and Tolerability of Apixaban in
Pediatric Subjects at Risk for a Venous
or Arterial Thrombotic Disorder
Source: Bristol-Myers Squibb
Role: Site-Principal Investigator

Dates: 07/2016 - 09/2019

Title: A Prospective, Open-Label, Active-Controlled Study to Evaluate the Pharmacokinetics, Pharmacodynamics, Safety, and Efficacy of Rivaroxaban for Thromboprophylaxis in Pediatric Subjects 2 to 8 years of Age after the Fontan Procedure

Source: Janssen

Role: Site-Principal Investigator

Dates: 11/2016 - 12/2020

Title: A Phase 3, Open-Label, Randomized, Multi-Center, Controlled Trial to Evaluate the Pharmacokinetics and Pharmacodynamics of Edoxaban and to Compare the Efficacy and Safety of Edoxaban with Standard of Care Anticoagulant Therapy in Pediatric Subjects from Birth to less than 18 years of age with Confirmed Venous Thromboembolism

Source: Daiichi Sankyo, Inc.

Role: Site-Principal Investigator

Dates: 09/2017 - 08/2022

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

Local

Niebler RA, ECMO in the Emergency Department, Pediatric Emergency Medicine Grand Rounds, Medical College of Wisconsin, 03/2010

Niebler RA, Inotropes in Abdominal Surgery and Trauma, Pediatric Surgery Educational Conference, Medical College of Wisconsin, 08/2011

Niebler RA, Anticoagulation in the Pediatric CICU, Pediatric CICU Lecture Series, Medical College of Wisconsin, 11/2012

Niebler RA, NIRS: The Next "Vital" Sign, Pediatric Surgery Education Conference, Medical College of Wisconsin, 12/14/2012

Niebler RA, Peri-Operative Anticoagulation Medication Management, Multidisciplinary Pediatric Surgery Conference, Medical College of Wisconsin, 03/07/2014

Niebler RA, Mechanical Circulatory Support in Single Ventricle Anatomy, S. Bert Litwin Lectureship, Herma Heart Center, Children's Hospital of Wisconsin, 10/01/2015

Niebler RA, Ventricular Assist Device Support in Single Ventricle Patients, Gallen Lectureship, Herma Heart Center, Children's Hospital of Wisconsin, Milwaukee, WI, 06/16/2016

Niebler RA, Keep 'Er Movin: Coagulation System and Testing in the ICU, Neurointensive Care Educational Lecture, Medical College of Wisconsin, Froedtert Hospital, Milwaukee, WI, 05/28/2019

Regional

Niebler RA, Clinical Research and the FDA-Compassion, Emergencies and your own IND, Wisconsin Chapter of the Association of Clinical Research Professionals, Milwaukee, WI, 09/12/2018

Niebler RA, Wellner H, ECMO from Afar and Back Again: Can We? Should We??. 4th Annual Wisconsin PICU Convention, Marshfield, WI (Virtual), 05/17/2022

National

Niebler RA, Antithrombin in ECMO: Beneficial or Not, 31st Annual CNHS Symposium: ECMO and the Advanced Therapies for Respiratory Failure, Keystone, CO, 02/23/2015

International

- Niebler RA, Medical Management of Neuropsychological Issues Associated with Mechanical Circulatory Support, Fourth Annual Cardiac Neurodevelopmental Symposium, Milwaukee, WI, 06/05/2015
- Niebler RA, ECMO in the Pediatric Hem/Onc/H SCT Patient, American Society of Pediatric Hematology/Oncology 30th Annual Meeting, Montreal, Quebec, Canada, 04/29/2017
- Niebler, RA, Moderator-Pediatric 2: Overcoming the Limits of Design: Miniturization, Portability and Affordability in Children, ASAIO 64th Annual Conference, Washington D.C., USA, 06/2018
- Niebler RA, Panelist-Right Ventricular Failure: A Case-Focused Panel Discussion, International Pediatric VAD and Heart Failure Summit, Stanford, CA, USA, 09/2018
- Niebler RA, Zinn M, Right Heart Failure and Biventricular Support Options, ACTION Learning Network Learning Session, Virtual, 08/13/2020
- Niebler RA, Post-Operative Care, The North American Berlin Heart EXCOR Pediatric Users Meeting, Houston, TX, USA, 10/18/2021
- Niebler RA, Long Term Support, The North American Berlin Heart EXCOR Pediatric Users Meeting, Houston, TX, USA, 10/19/2021
- Niebler RA, Bivalirudin Should be the Anticoagulant of Choice for ECMO: Pro/Con Debate, Pediatric Cardiac Intensive Care Society Annual International Meeting, Miami Beach, FL, USA, 12/16/2022

PEER REVIEWED WORKSHOPS/PRESENTATIONS:

National

- Niebler RA, Hyperosmolar Hyperglycemic Coma in a Nineteen-Year-Old Down Syndrome Patient, Poster Presentation: American Academy of Pediatrics National Convention, San Francisco, CA, 10/2004
- Berg MD, Samson RA, Donnerstein RL, Clark LL, Indik JH, Niebler RA, Berg DD, Kern KB, Berg RA, P-Waves During Ventricular Fibrillation (VF) May Result in Malfunction of the Automated External Defibrillator (AED), Poster Presentation: American Heart Association Resuscitation Science Symposium, Dallas, TX, 11/2005
- Gamez M, Niebler RA, Lankiewicz MW, Punzalan RC, Risk of Thrombosis with Recombinant Factor VIIa During Extra Corporeal Membrane Oxygenation, Oral Presentation: American Association of Blood Banks Annual Meeting, Miami Beach, FL, 10/2006
- Gaies M, Jeffries H, Niebler R, Thiagarajan R, Scheurer M, Vasoactive Inotropic Score (VIS) is Associated with Outcome After Infant Cardiac Surgery: A Report of the Pediatric Cardiac Critical Care Consortium (PC4), Oral Presentation: American College of Cardiology Annual Meeting, San Francisco, CA, 03/2013
- Niebler RA, Egodage SN, Ghanayem NS, Berger S, Shah TK, Woods RK, Mitchell ME, Tweddell JS, Zangwill SD, Mechanical Circulatory Support and Outcomes of Pediatric Heart Transplantation, Oral Presentation: Southern Thoracic Surgery Association 60th Annual Meeting, Scottsdale, AZ, 11/2013
- Scott JP, Niebler RA, Stuth EA, Benson DW, Woods RK, Tweddell JS, Cole R, Mitchell ME, Bercovitz RS, Simpson P, Montgomery R, Mast A, Maroney S, Yan K, Punzalan R, Newman DK, Proactive Platelet and Cryoprecipitate Transfusion during Neonatal Cardiopulmonary Bypass Rapidly Normalizes Platelet Count, Fibrinogen, and Functional Rotational Thromboelastometry Parameters, Oral Presentation: 96th Annual Meeting of the American Association of Thoracic Surgery, Baltimore, MD, 05/2016
- Hoffman GM, Scott JP, Stuth EA, Niebler RA, Mitchell ME, Tweddell JS, Ghanayem NS, Mussatto KA, Effect of Antifibrinolytic Drug on Hemodynamics in Neonates Undergoing the Norwood Procedure, Oral Presentation: Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, 10/2016
- Niebler RA, Kindel SJ, Hraska V, Woods RK, Conversion of Failed Single Ventricle Palliation to in Series Circulation and Total Artificial Heart, Podium Presentation: American Society of Artificial Internal Organs 64th Annual Conference, Washington DC, USA, 06/15/2018
- Niebler RA, Brickler M, Hawkins J, Schmidt J, Weber E, Kindel SJ, Woods RK, Compassion, Field Trips, and the Long Journey Home: A Case Study in Pediatric Mechanical Circulatory Support, Virtual Poster Presentation-American Society of Artificial Internal Organs Annual Meeting, Virtual, 05/2020
- Scott JP, Tanem J, Michell A, Laulederkind A, Niebler R, Bertrandt R, Hraska V, Woods RW, Mitchell ME, Association of preoperative cell-free DNA levels and outcome following pediatric cardiopulmonary bypass, American Heart Association Scientific Sessions, Virtual, 11/13/2020
- Nellis M, Bain J, Benbea M, Chegondi M, Cheung E, Cholette J, Joashi U, Niebler R, Paden M, Ozment C,

Karam O, Platelet Transfusion Practices for Children Supported by Extracorporeal Membrane Oxygenation, Poster Presentation: Pediatric Academic Societies Meeting, Washington, D.C. USA, 04/27/2023

International

- Niebler RA, Christensen M, Lankiewicz M, McArthur J, Fresh Frozen Plasma Transfusion is not Associated with a Change in the Oxygenation Index in the Pediatric Intensive Care Unit, Poster Presentation: Pediatric Critical Care Colloquium, Whistler, BC Canada, 02/2008
- Niebler RA, Ghanayem N, Brabant C, Thromboelastography compared to Standard Coagulation Testing in Evaluation of Coagulopathies after Cardiopulmonary Bypass, Poster Presentation: Pediatric Cardiac Intensive Care Society International Conference, Miami Beach, FL, 12/2008
- Niebler RA, Christensen M, Wellner H, Berens R, Antithrombin Replacement during Extracorporeal Membrane Oxygenation, Oral Presentation: Seventh International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion, Philadelphia, PA, 05/2011
- Niebler RA, Lew S, Zangwill SD, Woods RK, Mitchell ME, Tweddell JS, Ghanayem NS, Incidence and Outcome of Pediatric Patients with Intracranial Hemorrhage while supported on Ventricular Assist Devices, Oral Presentation: Ninth International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion, Hershey, PA, 05/2013
- Niebler RA, Scott JP, Cole R, Stuth E, Shah T, Benson D, Tweddell J, Whole Blood Versus Reconstituted Whole Blood for Cardiopulmonary Bypass Surgery in Infants, Poster Presentation: 60th Annual Scientific and Standardization Committee of the International Society of Thrombosis and Haemostasis, Milwaukee, WI, 06/2014
- Parker H, Simpson P, Dasgupta M, Niebler RA, Impact of Anticoagulation Strategy on ECMO Bleeding and Thrombotic Complications, Oral Presentation: Eleventh International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion, Verona, Italy, 06/2015
- Niebler RA, Woods K, Ghanayem NS, Hoffman G, Mitchell M, Punzalan R, Scott JP, Simpson P, Tweddell JS, A Pilot Study of Antithrombin Replacement Prior to Cardiopulmonary Bypass in Neonates, Oral Presentation: Eleventh International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion, Verona, Italy, 06/2015
- Brenner MK, Bercovitz RS, Cole R, Niebler RA, Scott J, Stuth E, Mitchell M, Tweddell J, Woods R, Benson DW, Newman DK, Assessment of Platelet Function and Hemostasis in Neonates Undergoing Cardiopulmonary Bypass, Poster Presentation: XXV Congress of the International Society on Thrombosis and Haemostasis, Toronto, Canada, 06/2015
- Auerbach SR, Richmond ME, Schumacker KR, Lopez-Colon D, Mitchell MB, Turrentine MW, Cantor RS, Niebler RA, Egtesady P, Infectious Complications fo Ventricular Assist Device Use in Children in the US: Data from the Pediatric Interagency Registry for Mechanical Circulatory Support (Pedimacs), Oral Presentation: 36th Annual Meeting and Scientific Sessions of the International Society for Heart and Lung Transplantation, Washington DC, USA, 04/2016
- Conway J, Miera O, Henderson HT, VanderPluym C, Buchholz H, Fenton M, Niebler RA, Padalino M, Slaughter M, Lorts A, Schweiger M, Hassan M, Schmitto JD, Scheel JN, Martin B, Li Y, Parrino PE, Morales DL, Kirk R, Global Experience with the Heartware HVAD in Pediatric Patients: A Preliminary Analysis, Oral Presentation: 36th Annual Meeting and Scientific Sessions of the International Society for Heart and Lung Transplantation, Wahington D.C. USA, 04/2016
- Imielske B, Niebler RA, Kindel S, Woods R, HeartWare Ventricular Assist Device Implantation for Failing Fontan Physiology, Oral Presenation: 12th International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion, New York City, NY, USA, 05/2016
- Jeewa A, Imamura M, Canter C, Niebler RA, VanderPluym C, Rosental D, Kirklin JK, McMullan M, Morell V, Turrentine M, Ameduri R, Nguyen K, Kanter K, Conway J, Gajarski R, Fraser C, Post-Transplant Outcomes of Patients Supported wiht the Berlin Heart EXCOR as a Bridge to Transplantation: A Multi-Institutional Sudy, Oral Presentation-37th Annual Meeting and Scientific Sessions of the International Society for Heart and Lung Transplantation, San Diego, CA, USA, 04/2017
- Niebler RA, Scott JP, Stuth E, Cole R, Newman D, Bercovitz R, Simpson P, Dasgupta M, Woods RK, Rotational Thromboelastometry Values Do Not Correlate with Severe Bleeding in Neonatal Surgery Utilizing Cardiopulmonary Bypass, Oral Presentation: 13th International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion, Rome, Italy,

09/2017

Hoffman G, Ghanayem N, Mitchell ME, Woods RK, Tweddell JT, Musatto K, Stucke A, Stuth E, Scott JP, Niebler RA, Bertrand R, Hraska V, Identification of Time-Dependent Risks of Hemodynamic States following Stage 1 Norwood Palliation, Oral Presentation: Society of Thoracic Surgeons 55th Annual Meeting, San Diego, CA, USA, 01/29/2019

C. VanderPluym, M. O'Connor, A. Lorts, M. Ploutz, D. Peng, S. Law, M. Zinn, R. Niebler, D. Rosenthal, J. Conway, S. Auerbach, D. Sutcliffe, M. Mehegan, Anti-Coagulation Management in Pediatric Ventricular Assist Device: A Quality Improvement Target, Oral Presentation: 39th Annual Meeting and Scientific Sessions: International Society of Heart and Lung Transplant, Orlando, FL, USA, 04/03/2019

Amidon MD, Yan K, Zhang J, Niebler RA, 4-Factor Prothrombin Complex Concentrate Use in Pediatric Patients with Ventricular Assist Device Presenting for Cardiac Transplant, Oral Presentation: 15th International Conference on Pediatric Mechanical Circulatory Support and Pediatric Cardiopulmonary Perfusion, New York City, NY, USA, 05/07/2019

Niebler RA, Amdani S, Blume B, Cantor R, Deng L, Kirklin JK, Lorts A, Morales DL, Rosenthal DN, Ghanayem NG, Stroke in pediatric ventricular assist device patients-a PediMACS registry analysis, Oral Presentation-International Society of Heart and Lung Transplant Annual Meeting, Virtual, 04/2020

Tanem J, Scott JP, Niebler RA, Otto M, Bertrand R, Stamm K, Mitchell ME, Total cell-free DNA (TCF) predicts death and adverse events following pediatric cardiothoracic surgery, Congenital Heart Surgeons Society and European Congenital Heart Surgeons Association Joint Annual Meeting, Virtual, 10/24/2020 - 10/25/2020

Lee J, Shezad MF, Zafar F, Barnes A, O'Brien JE, Peeler B, Joong A, Phillip J, Bleiweis M, Monge M, Woods RK, and Niebler RA, Outcomes of Intracorporeal Continuous, Paracorporeal Continuous, and Paracorporeal Pulsatile Ventricular Assist Devices in Pediatric Patients 10-30kg, Poster Session-International Society of Heart and Lung Transplant, Boston, MA, USA, 04/27/2022 - 04/30/2022

COMMITTEE SERVICE:

Medical College of Wisconsin

01/2013 - 12/2014 Member, Practice Excellence Committee, Children's Specialty Group

06/2013 - Present Epic Provider Champion, Children's Specialty Group

Hospital

07/2005 - 06/2009 Member, Code Committee, Children's Hospital of Wisconsin

06/2011 - 06/2017 CICU Physician Representative, CLA-BSI Collaborative, Critical Care, Children's Wisconsin

11/2011 - 06/2013 Critical Care Representative, iStrategy Provider Core Group, Children's Wisconsin

07/2013 - 06/2017 Member, Documentation Standards Committee, Children's Wisconsin

07/2013 - Present Member, Electronic Health Record Provider Committee, Children's Wisconsin

10/2013 - Present Co-Chair, Clinical Decision Support, Children's Wisconsin

07/2019 - Present Member, Electronic Health Record Decision Team, Children's Wisconsin

MEDICAL COLLEGE TEACHING ACTIVITIES:

Medical Student Education

09/2006 - 12/2009 Case Based Discussion Group Moderator, M1, Medical Biochemistry Course; 4 hours/yr

12/2007 - Present Course Instructor, M4 Pediatric Problem Solving; 50 hours/yr

12/2008 - 12/2010 Facilitator, Pediatric Component to the Clinical Examination and Reasoning Course; 4 hours/yr

03/2010 - 03/2012 Small Group Preceptor, M2 Clinical Examination and Reasoning Course; 20 hours/yr

05/2012 - Present Molecules to Cells Course Clinical Based Discussion Clinician Moderator and Case Author, 20 hours/year

01/2014 - 06/2020 M1/M2 Bench to Bedside Course Instructor, 20 hours/yr

07/2015 - Present M3 Pediatric Clerkship History and Physical Reviewer, 10 hours/year

Resident and Fellow Education

- 09/2007 - Present A Fellow's Guide to ECMO, Annual Lecture to Critical Care Section, 4 hours/yr
09/2008 - 09/2012 Ace the Boards-Pediatric Review Course, Critical Care Review, Children's Hospital of Wisconsin, 4 hours/yr
09/2013 - Present Pediatric Mechanical Circulatory Support, Bi- to Tri-annual lecture to Pediatric Critical Care and Cardiology fellows; 4 hours every 2-3 years

EXTRAMURAL TEACHING:

Community/Lay Public

- 08/2011 - 01/2012 Children's Hospital of Wisconsin-ECMO Specialists, Anticoagulation Management during Extracorporeal Membrane Oxygenation, 10 hours/year

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

Medical Students

- Parker H, Medical College of Wisconsin, 12/2014 - 06/2015 M4 Research Elective Mentor, Abstract presented as oral presentation at international conference, published manuscript

Clinical/Research Fellows

- Amidon MD, Medical College of Wisconsin, 09/2017 - 06/2020 Critical Care Fellowship Research Mentor, Abstract presented as oral presentation at international conference, recipient of young investigator award, manuscript submitted for publication
Benson JW, Medical College of Wisconsin, 07/2019 - 06/2022 Critical Care Fellowship Research Mentor, IRB approval of project, data collection/analysis is ongoing
Tuttle M, Medical College of Wisconsin, 07/2020 - 06/2023 Critical Care Fellowship Research Mentor, IRB approval of project, data collection/analysis is ongoing

Residents

- Imielski B, Medical College of Wisconsin, 01/2016 - 07/2016 Research Mentor, Abstract presented as oral presentation at international conference, recipient of young investigator award, published manuscript

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Heidenreich JW, Higdon TA, Kern KB, Sanders AB, Berg RA, Niebler R, Hendrickson J, Ewy GA. Single-rescuer cardiopulmonary resuscitation: 'two quick breaths'--an oxymoron. *Resuscitation*. 2004 Sep;62(3):283-9.
2. Niebler RA, Punzalan RC, Marchan M, Lankiewicz MW. Activated recombinant factor VII for refractory bleeding during extracorporeal membrane oxygenation. *Pediatr Crit Care Med*. 2010 Jan;11(1):98-102.
3. Niebler RA, Christensen M, Berens R, Wellner H, Mikhailov T, Tweddell JS. Antithrombin replacement during extracorporeal membrane oxygenation. *Artif Organs*. 2011 Nov;35(11):1024-8.
4. Gandy KL, Mitchell ME, Pelech AN, Niebler RA, Hoffman G, Berger S. Aortic exclusion: a method of handling aortic insufficiency in the pediatric population needing mechanical circulatory support. *Pediatr Cardiol*. 2011 Dec;32(8):1231-3.
5. Niebler RA, Christensen M, McArthur J. Plasma Transfusion and Lung Injury in the Pediatric Intensive Care Unit. *J Blood Disord Transfus* 2012(3):122. doi:10.4172/2155-9864.1000122
6. Niebler RA, Gill JC, Brabant CP, Mitchell ME, Nugent M, Simpson P, Tweddell JS, Ghanayem NS. Thromboelastography in the assessment of bleeding following surgery for congenital heart disease. *World J Pediatr Congenit Heart Surg*. 2012 Oct 01;3(4):433-8.
7. Almond CS, Morales DL, Blackstone EH, Turrentine MW, Imamura M, Massicotte MP, Jordan LC, Devaney EJ, Ravishankar C, Kanter KR, Holman W, Kroschwitz R, Tjossem C, Thuita L, Cohen GA, Buchholz H, St Louis JD, Nguyen K, Niebler RA, Walters HL 3rd, Reemtsen B, Wearden PD, Reinhartz O, Guleserian KJ, Mitchell MB, Bleiweis MS, Canter CE, Humpl T. Berlin Heart EXCOR pediatric ventricular assist device for bridge to heart transplantation in US children. *Circulation*. 2013 Apr

- 23;127(16):1702-11.
8. Niebler RA, Lew SM, Zangwill SD, Woods RK, Mitchell ME, Tweddell JS, Ghanayem NS. Incidence and outcome of pediatric patients with intracranial hemorrhage while supported on ventricular assist devices. *Artif Organs*. 2014 Jan;38(1):73-8.
 9. Niebler RA, Mitchell ME, Scott JP. Repeated aortopulmonary shunt thrombosis in a neonatal patient with a low antithrombin level. *World J Pediatr Congenit Heart Surg*. 2014 Jan 01;5(1):94-6.
 10. Niebler RA, Ghanayem NS, Shah TK, De La Rosa Bobke A, Zangwill S, Brosig C, Frommelt MA, Mitchell ME, Tweddell JS, Woods RK. Use of a HeartWare ventricular assist device in a patient with failed Fontan circulation. *Ann Thorac Surg*. 2014 Apr;97(4):e115-6.
 11. Gaies MG, Jeffries HE, Niebler RA, Pasquali SK, Donohue JE, Yu S, Gall C, Rice TB, Thiagarajan RR. Vasoactive-inotropic score is associated with outcome after infant cardiac surgery: an analysis from the Pediatric Cardiac Critical Care Consortium and Virtual PICU System Registries. *Pediatr Crit Care Med*. 2014 Jul;15(6):529-37. PMID: PMC4159673
 12. Niebler RA, Shah TK, Mitchell ME, Woods RK, Zangwill SD, Tweddell JS, Berger S, Ghanayem NS. Ventricular Assist Device in Single-Ventricle Heart Disease and a Superior Cavopulmonary Anastomosis. *Artif Organs*. 2016 Feb;40(2):180-4.
 13. Niebler RA, Woods KJ, Murkowski K, Ghanayem NS, Hoffman G, Mitchell ME, Punzalan RC, Scott JP, Simpson P, Tweddell JS. A Pilot Study of Antithrombin Replacement Prior to Cardiopulmonary Bypass in Neonates. *Artif Organs*. 2016 Jan;40(1):80-5.
 14. Imielski BR, Niebler RA, Kindel SJ, Woods RK. HeartWare Ventricular Assist Device Implantation in Patients With Fontan Physiology. *Artif Organs*. 2017 Jan;41(1):40-46.
 15. Auerbach SR, Richmond ME, Schumacher KR, Lopez-Colon D, Mitchell MB, Turrentine MW, Cantor RS, Niebler RA, Egtesady P. Infectious complications of ventricular assist device use in children in the United States: Data from the Pediatric Interagency Registry for Mechanical Circulatory Support (Pedimacs). *J Heart Lung Transplant*. 2018 Jan;37(1):46-53. PMID: PMC5849428
 16. Woods RK, Niebler RA, Kindel S, Mitchell ME, Tweddell JS, Hraska V. Multiple Mechanical Support Modalities and Cardiac Transplantation in a Young Child with Corrected Transposition. *J Thorac Cardiovasc Surg*. 2017 Dec 13 (Epub ahead of print).
 17. Bercovitz RS, Shewmake AC, Newman DK, Niebler RA, Scott JP, Stuth E, Simpson PM, Yan K, Woods RK. Validation of a definition of excessive postoperative bleeding in infants undergoing cardiac surgery with cardiopulmonary bypass. *J Thorac Cardiovasc Surg*. 2018 May;155(5):2112-2124.e2.
 18. Woods RK, Kindel SJ, Mitchell ME, Hraska V, Niebler RA. Total Artificial Heart Using Bilateral Paracorporeal Pulsatile Ventricular Assist Devices in an 8.2-kg Child. *Ann Thorac Surg*. 2018 Jun;105(6):e255-e257.
 19. Conway J, Miera O, Adachi I, Maeda K, Egtesady P, Henderson HT, Guleserian K, Fan CS, Kirk R, Pediatric VAD Investigators. Worldwide Experience of a Durable Centrifugal Flow Pump in Pediatric Patients. *Semin Thorac Cardiovasc Surg*. 2018 Autumn;30(3):327-335.
 20. Niebler RA, Parker H, Hoffman GM. Impact of Anticoagulation and Circuit Technology on Complications During Extracorporeal Membrane Oxygenation. *ASAIO J*. 2019;65(3):270-276.
 21. Scott JP, Niebler RA, Stuth EAE, Newman DK, Tweddell JS, Bercovitz RS, Benson DW, Cole R, Simpson PM, Yan K, Woods RK. Rotational Thromboelastometry Rapidly Predicts Thrombocytopenia and Hypofibrinogenemia During Neonatal Cardiopulmonary Bypass. *World J Pediatr Congenit Heart Surg*. 2018 Jul;9(4):424-433.
 22. Woods RK, Niebler R, Kindel S, Troshynski T, Joyce LD, Hraska V. A new method for implanting a total artificial heart in the patient with a Fontan circulation. *J Thorac Cardiovasc Surg*. 2019 Jan;157(1):353-355.
 23. Jeewa A, Imamura M, Canter C, Niebler RA, VanderPluym C, Rosenthal DN, Kirklin JK, Cantor RS, Tresler M, McMullan DM, Morell VO, Turrentine M, Ameduri R, Nguyen K, Kanter K, Conway J, Gajarski R, Fraser CD, Jr., Long-term outcomes after transplantation after support with a pulsatile pediatric ventricular assist device. *J Heart Lung Transplant*. 2019 Apr;38(4):449-455.
 24. VanderPluym CJ, Adachi I, Niebler R, Griffiths E, Fynn-Thompson F, Chen S, O'Connor MJ, Machado D, Hawkins B, Bleiweis MS, Koehl DA, Cantor RS, Morales D, Lorts A. Outcomes of children supported with an intracorporeal continuous-flow left ventricular assist system. *J Heart Lung Transplant*. 2019 Apr;38(4):385-393.
 25. Maroney SA, Peterson JA, Zwifelhofer W, Martinez ND, Yan K, Niebler RA, Stuth EAE, Scott JP, Bercovitz RS, Woods RK, Mast AE. Erratum to: "Erratum to: Plasma proteolytic cascade activation during neonatal cardiopulmonary bypass surgery". *Thromb Haemost*. 2019 Jan;119(1):187.

26. Hoffman GM, Scott JP, Ghanayem NS, Stuth EA, Mitchell ME, Woods RK, Hraska V, Niebler RA, Bertrandt RA, Mussatto KA, Tweddell JS. Identification of Time-Dependent Risks of Hemodynamic States After Stage 1 Norwood Palliation. *Ann Thorac Surg.* 2020 Jan;109(1):155-162.
27. Niebler RA. Acquired von Willebrand Syndrome in Pediatric Extracorporeal Membrane Oxygenation: Sheared and Cleaved Everywhere, but What to Do About It? *Pediatr Crit Care Med.* 2019 Oct;20(10):998-999.
28. Woods RK, Kindel S, Mitchell ME, Hraska V, Niebler RA. Evolving understanding of total artificial heart support of young infants and children. *J Thorac Cardiovasc Surg.* 2020 Mar;159(3):1075-1082.
29. Zwifelhofer NMJ, Bercovitz RS, Cole R, Yan K, Simpson PM, Moroi A, Newman PJ, Niebler RA, Scott JP, Stuth EAD, Woods RK, Benson DW, Newman DK. Platelet Function Changes during Neonatal Cardiopulmonary Bypass Surgery: Mechanistic Basis and Lack of Correlation with Excessive Bleeding. *Thromb Haemost.* 2020 Jan;120(1):94-106. PMID: PMC7003188
30. VanderPluym CJ, Cantor RS, Machado D, Boyle G, May L, Griffiths E, Niebler RA, Lorts A, Rossano J, Sutcliffe DL, Lytrivi ID, Buchholz H, Fynn-Thompson F, Hawkins B, Conway J. Utilization and Outcomes of Children Treated with Direct Thrombin Inhibitors on Paracorporeal Ventricular Assist Device Support. *ASAIO J.* 2019 Nov 20.
31. Lorts A, Smyth L, Gajarski RJ, VanderPluym CJ, Mehegan M, Villa CR, Murray JM, Niebler RA, Almond CS, Thrush P, O'Connor MJ, Conway J, Sutcliffe DL, Lantz JE, Zafar F, Morales DLS, Peng DM, Rosenthal DN. The Creation of a Pediatric Health Care Learning Network: The ACTION Quality Improvement Collaborative. *ASAIO J.* 2020 Apr;66(4):441-446.
32. Niebler RA, Amdani SM, Blume B, Cantor RS, Deng L, Kirklin JK, Lorts A, Morales D, Rosenthal DN, Ghanayem NS. Stroke in Pediatric Ventricular Assist Device Patients-A PediMACS Registry Analysis. *J Heart Lung Transplant.* 2020 Apr;39(4S):S129-S130.
33. Hoffman GM, Niebler RA, Scott JP, Bertrandt RA, Wakeham MK, Thompson NE, Ghanayem NS, Stuth EA, Mitchell ME, Woods RK, Hraska V, Mussatto KA, Tweddell JS. Interventions Associated With Treatment of Low Cardiac Output After Stage 1 Norwood Palliation. *Ann Thorac Surg.* 2021 May;111(5):1620-1627.
34. Niebler RA, Chiang-Ching H, Daley K, Janecke R, Jobe SM, Mitchell ME, Varner C, Woods K, Scott JP. Nitric oxide added to the sweep gas of the oxygenator during cardiopulmonary bypass in infants: A pilot randomized controlled trial. *Artif Organs.* 2021 Jan;45(1):22-28.
35. VanderPluym CJ, Cantor RS, Machado D, Boyle G, May L, Griffiths E, Niebler RA, Lorts A, Rossano J, Sutcliffe DL, Lytrivi ID, Buchholz H, Fynn-Thompson F, Hawkins B, Conway J. Utilization and Outcomes of Children Treated with Direct Thrombin Inhibitors on Paracorporeal Ventricular Assist Device Support. *ASAIO J.* 2020 Aug;66(8):939-945.
36. Zafar F, Conway J, Bleiweis MS, Al-Aklabi M, Ameduri R, Barnes A, Bearl DW, Buchholz H, Church S, Do NL, Duffy V, Dykes JC, Eghtesady P, Fisher L, Friedland-Little J, Fuller S, Fynn-Thompson F, George K, Gossett JG, Griffiths ER, Griselli M, Hawkins B, Honjo O, Jeewa A, Joong A, Kindel S, Kouretas P, Lorts A, Machado D, Maeda K, Maurich A, May LJ, McConnell P, Mehegan M, Mongé M, Morales DLS, Murray J, Niebler RA, O'Connor M, Peng DM, Phelps C, Philip J, Ploutz M, Profsky M, Reichhold A, Rosenthal DN, Said AS, Schumacher KR, Si MS, Simpson KE, Sparks J, Louis JS, Steiner ME, VanderPluym C, Villa C, ACTION Learning Network Investigators. Berlin Heart EXCOR and ACTION post-approval surveillance study report. *J Heart Lung Transplant.* 2021 Apr;40(4):251-259.
37. Cedars A, Kutty S, Danford D, Schumacher K, Auerbach SR, Bearl D, Chen S, Conway J, Dykes JC, Jaworski N, Joong A, Lorts A, Mascio CE, Morales DLS, Niebler RA, O'Connor M, Peng DM, Philip J, Reichman JR, Rosenthal DN, Zafar F, VanderPluym C, Villa C, Zinn M. Systemic ventricular assist device support in Fontan patients: A report by ACTION *Journal of Heart and Lung Transplantation.* 2021.
38. Cedars A, Kutty S, Danford D, Schumacher K, ACTION Learning Network Investigators, Auerbach SR, Bearl D, Chen S, Conway J, Dykes JC, Jaworski N, Joong A, Lorts A, Mascio CE, Morales DLS, Niebler RA, O'Connor M, Peng DM, Philip J, Reichman JR, Rosenthal DN, Zafar F, VanderPluym C, Villa C, Zinn M. Systemic ventricular assist device support in Fontan patients: A report by ACTION. *J Heart Lung Transplant.* 2021 May;40(5):368-376.
39. Niebler RA, Amdani S, Blume B, Cantor RS, Deng L, Kirklin JK, Lorts A, Morales DL, Rosenthal DN, Ghanayem NS. Stroke in pediatric ventricular assist device patients-a pedimacs registry analysis. *J Heart Lung Transplant.* 2021 Jul;40(7):662-670.
40. Lorts A, Conway J, Schweiger M, Adachi I, Amdani S, Auerbach SR, Barr C, Bleiweis MS, Blume ED,

- Burstein DS, Cedars A, Chen S, Cousino-Hood MK, Daly KP, Danziger-Isakov LA, Dubyk N, Eastaugh L, Friedland-Little J, Gajarski R, Hasan A, Hawkins B, Jeewa A, Kindel SJ, Kogaki S, Lantz J, Law SP, Maeda K, Mathew J, May LJ, Miera O, Murray J, Niebler RA, O'Connor MJ, Özbaran M, Peng DM, Philip J, Reardon LC, Rosenthal DN, Rossano J, Salazar L, Schumacher KR, Simpson KE, Stiller B, Sutcliffe DL, Tunuguntla H, VanderPluym C, Villa C, Wearden PD, Zafar F, Zimpfer D, Zinn MD, Morales IRD, Cowger J, Buchholz H, Amodeo A. ISHLT consensus statement for the selection and management of pediatric and congenital heart disease patients on ventricular assist devices Endorsed by the American Heart Association. *J Heart Lung Transplant.* 2021 Aug;40(8):709-732.
41. Scott JP, Tanem JM, Tomita-Mitchell A, Hoffman GM, Niebler RA, Liang HL, Simpson PM, Stamm KD, North PE, Mitchell ME. Elevated nuclear and mitochondrial cell-free deoxyribonucleic acid measurements are associated with death after infant cardiac surgery. *J Thorac Cardiovasc Surg.* 2022 Aug;164(2):367-375.
 42. McCrindle BW, Michelson AD, Van Bergen AH, Suzana Horowitz E, Pablo Sandoval J, Justino H, Harris KC, Jefferies JL, Miriam Pina L, Peluso C, Nessel K, Lu W, Li JS, UNIVERSE Study Investigators *. Thromboprophylaxis for Children Post-Fontan Procedure: Insights From the UNIVERSE Study. *J Am Heart Assoc.* 2021 Nov 16;10(22):e021765. PMID: PMC8751951
 43. Villa CR, VanderPluym CJ, ACTION Investigators*. ABCs of Stroke Prevention: Improving Stroke Outcomes in Children Supported With a Ventricular Assist Device in a Quality Improvement Network. *Circ Cardiovasc Qual Outcomes.* 2020 Dec;13(12):e006663.
 44. Hamzah M, Seelhammer TG, Yabrodi M, Beshish AG, Byrnes JW, Hall J, Wang L, Niebler RA. Evaluation of Bivalirudin Dosing in Pediatric Extracorporeal Membrane Oxygenation with Renal Insufficiency or Renal Replacement Therapy. *ASAIO J.* 2022 Nov 01;68(11):e196-e203.
 45. Tanem JM, Scott JP, Hoffman GM, Niebler RA, Tomita-Mitchell A, Stamm KD, Liang HL, North PE, Bertrand RA, Woods RK, Hraska V, Mitchell ME. Nuclear Cell-Free DNA Predicts Adverse Events After Pediatric Cardiothoracic Surgery. *Ann Thorac Surg.* 2022 Nov 01.
 46. Benson JW, Hraska V, Scott JP, Stuth EAE, Yan K, Zhang J, Niebler RA. Comparison of Prothrombin Complex Concentrate with Activated Factor VII Use for Bleeding Following Cardiopulmonary Bypass in Children. *World J Pediatr Congenit Heart Surg.* 2023 Mar 15;21501351231162911.

Books, Chapters, and Reviews

1. Meyer M, Niebler R, Quasney M. "Extracorporeal Membrane Oxygenation" in *Current Concepts in Pediatric Critical Care.* Society of Critical Care Medicine; Mount Prospect, IL 2011
2. Hehir DA, Niebler RA, Brabant CC, Tweddell JS, Ghanayem NS. Intensive care of the pediatric ventricular assist device patient. *World J Pediatr Congenit Heart Surg.* 2012 Jan 01;3(1):58-66.
3. Giglia TM, Dinardo J, Ghanayem NS, Ichord R, Niebler RA, Odegard KC, Massicotte MP, Yates AR, Laussen PC, Tweddell JS. Bleeding and thrombotic emergencies in pediatric cardiac intensive care: unchecked balances. *World J Pediatr Congenit Heart Surg.* 2012 Oct 01;3(4):470-91.
4. Woods RK, Ghanayem NS, Mitchell ME, Kindel S, Niebler RA. Mechanical Circulatory Support of the Fontan Patient. *Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu.* 2017 Jan;20:20-27.
5. Niebler RA, Lehmann LE. "ECMO use in the Pediatric Immunocompromised Hematology/Oncology Patient" in *Critical Care of the Pediatric Immunocompromised Hematology/Oncology Patient-An Evidence Based Guide.* Springer International Publishing; Cham, Switzerland 2019.

Peer Reviewed Educational Products

1. Niebler RA. Critical Appraisal of: Cambonie G, Milesi C, Fournier-Favre S, et al. Clinical Effects of Heliox Administration for Acute Bronchiolitis in Young Infants. *Chest* 2006; 129:676-682. In *The PedsCCM Evidence-Based Journal Club*, October 2, 2006. Available from: <http://pedscm.org/view.php?id=308>. Accessed May 8, 2008.
2. Niebler RA. Critical Appraisal of: Khan H, Belsher J, Yilmaz M, Afessa B, Moore SB, Hubmayr RD, Gajic O. Fresh frozen plasma and platelet transfusions are associated with development of acute lung injury in critically ill medical patients. *Chest* 2007 131:1308-1314. In *The PedsCCM Evidence-Based Journal Club*, April 5, 2008. Available from: <http://pedscm.org/view.php?id=476>. Accessed May 8, 2008.