

APRIL 25, 2023

## **PERSONAL INFORMATION**

**Slain, Katherine N.**  
DO

Case Western Reserve University School of Medicine  
UH Rainbow Babies & Children's Hospital  
Department of Pediatrics, Division of Pediatric Critical Care  
11100 Euclid Avenue, Cleveland, Ohio 44106  
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Katherine.Slain@uhhospitals.org

## **EDUCATION & TRAINING**

### **Education**

The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina  
Bachelor of Arts, History  
1998-2001

Chicago College of Osteopathic Medicine/Midwestern University, Downers Grove, Illinois  
Doctor of Osteopathic Medicine  
2005-2009

Case Western Reserve University School of Medicine, Cleveland, Ohio  
Master of Clinical Research (*in progress*)  
2022-present

### **Post-Graduate Training**

Northeast Ohio Medical University, Akron Children's Hospital, Akron, Ohio  
Pediatric Residency and Chief Residency  
2009-2013

Case Western Reserve University School of Medicine, Rainbow Babies & Children's Hospital, Cleveland, Ohio  
Pediatric Critical Care Medicine Fellowship  
2013-2016

## **PROFESSIONAL APPOINTMENTS**

Associate Professor  
Case Western Reserve University School of Medicine  
University Hospitals Cleveland Medical Center  
Rainbow Babies & Children's Hospital  
Department of Pediatrics, Division of Pediatric Critical Care  
07/2022-present

Assistant Professor  
Case Western Reserve University School of Medicine  
University Hospitals Cleveland Medical Center  
Rainbow Babies & Children's Hospital

Department of Pediatrics, Division of Pediatric Critical Care  
07/2016-06/2022

Chief Resident, Clinical Instructor  
Northeast Ohio Medical University  
Akron Children's Hospital  
Department of Pediatrics  
08/2012-06/2013

## **ADDITIONAL CAREER DEVELOPMENT**

### **Leadership Development**

Case Western Reserve University, Weatherhead School of Management  
Cleveland, Ohio  
Perioperative Medicine Administration Certificate  
2014

Northwestern University  
Virtual  
Leading Diversity, Equity, and Inclusion  
2021

### **Research Development**

Children's Hospital Association  
Lenexa, Kansas  
Health Services Research Academy  
2020

Case Western Reserve University  
Cleveland, Ohio  
CRSP 406, Introduction to R Programming  
2021

## **CERTIFICATION & LICENSURE**

### **Certification**

Diplomate, American Board of Pediatrics  
Certificate Number: 102752  
Date Issued: October 18, 2012

Diplomate, American Board of Pediatrics, Pediatric Critical Care Medicine  
Certificate Number: 2929  
Date Issued: November 15, 2018

### **Licensure**

Ohio State Medical License, Active  
License Number: 34.010447  
2012

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

American Academy of Pediatrics  
Fellow  
2009-present

Society of Critical Care Medicine  
Member  
2013-present

Society for Pediatric Research  
Member  
2022-present

## **PROFESSIONAL SERVICES**

### **Manuscript Reviewer**

Jornal de Pediatria, *ad hoc* Reviewer  
2018-present

Respiratory Care, *ad hoc* Reviewer  
2018-present

Pediatric Critical Care Medicine, *ad hoc* Reviewer  
2018-present

Pediatrics, *ad hoc* Reviewer  
2019-present

Pediatric Pulmonology, *ad hoc* Reviewer  
2019-present

Pediatric Research, *ad hoc* Reviewer  
2020-present

Scientific Reports, *ad hoc* Reviewer  
2020-present

Hospital Pediatrics, *ad hoc* Reviewer  
2020-present

Health Expectations, *ad hoc* Reviewer  
2020-present

Journal of Pediatric Intensive Care, *ad hoc* Reviewer  
2020-present

Nutrition, *ad hoc* Reviewer  
2020-present

BMC Health Services Research, *ad hoc* Reviewer  
2021-present

PLOS One, *ad hoc* Reviewer

2022-present

Journal of Pediatrics, *ad hoc* Reviewer

2022-present

## **COMMITTEE SERVICE**

### **International**

Society of Critical Care Medicine

Multidisciplinary Critical Care Knowledge Assessment Program Committee, Pediatrics, Member

2019-present

Society of Critical Care Medicine

Research Section, Member

2019-2022

Society of Critical Care Medicine

Pediatrics Section, Member

2019-present

Society of Critical Care Medicine

Pediatric Critical Care Medicine Fellowship Program Directors' Group, Executive Committee

2020-present

Society of Critical Care Medicine

Clinical Research and Epidemiology Section Committee, Member-at-Large

2020-2022

Pediatric Acute Lung Injury and Sepsis Investigators

Social Determinants of Health Subgroup, Founding Co-Chair

2020-present

Pediatric Acute Lung Injury and Sepsis Investigators

Scientific Committee, Member

2021-present

Virtual Pediatric Systems, LLC

VPS Research Committee

2021-present

### **National**

Children's Hospital Association

Health Services Research Academy, Mentor

2021-present

### **Hospital Affiliate**

Chief Medical Informatics Officer Steering Committee, Member

Akron Children's Hospital

2012-2013

Discharge Improvement Committee, Member

Akron Children's Hospital

2012-2013

YOU Matter Peer Supporter Committee, Member  
UH Rainbow Babies & Children's Hospital  
2019

Decentralized Quality Committee, Member  
UH Rainbow Babies & Children's Hospital  
2020-present

Equity, Diversity, and Inclusion Taskforce, Member  
Data Working Group, Physician Lead  
UH Rainbow Babies & Children's Hospital  
2021-present

General Pediatrics Epic Implementation Operational Workgroup  
UH Rainbow Babies & Children's Hospital  
2021-present

### **Educational Committees**

Pediatric Residency Education Committee, Member  
Akron Children's Hospital  
2012-2013

Graduate Medical Education Committee, Member  
Akron Children's Hospital  
2012-2013

Pediatric Critical Care Fellowship Clinical Competency Committee, Member  
UH Rainbow Babies & Children's Hospital  
2016-Present

Pediatric Critical Care Fellowship Program Evaluation Committee, Member  
UH Rainbow Babies & Children's Hospital  
2016-Present

Pediatric Education Portal Committee, Member  
UH Rainbow Babies & Children's Hospital  
2017-2018

Resident Wellness Committee, Member  
UH Rainbow Babies & Children's Hospital  
2017-2018

Graduate Medical Education Committee, Member  
UH Rainbow Babies & Children's Hospital  
2017-Present

Fellowship Education Committee, Member  
UH Rainbow Babies & Children's Hospital  
2017-Present

Taking Flight Mentoring Program, Member  
UH Rainbow Babies & Children's Hospital  
2018 - Present

UH Graduate Medical Education Special Review Committee, Member  
University Hospitals  
2019 - Present

## **HONORS & AWARDS**

Annual Critical Care Award, Akron Children's Hospital, 2011  
Annual Resident Teaching Award, Akron Children's Hospital, 2012  
Nicholas Libertain Award, Akron Children's Hospital, 2012  
James G. Kramer Research Award, Akron Children's Hospital, 2012  
Physician in Training Award, American Academy of Pediatrics – Section on Critical Care, 2012  
Young Investigators Research Showcase, Pediatric Acute Lung Injury and Sepsis Investigators, 2019  
Society for Pediatric Research, Elected Member, 2022

## **TEACHING ACTIVITIES**

### **Curriculum/ Course Development**

1. Pediatric Critical Care Medicine Fellowship Educational Curriculum, Core Lecture Series  
UH Rainbow Babies & Children's Hospital  
03/2016-Present  
Curriculum Development, Lecture Preparation and Presentation  
4-8 hours per month  
Pediatric Critical Care Medicine Fellows

### **Invited Lectures**

#### **Local**

1. Life Planning Workshop, Wellness Curriculum  
Pediatric Residents and Fellows  
UH Rainbow Babies & Children's Hospital  
2017, 2018, 2019
2. The Cost of Being Poor: The Relationship Between Poverty and Child Health  
Pediatric Advanced Practice Registered Nurse Pharmacology and Practice Update  
UH Rainbow Babies & Children's Hospital  
2019
3. Critical Congenital Heart Disease in the Emergency Department  
UH Emergency Medicine Residents  
University Hospitals Cleveland Medical Center  
2021

### **Grand Rounds**

#### **National**

1. Identifying Vulnerability and Promoting Resilience in the Pediatric Intensive Care Unit  
Hasbro Children's Hospital  
Pediatric Grand Rounds  
May 14<sup>th</sup>, 2021  
Providence, RI (virtual)

2. Yes, Now is a Good Time: Screening for the Social Determinants of Health in the Acute Care Setting  
Dartmouth-Hitchcock Medical Center  
Department of Pediatrics, Grand Rounds  
December 2<sup>nd</sup>, 2021  
Lebanon, New Hampshire
3. Yes, Now is a Good Time: Screening for the Social Determinants of Health in the Acute Care Setting  
Goryeb Children's Hospital  
Department of Pediatrics, Grand Rounds  
July 28<sup>th</sup>, 2022  
Morristown, NJ (virtual)

### **Regional**

1. Falling to the Top of the Mountain  
Oishei Children's Hospital  
Pediatric Grand Rounds  
December 11th, 2020  
Buffalo, NY (virtual)

### **Local**

1. The Depths of Disparity  
MetroHealth Medical Center  
Pediatric Grand Rounds  
January 16th, 2020  
Cleveland, OH

### **Other Presentations**

#### **International**

1. The Depths of Disparity  
Young Investigators Showcase  
Pediatric Acute Lung Injury and Sepsis Investigators  
Pediatric Critical Care Medicine Researchers  
September 6<sup>th</sup>, 2019  
Vancouver, BC
2. Impact of Social Determinants of Health on Pediatric Outcomes in Covid-19  
Pediatric Acute Lung Injury and Sepsis Investigators  
Pediatric Critical Care Medicine Researchers  
September 9th, 2021  
Virtual

#### **National**

1. Mentoring Workshop for Medical Professionals  
Workshop Presentation  
Association of Pediatric Program Directors Spring Meeting (Chief Resident Forum)  
Pediatric Chief Residents and Program Directors  
Nashville, Tennessee  
2013
2. Health Care Disparities and Pediatric Sedation  
Society for Pediatric Sedation Conference  
Pediatric Sedation Providers

October 31<sup>st</sup>, 2020  
Virtual

3. Moving Past the Why: A proposal for developing a strength-based screening tool for use in the PICU  
Pediatric Academic Societies 2021 Virtual Meeting  
Pediatricians and researchers  
May 3<sup>rd</sup>, 2021  
Virtual
3. Yes, Now is a Good Time: Screening for the Social Determinants of Health in the Acute Care Setting  
Plenary  
Improving Pediatric Sepsis Outcomes (IPSO) Collaborative  
National research and quality improvement collaborative  
December 7<sup>th</sup>, 2021  
Virtual
4. Yes, Now is a Good Time: Screening for the Social Determinants of Health in the Acute Care Setting  
Nationwide Children's Hospital Pediatric Critical Care Medicine Distinguished Lectureship Series  
Pediatric critical care medicine junior faculty and fellow trainees  
January 6<sup>th</sup>, 2022  
Virtual
5. Yes, Now is a Good Time: Screening for the Social Determinants of Health in the Acute Care Setting  
Pediatric Critical Care Medicine Fellowship - Equity, Diversity, and Inclusion Curriculum  
Pediatric critical care medicine fellows and faculty  
New York-Presbyterian Komansky Children's Hospital at Weill Cornell Medical Center  
April 4<sup>th</sup>, 2022  
Virtual

#### **Local**

1. The Impact of Social Determinants on Pediatric Critical Illness  
University Hospitals Research Day  
University Hospitals faculty and staff  
October 14<sup>th</sup>, 2019  
Cleveland, OH
2. The Impact of Social Determinants on Pediatric Critical Illness  
Health Services Research Seminar  
MetroHealth Center for Health Care Research and Policy  
MetroHealth faculty and staff  
December 6<sup>th</sup>, 2019  
Cleveland, OH

#### **Trainees / Mentees**

##### *Pediatric Fellows*

1. Meredith Broberg, MD, Pediatric Critical Care Fellow  
2016-2018  
Currently Cardiothoracic and Pediatric Intensivist, UH Rainbow Babies & Children's Hospital, Ohio
2. Bryan McKee, MD, Pediatric Critical Care Fellow  
2016-2018  
Currently Pediatric Intensivist, Akron Children's Hospital



3. Marla Carter, DO, Pediatric Critical Care Fellow  
2016-2018  
Currently Pediatric Intensivist, AdventHealth for Children, Florida
4. Morgan Wurtz, DO, Pediatric Emergency Medicine Fellow  
2016-2018  
Currently Pediatric Emergency Medicine Physician, Nationwide Children's Hospital
5. Casey McCluskey, MD, Pediatric Critical Care Fellow  
2016-2019  
Currently Pediatric Intensivist, West Virginia University Children's Hospital
6. Salar Badruddin, MD, Pediatric Critical Care Fellow  
2016-2019  
Currently Pediatric Cardiothoracic Intensivist, St Joseph's Children's Hospital, Florida
7. Kaitlyn Murphy, MD, Pediatric Critical Care Fellow  
2016-2019  
Currently Pediatric Intensivist, MetroHealth Medical Center, Ohio
8. Elizabeth (Dorn) Pace, MD, Pediatric Critical Care Fellow  
2017-2020  
Currently Fellow in Pediatric Cardiothoracic Intensive Care, UPMC Children's Hospital of Pittsburgh
9. Nyemake Cooper, MD, Pediatric Critical Care Fellow  
2017-2020  
Currently Pediatric Intensivist, Our Lady of the Lake Children's Health, Baton Rouge, Louisiana
10. Nicholas Huff, MD, Pediatric Critical Care Fellow  
2017-2020  
Currently Pediatric Intensivist at Beacon Children's Hospital, South Bend, Indiana
11. Alejandro Martinez-Herrada, MD, Pediatric Critical Care Fellow  
2018-2021  
Currently Pediatric Cardiothoracic Intensivist, Nicklaus Children's Hospital, Miami, FL
12. Michael Mount, MD, Pediatric Critical Care Fellow  
2018-2021  
Currently Pediatric Cardiothoracic Intensivist, UH Rainbow Babies & Children's Hospital, Cleveland, OH
13. Theodore Pei, MD, MPH, Pediatric Critical Care Fellow  
2018-2021  
Currently Pediatric Cardiothoracic Intensivist at Children's Hospital Los Angeles, Los Angeles, CA
14. Bryan Combs, MD, Pediatric Critical Care Fellow  
2019-2022  
Currently Pediatric Intensivist at Southern Illinois School of Medicine, Springfield, IL
15. Grant Hamill, MD, Pediatric Critical Care Fellow  
2019-2022  
Currently Pediatric Pulmonology Fellow at Children's Mercy, Kansas City, MO
16. Kira Mascho, MD, Pediatric Critical Care Fellow  
2019-2022  
Currently Pediatric Intensivist at Albany Medical Center, Albany, N
17. Monica Gray, MD, Pediatric Critical Care Fellow  
2020-present
18. Rabail Tariq, MD, Pediatric Critical Care Fellow  
2020-present
19. Elyssa Faigen, MD, Pediatric Critical Care Fellow  
2020-present
20. Danielle Maholtz, DO, Pediatric Critical Care Fellow at Cincinnati Children's Hospital  
2020-present
21. Lena Baker, MD, Pediatric Critical Care Fellow  
2021-present
22. Dana Coccola, MD, Pediatric Critical Care Fellow  
2021-present
23. Erin Whaite, MD, Pediatric Critical Care Fellow  
2021-present

24. Lauren Hintz, MD, Pediatric Critical Care Fellow  
2022-present
25. Kelsey Kenaan, DO, Pediatric Critical Care Fellow  
2022-present
26. Marissa Parrillo, MD, Pediatric Critical Care Fellow  
2022-present

#### *Pediatric Residents*

1. Anna Benson, MD, Pediatric Resident and Chief Resident  
2016-2019  
Currently Neonatal-Perinatal Fellow, UH Rainbow Babies & Children's Hospital
2. Tori Endes, MD, Pediatric Resident  
2017-2020  
Currently Pediatric Pulmonology Fellow, UH Rainbow Babies & Children's Hospital
3. Richelle Reinhart, MD, Pediatric Resident  
2018-2020  
Currently Neonatal-Perinatal Fellow at Children's National, Washington, D.C.
4. Anjali Garg, MD, Pediatric Resident  
2017-present  
Currently Pediatric Critical Care Medicine Fellow at Children's National, Washington, D.C.
5. Preeti Panda, MD, Pediatric Resident  
2017-present  
Currently Pediatric Emergency Medicine Fellow at Lucile Packard Children's Hospital, San Francisco, CA
6. Ashley Markowski, DO, Pediatric Resident and Chief Resident  
2018-2022  
Currently Neonatal-Perinatal Medicine Fellow at Vanderbilt University, Nashville, TN
7. Stephanie Harlow, MD, Pediatric Resident  
2019-2022  
Currently Obstetrics-Gynecology Resident at Dartmouth Hitchcock Medical Center, Dartmouth University, Lebanon, NH
8. Samantha Davidson, MD, Pediatric Resident  
2020-2022  
Currently Pediatric Critical Care Medicine Fellow at Children's Mercy at the University of Kansas, Kansas City, MO
9. Darla Fink, MD, Pediatric Resident  
2020-2022  
Currently Pediatric Critical Care Medicine Fellow at the University of Pittsburgh, Pittsburgh, PA

#### *Medical Students*

1. Katie Bean, BS, Medical Student at Case Western Reserve University School of Medicine  
2020-2022  
Currently Pediatric Resident at Thomas Jefferson University/Nemours Children's Hospital
2. Sara Remer, BS, Medical Student at Case Western Reserve University School of Medicine  
2021-2022

#### *Undergraduate Students*

1. Tylah Harrison, Morehead Cain Scholar at The University of North Carolina-Chapel Hill  
2021
2. Alexandria Lim, Case Western Reserve University  
2021

#### **Teaching Administration**

1. Associate Director, Pediatric Critical Care Medicine Fellowship  
UH Rainbow Babies & Children's Hospital  
2017-2019

2. Director, Pediatric Critical Care Medicine Fellowship  
UH Rainbow Babies & Children's Hospital  
2019-present

### **Teaching Activities**

1. iC.U.R.E, Core lecture series in the pediatric intensive care unit  
Pediatric and Emergency Medicine Residents  
UH Rainbow Babies & Children's Hospital  
Lecture development and presentation  
1 hour lecture per month  
2015-Present
2. IQ+, Clinical case presentation and management of diabetic ketoacidosis in pediatrics  
3<sup>rd</sup> and 4<sup>th</sup> year medical students  
Case Western Reserve University School of Medicine  
Course development and facilitator  
4 hours per quarter  
2015-2018
3. Pediatric Critical Care Medicine Fellowship Didactic, Core Lecture Series  
Pediatric Critical Care Medicine Fellows  
UH Rainbow Babies & Children's Hospital  
Lecture development and presentation  
4-8 hours per month  
2016-Present
4. Endocrine Emergencies in Children, Acute Management of Complex Acute Problems in Children II  
Masters level nursing students  
Case Western Reserve University, Frances Payne Bolton School of Nursing  
Lecture development and presentation  
3 hours per semester  
2016-present

### **RESEARCH / GRANT SUPPORT**

1. Center for Reducing Health Disparities Pilot Award for Community Engaged Approaches to Understanding Health Disparities  
National Institute on Minority Health and Health Disparities  
The Impact of Poverty on Cognitive Decline and School Reentry After Pediatric Critical Illness  
Katherine N. Slain, Principal Investigator  
Total Direct Costs Awarded: \$50,000  
February 2020 – February 2023
2. University Hospitals Cleveland Medical Center Clinical Research Center Pilot Award  
The Gut Microbiome in Cleveland Children from Different Neighborhoods: A Pilot Study  
Katherine N. Slain, Principal Investigator  
Total Direct Costs Awarded: \$57,050  
December 2019 – current
3. Linsalata Chair Pediatric Intensive Care Research Grant

Identification of Social Resource Needs Among Families of Critically Ill Children: A Pilot Survey Study  
Katherine N. Slain, Principal Investigator  
Total Direct Costs Awarded: \$7,500  
July 2019

4. University Hospitals Research Health Analytics and Informatics Pilot Award  
Characterization of the Economic and Social Distress of Children Admitted to the Pediatric Intensive Care Unit Using the Pediatric Health Information Systems Database  
Katherine N. Slain, Principal Investigator  
Total Direct Costs Awarded: \$25,000  
February 2019 – February 2021

## **RESEARCH COLLABORATIONS**

1. Children's Hospital Association  
Pediatric Health Information System (PHIS) PICU Research Node  
Collaboration of investigators from 5+ institutions querying PHIS dataset to perform health services research  
October 2020-present
2. Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)  
Collaborative Pediatric Critical Care Research Network (CPCCRN)  
*Personalized Immunomodulation in Pediatric Sepsis Induced MODS (PRECISE)*  
Mark W. Hall, Nationwide Children's Hospital; Athena F. Zuppa, Children's Hospital of Philadelphia;  
Peter Mourani, Arkansas Children's Hospital, Principal Investigators  
Katherine N. Slain, Site Co-investigator  
June 2021-present
3. Education in Pediatric Intensive Care (E.P.I.C.) Investigators  
Association of Pediatric Program Directors (APPD) Longitudinal Educational Assessment Research Network (LEARN)  
*Assessing Competence in Central Venous Catheter Placement in PCCM Fellows*  
Don Boyer, Children's Hospital of Philadelphia, Principal Investigator  
Katherine N. Slain, Site PI  
June 2021 – June 2022
4. Pediatric Acute Lung Injury and Sepsis Investigators (PALISI)  
Social Determinants of Health Subgroup  
*Current Social Risk Screening Practices among US Pediatric Intensive Care Units: a Multicenter Point Prevalence Study*  
Katherine N. Slain, Principal Investigator  
January 2022-present
5. Association of Pediatric Program Directors (APPD) Longitudinal Educational Assessment Research Network (LEARN)  
*Validity Evidence for a Novel Leadership Tool in Pediatric Subspecialty Training*  
Angela Czaja, Children's Hospital Colorado, Univ. of Colorado, Principal Investigator  
Katherine N. Slain, Site Co-Investigator  
December 2021-present
6. Association of Pediatric Program Directors (APPD) Longitudinal Educational Assessment Research Network (LEARN)  
*Virtual Recruitment Experiences*  
Katherine N. Slain, Site Co-Investigator

March 2022-present

7. Virtual Pediatric Systems Database Collaborative  
*PICU Outcomes and Neighborhood Opportunity*  
Michael McCrory, Brenner Children's, Wake Forest University, Co-Principal Investigator  
Manzi Akande, Oklahoma Children's Hospital, University of Oklahoma, Co-Principal Investigator  
Katherine N. Slain, Rainbow Babies & Children's Hospital, Case Western, Co-Principal Investigator  
March 2022-present

## **BIBLIOGRAPHY**

### **Peer Reviewed Articles**

1. Kelley-Clarke B, De Leon-Vazquez E, **Slain K**, Barbera AJ, Kaye KM. Role of Kaposi's sarcoma-associated herpesvirus C-terminal LANA chromosome binding in episome persistence. *J Virol*. 2009 May;83(9):4326-37.
2. Shein SL, **Slain K**, Martinez Schlurmann N, Speicher R, Rotta AT. Hyponatremia and Hypotonic Intravenous Fluids Are Associated with Unfavorable Outcomes of Bronchiolitis Admissions. *Hosp Pediatr*. 2017 May;7(5):263-270.
3. **Slain KN**, Martinez-Schlurmann N, Shein SL, Stormorken A. Nutrition and High-Flow Nasal Cannula Respiratory Support in Children with Bronchiolitis. *Hosp Pediatr*. 2017 May;7(5):256-262.
4. Shein SL, Rotta AT, Speicher R, **Slain KN**, Gaston B. Corticosteroid Therapy During Acute Bronchiolitis in Patients Who Later Develop Asthma. *Hosp Pediatr*. 2017 Jul;7(7):403-409.
5. Shein SL, **Slain K**, Wilson-Costello D, McKee B, Rotta AT. Temporal Changes in Prescription of Neuropharmacologic Drugs and Utilization of Resources Related to Neurologic Morbidity in Mechanically Ventilated Children with Bronchiolitis. *Pediatr Crit Care Med* 2017 Dec;18(12):e606-e614.
6. Shein SL, **Slain KN**, Clayton JA, McKee B, Rotta AT. Neurologic and Functional Morbidity in Critically Ill Children with Bronchiolitis. *Pediatr Crit Care Med*. 2017 Dec;18(12):1106-1113.
7. **Slain KN**, Shein SL, Stormorken AG, Broberg ACG, Rotta AT. Outcomes of Children with Critical Bronchiolitis Living in Poor Communities. *Clin Pediatr*. 2018 Aug;57(9):1027-1032
8. Clayton JA, McKee B, **Slain KN**, Rotta AT, Shein SL. Outcomes of Children with Bronchiolitis Treated with High-Flow Nasal Cannula or Non-Invasive Positive Pressure Ventilation. *Pediatr Crit Care Med*. 2019 Feb;20(2):128-135.
9. **Slain KN**, Rotta AT, Martinez-Schlurmann NM, Stormorken AG, Shein SL. Outcomes of Children with Critical Bronchiolitis Meeting at Risk for Pediatric Acute Respiratory Distress Syndrome Criteria. *Pediatr Crit Care Med*. 2019 Feb;20(2):e70-e76.
10. Kulkarni M, **Slain KN**, Rotta AT, Shein SL. The Effects of Furosemide on Oxygenation in Mechanically Ventilated Children with Bronchiolitis. *J Pediatr Intensive Care*. 2020 Jun;9(2):87-91.
11. Shein SL, Roth E, Pace E, **Slain KN**, Wilson-Costello D. Long-term neurodevelopmental and functional outcomes of normally developing children requiring PICU care for bronchiolitis. *Journal of Pediatric Intensive Care*. 18 Sept 2020.
12. Broberg MCG, Rose JA, **Slain KN**. The Relationship Between Estimated Median Household Income and Critical Care Length of Stay in Children with Diabetic Ketoacidosis. *Global Pediatric Health*. 2020 Sep 10;7:2333794X20956770.
13. Badruddin SS, Clayton JA, McKee BP, **Slain KN**, Rotta AT, Malay S, Shein SL. Prevalence of Reintubation Within 24 Hours of Extubation in Bronchiolitis: Retrospective Cohort Study Using the Virtual Pediatric Systems Database. *Pediatr Crit Care Med*. 2020 Oct 8.
14. Maddux AB, Pinto N, Fink EL, Hartman ME, Nett S, Biagas K, Killien EY, Dervan LA, Christie LM, Luckett PM, Loftis L, Lackey M, Ringwood M, Smith M, Olson L, Sorenson S, Meert KL, Notterman DA, Pollack MM, Mourani PM, Watson RS; Pediatric Outcomes Studies after PICU (POST-PICU) and PICU-COS Investigators of the Pediatric Acute Lung Injury and Sepsis Investigators (including **Slain KN**) and the Eunice Kennedy Shriver National Institute of Child Health and Human Development Collaborative Pediatric Critical Care Research Networks. Postdischarge Outcome Domains in Pediatric Critical Care and the Instruments Used to Evaluate Them: A Scoping Review. *Crit Care Med*. 2020 Dec;48(12):e1313-e1321

15. Moffitt C, Deakins K, Cheifetz I, Clayton J, **Slain KN**, Shein SL. Contemporary Use of Negative Pressure Ventilation in Pediatric Critical Care. *Pediatr Crit Care Med*. 2021 Feb 26
16. Kane JM, Hall M, Cecil C, Montgomery VL, Rakes LC, Rogerson C, Stockwell JA, **Slain KN**, Goodman DM. Resources and Costs Associated with Repeated Admission to Pediatric Intensive Care Units. *Critical Care Explorations*. 2021 Feb 17;3(2):e0347
17. **Slain KN**, Wurtz MA, Rose JA. US Children of Minority Race are Less Likely to Be Admitted to the Pediatric Intensive Care Unit After Traumatic Injury, a Retrospective Analysis of a Single Pediatric Trauma Center. *Injury Epidemiology*. 2021 Apr 12;8(1):14.
18. **Slain KN**, Barda A, Pronovost PJ, Thornton JD. Social Factors Predictive of Intensive Care Utilization in Technology-Dependent Children. *Front. Pediatr*. 2021 September 9(968).
19. Mount MC, Ji X, Kattan MW, **Slain KN**, Clayton JA, Rotta AT, Shein SL. Derivation and Validation of the Critical Bronchiolitis Score for the PICU. *Pediatr Crit Care Med*. 2022 Jan1;23(1)e45-e54.
20. **Slain KN**, Malay S, Shein SL. Hospital Charges Associated with Critical Bronchiolitis from 2009 to 2019. *Pediatr Crit Care Med*. 2022 Mar 1;23(3):171-180.
21. Garg A, Panda P, Malay S, **Slain KN**. Human Trafficking ICD-10 Codes are Under Utilized in Pediatric Tertiary Care Centers. *Front. Pediatr*. 2022;10:818043. doi: 10.3389/fped.2022.818043
22. Saju L, Rosenbaum DJ, Wilson-Costello D, **Slain KN**, Stormorken AG, Shein SL. Acute Neuro-Functional Morbidity Upon Discharge from the PICU after Critical Bronchiolitis. *Hosp Pediatr*. 2022 Apr 1;12(4):353-358. doi: 10.1542/hpeds.2021-006166
23. Pinto NP, Maddux AB, Dervan LA, Woodruff AG, Jarvis JM, Nett S, Killien EY, Graham RJ, Choong K, Luckett PM, Heneghan JA, Biagas K, Carlton EF, Hartman ME, Yagiela L, Michelson KN, Manning JC, Long DA, Lee JH, Slomine BS, Beers SR, Hall T, Morrow BM, Meert K, Arias Lopez MDP, Knoester H, Houtrow A, Olson L, Steele L, Schlapbach LJ, Burd RS, Grosskreuz R, Butt W, Fink EL, Watson RS; POST-PICU Investigators of the Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) Network (including **Slain KN**) and the Eunice Kennedy Shriver National Institute of Child Health and Human Development Collaborative Pediatric Critical Care Research Network (CPCCRN). A Core Outcome Measurement Set for Pediatric Critical Care. *Pediatr Crit Care Med*. 2022 Nov 1;23(11):893-907.
24. Bean KM, Bean CAL, Dingeldein L, **Slain KN**. Disparities in Mental Health Services Referrals in Child Sexual Abuse Cases. *Journal of Public Child Welfare*. 2022
25. Daughtrey H, **Slain KN**, Derrington S, Evans IVR, Goodman DM, Christie LM, Li S, Lin JC, Long DA, Madden MA, VandedBranden S, Smith M, Pinto NP, Maddux AB, Fink EL, Watson S, Dervan LA. Measuring Social Health Following Pediatric Critical Illness: A Scoping Review and Conceptual Framework. *J Intensive Care Med*. 2023 Jan;38(1):32-41
26. Gray MM, Malay S, Kleinman LC, Stange KC, Borawski EA, Shein SL, **Slain KN**. Child Opportunity Index and Hospital Utilization in Children with Traumatic Brain Injury Admitted to the PICU. *Crit Care Explor*. 2023 Feb 1;5(2):e0840.
27. Pei TT, Shein SL, Cheifetz IM, **Slain KN**. Nutritional Support in Children Meeting the At-Risk for Pediatric Acute Respiratory Distress Syndrome Criteria. *Crit Care Explor*. 2023 Feb 3;5(2):e0856.
28. **Slain KN**, Hall M, Akande M, Thornton JD, Pronovost PJ, Berry JG. Impact of Patient Race and Ethnicity on Intensive Care Utilization in Common Pediatric Diagnoses. [*under peer review*]
29. Rogerson CM, Heneghan JA, Kohne JG, Goodman DM, **Slain KN**, Cecil CA, Kane JM, Hall M. Machine Learning Models to Predict PICU Length of Stay with Application to Children with Bronchiolitis [*under peer review*]

#### **Invited, Peer Reviewed**

1. **Slain KN**, Shein SL, Rotta AT. The use of high-flow nasal cannula in the pediatric emergency department. *J Pediatr (Rio J)*. 2017 Nov-Dec;93 Suppl 1:36-45.
2. Clayton JA, **Slain KN**, Shein SL, Cheifetz IM. High flow nasal cannula in the pediatric intensive care unit. *Expert Rev Respir Med*. 2022 Apr;16(4):409-417
3. Akande M, Paquette E, Magee P, Perry MA, Fink EL, **Slain KN**. Screening for Social Determinants of Health in the Pediatric Intensive Care Unit – Recommendations for Clinicians. *Critical Care Clinics* 2022 <https://doi.org/10.1016/j.ccc.2022.09.009>

#### **Book & Book Chapters**

1. Alibrahim O and **Slain K**. Noninvasive Respiratory Support in Pediatric Acute Respiratory Distress Syndrome. In: Shein SL and Rotta AT (eds), Pediatric Acute Respiratory Distress Syndrome: A Clinical Guide. Springer Nature Switzerland, 2019.
2. Alibrahim O and **Slain KN**. Noninvasive Ventilation in the Pediatric Intensive Care Unit. In: Zimmerman JJ and Rotta AT (eds), Pediatric Critical Care, 6th Edition. Elsevier. 2021
3. **Slain KN** and Shein SL. Acute Viral Bronchiolitis. In: Zimmerman JJ and Rotta AT (eds), Pediatric Critical Care, 6th Edition. Elsevier. 2021

### **Editorials**

1. Shein SL, **Slain KN**, Rotta AT. High Flow Nasal Cannula Flow Rates: New Data Worth the Weight. J Pediatr. 2017 Oct;189:9-10.
2. Shein SL, **Slain KN**, Rotta AT, Milesi C, Cambonie G. High-flow nasal cannula flow rate in young infants with severe viral bronchiolitis: the question is still open. Intensive Care Med. 2019 Jan;45(1):134-135.
3. **Slain KN** and Shein SL. High Flow, high flow: it's off to work we go. Pediatr Crit Care Med. 2019 Mar;20(3):292-293.

### **Letters**

1. **Slain KN**, Shein SL, Rotta AT. The Dose Makes the Poison: Comparing Epinephrine with Dopamine in Pediatric Septic Shock. Crit Care Med. 2016 May;44(5):e308.

### **Abstract Presentations**

#### *Oral Presentations*

1. **Slain K** (presenter), Forbes M, and Wendorf R. Predicting Mortality in Pediatric Respiratory Failure: Feasibility of the Oxygenation Index Under Area Under the Curve. Oral Presentation at 2012 American Academy of Pediatrics National Conference and Exhibition (Section on Critical Care); New Orleans, Louisiana
2. **Slain K** (presenter), Martinez-Schlurmann N, Shein S, and Stormorken A. Nutrition and High Flow Nasal Cannula Respiratory Support in Children. Oral Presentation at 2015 American Academy of Pediatrics National Conference and Exhibition (Section on Critical Care); Washington, DC
3. Martinez-Schlurmann N, **Slain K**, Shein S. Hyponatremia and IVF Tonicity are Associated with Unfavorable Outcomes in Critical Bronchiolitis. Oral Presentation at 2016 Society of Critical Care Medicine Annual Congress; Orlando, Florida
4. **Slain K** (presenter), Martinez-Schlurmann N, Shein S, and Stormorken A. Feeding Practices and High Flow Nasal Cannula Respiratory Support in Children with Bronchiolitis. Oral Presentation at 2016 Society of Critical Care Medicine Annual Congress; Orlando, Florida
5. **Slain K** (presenter), Martinez-Schlurmann N, Stormorken A, and Shein S. Fluid Overload and High Flow Nasal Cannula Respiratory Support in Children with Bronchiolitis. Oral Presentation at 2016 Society of Critical Care Medicine Annual Congress; Orlando, Florida
6. **Slain K** (presenter), Martinez-Schlurmann N, Stormorken A, and Shein S. Children at Risk for Pediatric Acute Respiratory Distress Syndrome Requiring High Flow Nasal Cannula. Oral Presentation at 2016 Society of Critical Care Medicine Annual Congress; Orlando, Florida
7. **Slain K** (presenter), Shein S, Broberg M, Stormorken A, Rotta, A. Poverty is Associated with Unfavorable Clinical Outcomes for Children with Bronchiolitis. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i
8. McKee B, Clayton J, **Slain K**, Rotta A, Speicher R, Shein S. What Are We Doing? Changes in the Way Bronchiolitis is Treated in the ICU. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i

9. Broberg M, **Slain K**, Stormorken A, Shein S, Rotta A. The Effect of Poverty on Children Presenting with Diabetic Ketoacidosis. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i
10. **Slain K** (presenter), Broberg M, Stormorken A, Shein S, Rotta A. Poverty is Associated with Longer Hospital Lengths of Stay for Children with Critical Asthma. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i
11. Shein S, McKee B, **Slain K**, Speicher R, Rotta A. Dexmedetomidine is Associated with Unfavorable Outcomes in Ventilated Children with Bronchiolitis. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i
12. Shein S, McKee B, **Slain K**, Rotta A, Gaston B. Changing Patterns in Neurologic Medications Among Mechanically Ventilated Patients. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i
13. Clayton J, McKee B, **Slain K**, Rotta A, Shein S. Outcomes of High-Flow Nasal Cannula and Noninvasive Positive Pressure Ventilation in Bronchiolitis. Oral Presentation at 2017 Society of Critical Care Medicine Annual Congress; Honolulu, Hawai'i
14. Broberg M, McCluskey C, Wurtz M, Rose JA, Dingeldein M, Rotta A, **Slain K**. Family Income is Not Associated with Outcomes in Pediatric Patients with Critical Traumatic Injury. Oral Presentation at 2017 American Academy of Pediatrics Section of Critical Care/Pediatric Critical Care Colloquium Joint Abstract Program; Chicago, Illinois
15. McKee B, Clayton J, **Slain K**, Rotta A, Shein S. Recent Trends in the Epidemiology, Treatment, and Outcomes of PICU Bronchiolitis. Oral Presentation at 2018 Society of Critical Care Medicine Annual Congress; San Antonio, Texas
16. Speicher R, **Slain K**, Gallagher J, Broberg M, Shein S, Rotta A. Heated Humidified High-Flow Nasal Canula Gas Mixtures in a Human Model of Airway Obstruction. Oral Presentation at 2018 Society of Critical Care Medicine Annual Congress; San Antonio, Texas
17. Badruddin S, Clayton J, McKee B, **Slain K**, Rotta A, Shein S. Extubation Failure Rates and Post-Liberation Support Modality Among Bronchiolitis Patients. Oral Presentation at 2018 Society of Critical Care Medicine Annual Congress; San Antonio, Texas
18. McCluskey C, Broberg M, Wurtz M, **Slain K**, Rose J, Dingeldein M, Rotta A. Improper Use of Child Safety Seats and Restraints Is Not Associated with Low Income and Poverty. Oral Presentation at 2018 Society of Critical Care Medicine Annual Congress; San Antonio, Texas
19. **Slain K**, Broberg M, McCluskey C, Rotta A. Poverty Is Not Associated with Longer Length of Stay for Children with Severe Sepsis. Oral Presentation at 2018 Society of Critical Care Medicine Annual Congress; San Antonio, Texas
20. **Slain K**, Broberg M, McCluskey C, Rotta A. Poverty and Clinical Outcomes in Critically Ill Children with Pneumonia. Oral Presentation at 2018 Society of Critical Care Medicine Annual Congress; San Antonio, Texas
21. McCluskey C, **Slain K**, Shein S, Rotta A. Characterization of Critical Self-Harm Among Children in the United States. Oral Presentation at 2019 Society of Critical Care Medicine Annual Congress; San Diego, California
22. **Slain K**, Rose J, Rotta A. Neighborhood Opportunity in Children Admitted to the Pediatric Intensive Care Unit. Oral Presentation at 2019 Society of Critical Care Medicine Annual Congress; San Diego, California
23. Dorn E, **Slain K**, Stormorken A, Ronis S, Wilson-Costello D, Rotta A, Shein S. Neurofunctional Outcomes After PICU Admission During the First Three Years of Life. Oral Presentation at 2019 Society of Critical Care Medicine Annual Congress; San Diego, California
24. Badruddin S, McKee B, **Slain K**, Rotta A, Gallagher J, Deakins K, Ives K, Shein S. Implementation of an HFNC Weaning Protocol in Shortening the Duration of HFNC Use in the PICU. Oral Presentation at 2019 Society of Critical Care Medicine Annual Congress; San Diego, California
25. Mount M, Ji X, Kattan M, **Slain K**, Rotta A, Shein S. Derivation and Validation of a Bronchiolitis Severity Score for the Pediatric Intensive Care Unit. Oral Presentation at 2019 Society of Critical Care Medicine Annual Congress; San Diego, California



26. Cooper N, **Slain K**, Rotta A, Shein S. Hyperchloremia is Associated with Unfavorable Outcomes in Bronchiolitis. Oral Presentation at 2019 Society of Critical Care Medicine Annual Congress; San Diego, California
27. Gray MM, Malay S, Kleinman LC, Stange KC, Borawski EA, Shein SL, and **Slain KN**. Associations Between Income and Hospital Utilization in Pediatric Traumatic Brain Injury. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
28. Mount M, Ji X, Kattan M, **Slain K**, Rotta A, Shein S. Derivation and Validation of a Bronchiolitis Severity Score for the Pediatric Intensive Care Unit. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
29. Moffitt C, **Slain K**, Deakins K, Speicher R, Shein S. Epidemiology and Outcomes of Negative Pressure Ventilation Use in a Multicenter PICU Dataset. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
30. Saju L, Wilson-Costello D, **Slain K**, Stormorken A, Shein S. Post-PICU Acute Neurofunctional Morbidity in Children with Critical Bronchiolitis. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
31. Huff N, **Slain K**, Clayton J, Shein S. Trends in Epidemiology of Critically Ill Children in a Large National Database in the United States. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
32. Mount M, Ji X, Kattan M, **Slain K**, Shein S. External Validation of the Critical Bronchiolitis Score for the Pediatric Intensive Care Unit. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
33. Pace E, **Slain K**, Stormorken A, Ronis S, Shein S. Prospective Assessment of Neurofunctional Morbidity and Associated Risk Factors in PICU Patients. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
34. Pei T, Shein S, **Slain K**. Nutritional and Intravenous Fluid Support in Children Meeting the At Risk for PARDS Criteria. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
35. Molenaar M, **Slain K**, Shein S. Early Feeding in PICU Bronchiolitis Patients is Associated with Favorable Severity-Adjusted Outcomes. Oral Presentation at 2020 Society of Critical Care Medicine Annual Congress; Orlando, Florida.
36. Combs B, Malay S, **Slain K**. Community Level Income and Hospital Resource Utilization in Pediatric Severe Sepsis. Oral Presentation at 2021 Society of Critical Care Medicine Virtual Congress.
37. Pei T, Shein S, **Slain K**. Fluid Overload in Children Meeting the At Risk for PARDS Criteria. Oral Presentation at 2021 Society of Critical Care Medicine Virtual Congress.
38. Hamill G, **Slain K**. Effect of Poverty on Hospital Outcomes in Pediatric Ingestions. Oral Presentation at 2021 Society of Critical Care Medicine Virtual Congress.
39. Fink D, Rose J, Dingeldein M, **Slain K**. Differences in Mortality by Race in a Cohort of Traumatically Injured Children Admitted to the Pediatric Intensive Care Unit. Oral Presentation at 2021 American Academy of Pediatrics National Conference & Exhibition (Section on Critical Care); Philadelphia, Pennsylvania.
40. Fink D, Rose J, Dingeldein M, **Slain K**. Differences in Mortality by Race in Critically Injured Children with Traumatic Brain Injury. Oral Presentation at Society of Critical Care Medicine's 2022 Critical Care Congress; Virtual.

#### *Poster Presentations*

1. **Slain K**, Gallagher J, Rotta AT, and Shein SL. Oxygenation and Varying Intervals of Fluid Balance in Mechanically Ventilated Children. Poster Presentation at 2015 Society of Critical Care Medicine Annual Congress; Phoenix, Arizona
2. **Slain K**, Broberg M, Stormorken A, Shein SL, and Rotta A. The Cost of Being Poor: The Relationship Between Poverty and Hospital Outcomes in Children Critically Ill with Bronchiolitis. Poster Presentation at 2016 American Academy of Pediatrics National Conference and Exhibition (Section on Critical Care); San Francisco, California

3. Wurtz M, Broberg M, McCluskey C, Dingeldein M, Rotta A, Rose J, **Slain K**. Poverty Not Associated with Higher Injury Severity or Greater Likelihood of Hospitalization in Pediatric Trauma Patients. Poster Presentation at 2017 Pediatric Trauma Society Meeting; Charleston, South Carolina
4. **Slain K**, Samson K, Bolt K, Rose JA. Assessing the Utility of a Wellness Workshop for Pediatric Fellows. Poster Presentation at 2019 Association of Pediatric Program Directors Annual Spring Meeting; New Orleans, Louisiana
5. Endres T and **Slain K**. Association between Childhood Opportunity Index (COI) and Length of Stay in Critical Asthma. Poster Presentation at 2019 Pediatric Academic Societies Meeting; Baltimore, Maryland
6. Garg A and **Slain KN**. Assessment of Neighborhood Influence on Pediatric Trauma Outcome. Poster Presentation at 2019 American Academy of Pediatrics National Conference & Exhibition; Orlando, Florida
7. Bach M, **Slain KN**, Stormorken A, Shein SL. Sedative Use in the Setting of Critical Bronchiolitis. Virtual Poster Presentation at 2020 American Academy of Pediatrics National Virtual Conference and Exhibition.
8. Mascho K, Gray M, Combs, B, Davidson S, **Slain KN**, Anderson I. PICU Resident Simulations: The First 5 Minutes. Virtual Poster Presentation at the 2021 International Pediatric Simulation Society Virtual Experience.
9. Remer S, Gupta S, Sarode A, Speicher D, **Slain K**, Dingeldein M. Variations in ECMO Outcomes. Virtual Poster Presentation at the 32<sup>nd</sup> Extracorporeal Life Support Organization Virtual 2021 Conference.
10. Flaherty, MR, Lucas, A, Yager, P, Albert, B, Centola, C, Coronado Munoz, A, Derespina, D, Garcia, M, Good, R, Green, M, Hamill, GS, Harvey, H, King, JC, Kuo, KW, Mason, K, Mehta, R, Mink, R, Munoz, AC, Munoz Pareja, JC, Nielsen, K, Petersen, T, Pierce, R, Poepelman, R, Schuette, J, Siems, A, **Slain, K**, Smith, CJ, Smith, K, Srinivasan, S, Stewart, C, Tchamitchi, H, Watson, C, Wenger, J, Werner, J, Whalen, A, Wheaton, T, Zurca, A, Radhakrishnan, AG, Schwartz, A, Boyer, D, Rosenblatt, S. Validity Evidence for a Central Line Insertion Competency Checklist for Pediatric Critical Care Fellows and Its Association with Entrustment and Global Rating Skills. Virtual Poster Presentation at 11<sup>th</sup> Congress of the World Federation of Pediatric Intensive & Critical Care Societies, July 2022.