



## Pediatric Surgery Residency Program

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The Pediatric Surgery Residency at Children's Hospital of Wisconsin is a two-year clinical training program approved in 2002 by the ACGME. It was last reviewed in August, 2015 with approved ACGME accreditation. The curriculum includes comprehensive coverage of the scientific principles that are the basis for the practice of pediatric surgery. These are combined with structured operative and perioperative management of infants, children, and adolescents with problems managed in the contemporary practice of general and thoracic pediatric surgery. The clinical experience encompasses newborns, congenital anomalies, pediatric trauma, burns, critical care, surgical oncology, GI diseases, and the entire spectrum of abdominal, non-cardiac thoracic, urologic, and other clinical problems that fall within the scope of practice for pediatric surgery in the United States.

### **Educational Program**

The Children's Hospital of Wisconsin was founded more than a century ago and Dr. Marvin Glicklich established the pediatric surgical program more than 50 years ago. However, it is within the last 25 years that these have grown to rank among the major children's academic programs in the United States. Since 1999 the Children's Hospital of Wisconsin (CHW) has ranked among the top children's hospitals in the U.S. in the number of annual admissions among members of the Children's Hospital Association (CHA). The operative volume is also among the largest children's programs in the U.S. The Children's Hospital of Wisconsin has a long-standing affiliation with the Medical College of Wisconsin (MCW). This began as an affiliation with Marquette University School of Medicine and continued until 1970 when the School of Medicine became an independent entity and assumed the new name of Medical College of Wisconsin. The partnership with the Medical College of Wisconsin remains quite strong; the relationships with the MCW surgical and pediatrics training programs are cooperative across the disciplines. For many years MCW general surgery residents and



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trainees in other surgical specialties have received exceptional exposure to the surgical problems of infants and children at the Children's Hospital of Wisconsin.

CHW was relocated from a downtown Milwaukee location to the current facility on a new public campus on the western edge of Milwaukee in 1988. Institutions on the Milwaukee Regional Medical Center campus include MCW, CHW, Children's Research Institute, Froedtert Memorial Lutheran Hospital (adults), the Blood Research Institute of Southeastern Wisconsin and the Children's Research Institute; as well as eye, mental health and rehabilitation institutes

The pediatric surgery faculty and programs have been fully integrated into the medical school over the last 20 years. All of the current pediatric surgeons are MCW faculty members with full time academic appointments. All pediatric surgeons in Southeastern Wisconsin are members of this faculty and participate actively in this training program.

The training program has been designed to maximize exposure to a high volume of diverse surgical problems in infants and children, representing all of the essential areas in contemporary pediatric surgery. The trainee will be exposed to congenital, neoplastic, infectious and other acquired conditions of the GI system and other abdominal organs; of the blood and vascular system; of the integument; of the diaphragm and thorax (exclusive of heart); of the endocrine glands; of the gonads and reproductive organs; and of the head and neck. Similar experience is afforded in traumatic conditions of the abdomen, chest, head, neck and extremities. This includes both nonsurgical and operative management of multi-organ system injury and burns. This also includes experience with and the development of competence in the complete care of the critically ill infant or child,



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including CPR, management of ventilators, basic and advanced monitoring techniques, nutritional assessment and management and competence in recognition and management of clotting and coagulation disorders.

Advanced laparoscopic pediatric surgery is a programmatic strength and this experience is integrated into the training program. The core faculty includes nine pediatric surgeons working collectively with two pediatric cardiovascular surgeons, two dedicated plastic surgeons and four pediatric urologists within a single practice unit. The Children's Hospital of Wisconsin and the Medical College of Wisconsin are committed to educating health care practitioners and future leaders in all areas of medical care, including pediatric surgery. The Chief of the Division of Pediatric Surgery is David Gourlay, MD and the CHW Surgeon-in-Chief is Keith T. Oldham, MD. The Director of the fellowship training program in pediatric surgery is Casey M. Calkins, MD.

The curriculum includes exposure to, and progressive responsibility for a large volume of routine, as well as complex patients with pediatric surgical problems. Graded responsibility is given to the resident trainee for evaluation, perioperative management, and operative care of these patients. The curriculum includes a structured series of didactic sessions that address pathophysiology, relevant basic science and clinical principles based on the SCORE curriculum. There is clinical correlation of complex congenital and acquired problems of the gastrointestinal tract, cardiorespiratory system and urologic tract as well as responsibility for surgical oncology, critical care, trauma and burns. Each component of the curriculum has an identified faculty member with principal responsibility. A three-hour block of time without scheduled elective surgery is devoted to the education program every Friday morning, in addition to a number of other pediatric surgery conferences, rounds, and other Departmental educational activities. The curriculum includes attendance at a colorectal course of the trainees choosing. Both the junior and senior trainees attend one annual pediatric minimally invasive training course put on by the Association of Pediatric Surgery Training Program Directors, and the



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senior fellow attends a similar pediatric oncology program at St. Jude's Children's Hospital. In addition, each fellow attends either the AAP, Surgical Section or the APSA annual meeting.

The two-year fellowship is designed to advance the skills of the trainee in a graded fashion. During year one, the trainee has the opportunity to spend one month each on neonatology, the pediatric intensive care service or the urology service. In addition, elective time is available in otolaryngology and cardiac surgery. The trainees maintain night call responsibilities on the pediatric surgical service during off-service rotations. Participation with the cardiac surgery service is on an individual case basis for PDA ligations, vascular rings, coarctations, or the other occasional but relevant procedures as they arise. Airway and esophageal foreign bodies are assigned on an alternating weekly basis to the otolaryngology and pediatric surgical services. The first year includes a minimum of 6 months on the pediatric surgical service to familiarize the trainee with general pediatric surgery. The entire second year is spent on the pediatric surgical service. The trainee will have oversight responsibilities for the entire clinical service and will serve as the administrative leader of the house staff during the second year of training. At present, the junior pediatric surgery trainee, a general surgery PGY4, and two senior general surgery research residents alternate senior in-house call. A pediatric surgical critical care fellowship was approved by the ACGME in 2006 and this individual completes the in house call senior level rotation. The senior fellow takes in house call to compensate for vacations, meetings and other absences. In house call is necessary because the Children's Hospital is a designated American College of Surgeons Level I Pediatric Trauma Center. Additionally, the generally high volume of the inpatient service, EDTC and inpatient consultations, and critical care management predict active involvement both day and night by the senior residents and fellows. General surgery PGY1 and PGY2 residents are also part of the call team with an



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established night float system; therefore, there is always a senior surgical trainee and a junior surgical resident in house.

The average daily Pediatric Surgical Service inpatient census is approximately 40 patients with a range of 15-70 plus. Of the 17 main campus operating rooms, a minimum of 2 per day, and regularly 3 or 4, are committed to the Pediatric Surgical Service. This does not include a six O.R. ambulatory Surgicenter that is part of the Children's Health System and located about 10 minutes south of the main campus. This latter facility is a site of limited pediatric surgery ambulatory training. Ambulatory weekly clinic experience is a mandatory part of the trainee experience as well.

## **Research**

The basic and clinical science research programs in the Division of Pediatric Surgery include six research laboratories with aggregate funding of approximately \$2 million this fiscal year. The largest single source of funding is the National Institutes of Health. The Division includes 3 full-time research faculty with PhD degrees in basic disciplines, one faculty member with a PhD in epidemiology and expertise in clinical research, and a number of postdoctoral students, fellows and residents. In addition, members of the Division have active federal grants related to health services research and pediatric trauma. Each trainee is expected to develop an abstract or publication for national publication annually. Appropriate research personnel provide assistance, as trainee time is limited. Trainees are encouraged to attend and are supported for one professional meeting annually, usually the APSA or AAP meeting, as well as other meetings for professional presentations.

## Conference Schedule

Second Wednesday	1:00-2:00	Trauma Rounds
Every Wednesday	7:30-8:30	Fetal Anomalies
Wednesday	7:30-8:30	Department of Surgery Grand Rounds
Every Thursday	7:30-8:30	Fellows Professor Rounds
Every Friday	6:30-7:30	Morbidity & Mortality & Census Review
First Friday (qo month)	6:30-7:30	Surgery/Anesthesia/ICU
First Friday (qo month)	7:30-8:30	Surgery/EDTC
Second Friday	7:30-8:30	Surgery/GI
Third Friday	7:30-8:30	Surgery/Pathology
Fourth Friday	7:30-8:30	Surgery/Neonatology
Every Friday	8:30-9:30	Basic Science Conference
Every Friday	12:00-1:00	Solid Tumor Conference
Journal Club	Monthly	During Basic Science Conference



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## **Research Centers, Libraries and Other Resources**

### **Children's Research Institute**

The Children's Research Institute is a 298,000 square foot facility that provides shared research space and two wings of laboratories, one for Children's Research Institute and the other for the Medical College's Translational and Biomedical Research Center. Founded in 2004, Children's Research Institute provides infrastructure and support for pediatric basic science research and clinical research at Children's Hospital.

### **Health Research Center**

The Health Research Center (HRC), opened in 1998, is a 169,000-square-foot facility that serves as the front door to the College. The HRC includes an auditorium with state-of-the-art communication technology, a teleconferencing room with satellite capabilities, additional small-group teaching spaces, and research laboratories. The HRC also houses the College's Human and Molecular Genetics Center, the Health Policy Institute and the expanded medical library. The library includes an increased number of data ports to connect to the internet, a new media center, additional group study rooms, and increased individual study areas.

### **Medical Education Building**

The Medical Education Building (MEB) provides a variety of learning settings and accommodates classes of 200+ students. It contains two large modern auditoriums, the Alumni Center, 48 multi-use teaching spaces (MUTS), student services, a newly renovated computer-aided instruction lab, cafeteria, student lounges, a recently expanded exercise center, the College's administrative offices, and one entire floor of research space.



## **Todd Wehr Library**

The Todd Wehr Library, along with its branches located at Froedtert and Children's hospitals on the Medical College campus, ranks as a major health sciences research library and is a leader in implementing new electronic technologies in information management. The current collection consists of 250,000 volumes and subscriptions to 1,400 biomedical journals.

The Library offers an electronic Medical Information Network, which provides access to holdings from other libraries, as well as national and international databases. As a result, students and faculty have convenient access to a number of health-related bibliographic databases and full-text electronic books and journals from home, office or library.

Special facilities for library users include a Microcomputer Center, an Audiovisual/Media Center, and the History of Medicine/Archives Center. The Library staff provides an ongoing series of workshops in computer literacy, the internet, and information management.

Computer-Aided Instruction (CAI) Labs have been expanded and relocated within the Medical Education Building. The new CAI facility accommodates approximately 110 workstations. The workstations are available 24 hours a day, seven days a week. All computers enable access to a wide range of lab-specific and web-based instructional materials, e-mail, the Microsoft Office Professional suite, and other applications, including desktop conferencing, which allows campus-based students to interact with off-campus colleagues. All web-based educational materials are available to students from home via electronic connections.

## **Basic Science Building**

The Education and Basic Science wings are distinctly separate, yet connected - providing medical students with convenient accessibility to faculty in the basic science departments.

The Basic Science Building, connected to the Medical Education Building, houses the research laboratories and department offices of biochemistry; cell biology, neurobiology and anatomy; microbiology and molecular genetics; pharmacology and toxicology; and physiology.

## **MACC Fund Research Center**

The College's MACC Fund Research Center is connected to the Medical Education and Basic Science Buildings. The six-story 141,000-square-foot research center is named after the MACC Fund (Midwest Athletes Against Childhood Cancer), a Milwaukee-based organization dedicated to supporting pediatric cancer research.

The MACC Fund Research Center houses:

- laboratories of the Cancer Center of the Medical College, including its pediatric component, the Midwest Children's Cancer Center,
- the department offices of pediatrics,
- research laboratories for various clinical departments,
- the Biophysics Research Institute, home of the National Biomedical Electron Paramagnetic Resonance (EPR) Center. The EPR Center is identified by the National Institutes of Health as the largest, most comprehensive facility of its kind in the country



### **MRI Research Facility**

The MRI (Magnetic Resonance Imaging) Research Facility is connected to the MACC Fund Research Center. It houses a three-tesla system. This powerful instrument is used for experimental MRI and spectroscopic research. It is one of a few instruments in the country suited to the Medical College's world-renowned biophysics research specialty, real-time functional brain imaging (fMRI).

### **The Eye Institute**

The Eye Institute is the only facility in southeastern Wisconsin devoted exclusively to eye care, graduate medical education in ophthalmology and vision research. Thousands of patients are served annually by its clinics, operating suites and special diagnostic services. The Eye Institute, whose clinical operations are managed by Froedtert Hospital, contains research laboratories and faculty offices for the Medical College's Department of Ophthalmology. It also serves as a regional referral center. Patients are referred by ophthalmologists from all parts of Wisconsin and throughout the nation.

### **Froedtert & Medical College Laboratory**

The offices of the faculty of the Department of Pathology are in the Laboratory building directly across from the Medical College on Connell Avenue. This building houses the laboratories of Anatomic and Clinical Pathology and was opened in August 2000. It is a thoroughly modern clinical laboratory facility in which approximately 2.5 million patient samples are processed each year. The lab serves patients at Froedtert Hospital as well as hospitals and physicians throughout Wisconsin and Illinois.



### **Summary of Housestaff Benefits**

Pediatric surgery fellows are employed by the Medical College of Wisconsin Affiliated Hospitals (MCWAH). For information regarding vacations, leaves, insurance, stipends and professional liability please go online to <http://www.mcw.edu/Graduate-Medical-Education/Benefits.htm> (right navigation pane).



**Division of Pediatric Surgery**

**Children's Corporate Center, Suite 320**

**999 N. 92<sup>nd</sup> Street**

**Milwaukee, WI 53226**

Faculty

David M. Gourlay, MD

Professor and Chief, Division of Pediatric Surgery

Casey M. Calkins, MD

Professor and Program Director

Keith T. Oldham, MD

Professor, Pediatric Surgery

Surgeon-in-Chief, Children's Hospital of Chicago

John J. Aiken, MD

Professor

Marjorie J. Arca, MD

Professor

John Densmore, MD Professor

Associate Professor

Dave R. Lal, MD

Associate Professor

Thomas Sato, MD

Professor

Amy J. Wagner, MD

Associate Professor

Sabina Siddiqui, MD

Assistant Professor

**Pediatric Surgery Fellowship Graduates**

**2003**

Heidi Pinkerton, MD  
Private Practice-Phoenix, AZ

**2004**

Brian Sweeney, MB, MD, FRCSI  
Consultant Paediatric Surgeon  
Our Lady's Children's Hospital  
Crumlin, Dublin

**2005**

Adam Goldin, MD  
Faculty, University of Washington

**2006**

David Gourlay, MD  
Faculty, MCW

**2007**

Dave Lal, MD  
Faculty, MCW

**2008**

J. Craig Egan, MD  
Private Practice-Phoenix AZ

**2009**

John Densmore, MD  
Faculty, MCW

**2010**

Li Ern Chen, MD  
Faculty, University of  
Texas Southwestern  
Dallas, Tx

**2011**

Amy Wagner, MD  
Faculty, MCW

**2012**

Ramin Jamshidi, MD  
Private Practice-Phoenix, AZ

**2014**

Jill Whitehouse, MD  
Joe Dimaggio  
Children's Hospital  
Hollywood, FL

**2014**

Kathleen Dominguez, MD  
Marshfield Clinic  
Marshfield, WI

**2015**

Henry Chang, MD  
All Children's Hospital  
Tampa, FL

**2016**

Kendra Bowman, MD  
St. Luke's Children's  
Boise, ID

**2017**

Elizabeth Berdan, MD

**2018**

Veronica Sullins, MD

**Research Faculty**

Kirkwood Pritchard, PhD - Professor

Robert Miao, PhD-Assistant Professor

Hao Zhang, PhD-Assistant Professor



**Ancillary Staff**

Suzy Boebel, PA-C

Lynn Calaway, PA-C

Krista Kitzerow, PA-C

Terry Derks, PA-C

Danielle Leranath, PA-C

Kimberly Somers, PA-C

Diana Choren, PA-C

Carly Windt, PA-C

Mona Erickson, RN

Kathy Leack, APN

Ann Kurtz, RN

Lynn Walczak, RN

Kristin Braun, APN

Barb Riordan, RN

Paula Eberle, RN

Aubrey Guerard, RN