Now It's Personal, Doc!
Personalized Medicine Holds the Key to Customizing Healthcare

It has been dubbed “the right dose of the right drug for the right patient at the right time.” Personalized medicine, also called precision medicine, is an approach in which doctors tailor their decisions, practices, and treatments to each individual patient—and it is the future of medical treatment for a range of diseases.

Columbia University Medical Center is at the forefront of this new enterprise. Physicians in oncology are using diagnostic testing to select appropriate and optimal therapies based on molecular and cellular analyses that reveal a patient’s genetic makeup and the specific mutations that are driving his or her disease.

CUMC’s Division of Gynecologic Oncology is one of the areas that has embraced personalized medicine, with the creation of...
every year thousands of women and children come to CUMC/NYPH for care for an enormous range of medical issues, from a straightforward toothache, to the diagnosis and planning of a complicated birth. Since its beginning more than two years ago, Connections has showcased the work of both the specialists in our own two departments—Pediatrics and OBGYN—as well as that of our partners in care in many other departments and divisions throughout the medical center and hospital community. With this issue, we continue that theme. On page 1, read about personalized, or precision, medicine, a new paradigm in which physicians tailor treatments for each patient based on his or her specific genetic profile. Also on page 1, Pediatric Dentist Steven Chussid, DDS, talks about caring for children with simple cavities to complex systemic diseases that affect their teeth and mouths. Researchers in dentistry and OBGYN are collaborating on a study that shows a link between periodontal disease and intrauterine growth restriction (IUGR) (page 24). On page 12, read about how the practice of “narrative medicine” is helping doctors hear their patients’ stories with greater empathy. Moira Rynn, MD, director of the Division of Pediatric Psychiatry, oversees the work of more than 150 faculty and staff; she discusses the many, many programs she and her colleagues offer to children and adolescents with mental health needs on page 9. Experts in Maternal Fetal Medicine could not plan and carry out the deliveries for complicated pregnancies without the information gathered during fetal imaging (page 7). And you can learn some of the history behind our Department of OBGYN—and the hospital and medical center, too—in the Q&A with Mary D’Alton, MD, department chair, on page 3.

Michael Weiner, MD
Department of Pediatrics

Cande Ananth, PhD, MPH
Department of Obstetrics and Gynecology

Co-Editors-in-Chief
Connections
The Sloane Hospital: A History

A Conversation with Mary D’Alton, MD

In 1886, Emily Thorn Sloane (granddaughter of railroad tycoon Cornelius Vanderbilt) and her husband William Douglas Sloane made an offer to the College of Physicians and Surgeons: they would build and endow a maternity or “lying-in” hospital on the College’s grounds to provide free care for indigent women, and as a site for training in clinical obstetrics. The College’s board readily accepted. The Sloane Hospital’s first location was a three-story building on the corner of 59th Street and Tenth Avenue. In 1925, the Sloane merged with Presbyterian Hospital, which was operating in affiliation with P&S, and the combined hospital and medical school soon moved to its current location on 168th Street. The Sloane Hospital retained its name and continues to occupy several floors of the Presbyterian Hospital building. Mary D’Alton, MD, Chair of Obstetrics and Gynecology and Director of Services for the Sloane, shares some thoughts about the hospital’s history.

The Sloane Hospital was established when other institutions were also creating lying-in hospitals for women. What motivated this movement?

Maternity hospitals in America originated with a pioneering institution established in Philadelphia in 1762. The small lying-in hospitals built over the next hundred years were asylums for both poor and unmarried women. According to a writer of the time, the Sloane was established solely to provide free care for the “worst of the destitute class of the city.” The hospital didn’t accept private, paying patients until 1897, after it had become clear that it could no longer afford to provide free care. By then, wealthy women had become interested in giving birth in a hospital setting.

The Sloane was the first hospital in the US to provide both obstetrical and gynecologic care. What was the advantage of bringing these two together?

Edwin Cragin, the second director of the hospital, was trained predominately as a gynecologist and under his direction the College began emphasizing gynecologic training and built new clinical facilities to train gynecology residents. Bringing obstetrics and gynecology together made sense because, at the time, most gynecologic abnormalities stemmed from obstetric trauma, and training in gynecologic surgery led to improved obstetric techniques. This very forward-thinking approach provided a continuum of care for women in one space.

What are some of the significant advances in gynecologic and obstetrical care made here over the years?

The first to come to mind are the APGAR score and RhGAM. Dr. Virginia Apgar, a professor at Columbia for several decades, was an obstetric anesthesiologist and leader in the fields of anesthesiology and congenital abnormalities. In 1953, she introduced the APGAR score, a simple method to assess the health of newborns during the first few minutes after birth. (It measures Appearance, Pulse, Grinace, Activity, and Respiration.) The test is now used around the world. Another Columbia pioneer, Dr. Vincent Freda, was one of the first doctors in the country to perform amniocentesis. In 1964, he also performed the first surgery on a fetus, a blood transfusion needed because the mother and fetus were Rh incompatible. (Rh incompatibility can be potentially fatal to a fetus.) Dr. Freda, along with Dr. John Gorman, developed RhoGAM, an antibody that allows women with Rh-negative blood to deliver healthy babies. His contributions to obstetrics and maternal-fetal medicine are far-reaching, and have helped to save hundreds of babies throughout the world.

What is the current status of the Sloane Hospital? Is it still an entity within CUMC?

The Sloane’s physicians and staff have provided exceptional care to women and their families for more than 100 years and the hospital continues to be an active institution within NYP-CUMC. Today it is recognized as one of the best obstetrical and gynecological services in the world. We deliver more than 4,000 babies a year in the Carmen and John Thain Labor and Delivery Unit, and provide comprehensive, multidisciplinary care for both mother and baby. In addition to the Carmen and John Thain Center for Prenatal Pediatrics and The Mothers Center, we offer comprehensive gynecologic care to pediatric and adolescent patients, diagnosis and treatment to women with gynecologic cancers, and treatment for disorders of the reproductive system. This past year, we created a new program in minimally invasive gynecologic surgery, a safer and more effective alternative to traditional open surgery. We are developing an exciting new program in personalized medicine, and hope to provide more services that focus on women’s mental health and well-being. We are fortunate to have a group of faculty members who are dedicated to our core mission of providing exceptional patient care, to educating the next generation of obstetrician gynecologists, and to conducting innovative research that will further advance women’s healthcare.
Air quality in the United States has improved since the Clean Air Act was strengthened in 1990, yet exposure to outdoor and indoor air pollution remains a significant risk factor for both the development of asthma and the triggering of asthma symptoms. In a recently published review in the *Journal of Allergy and Clinical Immunology*, Rachel Miller, MD, director of the Division of Allergy, Immunology, and Rheumatology, and David Peden, MD, (University of North Carolina School of Medicine) highlight new data on the effects of pollutant exposure on asthma, including the innate and adaptive immune responses. They note that factors predisposing children to asthma include exposures that occur very early or prenatally, and the existence of other proinflammatory conditions like obesity and stress. They also discuss an emerging area of investigation: the effects of the environment on those with natural mutations in oxidative stress genes (such as glutathione S-transferase (GST)) as well as genes associated with Toll-like receptors of the innate immune system. Another new area of investigation focuses on epigenetic regulation, and identifying asthma genes whose expression may be disrupted by environmental exposures. They also reviewed potential interventions to mitigate these effects. For example, pollutant-induced asthma exacerbations are less frequent in patients that use inhaled corticosteroids, suggestive that pharmaceutical interventions that target acute inflammatory responses are beneficial. Indoor interventions, including cook stoves that minimize levels of wood smoke exhaust and HEPA filters, have promise as ways to reduce exposure to pollutants. Public policy measures are key in efforts to reduce ambient air pollutants, the authors note, citing several examples of government regulation reducing air pollution levels. Following passage of at least one regulation, fewer hospital admissions for respiratory problems were observed, they add. The authors conclude that, “Actively minimizing both indoor and outdoor pollutants and government air care regulations could decrease pollutant impacts on allergic lung disease.”

Growth Plate Abnormalities that Develop After Anti-Angiogenic Therapy are Reversible

Angiogenesis inhibitors, agents designed to prevent the formation of new blood vessels, are increasingly used in cancer treatment to stop or slow the growth or spread of tumors. Some studies have suggested that anti-angiogenic agents may affect the developing growth plate in children and adolescents; this area of tissue near the ends of the long bones is where these bones lengthen. A group of multicenter researchers including Julia Glade-Bender, MD, director of CUMC’s Pediatric Cancer Foundation Developmental Therapeutics Program, evaluated the incidence of growth plate abnormalities in children with refractory cancer undergoing anti-angiogenic therapy. They studied children enrolled in six different early phase clinical trials, two of which were led by Dr. Glade-Bender, evaluating new anti-cancer agents that interfere with angiogenesis (tyrosine kinase inhibitors with anti-angiogenic effects, monoclonal antibodies targeting vascular endothelial growth factor (VEGF), or angiopoietin). The researchers obtained radiographs of patients’ distal femur/proximal tibia before and after treatment. Five of 53 patients (9.4 percent), all of whom received a specific VEGF/VEGFR blocking agent (sunitinib or pazopanib), had growth plate abnormalities, particularly growth plate widening—but in cases where radiographs could be repeated after treatment ended, the growth plate changes appeared to be reversible. These potentially effective agents were initially denied to children, Dr. Glade-Bender said, because researchers anticipated their effects on growth plates. The changes do occur, but infrequently. Considering that the changes are reversible, ongoing growth plate monitoring is recommended, particularly as anti-angiogenic agents move to frontline pediatric cancer therapy, she added.


The Ethics of Genetic Testing Explored

When children undergo genetic testing, should they and their family be notified of incidental (or secondary) findings of genes for adult-onset diseases? This question is the basis of two policy statements, both published in March 2013, that seek to provide guidance in an era of rapid advances in genetic and genomic medicine. The American College of Medical Genetics (ACMG) Working Group developed a panel of 56 genes deemed highly likely to cause diseases for which preventative measures and/or treatments were available. They recommend that patients have the option to have laboratories actively search for mutations among these genes and report them when either whole exome sequencing (WES) and whole genome sequencing (WGS) testing is performed on all patients, including children. The American Academy of Pediatrics (AAP) policy statement (developed jointly with the ACMG) focuses on genetic testing for a single gene or focused set of genes that cause a specific clinical presentation. George Hardart, MD, director of Pediatric Clinical Bioethics, and Medical Geneticist Wendy Chung, MD, PhD together reviewed these policy statements in an article in Pediatrics. Before these recommendations, they write, there was broad consensus that genetic testing of children should only be performed if effective interventions were available for the condition in childhood. The primary rationale for deferring testing is to preserve the child’s “open future”—their ability to decide for themselves whether they want genetics testing once they reach maturity. Both new guidelines challenge this long-standing rule but take different approaches in doing so. The AAP supports exceptions to this rule for families who desire the testing to resolve disabling parental anxiety and/or to provide potential psychosocial benefits to the extended family.

Episiotomy: Is it Worth the Risk?

According to a recent study in JAMA, by Alex Friedman, MD, Assistant Professor of Obstetrics and Gynecology at CUMC, episiotomy—a surgical procedure for widening the outlet of the birth canal to make it easier for the mother to give birth—declined in the U.S. between 2006 and 2012. This is a relatively common procedure, even though limited use of episiotomy has been recommended because of the risks related to the procedure, such as bleeding, tearing past the incision into the rectal tissues and anal sphincter, perineal pain, infection, perineal hematoma (collection of blood in the perineal tissues), and pain during sexual intercourse. “Episiotomy used to be performed because there was a supposed benefit in preventing more serious vaginal lacerations and promoting healing after delivery,” says Dr. Friedman. “Research has shown that this isn’t the case, and that the procedure may be associated with worse pain and lacerations.” That’s why he and colleagues began research on episiotomy and its subsequent effects. Analyzing data from 2,261,070 women who were hospitalized for a vaginal delivery in 510 hospitals, 325,193 underwent episiotomy (14.4 percent). There was a decline in the rate of episiotomy between 2006 (17.3 percent) and 2012 (11.6 percent). In addition, several demographic characteristics were associated with receipt of episiotomy: 15.7 percent of white women versus 7.9 percent of black women; and 17.2 percent with commercial insurance versus 11.2 percent with Medicaid insurance. The study also found that hospital characteristics, such as rural location and teaching status, were related to fewer episiotomies. “Our study found that the probability of receiving an episiotomy depended largely on the hospital where a patient delivered,” Dr. Friedman states. “Certain hospitals had episiotomy rates above 30 percent, meaning they are probably doing episiotomies that do not need to be done, while other hospitals had episiotomy rates below 5 percent. “Variation between hospitals suggests that episiotomy use could be further reduced by improving care quality,” he added.
Prospective parents often leave their obstetrician’s office after the second trimester ultrasound with a shadowy black and white image, a glimpse of their developing baby’s nose, fingers, or feet. Maternal fetal medicine specialists in CUMC’s Department of OB/GYN perform dozens of these fetal anatomic surveys every week. Most of them reveal a normally developing fetus, with everything as it should be. But since CUMC’s Center for Prenatal Pediatrics (CPP) is a referral center for pregnancies with fetal complications, Karin Fuchs, MD, OB/GYN’s director of ultrasound, and her colleagues see several patients every day who have already been diagnosed with a fetal structural malformation at another center. “A substantial part of our practice is prenatal diagnosis,” says Dr. Fuchs, “and a significant proportion of what we see are complex cases.” Obstetricians use ultrasound early in a pregnancy to confirm the number of fetuses, the gestational age, and to do a preliminary assessment of genetic and anatomic risks. During the second trimester, they perform an anatomic survey, examining the fetus from head to toe for major structural abnormalities or genetic, infectious, or growth disorders that might increase the risk of complications.

Major fetal structural malformations occur in 2 to 3 percent of pregnancies, according to Dr. Fuchs, and about a third of these anomalies are a form of congenital heart disease. Other less common anomalies include spina bifida, diaphragmatic hernias (a hole in the diaphragm between the chest and the belly), or defects of the abdominal wall (omphalocele and gastroschisis). “We also see malformations such as clubbed feet or cleft lip, which are clearly very important to parents, but are generally not life-threatening anomalies,” she says.

During a standard ultrasound, sound waves are used to create a 2D image in shades of black and white. In contrast, 3D ultrasound uses additional software to create an image that is far more lifelike than 2D, showing depth and texture of structures. 3D ultrasound enables doctors to create renderings of fetal surfaces that can be particularly useful in the evaluation of masses and defects in the fetal abdominal wall or spine. “3D ultrasound enables us to assess the spatial relationships of structures, and, if we do find an abnormality, it can help patients visualize the malformation and understand its significance,” Dr. Fuchs says.

Dr. Fuchs can convert the ultrasound machine from 2D to 3D with the touch of a button. “In a facility like ours, where we can really do everything in one place, we routinely employ 3D ultrasound during an anatomic survey to get a better view of a structure that we’re interested in.” While 2D and 3D images are static, a 4D image shows the fetus as it moves. 3D and 4D ultrasound emerged a decade ago for clinical use, and in the last five years their use has become routine, she says.

If Dr. Fuchs identifies a structural malformation in a fetus, she discusses the ultrasound findings with the patient and counsels them about the anticipated management during the pregnancy, and during and after delivery. The Center for Prenatal Pediatrics also coordinates same-day consultations with a neonatologist and, depending on the malformation, with the appropriate pediatric subspecialists in cardiology, surgery, urology, or neurosurgery. Members of the Center for Prenatal Pediatrics coordinate same-day consultations with a neonatologist and, depending on the malformation, with the appropriate pediatric subspecialists in cardiology, surgery, urology, or neurosurgery. Members of the Center for Prenatal Pediatrics coordinate same-day consultations with a neonatologist and, depending on the malformation, with the appropriate pediatric subspecialists in cardiology, surgery, urology, or neurosurgery.
also meet weekly to review cases and establish a multidisciplinary plan of care for each patient. “Many patients who come to the CPP to have a fetal diagnosis confirmed remain in CUMC’s care, but some return to deliver with their primary physician,” says Dr. Fuchs. “When cases are referred from the community, we see them in the Center for Prenatal Pediatrics to confirm the nature of the anomaly, and then, together with neonatology and other pediatric subspecialists here at Columbia, we make a recommendation about whether the patient should transfer to Columbia for delivery here or if they can deliver locally.”

As the team anticipates the delivery of a baby with an anomaly, prenatal images are key to enabling surgeons to plan the birth. A few years ago, perinatologists at the CPP diagnosed a fetus with a mass arising from its neck. In the second trimester, which continued to grow through the pregnancy. “Sometimes a big mass in the neck can compress the airway and cause significant respiratory distress at birth,” says Dr. Fuchs. Given the concern for airway compromise in this case, a multidisciplinary team, including obstetricians, anesthesiologists, neonatologists, pediatric surgeons, and ECMO specialists, was present when the infant was delivered by cesarean section. The infant was intubated before its umbilical cord was cut, and then passed into the care of CUMC’s neonatologists. The baby went to the operating room the next day where surgeons removed the mass, a benign immature teratoma. The baby went home a week and a half later, feeding normally, and has continued to thrive. Dr. Fuchs says, “A very complex delivery like this occurs only once every few years, even at an institution like Columbia.” When it does, prenatal imaging is fundamental to its success. — Beth Hanson
Skipping school, breaking curfew and other rules, withdrawing from family and friends, getting into fights, talking about not wanting to live... When children develop problems like these the root causes are not always obvious, and parents and teachers may be at a loss to know what’s going on. Child and adolescent psychiatrists who meet with kids to sort out these issues, “can’t go in with any assumptions,” says Moira Rynn, MD, director of CUMC’s Child and Adolescent Psychiatry Division. “You see the behavior, but a whole array of things might cause it, and an 8- or 10-year-old or even an adolescent may not be able to articulate the things that are occurring in their lives, or they’re too embarrassed to talk about them. So your job is to be a detective—and it often takes time and can be hard work.”

To piece together a child’s story, Dr. Rynn says, the psychiatrist must talk with his or her parents, teachers, school counselor, grandparents, and any other adults in the child’s life. “You have to gather all of the collateral information to find out what is happening to this child, put the right treatment plan in place, and address the right social issues.”

Many mental health issues have a biological basis: children may have an underlying genetic vulnerability to problems like depression or anxiety. When they are also in challenging home environments and social settings that magnify stress, their risk of developing problems is heightened, Dr. Rynn says. Children in the area around CUMC often struggle with issues that can greatly increase their stress and interact with a genetic susceptibility. “We work with children who feel threatened and unsafe at school, who have witnessed violence or been neglected or abused, who may be in the shelter system or coping with overcrowding in a small apartment, or whose families are in difficult financial straits. These same families are trying to get their children to school every day despite these challenges,” she says.

The Child and Adolescent Psychiatry Division and its approximately 150 faculty and staff members—psychiatrists, psychologists, social workers, psychiatric advance nurse practitioners, case managers, and counselors—provide an enormous range of clinical services and research programs for children and adolescents from the community and the region. Every year they assess 1,200 children and adolescents in the emergency department. The Division runs a school-based program in 10 schools; a home-based crisis intervention program designed to prevent high-risk kids from being hospitalized; a dialectical behavioral treatment program for teenagers with severe depression and self-injury behaviors; one of the city’s largest clinics for anxiety disorders; a clinic for children with Tourette’s; an interpersonal psychotherapy clinic for adolescents with depression; and the Promise Program, which provides classroom observations, school consultations, and advocacy for low-income children at high risk for learning disabilities.

Division members also work with children who are hospitalized with very complex medical problems such as infectious diseases, kidney problems, cancer, or who are awaiting a heart transplant. These children may undergo many different types of procedures over months or years, which can be very anxiety-provoking. Psychiatrists in the consult liaison service work with physicians and nurses in Pediatrics to gauge the mental health needs of children on all of the inpatient units at the Children’s Hospital, and also work with the parents to help them navigate the system, according to Dr. Rynn.

Mental health problems that go unaddressed can have a huge impact on a child’s future, she says. “A child with behavioral health problems is clearly not going to do as well in school, in developing their social skills, and in meeting the developmental markers that they need to go on to higher education. That’s going to affect their chances of becoming employed, developing successful relationships and having a good marriage, and many other aspects of their lives.”

Despite this recognition, there are major challenges to providing mental health care to children. Around CUMC, one of the biggest challenges is access. “Insurance reimbursement for pediatric mental health is lacking, so it’s very hard to run a sustainable insurance-based clinic,” Dr. Rynn says. And although there is a huge need, there are not enough well-trained providers to meet it. In addition, she says, “It’s difficult to maintain the best talent in an academic medicine setting because recent graduates often opt to pursue private practice or for-profit systems.”

To meet the demand for psychiatric services, Dr. Rynn and her faculty are developing some novel strategies. Working with Pediatrics, the division has located nurse practitioners with specialized training in the pediatric ambulatory care clinics, where they provide psychiatric evaluation and treatment and can prescribe psychotropic medications and psychotherapy. Dr. Rynn and colleagues Laura Mufson, PhD, Professor of Medical Psychology, Karen Soren, MD, Associate Professor of Pediatrics and Population and Family Health, and Eileen Stewart, MSW, manager, social work, Ambulatory Care Network, NYPH, also recently completed a study in which they trained the ambulatory clinics’ social workers to deliver a brief form of depression psychotherapy, and when indicated the pediatrician prescribed antidepressants. The results were positive, she says. “Given the great need for child mental health, we need to think more broadly about integrating mental services in pediatric clinics, schools, and anywhere children are seen. If we can do this successfully the impact on children’s lives will be enormous.”

— Beth Hanson
Finding Her True Calling

June Hou Joins the Division of Gynecologic Oncology

June Hou, MD, didn’t always want to become a physician. But as the old saying goes, life doesn’t always go according to plan. The new addition to the Department of Obstetrics and Gynecology followed her heart, which eventually led her to her true calling—becoming a doctor.

“I struggled with the decision of going to art school toward the end of my high school years because I loved creating an art form with my own hands,” she says. “Yet through my college classes in the biological sciences, I also loved understanding the complexity behind how the human body and mind work. Ultimately, it is the humanism of medicine that inspired me to become a physician, specifically a gynecologic oncologist.”

Dr. Hou’s story begins in Shanghai, China, where she was born and raised before immigrating to California at the age of 8. She graduated with honors from Yale College with a degree in neurobiology and moved on to the Georgetown University School of Medicine. Following residency training at Yale New Haven Hospital, Dr. Hou completed gynecologic oncology fellowship training at Albert Einstein College of Medicine at Montefiore Medical Center, New York.

Dr. Hou joined the faculty practice at Columbia University Medical Center as an assistant clinical professor in August 2014. As a member of the Division of Gynecologic Oncology, she cares for patients who are at high risk for developing gynecological cancers, those who have pre-cancerous diseases, or those with diagnosed malignancies. She also monitors patients with recurrent cancers who wish to consult regarding future treatments, including novel therapies and participating in clinical trials.

In her new role, Dr. Hou will aim “to work hard to implement clinical trials to find better ways to diagnose and treat patients.” Her primary objective is to develop novel therapies and early phase clinical trials for patients with gynecologic malignancies. Board certified in palliative medicine and gynecologic oncology, Dr. Hou has a research interest in quality of life measures for patients enrolled in clinical trials.

“I also enjoy the opportunity to teach students, residents, and fellows in the operating room, as well as in the hospital wards,” she explains. And CUMC is just the right place to accomplish these career goals. “I am excited about the opportunity to collaborate with world-renowned research scientists and clinicians at the Herbert Irving Cancer Center in order to advance our understanding of cancer biology and to improve patient care,” she states.

Since her arrival at CUMC, Dr. Hou has collaborated both with clinicians at the Herbert Irving Cancer Center, as well as colleagues within her division to work toward the common goal of personalized medicine, which starts by looking at the genetic mutations in the patient’s tumor and tailoring the appropriate therapy to the patient’s specific mutations.

Another initiative Dr. Hou is involved in is an ovarian cancer screening trial. Currently, there is no effective screening test for ovarian cancer, which is a leading cause of death for women in the United States. About 10-15 percent of ovarian cancer cases are thought to be hereditary. Women who are at high risk of developing ovarian cancer are eligible for this study. “Using new sequencing technologies that can detect very small amounts of circulating tumor DNA in blood, we hope to develop a non-invasive blood based screening test that will result in early detection of ovarian cancer and ultimately improve diagnosis for these women,” says Dr. Hou.

Along with research, Dr. Hou also sees patients. Doctors in the Division specialize in the diagnosis and treatment of patients with gynecological cancer, and those who are at high risk of developing one. Patients have the benefit of consulting with physicians with expertise in the field, such as Dr. Hou, who have advanced training in both minimally invasive surgical techniques and are dedicated to comprehensive screening, treatment, and supportive care.

Because treatment is also multi-disciplinary, Dr. Hou joins experts in radiology, radiation oncology, pathology, as well as members of the gynecologic oncology team to diagnose and treat patients. “We also have a fantastic cohort of supportive care specialists, such as a nutritionist, social worker, and therapists who offer individualized complementary care medicine for each patient,” Dr. Hou adds.

Dr. Hou describes her approach as “patient-oriented and personalized. Often, patients feel loss of control because of the complexity of their diagnosis,” she says. “First and foremost, I try to empower them with knowledge and information about their individual cases. Our field has made many advancements in the last two decades in novel chemotherapy and surgical techniques, including minimally invasive surgery, which can optimize patient outcomes.”

She adds, “Just as important and beyond the scope of disease-specific statistics, I also try to help the patients understand that an important facet of their care is maintaining their life goals and improving their quality of life.”

And while Dr. Hou wears many hats—researcher, professor, and mother—one of her most important roles is being a doctor. In this position, she dons many hats, as well: physician, friend, and counselor.

“Almost every day, I am reminded of how fortunate it is for me to be in a profession that I love,” Dr. Hou admits. “My job is a hybrid of patient care, surgeries, teaching, and clinical research. It’s a lot, but every aspect of it is rewarding.”

She credits the stellar patient-physician relationships she creates to her disbelief in a patient-physician hierarchy. “I am open minded, which allows me to listen to the patient, instead of dictating her care. I think that mutual respect is the foundation for trust, which is crucial in any relationship, but particularly in one that I seek to develop with a patient.”

With all of her knowledge and experience, Dr. Hou will undoubtedly be an asset to the Division of Gynecologic Oncology, which plays an integral part in CUMC’s academic and clinical community. And for all aspiring physicians, Dr. Hou has some advice that she herself has learned over the years. “Take some time for yourself everyday: whether be it 10 minutes of bedtime leisure reading or a quick run in the park, it will go a long way in balancing your mind and body in the long run,” she advises.

“We are only at our best if we stay mentally and physically healthy.” — Cecilia Martinez
Deep Impact

Ronald J. Wapner Receives the SMFM Lifetime Achievement Award

After a review of career successes, Ronald J. Wapner, MD, vice-chair of research for the Department of Obstetrics and Gynecology, recently received the Society for Maternal-Fetal Medicine (SMFM) Lifetime Achievement Award for his “impact to the field, in particular research and scientific contributions that have changed healthcare for pregnant woman,” according to SMFM officials.

“This is one of the most prestigious awards I’ve ever received,” says Dr. Wapner. “It not only shows the recognition of my peers for all the time and effort I’ve devoted to improving maternal and fetal health, but, most importantly, it shows the work I did was important.”

According to the website, the Society was established in 1977 to give MFM physicians and scientists a place to share knowledge, research, and clinical best practices in order to improve care for moms and babies. The Society’s focus is to lead the global advancement of women’s and children’s health through pregnancy care, research, advocacy, and education, as well as to improve maternal and child outcomes and raise the standards of prevention, diagnosis, and treatment of maternal and fetal disease through support for the clinical practice of maternal-fetal medicine, research, education/training, advocacy, and health policy leadership.

Dr. Wapner is an internationally-known physician who focuses on first trimester screening and invasive procedures, including percutaneous umbilical cord blood sampling (PUBS), chorionic villi sampling (CVS), and amniocentesis. A graduate of Jefferson Medical College in Philadelphia, Pa., Dr. Wapner completed residency and fellowship training at Thomas Jefferson University Hospital Philadelphia. Prior to joining CUMC, he worked as a professor of obstetrics and gynecology at Drexel University College of Medicine and taught at Thomas Jefferson University, where he was also the director of maternal-fetal medicine.

In addition to the SMFM award, Dr. Wapner has also received numerous accolades throughout his distinguished career, including the coveted Dru Carlson Award for Best Research in Genetics and Ultrasound from the SMFM in 2012.

Despite his decorated career, Dr. Wapner’s biggest achievement doesn’t come from a paper or plaque. According to Dr. Wapner, one of the things he is most proud of is finding solutions to issues that are important to patients. “Almost all of my accomplishments were driven by my patients’ need for a better way to do things,” he says. In addition, he is also honored to have mentored young residents and fellows, helping them to progress their career in maternal-fetal medicine.

Dr. Wapner is currently beginning work on precision medicine as it applies to the fetus. This coincides with his passion for genetics and its potential to reveal the underpinnings of the diseases of pregnancy and the fetus.

He also has big plans for his future in maternal-fetal medicine. “I will continue to foster young investigators in the Department of OBGYN because without them there is no future,” he says. He also hopes to raise sufficient money this year to continue to grow his research enterprise.

“Our department is already one of the cutting edge leaders in the country in research and, as such, we have a responsibility to the future leaders of medicine and our patients.” — Cecilia Martinez
Feeding the Soul with Word

Narrative Medicine in Pediatrics Helps Doctors, Patients with Treatment

Pediatric doctors are more than just physicians. They are a patient’s—and parent’s—confidant, consoler, joker, and even a friend. All of these components, while unwritten in medical textbooks or discussed in lecture halls, are part of the job, especially when caring for babies with congenital heart disease, toddlers with leukemia, and children with neurological disorders.

But as author Neil Gaiman has said, “A short story is the ultimate close-up magic trick—a couple of thousand words to take you around the universe or break your heart.” That is why Narrative Medicine is so important. Narrative medicine is a medical approach that recognizes the value of people’s narratives in clinical practice, research, and education. It fortifies clinical practice with the narrative competence to recognize, absorb, metabolize, interpret, and be moved by the stories of illness. Through narrative training, Narrative Medicine helps physicians, nurses, social workers, chaplains, social workers, academics, and all those interested in both narrative and medicine improve the effectiveness of care by developing narrative skills with patients and colleagues.

The general field of Narrative Medicine arose in 2000 through the work and vision of group leader Rita Charon, MD, Professor of Medicine at CUMC and Director of the Program in Narrative Medicine at the Columbia University College of Physicians and Surgeons. A number of pediatric faculty had been exposed to Narrative Medicine through workshops run by the Program, as well as in their role as faculty teaching students in the medical school where Narrative Medicine is an integral part of the curriculum. Participants found the program so useful that the Department of Pediatrics developed a faculty Narrative Medicine group in 2012.

“Practicing Narrative Medicine helps bring me back to why I went into medicine in the first place,” says Anne Armstrong-Coben, MD, Assistant Professor of Pediatrics, who spearheaded the formation of this group. “It was to connect with patients, hear their stories, and help them to heal. At a time in my career where burnout is widespread, it has helped me change my approach. When I walk into my office and there are six patients already waiting to see me, instead of saying ‘Oh, s@#%,’ I have a feeling of privilege and happiness that these families/patients have come to me to tell me their child’s ‘story’ of illness.” Heidi Beutler, MD, Assistant Professor of Pediatrics and a participant of the program, says that “Narrative Medicine helps me to remember there is still an art to medicine.”

The primary goal of Narrative Medicine is to address the needs of patients and caregivers: to share their experience/tell their stories of illness, to be truly heard, and to be valued by caregivers. Doctors meet once a month to practice Narrative Medicine.

“Narratives are the most important part of the clinical encounter,” says Dr. Armstrong-Coben. “We need to listen to our patient’s stories to understand why they came to see us and what they have been experiencing.”

During the monthly Narrative Medicine meeting, anything from a poem, page from a short story, or even a painting is chosen to be read, heard, or viewed. Afterwards, participants reflect upon the piece before discussing it. Then the physicians are given a prompt, through Narrative Medicine training will benefit both them and their patients for all the reasons previously described,” says Dr. Armstrong-Coben.

The study of narrative medicine is profoundly multidisciplinary. The curriculum for the master’s program in Narrative Medicine includes core courses in narrative medicine, understanding, the illness experience, and the tools of close reading and writing; focused courses on narrative in fields like genetics, social justice advocacy, and palliative care; electives in a discipline of the student’s choosing; and field work.

This program is also open to non-physicians. For more information on the master’s program, visit http://ce.columbia.edu/narrative-medicine.
writing in the “shadow of the text” for a few minutes. After pens are laid down, those who wish to share their writing with the group are welcomed to share their reflections.

“For example, we have read ‘The Artist’ by William Carlos Williams and then written to the prompt ‘write about an unexpected work of art,’” says Dr. Armstrong-Coben. “We have also read the opening pages of Michael Ondaatje’s ‘The English Patient’ and after discussion, prompted to ‘write about a room of care.’”

And the value of Narrative Medicine in the diagnostic encounter has already been seen within the various divisions that care for children.

“I had just done quite a bit of Narrative Medicine work when a mother and her young son came to see me,” says Dr. Armstrong-Coben. “He had cut himself with a pair of scissors – a superficial cut that my ‘former’ self would have said antibiotic ointment and a Band-Aid. However, I was far more in tune to the mother’s tone and sense of urgency. Instead of sending her and her son on their way, I asked more questions that got to why she was really there. The scissors that had caused her son’s cut had been used by an HIV positive couple during a fight. Her true concern was that her son had acquired AIDS. This led to a very different approach.”

In the therapeutic process, one of the biggest complaints physicians hear from patients is that doctors are not truly listening to them – that they are more concerned about checking boxes on a computer and getting on to their next patient than really hearing a patient’s concerns.

“Patients and families are comforted by a physician who truly hears and responds to their stories of illness,” says Dr. Armstrong-Coben. “It is also far more rewarding as a physician to know that I have truly heard what the patient wanted me to know.”

And patients aren’t the only demographic benefiting from Narrative Medicine. Doctors are finding the practice useful themselves.

Helen Towers, MD, Associate Professor of Pediatrics and a participant of the program, reflected, “This once a month experience of reading narrative or poetry followed by shared observations and an opportunity to write to a ‘prompt’ is one of my favorite beginnings to a day. I carry with me other’s interpretations and thoughts and allow myself to share my own personal experiences and viewpoint. Not everyone present knows each other very well, but our individual medical odyssey and life experiences allow us to share quite personal responses in a totally nonjudgmental space. Listening to each other’s writings opens me to the experience of others, which may include patients, families, and friends. It’s positively therapeutic.”

Dr. Beutler echoed these sentiments, saying, “I am connected through Narrative Medicine to a group of doctors who still see the value in listening to stories, to each other, and to patients, and that has kept me going – writing with others is a way to see that I am not alone.”

According to Dr. Armstrong-Coben, she would love to see the Pediatrics Program in Narrative Medicine grow to include more members from the department. For those interested, the group meets the third Tuesday of every month from 8:30-9:30 a.m. in the Hoyt Boardroom. If you ask Dr. Armstrong-Coben, you will not be disappointed.

“It has certainly made me a better physician and invigorated my practice,” she says. “I am also more empathetic to my colleagues having shared the stories of our patients, and our responses to truly listening to our patients.”

— Cecilia Martinez
Addressing the Needs of the Most Complex Pediatric Patients

Children’s Board Helps Establish New Program

There is more to caring for a nine-year-old girl born with a rare chromosomal abnormality than great doctors. The child has a condition never seen before, so her physicians are playing catch-up with its consequences: severe neurological impairment, blindness, paralysis, seizures, and a heart defect. She required hip surgery to control muscle spasticity, and gastrointestinal surgery to address her eating and digestive problems. The child is in the care of 10 medical specialists, she is on a complicated medication schedule that includes nine drugs taken several times a day, and is admitted to CUMC almost once a month. Yet on a day-to-day basis, her medical decisions are managed by a local pediatrician who is unaffiliated with Columbia and, therefore, is not in a position to effectively coordinate her highly-specialized care.

Although cases like this are rare, CUMC is one of the few institutions with the resources and expertise to manage them. But without a system to keep specialists in different divisions on the same page with primary care doctors miles away, treatment decisions are made piecemeal, undermining patient progress while placing a tremendous strain on patients’ families.

The launch of CUMC’s Program for Children with Medical Complexity (PCMC) aims to change this. Designed specifically for pediatric patients who have chronic conditions that affect multiple organ systems, the practitioners in the program will play the role of medical quarterback, developing an individualized care plan, coordinating care providers, and facilitating the execution of care as effectively and efficiently as possible.

PCMC staff will systematically assess each of their patients’ medical problems with an eye on the individual child’s overall health and well-being, working directly with families, CUMC specialists, and primary care physicians to keep the lines of communication open. The program will also collaborate with social workers, mental health providers, and a palliative care team to ensure that families have all the services they need to help support their children.

The establishment of PCMC is made possible because of the efforts of the Children’s Board at Columbia, which this past fall chose to allocate the proceeds from its inaugural Columbia Children’s Gala, held last spring, to the program.

“We are thrilled that this crucial resource will be available to our patients and their families,” says Karen A. Kennedy, MD, pediatrician and chair of the Children’s Board. “The Board recognized this special opportunity to support the children most in need and, thanks to the many donors who contributed to the Columbia Children’s Gala, we had the funds necessary to help bring this vital program to our patients.”

Patricia A. Hametz, MD, MPH, associate director of the Division of Child and Adolescent Health, stresses the promise of the PCMC to treat additional pediatric medical difficulties for chronically ill children.

“Through PCMC, we are a critical health advocate for both patient and family,” says Dr. Hametz. “By taking a more systematic look at the way our institution interacts with these children, we can improve efficiency and communication, which will produce fewer and shorter hospital stays, reducing costs and improving quality of life for patients.”

The program began enrolling patients in March and expects to have 40 patients registered in its first year. —John Uhl

Babies Heart Fund Gala Celebrates Pediatric Cardiology

On March 5, the annual Babies Heart Fund Gala was held at The Pierre Hotel to celebrate and raise support for the Division of Pediatric Cardiology. The gala raised nearly $600,000 to advance research in congenital heart disease at CUMC, the highest fundraising total in the gala’s 28-year history. This year’s event honored Linda J. Addonizio, MD, director of CUMC’s program for pediatric cardiomyopathy, heart failure, and transplantation, which offers comprehensive care to children from all over the world who have complex heart disease. Dr. Addonizio is a groundbreaking and beloved physician who has been key to CUMC’s leadership in pediatric heart transplantation. In addition, Anjali Chelliah, MD, Assistant Professor of Pediatric Cardiology, received the Babies Heart Fund Research Award. The evening also included a special “balloon raise” to generate support for innovative research projects in pediatric cardiology.
Stephen M. Ross Center Brings Together Outpatient Eye and ENT Care

There’s a new place at NewYork-Presbyterian/Morgan Stanley Children’s Hospital just for kids who have disorders of the eyes and the ears, nose, and throat (ENT). The Stephen M. Ross Children’s Center for Ophthalmology and Otolaryngology opened last fall on the fifth floor of the hospital, providing a family-friendly environment for infants, children, and adolescents coming in for outpatient care.

“We often refer our patients to the Division of Ophthalmology,” says Joseph Haddad, Jr., MD, Chief of the Division of Otolaryngology (ENT), which has four new exam rooms at the Stephen M. Ross Center. “We’ve been able to increase our capacity to see patients. Patients with both eye and ENT problems can now come to the same center for their care.” For example, children with chronic sinus diseases may develop eye infections. Some children with cleft palate experience eye problems and complications affecting the head and neck. And some young patients develop an obstruction of the nasolacrimal duct, which carries tears from the eyes into the nose.

Children with eye problems used to receive their outpatient care at the Harkness Eye Institute, in the same clinic as adult patients. They can now see their doctors in a center which features a bright, cheerful waiting area and playroom and four dedicated exam rooms for the growing Division of Pediatric Ophthalmology. Bringing the clinic into NYP/Morgan Stanley Children’s Hospital also makes it more convenient for children seeing other doctors in the hospital to come to one familiar building. “The integration of care is great for kids with complex medical disorders who need to see multiple specialists,” explains Steven E. Brooks, MD, Chief of the Division of Pediatric Ophthalmology.

Both divisions are known for providing comprehensive care. NYP/Morgan Stanley Children’s pediatric ophthalmologists evaluate and treat patients with the full range of eye disorders, including strabismus (eye misalignment or abnormal eye movements) and amblyopia (lazy eye), as well as less common conditions such as cataracts, glaucoma, and retinopathy of prematurity (a potentially blinding disorder in premature infants). They also offer a full range of diagnostic testing for children with retinal degeneration and genetic retinal disorders.

The Division of Otolaryngology features a team of specialists well-versed in the diagnosis and treatment of infants and children with a wide range of ENT problems, including chronic infections of the tonsils, adenoids, and ear; sinus diseases; airway disorders; craniofacial conditions affecting swallowing, hearing, and speech; and hearing loss. The Division is well known for its dedicated program for children with hypernasality—a condition in which the palate and throat tissues do not close properly, causing air to escape through the nose during speech instead of coming out of the sides and back of the throat.

The new center was made possible by a generous gift from Stephen M. Ross, an NYP trustee who is a real estate developer and owner of the Miami Dolphins football team. “Mr. Ross’s generosity, and those of the other donors who made this center a reality, will help ensure that children suffering from sight-threatening conditions get access to the high-quality care they need, in an environment that is both comfortable and efficient,” says Dr. Brooks. “Putting ophthalmology together with Pediatric ENT is an added bonus for both services.”

“We’re very grateful for the gift that made this center possible,” concludes Dr. Haddad. “The children we treat and their families are already letting us know how much they’re enjoying it.” — Rosie Foster
KAISER HEALTH NEWS
Pediatricians Should Receive Better Training in Intrauterine Devices for Adolescents

Last fall, the American Academy of Pediatrics for the first time recommended the IUD (intrauterine device) as a first-line form of contraception for adolescents who have sex. The recommendation builds on support from the American College of Obstetricians and Gynecologists (ACOG), which noted both that IUDs pose minimal risks and that they may be easier for adolescents to manage than other forms of birth control. “So many kids never pick up the pills, or pick up the pills and don’t take them right,” Melanie Gold, DO, medical director of CUMC’s School-Based Health Centers, told Kaiser Health News. “Clearly, an IUD is a better choice.” But pediatricians often aren’t trained in IUD insertion, so teenage girls have less access to this form of birth control than adult women, who are more likely to see a gynecologist. CUMC adolescent sexual and reproductive health specialist Julia Potter, MD, co-author of an editorial on the topic in the Journal of the American Medical Association (JAMA) Pediatrics, noted that instructors who teach adolescent medicine to pediatric residents often aren’t themselves trained in IUD insertion, so residents may not pick up the skills they need to provide this birth control option. The story was featured in the Washington Post and on NPR.


BUZZFEED
New Approaches Needed to Halt Measles Outbreak

Twenty-five years ago measles spread rapidly among unvaccinated black and Latino children under the age of five living in inner city areas, where low vaccination rates were due to poverty and poor access to health care. Congress addressed that outbreak with the federal Vaccines for Children program in 1993, which covered the cost of vaccines for families who couldn’t afford them; measles vaccine coverage increased and has been at or above 90 percent until very recently. The current measles outbreak has focused attention on a different demographic group: the anti-vaccination movement, whose members tend to be well-off, white, and live in suburban areas. Pediatrician and vaccine researcher Melissa Stockwell, MD, MPH told BuzzFeed News, “My concern is that this is may be a little bit of a harder group to target than in 1991.

When it was an issue of access to health care, we knew we could offer vaccinations and get kids vaccinated. It wasn’t that the parents were against it.” Today’s outbreak is rooted in the choices of parents who decide not to get their children vaccinated, which has prompted public health advocates and lawmakers to argue that states should make it harder for parents to file for exemptions. “If states were to have a more rigorous vaccination exemption process,” Dr. Stockwell said, “fewer children would be at risk.”

http://bzfd.it/18SQAi8

SAVON.COM
The Concept of Fetal Pain Refuted

Nebraska passed a law banning abortion at 20 weeks in 2010, and close to a dozen state legislatures across the country have since followed suit. These restrictions are based on the concept that a fetus can experience pain at 20 weeks, and that this is a sufficient justification to ban all abortions after this gestational stage. But “fetal pain” is a nebulous concept that is not grounded in medical evidence, according to obstetrician Anne Davis, MD, consulting medical director at Physicians for Reproductive Health, an organization promoting access to comprehensive reproductive health care. The limited research used to support fetal pain has been refuted by both the Journal of the American Medical Association (JAMA) and the British Royal College of Obstetricians and Gynecologists. “We know a lot about embryology. The way that a fetus grows and develops hasn’t changed and never will,” Dr. Davis told Salon. “And what we know in terms of the brain and the nervous system in a fetus is that the part of the brain that perceives pain is not connected to the part of the body that receives pain signals until about 26 weeks from the last menstrual period, which is about 24 weeks from conception.”

http://bit.ly/1843v0B

MEDICAL NEWS TODAY
Many Women Who Undergo Hysterectomy May Not Need the Procedure

Every year more than 400,000 women undergo a hysterectomy in the US—most for benign conditions such as abnormal uterine bleeding, uterine fibroids, and endometriosis. But a recent study in the American Journal of Obstetrics and Gynecology showed that almost a fifth of these women may not have needed the procedure. Women with benign gynecologic diseases should be offered alternative treatments such as hormone therapies and endometrial ablation before having a hysterectomy, according to ACOG guidelines. But not only were almost 40 percent of women included in the study not offered alternative treatments prior to their hysterectomy, the pathological findings following surgery did not support the need for hysterectomy in about 18 percent of them. Commenting on the study in Medical News Today, Jason Wright, MD, Chief of the Division of Gynecologic Oncology (who was not involved in the study), said: “Reducing the number of procedures performed in women who may not necessarily require the procedure in the first place has the potential to have an even more meaningful impact in reducing adverse outcomes and cost than optimizing the postoperative care. As reimbursement policies shift, appropriateness of surgery will likely become an even greater imperative from patients and payers.”


THE HILL
Legislating Weight Loss

In a blog post on the website, The Hill, titled, “The Weights of Passage,” Michael Rosenbaum, MD, pediatric endocrinologist, wrote that despite the Food and Drug Administration’s (FDA) recent approval of the drug Saxenda for overweight and obesity, most won’t be able to get this drug, “because treatments for obesity and overweight as diseases are not covered by most insurance plans. The US Preventive Task Force ‘recommendation’ that obese individuals should be offered ‘intense, multicomponent, behavioral interventions’ is great, but largely unaffordable,” he wrote. It’s important to treat overweight and obesity before complications such as diabetes and cardiovascular disease set in. “The opportunity to take a major step toward supporting weight loss and avoiding its complications is currently before our legislators in the form of the Treat and Reduce Obesity Act of 2013-14, which is a bipartisan bill that mandates Medicare part D reimbursement for multiple resources including dietitians, lifestyle counselors, and medication to all individuals who are obese or overweight with at least one co-morbidity such as diabetes or hypertension. The bill also directs the Health and Human Services Department to develop and implement a comprehensive new research and outreach plan to combat obesity, thereby encouraging much needed scientific research into the understanding of this disease.”

http://bit.ly/1GL2g1M
Brain Injury Unlikely if Headache is Only Symptom After Head Bump

If a headache is a child’s only symptom after minor blunt head trauma, there is little risk of a clinically important brain injury. This finding, published recently in Pediatrics, “strongly suggests that CTs (computed tomography scans) are not indicated in most children with headaches and no other signs or symptoms of (traumatic brain injury) after blunt head trauma,” Peter Dayan, MD, who is a specialist in pediatric emergency and who led the study, told Reuters Health. Dr. Dayan and his research collaborators examined data from a prospective observational study, focusing on children admitted for minor blunt head trauma. Not one of nearly 2,500 kids evaluated had a clinically important brain injury when their only symptom was a headache. “A period of observation may be warranted before CT decision-making,” Dr. Dayan and his colleagues wrote.

http://bit.ly/1DOsumu

THE JOURNAL NEWS

Childhood Heart Murmurs Not Necessarily Cause For Alarm

A heart murmur—an extra noise audible during a heart examination—“is caused by turbulence in blood flow,” Michael Snyder, MD, Allison Levey, MD, and Michael Monaco, MD, all pediatric cardiologists at CUMC, explained to the Journal News. “The heart pumps an amazing amount of blood every minute. Usually the blood flow is very smooth and does not make enough noise to be detected through the stethoscope, but if there are any abnormalities in the heart which makes the blood flow turbulent or ‘noisy,’ a murmur can be produced,” Dr. Snyder explained. Dr. Levey added, “We really do not know what exactly causes the noisy blood flow in these situations. Sometimes children can have murmurs caused by other more serious problems, such as holes within the internal walls of the heart.” The majority of murmurs in childhood are benign (typically called innocent murmurs), resolve by mid-childhood, and rarely need ongoing cardiac follow up, Dr. Snyder concluded.

http://lohud.us/1Ch76Em

THE WALL STREET JOURNAL

Gynecology Tool Under Increasing Scrutiny

The morcellator, a surgical tool used to remove fibroid growths or the whole uterus through small incisions, has come under increasing scrutiny over the last two years. The FDA has called for strict new language on the device’s labeling, and now warns against using the tool in most cases because of its potential to spread hidden cancer throughout the abdomen. Most of the tens of thousands of morcellation procedures performed before 2013 involved hysterectomies. But in a procedure called a myomectomy, often performed in younger women who still want to have children, gynecologic surgeons remove just fibroids. Jason Wright, MD, Division Chief of Gynecologic Oncology, is lead author of a recent study published in the Journal of the American Medical Association Oncology.

The study found that women who have only fibroids removed with a power morcellator face a lower risk of undetected cancers than hysterectomy patients, as do women under age 50. Younger myomectomy patients are “potentially an area where you may still consider morcellation,” Dr. Wright told the Wall Street Journal. But patients should still carefully weigh possible hazards, he said. “Some women certainly would not want to take the risk of having a potential cancer disseminated,” he concluded.

http://on.wsj.com/1xUNrom

NJ.COM

Children’s Aid and Family Services Group Help Kids Beat the Odds

Anne Armstrong-Coben, MD, Associate Director of Community pediatrics, regularly sees the devastating effects of neglect endured by children in the foster care system. She and Nurse Practitioner Kathy Courain, NP, witnessed firsthand the impact of a lack of medical care and health education during the five years they oversaw a practice for homeless adolescents in Newark, New Jersey who had aged out of the foster care system, Dr. Armstrong-Coben told NJ.com. Since 2011, she has directed the Children’s Aid and Family Services’ Medical Services and Advocacy Center in Newark. The program offers direct medical care as well as coordination of care and health promotion and education to children in the foster care system. “Often these children have been moved numerous times, so their health care needs have never been properly addressed. They have undiagnosed or misdiagnosed conditions, medical tests have not been followed up, and their medical records are scattered,” Dr. Armstrong-Coben said. Many of the children have suffered significant trauma caused by severe sexual or physical abuse or neglect and have been through numerous foster homes, she said. “Their needs extend beyond what a typical pediatric practice can provide. We have a multidisciplinary team... that coordinates care with the psychiatrists, caseworkers, caregivers and workers from state agencies as well as with medical specialists. This requires a different approach to care, and we help to educate others who come into contact with our children.”

http://bit.ly/1L087dt
Each year, members of the Departments of Obstetrics and Gynecology and Pediatrics publish several hundred research articles in medical journals. Below are highlights from those publications.

**Pediatrics**


GPIba–VWF binding interfaces to regulate the kinetic interplay between the GPIba–VWF binding interfaces to regulate hemostasis and thrombosis. Blood. 2014. 124:3799-3807.

**OB/GYN**


Friedman AM, Ananth CV, Prendergast E, D’Alton ME, Wright JD. Variation in and factors associated with loss of control behaviors are associated with use of episiotomy. JAMA 2015 Jan 15;160(1-2):269-84.


Westhoff CL, Reinecke I, Bangert K, Merz M. Impact of body mass index on suppression of follicular development and ovulation using a transdermal patch containing 0.55 mg ethinyl estradiol/2.1 mg gestodene: a multicenter, open-label, uncontrolled study over three treatment cycles. Contraception. 2014 Sep;90(3):272-9.


David Bell, MD, MPH. Associate Professor of Pediatrics, Population, and Family Health at CUMC in the Division of Child and Adolescent Health, was selected as one of the members of the newest class of Columbia Public Voices Fellows. The project connects fellows with a national network of top-ranking media mentors to provide direct access to media gatekeepers.

Richard Deckelbaum, MD. Professor of Pediatrics and Epidemiology in Gastroenterology, Hepatology, and Nutrition, and Vadim Ten, MD, PhD. Associate Professor of Pediatrics in the Division of Neonatology, were together awarded an R01 award from the National Institutes of Health (NIH) for their project, titled “Omega 3 Fatty Acids: Acute Neuroprotection via Mitochondria.”

Thomas Diacovo, MD. Associate Professor of Pediatrics and Pathology and Cell Biology, (Neonatology) and Samuel Sia (Bioengineering) are the co-recipients of the 2015 Precision Medicine Pilot Award for their research project, “Personalized Pharmacology for Neonatal Cardiac Patients at Risk for Arterial Thrombotic Events.”

Jeffrey Edwards, MD. Assistant Professor of Pediatrics at CUMC (Critical Care Medicine), is the recipient of a K23 award from the NIH for his project, titled “Decisions around Chronic Ventilation for Children with Life-Limiting Conditions.”

Dieter Egli, PhD. Assistant Professor of Developmental Cell Biology (in Pediatrics), was awarded the New York Community Trust award for a project titled “Using Stem Cells to Understand the Pathogenesis of Beta Cell Failure in Diabetes.” Dr. Egli is also the co-investigator on a JDRF grant, titled “Clinical Investigation on an Approved Drug, Taurodeoxycholic Acid, to Enhance Pancreatic Beta Cell Survival in Type 1 Diabetes by Reducing ER Stress.”

Adolfo Ferrando, MD, PhD. Associate Professor of Pediatrics and Pathology, received the William Laurence & Blanche Hughes Foundation Grant for his project, “Developing New Combination Therapies in T-cell Acute Lymphoblastic Leukemia.”

Jenny Francis, MD, MPH. Assistant Professor of Pediatrics in Child and Adolescent Health, was awarded a Provost’s Grant for junior faculty who contribute to the diversity goals of the University for her research project, “Hispanic Adolescent and Parent Discordance about Reproductive Health Clinical Trials.”

Alexander Friedman, MD, MPH. Assistant Professor of Obstetrics and Gynecology, received the Norman F. Gant Award for his research project, “Are Low Volume Hospitals Low Risk for Maternal Morbidity?”

Joji Fujisaki, MD, PhD. Assistant Professor of Medical Sciences (in Pediatrics) in Hematology, Oncology, and Stem Cell Transplantation, has been selected as the 2015 Schaefer Research Scholar.

Steven G. Kernie, MD. Associate Professor of Pediatrics and Pathology and Cell Biology and Chief of the Division of Pediatric Critical Care Medicine, has been elected to the American Pediatric Society.

Stephanie Lovinsky-Desir, MD. Assistant Professor of Pediatrics at CUMC in Pulmonary Medicine, was the recipient of a Provost’s Grant for junior faculty who contribute to the diversity goals of the University for her project, titled “The Impact of Physical Activity Level on Environmental and Epigenetic Mechanisms in Asthma.”

Kara Margolis, MD. Assistant Professor of Pediatrics in Gastroenterology, Hepatology, and Nutrition, was selected as a member of the inaugural class of the Future Leaders Program of the American Gastroenterological Association (AGA). During the year-long program, participants will receive leadership training and work closely with AGA mentors on projects linked to AGA’s Strategic Plan.

Paul Planet, MD, PhD. Assistant Professor of Pediatrics in Infectious Diseases, has been elected into the Society for Pediatric Research (SPR).

Cyri Sahyoun, MD. Assistant Professor of Pediatrics in Emergency Medicine, has been chosen to receive the Outstanding Teacher Award by the College of Physicians and Surgeons Class of 2016.

Melissa Stockwell, MD, MPH. Assistant Professor of Pediatrics and Population and Family Health in Child and Adolescent Health, has been elected to the Society for Pediatric Research (SPR).

Congratulations to the winners of the 2015 Steve Miller Fellowship in Medical Education!

Erica Cao (P&S Class of 2018) won for her proposal, “The Benefits of Music and Service-Learning: An Intervention Program for Medical Students and At-Risk Youth.”

Jemma Benson (P&S Class of 2018) and Christopher Clayton (P&S Class of 2018) won for their proposal, “Dígame Bienvenidos: Washington Heights Pre-Orientation Program.” A presentation of their work will be given at the Steve Miller Medical Education Day in October, 2015.

Upcoming Events

JUNE 22, 2015

19th Annual Hope & Heroes Golf Tournament

TRUMP BEDMINSTER,
900 LAMINGTON ROAD, BEDMINSTER TOWNSHIP, NJ 07921

The 19th Annual Hope & Heroes Golf Tournament will be held on Monday, June 22. Foursomes for this popular event typically sell out, so email Kathryn Leiby at kl2601@cumc.columbia.edu to be added to the mailing list.

OCTOBER 21, 2015

Save the Date: The Steve Miller Medical Education Day

A day to spotlight education and humanism in medicine and to pay tribute to the legacy and contributions of Steve Miller, MD, CC ’80, P&S ’84, Director of Pediatric Emergency Medicine, as well as Director of Pediatric Medical Student Education from 1993 to 2004. The event will feature The Steve Miller Lecture on Humanism in Medicine, delivered by Abraham Verghese, MD, MACP, Linda R. Meier and Joan F. Lane Provostial Professor and Vice Chair for the Theory and Practice of Medicine at the School of Medicine at Stanford University. For more information, contact Morgan Tupper at (212) 304-7210 or morgan.tupper@columbia.edu.
Pediatric Pulmonary Hypertension Care Center is First to Receive Accreditation in US

In children and adults with pulmonary arterial hypertension (PAH), the right side of the heart works overtime to push blood through arteries in the lungs that have become narrowed and stiff. This extra stress on the heart eventually causes it to enlarge, become less flexible, and less able to move blood to the lungs and the rest of the body. If untreated, this rare and debilitating disease can cause right heart failure and death. CUMC established its Pulmonary Hypertension Comprehensive Care Center more than 25 years ago, and it is now one of the largest PAH treatment centers in the world. “We have been at the forefront of researching and treating this very rare disease, and offer patients every opportunity to get the most advanced therapy,” says Erika Berman-Rosenzweig, MD, who has been the center’s medical director since 2008.

In recognition of the Center’s expertise and comprehensive care, it recently received accreditation as the first Pediatric Comprehensive Care Center (CCC) in the United States by the Pulmonary Hypertension Association (PHA). Gaining accreditation signifies that CUMC’s Center has met a set of rigorous criteria. These include a day-long site visit, during which members of the review committee assessed more than 50 components relating to the Center’s director, coordinator, program staff and support services, clinical facility, and clinical research program.

As additional centers receive accreditation, they will form a national network that will aim to maintain best practices in PAH management, says Dr. Berman-Rosenzweig, who also chairs the PHA review committee. Centers will be invited to contribute to a patient registry, which will give their researchers access to more patient data and will promote collaboration between centers. During a second phase, the PHA will recognize regional care programs, in which smaller programs link into a larger program for accreditation.

“Because PAH is so rare, few physicians have experience diagnosing it, and many patients will see three or more different physicians before they are properly diagnosed. Too often we see patients who have been managed at a smaller, less experienced center and by the time they come to us, the disease is very advanced,” Dr. Berman-Rosenzweig says. “We hope that the accreditation of PH care centers will help prevent that, and will help patients find places where they have every opportunity for getting advanced care.” — Beth Hanson

For more information about PHCC and its accreditation criteria, visit PHCareCenters.org.

Dr. Meyer Receives Community Service Award of Excellence

On January 29, Dodi Meyer, MD, Associate Professor of Pediatrics at CUMC, received the 2014 P&S Community Service Award of Excellence at the P&S annual gala, which recognizes those who have gone above and beyond the call of duty in caring for patients. Dr. Meyer received this award for her efforts as director of the Community Pediatrics Program in the Department of Pediatrics at CUMC. Under Dr. Meyer’s leadership, the program connects CUMC with community groups to help children in two ways: by increasing the health literacy of parents, and training pediatricians on how to overcome cultural differences so patients receive the best health care possible.

DODI MEYER, MD (CENTER) WITH LAWRENCE STANBERRY, MD, PHD (LEFT), AND LEE GOLDMAN, MD, P&S DEAN
Jennifer Rathe, MD, PhD, a third-year resident in pediatrics and physician-scientist in infectious diseases, is fascinated by viral infections in children and is driven to combine bench research with clinical care. Dr. Rathe completed her combined degree at the University of Maryland, where she collaborated with other researchers to finish full genome sequencing of the more than 100 strains of the common cold virus (human rhinovirus) to understand how the virus evolves. This work signaled the beginning of Dr. Rathe’s interest in viral infections. During her residency at CUMC, she continued her research with Raul Rabadan, PhD, and Stephen Liggett, MD, into how community outbreaks and individual rhinovirus infections evolve. More recently, she joined Paul Planet, MD, PhD, and Jeffrey Shaman, PhD, to look at students who carry viruses over time. Dr. Rathe plans to complete a fellowship in pediatric infectious disease, combining clinical viral studies with basic science experiments, to understand viral infections and to develop anti-viral therapies.

Saira Siddiqui, MD, a second-year resident in pediatrics, has an undergraduate background in neuroscience and behavior and is interested in investigating the impact of congenital heart disease lesions on a patient’s future neurodevelopment. Since her third year as a medical student at CUMC, Dr. Siddiqui has performed her research under the mentorship of Ismee Williams, MD, in the Department of Pediatric Cardiology, and William Fifer, PhD, a developmental psychobiologist at the NYS Psychiatric Institute. Her project focuses on characterizing autonomic development in fetuses with congenital heart disease and assesses potential fetal heart rate markers of future infant neurodevelopment. She presented this research at the American Academy of Pediatrics annual meeting in October 2013 and published it in Early Human Development (2015 Feb 4;91(3):195-198.). Dr. Siddiqui is applying for a fellowship in pediatric cardiology to begin in July 2016.

N. Valerio Dorrello, MD, PhD, is a pediatric critical care fellow conducting translational lung research in the Laboratory for Stem Cells and Tissue Engineering, directed by Vunjak-Novakovic, PhD. As a clinician, he deals with the devastating consequences of lung failure. Lung transplantation, the only definitive treatment for the nearly 25 million Americans with end-stage lung disease, remains limited by a shortage of donor lungs. As a scientist, he is diligently working on increasing the number of lungs for transplantation by employing novel clinical and bioengineering approaches. Dr. Dorrello is developing a system for improving the quality of lungs rejected for transplantation by selectively replacing diseased cells in the lung with healthy cells capable of regenerating lung tissue. To this end, he is working on methods to remove cells while preserving tissue matrix, then re-populate the matrix with pulmonary progenitor cells derived from the patient’s stem cells, to produce functional lungs capable of gas exchange. His long-term goal is to apply this technology as a means of re-establishing gas exchange in patients with severe respiratory failure before irreversible complications set in.
of The Center for Precision Medicine for Gynecologic Cancers in the fall of 2014. The Center is co-directed by Jason D. Wright, MD, Sol Goldman Associate Professor of Gynecologic Oncology, and June Hou, MD, Assistant Professor of Obstetrics and Gynecology.

"Since my arrival at CUMC, I’ve had the opportunity to collaborate both with clinicians at the Herbert Irving Cancer Center, as well as my colleagues within my division to work toward the common goal of personalized medicine, which starts by looking at the genetic mutations in the patient’s tumor, and tailoring the appropriate therapy for the patient to the specific mutations,” says Dr. Hou.

"Over the last five years, there has been a much greater understanding of the molecular biology of most cancers," adds Dr. Hou. "We now have the tools, through DNA sequencing, to evaluate specific molecular changes in a given patient’s cancer," says Dr. Wright. "We now have the tools, through DNA sequencing, to evaluate specific molecular changes in a given patient’s cancer," says Dr. Wright.

"We now have the tools, through DNA sequencing, to evaluate specific molecular changes in a given patient’s cancer," says Dr. Wright.

For patients at risk for hereditary cancer syndromes, the Center analyzes blood cells to detect specific mutations, such as the BRCA mutations for ovarian cancer and Lynch syndrome mutations for endometrial cancer, which are associated with inherited cancers. This knowledge provides important information for the patient to guide treatment and identify other family members at risk to developing cancer.

"We have the ability to offer these services to women with all gynecologic cancers, and can offer this program to patients who start their treatment at Columbia, as well as women who present for consultation after having already initiated treatment," says Dr. Wright.

But the Division of Gynecologic Oncology isn’t the only unit embracing personalized medicine at CUMC. The Division of Pediatric Hematology, Oncology, and Stem Cell Transplantation in the Department of Pediatrics has launched the Precision in Pediatric Sequencing (PiPseq) tumor sequencing program, which aims to pinpoint the molecular drivers of a patient’s cancer, and then use the results to personalize treatment. Also, Wendy Chung, MD, PhD, director of the clinical genetics program at CUMC, was recently invited to attend President Barack Obama’s announcement of a $425 million precision medicine research initiative, funding that could modernize the way diseases are treated and improve overall patient health. Look for future editions of Connections for more information on these exciting initiatives.

— Cecilia Martinez

PICTURED ARE DRS. WRIGHT AND HOU OF GYNECOLOGIC ONCOLOGY, ALONG WITH JAN KITAJEWSKI, MD, OF CLINICAL PATHOLOGY, WHO ASSISTS WITH THE IMPLEMENTATION OF PRECISION MEDICINE FOR PATIENTS.
Pediatric dentistry

CONTINUED FROM PAGE 1

care in Harlem and Washington Heights/Inwood, communities that are underserved by dental professionals, according to the Department of Health and Human Services. Staff members of the pediatric dentistry clinic, who treat more than 12,000 patients a year, are all bilingual and most have been with the clinic since it opened almost 13 years ago. Children from the community get dental care there, as well as on the dental school’s mobile dental van and through six school-based clinics. Older children with few complications are also seen by trainees at the dental school.

The Division has four full-time faculty, a number of part-time attendings, and a two-year NewYork-Presbyterian Hospital residency program directed by Richard Yoon, DDS, which trains dental school graduates who want to specialize in treating children. Division members work closely with other dental specialties including orthodontics, oral surgery, endodontics, as well as with medical specialists in a wide range of areas like hematology, oncology, cardiology, and dermatology. “Our patients get really unique and excellent care here since we have the resources of both the children’s hospital and the dental school,” Dr. Chussid says.

One major problem CDM’s pediatric dentists see very often is extensive decay from poor dental care. “Many patients in our community may be medically healthy but have very, very high rates of decay and dental problems. We see two-, three-, and four-year olds who have cavities in 12, 15, or sometimes all of their 20 teeth, and we have to bring them to the operating room and perform their dental treatment while they are under anesthesia,” Dr. Chussid says. These problems are often due to a lack of routine care and to dietary issues like snacking throughout the day, which fuels the bacteria in the mouth. Tooth decay is also much more likely when very young children are put to bed with a bottle, he adds.

Other patients who require careful monitoring during dental treatment, and who are likely to get their care in the operating room, are children with significant cardiac or pulmonary problems. These patients, even those with relatively minor dental needs, may not be able to be safely treated in an outpatient setting. All told, division members do approximately 100 dental cases in the operating room a year.

Before children undergo a heart transplant or start chemotherapy, Division members assess the oral health of these potentially immune-compromised patients to rule out infections or abscesses that could be the source of life-threatening pathogens. Pediatric dentists are very active members of CUMC’s craniofacial team, working with ear-nose-throat specialists, plastic surgeons, and others on patients such as

CONTINUED ON PAGE 24

Study Suggests Link Between Periodontal Disease and Fetal Growth

The insurance company Aetna is unusual in a couple of ways. First, Aetna offers both medical and dental coverage to subscribers, and second, the company willingly shares certain (anonymous) information about its claims with health policy researchers. This double difference has enabled David Albert, DDS, MPH, a health policy researcher in the College of Dental Medicine, and Cande Ananth, PhD, MPH, an epidemiologist and biostatistician in the Department of Obstetrics and Gynecology, to explore Aetna’s data for several years to uncover links between oral health and pregnancy outcomes. In 2012, Drs. Albert and Ananth published research in the American Journal of Public Health demonstrating an association between dental care and preterm and low birth weight. This winter, Dr. Albert presented a new study by the collaborators at the International Association for Dental Research meeting in Boston, showing that pregnant women who have periodontal disease are more likely to be diagnosed with intrauterine growth restriction (IUGR), a condition in which the developing baby weighs less than 90 percent of other babies at the same gestational age. IUGR is linked to a number of problems during and after birth, including stillbirth. They found that women who received periodontal treatment (a proxy for periodontal disease) were 40 to 50 percent more likely to develop IUGR. No other dental treatment had an effect on IUGR probability.

“When we made a big push for the age-one dental visit, and have gotten a lot of support from the pediatricians here in seeing patients earlier and more regularly, when we can really have made an impact,” Dr. Chussid says.

Aetna hopes that sharing data for this type of clinical research will promote evidence-based medical and dental care and insurance coverage. Based on earlier research by Dr. Albert that showed a link between diabetes and oral care, for example, the insurance carrier developed its Aetna Dental/Medical IntegrationSM (DMI) Program. Aetna’s DMI program now provides enhanced benefits to at-risk members with diabetes or cardiovascular disease, or who are pregnant, including an additional visit for a cleaning with a hygienist for patients with diabetes. Because IUGR is correlated with small-for-gestational age and low birth weight, more infants with IUGR end up in the neonatal intensive care unit. “So there are costs associated with IUGR,” Dr. Albert says. “The insurance companies look at this and say, ‘if we have this association and we change our plan in a particular way, do we actually save costs? Do our subscribers have fewer low-birth-weight or preterm babies? Can we save dollars down the road?’”

If Drs. Albert’s and Ananth’s hypothesis about IUGR and periodontal disease holds up after further research, it may also affect the recommendations that dentists make to their patients. “Hypothetically, the body is responding to this infection in a way that also affects fetal growth,” Dr. Albert says. “And that has very strong implications for the advice we give women. Because if there is a causal relationship, women of childbearing age need to make sure their oral hygiene is impeccable so they don’t develop periodontal problems.” — Beth Hanson
those with cleft lip and/or palate, who require a unique and extended dental treatment regimen. The group also gets referrals from dermatology of patients with epidermolysis bullosa, a skin condition that involves sloughing of the skin on the body and in the mouth, and that can cause extensive scarring. Dr. Chussid says, “Dental management in patients with these kinds of conditions is quite complicated and requires specific training and expertise.”

Surveys of parents of children with special needs show that they have difficulty obtaining many services for their kids, and dentistry is always near the top of the list, according to Dr. Chussid. Treating patients with special needs is not a huge part of dental training, so general dentists often don’t have a comfort level with this—and special needs patients “often get the runaround,” he says. “The residents in our program get a great deal of experience working with children who have special needs. We are able to treat even those with very acute problems here, and provide safe, excellent care that’s very difficult to get elsewhere. That’s very gratifying.”

Some children’s visits to the dentist are completely unplanned, and happen in the wake of an accident—a chipped or knocked-out tooth or broken jaw—or because of a severe toothache. “Many of the emergencies we see are related to tooth decay and are preventable,” Dr. Chussid says, “if children get routine care. We’ve made a big push for the age-one dental visit, and have gotten a lot of support from the pediatricians here in seeing patients earlier and more regularly, when we can really have made an impact.”

Columbia’s pediatric dentists not only learn and hone a wide range of techniques and procedures specific to children’s dental care, but, like pediatricians, they are trained in behavior management and modification and in dealing with social issues, Dr. Chussid says. While a visit to the dentist might be a bit intimidating at first for any child, whatever their underlying health issues, “our clinic and staff are very child- and family-friendly and we do whatever we can to make every visit a positive experience.” — Beth Hanson