

Curriculum Vitae

Name: Jessica A. Davis, PhD, RN, CCRN, IBCLC

**Business Address: 3000 Children's Hospital
Office Building
Pittsburgh, PA 15213**

E-Mail: jad312@pitt.edu

Personal Statement

My aspiration is to become an independent clinician scientist with an interdisciplinary program of research that utilizes research methodologies rooted in health equity and community-based research to achieve life-long positive outcomes of children born with congenital heart defects (CHD). As the first step in this journey, I pursued my PhD in Nursing at the University of Pittsburgh. During my predoctoral training, I completed a research apprenticeship to identify in-hospital barriers to lactation goal attainment in infant cohorts. Relatedly, my dissertation research project involved an examination of the associations between human milk, gut microbiome composition, and feeding outcomes among neonates with CHD. My exploration of modifiable risk factors (neonatal diet) and biomarkers (gut microbiome) in the pathway to development of feeding intolerance, necrotizing enterocolitis, and malnutrition was completed by building a retrospective data set of electronic health record (EHR) data from hospitalized neonates with CHD and by conducting a microbiome study in a complementary prospective cohort. Results indicated that human milk and direct chest/breastfeeding may be protective against adverse outcomes in CHD cohorts.

As a Postdoctoral Scholar on a HRSA NRSA T32 at the University of Pittsburgh's School of Medicine, I have continued investigations regarding facilitators and barriers of positive lactation and nutrition outcomes among infants with CHD. Although my initial intention was to continue microbiome science, I realized that systemic inequities in clinical practices are a primary component of the health outcomes I was observing. Therefore, I have pursued training in methodologies rooted in health equity and qualitative science. I used clinical data collected during my dissertation to explore associations between indicators of systemic racism and birth and lactation outcomes in neonates with CHD. I am also conducting a qualitative analysis describing parent perceptions of infant feeding and maternal health research in the setting of a fetal/infant CHD diagnosis. This qualitative project is essential to my career development, as I will receive qualitative research training, and will learn how to respectfully investigate these emotionally charged topics. My postdoctoral training will ensure respectful, inclusive, and culturally appropriate interpretation and dissemination of results. Further, these projects provide preliminary data to support my K23 project proposal (February 2025 submission), a pilot study of an adaptive doula support intervention for mothers at high risk for distress and lactation attrition and who give birth to infants with CHD.

Education and Training

Undergraduate

August 2007-May 2011	Northern Arizona University Flagstaff, AZ	Bachelor of Science Nursing
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Graduate

August 2019-August 2023	University of Pittsburgh Pittsburgh, PA	Doctor of Philosophy Nursing Science, Minor in
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Appointments and Positions**Academic**

April 1 st , 2024 - December 31 st , 2024	Environmental Health Research Institute for Nurse and Clinician Scientists	Fellow
June 24 th , 2023 - Present	University of Pittsburgh School of Medicine Department of Pediatrics HRSA NRSA T32 Primary Care Research (Grant # T32HP22240)	Postdoctoral Scholar
January 2022- April 2022	University of Pittsburgh School of Nursing NUR 1042-Nursing Care of Children and Families	Clinical Instructor
August 2021- June, 23 rd 2023	University of Pittsburgh School of Nursing Targeted Research and Academic Training Program for Nurses in Genomics Award T32NR009759	Predoctoral Fellow
August 2020- December 2020	Salk Health Activist Fellowship Jewish Health Care Foundation	Fellow
January 2020- December 2021	University of Pittsburgh PREPARE Study (PI: Demirci)	Graduate Student Researcher
May 2020	University of Pittsburgh NUR 0087- Pharmacology and Therapeutics Across the Lifespan	Teaching Assistant
August 2019- August 2023	ARCS Foundation Pittsburgh Chapter	Predoctoral Scholar
August 2019- December 2019	University of Pittsburgh NUR 1050- Nursing Care of Mothers, Newborns, and Families	Clinical Instructor
Non-Academic 2018-2019	UPMC Children's Hospital of Pittsburgh	Lactation Consultant
2017-2018	UPMC Children's Hospital of Pittsburgh Neonatal Nurse Fellowship	Fellow
2015-2018 2022-present	UPMC Children's Hospital of Pittsburgh Cardiac Intensive Care Unit	Senior Professional Staff Nurse II

2013-2015	UPMC Magee Women's Hospital Woman Care Birth Center Obstetric Critical Care	Professional Staff Nurse
2013-2014	The Midwife Center for Birth and Women's Health	RN Birth Assistant
2011-2013	UPMC Children's Hospital of Pittsburgh Neonatal Intensive Care Unit	Staff Nurse
2010	UPMC Children's Hospital of Pittsburgh Neonatal Intensive Care	Student Nurse Intern

Licensure and Certification

2011-Present	RN 627615 Pennsylvania Department of State	Pennsylvania Registered Nurse
2016-Present	Certified Critical Care Nurse American Association of Critical Care Nurses	Pennsylvania Pediatrics
2018-Present	IBCLC L-130013 International Board of Lactation Consultant Examiners	Pennsylvania Board Certified Lactation Consultant (IBCLC)

Membership in Professional and Scientific Societies

2023-Present	Cardiac Neurodevelopmental Outcome Collaborative Member – Cardiac Newborn Neuroprotective Network Special Interest Group Co-Lead – Breastfeeding and CHD Special Interest Group
2022-Present	Pediatric Cardiac Intensive Care Society
2020-Present	NeoHeart Society
2020-Present	Sigma Theta Tau International Nursing Honor Society
2019-Present	International Society of Nurses in Genetics (ISONG)
2021	Education Committee
2020	Congress Committee
2019-Present	United States Lactation Consultant Association (USLCA)
2018-Present	Peer Leader, La Leche League
2018-2021	International Lactation Consultant Association (ILCA)
2017-2021	Northeast Pediatric Cardiology Nurses Association (NPCNA)
2017-2021	National Association for Neonatal Nurses (NANN)
2016-2018	American Academy of Critical Care Nurses (AACN)
2013-2014	American College of Nurse Midwives (ACNM)
2014	Student Liaison
2011-2020	Association of Women's Health, Obstetrical and Neonatal Nurses (AWHONN)

Honors

- 2007-2011 Dean's List, College of Health and Human Services
Northern Arizona University
- 2018 Daisy Award Nominee (nursing service award)
UPMC Children's Hospital of Pittsburgh
- 2021 Invited Student Presenter, Rising Stars of Research and Scholarship
32nd International Congress, Sigma Theta Tau International

Publications

Refereed Articles

ORCID ID- 0000-0002-1295-4149

1. Elgersma K.M., Engel M.L., Ramel S.E., **Davis J.A.**, McKechnie A.C., Pfister K.M. (2024) Human milk, breastfeeding, and early neurodevelopmental outcomes for infants with critical CHD. *Cardiology in the Young*. Published online 2024:1-9. doi:10.1017/S1047951124025228
2. **Davis, J.A.**, Baumgartel, K., Baust, T., Conley, Y.P., Ren, D., Morowitz, M.J., and Demirci, J.R. (2024) Neonatal Diet Type and Associations with Adverse Feeding Outcomes Among Neonates with Critical Congenital Heart Defects. *Journal of Perinatal and Neonatal Nursing*. Published online ahead of print on January 18, 2024. | DOI: 10.1097/JPN.0000000000000790
3. Ray, M., Wallace, M.K., Grayson, S.C., Cummings, M.H., **Davis, J.A.**, Scott, J.L., Belcher, S.M., Davis, T., Conley, Y.P. (2023) Epigenomic links between social determinants of health and symptoms: A scoping review. *Biological Research for Nursing*.
4. **Davis, J.A.**, Ho, R., P, E.K., Kim, A., Lin, J.H., & Morowitz, M.J. (2022) Early empiric antibiotic treatment among neonates with congenital heart defects: A brief report of an integrative review. *Critical Care Explorations*
5. **Davis, J.A.**, Glasser, M., Clemens, M., Eichhorn, B., Vats, K., & Demirci, J.R. (2022) Antenatal milk expression and breastfeeding outcomes for mothers of infants with surgical defects: A case series. *Journal of Perinatal and Neonatal Nursing*
6. **Davis, J.A.**, Glasser, M., Scott, P., Spatz, D.L., & Demirci, J.R. (2022) First feed type is associated with birth/lactating parent's own milk use during NICU stay among infants who require surgery. *Advances in Neonatal Care: Official Journal of the National Association of Neonatal Nurses*, doi: 10.1097/ANC.0000000000000981. Advance online publication.
7. Demirci, J.R., **Davis, J.A.**, Glasser, M., and Brozanski, B. (2021) Prevalence and patterns of gestational parent's own milk feeds among infants with major congenital surgical anomalies in the NICU. *Journal of Perinatology*.

8. **Davis, J.A.**, Baumgartel, K., Giangrasso, V., Morowitz, M.J., & Demirci, J.R. (2020) The role of human milk in decreasing necrotizing enterocolitis through modulation of the infant gut microbiome: A scoping review. *Journal of Human Lactation*. doi:10.1177/0890334420950260
9. **Davis, J** & Spatz DL (2019) Human milk and infants with congenital heart disease: A summary of current literature supporting the provision of human milk and breastfeeding. *Advances in Neonatal Care*, 19(3): 212-218. doi: 10.1097/ANC.0000000000000582

Published Abstracts

1. **Davis, J.A.**, Baumgartel, K., Conley, Y.P., Firek, B., Mazzacco, S., Morowitz, M.J., Ren, D., Seifert, N., and Demirci, J.R. (2023) Neonatal Diet Type and Microbiome Composition in Neonates with Critical Congenital Heart Defects. *International Society of Nurses in Genetics 2023 Congress*.
2. **Davis, J.A.**, Baumgartel, K., Conley, Y.P., Ren, D., Morowitz, M.J., and Demirci, J.R. (2023) Neonatal Diet Type and Associations with Adverse Feeding Outcomes Among Neonates with Critical Congenital Heart Defects. *World Congress for Pediatric Cardiology and Cardiac Surgery*.
3. **Davis, J.A.**, Baust, T, and Morowitz, M.J. (2023) Prevalence and Patterns of Antibiotic Treatment in Neonates with Critical Congenital Heart Defects. *Association for European Paediatric and Congenital Cardiology Annual Meeting*.
4. **Davis, J.A.**, Glasser, M., Clemens, M., Eichhorn, B., Vats, K., & Demirci, J.R. (2021) Antenatal milk expression and breastfeeding outcomes for mothers of infants with surgical defects: A case series. *National Association of Neonatal Nurses 2021 Conference*. Virtual Poster Presentation.
5. **Davis, J.A.**, Glasser, M., Clemens, M., Eichhorn, B., Vats, K., & Demirci, J.R. (2021) Antenatal milk expression and breastfeeding outcomes for mothers of infants with surgical defects: A feasibility study. *Sigma Theta Tau International 2021 Congress*. Virtual Poster Presentation.

Reviews, Invited Published Papers, Proceedings, Monographs Book Chapters and Books

1. **Davis, J.A.** & Demirci, JR (2021) A vision for the future of nursing leadership in the lactation field. *Journal of Perinatal and Neonatal Nursing*.
2. Jiuann-Huey, I. L ; Judy Squire, J; Malek, M; **Davis, J**; Munoz, R. (2019) Gastrointestinal Complications: Necrotizing Enterocolitis, Malrotation, Protein Losing Enteropathy and Nasogastric Tube syndrome. In *Critical Care of Children with Heart Disease: Basic Medical and Surgical Concepts*

Other Publications

1. **Davis, J.A.** (2021) Beyond the NICU. *USLCA Amplify*. Op-Ed.

Research

Principal Investigator

Ongoing Research Support

SDOH & Place Fellowship

Indicators of Health-Related Social Needs and Birth and Lactation Outcomes in Neonates with Congenital Heart Defects

02/16/2024-12/31/3024

Award Amount: \$5,000

Heilbrunn Nurse Scholar Research Award, Rockefeller University

Neonatal Diet Type and Associations with Adverse Feeding Outcomes and Gut Microbiome Composition in Neonates with Critical Congenital Heart Defects

07/01/2022-06/30/2024

Award Amount: \$24,000

Completed Research Support

Margaret E. Wilkes Scholarship, University of Pittsburgh School of Nursing Internal Awards

The Impact of Neonatal Diet Type on Adverse Feeding Outcomes and Gut Microbiome Composition in Neonates with Critical Congenital Heart Defects

11/1/2021-08/31/2023

Award Amount: \$7,500

Sigma/Rosemary Berkel Crisp Research Award, Sigma

Neonatal Diet Type and Associations with Adverse Feeding Outcomes and Gut Microbiome Composition in Neonates with Critical Congenital Heart Defects

06/01/2022-05/31/2023

Award Amount: \$5,000

University of Washington Summer Institute in Statistics and Modeling in Infectious Disease

Summer Institute Scholarship

Award Amount: \$900

Sigma Theta Tau Eta Chapter Research Award

The Impact of Neonatal Diet Type on Adverse Feeding Outcomes and Gut Microbiome Composition in Neonates with Critical Congenital Heart Defects

6/1/2021-6/30/2022

Award Amount: \$1,000

ARCS Foundation Scholarship, Pittsburgh Chapter

The Impact of Neonatal Diet Type on Adverse Feeding Outcomes and Gut Microbiome Composition in Neonates with Critical Congenital Heart Defects

8/1/2019-5/31/2022

Award Amount: \$15,000

Corrine M. Barnes Scholarship, University of Pittsburgh School of Nursing

The Impact of Neonatal Diet Type on Adverse Feeding Outcomes and Gut Microbiome Composition in Neonates with Critical Congenital Heart Defects

8/1/2019-5/31/2020

Award Amount: \$20,500

Beckwith Frontline Innovation Grant, Beckwith Foundation

*Breastfeeding Support and Education for Families and Staff of the Heart and Vascular
Institute of Children's Hospital of Pittsburgh of UPMC*

1/1/2018-12/31/2018

Award Amount: \$10,000

Other Scholarly Activities

Editorial Board Membership

2023- Journal of Perinatal and Neonatal Nursing

Manuscript Reviewer

2022- Journal of Perinatal and Neonatal Nursing

2020- Journal of Neonatal Nursing

2020- Academy of Breastfeeding Medicine

2019- Advances in Neonatal Nursing

Unpublished Presentations

(International; National; Regional; Local)

International

1. **Davis, J.A.**, Ghassemzadeh, R., Baust, T., Firek, B., Quigley, L., Kreutzer, J., Morowitz, M.J., & Martin, J.M. (Abstract Accepted) A Descriptive Survey of Antibiotic Prescribing Practices and Beliefs Among Pediatric Cardiac Clinicians. *Pediatric Cardiac Intensive Care Society Annual Conference 2024*.
2. Elgersma, K.M., **Davis, J.A.**, Mohan O'Neill, S., Overpeck, S.R., Desai, H., Gauntt, J., Godsil, J.L., Gray, J.K., Harris Dixon, B.D., Hodgson, S.W., Marks, C.J., Mekler, E.R., Momin, N.H., Morris, K.M., Muller, K.M., Negrin, K.A., Scheiderer, V.L., Slater, N.L., Butler, S.C., & Peterson, J.K. (2024) Breastfeeding Infants with Critical Congenital Heart Disease: A Science Advisory and Call to Action from the Cardiac Newborn Neuroprotective Network. *Cardiac Neurodevelopmental Outcome Collaborative 2024 Annual Meeting*.
3. **Davis, J.A.**, Elgersma, K.M., Klein, J., Ray, M., Scott, J., & Levine, M. (2024) Indicators of health-related social needs as predictors for birth and lactation outcomes among neonates with critical congenital heart defects: A preliminary analysis. *Pediatric Academic Societies Meeting 2024*.
4. Ray, M., **Davis, J.A.**, & Scott, J. History of racism and oppressive language in omics research. *International Society of Nurses in Genetics (ISONG) 2021 Conference*, November 5-7, 2021. Video Recording
5. **Davis, J.A.** Human milk influences the bacterial composition of the premature infant gut microbiome: A scoping review. *2020 ISONG International Congress*, 13-15 November 2020. Virtual Poster Presentation

National

1. **Davis, J.A.** Supporting lactation in the setting of a congenital heart defect. *USLCA Live Webinars*, August 18th, 2021. Synchronous Virtual Presentation

Regional

1. Elgersma, K. M., Engel, M. L., Ramel, S. E., **Davis, J. A.**, McKechnie, A. C., Pfister, K. M. (2024, April 14). Human milk, breastfeeding, and early neurodevelopmental outcomes for infants with critical congenital heart disease. [Oral presentation]. Nursing Research Day 2024, University of Minnesota, Minneapolis, Minnesota, United States.
2. **Davis, J.A.**, Glasser, M., & Demirci, J.R. First feed composition predicts formula use at NICU discharge among surgical infants. *Pennsylvania Health Care Mosaic Conference*, 1-5 March 2021. Virtual Poster Presentation.
3. **Davis, J.A.**, Baust, T., & Domnina, Y. Improvement of breastfeeding outcomes for neonates and infants with congenital heart disease. *Nurses Week Conference*, May 2019. Poster Presentation
4. **Davis, J.A.** Postpartum mood disorders in the setting of the Neonatal Intensive Care Unit. *At the Bedside Nursing Fellows Conference*, March 2018. Podium Presentation
5. **Davis, J.A.** Breastfeeding the infant with congenital heart disease: A Certified Breastfeeding Counselor's approach. *Northeast Pediatric Cardiology Nurses Association Annual Conference*, October 13-15, 2017. Podium Presentation

Other Presentations

1. **Davis, J.A.**, Baust, T., & Domnina, Y. Heart and Vascular Institute breastfeeding outcomes. *QAPI*, November 2018. Heart and Vascular Institute of Children's Hospital of Pittsburgh. Podium Presentation
2. **Davis, J.A.** Human milk and the newborn with cardiac disease. *Breastfeeding Education for the Heart and Vascular Institute of Children's Hospital of Pittsburgh of UPMC*. June 2018. Podium Presentation.

Teaching

Teaching Assistant

Fall/Spring AY 2022/23	Nursing Care of Children and Their Families-Clinical/Didactic University of Pittsburgh School of Nursing
Summer 2020	Pharmacology and Therapeutics Across the Lifespan University of Pittsburgh School of Nursing
Fall 2019	Nursing Care of Mothers, Newborns, and Families-Clinical University of Pittsburgh School of Nursing

Academic Lecturer/Guest Lecture

Fall 2023 International Association for Breastfeeding and Lactation Education (IBALE) Single-day Conference: Congenital Heart Defects and Lactation and Breastfeeding
Topic: Anticipatory Guidance for Lactation in the Setting of Congenital Heart Defects

Fall 2023 Topic: Effects of Maternal Medications on Breastfeeding, Particularly Effects of Labor Analgesia and Postpartum Analgesia
Audience: Obstetric anesthesia fellows

Summer 2022 Management of the Fetus and Neonate in Dyad
Topic: Breastfeeding Assessment and Management of Common Problems

Fall 2021 Nursing Care of Children and Their Families-Lecture
Topics: Neurodevelopmental Care and Anticipatory Guidance; Cardiovascular Disorders; Lactation for the High-Risk Newborn

Patient and Staff Education

March 2024 Cardiac Skills Fair at UPMC Children's Hospital of Pittsburgh
Topic: Resources and technologies to support lactation
Audience: Registered Nurses

March 2021 Feeding with Congenital Heart Disease 101
CHP Healing Hearts Virtual Program
Co-presenter

2018-2019 Prenatal Lactation Education
Co-educator, Lactation Consultant

2016-2019 Quarterly, monthly, and new hire orientation
Lactation Support
UPMC Children's Hospital of Pittsburgh

2015-2019 Patient Education-Lactation in the Cardiac Intensive Care Unit
Certified Breastfeeding Counselor, Lactation Consultant

2012 Nursing care for infants with Spina Bifida
Single education session

Research Mentoring

Trainee/Student & Where Training Occurred	Training Period	My Role	Research Program	Funding/Awards
R. Ho	2022-2023	Primary Mentor	Undergraduate Research Mentorship Program	n/a

			(Training on Margarete E. Wilkes Scholarship)	
A. Kim	2022-2023	Primary Mentor	Undergraduate Research Mentorship Program	n/a

Service

University Committees

2021-2022 Graduate and Professional Student Government

School Committees

2021-2022 Mentoring Committee, Eta Chapter, University of Pittsburgh
 2019-2023 Graduate Student Nurses Organization (GNSO), University of Pittsburgh
 2021-2022 President (elected)

Other Professional Activities

2024-Present Case Review Team, Fetal and Infant Mortality Review
 Allegheny County Health Department
 2020-Present Board of Directors, Mid-Atlantic Mother's Milk Bank
 Diversity, Equity, and Inclusion Committee
 Board Development and Governance Committee
 2020-2022 Associate Professional Liaison, Western Pennsylvania La Leche League
 2019-2021 Cardiac Necrotizing Enterocolitis (NEC) Working Group, NEC Society