

NEWS

# IN THE SPOTLIGHT: W. NATHAN HOLMES, MD AND AZAM EGHBAL, MD

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*Their paths may have diverged after completing pediatric radiology fellowships together at Boston Children's Hospital, but not for long. Dr. W. Nathan Holmes and Dr. Azam Eghbal have teamed up once more to refine Orange County's only truly pediatric radiology department. Among their accomplishments is a 90 percent reduction in radiation exposure.*



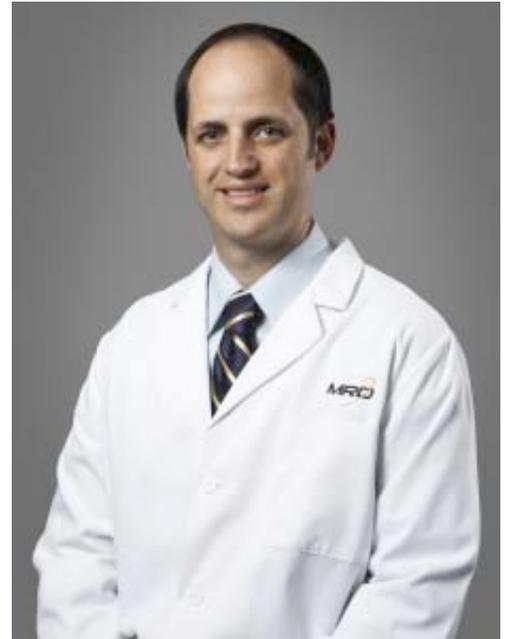
*An enduring fellowship. Pediatric radiologists Dr. W. Nathan Holmes, chair, department of radiology at CHOC Children's, left, and Dr. Azam Eghbal, medical director, CHOC Children's radiology department have made CHOC the regional resource for pediatric imaging excellence. Some of their techniques may surprise you.*

A pet therapy dog recently trotted into the [CHOC Children's Radiology Department](#). Waiting inside was a young patient about to undergo a CT scan. A few minutes later, the radiology team at CHOC produced a clear scan without anesthesia, thanks to the dog's calming influence on the patient.

Pet therapy is just one of many techniques the department utilizes to get the best images with the least radiation possible. And that ability to do things a little

“outside the box” is what drew [Dr. W. Nathan Holmes](#) to CHOC in 2008 after completing his fellowship training at Boston Children's Hospital. CHOC was on its way to opening a stand-alone radiology department, and Dr. Holmes could not resist the opportunity to help design and equip a truly pediatric-specific and friendly environment.

“Most children are imaged in adult facilities, and it is not uncommon to see radiation doses that are 50 percent higher than what we do here,” Dr. Holmes said. “One of our goals has been to acquire and fine-tune the best equipment to get the diagnostic quality we need with minimal radiation.”



*Dr. W. Nathan Holmes*

The CHOC CT delivers extremely low-dose radiation with scanners that are so fast, repeat scans are rarely needed. Other hospitals have begun transporting neonates to CHOC for imaging because of these capabilities.

CHOC has reduced radiation associated with fluoroscopic procedures by up to 90 percent by using pulse dose technique and image capture compared to continuous fluoroscopy and full-image acquisition. Additionally, the CHOC X-ray technologists and ultrasonographers understand the pediatric disease process and are experienced at getting the highest quality of key images. Dr. Holmes also credits the department's dedicated child life specialists for providing distractive techniques that have greatly reduced the need for anesthesia.

### **Increasing Applications for MRI**

After her fellowship at Boston Children's Hospital, [Dr. Azam Eghbal's](#) career took an administrative turn. As vice-chair of the radiology department and MRI division director at Akron Children's Hospital, Dr. Eghbal was integrally involved with the acquisition and accreditation of the hospital's 3 Tesla MRI magnet. She subsequently developed all neuro and body MRI protocols.



Dr. Azam Eghbal

Dr. Eghbal also became Lean Six Sigma-certified, and initiated several MRI-related performance and quality improvement initiatives. Those were some of the specific skills Dr. Holmes was looking for when he contacted his former colleague in 2013.

“Dr. Holmes has done an amazing job,” Dr. Eghbal said. “My goal is to increase image quality and utilize MRI equipment to maximum capacity.”

CHOC is equipped with two MRIs, including one with a 3 Tesla magnet. As MRI technology is continually undergoing upgrades, Dr. Eghbal and Dr. Holmes work closely with other radiologist colleagues and CHOC departments to expand imaging options. In the near future, the following services will be available:

- Functional MRI and brain mapping
- Cone-beam CT for orthognathic surgeries

Additionally, monthly interdepartmental meetings have addressed MRI pathways for stroke, osteomyelitis and trauma. Dr. Eghbal recently contributed a textbook chapter about trauma, and brings considerable perspective to the pediatric-focused trauma center that opened earlier this year inside the Julia and George Argyros Emergency Department.

“What works for one hospital, may not work for another,” she said. “However, most things are easy when you have a group of good people who are dedicated and willing to improve. We all share a common goal: to improve CHOC and better serve the kids.”

The [CHOC Children’s Radiology Department](#) has received full accreditation for both MRI and CT from the American College of Radiology, and is currently undergoing accreditation for ultrasound. Both Dr. Holmes and Dr. Eghbal welcome questions from the pediatric community.

**To contact them, please call the CHOC Radiology Department at 714-509-9081.**

