

Division of Pediatric Emergency Medicine Research and Scholarly Activity  
July 1, 2022 – June 30, 2023

Division Chief: Michele Walsh, MD, MMHC  
Research Director: Don Arnold, MD, MPH

**Peer Reviewed Original Research Manuscripts**

1. Jain SB, **Anderson TW**, Mikhail D, Banerjee R, **Arnold DH**. Serious infections are rare in well-appearing neonates with hypothermia identified incidentally at routine visits. *Am J Emerg Med*. 2023 Mar;65:1-4. doi: 10.1016/j.ajem.2022.12.008. Epub 2022 Dec 13. PMID: 36566678.
2. Goettel AM, **Hanson HR**, Overfield J, Thornton C, **Arnold DH**. Tastes great, less filling! Randomized trial comparing perceived palatability of dexamethasone preparations in children. *Ann Allergy Asthma Immunol*. 2023 Jan;130(1):114-115. doi: 10.1016/j.anai.2022.09.016. PMID: 36596609.
3. Cabo J, Graham K, Chen H, Zhao S, **Burger C**, **Arnold DH**, Taylor A, Pope J 4th, Clayton D, Brock JW 3rd, Adams M, Adams C, Thomas J. Increasing utilization of the TWIST score in workup of patients with acute scrotal pain: Role in diagnosis and risk stratification. *J Pediatr Urol*. 2022 Dec;18(6):845.e1-845.e8. doi: 10.1016/j.jpuro.2022.09.018. Epub 2022 Sep 28. PMID: 36244901.
4. **Arnold DH**, Gong W, Antoon JW, Bacharier LB, Stewart TG, Johnson DP, Akers WS, Hartert TV. Prospective Observational Study of Clinical Outcomes After Intravenous Magnesium for Moderate and Severe Acute Asthma Exacerbations in Children. *J Allergy Clin Immunol Pract*. 2022 May;10(5):1238-1246. doi: 10.1016/j.jaip.2021.11.028. Epub 2021 Dec 13. PMID: 34915226; PMCID: PMC9086103.
5. Gorbalkin O, Pearce J, Goldschmidt M, Thomas A, Sanseau E, **Ciener D**, Toto R, Keilman AE. Severe Epistaxis in the Pediatric Patient: A Simulation for Emergency Department Management. *Cureus*. 2022 Aug 8;14(8):e27784. doi: 10.7759/cureus.27784. PMID: 36106282; PMCID: PMC9451106.
6. Holland JR, **Arnold DH**, **Hanson HR**, **Solomon BJ**, **Jones NE**, **Anderson TW**, Gong W, Lindsell CJ, Crook TW, **Ciener DA**. Reliability of the Behaviorally Anchored Rating Scale (BARS) for assessing non-technical skills of medical students in simulated scenarios. *Med Educ Online*. 2022 Dec;27(1):2070940. doi: 10.1080/10872981.2022.2070940. PMID: 35506997; PMCID: PMC9090385.
7. **Hayes J**, **Levine MC**, **Frazier SB**, Antoon JW. Croup associated with COVID-19: A case series. *JEM Rep*. 2023 Mar;2(1):100011. doi: 10.1016/j.jemrpt.2023.100011. Epub 2023 Feb 4. PMID: 36865663; PMCID: PMC9899123.
8. **Levine MC**, Lin T, Baird J, Constantine E. The Gender Landscape of Academic Pediatric Emergency Medicine: An Observational Study of Leadership Positions as Described by Fellowship Programs' Online Presence. *Pediatr Emerg Care*. 2023 May 9. doi: 10.1097/PEC.0000000000002962. Epub ahead of print. PMID: 37159344.
9. Kaizer AM, Wild J, Lindsell CJ, Rice TW, Self WH, Brown S, Thompson BT, Hart KW, **Smith C**, Pulia MS, Shapiro NI, Ginde AA. Trial of Early Antiviral Therapies during Non-hospitalized Outpatient Window (TREAT NOW) for COVID-19: a summary of the protocol and analysis plan for a decentralized randomized controlled trial. *Trials*. 2022 Apr 8;23(1):273. doi: 10.1186/s13063-022-06213-z. PMID: 35395957; PMCID: PMC8990452.
10. Kaizer AM, Shapiro NI, Wild J, Brown SM, Cwik BJ, Hart KW, Jones AE, Pulia MS, Self WH, **Smith C**, Smith SA, Ng PC, Thompson BT, Rice TW, Lindsell CJ, Ginde AA. Lopinavir/ritonavir for treatment of non-hospitalized patients with COVID-19: a randomized clinical trial. *Int J Infect Dis*. 2023 Mar;128:223-229. doi: 10.1016/j.ijid.2022.12.028. Epub 2022 Dec 27. PMID: 36581186; PMCID: PMC9792182.
11. Clark AT, Lacy AJ, Simpson MD, Lin SG, Jordano JO, **Williams SR**. Greater cervical nerve block with bupivacaine resulting in neurotoxicity: A case report. *JEM Reports* 2023;2(2).
12. Matthews A, **Swarm M**, Walsh R (2023). "Coughing Up Rocks: Broncholithiasis in the Emergency Department." *Visual Journal of Emergency Medicine*. March 2023; Vol 31. <https://doi.org/10.1016/j.visj.2023.101638>
13. Hallet TC, Klein L, Dunnavant D, Weatherly AJ, **Kidd RS** & Bruccoleri RE. (2023) Imaging use after 35% hydrogen peroxide ingestion by a 3-year-old: a case report, *Toxicology Communications*, 7:1, DOI: 10.1080/24734306.2023.2203367
14. Reynolds RA, Kelly KA, Ahluwalia R, Zhao S, Vance H, Lovvorn HN, **Hanson HR**, Shannon CN, Bonfield C. Protocolized management of isolated linear skull fractures at a Level 1 pediatric trauma center. *J. Neurosurg*. 2022 Jul 1:1-8 (epub ahead of print). PMID: 35901741

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15. **Frazier SB, Walsh M**, Beveridge G, Thornton C, **Otilio JK, Fain E**, Patterson B. It Pays to be Accurate: Improving Critical Care Documentation in a Pediatric Emergency Department. *Hosp Pediatr*. 2022 Aug 1;12(8):726-734. doi: 10.1542/hpeds.2021-006459. PMID: 35818843.
16. **Frazier SB**, Gay JC, Barkin S, Graham M, **Walsh M**, Carlson K. Pediatric emergency department to primary care transfer protocol: Transforming access for patients' needs. *Healthc (Amst)*. 2022 Sep;10(3):100643. doi: 10.1016/j.hjdsi.2022.100643. Epub 2022 Aug 10. PMID: 35961185.
17. Carroll AR, Smith CM, **Frazier SB**, Weiner JG, Johnson DP. Designing and Conducting Scholarly Quality Improvement: A Practical Guide for Improvers Everywhere. *Hosp Pediatr*. 2022 Oct 1;12(10):e359-e363. doi: 10.1542/hpeds.2022-006717. PMID: 36172802; PMCID: PMC9645019.
18. Kaizer AM, Wild J, Lindsell CJ, Rice TW, Self WH, Brown S, Thompson BT, Hart KW, **Smith C**, Pulia MS, Shapiro NI, Ginde AA. Trial of Early Antiviral Therapies during Non-hospitalized Outpatient Window (TREAT NOW) for COVID-19: a summary of the protocol and analysis plan for a decentralized randomized controlled trial. *Trials*. 2022 Apr 8;23(1):273. doi: 10.1186/s13063-022-06213-z. PMID: 35395957; PMCID: PMC8990452.
19. Kaizer AM, Shapiro NI, Wild J, Brown SM, Cwik BJ, Hart KW, Jones AE, Pulia MS, Self WH, **Smith C**, Smith SA, Ng PC, Thompson BT, Rice TW, Lindsell CJ, Ginde AA. Lopinavir/ritonavir for treatment of non-hospitalized patients with COVID-19: a randomized clinical trial. *Int J Infect Dis*. 2023 Mar;128:223-229. doi: 10.1016/j.ijid.2022.12.028. Epub 2022 Dec 27. PMID: 36581186; PMCID: PMC9792182.

**Platform/Poster Presentations**

1. **Roach B**, Bielanin J, Shelton IJ, Fritz CQ, **Hanson HR**. "Using a QR code to connect families to food resources – A novel tool for addressing food insecurity in the Pediatric Emergency Department". Poster Presentation. American Academy of Pediatrics Annual Meeting, Anaheim, CA, October 8, 2022.
2. Ruest S, **Hanson HR**, Kiragu AW, Lee LK, Pomerantz WJ. "The Impact of COVID-19 on Fractures Presenting to Pediatric Emergency Departments (EDs)". Poster Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, April 28, 2023. 5:15 PM
3. Ruest S, Charyk Stewart T, Clukies L, Farrell C, **Hanson HR**, Laraque-Arena D, Lawson KA, Pomerantz WJ. "The Impact of COVID-19 on Child Abuse Cases Presenting to Pediatric Emergency Departments (EDs)". Poster Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, April 28, 2023. 5:15 PM
4. Menk PT, Mahabee-Gittens EM, Ruest S, Agarwal M, Mullins H, Curtis EG, Pomerantz WJ, **Hanson HR**. "Pediatric Dog Bite Injuries across the United States During the COVID-19 Pandemic". Poster Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, April 28, 2023.
5. Clukies, LD, Spectorosky KA, **Hanson HR**, Pomerantz WJ, Agarwal M, Charyk Stewart T, Desai P, Hafeez Z. "The Effects of COVID-19 on Emergency Department Visits for Pediatric Pedestrian Crashes: A Multi-Center Retrospective Study". Poster Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, May 1, 2023. 9:30-11:30
6. **Roach B**, Fritz CQ, Shelton I, Bielanin J, **Hanson HR**. "Using a QR Code to Connect Families to Food Resources – A Novel Tool for Addressing Food Insecurity in the Pediatric Emergency Department". Poster Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, May 1, 2023. 9:30-11:30
7. **Solomon BJ, Ayers C**. A Comparison of Teleburn to In-person Consultations of Pediatric Patients in a Children's Emergency Department. Platform Presentation, American Burn Association Conference, Dallas, May 2023.
8. **Solomon BJ, Ayers C**. A Comparison of Teleburn to In-person Consultations of Pediatric Patients in a Children's Emergency Department. Poster Presentation, Pediatric Academic Society Conference, Washington, DC, April 2023.
9. **Gilmartin, T**. Infant Safe Sleep Survey: Assessing Parental Knowledge and Practice. Vanderbilt University Medical Center Department of Pediatrics Research Retreat. Nashville, TN. April 2023.
10. Brucoleri RE, Littlejohn SS, Hernderson CC, Weiner JG, Skaff AM, **Williams SR**. Breaking the heart and breaking the blood: A case series of cutaneous-hemolytic loxoscelism with cardiac involvement. North American Congress of Clinical Toxicology. *Clin Toxicol* 2022;60(sup2):143. San Francisco, California. Poster presentation.

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11. Korducki J, **Ciener D**, Palm K, Walsh R, Booker R. An Inexpensive, High Fidelity Model for Simulation of Pediatric Post-Tonsillectomy Hemorrhage in the Emergency Department. Gerald S. Gotterer Health Professionals Education Research Day (HPERD). Vanderbilt University Medical Center. Nashville, TN. December 16, 2022.
12. Dupont A, **Ciener D**, Monteilh C, Bharath A, Thomas A, Wolpert K, Pearce JI. "Multi-Institutional Pediatric Sedation Complication Simulation." Abstract ID: 1423292. Poster Presentation. Pediatric Academic Societies Annual Meeting, Washington, DC. April 30, 2023.
13. **Burger C**. "Facilitating Adaptive Expertise in Learning Computed Tomography: A Multicenter Randomized Controlled Trial. Poster Presentation. Society of Academic Emergency Medicine. Austin, TX. May 2023.

### Oral Presentations

1. **Hanson HR**, Formica M, Laraque-Arena D, Zonfrillo MR, Desai P, O'Neil JO, Unni P, Johnson EL, Cobb P, Agarwal M, Beckworth K, Schroter S, Strotmeyer S, Donnelly KA, Middelberg LK, Morse AM, Dodington J, Latuska RF, Anderson B, Lawson KA, Valente M, Levas MN, Kiragu AW, Monroe K, Ruest SM, Lee LK, Charyk Stewart T, Attridge MM, Haasz M, Jafri M, McIntire A, Rogers SC, Uspal NG, Blanchard A, Hazeltine MD, Riech T, Jennissen C, Model L, Fu Q, Clukies LD, Juang D, Ruda MT, Prince JM, Chao S, Yorkgitisn BK, Pomerantz WJ. "A multicenter evaluation of the impact of COVID-19 on injury-related pediatric emergency department visits". Oral Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, April 30, 2023.
2. Wynia E, Clukies LD, Pomerantz WJ, **Hanson HR**, Uspal NG, Porter D, Curtis E, Danzo MA, An M, Hallett C, Agarwal M. "The Effects of COVID-19 on Emergency Department Visits for Pediatric Poisonings in the United States: A Multi-Center Retrospective Study". Oral Presentation. Pediatric Academic Societies' Annual Meeting, Washington, DC, April 30, 2023.
3. **Hanson HR**. Keynote Speaker, Injury Free Coalition for Kids Conference. A Collaborative Approach to the Investigation of Pediatric Injuries during a Pandemic. Fort Lauderdale, FL. December 2022.
4. **Roach B**. "Febrile Young Infant – What's New?" Emergency Medicine Education Conference. Georgetown Public Health Hospital Corporation. Georgetown, Guyana (Virtual). August 30, 2022.
5. Gutman CK, Aronson PL, Fernandez R, **Roach B**, Pickett ML, Pulcini CD, Lucrezia S, Green RS, Kotler H, Singh N, Hoffmann JA, Corboy JB, Thompson AD, Tedford NJ, Tran TT, Piroutek MJ, Bouvay K, Bergmann KR, Chow JL, Chowdhury N, Gifford S, Jackson K, Kelly J, Hartford EA, Cheng T, Akinsola B, Ford V, Chung S, **Hincapie M**, St. Pierre-Hetz R, Krack A, Truschel L, Lin K, Chu J, Molyneaux ND, Duong M, Kannikeswaran N, Rose J, Dingeldein L, Theiler C, Sartori LF, Bhalodkar S, Tiller J, Waseem M, Lababidi A, Lou XY, Lion KC. "Race, Ethnicity, Language and the Emergency Management of Low-Risk Febrile Infants." Pediatric Academic Societies. Washington, DC. April 30, 2023.
6. **Roach B**, White R, Hess J, Sikon J, Lei C. "Using Simulation to Uncover Implicit Bias and Improve Equitable Care." International Meeting on Simulation in Healthcare. Orlando, FL. January 2023.
7. **pry M**, Lipton M, **Kidd RS**, **Arnold DH**, **Levine MC**. Ultrasound for Spinal Anatomy in Infants. Vanderbilt University Graduate Medical Education Research Forum. Nashville, TN. April 2023.
8. **Barton M**, **Ciener D**. Neonatal Resuscitation Simulation. Rocket City Emergency Medicine Conference. Huntsville, AL. May 2023.
9. **Barton M**. Mass Casualty Simulation. National Disaster Medical System Exercise in middle Tennessee (Provided pediatric perspective during simulation). August 2022.
10. Liu A, **Wong A**, Santarelli M, Sutyla R, Betters K, Boyle K. Communication during Rapid Responses using SBAR Presentation. Society of Critical Care Medicine 2023 Critical Care Congress. San Francisco, CA. January 2023.
11. **Jones NE**. "Submersion Injuries". Children's Emergency Care Alliance Tennessee Conference. Memphis, TN. April 2023.
12. **Kidd RS**. "The Limping Child". Society for Pediatric Urgent Care Annual Meeting, Nationwide Children's Hospital. Columbus, OH. September 2022.  
**Levine MC**. "Cool Cases in PEM POCUS". Children's Emergency Care Alliance Tennessee Conference. Memphis, TN. April 2023.
13. **Smith C**. "Clay's Top Picks: The Latest Emergency Medicine Articles You Need to Know". Grand Rounds Kaiser Permanente. San Francisco, CA. May 2, 2023.

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14. **Anderson T.** "Mass Casualty Incidents". Middle Tennessee EMS Conference. Nashville, TN. May 12, 2023.
15. Korducki J, **Ciener D**, Walsh R, Palm K, Booker R. "Novel Modification of a Manikin to Simulate Pediatric Post-Tonsillectomy Hemorrhage." SimVentors Video Demonstration. International Meeting on Simulation in Healthcare (IMSH). Orlando FL, January 2023

**Abstracts**

1. Kannikeswaran N, Spencer P, Fernandez R, Aronson PL, Lion KC, Singh N, Pickett ML, Bouvay K, Kelly J, Hartford EA, St. Pierre-Hetz R, **Hincapie M**, Green RS, **Roach B**, Kotler H, Corboy JB, Hoffmann JA, Gifford S, Ford V, Akinsola B, Chow JL, Tran TT, Tedford NJ, Thompson AD, Krack A, Bergmann KR, Lucrezia S, Piroutek MJ, Lin K, Truschel L, Chung S, Molyneaux ND, Chu J, Chowdhury N, Sartori LF, Dingeldein L, Rose J, Duong M, Cheng T, Jackson K, Bhaladkar S, Lababidi A, Pulcini CD, Theiler C, Waseem M, Lou XY, Gutman CK. "Emergency Department Management and Disposition of Low-Risk Febrile Infants 29 – 60 Days Old with and without a Primary Care Physician." Pediatric Academic Societies. Washington, DC. April 28, 2023.
2. **Roach B**, Shelton I, Bielanin J, Fritz C, **Hanson HR**. "Using a QR Code to Connect Families to Food Resources - A Novel Tool for Addressing Food Insecurity in the Pediatric Emergency Department." Pediatric Academic Societies. Washington, DC. May 1, 2023.
3. **Roach B**, Shelton I, Bielanin J, Fritz C, **Hanson HR**. "Using a QR Code to Connect Families to Food Resources - A Novel Tool for Addressing Food Insecurity in the Pediatric Emergency Department." Department of Pediatrics Research Retreat. Vanderbilt University Medical Center. Nashville, TN. April 14, 2023.
4. **Roach B**, Shelton I, Bielanin J, Fritz C, **Hanson HR**. "Using a QR Code to Connect Families to Food Resources - A Novel Tool for Addressing Food Insecurity in the Pediatric Emergency Department." 41st Annual Graduate Medical Education Research Forum. Vanderbilt University Medical Center. Nashville, TN. April 21, 2023.
5. White R, **Roach B**, Hess J, Nelson R, Tyson D. "An Interdisciplinary Elective Translating Health Equity Knowledge into Action." Gerald S. Gotterer Health Professions Education Research Day. Vanderbilt School of Medicine. Nashville, TN. December 16, 2022.
6. **Roach B**, White R, Hess J, Sikon J, Lei C. "Using Simulation to Uncover Implicit Bias and Improve Equitable Care." Gerald S. Gotterer Health Professions Education Research Day. Vanderbilt School of Medicine. Nashville, TN. December 16, 2022.
7. **Roach B**, Shelton I, Bielanin J, Fritz C, **Hanson HR**. "Using a QR Code to Connect Families to Food Resources - A Novel Tool for Addressing Food Insecurity in the Pediatric Emergency Department." American Academy of Pediatrics National Conference. Anaheim, CA. October 8, 2022.
8. Dupont A, **Ciener D**, Monteilh C, Bharath A, Thomas A, Wolpert K, Pearce JI. "Multi-Institutional Pediatric Sedation Complication Simulation." Abstract ID: 1423292.

**Awards**

1. **Hanson HR**, "A Randomized Controlled Trial Comparing Outcomes of Pediatric Laceration Closure Using a Tissue Adhesive (Dermabond) Versus Adhesive Strips (Steri-Strips) Versus Absorbable Sutures" Principle Investigator, Vanderbilt Institute for Clinical and Translational Research (VICTR), January 2018-August 2022

**Quality Improvement Projects**

1. **Ayers C**, **Frazier SB**, **Estrada C**, Johnson D. "Self-Service to Full Service: Improving Children's Hospital Emergency Department Access to Outpatient Prescriptions.  
Primary Aim: A quality improvement project to improve the utilization of the onsite outpatient pharmacy. August 2021-Present.
2. **Barton M**. "Imagination Library QI Initiative in the Pediatric Emergency Room".  
Primary Aim: The global aim of the project is to increase access to books for our pediatric patients. Dolly Parton's Imagination Library is an organization that sends patients <5 years old free books, monthly. Interventions are

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performed to enroll non-critical patients in the emergency room into Imagination Library so that they can receive free books at home. July 2022-Present.

3. **Otilio JK, Frazier SB, Wong, A.** Treating Vaso-occlusive Crisis in the Pediatric Emergency Department A quality improvement project aimed at reviewing vaso-occlusive pain management of patients with Sickle Cell disease in the ED at VCH and implementing change to increase pain assessments and decrease time to appropriate pain medications. Ongoing.
4. **Anderson TE.** "ED STOP Suicide Collaborative". Ongoing.

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	<b>Totals</b>
<b>Activity</b>	<b>Number</b>
Peer Reviewed Manuscripts	19
Abstracts	8
Platform/Poster Presentations	13
Oral Presentations	15
Awards	1
QI Projects	4
<b>Total</b>	<b>60</b>
<b>Faculty Member</b>	<b>Number of Activity</b>
Tucker Anderson, MD	3
Don Arnold, MD, MPH	6
Catherine Burger, MD	2
Daisy Ciener, MD, MS	6
Emily Fain, MD	1
Barron Frazier, MD	6
Holly Hanson, MD	17
Mark Hincapie, MD	2
Nicholas Jones, MD	2
Rebecca Kidd, MD	3
Marla Levine, MD	4
Jaime Kaye Otilio, MD	2
Clay Smith, MD	5
Barbara Solomon, MD	3
Saralyn Williams, MD	2
Michele Walsh, MD, MMHC	2
<b>Fellow</b>	<b>Number of Activity</b>
Claci Ayers, MD	3
Margaret Barton, MD	4
Thomas Gilmartin, MD	1
Britta Roach, DO	13
Amelia Wong, MD	2
Taylor Anderson, MD	1