

# NEUROSURGERY

## PHILOSOPHY

Our highly experienced, board certified pediatric neurosurgeons provide innovative and compassionate care to treat neurological disease in children. While every effort is made for nonsurgical intervention, neurosurgery can often be the answer to saving or improving a child's life.

Our board-certified neurosurgeons bring the highest levels of expertise and experience to even the most complex disorders of the brain and spine. We are pioneers in some of the most innovative neurosurgical procedures, including endoscopic/minimally invasive surgery for brain tumors; endoscopic and open surgery for craniosynostosis; minimally invasive laser ablation of intracranial tumors and epileptogenic lesions; robotic surgery; deep brain stimulation for movement disorders; advanced epilepsy surgery including RNS; and treatments for traumatic brain injuries. We use the latest technology and cutting-edge treatments to provide the most effective and least invasive treatments for our patients. We partner with institutions around the country in research to advance our knowledge of pediatric neurological disease, and we use this knowledge to provide the best treatments for our patients.

## WHAT WE TREAT

- Arteriovenous malformations of the brain and spinal cord
- Basilar invagination syndrome
- Birth defects
- Brachial plexus nerve damage
- Brain cysts
- Brain and spinal cord tumors
- Cavernous malformations of the brain and spinal cord
- Chiari malformations
- Cerebral palsy and spasticity
- Concussion and head/spinal cord trauma
- Congenital and acquired brain anomalies
- Craniosynostosis (open and endoscopic/minimally invasive surgery)
- Deep brain stimulation
- Epilepsy
- Hydrocephalus
- Infants with abnormal head size
- Laser ablation surgery
- Minimally invasive surgery



- Movement disorders
- Moyamoya disease
- Plagiocephaly
- Robot-assisted surgery
- Sacral dimples
- Scoliosis
- Spina bifida
- Spinal anomalies
- Spinal cord compression, and herniated disks
- Spinal dermal sinus tracts
- Spinal instability
- Tumors of the brain and spine
- Vascular anomalies of the brain and spine

## PROGRAMS AND SERVICES

- Brachial Plexus Program
- Comprehensive Epilepsy Program
- Concussion Clinic
- Evaluation of infants with large, small, or misshapen heads
- Maternal fetal evaluation
- Neurofibromatosis Program
- Neuro-oncology Treatment Program
- Plagiocephaly Clinic
- Spasticity Clinic
- Second opinion for all pediatric neurosurgery issues
- Spina Bifida Clinic
- Tuberous Sclerosis Clinic

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## MAIN OFFICE

### CHOC Neuroscience Institute

### CHOC Commerce Tower

505 S. Main Street, Suite 300, Orange, CA 92868

Appointments: 714-509-7070

Fax: 844-340-5348

## TELEHEALTH SERVICES

CHOC offers multiple types of convenient services for our patients. In addition to in person visits, patients can have telehealth visits with our providers when appropriate, allowing more flexibility and access to care.

## SPECIALTY CARE PHYSICIAN CONCIERGE SERVICE

Our physician concierge service expedites communication between healthcare professionals and CHOC specialists. To connect with a physician concierge representative, please call 714-509-4013.

## ONLINE REFERRAL PORTAL

- Referrals can now be placed online through the CHOC referral portal, eceptionist™:
- Submit your referral electronically
- Review your referrals and know your patients have a confirmed appointment time
- Contact your CHOC Referral Coordinator from a single portal

To sign up, go to [choc.org/referrals](http://choc.org/referrals).

## VOALTE®

Physicians are available via Voalte®, a secure HIPAA-compliant secure text messaging app, available on PC and smartphone devices. For more information, please contact CHOC Business Development: [BDinfo@choc.org](mailto:BDinfo@choc.org).



## OUR TEAM

### Pediatric Neurosurgery Team

#### Joffre Olaya, MD

#### Division Chief and Co-Director of CHOC Neuroscience Institute

Epilepsy, movement disorders, deep brain stimulation, brain/spine tumors, spasticity, neuro-genetic disease, Chiari malformations, neural tube defects, hydrocephalus, craniosynostosis

#### Brian E. Hanak, MD

Hydrocephalus, vascular malformations, brain tumors, neuroendoscopy, spina bifida, complex tethered cords, epilepsy

#### William Loudon, MD

Molecular characterization and novel therapeutic approaches for CNS malignancy, cancer stem cell biology, regenerative medicine, head trauma, gamma knife, stereotactic radiosurgery, spina bifida

#### Michael Muhonen, MD *(No longer seeing new patients)*

Hydrocephalus, cerebral palsy, traumatic head injuries, spina bifida, brain/spine tumors, Moyamoya disease, vascular malformations of the brain

#### Aaron Yengo-Kahn, MD

Pediatric spine - craniocervical junction, spine tumors, scoliosis, trauma, brain tumors, neuroendoscopy, traumatic brain injury

#### Brett Anderson, PA-C

#### Myrlee Appel, PA-C

#### Lauren Leyson, PA

#### Sarah Pedroza, PA-C

Learn more about CHOC Neuroscience Institute at [choc.org/neuroscience](http://choc.org/neuroscience).