

Innovations in Gastroenterology & GI Surgery



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PEOPLE

Liver specialist Dr. Kathleen Schwarz joins team



Kathleen Schwarz, M.D., has joined the team of the Division of Gastroenterology, Hepatology & Nutrition at Rady Children's Hospital-San Diego. She is triple certified by the American Board of Pediatrics in pediatrics, pediatric gastroenterology and pediatric transplant hepatology.

Her research focus is viral infections of the liver – both the typical (hepatitis B and C) and atypical (as triggers of biliary atresia and autoimmune hepatitis) kinds.

Prior to joining Rady Children's in May, Dr. Schwarz was the division chief of pediatric gastroenterology and medical director of the Pediatric Liver Transplant Program at Johns Hopkins University in Baltimore. Previously, she was chief of pediatric gastroenterology at St. Louis University.

Dr. Schwarz received her bachelor's degree in biology from Scripps College, her Master of Arts in Teaching in biology from Northwestern University and her medical degree from Washington University in St. Louis. She completed her residency in pediatrics and fellowship in pediatric gastroenterology at St. Louis Children's Hospital/Washington University School of Medicine.

Dr. Schwarz was named one of *Baltimore* magazine's top 25 pediatricians, and she has won teaching awards at both St. Louis University and Johns Hopkins University. In 2017, she received the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) Shwachman Award for major lifelong scientific contributions to the field of pediatric gastroenterology, hepatology and nutrition.



Division rises in rankings of best pediatric hospitals

The Division of Gastroenterology, Hepatology & Nutrition achieved the No. 22 ranking in *U.S. News & World Report's* survey of the nation's top children's hospitals.

The results of the comprehensive survey were published in the new 2018-19 Best Children's Hospitals rankings.

Programs were ranked on various measures of clinical care. Eighty-five percent of each hospital's score comes from data collected through a detailed U.S. News clinical survey of children's hospitals, such as liver transplant survival, patient volume and prevention of ICU infections. The remaining percent reflects nominations from pediatric specialists and subspecialists who responded to surveys in 2016, 2017 and 2018 and recommended the hospital for serious cases in their specialty.

The Division scored "excellent" on the following measures:

- **Nurse staffing:** average hospital-wide number of R.N.s over 24 hours relative to the average number of daily inpatients.
- **Advanced clinical services offered:** such as pediatric interventional radiologists and pediatric liver-specialized pathologists available every day for consult.
- **Clinical support services offered:** such as rapid-response team and pediatric pain management program.
- **Advanced technologies available:** such as PET or PET/CT scanner, MR cholangiopancreatography and CT enterography.
- **Specialized clinics and programs available:** such as programs for intestinal rehabilitation and inflammatory bowel disease.
- **Full-time subspecialists available:** such as pediatric gastroenterologists.
- **Commitment to best practices:** such as outreach programs in the community and providing disease information to patients/families.
- **Commitment to quality improvement:** such as collecting and analyzing data to improve quality of care.
- **Adoption of health information technology:** use of electronic medical records and computerized physician order entry to improve patient safety and care.
- **Commitment to clinical research:** active participation in clinical trials and bench-to-bedside research.
- **Help for families:** such as through a family resource center, family support specialists and pediatric psychologists.
- **Enlistment of families in structuring care:** such as through a parent advisory committee that meets frequently.

Rady Children's Hospital, once again, was ranked in all 10 pediatric specialties surveyed.



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Wearable device offers alternative to manometry for monitoring digestive activity

[Hayat Mousa, M.D.](#), clinical director of pediatric gastroenterology and the director of the [Neurogastroenterology and Motility Center](#) at Rady Children's Hospital, was part of a recent study on a wearable, noninvasive gastric monitor. The novel device monitors electrical activity in the stomach over a 24-hour period, essentially working like an echocardiogram, but for the GI tract.

The monitor was developed by UC San Diego bioengineers. Worn on the abdomen, it uses off-the-shelf electrodes used in electrocardiograms. The electronics and battery are encased in a 3-D printed box and connected to the electrodes.

The research team tested the device on 11 of Dr. Mousa's patients and one adult volunteer. The children had been undergoing invasive testing with esophageal manometry, the standard method of monitoring digestive activity. This procedure requires a long catheter that's inserted through the nose, while the child is sedated or under general anesthesia, to measure pressure at several parts of the stomach.



Photo credit: Jacobs School of Engineering / UC San Diego

In comparing the two methods, the researchers found that the device performed as well as the manometry but was far more comfortable for the patients. They also discovered that the stomach's electrical activity changes during sleep as well as around meals.

Dr. Mousa, who has been practicing pediatric gastroenterology and taking care of patients for 20 years, believes that the wearable monitor is the best way to evaluate children with motility and functional GI disorders. "It provides the information without the need for sedation, and it offers the flexibility to monitor kids while they continue their daily activities," she says. "This procedure allows convenience without compromising accuracy. In addition, it offers the option to assess the brain-gut response to therapeutic interventions, including biofeedback and neuromodulation."

The system is currently paired with a smart phone app that allows patients to log their meals, sleep and other activities. The long-term goal is to design an app that would allow patients and physicians to see the data collected by the device in real time.

The project is a collaboration among Rady Children's clinicians, UC San Diego bioengineers and UC Berkeley neuroscientists. The research findings are published in the March 22 issue of *Scientific Reports*. [Read the abstract](#).