Nemours and UCF Transform Education for Hospitalized Children

ORLANDO, Nov. 13 –Nemours Children's Hospital in Orlando and UCF today announced the launch of PedsAcademy (PEEDS-Academy), a first-of-its kind program that provides highly specialized schooling to chronically ill, hospitalized children in a way that's tailored to their specific disease. Through PedsAcademy, more than 50 UCF faculty and student teachers work closely with physicians to deliver daily STEM instruction to hospitalized patients using high-tech learning tools such as virtual reality, robotics and more.

"Bringing this kind of scale and innovation to K-12 teaching in children's hospitals is simply unprecedented," said Terri Finkel, Nemours chair of pediatrics and faculty sponsor for PedsAcademy. "Every child has the opportunity to participate every day, and each lesson is unique and personalized for them. This is a welcome, even therapeutic, distraction and an exciting learning experience for a child who is going through a stressful time."

The program, which began in August, uses robots, immersive virtual reality telepresence, 3D printers and MakerSpaces to deliver lessons that range from basic computer programming to learning about undersea worlds. Lessons are personalized to a child's specific interest areas, incorporating themes like superheroes, animals or sports.

PedsAcademy is the world's first pediatric school program that uses curriculum specifically tailored to a child's disease. Teaching methods and tasks are based on research into cognitive development and the effects of specific diseases on learning, so patients are taught using learning tools conducive to their physical limitations and sensory conditions. For example, a child with cancer who likes superheroes might have a math session that features Spiderman and uses robots to promote engagement. Because chemotherapy can cause problems with focus, working memory, and identifying visual and spatial relationships, the activity might center around an activity that involves mental rotation, repetitive programming, and small increases in task difficulty.

"These children can miss out on weeks, months or even years of schooling," said Megan Nickels, UCF assistant professor and PedsAcademy faculty director. "Our goal is to provide a rich, meaningful, educational experience so they aren't just keeping pace with their healthy, typically developing peers, but they are actually getting extraordinary educational opportunities while in the hospital."

Instruction takes place at the bedside of long-term patients and in outpatient settings like the Nemours' Infusion Center where children are treated for cancer and blood disorders, kidney disease, and immune system disorders. In some cases, VR goggles are such an effective distraction, they are used as an alternative to sedation.

On an average day, 40-60 children are taught through PedsAcademy. Patients may receive three hours or more of instruction per day and may begin participating as soon as they are admitted and their care plans allow. The siblings of patients can also participate in the instruction.

The PedsAcademy teaching team is comprised of UCF faculty members, student researchers, postdoctoral scholars and dozens of student interns. The students, all pre-service teachers, complete a semester of study at Nemours, providing instruction to patients under the supervision of a faculty member while developing new skills for teaching special populations such as hospitalized children.

The program was inspired by research showing that education is disrupted when children face life-threatening illnesses or suffer from chronic health conditions, often leading to an inability to keep pace and failure to perform at grade level. These educational deficiencies affect children into their later years, and can limit their achievements and social function. In the United States, each year, eight out of every 100 children are hospitalized, sometimes with extended absences from school. Use of robotics to teach mathematical thinking during extended or frequent hospital stays can support these children in attaining or exceeding grade level expectations.

The program is funded through grants and private donations.

About Nemours Children's Health System

Nemours is an internationally recognized children's health system that owns and operates the two free-standing children's hospitals: the Nemours/Alfred I. duPont Hospital for Children in Wilmington, Del., and Nemours Children's Hospital in Orlando, Fla., along with outpatient facilities in five states, delivering pediatric primary, specialty and urgent care. Nemours also powers the world's most-visited website for information on the health of children and teens, KidsHealth.org,and offers on-demand, online video patient visits through Nemours CareConnect. Nemours ReadingBrightstart.org is a program dedicated to preventing reading failure in young children, grounded in Nemours' understanding that child health and learning are inextricably linked, and that reading level is a strong predictor of adult health.

Established as The Nemours Foundation through the legacy and philanthropy of Alfred I. duPont, Nemours provides pediatric clinical care, research, education, advocacy and prevention programs to families in the communities it serves.

Additional assets available online: **Photos** (3) **Video** (2)

https://nemours.mediaroom.com/2018-11-13-NemoursUCFTransformEducationforHospitalizedChildrens