

Department of Pediatrics

PEDIATRIC FELLOWSHIP NEWSLETTER

Winter 2017

pediatrics.urmc.edu/fellowships
Facebook: [Pediatric Fellowship Programs](#)

Fellow Research Spotlight

Elizabeth Nocera, D.O., Third Year Pediatric Critical Care Fellow

Pilot Study Confirms Protocol to Minimize Blood Exposure Post Cardiac Surgery



[Elizabeth Nocera, DO](#), third year pediatric critical care fellow has conducted a pilot study that proves the safety of cell saver re-infusion for up to 24 hours post-operation in patients who have undergone cardiac surgery, a practice which ultimately minimizes blood exposure and the associated complications.

When neonates and small infants undergo cardiac surgery with cardiopulmonary bypass, the circuit requires priming with allogeneic blood. Following surgery, the excess blood in the bypass machine is washed and spun, and the red blood cell product is collected as cell saver, which accompanies the child to the Pediatric Cardiac ICU (PCICU) to be used for post-operative RBC transfusion or volume replacement. Traditionally, cell saver re-infusion is limited to six hours post its collection. However, working with mentor [Jill M. Cholette MD](#), Dr. Nocera hypothesized that this period of time could be extended to 24 hours which is the duration of time when the patient is most fragile and in need of a transfusion or volume replacement. To explore this hypothesis, a retrospective chart review of 110 neonates and infants s/p open heart surgery was performed. The results indicate that re-infusing cell saver blood, stored at the bedside in a temperature controlled cooler for up to 24 hours post-operation, does not increase infection rate or post-op complications. Furthermore, it decreases the need for allogeneic blood transfusions and minimizes blood donor exposures. Larger prospective studies will be needed to determine whether this practice will reduce the known risks and complications of blood product transfusions.

Maintenance and re-infusion of cell saver blood at the bedside for up to 24 hours post its collection has become the standard in the PCICU at Golisano Children's Hospital. Dr. Nocera's abstract was recently published in [Critical Care Medicine](#) and she was invited to present these findings at the annual Society for Critical Care Medicine (SCCM) meeting in January 2017. Dr. Nocera is thankful for the guidance and support of her mentor, Dr. Cholette, as well as Eugene Daugherty, MD, George Alfieri, MD and Ron Angona, CCP, who played an integral role in her project.

Recent Fellow Publications

Bounds RL, Kuebler J, Cholette JM, Wittlieb-Weber CA (2016). "[Left Main Coronary Atresia in an Infant with Inclusion-Cell Disease.](#)" *World Journal for Pediatric and Congenital Heart Surgery*.

Lingan JV, Alanzalon RE, Porter, Jr. GA (2017). "[Preventing Permeability Transition Pore Opening Increases Mitochondrial Maturation, Myocyte Differentiation and Cardiac Function in the Neonatal Mouse Heart.](#)" *Pediatric Research*.

Mannan J, Amin S (2016). "Physiology of Neonatal Jaundice." *Peri - Facts Academy*, 1-15.

Mannan J, Amin S (2016). "[Meta-Analysis of the Effect of Chest Shielding on Preventing Patent Ductus Arteriosus in Premature Infants.](#)" *Am J Perinatol*, 00: 1-5.

Nocera E, Daugherty L, Angona R, Wang H, Tesini B, Alfieris G, Cholette J (2016). ["Re-infusion of Cell Saver For Up to 24 hours Post Collection Does Not Increase Risk of Infection."](#) *Critical Care Medicine*; Volume 44, Issue 12, p 225. doi: 10.1097/01.

Nutt R and Adair R (2016). "Care of the Newborn with Down Syndrome." *The perIFACTS OB/GYN Academy*, Activity 16043P.

Congratulations to Our Recent Fellowship Graduate!



Congratulations to Robert Nutt, MD, MPH who graduated from the Developmental-Behavioral Pediatrics Fellowship Program in December 2016. During his fellowship, Dr. Nutt received his Masters in Public Health, was the recipient of several research awards, including the T32 training grant, Bradford Fellowship Award, and the Haggerty-Friedman Psychosocial Fund Award, and served as a national committee member for the AAP Early Hearing Detection & Intervention (EHDI) Leadership Team. He has accepted a position at Carolinas Healthcare System in North Carolina where he will work with two affiliated DBP practices in Concord and Charlotte. He looks forward to continuing to work with families of deaf and hard of hearing children in his new practice and will continue to serve on the AAP leadership Team for EHDI. We wish Dr. Nutt all the best in his career!

Enhancing the Educational Experience Through Simulation Training

Simulations are becoming an effective and popular tool for physicians and health care providers to practice technical skills, improve communication, and prepare for critical complex patient scenarios. [Rita Dadiz, DO](#), Associate Professor of Pediatrics and Associate Director for the Neonatology Fellowship Program began this practice at the University nearly ten years ago and has incorporated a broad range of simulations into the education of our pediatric fellows and residents.

As the Director of the Neonatal Innovation Simulation and Safety Program, Dr. Dadiz works with fellows, residents, and health care providers throughout the NICU and across disciplines. From practicing procedures on high-tech neonatal mannequins costing over \$30,000, which have a heart rate and can simulate real acts of breathing and crying, to interacting with hired actors to practice delivering bad news, trainees are exposed to simulations that allow them to enhance their technical and communication skills. In addition, through mock codes with interprofessional teams, often involving the Department of Obstetrics and Gynecology, trainees and colleagues engage in team-based training to improve communication at the bedside. While each aspect of the simulation process contains invaluable educational opportunities, Dr. Dadiz says one of the most valuable features is the debriefing that follows. "The simulation's main purpose is to provide a framework for discussion," she said. By talking through a scenario, getting others' opinions, and understanding others' perspectives, trainees are being taught vital communication skills, which they will use throughout their career and ultimately teach others through example in future leadership roles.



Dr. Dadiz has seen much success with the simulation program and is a co-investigator on an AHRQ grant to continue the progress. The grant is specifically aimed at simulating scenarios in a new space before a move occurs, an area in which she brings much insight given her experience with the move into the new Golisano Children's Hospital in July 2015. In collaboration with other departments across the University, including Palliative Care and Obstetrics/Gynecology, she has even taken simulations on the road, providing training at national meetings including Pediatric Academic Societies (PAS). As simulation training is gaining more national recognition as a valuable practice, Dr. Dadiz looks forward to new opportunities that become available and the ability to enhance the education pediatric trainees receive through this type of training.



Program Director Spotlight

Marc Lande, M.D. M.P.H., Director, Pediatric Nephrology Fellowship Program

[Marc Lande, MD, MPH](#), Pediatric Nephrology Fellowship Program Director, was featured in *The New York Times* for his research on the effects of hypertension in children. The full article can be found [here](#).

Society for Pediatric Research

Fellows are encouraged to join the [Junior Section of the Society for Pediatric Research](#). Free to join, this organization serves as a resource for networking and career development. [Kate Ackerman, MD](#), Associate Professor of Pediatrics (Critical Care) currently serves as the society's treasurer/secretary.

Seasonal Fun!

[Polar Passport for the Seneca Lake Wine Trail](#)

Visit 20+ participating wineries on the Seneca Lake Wine Trail and enjoy a free flight of wines, chat with winemakers and enjoy personalized off-season attention. Pass is valid through March 31, 2017. Purchase passes online, in advance or at participating wineries. See individual wineries for schedules.

[Bristol Mountain](#)

If you are looking for a great skiing opportunity, check out Bristol Mountain. It offers 35 slopes and trails, beautiful scenery and a variety of inclines for every skier and snowboarder, from beginner to expert.

[Family-Friendly Activities](#)

Rochester and Genesee Valley Parent magazine offers suggestions for family-friendly activities around the area this winter.



NICU fellows and families had a day of fun ice skating at Manhattan Square Park in downtown Rochester!