PEDIATRICS

LMP 4085, 203.785.4638
https://medicine.yale.edu/pediatrics

Professors N. Ameen, W.A. Andiman (*Emeritus*), P. Aronson, A.G. Asnes, J. Asnes, M. Auerbach, C. Baum, A. Bazzy-Assad (*Emeritus*), K.A. Bechtel, A. Berkwitt, M.J. Bizzarro, C.W. Bogue (*Chair*), P. Braverman (*Adjunct*), M. Brueckner, S. Caprio, T. Carpenter (*Emeritus*), K. Chawarska (*Child Study Center*), L. Chen, M.X. Cicero, E.R. Colson (*Emeritus*), J.A. Copel (*Obstetrics, Gynecololgy, and Reproductive Sciences*), M. Dias, B. Doolittle (*Medicine*), M.E. Egan, J. Fahey (*Emeritus*), E. Faustino, B. Feldman, A. Fenick, M. Flaherty-Hewitt, B.W. Forsyth (*Emeritus*), A. Friedman, P.G. Gallagher (*Emeritus*), M. Genel (*Emeritus*), J.S. Giuliano Jr., I. Gross (*Emeritus*), M. Grossman, J. Gruen, J.P. Hafler, W.E. Hellenbrand (*Emeritus*), M.K. Hostetter (*Adjunct*), A.L. Hsiao, A. Jastreboff (*Medicine*), Y. Jiang (*Genetics*), L.C. Johnston, O. Karam, D.M. Komp (*Emeritus*), L. Krishnamurti, M. Langhan, J. Leventhal (*Emeritus*), G. Lister, R.A. Martinello (*Medicine*), L.C. Mayes (*Child Study Center*), P.L. McCarthy (*Emeritus*), L.R. Ment, M.R. Mercurio (*Emeritus*), G. Miller (*Emeritus*), I. Miller, R. Mistry, T. Murray, E. Paintsil (*Adjunct*), J.M. Panisello, D.S. Pashankar, F.D. Pashnakar, J. Pérez Fontán (*Adjunct*), S.M. Peterec, A. Porto, M. Recht, J. Rho, L. Rodriguez, S. Rooney (*Emeritus*), K. Santucci, E.D. Shapiro, B. Shaywitz, S.E. Shaywitz, J. Sherr, R.N. Shiffman (*Emeritus*), B. Smith (*Laboratory Medicine*), W.V. Tamborlane (*Emeritus*), S.N. Taylor, A. Tufro (*Emeritus*), M. Vazquez, S. Weinzimer, P.G. Weiss, C. Weitzman (*Emeritus*), I. Yildirim

Associate Professors A. Alper, P.J. Ananth, E. Aragona, N. Bakshi, N. Bamford, C.M. Beach, C. Bruno, E. Bruscia, A. Cameron, C. Canapari, M.F. Canarie, K. Cardinale, F. Cheng, H. Chang, E. Christison-Lagay (*Surgery*), M. Cohen, H. Collette, K. Corbin, E. Deniz, C.A. Dinauer, J.M. Dodington, R.W. Elder, S.I. Escalera, E. Faherty, R.L. Fawaz, D. Ferdman, I.D. Ferguson, A. Galderisi (*Adjunct*), M. Goldman, C.K. Gooden (*Anesthesiology*), J. Goodwin, J. Greenberg, I. Gross, J. Gujral, A.R. Gupta, S. Gupta, E. Hall, J. Hamilton (*Adjunct*), E. Harrington Myers, D. Hersh, K. Hieftje, A.B. Hittelman (*Urology*), D. Hochreiter, M.S. Hogan, M. Hommel, C. Ionita, S. Kandil, R. Karnik, B. Keeshan, V. Knight, Y. Konnikova, A. Koral, K. Kosiv, M. Kusulas, S. Kwon, S. Leeds, O. Levit, J. Loyal, N. Makhani, A. Marks, S.A. Massaro, V. Meneses, A. Montgomery, L. Mulligan, C.L. Olezeski (*Psychiatry*), C. Oliveira, R. Osborn, A.D. Patel, L. Pavlovic, J. Pellegrini, U. Phatak, R. Pierce, A. Riera, D.J. Rosen, N. Santoro, T. Schlachter (*Radiology and Biomedical Imaging*), V. Shabanova, N. Shah (*Adjunct*), M. Sharifi, B. Sheares, L. Siew, G. Soffer, M. Spencer-Manzon (*Genetics*), J. Steele, L. Sude, J. Talwalkar (*Medicine*), P. Tebben (*Medicine*), G.Y. Tiyyagura, M. Van Name, A.V. Vash-Margita (*Obstetrics, Gynecology, and Reproductive Sciences*), J.M. Vinocur, E. Waldman (*Surgery*), S.A. Walsh, D. Yimlamai, H.Z. Zhang (*Genetics*)

Assistant Professors S. Abedin, S. Agrawal, A. Ahmed, A. Alsherbini, C.Y. Bakhoum, S. Bass (*Radiology and Biomedical Imaging*), J. Beiner, S. Bickerton, C. Black, L. Braun, N. Brodsky, C. Buck, D. Chen, L. Chen, C. Crana, C. DeMartino, A. Devlin, D. Ebbs, V. Fairchild, S. Felek Boyvat, A. Ferdjallah, M. Fernandes, C. Figgie, A. Flagg, N. Fleiss, K. Fletcher, J. Flom, M. Foley, Y. Fuchs, J.R. Gaither, S. Gentle, E. Gershon,

D. Glaser, L. Hart, L.H. Hart, M. Herrera, P. Hu, N. Ijaz, I. Ilahi, Z. Ilahi, K. Joseph, K. Kaman, S. Kazmir, R. Kesman, I. Kho, S. Kyc, C. Lampi, M. Landis, E. Lantigua Guichardo, C. Lepus, M. Leslie, J. Leviter, R. Malik, M. McNamara, S. Mervine (*Adjunct*), P. Mukherjee, L. Nally, J. Nugent, O. Olaloye, S. O'Malley, S. Ostfeld-Johns, L. Palladino, S.T. Panacherry, E.M. Powers, D. Prior, S. Prozora, V. Puthenpura, B. Redmond, M. Reisfeld, A. Rodriguez, R. Rodwin, H. Rosario (*Medicine*), J. Rosenberg, A. Rosenthal (*Adjunct*), C.A. Rowan, S. Samuels, M. Shah, J. Shin (*Medicine*), S. Siebel, J. Silberg, M. Silver, G. Soma, S. Stahl (*Child Study Center*), J. Sullivan, K. Swec, J.C. Vasquez, A. Veten, J.K. Warejko-Rossi, L. White, T.M. Whitfill (*Adjunct*), K. Wong, S. Woolf, L. Yankova, C. Young

Instructors S. Athanasopoulou, A.S. Carey, H. Davis, A. Jauhari, A. Loza, J. Malhotra-Nogueras, C. Myers, D. Nardella, L.F. Oritz

Senior Research Scientist T. Carpenter

Research Scientists W. Ji, V. Weser

Associate Research Scientists L. Balsamo, D. Bhatt, J. Browne, G. Fulgoni, S. Jamwal, B. Lainez-Mas, H.T. Le, L. Li, E. Marsillio, W. Ni, R. Park, V. Schulz, Z. Shi, N. Soni, S. Wei, K. Yu

Clinical Professors R. Angoff, H.S. Bennett, S. Levy, C. Randolph, S. Spiesel, J. Zelson

Associate Clinical Professors A. Avni-Singer, S. Boulware, C. Brown, C. Dorfman, M. Ellison, B. Emerson, Y. Figueredo, G. Germain, J. Hen, C. Mann, E. Nozetz, S. Sudikoff, P. Wang, R. Young

Assistant Clinical Professors J. Burger, C. Butler, J. Canarie, M. Gaeta, J. Gruskay, L.M. Marks, C. Patterson, A. Pittard, L. Shader, C. Summers, M. Williams

Clinical Instructors J. Ancona, R. Boyarsky, T. Brown, A. Coughlin, E. Dieckman, C. Hemenway, S. Khalife, F. Lin, A. Maley, R. Rastetter, B. Roberts, J.C. Samuel, D. Springer, L. Visscher, N. Wijesekera

Lecturer M.C. Hooper

CLERKSHIP

Pediatrics, Obstetrics, and Gynecology Clerkship This twelve-week integrated clerkship block is composed of pediatrics with obstetrics and gynecology. The combination of these two disciplines allows students to experience and appreciate the continuum in health between women and children. Students experience this interconnectedness through their clinical encounters, integrated didactics, and a combined postcede at the end of the integrated clerkship block.

ELECTIVES

Pediatric Critical Care Medicine Elective (PICU) Senior medical students participate as members of the pediatric intensive care unit team. Students are directly responsible for the care of assigned patients under the supervision of pediatric residents, critical care fellows, and attending intensivists. A core curriculum composed of interactive talks on the major pediatric critical care topics is presented two to three times a week, as well as daily radiology rounds and a monthly morbidity and mortality conference.

Pediatric Emergency Medicine Elective Fourth- and fifth-year students have the opportunity to evaluate and manage a broad range of acute medical and surgical complaints while honing their clinical skills under direct attending physician supervision, including thirty-six clinical hours per week in the pediatric emergency department. Education during clinical shifts is augmented by pediatric emergency medicine fellow education conferences and one-on-one teaching sessions with the elective director. Participation in teaching conferences and mock codes is required.

Pediatric Endocrinology and Diabetes Elective This elective provides extensive exposure to various aspects of pediatric endocrinology, with an emphasis on disorders of growth and sexual development, thyroid function, diabetes (type 1 and type 2), obesity, and bone and mineral metabolism. The student participates primarily in the outpatient pediatric endocrinology and diabetes clinics, as well as the inpatient service. The rotation includes participation in weekly pediatric endocrinology conferences as well as conferences held jointly with the adult endocrinology service.

Pediatric Gastroenterology and Hepatology Elective This two-week elective is an opportunity to further explore all facets of this subspecialty. Students are given time to work with fellows and faculty in outpatient, inpatient, and procedural settings. Students get in-depth experience working with hospitalized patients by working as a direct part of the GI/hepatology service, including attending rounds, performing consultations to other services, and aiding the fellow in management of the GI/hepatology services. They also participate in care for common outpatient gastrointestinal and liver conditions, in various outpatient settings. They observe diagnostic and therapeutic endoscopies and learn the indications, contraindications, and outcomes of various procedures, as well as learning anatomical and mucosal landmarks. Students have opportunities to rotate through satellite clinics, including local clinics at Trumbull and Long Wharf Locations. In some instances, students may be requested to travel to more distant locations for diverse exposure. Students participate in section academic activities every Monday afternoon.

Pediatrics Greenwich Hospital This two-week elective provides students hands-on experience in pediatrics in diverse clinical settings at a community hospital that is affiliated to a major academic center. Trainees are exposed to a broad array of pathology in pediatrics, ranging from care of newborns to older children. Students have the opportunity to evaluate and manage a broad range of acute and chronic medical and surgical complaints while honing their clinical and procedural skills under direct attending physician supervision. Students are exposed to patients over a broad range of settings, from well-baby nursery, level-3 NICU, inpatient pediatric floor, pediatric ED, and outpatient subspeciality clinics. Additionally, there may be opportunities for trainees to participate in pediatric outpatient procedures. Since these locations don't typically have other trainees like residents and fellows, the students may have an opportunity to directly experience some unique cases and procedures with attending supervision. This rotation is tailored to students' interests.

Pediatric Hematology/Oncology Elective This elective provides broad experience in the diagnosis and management of pediatric malignancies and hematologic disorders of infancy and childhood. The student functions as part of the inpatient service team and participates in the outpatient clinic three to four mornings each week. Weekly conferences include the multidisciplinary pediatric tumor board, leukemia and

lymphoma conference, section conference, and weekly pediatric hematology/oncology patient management rounds.

Pediatric Infectious Disease Elective Students participate in pediatric infectious disease rounds by presenting the case study of an inpatient whom they have examined to a group of faculty and fellows. Emphasis is placed on the correlation of the clinical problem and its practical management with principles of infectious epidemiology and clinical microbiology (bacteriology and virology). Consulting rounds are held daily. Teaching rounds in diagnostic microbiology are held four times a week. Weekly divisional rounds last approximately two hours. Students also attend the pediatric AIDS clinic.

Pediatric Neonatal-Perinatal Medicine Elective (NNICU) Students spend two weeks on the step-down service, followed by two weeks on the intensive care service. On each service students attend medical rounds and follow neonatal patients and write progress notes under close supervision. Students attend delivery room resuscitations and stabilizations, and prenatal consultations. On both services, students attend general and student-oriented educational conferences as well as radiology rounds. Students also pursue independent study on topics in neonatology and make brief presentations to the clinical team. Additional opportunities, such as attendance at outpatient developmental follow-up exams, are available to students based on interest.

Pediatric Nephrology Elective Students participate in the evaluation and management of patients on the pediatric inpatient service, pediatric ICU, neonatal ICU, and pediatric specialty center. Patient problems encompass the full range of clinical renal disorders, including fluid and electrolyte disturbances, acute and chronic renal failure, various forms of glomerulonephritis and interstitial nephritis, nephrolithiasis, hypertension, intoxications, inherited renal diseases, and urinary tract abnormalities. A pediatric nephrology faculty member serves as attending physician at all times and conducts teaching rounds daily. These teaching sessions provide supervision and training in the practical aspects of patient management, as well as instruction in the basic scientific disciplines that underlie the clinical practice of nephrology. Students also participate in outpatient renal clinics under the supervision of the faculty, gaining experience in the work-up of common renal disorders not initially requiring hospitalization (e.g., proteinuria, hematuria, mild azotemia), the assessment and treatment of childhood hypertension, and the long-term follow-up of patients after discharge from the inpatient and transplant services. Several teaching conferences are devoted to clinical nephrology. The most important of these is the Friday Pathophysiology Lectures that encompass renal pathology; renal physiology; diseases of the glomerulus, tubules, and interstitium; renal transplantation; electrolyte disorders; and stone disease and is attended by all trainees and faculty in both pediatric and adult nephrology. In addition, a formal pediatric renal core curriculum is held every Friday afternoon at 1 p.m.

Pediatric Neurology Elective This elective provides hands-on experience in pediatric neurology in both inpatient and outpatient clinical settings. Students attend rounds with supervising attending physicians as well as adult and pediatric neurology residents. Students are exposed to acute common as well as rare pediatric neurology disorders such as epilepsy, headaches, mental status changes, and weakness. The students obtain histories and perform neurological examinations on newly admitted patients or consult patients. Bedside discussions regarding diagnosis, work-up,

and treatment are encouraged. Students have the opportunity to participate in the pediatric neurology consultation service or outpatient clinics. The consultation service exposes students to various emergencies in pediatric neurology such as seizures, status epilepticus, stroke, and other acute neurological issues. Both general pediatric neurology as well as subspecialty clinics (such as epilepsy, headache, movement disorders, multiple sclerosis, neuromuscular, EMG) are available. In addition, students are introduced to different procedures, including spinal tap, electroencephalogram, brain and spine imaging techniques, and electromyogram.

Pediatric Respiratory Pulmonary Elective This elective provides training and experience in the diagnosis and management of common respiratory and sleep disorders in children and adolescents. Students participate in the direct care and observation of patients on the inpatient service and in the ambulatory pulmonary clinics. They have the opportunity to go to the operating room to observe bronchoscopies. They review pulmonary function tests. The inpatient experience consists of daily bedside rounds and consultations on the wards with the attending physician and pulmonary fellow on service. The outpatient experience occurs with faculty during their office hours and fellows during their continuity clinic. Facilities include a dedicated pulmonary function laboratory for children, a pediatric exercise laboratory, an accredited sleep laboratory, and an accredited Cystic Fibrosis (CF) Center (one of only two in Connecticut, it offers a multidisciplinary team approach to providing comprehensive state-of-the-art care for children and adolescents with CF). Students are expected to attend pulmonary conferences and seminars.

Pediatric Rheumatology Elective This elective provides hands-on experience in pediatric rheumatology. This service involves consultation service in the inpatient and outpatient setting as well as long term care for patients with autoimmune conditions. Pediatric rheumatology requires the ability to perform a comprehensive physical examination and history while interpreting laboratory and radiographic studies to develop an often-complex differential diagnosis. Pediatric rheumatology involves patients of all chronologic ages and developmental stages so learners have the opportunity to develop rapport with patients and families across pediatrics. The student is exposed to clinical setting in the hospital and outpatient setting and academic opportunity includes participation in rheumatology didactics with the internal medicine group (grand rounds and journal club) as well as with scheduled pediatric didactics (grand rounds, weekly pediatric rheumatology case conference). Where available students are able to observe arthrocentesis and learn the basics of musculoskeletal point of care ultrasound. Clinical settings include outpatient visits and hospital consultation at Yale New Haven Hospital and participation at satellite clinics is a shared decision with the student and the attending at the ultimate discretion of the course director. During this rotation, it is necessary to travel back and forth between YNHH and Pediatric Specialty Center at Longwharf (1 Long Wharf Drive, New Haven); other satellite opportunities are not required but may be available at the student's and course director's discretion.

SUBINTERNSHIPS

Pediatrics Subinternship This is a four-week inpatient rotation during which senior medical students are considered the equivalent of interns and are directly responsible for the care of assigned patients under the supervision of resident and attending

physicians. There are four patient-care units in Yale-New Haven Children's Hospital that students may be assigned to: the Pediatric ICU, the Neonatal ICU, and two units with a mixture of general and specialty pediatric patients. Typically, up to four students can be accommodated in the rotation each block. The schedule of shifts will be as that of an intern. All subinterns, regardless of placement, take daytime and evening shifts. No overnight shifts will be assigned. Subinterns are subject to the same duty hour restrictions as the interns. For students rotating on the NICU service, there is an optional community-based component available. This option allows students to split their four-week experience into one/two weeks at a community level 3 NICU site and two weeks at the primary academic inpatient NICU. This structure is intended to broaden clinical exposure by offering experience in both tertiary and community care settings. Additionally, there may be opportunities for trainees to participate in pediatric outpatient procedures. Participation in the community NICU experience is not required, and students may choose to complete the full four weeks at the primary NICU site if preferred and we are able to accommodate students. This subinternship is a great opportunity to develop organizational skills and experience the pace of internship in a supportive environment. An emphasis is placed on being an integrated team member, taking ownership of one's patients, and demonstrating improvement in intern skills (clinical reasoning, communicating with patients/families, organization, prioritization, presentation, and efficiency) through the incorporation of constructive feedback.