American Association of Orthodontists Foundation

Research Aid Award

Drs. Katelyn Cass and Allen Rapolla, University of North Carolina Chapel Hill Adams School of Dentistry

Dr. Katelyn Cass graduated top of her class at Columbia University College of Dental Medicine and recently received both her Masters in Oral Biology and Certificate in Orthodontics from the University of North Carolina Adams School of Dentistry. Prior to dental school, Katelyn attended the University of South Carolina where she studied business and received a B.S. in Finance and graduated Summa Cum Laude and with Honors from the South Carolina Honors College.

Dr. Allen Rapolla obtained his dental degree from the UCLA School of Dentistry and his Certificate in Pediatric Dentistry from Texas A&M College of Dentistry. He worked in private practice specializing in sedation and hospital dentistry for children prior to continuing his training in orthodontics. Dr. Rapolla is currently a third-year resident at the University of North Carolina Adams School of Dentistry.

During his first year, Dr. Rapolla was greatly influenced by Dr. Cass' preliminary research project assessing the perceptions of animal-assisted therapy in dentistry. Dr. Rapolla's experience using sedation highlighted the risks of using pharmacological intervention and growing patient concern and awareness. Dr. Cass and Dr. Rapolla decided to join forces on their current research project titled "Evaluating the effects of animal-assisted therapy on anxiety in pediatric dental patients." The Covid-19 pandemic has increased anxiety levels amongst the general population due to health and economic hardships, interpersonal restrictions and an altered way of life. Anxiety in the dental setting has long been present in a majority of the dental population with a high percentage linked to negative pediatric dental experiences with the adverse result being increased dental disease and decreased delivery of care due to avoidance. The aim of their study is to determine the efficacy of animal-assisted therapy in reducing biometric measures of anxiety during a dental procedure. They will have patients randomized to a dog intervention, where children will either pet a therapy dog or have quiet time, prior to a stressful dental procedure. They will ask validated survey questions, measure salivary stress hormones (cortisol and amylase), and track the patients' heart rate and sweat response to evaluate anxiety. They will determine if animal therapy helps to alleviate anxiety in pediatric dental patients.

As a dual-trained provider and diplomate of the American Board of Pediatric Dentistry, it is Dr. Rapolla's mission to utilize all tools, including behavior management and sedation, to prevent traumatic dental experiences while restoring the oral health of my patients. As a budding orthodontist, it is Dr. Cass' goal to provide positive patient experiences to create happy and healthy smiles. As they continue their education in orthodontics, they recognize similar patterns of anxiety in pediatric orthodontic patients, as in restorative clinics, and hope to discover new tools for anxiety management. The AAOF award supports this research which is highly valuably to the practice of orthodontics and pediatric dentistry and is critical for development as clinicians and resident researchers. Positive educational experiences

in research will help develop better providers, teachers and allow critical analysis of the literature throughout their professional careers. Dr. Cass and Dr. Rapolla hope to pay forward the lessons learned at UNC through this project to enhance the experiences and education of their patients and future residents through teaching positions after residency.